Archaeological investigations at the Bamber House and Wanganui Hotel sites (Town Sections 79 and 77), UCOL Whanganui Converge redevelopment, Wanganui

report to
The New Zealand Historic Places Trust
and
The Universal College of Learning

Matthew Campbell, Warren Gumbley and Beatrice Hudson

CFG HERITAGE

Archaeological investigations at the Bamber House and Wanganui Hotel sites (Town Sections 79 and 77), UCOL Whanganui Converge redevelopment, Wanganui

report to
The New Zealand Historic Places Trust
and
The Universal College of Learning

Prepared by: M.L. Campbell
Matthew Campbell

Reviewed by: Jacqueline Craig

Date: 30 November 2009
Reference: 2007/44

CFG Heritage Ltd.
P.O. Box 10 015
Dominion Road
Auckland 1024
ph. (09) 638 6624
mat.c@cfgheritage.com

Contents

Figures

Tables

Summary

Archaeological excavations at the Whanganui UCOL Converge redevelopment site took place from 28 November to 20 December 2006. Two sites in particular were excavated: the Bamber House site, home of early Wanganui settler Thomas Bamber; and the Wanganui hotel site.

Thomas Bamber and his family lived in their house on Town Section 79 from the 1850s up to 1915, when Bamber died. Bamber was a blacksmith and his forge was also on the section, though the site of the forge is now destroyed beneath the Wanganui Chronicle building (now the Chronicle Glass Studio). Bamber was also Mayor of Wanganui. The house was demolished in 1995.

On Town Section 77 the main focus of excavation was the annexe and back yard of the Wanganui Hotel, dating from the late 1850s through to the late 1890s. Other businesses are recorded on the section throughout the late 19th century, including a corn merchant, stables and auction mart. The hotel was owned by John, and later his widow Caroline, Dunleavy, though the proprietors turned over fairly rapidly. The hotel was demolished in the late 1800s/early 1900s and the front of the section was occupied by the Public Trust building from 1914.

The Bamber House site showed two phases of house construction, with the second building replacing the first. The material culture and faunal record was not rich, but the site had been scraped hard by heavy machinery during demolition. One pit contained numerous iron items, many partly worked, which would have been associated with Bamber's forge.

The hotel annexe and various later structures were uncovered – here phasing consisted of new buildings on different parts of the section as commercial activities on the section changed. Most material culture could be clearly linked to the hotel rather than other businesses. In particular, four rubbish pits contained numerous bottles with their paper labels still largely intact. The contents were primarily alcohol with condiments also well represented.

While the hotel had a greater range of table, kitchen and bathroom ceramics, both sites were dominated by Willow pattern, with clear evidence that tableware was not purchased or maintained as formal sets, rather that Willow from a variety of manufacturers was bought as replacements. There was also evidence of the hotel proprietors with one pit containing whole plates and much other domestic refuse, perhaps cleaned out as one proprietor, and family, replaced another.

Faunal remains showed a fairly simple diet at both house and hotel, though the hotel had some evidence of wild birds. Locally bought pig and cattle dominated the assemblages, with sheep perhaps butchered on site.

The two sites have some notable similarities, particularly the unpretentious nature of the material culture and faunal assemblages. Bamber was a blacksmith, a working class man (though he clearly bettered himself in the colony), and his tastes would have been fairly simple, and it was men much like Bamber that the hotel catered to. We conclude with a brief discussion of archaeologies of identity, which the UCOL sites contribute to.

Acknowledgements

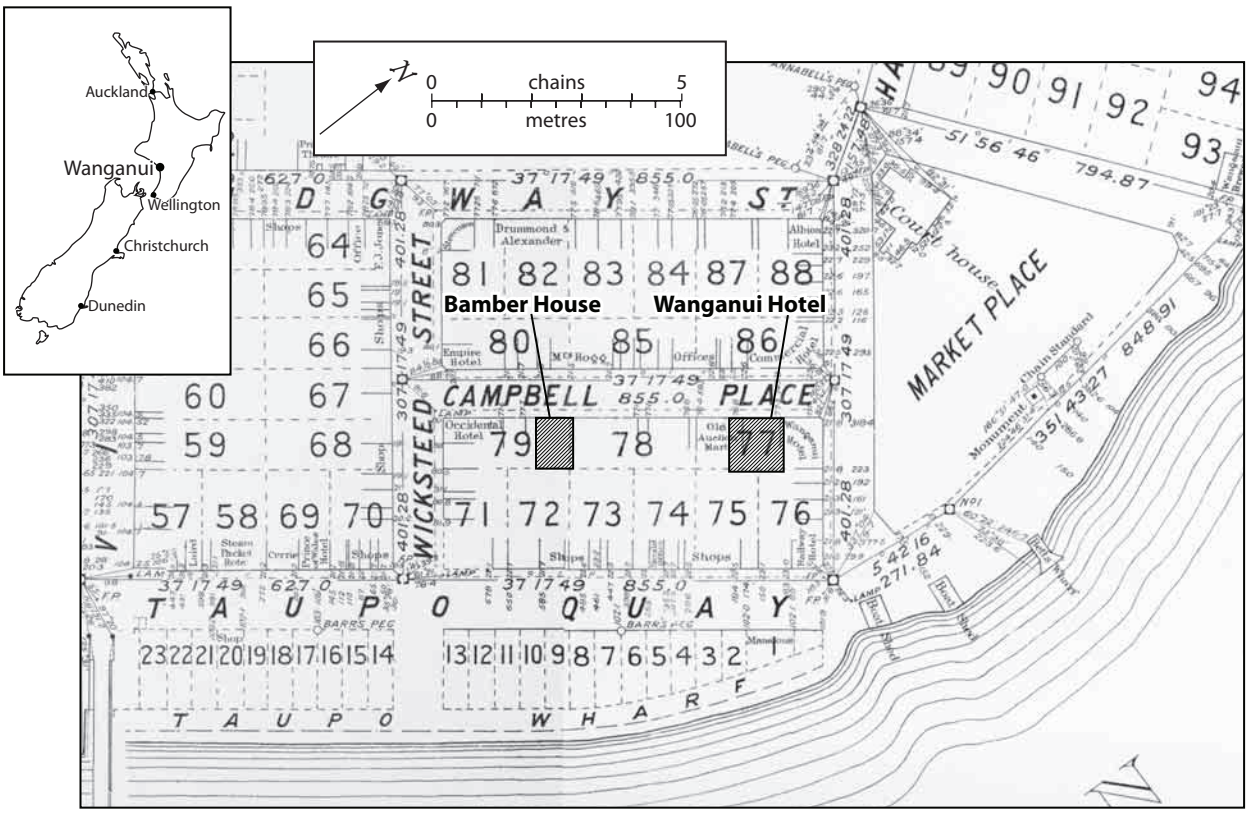
The excavation team consisted, at various times, of: Matthew Campbell (director), Warren Gumbley (director), Beatrice Hudson (assistant director), David Carley, Glen Farley, Jaden Harris, Noel Hill, Andrew Hoffman, Nick Hogg, Raylene Reihana-Ruka, Casey Robb, Susan Strongman, Ben Thorne, Ella Ussher and Colin Sutherland. Ben Thorne also surveyed the excavation. Jaden Harris did the artefact analysis. Stuart Hawkins did the faunal analysis. Hamish Macdonald photographed the artefacts. Our thanks to Bruce Dickson of DLA Architects and Jule Einhorn of UCOL.

1 Introduction

Matthew Campbell, Warren Gumbley and Beatrice Hudson

In December 2006 the Universal College of Learning (UCOL) began redevelopment of its campus in downtown Wanganui. The development affected much of the block bounded by Drews Avenue, Rutland Street, Taupo Quay and Market Place (Figure 1.1). Archaeologically, this block comprised a mosaic of recent development and areas with late 19th/early 20th century structures. The principal area of the block affected was along the Rutland St frontage and the redevelopment presented an opportunity to recover archaeological information documenting domestic and commercial activities carried out by the inhabitants of Wanganui from the 1840s to the early 20th century. Two areas of this block were selected for archaeological investigation based on the likelihood of survival of early remains. This report gives a summary of the historical research that has been conducted for this area, then reports on the archaeological investigations and analysis of material recovered from the areas selected for excavation. UCOL commissioned CFG Heritage Ltd to carry out the archaeological investigation under authority 2007/70 issued by the New Zealand Historic Places Trust under Section 14 of the Historic Places Act 1993. Excavation was undertaken during three weeks from 28 November to 20 December 2006, by a team of up to 13 archaeologists under the direction of Matthew Campbell and Warren Gumbley

The block under development comprised Sections 71 to 79 of the original Wanganui Town Sections advertised for sale by the New Zealand Company by 1842 (see Chapter 2). The two areas chosen for excavation had both been occupied by long-standing buildings that were present from at least the late 1850s. The first excavation was of part of Town Section (TS) 79, where the house of Thomas



1.1. Detail of an 1883 survey plan of Wanganui showing the block occupied by UCOL with the Bamber House and Wanganui Hotel sites highlighted (Campbell Place is now Rutland Street and Wickstead Place is now Drews Avenue); inset, location of Wanganui (background image: Alexander Turnbull Library, Wellington).

Bamber and family stood from the late 1850s to 1995; the second was on part of TS 77, where part of the Wanganui Hotel stood from the late 1850s to the 1880s, as well as buildings relating to other businesses. We refer to these as the Bamber House and the Wanganui Hotel sites respectively. The Chronicle Glass studio occupied part of TS 79 where Bamber's forge had been (he was a blacksmith), while the Public Trust building occupied part of TS 77, including much of the front of the original hotel footprint. These two 20th century buildings were not being removed and would have largely destroyed any archaeological remains beneath them.

The Bamber House and Wanganui Hotel sites were targetted for examination due both to time constraints and the greater likelihood of survival of archaeological features. TS 78 was not investigated since it had had much heavier buildings, including engineering works and a foundry, both with deep, heavy foundations which were built on it in the late 19th and early 20th centuries. A sunken ramp and courtyard had also been excavated there for an existing UCOL building and the earlier 19th century archaeology would have been substantially disturbed, if not destroyed. Artefacts were surface collected from TS 78 as they were exposed by heavy machinery. Thomson and Lewis established a bottling plant here in 1876 and several artefacts related to this enterprise.

The Backhouse Building on TS 71 had been due to be investigated when it was repiled, but inspection showed that it had a deep basement, erasing any earlier 19th century archaeology. The removal of the concrete floors and foundations for the workshops fronting most of other Town Sections on Taupo Quay were as substantial as those on TS 78 and required large-scale earthworks and disturbance to remove them, resulting in extensive damage to the area. As a result, it was concluded that much of the context of any remaining in situ archaeological deposits in this area had been lost.

In the chapters that follow the Bamber House and Wanganui Hotel sites are treated as separate excavations, which, by and large, they were. They are related by their proximity and contemporaneity, but one is clearly a domestic site while the other is commercial. Each analysis chapter begins with a summary and methodology followed by a separate analysis for each site, with analysis of material from TS 78 where appropriate. The two excavations are integrated more in the concluding chapter.

The Bamber House site was recorded as R22/511 and the Wanganui Hotel site as R22/512 in the New Zealand Archaeological Association site file.

Research design

Documentary research providing the historic background (Chapter 2) was an important component of the project, intended to assist the interpretation of archaeological data, and vice versa, and allow us to relate the archaeological evidence to particular individuals, groups, organisations and commercial enterprises. The relevance of the investigation to the general public and the potential for future interpretation of the area for the community were also important considerations alongside the relevance of the investigation for academic study.

The research themes were primarily influenced by the Wellington Inner City Bypass archaeological investigations (CFG Heritage report in preparation). Both Wellington and Wanganui were planned New Zealand Company settlements dating to the 1840s and so their common origin and contemporaneity provided an obvious starting point for comparison. Also it was important to continue to develop established research themes. In this respect the Westney Farmstead archaeological investigations (Campbell and Furey 2007) were also influential, though this was a rural site dating to the 1850s. The chronological span of the material available to investigate is significant, with activities from 1841 to the present day expected to

be represented, allowing issues of change over time to be examined, while incorporating a significant period of transformation as late colonial New Zealand gave way to the early years of the Dominion. The research themes can be summarised under the headings of:

- land-use and urban development;
- domestic and urban economy in relation to transport, commercial and industrial activities and development;
- changing patterns of activity and occupation;
- social relationships – social and communal inter-relationships, social mobility, and community identity.

Urbanisation and urban landscapes have increasingly been examined by historical archaeologists, notably in Australia and the USA (Mayne and Murray 2001). Some archaeological work has been carried out on early urban development in New Zealand, but on a comparatively limited scale (Macready 1990). While research necessarily focussed on colonial Wanganui, developing an understanding of urban processes that could be of value in examining other major centres was important.

Similarly, economic development and trade has often been a topic for archaeological study, and can be closely linked to urbanisation in a colonial context (King 1990). The proximity of the study area to the original port, the presence of warehouses, bond stores and hotels, all associated with transport and trade, provide an opportunity to investigate this theme.

The changing use of the site over time relates not only to the external economy of the growing city and colony (and empire) but to changes at the level of the occupation of each site as occupations and households change and grow. At the Westney Farmstead, for instance, the changing household composition over three generations of the Westney family occupation could be seen mirrored in the growth of the house and the deposition of rubbish beneath it (Campbell and Furey 2007). There is an obvious contrast between the rural setting of the Westney Farmstead and the urban setting of the UCOL sites.

The issue of social relationships and identities may be the most difficult theme to address given both the extent of late nineteenth century commercial development and the location of the principal investigation area. However, the presence of the Bamber family house within the investigation area provides and opportunity to address this theme with reference to a family of early settlers from Scotland and an individual who was an early resident of Wanganui and became Mayor as well as being a local tradesman

These research themes were expected to be of differing importance between the two sites. The Bamber House site had the potential to address the theme of social relationships with reference to a family of early Wanganui residents though the proximity of Bamber's place of work to his residence has implications for processes of urban growth. The Wanganui Hotel site related to commercial activity, transport of both goods and people, but also potentially to social relations.

2 Historic Background

Tony Walzl, Beatrice Hudson and Matthew Campbell

Historical research into the occupation of the development area was initially undertaken by Taylor and Sutton (2006), who prepared the archaeological assessment for the proposed development, and was later supplemented by a report commissioned by CFG Heritage Ltd from Walghan Partners (Walzl 2006), and subsequent research into maps and plans of early Wanganui. In this chapter this research is summarised for Town Sections 79 (the Bamber House site), 78 and 77 (the Wanganui Hotel site).

Wanganui

Wanganui was purchased from local Ngati Apa chiefs by Colonel William Wakefield and his nephew, Edward Jerningham Wakefield, on behalf of the New Zealand Company in 1839 (Chapple and Veitch 1939), though the principal Putiki chiefs were not party to the transaction (Waitangi Tribunal 1999). The first settlers arrived the following year and the company began to develop the town in 1840–41. Town Sections 71–79 were among the first to be surveyed and advertised for sale in 1842. However, only Section 71 was sold at this time; all the others were later sold by the Crown, which took over administration from the Company in the 1850s. Any activity that may have been conducted on the sections prior to this, such as casual residential or agricultural/horticultural occupation, is undocumented.

From the beginning, Wanganui was a trading port and the town's prosperity depended on this. With the removal of overseas trade to Wellington in the 1920s, the Great Depression and World War II, Wanganui's trade went into a terminal decline. In its heyday in the eraly 20th century it was the fifth largest city in New Zealand (Atwell 2006).

During the mid 19th century the town sections in the block bounded by Campbell Place (now Rutland Street) to the west, Market Place (now partly Moutua Gardens) to the north, Taupo Quay running alongside the Whanganui River (now partly reclaimed) to the east and Wicksteed Place (now Drews Avenue) to the south quickly became a centre for trade, manufacture and stores as well as residential occupation. Taylor and Sutton (2006) outline four phases for the evolution and development of the block: during the 1840s settlers resided and traded from small houses made from temporary materials; from the 1840s through the 1860s wooden dwellings and other structures replaced the original ones; from 1860 to 1895 the wooden dwellings and early workshops and stores were replaced with substantial commercial buildings; from 1898 wooden buildings were replaced with brick following new fire prevention regulations.

Town Section 79

Town Section (TS) 79 was granted by the Crown to William Russell, a sergeant in the Royal Artillery, on the 1st of July 1852. Thomas Bamber is recorded as having a leasehold along Campbell Place (Rutland Street) as early as 1858.

Thomas Bamber (Figure 2.1) was born in North Berwick, Scotland, in 1831, the son of Rev. Bamber, and emigrated to Wanganui in 1856 on the *Hastings* with his wife Euphemia (Anderson) and son William. Their second child, Thomas Anderson Bamber, was born in New Zealand. Bamber was a blacksmith and later Mayor of Wanganui from 1878–1880, during which time the foreshore reclamation was begun. He was also chairman of the Harbour Board and sat on the Licensing Board (The Cyclopedia Company 1897). In 1894 a street directory records him

as both blacksmith and Justice of the Peace. He also have been Seargent Farrier to the 58th and 65th regiment in Wanganui (Taylor and Sutton 2006: 29)[1] and he served in the local militia. In the 1910s Bamber appears in records variably as a gentleman, settler and farmer – his farm was 'Ellangowan' on No 2 Line. His wife died in 1905 and he died in 1915. Their two sons survived them (Wanganui Public Library, biographical index cards).

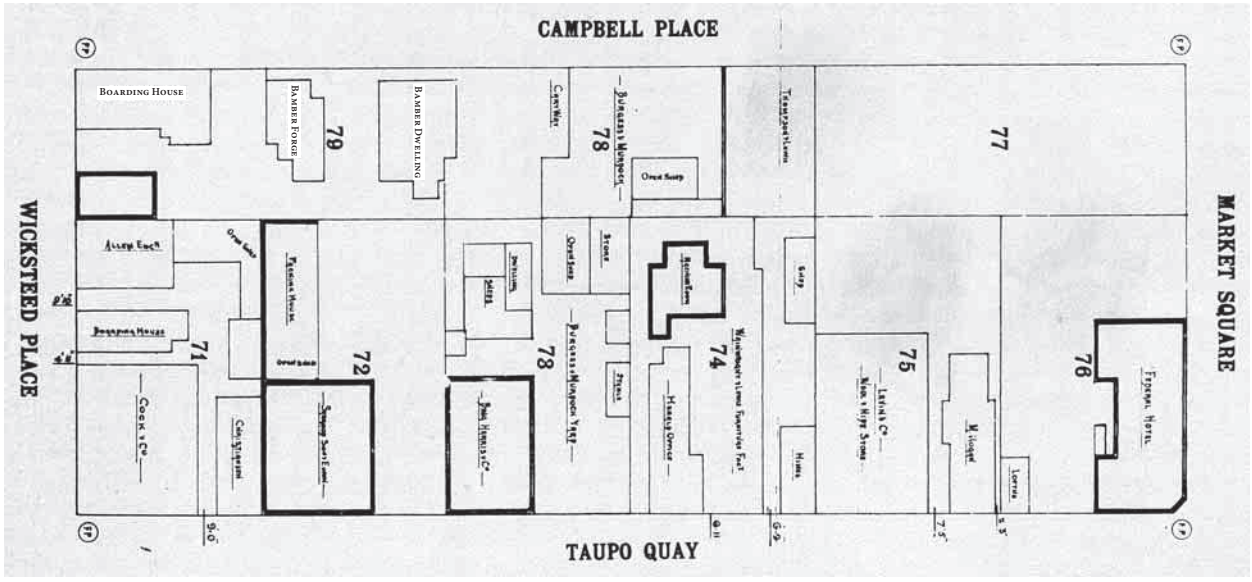
Valuation rolls from the 1870s record that he occupied parts of both Section 78 and 79. On TS 79 he is recorded as having a six-roomed dwelling and a smithy. It is likely that the smithy at least was present from the late 1850s, when his leasehold is first recorded, and that the family also lived on the site from this time, though the archaeology (Chapter 3) indicates that the smithy was present before the house.

Early photographs show a large house present on the section from at least the 1860s. In 1903 Bamber is still recorded in valuation rolls as having a house and dwelling on the sections, and street directories and almanacs printed between these years indicate that he had continuous occupation of the site. The Bamber House stood, though much modified, until 1995 when it was demolished as part of the UCOL Quay School of the Arts development.

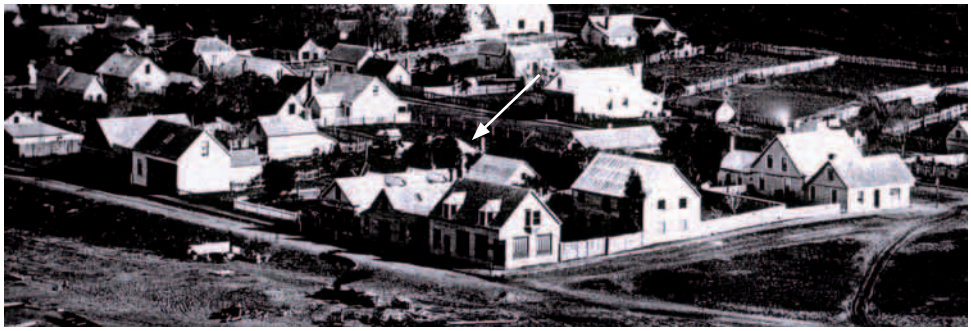
The position of Bamber's house is clear in historic photographs and plans. A 1908 insurance plan (Figure 2.2) shows the smithy between Bamber's house and the boarding house on the street corner of TS 79. The nature of Bamber's occupation of TS 78 is unclear. Valuation rolls for the 1870s mention a workshop in addition to the house and smithy. It is possible that the workshop was on TS 78, however this is likely to have been closer to, or part of, the smithy. Photographs and a plan from the 1860s show only empty land on TS 78 (Figures 2.3. and 2.4.).

2.1. Thomas Bamber (Whanganui Museum).

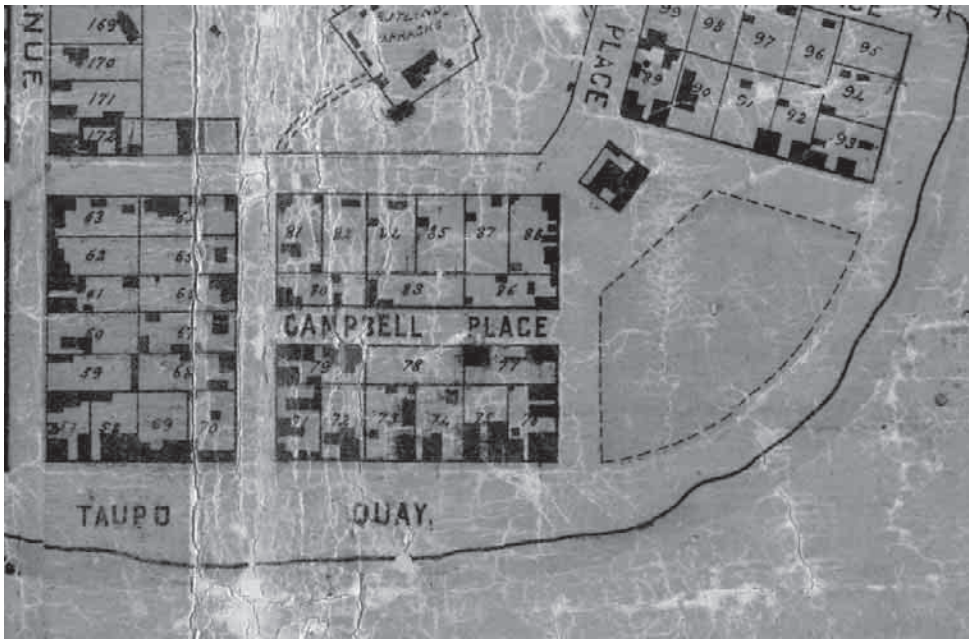
2.2. A 1908 Insurance plan shows the position of Bamber's house and forge on TS 79 (Wanganui Public Library).



[1] The dispositions of the Imperial regiments in 19th century New Zealand are not always clear. The 58th arrived in December 1846 (Cowan 1983: 136) and were in Taranaki in August 1855 (Cowan 1983: 148) – it is not clear if they remained in Wanganui, or even New Zealand, in the meantime. The Grenadier Company of the 65th arrived in May 1847 and the 65th maintained a presence in Wanganui until at least 1862 (http://hicketypip.tripod.com/history.htm, accessed 21 April 2009).



2.3. 1860s photograph showing that TS 78 is still bare land, though all around it has been built on (Alexander Turnbull Library, Wellington).



2.4. Detail from an 1860s map of Wanganui showing outlines of buildings on TS 77 and TS 79, but nothing marked on TS 78 (Alexander Turnbull Library, Wellington).

In 1863–64 John Watson Liddell and Thomas Bamber are the recorded occupants of TS 79. Liddell was an ironmonger and their shared occupation and allied trades suggest a commercial relationship. From 1866 Daniel McGregor is listed as an occupant and, by the end of the decade, as proprietor of the Phoenix Hotel on TS 79 at the corner of Campbell Place (Rutland Street) and Wicksteed Place (Drews Avenue). He is also listed on the 1872 rates roll as owning a workshop on TS 78, for which a blacksmith called William McLeod is listed as occupier.

Street directories from 1894 record Bamber as a blacksmith and a Justice of the Peace and then only as Justice of the Peace from 1896. At this time his neighbour at 4 Campbell Place (Rutland Street), John Rodgers, is listed as a blacksmith.[2] Perhaps Bamber's smithy was then being run by John Rodgers, while Bamber still occupied the house. Bamber is still listed in 1908 as having a house and forge on parts of TS 78 and 79 but after that with 'house and buildings' only; what these are is not detailed. It could be that Bamber had partners in the business, or that the smithy changed hands a few times. Bamber may have had another blacksmith running the forge from 1878–80 when he was Mayor, though the mayoralty may not have been a fulltime job. By the time John Rodgers was listed, Bamber would have in his

[2] Bamber occupied Number 6 Campbell Place (Rutland Street), though these street numbers are not in the record until the street directory of 1905. It is unclear whether Rodgers and No. 4 were on Town Section 79 and Bamber and No. 6 were on Town Section 78, but this is possible.

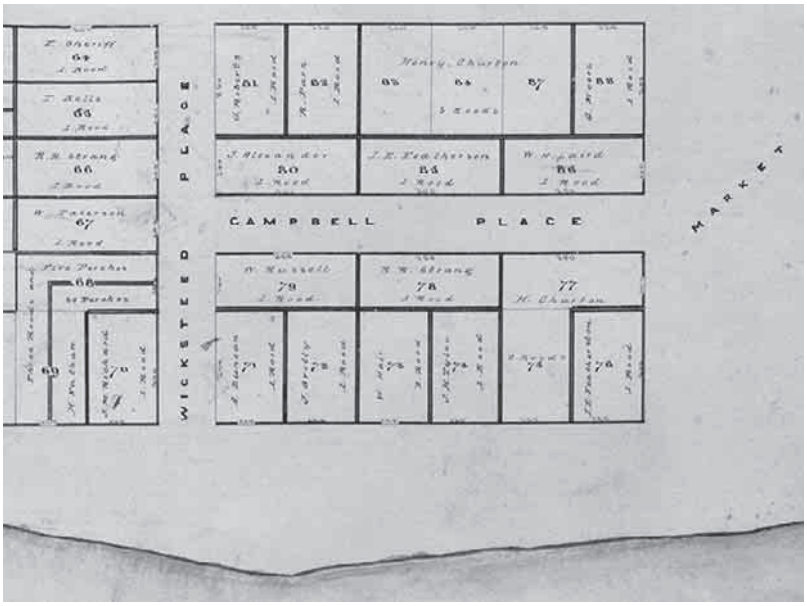
late sixties/early seventies and unlikely to still be working as a blacksmith.

Historic photographs show that Bamber's house appears to have been modified and extended during the late 1870s or 1880s. Figure 2.5. shows that the house began as a medium-sized, one-and-a-half storey cottage with a single gable roof, a small lean-to room on the back and a chimney along the southern side. Photographs dating to about the late 1870s show the house as much larger, with a double-gabled second storey (the new gables facing streetward), and extended lean-to at the back. The external chimney is now on the eastern instead of southern side and there are two internal chimneys. The archaeology (Chapter 3) in fact showed that the later house was a new building rather than an extension of the original.

2.5. Comparison of two enlargements showing Bamber's house before and after rebuilding in the 1870s (Alexander Turnbull Library, Wellington).

A number of other occupants of Section 79 are recorded. Many of these are associated with the Phoenix Hotel and the boarding house that subsequently replaced it. The Phoenix Hotel (renamed the Occidental Hotel in 1879) occupied the corner of Campbell Place (Rutland Street) and Wicksteed Street (Drews Avenue) on Section 79 and was present by at least 1866. It had a series of proprietors through the 1860s and 1870s and it appears that by the 1890s, certainly the early 1900s, the hotel was replaced by another building that was run as a boarding house. The boarding house also had a series of proprietors until 1911, when it was pulled down to make way for the Wanganui Chronicle offices, built in 1913. This building still remains today.

The Wicksteed Place (Drews Avenue) side of the Section was occupied by a draper, David Nathan, in the 1860s and early 1870s, and then by a series of businesses including a merchant's premises, a butcher, a billiard room, a solicitors' office, a printing works and, in the 1910s, a laundry.



2.6. Survey map showing names of the owners of TS 77–79 c. 1855 (Plan of the town of Whanganui, formerly named Petre, Auckland City Library Special Collections).

Town Section 78

While the original crown grant for TS 78 has not been relocated, an 1855 map of sections and section holders shows R.R. Strang as owner/occupier (Figure 2.6). From the 1860s various businesses are recorded, including timber merchants, a coachbuilder (until at least the late 1880s), a stonemason (to 1874) and fellmongers (to the late 1870s). Thomas Bamber is also recorded as an occupant between 1866 and 1869, though presumably his main place of business remained in TS 79. From 1896 Thompson and Lewis operated a bottling factory on the northern part of the section

until at least 1922. Other parts of the section were used for warehousing. Later in the 20th century heavy engineering works occupied the section.

Town Section 77

As with TS 79, TS 77 does not appear to have been sold by the New Zealand Company, as its title was granted by the Crown to Henry Churton, described variously as "esquire" or "gentleman", on the 18 January 1853. By 1857 Churton appears to have sold the land to John Dunleavy, a corporal of the police who is listed the following year as a licensed victualler. John Dunleavy and then Mrs Caroline Dunleavy were owners of TS 77 throughout the 1860s and 1870s and presumably of the Wanganui Hotel that occupied the site. Although the Dunleavys maintained some form of ownership, the hotel was leased out under a number of proprietors through the 1860s, 70s and 80s. In 1866 Hart and Buckley were the occupants and from later that year up to about 1872 the occupier was David Atkinson. From 1872 to 1873 it was Whitlock and Small and from 1873 to 1877 it was Alfred Muller.

In 1877 Joseph Chadwick, who was an auctioneer, acquired the lease off Muller and in December advertised in the local newspaper that "The Old Wanganui Hotel has disappeared, and in its place is a beautiful structure, with the best accommodation for man and horse" (*Wanganui Herald* 11 December 1877, paperspast.natlib.govt.nz). From this and other newspaper accounts it appears that Chadwick largely rebuilt the Wanganui Hotel, including installing gas and water pipes. During this time he ran both the hotel and his auction business. He advertised it as a hotel with thirty-five rooms, containing every convenience (*Wanganui Herald* 23 February 1878, paperspast.natlib.govt.nz). By December 1879 Chadwick was advertising the hotel for sale or lease and by July 1880 John Walters is listed as the proprietor. In 1883 the proprietorship shifts to J. Woolston who remains until 1888, when Peter McAlinden takes his place in the records. In June 1892 McAlinden made an application to renew the hotel's license but was declined. In September of the same year McAlinden put up the whole of his household furniture and effects for auction (*Wanganui Herald* 12 September 1892, paperspast.natlib.govt.nz); the lack of a liquor license had presumably driven him out of business.

Caroline Dunleavy remained the owner of TS 77 throughout the 1890s and in 1893 the hotel became a boarding house and temperance cafe. By the end of 1892 the former Wanganui Hotel was being advertised as the Wanganui Coffee Palace under the proprietorship of L. E. Stokes, with newly renovated rooms to accommodate 45 people (*Wanganui Herald* 22 December 1892, paperspast.natlib.govt.nz). Street directories list the boarding house being run by Richard Reid in 1894, Mrs. G.C. Rees in 1895 and Mrs A. Ansley in 1896.

2.7. The Wanganui Hotel circa 1865 (Alexander Turnbull Library, Wellington).

The earliest photographs, taken in the 1860 and 70s, of the Wanganui Hotel building show it to be made up first of three and then of four conjoined buildings. This implies that there had already been successive stages of development by this time. Figure 2.7. shows that two of these buildings had small second storeys, one was a small single-storey annexe (which probably served as the laundry or kitchen) and the latest was a small hipped roof addition that

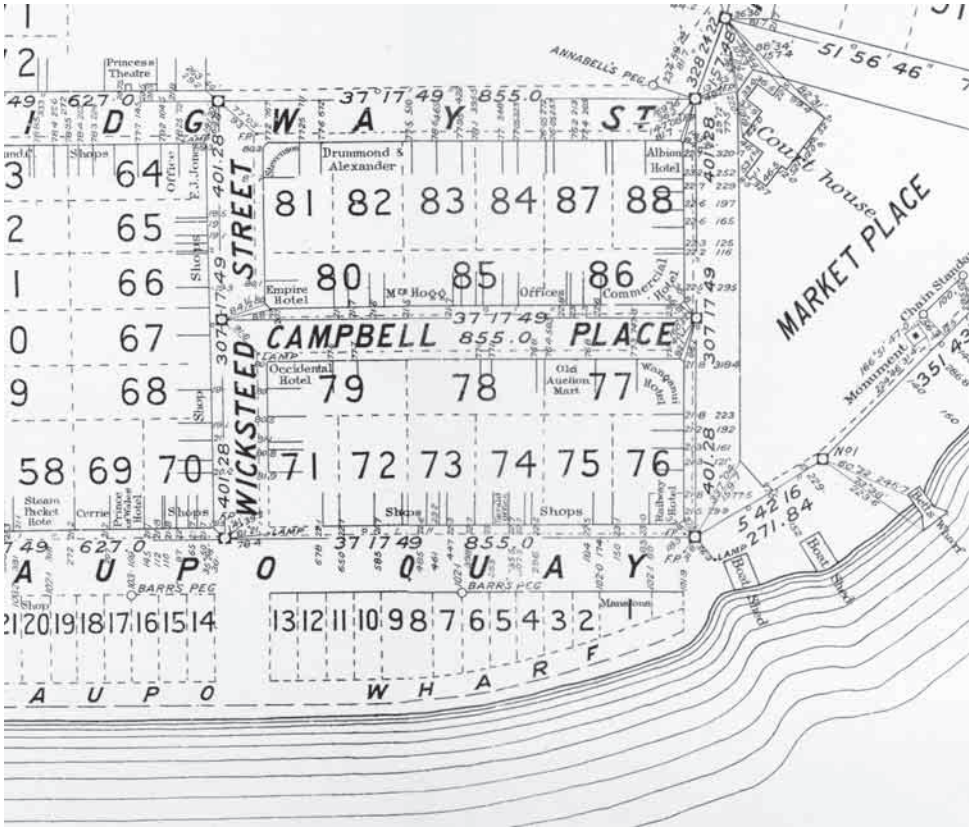
fronted onto Market Place, filling the gap between the hotel and adjacent bond store. By the late 1870s, a larger, two-storey building built by Chadwick has replaced the Market Place frontage buildings of the hotel, but there does not appear to have been major change to the other buildings.

In 1893 the business was listed as a boarding house and remained so under different landlords until 1897. TS 77 and part TS 78 were advertised for sale in 1900 (*Evening Post* 7 November 1900, paperspast.natlib.govt.nz). Caroline Dunleavy died in September 1902 and by 1903 the hotel building seems to have been pulled down as Fanny and Ellen Dunleavy are then recorded as being in possession of only bare land. Figure 2.11, dating to the early 1900s, shows the section with only a series of tents on the land. The corner of the section was built on again in 1914, when offices of the Public Trust were built there. This building still remains today.

On the Campbell Place (Rutland Street) part of the section a corn merchant named Isaac Freeth is listed as occupying a house, store and stables in 1873. Freeth advertised his business as the New Market Horse Bazaar, Market Square, and in conjunction with this business he operated a store where he sold hay, corn, timber and other produce (Wanganui Chronicle 3 January 1874, paperspast.natlib.govt.nz). By 1875 J.W. Jackson ran a livery service from the stables and yard, which was most likely associated with the business of Freeth. These are probably the buildings shown in Figure 2.8 to the far right. From 1879 there is no further record of the corn merchant or livery businesses on the section. Almanacs list Joseph Chadwick as occupying TS 77 as an auctioneer between 1879 and 1881, but from newspaper accounts we know that he took over the lease in 1877. Chadwick is listed as occupying the corner section and is named as both hotelkeeper and auctioneer. He seems to have run both the hotel and his auction business here, since an 1883 survey map (Figure 2.9) marks an "old auction mart" on Section 77. It is possible that this relates to a building visible in the historic photographs dating to the 1870s as standing on that part of the section. The building is highlighted in Figure 2.10. It is a longer, higher building in the place of, or adjacent to, the smaller buildings believed to be the corn merchant's and stables. Whether or not that building still stood then is unknown, but it was certainly demolished by the early 1900s, when photographs show the property as bare land (Figure 2.11.).

By 1910 the area was built on again as the Thompson and Lewis soft drink factory spills over on to the section from Section 78. Photographs from that period show sheds extending from the north side of the Thompson and Lewis building, into TS 77. Figure 2.11 shows a relatively small shed that would not likely have reached the excavation area. Figure 2.12 shows the section once the Public Trust building is present (built 1914). The Thompson and Lewis factory building can be seen behind it with sheds that appear to extend much further into TS 77.

2.8. Section 77, circa 1870s. The Wanganui Hotel buildings are on the left. The buildings to the right may be the store (on the street-front) and stables (behind, with ventilator over the door) listed as present in the 1870s (Alexander Turnbull Library, Wellington)



2.9 (right). Survey map dating to 1883 (Alexander Turnbull Library, Wellington).

2.10 (below). The long, tall building (arrowed) that may have been Joseph Chadwick's auction mart, c. 1870s (Alexander Turnbull Library, Wellington).

Two photographs from the early 20th century show an additional structure behind the Public Trust building that would have stood where the hotel annexe had once been (Figure 2.13). It is difficult to make out what the structure is; it appears to be parallel rows of walls or stacks of some kind sitting on a raised platform with a small ramp in the middle leading up to it. There is no roof over the structure and no connecting beams can be made out. If these rows are stacks, they were possibly storage for Thompson and Lewis, such as for bottle crates, or for Judas Keesing, the second auctioneer who bought a part of the land between the Public Trust building and the Thompson and Lewis factory.

2.11. Close up of image dating to the early 1900s showing TS 77 as bare land. To the left is the Thompson and Lewis factory (the large, white building with the domed roof) and a small shed extending to the north onto TS 77 (Alexander Turnbull Library, Wellington).

2.12. A photo taken after 1914 showing the Public Trust building with what appear to be large sheds extending from the Thompson and Lewis factory behind it (Alexander Turnbull Library, Wellington).

2.13. Close up of a photo taken from the east, showing an additional structure behind the Public Trust building (Alexander Turnbull Library, Wellington).

3 Archaeology

Beatrice Hudson, Matthew Campbell and Warren Gumbley

Methodology

Prior to excavation both the Bamber House site and the Wanganui Hotel site had been covered in asphalt and layers of modern fill consisting of base course and sand. This was removed by a mechanical excavator with a cleaning bucket, under the supervision of an archaeologist. The exposed surfaces were then cleaned down by hand in order to define features, which were then excavated by hand.

The excavation used a project north, also used by the project architects, that was approximately 38 degrees west of grid north (Wanganui 2000 datum), parallel to Rutland Street. All directions referred to in this report are in relation to this project north, though both this and grid north are shown in the site plans.

Contexts (features and fill layers) were numbered sequentially and the numbering was continuous between the two sites. The Bamber House site on TS 79 was excavated first with a total of 253 contexts. Two context numbers were given to fill layers over TS 78 and a further 380 contexts were excavated at the Wanganui Hotel site on TS 77. Features and feature descriptions were recorded on a HP IPaq 4750 using DataOnTheRun software and synchronised with a Microsoft Access database on a laptop computer. All features were mapped using a Leica 1205 robotic total station on the Wanganui 2000 datum, using control points previously set up by the construction project surveyors. Selected features were photographed before, during or after excavation. The blackboard in the photos in this chapter has an arrow pointing north.

Artefacts were collected and sorted at an on-site office. All faunal material was collected. Whole bricks were sampled from features and several wood samples were taken from postholes where posts remained in situ (analysed by Dr Rod Wallace of the University of Auckland Anthropology Department). All artefacts and finds from features were sorted into basic material classes: glass, ceramic, faunal and miscellaneous. Artefacts were then bagged and labelled with a sample number, which was entered into an Excel database along with a basic description and the provenance information. Non-diagnostic glass, ceramic drain pipes and much of the metal was recorded and discarded on site, with information for each item entered into the catalogue. Non-diagnostic material such as middle glass and brick fragments were not routinely sampled. All retained artefacts were transported to Auckland for detailed analysis. Methodologies for analysis of specific material classes are discussed under the appropriate chapters.

General stratigraphy

In some places, beneath the asphalt and base course of gravel and sand was a truncated brown topsoil 150 to 200 mm thick. This overlay a pale yellow to olive alluvial subsoil, which incorporated various natural sub-strata from silt to fine pumice gravel formed by alluvial deposition.

The sequence of intercutting features was often difficult and sometimes impossible to determine, since many features were filled with the same indistinguishable mixed matrix. This was true of both areas excavated so, unless stated otherwise, it should be understood that features were filled with silty brown topsoil mixed with the sandy, silty yellow subsoil appearing as mottles. This generally had a smooth, fine texture and in many features it had few or no inclusions of any kind. Soil conditions were such that a lot of wood remained in postholes and, at the Wanganui

Hotel site, paper labels survived exceptionally well on bottles in some rubbish pits.

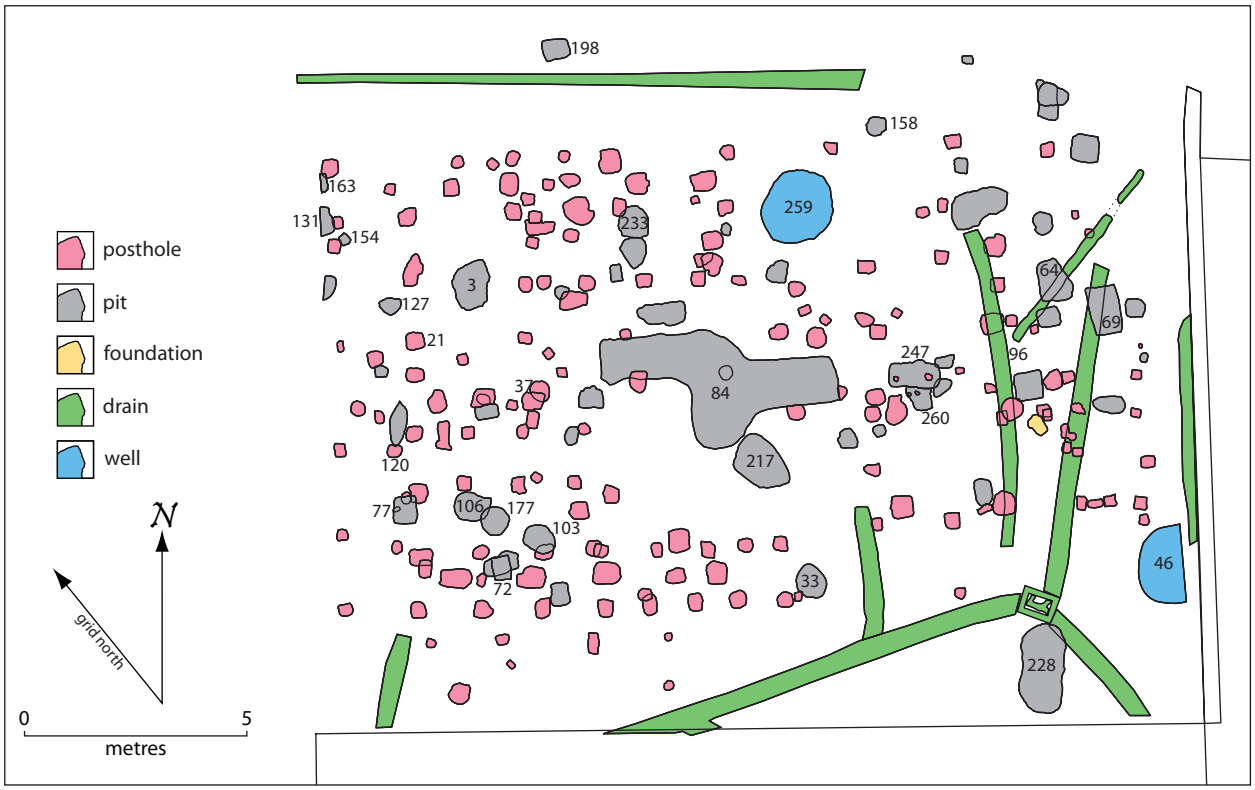
The Bamber House site, Town Section 79

Overlying layers

A layer of modern base course and fill overlay the site. It comprised a 150–200 mm thick layer of pale yellow silt and river gravel on top of 400–500 mm of black sand. Both were removed by machine. Underneath the black sand layer in the west and east ends of the site was a brown silty soil, the remnant of the original topsoil, containing scattered bone and artefacts. There was a particularly large amount of bone at the east end of the site. This deposit is probably the remains of material that built up throughout the period of occupation, some of it disturbed and redeposited during demolition. This layer was not present in the middle of the site. Its edges were not distinct and had been further disturbed during house demolition and surfacing with heavy machinery in 1995. Neither the remnant topsoil nor the asphalt/base course layer were surveyed.

Phasing

The Bamber House site had been scraped down hard by machinery during demolition of the house and this created a great deal of difficulty in establishing phases of activity as the stratigraphic relationships of many features were lost. Phasing was largely established in relation to the house foundation posts – those features cut by house foundation posts clearly predated the house. Since the house was standing until demolition in 1995, those under the house will also have predated it, with the exception of a few that may be related to repiling of the house. It was generally



3.1. Features excavated at the Bamber House site. Features mentioned in the text are labelled.

assumed that all other features within the first, pre 1870s house footprint predated that building with the exception of a few that might relate to the construction of the second house. Other features outside the first house but within the second can confidently be assigned to the first house (Phase 2) and, in general, artefact dates from them are consistent with this interpretation. Historic photographs helped to understand the development of the house so some features could be phased according to the sequence of additions and renovations. Many features at the back of the house could not be phased as they could not be related stratigraphically to the house or other structures. The phasing is summarised in Table 3.1.

1	pits prior to the first Bamber House
2	the first Bamber House and associated features
3	the second Bamber House and associated features
3a	subsidiary structures and amenities associated with the second house
G	garden shed

Table 3.1. Summary of phases of the Bamber House site

Phase 1: pits prior to the first Bamber House

Some of the earliest features included a group of iron-filled rubbish pits, some of which (Features 154, 131 and 3) were clearly cut by postholes from the foundations of the first Bamber House and therefore predated it. These were located in the western end of the site, beneath what would become the verandah and street frontage, and were filled with corroded iron artefacts and metal scrap. Some were distinct pits; others were artefacts in a smear of corroded iron staining. Feature 3 (Figure 3.2) was the largest of these (1000 x 800 x 360 mm deep)[1] and was very densely packed, with 821 items catalogued from this pit alone. Some items were sheets or bars of scrap metal, others were metal objects perhaps intended for recycling. Some iron bar offcuts had been partially worked, while others had been only partially finished or had sections cut off them. Despite the large sample of metal, none of this is dateable by itself. The pit appeared to have been filled as a single event and the four black beer bottle bases in the pit suggest a date prior to the 1870s at least. This pit and other iron-filled features were most likely associated with blacksmithing activities. This indicates that

3.2. Feature 3, iron-filled rubbish pit, during excavation. The bins contain only some of the contents. The 1 m scale and the north arrow on the blackboard are not in place, this photo is taken facing south.

[1] Depths given are from the top of the excavation surface after removal of the overburden. Over the Bamber House site the surface had already been truncated by an unknown amount during house demolition in 1995, though this was not an issue for the Wanganui Hotel site, where the discovery of a pre-construction ploughed surface indicated that truncation here was minimal.

3.3. Phase 1 features from the Bamber House site.

Bamber had a working forge on or adjacent to the site before either of the later buildings on the site. Many of the postholes of both house foundations had small chunks of iron slag in their fill, again indicating smithing prior to house construction. Phase 1 features are shown in Figure 3.3.

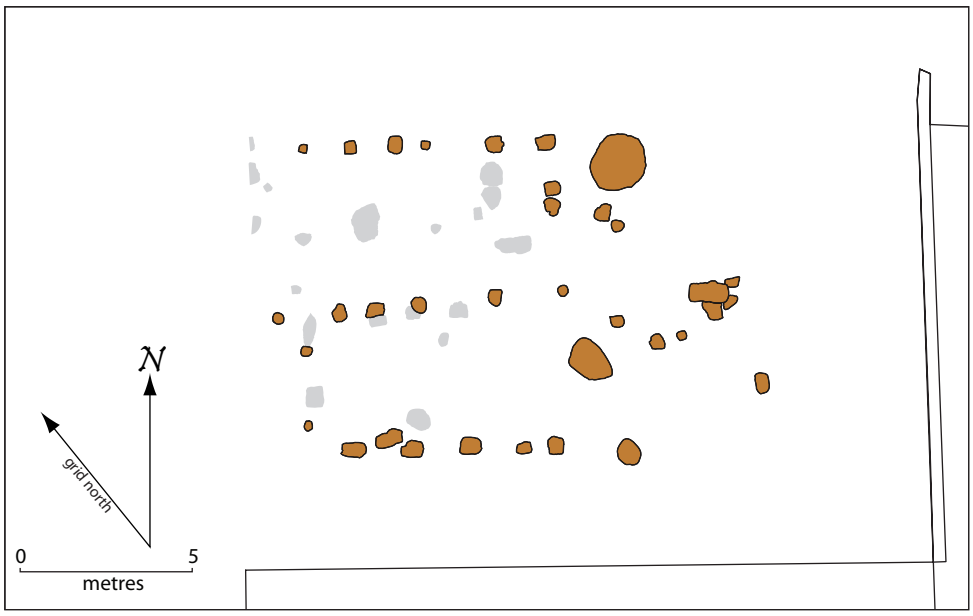
A number of other pits towards the street front seem also to predate the house. Some of these (Features 163 and 127) were similar to the iron pits, though without the same density of metal items in their fill. Others (Features 77, 233, 37 and 103) are clearly cut by later foundation postholes. These pits had varied fills, some were only silt and others gritty or containing fragmented brick or artefacts.

Other pits assigned to this phase were within the footprint of the first (Phase 2) building on the site. They probably predate this building, although it is possible that some of them were dug between the demolition of Building 1 and the construction of Building 2. One small pit under the centre of the house contained a salad oil bottle along with a piece of tin sheet, nails and slag. Feature 233 was a deep (870 mm), square pit containing a mixed assemblage including 15 ceramic vessels, 20 glass containers, three clay tobacco pipes and several items of footwear. The tobacco pipe maker's marks indicated that they were probably made in the 1850s. A cup in the Acadia pattern (the only example found on the site) is most likely to have been produced in the 1840s. Based on the dates for the ceramics and the clay tobacco pipes, which would have had a short use-life, the deposition of the rubbish in this pit probably occurred around the late 1850s.

Phase 2: the first Bamber House and associated features

Three alignments of postholes were recorded that did not match with the later, clearer Bamber House foundations. These are believed to belong to an earlier house structure, probably that house shown in historic photographs as being on the section prior to the 1870s (Figure 2.5). The layout of these features is shown on Figure 3.4.

Each of these three alignments was somewhat different. In the northernmost row, most postholes contained the remains of a wooden post and had a gravely fill with brick and coal fragments – they are similar to those of the subsequent building, though their positions do not fit with that one. The middle row is made up



3.4. Phase 2 features from the Bamber House site.

of more rounded postholes, most with a clear oval post mould within them. The remains of wooden posts survived in two of them though badly decomposed or burnt. The third row lay to the south of these and was different again. These were generally shallow rectangular postholes, some with post moulds formed of smooth grey clay that stood out within their otherwise silty fill.

One of these postholes, Feature 120, contained a lot of artefacts, perhaps deposited when the post was pulled out of the hole during construction of the subsequent house. This was a small, square posthole (300 x 290 x 200 mm) containing remains of 15 vessels and two clay tobacco pipes. Potentially early ceramics dating to the mid 19th century include fragments of Shell Edge, Willow, Japan Flowers, Wild Rose and an unidentified pattern (UCOL 126, see Chapter 4) manufactured by Sewell.

A well, Feature 259, lay just to the north east of Building 1, within the footprint of Building 2, approximately 1500 mm in diameter. A test pit was dug to 1700 mm in the centre of it but its base was not reached. The fill consisted of layers of black and yellow silty sand. Fragmented artefacts were dispersed throughout the fill but were not concentrated as rubbish deposits. The sample included 12 ceramic vessels, six items of glassware and one clay tobacco pipe. Several transfer printed patterns were identified among the ceramics including Willow, Medici, Fibre, Broseley and Olive. Of these, Olive has the latest known period of production, being made after 1862. The bottle glass, which is mainly black beer, is also typical of the 1860s. The infilling process for this well then may date from the late 1860s or 1870s. If the well had once been lined with bricks, they had been removed (as was the case for all wells on both sites), at least to the level at which we observed it, and the upper sides had collapsed, disguising its original form.

Just beyond the back wall of Building 1, within the footprint of Building 2, were two small pits containing rubbish. Feature 33 was a round pit filled with coal, artefacts and bone in the top half, but with cleaner silty fill below. Twelve ceramic fragments were found in it, including part of a Willow pattern saucer with a Copeland and Garrett backmark (dating to 1833–1847) and a piece of Japan Flowers plate.

The other pit, Feature 217, was larger and contained mostly early ceramics. Patterns and designs among the 23 vessels include Shell Edge, Japan Flowers, Fibre, Willow and the unidentified UCOL 136. The Willow plate fragments are marked

'Barker & Till' (c. 1846–1850) and the Japan Flowers fragments made by Ridgway, Morley, Wear & Co. date to c. 1836–1842. A shoe and table fork handle were also found, as well as a thin lens of ash towards the base. The assemblage from Features 33 and 217 implies refuse from domestic setting, contrasting with the iron pits of Phase 1, though the early dates suggest they might belong to Phase 1.

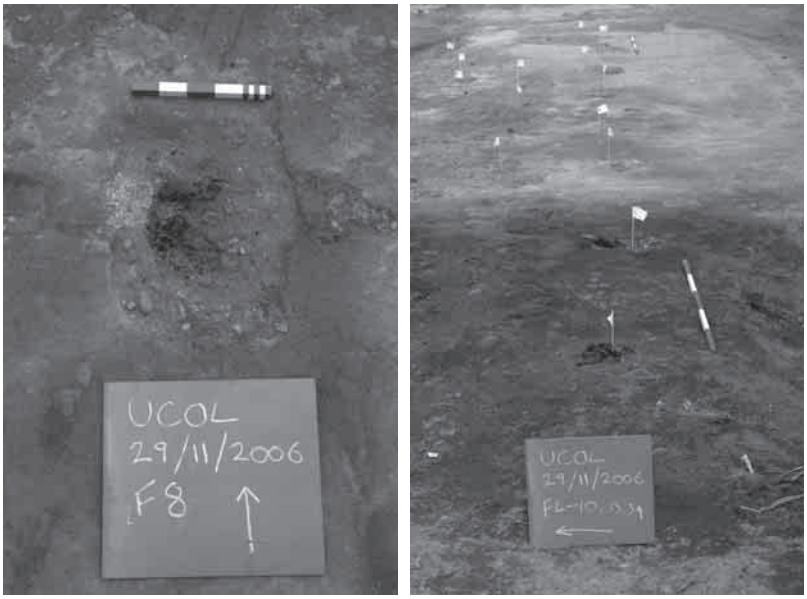
Other early pits for which dates could be obtained probably belonged to Phase 2. Feature 247, a rectangular pit, lay just beyond the edge of the footprint of Building 2. It is most likely related to Building 1, from which it would have been distant and in the yard area. This pit contained a minimum of 19 ceramic vessels, five items of glassware, two clay tobacco pipes and a few fragments of metal. Early markers among the ceramics include fragments of Shell Edge and Willow. The one marked clay tobacco pipe is from the firm of Balme and probably dates from the 1860s. Also found in the pit was a military button from the 57th Regiment, who were based in Wanganui from 1860–66. This pit then must date to around the mid to late 1860s.

This pit cut Feature 260, which contained seven fragments of ceramic, two fragments of clay tobacco pipe and one black beer base. One early item is part of a saucer printed with a portrait of a British Member of Parliament, Sir Robert Peel. This saucer was probably produced no later than the 1850s. The Willow and Shell Edge sherds in the pit are also potentially early. One of the clay tobacco pipes is marked 'Balme' dating it to the 1850s or 1860s.

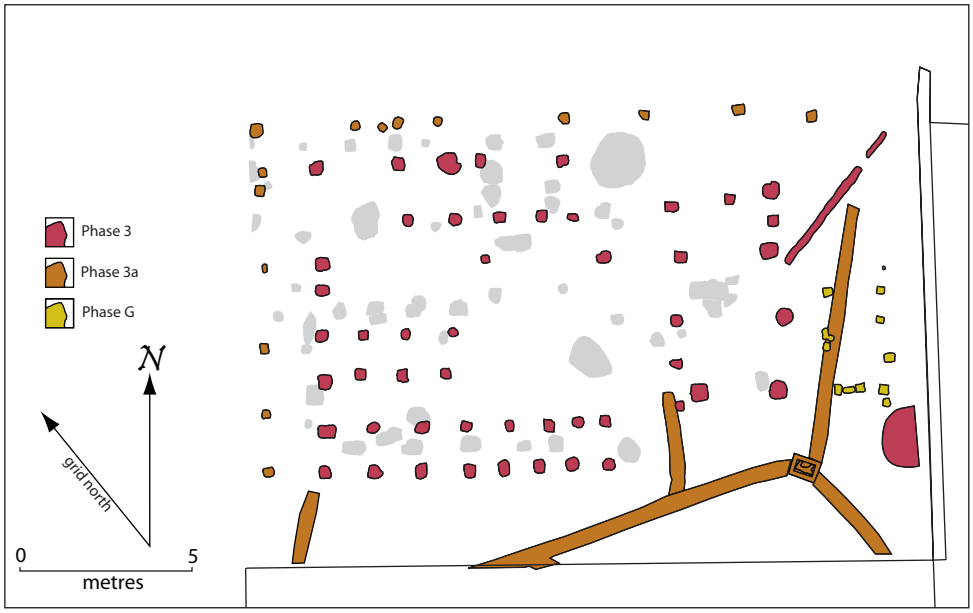
Phase 3: the second Bamber House and associated features

During excavation a grid-like pattern of uniform postholes was clearly visible (Figure 3.5). They were generally distinct squares with depths varying between 60 and 550 mm (mostly less than 200 mm) and almost all contained the remains of a wooden post. One of these was selected for analysis (Feature 21) and shown to be totara, a typical 19th century house piling material. Most were filled with a mottled mix of yellow silty subsoil and brown topsoil, though the two rows at the southern end of the site typically had gravely fill containing river pebbles and occasional iron slag and brick fragments. These mark the second phase of the Babmber House construction and these other features belonging to this phase are shown in Figure 3.6.

In historic photographs the Bamber House appeared to have been modified and extended during the late 1870s or early 1880s (Figure 2.5). It is difficult to judge the relative sizes of the buildings in the photographs and it was unclear from the images whether this was a completely new building, or simply the original one that had been greatly modified. The archaeology suggests that the post 1870s house is a new building that stood in the same place, but on a slightly enlarged floor plan. The foundation posts of Phase 3 represent Bamber House in its later, post 1870s, incarnation.



3.5. The typical appearance of the postholes from the Phase 3 Bamber House (left, scale = 0.25 m) and a row of postholes (right, scale = 1 m).



3.6. Phases 3, 3a and G features from the Bamber House site.

A group of postholes was found beyond the back of Building 2 which probably represents the lean-to visible behind the later Bamber House (Figure 2.5). One narrow metal pipe, 40 mm in diameter, in the back yard area may have serviced this Phase 3 lean-to as it appeared to lead to it, running south west–north east. It was corroded and fragmented but may have been a water or gas pipe. It overlay features already in the area.[2]

A well, Feature 46, was found at the back of the property (Figure 3.7) where its top was cut by a modern brick wall that bounded the east end of the section. The well was excavated to a depth of 2600 mm, though this was not the base. A test pit reached the water table at 3000 mm. The fill comprised successive layers of dark soil containing lenses of coal, some of which are visible in Figure 3.7. Metal, ceramics, glass and bone artefacts were dispersed throughout the fill, but largely concentrated towards the middle; the rest was dispersed throughout the dark soil fill. It would originally have been brick-lined but, as with all wells on both sites, the bricks had been removed.

This well contained the largest assemblage of artefacts, other than metal, from the Bamber House site. A minimum number of 90 ceramic vessels and 6 clay tobacco pipes, and 28 items of glassware were calculated for this feature. Three bell-shaped salad oil bottles, a pig-snout case gin bottle, and a gin bottle with a 'Bernard & Co' seal, can all potentially date to the start of Bamber's occupation in the late 1850s to early 1860s. Among the ceramics several items point to the 1860s as the most likely period of manufacture. The Holloway's ointment pot has a terminal date of production of 1867, while the Old Hall Earthenware Company Willow pattern platter and a Pinder, Bourne and Company piece must have been made from the early 1860s onwards. Two Balme clay tobacco pipes are also likely to have been made in the 1860s. The distribution of the artefacts throughout the fill suggests that the well was filled in over a period of time, rather than as a single event. This activity probably dates to the late 1860s or early 1870s.

[2] Given that the lean to may well be later than the main house (as, technically, a lean to must be, though we can't be sure that it is a lean to rather than part of the original building) it might as easily be assigned to Phase 3a as Phase 3. As an integral part of the house it is here assigned to Phase 3.

Phase 3a: subsidiary structures and amenities associated with the second house

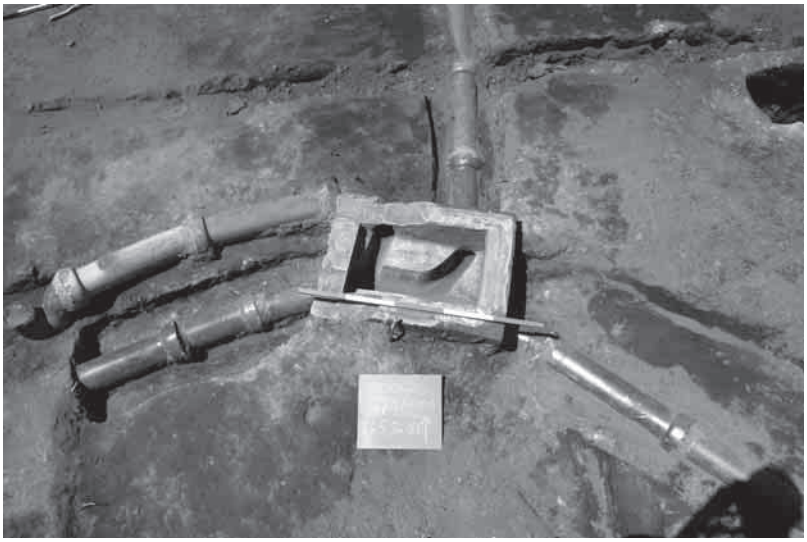
A row of smaller postholes containing small wooden posts ran along the street side and marked the house's verandah. A similar row that ran along the TS 79/TS 78 boundary probably represents a fenceline. These have been given a different phase number as they are not necessarily contemporary with the main house construction.

At the back of the property, near the well, four ceramic drains intersected at one brick and concrete inspection chamber (Figure 3.8). These cut through some earlier pits in the backyard area and so would seem to have been added after the house had been in use for some time. One of the drains may have attached to the south-eastern corner of the house. It was the highest of this group and had a U-bend at the house end. Other ceramic drains led south from the house and probably intercepted this system, while another (unphased) ran along the north boundary of TS 79. We have not been able to determine when public wastewater was installed in this part of Wanganui, but this would probably give us an accurate date for the ceramic drains.

3.7 (above). The well, Feature 46, during excavation. The layer of coal is clear in the section. Scale = 1 m.
3.8 (below). The inspection chamber and the drains radiating from it. To the far left, the U-bend toward the house is visible. Scale = 1 m.

Phase G: garden shed

There were numerous scattered features behind the house but few of them intercut each other or formed meaningful alignments. Many of them had coal mixed into the fill, which could be another remnant of the forge next door or may simply have resulted from household use. A very dark, fine organic soil covered the eastern end and southeast corner of the site in this back of house area and was probably a garden soil. Some features in this area were clearly dug through the soil; others were only visible once it was removed. This division has not been used for phasing as it was disturbed in some places, probably by the demolition of the house in 1995. Separating features by whether they cut, or were overlain by, the garden soil did not reveal any new patterns or alignments of features.



Many small, shallow postholes were uncovered behind the house, some of which appear to have belonged to a small structure, perhaps some kind of garden shed. This structure is referred to as Phase G, since its temporal relation to the house phases is unclear. Some of the postholes making up this configuration contained small post moulds. All were small and shal-

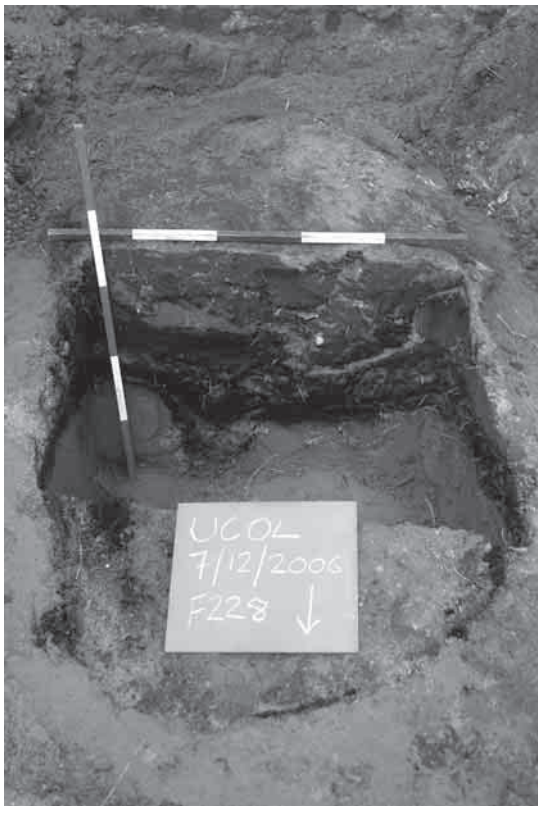
low and while some were clearly visible cutting into garden soil, others were not seen until this was removed.

Miscellaneous features

Many features, particularly at the rear of the house, but also within its footprint, contained very little in the way of artefacts, could not be phased, and formed no clear alignments with other features. There were many small, square postholes of similar dimensions (in the region of 200 x 200 mm), without post moulds, scattered around the north west area of the site. It is not clear what they are related to – perhaps temporary sheds were built on the area before the houses. Many of the house foundation postholes contained brick rubble, coal or metal and slag fragments suggesting earlier activity related to smithing.

A number of pits were found in the back of house area that contained only very few artefacts. Feature 69 had a small collection of five ceramic vessels, seven clay tobacco pipes and a few pieces of metal. A plate decorated with a cut-sponged design (UCOL 137) and fragments of a romantic style transfer printed cup (UCOL 136) made by Sewell, date to approximately the mid 19th century. Feature 64 was very similar and had the rotted remains of a wooden plank across the surface. Both contained mainly coal and coal ash. Feature 228 (Figure 3.9) was a large oval pit 650 mm deep that had been used for some kind of burning activity, perhaps to incinerate rubbish. It was filled with layers of charcoal and ashy brown silt. The fibrous remains of what appeared to be two parallel ponga (*Cyathea dealbata*) logs lay at the top of the pit and more ponga fibres were found in layers throughout the fill. The feature predates the digging of the drain trenches in this area.

One small pit, Feature 158, was just beyond the north boundary of the TS 79 and contained the fragmented remains of a porcelain toilet bowl, but this may well be related to the later occupation of the site by plumbers from 1920 through to the 1990s.



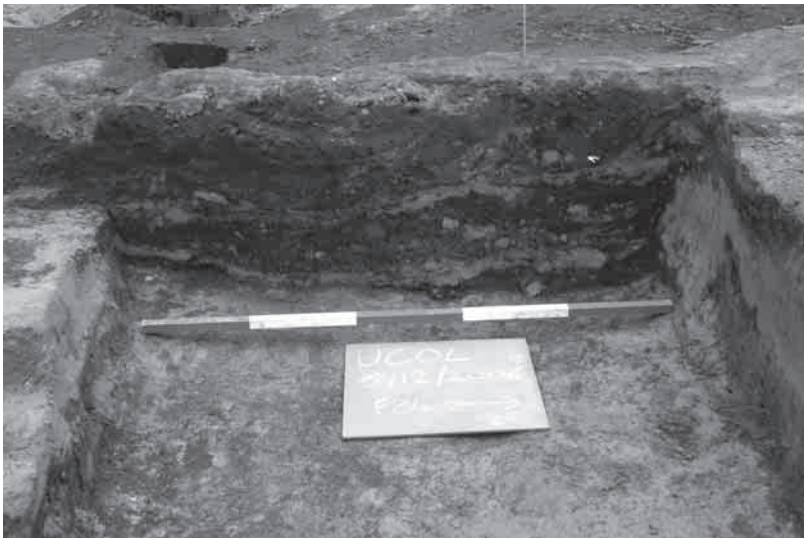
3.9. Feature 228 excavated in half section. Scale = 1 m.

Four large, deep features in the southwest corner of the house area stood out but were difficult to interpret. Two, Features 106 and 72, were both 780 mm deep. Feature 72 cut a posthole that was associated with Building 1. The other two, Features 103 and 177, had a similar appearance but were shallower (250 and 300 mm respectively) and one of them cut Feature 106. They are very large for postholes and may have been rubbish pits with no inorganic artefacts. They lay within the footprint of both phases of the house – they are the only features that we interpret as possibly related to the construction of the second, Phase 3, house.

One ceramic drain was hard to associate with a structure or phase. Feature 96 was a very fragmented and disturbed glazed, ceramic drain, similar to all the others on site. It ran north–south but was truncated at either end. The remains of the trench dug for it contained coal and brick fragments as well as the broken remains of the pipe. It may be that it was disturbed and fragmented when the extension on the back of the later Bamber House was built or it may relate to the earlier Phase 2 building.

A large pit (Feature 84) was found in the centre of the house footprints for which no clear purpose can be established – it may be related to repiling the

Phase 3 house but there was no clear indication that it had been repiled. The shape of the pit gave the impression that it was perhaps initially three pits, but the fill – a mix of dark brown sandy-silt matrix with chunks and lenses of the natural subsoil – was continuous throughout. Figure 3.10 shows it in cross section. This pit was overlain by a widespread deposit of dark brown gravel and soil up to 150 mm deep that covered the centre of the site and was largely a demolition deposit mixed into earlier topsoils and fills (Figure 3.10). The gravel in it was largely made up of river pebbles and the matrix also contained a lot of fragmented brick and some fragments of glass and ceramics. Its fill relates to the 1995 demolition of the house but it is unclear when it was dug.



3.10. West-facing section of Feature 84. Scale = 1 m.

The Bamber House site: summary

The excavation on Town Section 79 covered the area where the house and yard of Thomas Bamber and his family had been. Bamber's forge was on the southern part of TS 79, where the Chronicle Glass Studio now stands, and this area was not excavated – evidence of the forge is unlikely to survive as the glass studio has a deep basement. The excavation was dense with features, especially pits and postholes, some of which outlined two phases of house construction. Unfortunately the ground had been scraped hard during demolition of the house in 1995, truncating many features, destroying their stratigraphic relationships and removing any under house deposits that may have existed. Much of the mixed, fragmented material in Feature 2 may have originated as an underfloor deposit that had been disturbed, mixed with material from truncated features and redeposited. Toothmarks from a digger bucket were visible in the surface of the natural subsoil, particularly at the western end of the site. Any remaining evidence of fireplaces was probably also lost in the demolition process. External and internal chimneys are clearly visible in the historic images of the house.

Although the Bamber House site yielded a large number of features, very few contained any substantial artefactual deposits. Most postholes and many of the pits contained only a few fragments of glass, ceramics and metal. In many features the artefacts were dispersed through the fill and probably not in primary deposition. Some assemblages are notable, however, for the early manufacture date of ceramic patterns and vessels.

Few pits were found to contain any quantity of domestic refuse. There are several possible explanations for this: municipal rubbish collection, dumping of rubbish directly in the nearby river or using the area across from Taupo Quay as a dumping site while land reclamation was in process.

The historic photos (Figure 2.5) show two apparently different buildings and the archaeology clearly shows two distinct phases of building, with each phase being a different size. The first house would have been demolished some time in the late 1870s and replaced with the second, which stood until 1995. At least one post-

hole from the Phase 1 building contains a burnt post, though no wider evidence of fire was observed. Fire may have some bearing on the demolition of the first house, or it may be that the burning was part of demolition activity.

There was clearly substantial activity on the site before either of these structures was built. Many postholes and pits existed before them, though no clear alignments could be discerned. The iron filled pits and scattered metal, coal and slag fragments in the fill of features under the house area suggests that this section was used for discarding refuse from, and became scattered with the debris of, Bamber's forge.

Bamber is recorded as having a leasehold on the section in 1858, though what buildings he had there is not noted until the 1870s when valuation rolls record him as having a six-roomed dwelling and a smithy. A 1908 insurance plan of the block (Figure 2.2) shows Bamber's forge adjacent to the house on the south side, where the Chronicle Glass Studio stands today. The archaeological evidence certainly suggests that the smithy was built next door before the house.

The Wanganui Hotel site, Town Section 77

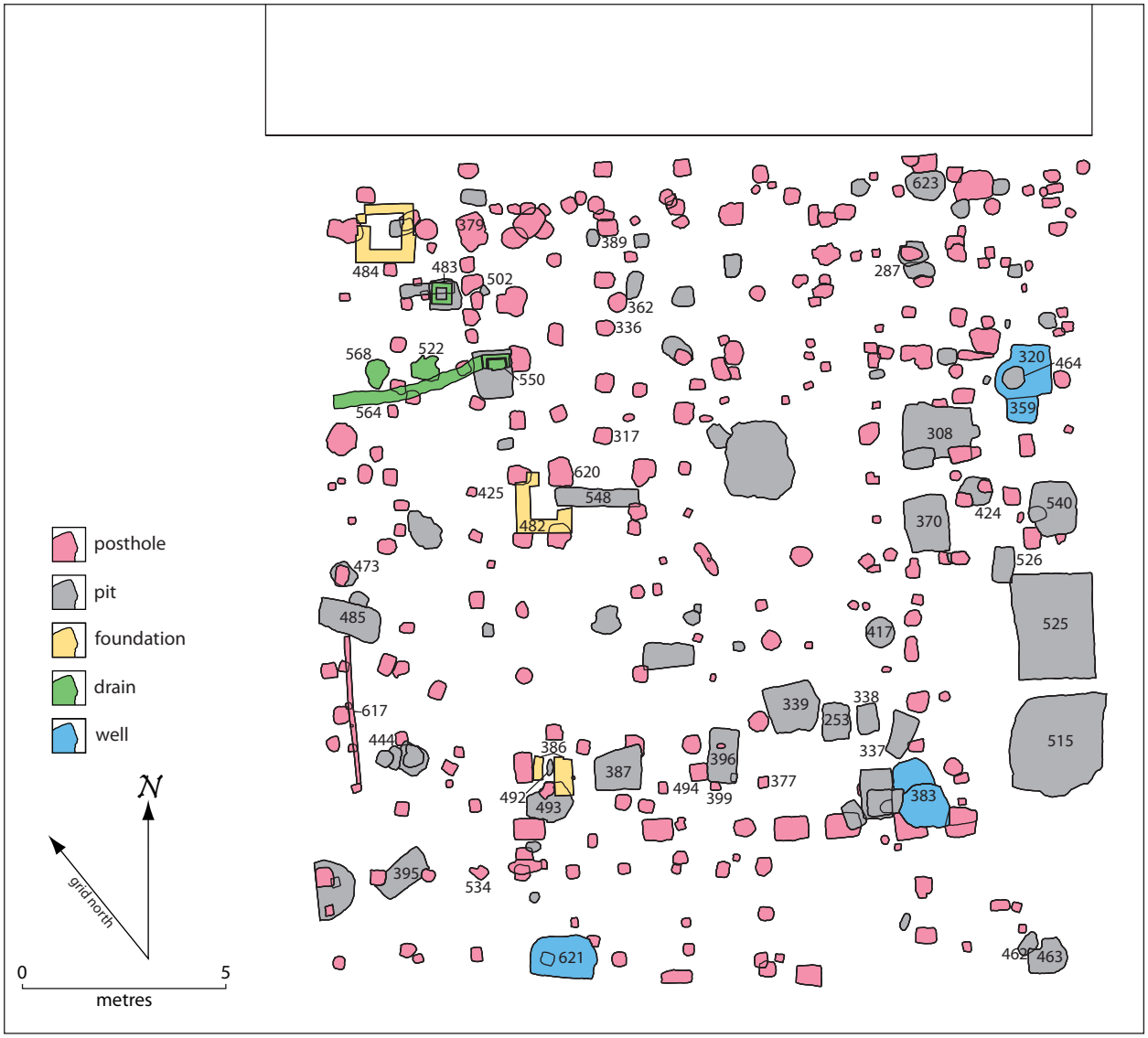
The excavation of Town Section 77 covered an area where the small annexe of the Wanganui Hotel and the buildings of several other businesses had once stood. The Public Trust building, dating to 1914, still stands on the front half of the section where the main hotel buildings were. The overlying material, consisting of a layer of asphalt approximately 30 mm thick over a levelling base course consisting of 200 mm of silt and gravel, was removed by heavy machinery. A dark brown silt and sand topsoil 200–300 mm thick lay underneath this. At the eastern side of the site this was largely removed by machinery, but at the western side some features were found to cut through the last 100 mm of it. The remainder of topsoil in this area was removed by hand once these features were excavated (Figure 3.11).

Phasing

The phasing of the Wanganui Hotel site is different to the Bamber House site. Buildings were added to the section in addition to replacing others. For example, the Phase 5 building replaced those of Phase 3, but Phase 3 buildings were contemporary with those of Phase 2 – the Wanganui Hotel. The sequence of intercutting features, dates of artefact assemblages and historic records and photographs were used to establish phasing.

1	pre-Wanganui Hotel ploughing (not shown on plan)
2	features associated with the hotel but pre-dating the annexe
3	the Wanganui Hotel annexe and associated features
3a	yard buildings of the Wanganui Hotel
4	corn merchant's premises and stables
4a	changes to the hotel yard
5	features post-dating the corn merchant and stables
6	Thompson and Lewis factory extension and other structures

Table 3.2. Summary of phasing of the Wanganui Hotel site.



3.11. Features excavated at the Wanganui Hotel site.

Phase 1: pre-Wanganui Hotel ploughing

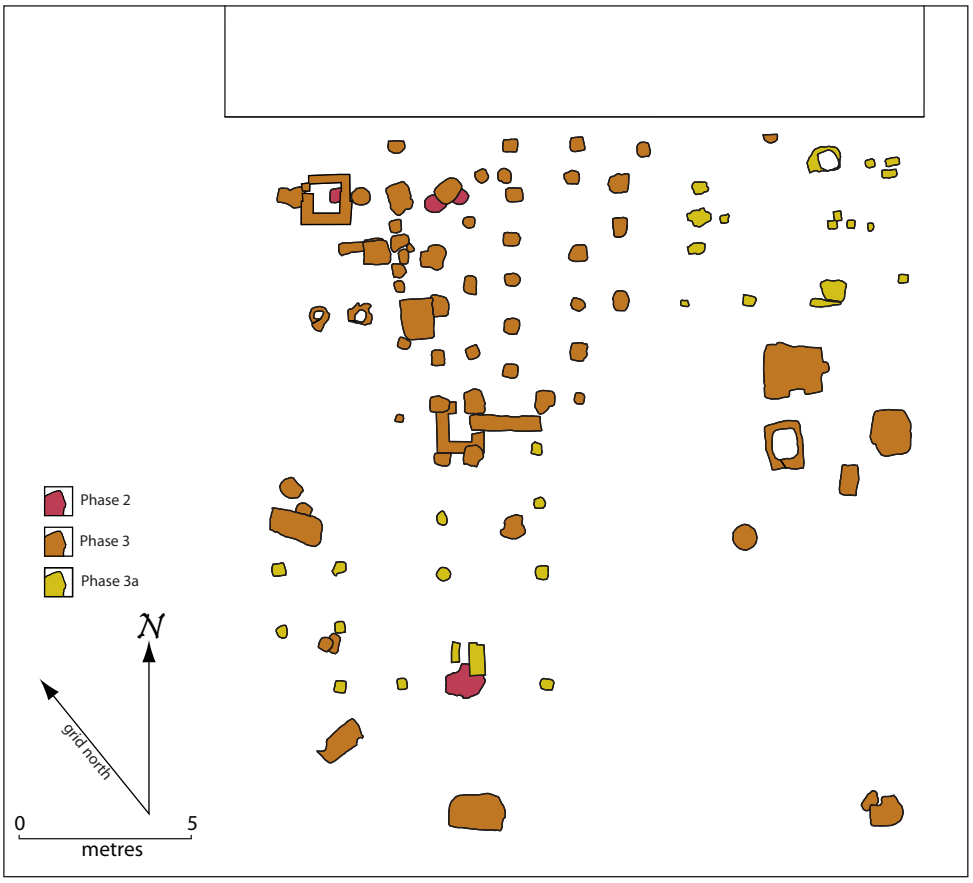
The earliest sign of activity on the site was plough marks in the surface of the natural subsoil (Figure 3.12). These did not disturb the surface of any features indicating that the site was ploughed before the building of any of the identified structures.

Phase 2: features associated with the hotel but pre-dating the annexe

Scattered features were excavated within the footprint of the Wanganui Hotel annexe. Some of these were probably dug in the hotel yard before the annexe was in place. These are shown, along with features of Phase 3, in Figure 3.13.

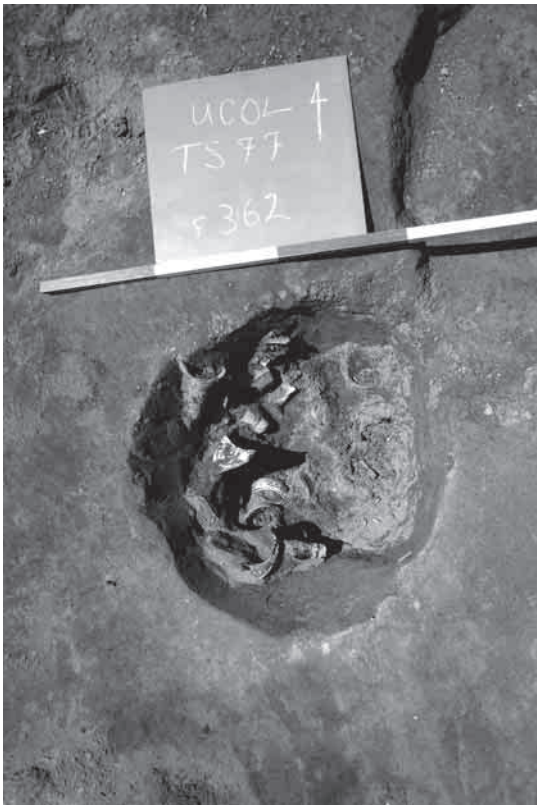
One of these features was a small, circular rubbish pit, Feature 362, containing black beer bottles and a variety of ceramics (Figure 3.14). It was quite deep (740 mm) and though round at the top (450 mm diameter), tapered to a square base measuring 300 x 300 mm. The artefacts were found only in the top half of the fill; the lower fill was largely charcoal and ash. Organic rubbish may have been burnt in the pit before the inorganic waste was buried in it. A shallow oval pit under one

3.12. Lines of shallow scrapes in the natural subsoil show that the ground was ploughed.



3.13. Phases 2, 3 and 3a from the Wanganui Hotel site.

of the hotel fireplaces was clearly early since it predated the fireplace belonging to the middle hotel building. Its purpose was unknown however, as it contained only mixed, mottled silt.



3.14. Feature 362, during excavation. Scale divisions = 0.2 m.

Phase 3: the Wanganui Hotel annexe and associated features

Wanganui Hotel foundation postholes

Early photographs of the hotel clearly show that by the mid 1860s it was made up of three adjoining buildings: one small one-and-a-half storey building on the corner of Market Place and Campbell Place (Rutland Street); a second, larger two storey one behind this on Campbell Place; and a small single storey annexe behind this. The building on the corner was almost certainly the first, with the middle building and annexe added afterwards. The annexe likely served as a kitchen and/or laundry.

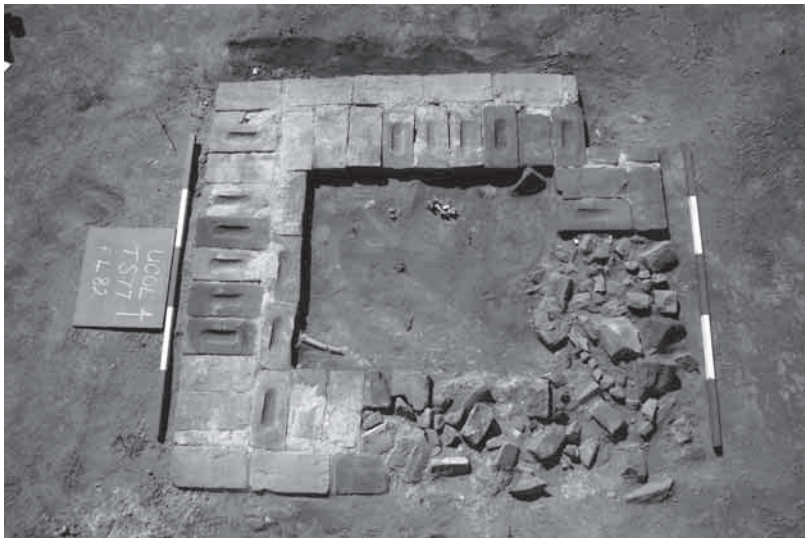
While not as uniform as the Bamber House foundations, postholes for the Wanganui Hotel buildings were evident in the northwest quadrant of the excavated area. North–south alignments were clear and appeared to represent the annexe building. Some contained the remains of wooden posts, but many did not. Wood from one of these postholes, Feature 336, was analysed and found to be totara. The clearest and most uniform alignment is that in the centre of the annexe between Features 389 and 317. Towards the east, definition of the building becomes less certain. Along the northern edge there is a row of postholes that have been cut by the foundation of the Public Trust building. These were most likely foundations for the large, middle building of the hotel.

A cluster of small, mostly quite shallow, postholes in the northwest corner of the hotel foundations appears also to be part of the structure, since these are grouped along the line of what would have been the annexe's western outer wall, Features 425 to 379. A shallow trench leading from the middle of the annexe fireplace base (Feature 482) is believed to mark the position of the southern wall of the annexe.

Fireplaces

The brick bases of two of the hotel fireplaces, Features 484 and 482, were excavated. The location of Feature 484 matches that of a chimney visible in historic photographs on the south west corner of the middle building of the hotel (Figure 2.8). The other fireplace probably belonged to the hotel annexe, even though the photo shows a chimney in the centre of the annexe, in line with the apex of the roof, but the fireplace excavated is further towards the street. The similar layout and types of bricks in the two fireplace bases uncovered would suggest that they are contemporary. It may be that adjustments were made to the annexe building and the chimney moved at some stage, although no evidence of a different position for the fireplace could be identified archaeologically.

Both fireplaces were constructed with the same kind of bricks, with rounded, narrow frogs. In most places only one or two courses of bricks remained. Mortar samples were tested for calcium carbonate using a 10% hydrochloric acid solution. The mortar from the annexe fireplace (Feature 482) contained approximately 5% and the mortar from the hotel fireplace (Feature 484) contained 5–10% calcium



3.15. Feature 482, fireplace.

carbonate, showing that the clay mortar had lime added to it.

The bricks from the north east corner of Feature 482 were fragmented, though they had not been scattered or dispersed, but remained within the outline of the square fireplace base (Figure 3.15). Underneath these broken bricks lay a large, square posthole (Feature 620) and a shallow trench (Feature 548). Figure 3.15 shows how the broken bricks had been incorporated into the fill of the large posthole. Once the shallow trench was excavated, undisturbed bricks could be seen beneath it.

The other fireplace, Feature 484, also showed some sign of damage, or perhaps use of recycled bricks, on its north east and south east corners. The north west corner was cut through by a later posthole. Two postholes on its west and east sides represent foundations of the wall that the chimney was set into. Both contained the remains of large wooden posts. At its northern end the bricks were laid on a layer of soft black sand with a small amount of mortar underneath them.

Drainage

Two gulley traps related to the hotel annexe were uncovered in the north west corner of the site. Both were constructed of bricks with wide, squared frogs, distinct from those used for the fireplaces. The two were connected by a shallow drain that remained only in the topsoil.

The first of the gulley traps (Feature 550) had had the bricks from its walls packed in to fill the middle of it once it was disused, leaving a neat block of bricks. It had been set into a rectangular pit and had a metal stand-pipe partly overlying it, which probably stood against the wall the hotel annexe.

3.16. The gulley trap, Feature 483. Scale = 1 m.

A drain trench (Feature 564) led from this gulley trap to the street. Underneath it was a series of blue-tinged clay features that did not appear to be cut, but rather an effect of water collecting in the soil (due to, for example, a leaking water pipe). Two large pits (Features 522 and 568) along the drain line may have acted as sumps. Their irregular tops sloped down from the drain and they too contained blue-tinged clay.

The second gulley trap, Feature 483 (Figure 3.16), had

no visible outflow but was laid on a clay cap covering a sand filled pit, probably a sump.

Rubbish pits

There were a number of rubbish pits including bottle dumps around the section. Feature 395 was a bottle pit that belongs to this phase, before the corn merchant's building (Phase 4) was established over that area. This was a 1000 mm deep pit packed with glass and little else. It contained 525 items of glassware, 495 of which were alcohol bottles. Two plain ceramic vessels and three clay tobacco pipes were also recovered. Like the other hotel bottle pits, many of the bottles still retained part of their paper labels. From the labels and embossings most of the material would seem to date to between 1860 and 1870. The pit was probably filled in the late 1860s to early 70s. The fill was a coarse, brown, sandy soil underneath a 150 mm cap of compact yellow silt, which was probably laid when the corn merchant's premises was built over it.

Feature 473 may also have belonged to this phase. This was a shallow pit that appeared to have been truncated by heavy machinery, leaving it only 60 mm deep. It was filled with broken glass – a minimum of 30 items of glassware and just two ceramic vessels. Items such as an Asiatic Pheasants serving vessel and a Dr Townsend's Sarsaparilla bottle were probably made in the 1860s or 70s and so the pit was most likely filled in during the 1870s.

More general rubbish pits were found on the street side of the site. Feature 485 was a long, oval rubbish pit that went into the western edge of the site. It contained a lot of coal, bone and broken lumps of asphalt in addition to a minimum number of 12 ceramic vessels and 33 items of glassware. A William Brownfield Pansy pattern chamberpot, Asiatic Pheasant pattern vessels and gilt edgebanded vessels all point to manufacturing dates in the 1860s and 70s. Part of a Dr Townsend's Sarsaparilla bottle also dates to this period. This pit then was probably filled in sometime in the 1870s. Another small glass-filled feature located on the west side of the hotel annexe, Feature 502 was a very shallow (110 mm) pit densely packed with broken glass including fragmented black beer bottles and table glass.

One cluster of bottle dumps and rubbish pits was of particular interest. They were located in what would have been the corner of the yard during Phase 4, but all dated to the 1860s, before the corn merchant's premises (Phase 4) were established (Chapter 2). Feature 339 (Figure 3.17) was the largest of these and was densely packed with bottles and broken bottle glass for most of its 1030 mm depth. A minimum of 1082 items of glassware were represented in this pit, 954 of which were alcohol bottles, 23 condiments, 20 Hamilton patent aerated waters bottles, and the rest miscellaneous. The alcohol and condiment bottles were notable for having a large number of well preserved labels. From the labels and embossings the dates of manufacture can be securely placed in the 1860s. Of the ten ceramic vessels, five were stoneware schnapps and gin bottles. One of the stoneware schnapps and 93 of the glass bottles were recovered whole. A 130 mm thick lens of yellow-brown pumice sand within the fill indicated that the pit was filled in two events in rapid succession rather than being used over a period of time. The distributions of glass types and labels in these pits is mapped in Chapter 5.

Different approaches were taken to disposing of bottles from the hotel: while Feature 399 contained many whole bottles, Feature 253 next to it almost exclusively contained densely packed, broken bottle glass for all of its 700 mm depth (Figure 3.18). One plain ceramic jar, a 'Balme' clay tobacco pipe and a fragment each of Willow and Rhine pattern ceramic were the only other artefacts in the feature.

The degree of brakeage shows that the bottles were deliberately smashed as they were thrown into the pit – whether this was to fit more bottles into the pit or

3.17 (top). The bottle dump, Feature 339, contained a lot of whole bottles. To the right is Feature 253, already emptied of its contents. In the far right the surface of Feature 338 can be seen. Scale = 1 m. 3.18 (bottom). Feature 253 was densely packed with fragmented glass. Scale = 0.5 m.

for fun, or both, we cannot say. Once again, the great majority – 414 of a total of 458 items of glassware – were alcohol bottles. Only 13 of them were recovered whole and these were mainly small black beers and ring-seals. Although there was no definable stratigraphy, it was noted during excavation that there were more case gin bottles at the top, and ring-seal and clear glass bottles towards the base, with black beer bottles throughout. Of the 414 alcohol bottles, 195 were black beers, 80 case gins, 94 ring-seals and 25 spirits. The bottles and labels gave a date of 1860s. In a commercial establishment such as a hotel the curation period for bottles would possibly be much shorter than in a domestic setting where bottles may have had frequent use for contents other than the original. These pits can confidently be dated to the 1860s and were directly related to the hotel.

Another pit in this group was Feature 338, which was much smaller and shallower (350 mm deep) than the other bottle pits. Although the artefacts it contained were also predominantly alcohol bottles, its fill was more mixed and included metal and brick fragments. The artefacts were of a similar nature and date to those of the adjacent bottle pits. It contained two ceramic vessels and 38 items of glassware. Of the glass bottles 25 are alcohol bottles, including 8 black beers and 12 gin bottles. A lead capsule from a Blood, Wolfe and Company black beer and two 'Evans' Hamilton patent soft drink bottles were also recovered (see Chapter 5). All of this material would appear to date to the same period as the large bottle pits.

Feature 337 was adjacent to this, again with similar material dated to the 1860s and interspersed with brick and metal fragments. It was not as densely packed as the other pit though, containing only 164 glassware items in its 1080 mm depth. Only 124 of the 164 items of glassware were alcohol bottles but several stoneware stout bottles were also present among the ceramics. Embossings and labels from the black beers suggest a manufacture date in the 1860s for most of the bottles. A minimum of 22 ceramic vessels were recovered, including an Olive pattern soup plate by Hope and Carter (c. 1862–80). One of the two clay tobacco pipes was from the firm of Balme and probably dates from the 1860s as well.

Feature	length (m)	width (m)	depth (m)	volume (m^3)	MNV	MNV/m^3
253	0.9	0.68	0.7	0.43	458	1069
337	1.05	0.7	1.08	0.79	164	207
338	0.7	0.55	0.35	0.13	38	282
339	1.13	1.27	1.3	1.87	1082	580
395	1.45	0.7	1	1.02	525	517

Table 3.3. Density of glassware in the bottle pits at the Wanganui Hotel site.

When the density of glassware in each pit is calculated as MNV/m^3 it is clear that Feature 253, where the glass was mostly smashed, contains between two and five times as many vessels as the other bottle dumps (Table 3.3).

To the north of this cluster was another rubbish filled pit, Feature 417. This was an almost perfectly circular pit 750 mm deep. What its initial purpose was is unclear, but when it fell into disuse it was filled in stages – first with a dark soil layer that was densely packed with artefacts, then with mixed silt including a minimum of 15 ceramic vessels, two clay tobacco pipes, and 45 items of glassware. Among these artefacts are several early styles and pieces. A saucer in the Cleopatra pattern and a Dimmock and Smith Willow pattern plate cannot have been made any later than the 1850s. The Balme and Baltic Yachter clay tobacco pipes probably date to the 1860s. The alcohol bottles possibly date to the 1860s as well, with pontiled black beers and a pig-snout gin being present. This pit then most likely dates to the 1860s.

A number of other features were located to the east of the hotel building. Some of these were also refuse pits, while others appear to have had unknown functions. Features in this area predated the postholes of what is thought to be an extension to the stables of the corn merchant's premises.

Feature 540 is perhaps one of the earliest pits at this site. The pit had a lot of black ash and charcoal through its fill with one discreet area of burning in the southern end. The top of the pit had a cap of yellow silt and clay, which may have been deposited in preparation for the construction of the later (Phase 4a) structure in this part of the site. It would also appear to relate to the Hotel occupation with a minimum number of 55 ceramic vessels, 14 clay tobacco pipes and 92 items of glassware recovered, including a minimum of 36 tumblers. Among the clay tobacco pipes, those from the firms of Murray, Milo, Balme, T. White and Co. and McDougall all point to manufacturing dates in the late 1850s or 1860s. The ceramics present a similar picture with the only identified manufacturer from this feature being Pinder, Bourne & Hope (c. 1851–62). The Powell and Co. black beer, three pig-snout gins and four handmade decanters may also date to the 1850s and 1860s.

Feature 526 was a pit containing fibrous burnt material, some of it with an appearance like ponga log. It mostly had a brown, silty fill but under this was a layer dense with bone and several types of shell, some of it burnt. The flat base was covered with ash and charcoal.

Feature 370 was a rectangular pit that had two distinct fill episodes. The first, 750 mm deep, was a sandy, dark brown silty matrix. The second fill, maximum 500 mm thick, was dense coal. Artefacts were dispersed through both fills and included a mixture of small domestic items. The pit reached 1200 mm in depth and its purpose is unclear since it does not appear to have primarily been a rubbish pit, certainly not for inorganic waste. Its upper edges were rounded and sloping, as if it were open for a period of time.

Another rubbish pit, Feature 462, was an oval scoop 300 mm deep, positioned quite far from the hotel in the south east corner of the site. It was densely packed with household rubbish. The material in it was similar to that in the pit that cut through it, Feature 463. The latter was a rubbish pit that was irregular at the top but became a regular, 700 x 530 mm rectangle about a third of the way down. The fill was dense with mixed rubbish including 22 ceramic vessels, two clay tobacco pipes and 30 items of glassware concentrated at the base. Among the ceramics was a William Copeland Willow pattern plate and a Broseley Lucerne pattern saucer. Most of the glassware was alcohol bottles and included pontiled black beers and a pig-snout case gin. It contained a second fill that did not have rubbish in it. This was black sand that was present most of the way down the west wall of the pit. It appeared to have been used to fill in the pit after the rubbish fill was piled into it. This pit could be associated with the hotel during its early period before the corn merchant's was built, or it could be associated with the latter; as it cannot be dated any more precisely than to the 1860s or 1870s.

Possible cellar

Another large pit in this area appeared to have a quite different function. Feature 308 was a deep, rectangular pit with very straight walls and a flat base. It measured 1.77 m by 1.65 m and was 1.5 m deep (Figure 3.19). It had been filled with mixed sandy silt with loose gravel on top. Both fills contained dispersed artefacts rather than concentrations and included fragments of brick, coal, slag and charcoal. Scattered fish bone was found, particularly among the gravel fill. It was clear that the pit's purpose was not for refuse disposal. It yielded a modest assemblage of artefacts consisting of a minimum of one ceramic vessel, three clay tobacco pipes, 22 items of glassware and a few metal items. The ceramic plate is in the Pearl Wreath pattern, manufactured by George Jones between 1861 and 1867. A clay tobacco pipe stem carrying a 'Davidson' mark also dates to after 1861. Other potentially datable items were a lead capsule from a Hennessey cognac bottle and a H. J. Hall trade token from Christchurch. The fill of this pit must date to the 1860s or later.

Its regular, deep straight sides and flat base suggested that it may have acted as a small cellar or cold store for the hotel. It was close to where the hotel building is expected to have stood, but not within it, so would have had to be accessed from outside. There was probably a small structure over it to keep rain out. Some of the numerous miscellaneous postholes in this area may belong to such a structure though nothing can be clearly identified.

3.19. Feature 308, the possible cellar. Scale = 1 .m

Halfway down the walls was a band of iron staining 200 mm to 400 mm wide. This appeared to be from a metal brace of some sort supporting the walls, which in places were extremely soft as the subsoil contained layers of loose, pumice sand. Nothing was found to indicate how the cellar was accessed, for example, steps or grooves for a ladder.

Well

Feature 621 at the southern border of the excavation area may have been a well. The feature was dug in half section since it extended beyond the excavation area and was cut at the top by a modern gas line trench. Its shape was irregular at the top where it was roughly rectangular and 1500 mm wide, but at 300 mm depth it began to slope to a narrower shaft only 1000 mm wide. This irregular shape may be a result of disturbance when the bricks were retrieved. The feature was only 2500 mm deep but otherwise its shape suggests a well. It belongs to Phase 1, 2 or 3, certainly pre-1873 since one of the postholes of the corn merchant's premises cut into it. As with all wells uncovered during the excavation, it was no longer brick-lined. Artefacts were dispersed through a silty fill all the way to the base and included a wide range of material that was indicative of a domestic household rather than the hotel. It contained a minimum of 86 ceramic vessels, 3 clay tobacco pipes, 121 items of glassware, a surprisingly large amount of footwear – 33 pairs – and a number of other miscellaneous items. It did not contain the large amounts of alcohol bottles or serving dishes that some other features did. The ceramics were notable for having a large proportion of complete or near-complete vessels. These included a stack of four Morea pattern plates, a set of three blue banded chamber pots, and 25 semi-vitreous teaware vessels with sprigged decoration. Datable items were a John Hawley Ava pattern chamber pot (c. 1860s), a Stephen Green jar (c. 1850s), a William Copeland Willow pattern plate and a Joseph Bourne bottle (c. 1850s). Several salad oil bottles had diamond registration marks dating from the 1850s–1870. All this suggests that the well was filled as a single event sometime in the 1870s so it was probably in use up until shortly before it was built over in 1873.

Phase 3a: yard buildings of the Wanganui Hotel

Rows of postholes in the yard area of the hotel indicate that there was another structure to the south of the hotel annexe. One photograph of the hotel in the early 1870s (Figure 2.8) shows a low roofline here, though unfortunately a tree obscures most of it. The layout of the postholes indicates a long building oriented along the Campbell Place (Rutland Street) frontage. This may have been some kind of shed or yard building.

One small section of brick paving and a pile of fragmented bricks could be the remains of a brick floor to the structure (Figure 3.20). This was Feature 386, which appeared to be cut through by the fenceline of the corn merchant's building (Phase 4). One fenceline posthole had been dug through a gap in the bricks.

The bricks were laid in three rows with a gap the width of one brick between the western-most row and the other two rows. There was only one course of bricks, which were frogged and most of the frogs faced upwards. The bricks were not the same as those used for the hotel fireplaces, but had wide frogs with squared corners, similar to those used to make the hotel gulley traps. Some of the bricks were laid directly on the clean black sand that filled a large oval pit with a scooped

3.20. Feature 386, possibly the remains of brick flooring. Towards the bottom of the image, the black sand filling Feature 493 can be seen. Scales = 1 m.

base (Feature 493), indicating that the black sand was used to fill in the pit and level the area when the bricks were laid.

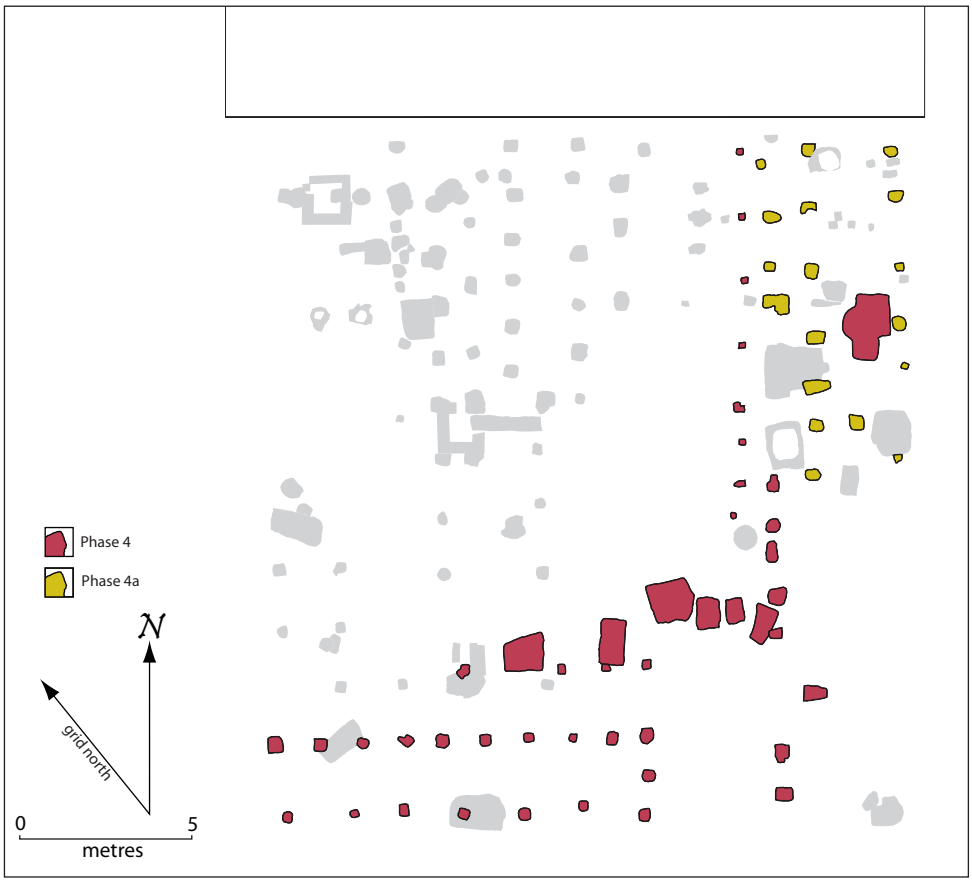
Another yard building may be represented by postholes in the north east corner of the site. Two photos from the 1870s show the edge of a small structure here, directly to the east of the hotel annexe (Figures 2.7 and 2.8). It is difficult to distinguish for certain which postholes might belong to the structure – the most likely group is shown in Figure 3.13.

Phase 4: corn merchant's premises and stables
Possible corn merchant's building

Two early buildings that were added to the section after the construction of the Wanganui Hotel have been assigned to Phase 4. Postholes along the southern and eastern edges of the excavation area appear to represent these two buildings shown in historic photographs and noted in rates rolls.

As outlined in Chapter 2, in 1873 a corn merchant named Isaac Freeth was listed on valuation rolls as occupying a house, store and stables on TS 77. J.W. Jackson then ran a livery service from the stables and yard in 1875. Figure 2.8 shows, on the far right, the small buildings believed to be the corn merchant and livery business buildings and the stables referred to in the 1873 and 1875 rates rolls.

A series of postholes in the southwest corner of the excavation area may represent foundation posts of one of the buildings of the corn merchant/livery businesses (for the sake of simplicity, referred to as the corn merchant's building). The structure spanned two-thirds of the section, approximately 13 m. The postholes of



3.21. Phases 4 and 4a from the Wanganui Hotel site.

the northernmost row were particularly uniform in size and all contained the remnants of wooden posts in a gravel fill. The wood from one of these posts, Features 534, was analysed and found to be totara. These are shown on Figure 3.21.

Stables

The stables building can also be seen in Figure 2.8. It stands by the corn merchant's building with ventilators above the doorways .

An alignment of postholes in the south eastern end of the site may represent the front (street-facing side) of the stables. There is no row to represent the back of the building, though they may have been affected by the large pits here (see below) or simply have been outside the excavation area. A small point in favour of this being the stables was the finding of two horseshoes in a cluster of horseshoe nails within its outline.

To the north of this were more rows of postholes running north-south behind the hotel annexe. A separate structure or perhaps an extension from the stable building existed here sometime after the cellar was in use (since one of the postholes clearly cut the cellar wall). There is no photographic evidence to confirm an extension adjoining the stables or any structure of this size in this position however.

Phase 4a: changes to the hotel yard
Well

Feature 320, another well, was located on the east side of the hotel building. This well was possibly dug to replace the other (Feature 621) when the corn merchant's building covered it. Its shape seemed to represent two things: a circular well that would have been lined with bricks, since removed; and a rectangular pit with the same fill, probably dug when retrieving the bricks. The well was filled with mixed sandy silt, pebbles, coal, slag, charcoal and numerous artefacts. It was 960 mm in diameter and was excavated to a depth of 2000 mm. The water table was not reached. There was no difference between the fill of the rectangular and circular components of this feature so they were probably filled in at the same time after retrieving the bricks. A small but varied collection of artefacts was recovered, consisting of a minimum of 35 ceramic vessels, 3 clay tobacco pipes, 18 items of glassware and an assortment of miscellaneous items. A number of items, including a John Miller clay tobacco pipe and Olive and Pearl Wreath pattern ceramics, cannot have been made until the 1860s at the earliest and so the fill of this feature probably dates to the early 1870s.

3.22. Features 320 (middle, semi-circular feature), Feature 359 (right, rectangular feature) and the cross-section of 464 is visible in the facing wall. Scales = 1 m horizontal, scale divisions = 0.5 m vertical.

A second rectangular pit (Feature 359) cut into this feature and was probably also dug to retrieve bricks. Its fill was a light pumice sand mixed with lumps of clay, coal and river pebbles. It was excavated to 1860 mm and an auger probe showed it to continue at least to 2 m deep. These features are vis-

ible on Figure 3.22 along with yet another intercutting feature (464), a later pit, possibly for a latrine, cut into the centre of the well (see Phase 5).

Fenceline and features dug against it

A small group of postholes represent a fenceline separating the corn merchant's premises from the hotel. Features 494, 399, 377 and 492, formed an east–west line parallel to the corn merchant's building, approximately where a fence is shown in Figure 2.8. They were all square, with a similar fill. Feature 492 was an L-shaped hole that was probably a posthole that had been used to dispose of rubbish once the post was removed. The remains of a large Rhine pattern serving platter was packed into the hole along with fragments of black beer glass.

The bounds of the hotel yard would have been reduced by the construction of the corn merchant's building. A number of features were subsequently dug against this fenceline on the hotel side, which would then have been at the very back of the hotel yard.

Feature 387 was a large pit containing several layers of fill (Figure 3.23): at the base were layers of different coloured and grained soil and sand; next was a layer containing glass, bone, cloth and ceramic in a mottled black sandy soil and a charcoal lens; on top of this was a 500 mm layer of white, coarse-grained pumice sand (Figure 3.24) and last was a rubbley, mixed layer including a lot of fragmented brick. Its base was 1.2 m below the ground surface. The last could well be a deposit related to demolition or levelling activities, which had been pushed into the surface of the pit.

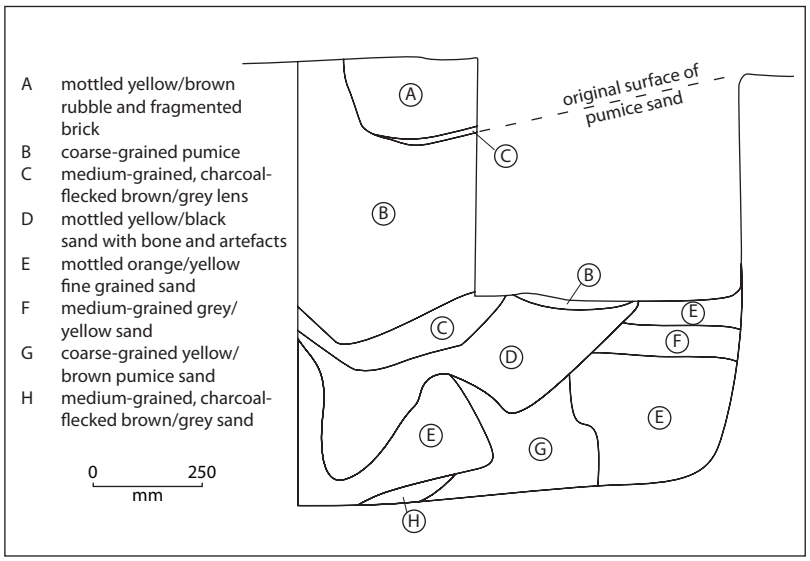
The purpose of the pit is unknown and its artefacts did not allow for a date estimate. It was deep with straight sides, as was the possible cold store (Feature 308, described above) though not as regular in shape. It may have performed a similar function once the structure to the north of the stables had caused the cellar to be disused,

The white pumice sand that filled Feature 387 was noted in many features around this central part of the site, such as in Feature 396, a large but very shallow (1360 x 760 x 40 mm), rectangular feature, which also appeared to have been dug against the fenceline.

A curious feature in what would have been the southwest corner of the yard at this time was a bitumen pit, Feature 444 (Figure 3.25). This feature was noted as a rubbley patch of degraded mortar and pumice. Under 120 mm of this fill, a tar surface was uncovered that was round and scooped. In it were impressions of coarse woven material, probably sacking, and a round disc, which was perhaps an object fallen in the tar. The tar formed a large round column in the ground, showing that it had been poured into a round hole and set this way.

Another fenceline was found to the east of the hotel. A north–south alignment of small, square, shallow postholes

3.23. Cross-section of the east-facing wall of Feature 387.

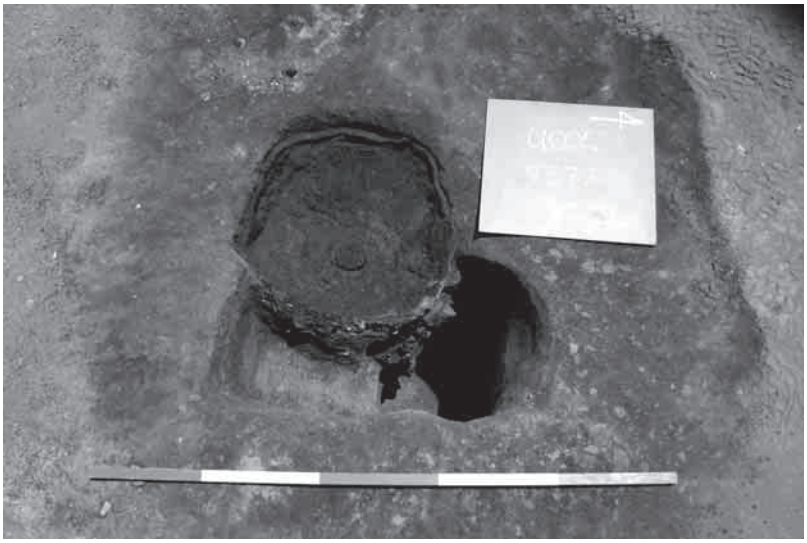


were clearly visible between the hotel building and the stables, and probably served to separate the two. These were mostly about 200 x 200 mm and between 100 and 150 mm deep.

Phase 5: features post-dating the corn merchant's and stables

From 1879 there is no further record of the corn merchant or livery businesses on the section. Almanacs and valuation rolls list J. Chadwick, an auctioneer, occupying TS 77 between 1879 and 1881. If his business established any new buildings, these are not evident archaeologically so presumably he occupied the former corn merchant's.

Some time after the demolition of the stable building but before the site became vacant, another well, Feature 383, was dug on the property, this time in the south east corner. Like all the wells excavated, it appeared to have had its lining bricks retrieved. This would explain the irregularity at the top of the feature: it was rounded on the west side, but squared on the east and south sides, reminiscent of the other wells, described above. On the surface, and for the top 800 mm, the feature contained corroded iron and mixed artefacts. It was excavated to a depth of 2600 mm, but the base was not reached. The well contained a minimum number of nine ceramic vessels and 22 items of glassware. The style of the ceramic patterns suggests that most pieces were manufactured in the 1860s. With the bottle glass, the inclusion of Dr. Townsend's Sarsaparilla and Udolpho Wolfe's Schnapps, suggests a date in the 1870s. This feature, then, cannot have been filled in until the 1870s. The well and some of the surrounding features that it intercut with can be seen in Figure 3.26. Features assigned to Phases 5 and 6 are shown on Figure 3.27.

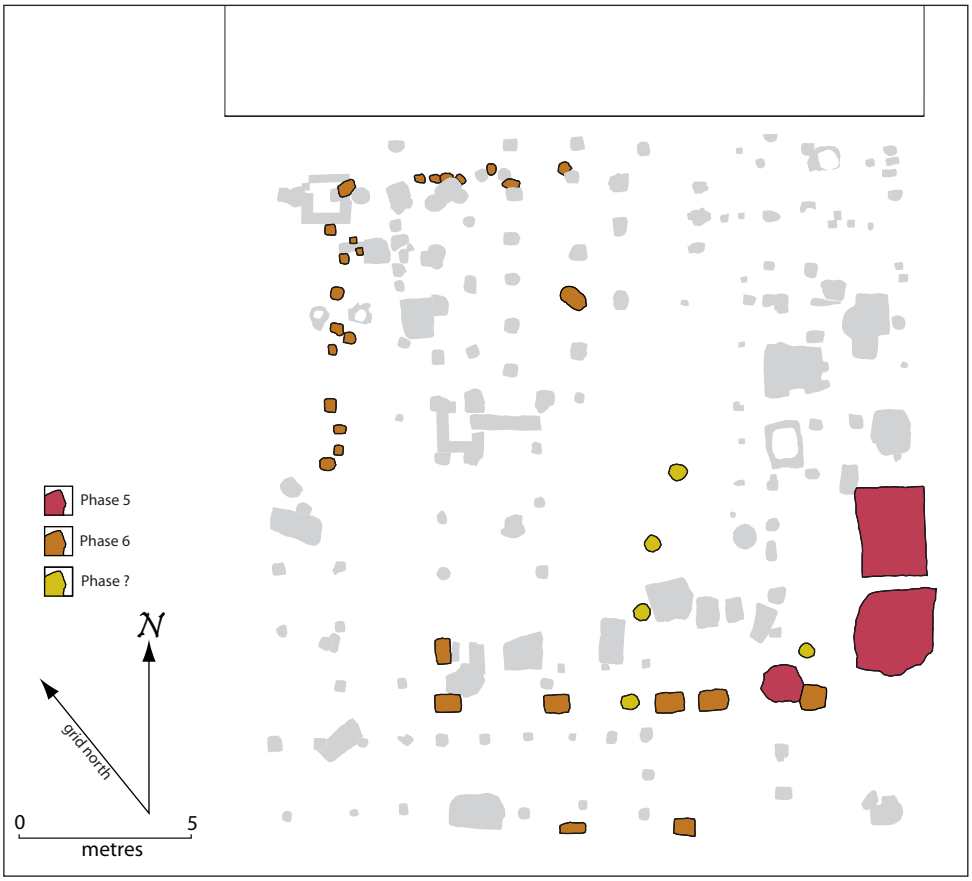


3.24 (top). Feature 387 from the surface. The white pumice fill shows up clearly. Scale = 1 m. 3.25 (bottom). Feature 444, the bitumen pit. Scale = 1 m.

Later features associated with the hotel

Two large rubbish pits, Features 515 and 525 were located in the area where the stables once stood. Both were near square, over 2000 mm across and up to 2000 mm deep. Neither were fully excavated due partly to time constraints and partly because test trenches, approximately 700 mm wide, excavated across the width of each showed that both had been fossicked. In Feature 515 this was made clear by the presence of a modern Coca-Cola can in the fill. Otherwise, their fill was gravely silt mixed with deposits of ash and coal and throughout the fill were dis-

3.26. The well, Feature 383, during excavation, cutting through several earlier features. Scale = 1 m.



3.27. Phases 5 and 6 from the Wanganui Hotel site.

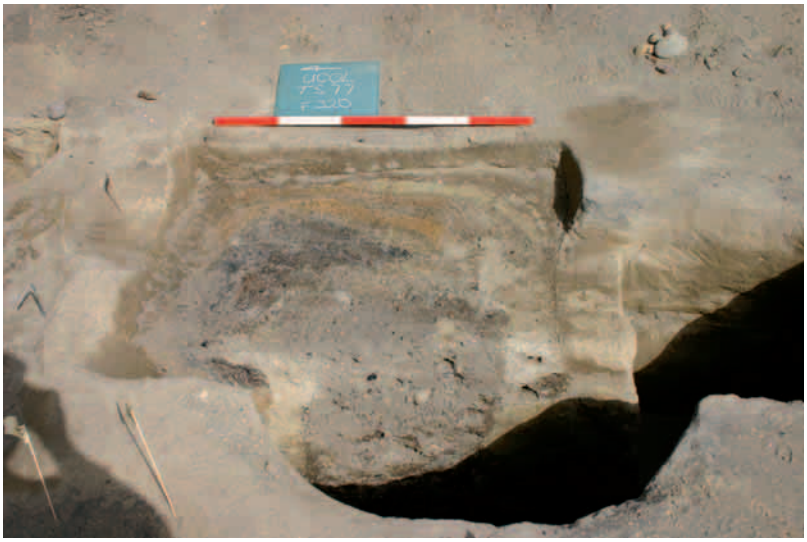
persed artefacts. The contents of each pit were sampled and from Feature 515 a minimum number of 99 ceramic vessels, two clay tobacco pipes and 263 items of glassware were recovered. The dates of manufacture for both ceramic and glass artefacts ranged from the 1860s–1870s, with a few earlier and later items. The range of items recovered from the test trench is unlikely to be significantly different from that originally deposited in the pit. The dates of objects in the pit suggest that it was filled in over a period of time, but this was not able to be determined due to the disturbance. The ash and coal indicates dumping of daily household/hotel waste, and distinguishes the use of these pits from the bottle pits, which had a very specific use. The size of these pits also distinguishes them – they were both approximately 8 m^3, while other pits around the site averaged only about 1 m^3.

The trench through Feature 525 yielded 58 ceramic vessels, three clay tobacco pipes and 77 items of glassware. Manufacturing dates point to the 1860s and 1870s, with no items securely datable to the 1880s or later. This suggests a date for this pit in the 1870s.

The later date of Feature 515 indicates that it would have been dug after the presence of the stable here. These pits are therefore attributed to this stage after Phase 4, but before the construction of the Thompson and Lewis factory in the 20th century, when the hotel no longer existed. It may be that once the stables building had been removed, the yard available for use by the hotel expanded again.

Possible latrine

Feature 464 was a deep, oval pit that cut into the centre of the well, Feature 320. It measured 500 x 800 mm and at the base, at a depth of 1800 mm, whole bricks were found which appeared to have fallen or been dropped in. It had a much darker brown fill than the well. At the top, this fill was ringed by a rusty orange stain, possibly from metal elements in the latrine structure, visible in Figure 3.28. The feature contained 18 ceramic vessels, four clay tobacco pipes and 16 items of glassware. A plate in the Olive pattern, backmarked with the retailer's name, Alfred B. Pearce, cannot have been made before 1866 and the Davidson and Higgens clay tobacco pipes also date from the 1860s onwards. This would seem to point to a date in the 1870s for this feature. It is possible that this was a later latrine, which made use of the soft fill of the old well for easy digging. Its dark fill could be a residue from a high organic component and its shape and depth would seem to suit this purpose.



3.28. The dark fill of Feature 464 cutting Feature 320, ringed by an orange-stained, sandy fill. Scale = 1 m.

Phase 6: Thompson and Lewis factory extension and other structures

As outlined in Chapter 2, the Thompson and Lewis factory was recorded as having extended onto TS77 for a time in the early 20th century. Part of these Thompson and Lewis extensions appear to be represented in the archaeology by a series of large, deep, rectangular postholes. They made an east–west line across the south end of the excavation area. The postholes were of similar dimensions

(approximately 750 x 500 mm x 750 mm deep) and most had small, square post moulds or posts, also of similar dimensions (170–190 mm square) within them. These are marked above on Figure 3.27. They appear to have supported a tall building, since they had large, deep postholes for relatively thin posts, which indicates that they were intended to support height rather than weight.

Chapter 2 describes an unknown structure behind the Public Trust building in the early 20th century (Figure 2.13). It stood where the hotel annexe would once have been and would have covered roughly the northern third of the excavation area. This late structure could explain some of the many features unaccounted for in the area. When other phases are removed from the plan it is clear that postholes cluster along the western edge, perpendicular to the back of the Public Trust building, and along the north edge, parallel to it. Those along the north edge cut through and postdate the hotel foundations. They could have belonged to this mysterious structure, the purpose of which remains unknown, but has been suggested to relate to storage for Thompson and Lewis or for an auctioneer by the name of Judas Keesing, who bought a part of the land between the Public Trust building and the Thompson and Lewis factory in the 1910s.

Miscellaneous features

A number of features, mostly postholes, cannot be placed in a phase or associated with a particular structure. Among these was a group of round postholes that were clearly similar to each other and formed an arc running north east–south west across the middle of the site. They were large, 500–550 mm in diameter, and between 500 and 700 mm deep with clear, square post moulds. Most had a soft dark fill in the post mould and a mottled yellow and brown fill in the posthole while two of them contained the remains of wooden posts. What they may have supported, or what phase they belong to is unknown.

Successive activities contributed to the density of features in the north east corner, unfortunately these cannot all be interpreted. The possibility of a small building being represented by postholes here has been mentioned above. The area was dense with small postholes and a few large pits, which formed clusters, but not rows. Most of them were very shallow, usually less than 150 mm. Some larger pits and postholes were found, though their purpose cannot be interpreted: Features 287, 424, and 623, were large oval pits that were relatively early, since they were all cut into by later features. None was clearly a rubbish pit and they had very little in them, while other small pits in this area contained building rubble, such as whole and broken bricks, metal, slag and wood.

In the west of the site, along the Campbell Place border of the section, a group of five small postholes were located along a narrow, shallow, linear feature (Feature 617) that may represent a small fence or light structure. The linear feature was filled with dark, sandy soil containing small flecks of charcoal. In some places it was faint and only a few centimetres deep, in others it reached 130 mm. The linear depression was cut by Feature 485, and it could no longer be traced after the edge of this pit.

The Wanganui Hotel: summary

We refer to the excavated part of TS 77 as 'the Wanganui Hotel site', though it is clear from both the historical and archaeological records that there were several structures belonging to different businesses that operated here. The lot appears to have been built on steadily and over time the Wanganui Hotel went from the only building to being crowded with neighbours and having its yard area diminish. The building and rebuilding of structures demonstrates busy commercial

activity. Many of the structures visible in historic photographs are evident in the archaeology.

In contrast to the Bamber House site, the Wanganui Hotel site has a large number of rubbish pits associated with the hotel that yielded large quantities of artefacts, glass in particular. The many paper labels preserved in the bottle pits gives an excellent insight into the range and origin of products consumed (Chapter 5). The dates of manufacture for these items can help determine when the activities of digging and filling in these pits may have occurred.

The density of features, particularly postholes, and the lack of stratigraphy at the Wanganui Hotel site has caused some difficulty in interpretation. The many historic photographs of the area have been invaluable in understanding some of the different structures represented by the many postholes. Photographs can be problematic however, as it is often difficult to gauge proportions and distances due to different scales and distortion of wide-angled lenses. One building visible in the historic photographs that may have been on TS 77 in the area of our excavation, but is not accounted for in the interpretation above. This building, discussed in Chapter 2, possibly relates to Joseph Chadwick, the auctioneer who occupied the site between 1879 and 1881. This long building should have spanned the section from Campbell Place to the boundary with TS 76 but no line of foundation postholes can be interpreted as belonging to such a structure. It is possible that it had shallow foundations that have not left enough mark to be distinguished in our excavation area, but this is unlikely given the building's size and likely date of construction.

4 Ceramics

Jaden Harris

A total of 5619 ceramic sherds were recovered from the UCOL excavations representing an estimated minimum number of 942 individual vessels and objects. All sherds were retained from both the Bamber House site and the Wanganui Hotel site, with only a sample of surface material collected from TS 78. The assemblages are described in this chapter, including tables giving summary data, while more complete data sets are given in Appendices B and E.

Methodology

During laboratory analysis attributes of fabric, colour, decoration, form and backmarks were recorded. Where vessels were substantially complete rim diameters and other measurements were taken to more closely document the vessel form. For calculating minimum numbers discrete features, such as large rubbish pits and wells, were treated as single assemblages. Sherds from other features, such as postholes and surface scatters, were checked for possible matches between vessels of the same form and decoration to ensure that objects were not counted twice. To aid this process vessels were refitted where possible, which showed that there was a very low occurrence of sherds joining between individual features.

One of the strongest diagnostic attributes of historic ceramic assemblages is the decoration type and pattern. For transfer printed ceramics some of these can be assigned formal pattern names, either through names printed on the vessels themselves or from referenced examples in published material, such as Coysh and Henrywood's *Dictionary of Blue and White Printed Pottery* (1982, 1989) or from illustrated examples in previous archaeological reports. For common patterns like Asiatic Pheasants and Willow this is a relatively straightforward exercise; however, the majority of transfer printed and other designs recovered from archaeological sites in New Zealand remain unidentified. To ensure that the full range of patterns was documented unidentified transfer prints and other unique designs were assigned a pattern code during analysis (e.g., UCOL 001). Photographs of fair examples of each pattern were taken and are illustrated in Appendix F. Designs that could only be assigned to general decorative styles like 'edgebanding' or 'shell edge' were not given pattern codes.

The Bamber House site

A relatively small but varied assemblage with a minimum number of 325 ceramic vessels was recovered from the Bamber House site. The most securely provenanced sample is from the well, Feature 46, with few other features containing significant amounts of ceramics. Much of the material from the fill layers and less secure contexts can still be associated with the Bamber period of occupation of the site based on backmarks and stylistic grounds.

Vessel fabric

The Bamber House site ceramic assemblage consists mainly of earthenwares, with whiteware making up the majority of this. The next most common fabric is stoneware followed by semi-vitreous vessels. Other fabrics such as porcelain and Chinese porcelain are represented by just two or three vessels each.

Fabric	% total MNV	MNV
Whiteware	77	251
Semi-vitreous	7	22
Porcelain	1	2
Stoneware	10	33
Other	5	17
Total	100	325

Table 4.1. Composition of ceramic vessels by fabric, Bamber House.

Vessel Form
Tableware

Plates account for 68 of 244 (28%, Table 4.2) items of tableware from the Bamber House site. The most common pattern is Willow with 21 plates. Willow would appear to have been the favoured pattern during the early period of the Bamber household with four features having more than one Willow plate. There is no evidence that matching dinner sets are represented but the presence of three Barker and Till marked Willow plates suggests that ceramics may have been purchased several vessels at a time or as small mixed lots. The majority of the other plates are also transfer printed, with most patterns represented by just one or two vessels. This further indicates that ceramics were purchased on a piecemeal basis as they were required, once the popularity of Willow had waned.

Serving dishes are not well represented in the Bamber House site assemblage, accounting for just 6 of 244 vessels (2%). All of the serving vessels are large Willow pattern oval platters, with no specialised serving forms such as tureens present. The lack of any later style serving vessels in the assemblage may mean that other non-ceramic vessels were used in the preparation and serving of food at the table. On the other hand food may have been served straight from the pot to the plate. On the basis of this evidence it seems that formal dining did not play a significant role in the Bamber household.

Cups and saucers are the most numerous items of tableware, accounting for 136 vessels (56 %). Like the table plates there is little evidence for any matching sets apart from the three cups and three saucers in the Nymph pattern recovered from the well. Fibre is more common with nine cups and saucers but these are spread across the site and in three different colours (Table 4.5). The large number of cups and saucers suggests that tea drinking was an important social activity in the Bamber household, but interestingly only two ceramic teapots were recovered. One possibility is that cheap, enamelled metal teapots may have been used on a daily basis, or even a more expensive silver-plated tea set. Other tableware forms such as jugs, bowls and eggcups are not common. All of the bowls are of the typical 19th century form with deep sides.

Kitchen and utilitarian

Items that would have been used in the kitchen for the preparation of food are scarce in the assemblage. Only one baking dish and three mixing bowls were positively identified. The baking dish is a plain yellow-bodied earthenware vessel with a clear glaze. The mixing bowls are of plain whiteware, with heavy rims and minimal or no decoration. Jugs are relatively common but could have been used for a number of purposes either in the kitchen or at the table.

Vessel form	Whiteware	Dyed body	Buff body	Red body	Yellow body	Semi-vitreous	Porcelain	Chinese porcelain	Stoneware	Terracotta	Total
Tableware											244
Plate	67	1									68
Plate/dish	1										1
Plate/saucer	3					2					5
Saucer	65					9					74
Cup	54					6	2				62
Cup/bowl	2										2
Cup/jug	3										3
Cup/mug	5										5
Mug	1										1
Mug/bowl	3										3
Mug/jug	1										1
Bowl	8										8
Serving platter	6										6
Eggcup						1					1
Jug	1					1					2
Teapot			2								2
Kitchen/utilitarian											30
Baking Dish					1						1
Baking/serving dish	1										1
Bowl	1			1	1						3
Bowl/dish	2										2
Bowl/jug	1										1
Dish lid	1										1
Jar	1							2	3		6
Jar/crock									1		1
Jug	10	2		1							13
Jug/bottle									1		1
Bedroom/bathroom											8
Chamber pot	5				1						6
Candlestick									1		1
Ointment jar	1										1
Holloway's ointment	3										3
Other											43
Bowl/chamberpot	2				1						3
Bowl/tureen	1										1
Blacking bottles									9		9
Ink bottles									9		9
Ginger beer bottle									2		2
Bottle									3		3
Miniature cup						1					1
Miniature saucer						1					1
Flower pot										3	3
Drain pipe									4		4
Toilet	1										1
Non-diagnostic hollowware	1										1
Unknown			1			1					2
Total	251	3	3	2	4	22	2	2	33	3	325

Table 4.2. Bamber House vessel forms and fabric, minimum numbers.

Bedroom and bathroom

Very few items in this category were recovered from the Bamber House site. One plain chamberpot 145 mm high with a rim 230 mm in diameter and fragments of a mocha decorated one were found in the well along with a complete Holloway's ointment pot 46 mm high and 79 mm in diameter. All four of the other chamberpots were transfer printed, with two coming from Feature 233. Fragments of two smaller sized Holloway's pots and one candlestick were recovered from the fill layer overlying the main features.

Other vessel forms

Other vessels included 3 plain terracotta flower pots and one toilet pan. The property was occupied by plumbers from 1920 through to the 1990s and so the toilet pan is likely to be associated with this later occupation. A miniature cup and saucer were the only children's ceramics found on the Bamber House site. The stoneware vessels and drain pipes are discussed separately below.

Decorative techniques

Transfer printing is by far the most common decorative technique in the Bamber House assemblage (Table 4.3), as is usually the case for 19th century contexts in New Zealand.

Decorative technique	Whiteware	Dyed body	Buff body	Red body	Yellow body	Semi-vitreous	Porcelain	Chinese porcelain	Total
Transfer printed	192								192
Transfer printed and painted	5					1	1		7
Edgebanded	8								8
Gilt edgebanded	3					8			11
Imitation jasper						7			7
Hand painted	12					2	1	2	17
Dyed body		2							2
Dyed body and relief moulding		1							1
Annular	7				2				9
Mocha					2				2
Relief Moulding	2			1					3
Shell edge	4								4
Slipped/colour glazed			4	1					5
Sponged	3								3
Undecorated	9				1	5			15
Total	245	3	4	2	5	23	2	2	286

Table 4.3. Bamber House Site: Decoration type by fabric, minimum numbers, excluding stoneware and other miscellaneous forms

Transfer Printed

In total, 17 named transfer prints were identified from the Bamber House site (Table 4.5), with a further 92 designs remaining unidentified (see Appendices E and F for descriptions and illustrations of transfer prints). The predominant colour is blue, with green, flow blue, black and purple all approximately equally represented, and other colours less common (Table 4.4). Willow is the most numerous pattern with most other patterns represented by just a few vessels. Of the unidentified patterns, 79 only occur once; nine twice; and three three times (see Table E.1).

The assemblage is notable for the number of potentially early ceramics produced around the middle of the 19th century or just before. Most of the Willow pattern vessels are probably early with two manufacturers (Copeland and Garrett, and Barker and Till) dating to 1850 or before. The Japan Flowers plates by Ridgway, Morley, Wear and Co., and the Moss Rose plate by Ridgway and Morley, date to no later than the mid 1840s. Other patterns can be assigned early manufacture dates on stylistic grounds. A cup and saucer in the unidentified romantic style pattern UCOL 136, made by Sewell, probably dates to the 1840s or 1850s (Figure F.3i). A similar style pattern (UCOL 023) represented by a blue printed saucer from the well, Feature 46, probably dates to the same period (Figure F.3a). The flow blue Acadia cup from Feature 233 (Figure 4.1g) and the Wild Rose plate from Feature 120 are also early items (Figure F.5b).

Colour	MNV	Percentage
Blue	110	58.5
Black	13	6.9
Brown	6	3.2
Flow blue	16	8.5
Green	17	9
Grey	9	4.8
Purple	15	8
Red	2	1.1
Total	188	100

Table 4.4. Bamber House site, Transfer printed vessels by colour.

Pattern	Feature	Vessel	Colour	Date	MNV	Total
Acadia	233	Cup	Flow blue	1840–60	1	1
Asiatic Pheasants	2	Plate	Blue		1	3
Asiatic Pheasants	2	Plate	Grey		1	
Asiatic Pheasants	71	Serving dish	Blue		1	
Bouquet	2	Saucer	Black	1861–82	1	1
Broseley	259	Saucer	Light Blue		1	1
Fibre	2	Cup	Blue		1	9
Fibre	46	Cup	Black		1	
Fibre	46	Lid	Black		1	
Fibre	46	Saucer	Blue		1	
Fibre	83	Cup	Black		1	

Table 4.5. Summary of named transfer printed vessels from the Bamber House site.

Pattern	Feature	Vessel	Colour	Date	MNV	Total
Fibre	84	Cup	Blue		1	
Fibre	205	Saucer	Grey		1	
Fibre	247	Cup	Grey		1	
Fibre	259	Saucer	Blue		1	
Japan Flowers	83	Plate	Blue	1836–54	1	4
Japan Flowers	83	Plate	Green	1836–54	1	
Japan Flowers	84	Plate	Green	1836–54	1	
Japan Flowers	217	Plate	Green	1836–54	1	
Fruit	46	Plate	Blue	1828–59	1	1
Holloway's ointment	2	Ointment pot	Black	1839–67	1	3
Holloway's ointment	2	Ointment pot	Black	1867–	1	
Holloway's ointment	46	Ointment pot	Black	1839–67	1	
Lucerne	46	Cup	Blue		1	1
Medici	2	Cup	Blue		1	2
Medici	259	Plate	Blue		1	
Moss Rose	83	Plate	Flow blue	1842–45	1	1
Nymph	2	Saucer	Purple		1	7
Nymph	46	Cup	Purple		3	
Nymph	46	Saucer	Purple		3	
Olive	259	Bowl	Purple	1862–80	1	1
Rhine	46	Plate	Blue		1	4
Rhine	46	Serving/baking dish	Grey		1	
Rhine	46	Plate	Grey		2	
Teddesley	2	Plate	Black		1	1
Triumphal Car	120	Chamber pot	Blue	1826–70	1	1
Willow	2	Saucer	Blue		1	30
Willow	2	Plate	Blue		1	
Willow	33	Saucer	Blue	1833–47	1	
Willow	46	Plate	Blue		4	
Willow	46	Saucer	Blue		1	
Willow	46	Serving platter	Blue	1862–86	1	
Willow	46	Serving platter	Blue		1	
Willow	64	Plate	Blue		1	
Willow	71	Plate	Blue		1	
Willow	83	Saucer	Blue		1	
Willow	83	Plate	Blue		3	
Willow	84	Serving platter	Blue		1	
Willow	120	Plate	Blue		3	
Willow	148	Plate	Blue		1	
Willow	188	Plate	Blue		1	
Willow	217	Plate	Blue		1	
Willow	217	Plate	Blue	1846–50	2	
Willow	228	Serving platter	Blue		1	
Willow	233	Plate	Blue		2	
Willow	233	Serving platter	Blue		1	
Willow	259	Serving platter	Blue		1	
Winton	2	Plate	Red	1892–1900	1	1
Total						71

Table 4.5. continued.

Other Decorative Techniques

Some of the earliest hand painted designs in the assemblage are represented by three vessels found in the well, Feature 46, decorated with simple polychrome floral patterns (UCOL 167, 168 and 169, Figures F.15 e–f). Such decoration was more common during the first half of the 19th century and had largely ceased production by the mid 1850s (Plowman 2000: 45). The vessel forms also suggest that the pieces are early. The fragment of teacup with the UCOL 167 design has a slightly scalloped rim and the UCOL 169 fragment may well be from a handleless tea bowl. Scalloped tea sets were produced for only a short period in the 1820s and 30s and handleless teawares are most common from the first half of the 19th century (Miller 2000: 100, 101). A more complete tea bowl decorated in a similar style was recovered from Albert Barracks in Auckland (Clough et al. 2003: 74, Figure 47c). Other hand painted designs are less diagnostic regarding date of manufacture and could have been produced anytime from the middle of the 19th century onwards.

Among the hand painted items are fragments of two Chinese porcelain jars of a rather coarse highly vitrified fabric and most probably contained preserved ginger or something similar. The jars are decorated with crudely painted blue underglaze abstract designs. They are not examples of Chinese export porcelain "but represent the type of 'provincial' or coarse-ware which is frequently found on 19th century overseas Chinese worker sites in Australia; New Zealand; and the USA" (Staniforth 1998: 12). They would have been purchased for their contents, perhaps ginger in syrup.

Vessels decorated with painted edgebands and hairlines are not common in the assemblage, with just eight represented. Most of the vessels have a simple edgeband with one or more hairlines below, all in the same colour. Two vessels from Feature 46 show some variation: a cup has a blue edgeband followed by two red hairlines with another blue band below; a saucer has four green hairlines around the rim. Gilt edgebanding is only slightly more common with this type of decoration occurring on three earthenware and eight semi-vitreous vessels. Gilt decoration was mainly confined to the rim of the vessel, although one saucer fragment from the general fill also had part of a 'tea leaf' design in the centre. Gilt edgebanding may have been more common than the analysis indicates as gilt often wears off the vessel, either during use or in the ground.

Fragments of semi-vitreous vessels with sprigged decoration were identified from the Bamber House site in three designs, all occurring on teaware forms: Sprigged A features small sprigs of vegetation; Sprigged B has a thistle alternating with a flower; while Sprigged C features sprigs of grapes and leaves on a lightly moulded body and was found on a jug, cup and saucer from the well, Feature 46. Several different sprigged designs have been identified from archaeological contexts in New Zealand, but the individual designs to not appear to be temporally sensitive. From the limited information available Sprigged A appears to be the most commonly recovered design from New Zealand sites.

Dyed body wares were represented by three vessels. A blue bodied jug from the well, Feature 46, is moulded with a tulip pattern (UCOL 022, Figure 4.3a). A jug with the same moulded design and decorated with a cream slip was recovered from the Victoria Hotel site dating to 1865 at the latest (Brassey and Macready 1994: 59; Figure 28 C36). The other two vessels, a green bodied plate from the overlying fill and fragment of blue bodied jug from Feature 233, were not moulded.

The most common form of slipped decoration was 'annular' with at least nine bowls and mugs represented. Annular decoration involves the application of horizontal bands of different coloured slips around a vessel to produce a banded effect.

Two mocha decorated vessels are also present employing a blue mocha design on a white slip on utilitarian yellow-ware bodies.

Shell-edging is present only as fragments, representing four plates. All have scalloped rims with impressed curved lines and blue underglaze painting. One shell-edge vessel was recovered from the well, Feature 46.

Sponged decorative wares are represented by just a few vessels. Fragments of saucer were found decorated in the same fashion as a more complete vessel from the Wanganui Hotel site (UCOL 35). A plate from Feature 69, 34 mm high and 240 mm in diameter, is decorated with cut-sponged designs in green and red, separated by blue hand painted lines (UCOL 137, Figure 4.3e). Fragments of cup with a green painted edgeband and red sponged decoration below this were found in the same feature and others across the site (UCOL 131, Figure F.14q). The only other vessel employing sponging is a fragment of cup from the overlying fill layer with a purple cut-sponged design around the rim, topped with an overglaze gilt hairline (UCOL 242, Figure F.15o).

Stoneware

The Bamber House stoneware assemblage is dominated by blacking and ink bottles, with no alcohol related bottles recovered. The well, Feature 46, contained the most stoneware including seven complete blacking bottles, five ink bottles and two jars. Most other stoneware items, such as two ginger beer bottles from the firm of Thompson and Lewis, were not found in secure contexts.

Manufacturers

The majority of the manufacturers identified from backmarks are of British origin, and almost exclusively from the Staffordshire district. J. and M. P. Bell and Co.,

Feature	Vessel	Height (mm)	Maximum diameter (mm)	MNV	Total
46	Blacking Bottle	126–133	59	7	9
71	Blacking Bottle			1	
108	Blacking Bottle			1	
2	Ink	48	48	3	9
2	Ink	112	44	1	
46	Ink	51	50	2	
46	Ink	110	42	2	
46	Ink			1	
2	Ginger Beer		69	2	
2	Bottle	91	58	1	3
120	Bottle			1	
233	Bottle		79	1	
46	Jar		c. 110	1	3
46	Jar			1	
137	Jar		c. 105	1	
2	Jar/Crock		c. 125	1	1
2	Jug/Bottle			1	1
2	Candlestick			1	1
Total					27

Table 4.6. Summary of stoneware vessels from the Bamber House site

who operated out of Glasgow in Scotland, and Sewell are the only British potteries not based in Staffordshire. This is similar to other historic sites in New Zealand, representing the dominance of Britain in supplying the colonies with manufactured goods throughout the 19th century.

The only pottery represented by more than one pattern is Sewell, with a cup and saucer in the UCOL 136 pattern (Figure F.3i) and a saucer in the UCOL 126 pattern (Figure F.9k). This suggests that the identity of the maker was not a motivating factor in the purchasing of ceramics. The longevity of such patterns as Willow would have allowed consumers to purchase replacement pieces for their dinner sets, probably with little regard being paid to any particular piece having being made by a different manufacturer. The only pattern purchased as a set would appear to be the Nymph teaware found in Feature 46, although the maker 'H. W.' is unidentified (Figure F.1k).

Discussion

The ceramics from the Bamber House site represent a modest assemblage from a small to medium sized household in mid to late 19th century Wanganui. The range of tableware shows that dining in the Bamber Household was a largely informal affair, with no specialised serving forms present other than large oval platters. This would be in keeping with Thomas Bamber's primary working class occupation as a blacksmith. Even after his time as Mayor of Wanganui there is no evidence from the material record to suggest that daily life in the household changed much.

Many of the ceramics date prior to Bamber's emigrating from Britain with his wife in 1856. Possibly they may have taken several years to reach colonial markets, or been old stock brought over from the Australian colonies, but a more likely

Feature	Maker	Date Range	Vessel	Pattern	MNV
2	Ralph Malkin*	c. 1864–81	Plate	Asiatic Pheasants	1
2	Thomas Dimmock (Jr) and Co*	c. 1829–59	Plate	Fruit	1
2	Enoch Fowler	1837–73	Bottle		1
2	Grimwade Brothers	c. 1892–1900	Plate	Winton	1
2	Sewell	c. 1804–78	Cup	UCOL 136	1
2	Sewell	c. 1804–78	Saucer	UCOL 136	1
33	Copeland and Garrett	1833–47	Saucer	Willow	1
46	Old Hall Earthenware Co Ltd	1862–86	Serving platter	Willow	1
46	Pinder, Bourne and Co	c. 1862–82	Plate	Bouquet	1
56	Davenport	c. 1835–69	Plate	Willow	1
56	'R'		Plate	Willow	1
67	Sampson Bridgwood and Sons	c. 1853–91	Plate		1
83	Barker and Till	c. 1846–50	Plate	Willow	1
83	Ridgway and Morley	c. 1842–45	Plate	Moss Rose	1
83	Ridgway, Morley, Wear and Co	c. 1836–42	Plate	Japan Flowers	1
83	W.T. Copeland	1847–67	Plate	Willow	1
120	J. and M. P. Bell and Co.	c. 1850–70	Chamber pot	Triumphal Car	1
120	Sewell	c. 1804–78	Saucer	UCOL 126	1
217	Barker and Till	c. 1846–50	Plate	Willow	2
217	Ridgway, Morley, Wear and Co	c. 1836–42	Plate	Japan Flowers	1

*Attributed to a maker only.

Table 4.7. Identified manufacturers marks from the Bamber House site

explanation is that Bamber brought them out with him. There is also the possibility that some of these early ceramics derive from informal occupation of the land prior to Bamber's arrival. Willow seems to have been the favoured pattern but there is no evidence that it was ever bought as sets; rather replacement pieces by various manufacturers were purchased as they were required.

Evidence from maker's marks confirms that Britain was the main source of ceramics, and probably the majority of all manufactured goods available in mid 19th century Wanganui. Some of this material culture may have been imported directly from Britain while other goods may have arrived via Sydney. The presence of an Enoch Fowler stoneware bottle made in Sydney highlights the importance of trade between Australia and New Zealand during this period.

The Wanganui Hotel site

In total a minimum number of 568 vessels are represented in the Wanganui Hotel site ceramic assemblage. Much of this material came from large rubbish pits securely associated with the hotel phase occupation of the site (see Chapter 3). Material from the general fill layers is included in the minimum number counts but is not discussed in detail.

Vessel Fabric

The majority of the Hotel ceramics are composed of whiteware fabrics but the assemblage also contains a significant proportion of semi-vitreous and porcelain fabrics (Table 4.8). The remainder are composed of other earthenware fabrics and stoneware. The high proportion of semi-vitreous wares is largely due to the high number of sprigged decorated vessels present in the assemblage. Sprigged decoration accounts for over two thirds of the semi-vitreous vessels.

Vessel Form

Tableware

From the Wanganui Hotel site plates account for 123 of 399 vessels (31%, see Table 4.9). Many of the plates and other vessels were found substantially whole or could be reassembled, allowing for vessel forms to be documented more closely. Diameters for dinner sized plates range from about 230 to 270 mm, with smaller side plates measuring between 170 and 225 mm. Taking cups and saucers together they account for 189 of 399 vessels (47%). Serving vessels account for 42 of 399 vessels (11%) made up of platters, dishes and tureens. Among these are forms not commonly recovered from archaeological sites. At least two examples of what Coysh and Henrywood (1982, 1989) describe as vegetable dishes are present. These

Fabric	% total MNV	MNV
Whiteware	65	370
Semi-vitreous	18	102
Porcelain	5	30
Stoneware	10	57
Other	2	9
Total	100	568

Table 4.8. Composition of ceramic vessels by fabric, Wanganui Hotel.

are dishes approximately 220 mm square and 55 mm high with a matching lid. Several handled serving dishes of various forms are present. Figure F.3d has open handles and would have originally stood on four feet, which have broken off. A vessel in the Genevese pattern is approximately 255 mm in diameter and 70 mm high and has closed handles at the ends (Figure 4.1e). Two domed lids with open handles at the top were found which cover the central well of this vessel exactly (Figure 4.1f). Vessels such as these could presumably have been used to serve a large variety of foodstuffs. Also recovered was a largely complete Asiatic Pheasants tureen and a matching ladle (Figure 4.1c, d). This range of vessel forms shows the different nature of dining in a commercial establishment like the Hotel compared to the Bamber House with its single occupying household. Other tablewares such as bowls and eggcups are not common. Where bowls were identified they were all relatively small in size with deep sides, as shown by several more complete examples. Interestingly, no teapots were recovered from the Hotel site, apart from one rather squashed and possibly burnt metal one from Feature 338.

Kitchen and utilitarian

A number of plain earthenware jars with a groove below the rim for securing a cover or top were recovered from Wanganui Hotel. Such jars were commonly used for preserves and other foodstuffs. Rim diameters ranged from small jars at 40–50 mm, to medium sized jars at 100–120 mm, to one large jar measuring 170 mm. Jugs are relatively common and could have been used for a number of purposes in either the kitchen or at the table.

Bedroom and bathroom

The Wanganui Hotel site has a small but significant collection of bedroom and bathroom ware totalling 5% of the assemblage. Of this 21 of 29 vessels are chamberpots, with eight coming from Feature 515 (a fossicked rubbish pit) and five from Feature 621 (well/rubbish pit). Six of the chamberpots from Feature 515 have different transfer printed patterns, with the other two being plain. Also found in Feature 515 was part of a bedpan printed with the title 'Slipper' and instructions on its use (Figure F.4l). Three of the chamberpots from Feature 621 have white and blue-banded slipped decoration and form a set (Figure 4.3h), with the two larger pots standing 149 mm high and 247 mm in diameter and the smaller 125 mm high and 200 mm in diameter. The other two chamberpots are decorated with transfer prints, one being Ava and the other UCOL 001 (Figure 4.2 a, d). Another blue slip banded chamberpot 125 mm high and 200 mm in diameter, identical to the smaller one from Feature 621, was recovered from Feature 540 (rubbish pit), along with three other transfer printed examples. One chamberpot apiece was identified from Features 395, 417, 463 and 485, with two being plain, one having annular decoration and one in the transfer printed pattern Pansy (Figure F.4a). The large number of chamberpots from Features 515 and 621 is almost certainly associated with the hotel occupation. One item identified as a washbowl was found in Feature 417 and stands 128 mm high with a rim diameter of 378 mm. Other items from the Wanganui Hotel site include fragments of a plain ointment jar and lid, and a plain soap dish 79 mm long and 52 mm wide from Feature 320.

Other vessel forms

One of the more unusual vessel forms from the Wanganui Hotel site is a feeding cup. The porcelain vessel from Feature 525 stands 56 mm high with a maximum diameter of 107 mm and is decorated with an abstract blue painted floral design

4.1. a, Asiatic Pheasants serving platter; b, Asiatic Pheasants serving dish; c, Asiatic Pheasants tureen; d, Asiatic Pheasants ladle; e, Genevese serving vesse; f, Genevese serving vessel lid; g, Acadia cup; h, Morea plate backmark.

4.2. a, Ava chamberpot, John Hawley and Co backmark; b, Lazuli chamberpot with backmark; c, Lazuli washbowl; d, UCOL 001 chamberpot; e, UCOL 013 chamberpot; f, UCOL 038 chamberpot.

with gilt edgebanding around the rim and sides of the handle. At first it would appear to be a small teapot but the handle and the spout are at a ninety degree angle to one another. Feeding cups are essentially a cup fitted with a spout and half covered so that the liquid does not spill, used for feeding babies and invalids (Coysh and Henrywood 1982: 135). The Wanganui Hotel site cup is slightly different in that the half lid is separate (see Figure 4.3d), unlike the examples illustrated in Coysh and Henrywood which are potted as one piece.

Another item clearly related to the hotel occupation is a semi-vitreous beer tap handle. It is dark purple and has overglaze gilt decoration (Figure 4.3k). One Prattware pot lid approximately 75–80 mm in diameter, decorated with a hunting scene, was recovered from Feature 621 (Figure F.14s). Multi-coloured printed pot lids were first produced in quantity by the firm of F. and R. Pratt and Co, c. 1840–1916 (Kowalsky and Kowalsky 1999: 312). The only item of terracotta was a fragmented plain flower pot.

Dolls and figurines

A total of 10 dolls and 5 figurines were recovered from the Wanganui Hotel site, with 8 dolls coming from Feature 621. The large number of dolls and other artefacts relating to children from this feature clearly indicates a more domestic context than from other parts of the hotel site. The exact nature of the domestic occupation has not been established but the rubbish most likely derives from the household of one of the proprietors of the hotel. Five of the dolls from this feature are represented by leg or foot parts; one by an arm and two by heads. All of the doll arms, legs and heads would have been originally attached to bodies made of cloth or other perishable materials which do not survive. One head (Figure 4.4b) is finely painted and has 4 holes around the edge of the torso to attach the body. The other head is much larger and again has hand painted detail on the hair and face (Figure 4.4g). The other dolls are represented by a pair of legs, with a blue bow painted around the top of the calf and a pair of arms painted in a flesh-toned colour.

One small figurine of a religious nature, 45 mm high though missing the head, was recovered from Feature 540. The figure is dressed in a long robe and holds a book in its left hand (Figure 4.4h). Another small figure, 49 mm high, depicts a nude female with her hands clasped in front of her (Figure 4.4i). A more fragmentary figurine has the torso and legs of a woman standing beside an upright log. Another figurine has a religious tone, with two persons kneeling down below what was probably a large cross, now mostly missing, with their hands clasped before them in prayer. The only figurine or doll not made of porcelain was a whiteware dog recovered from Feature 320.

Decorative Techniques

From the Wanganui Hotel site transfer printing only makes up 55 % of the assemblage. This low count is due to the large number of semi-vitreous and porcelain vessels in the assemblage which are nearly all decorated by methods other than transfer printing.

Transfer Printed

Transfer printing is used as the primary means of decoration on 276 vessels from the Hotel site. Of these, 170 vessels are represented by 29 identified patterns, with four patterns accounting for 111 vessels alone. As is common in New Zealand historic contexts the most common colour is blue (Table 4.11) and the most common pattern is Willow, with an MNV of 60 making up 22% of all transfer printed vessels

4.3. a, UCOL 022 jug; b, UCOL 252 jug; c, UCOL 253 jug; d, handpainted porcelain feeding cup; e, UCOL 137 plate with unidentified backmark; f, UCOL 035 saucer; g, Sprigged 'A' decorated saucer; h, Annular slip decorated chamberpot; i, Sprigged 'A' decorated jug; j, UCOL 247 jug; k, ceramic beer tap handle.

4.4. Dolls and figurines: a, dolls arm; b, handpainted dolls head; c–e, dolls legs; f, dolls leg; g, dolls head; h, porcelain figurine; i, porcelain figurine.

(Table 4.12). Asiatic Pheasants is next with 21 vessels, followed by Rhine (16 vessels) and Genevese (14 vessels). These, apart from Genevese, are some of the most commonly recovered patterns from New Zealand historic archaeological sites.

Willow pattern vessels would appear to have made up the bulk of the table service used in the Wanganui Hotel from the late 1850s until at least the 1870s (see Figure 4.5). From backmarks and other evidence, however, it would seem that pieces of Willow were purchased to make up or maintain a service rather than a full table service being brought as a single lot. This pattern was also noted at the Bamber House site. Status is often implied by the ability of a household or establishment to purchase a set of ceramics from a single manufacturer but in reality a mixed set of vessels in the same colour and pattern would have been functionally no different than a matching one. The wide availability of Willow would also have allowed items to be added or brought as replacements at any time.

The transfer printed tableware, specifically plates and serving dishes, is notable for the lack of variety in the patterns. The bulk of these items are made up of

Vessel Form	Whiteware	Dyed body	Red body	Yellow body	Semi-Vitreous	Porcelain	Stoneware	Terracotta	Total
Tableware									399
Plate	117				3	3			123
Plate/saucer	4								4
Cup	44				35				79
Mug	5		1		1				7
Cup/bowl	1								1
Cup/jug					1				1
Saucer	59				49	2			110
Bowl	15				2				17
Milk jug	1								1
Eggcup	5				4	6			15
Ladle	1								1
Serving platter	18								18
Serving plate	5								5
Serving dish	3								3
Serving/baking dish	2								2
Serving dish lid	3								3
Tureen	3								3
Tureen lid	3								3
Tureen/serving dish lid	3								3
Kitchen/utilitarian									51
Bowl	4								4
Baking dish	1			1					2
Bowl/dish	3								3
Bowl/jug					1				1
Dish	2								2
Dish lid	2								2
Jar	17						1		17
Jar lid									1
Jug	11	3	1		3	1			19
Bedroom/bathroom									29
Chamber pot	20			1					21
Bowl/basin	1								1
Ewer/jug	1								1
Ointment jar	1								1
Ointment jar lid	1								1
Soap dish	1								1
Washbowl	1								1
Washbowl/basin							1		1
Bedpan	1								1
Other									89
Bowl/chamber pot	2								2
Feeding cup						1			1
Blacking bottle							7		7
Ink							14		14

Table 4.9. Minimum numbers of ceramic vessel forms by fabric from the Wanganui Hotel site.

Vessel Form	Whiteware	Dyed body	Red body	Yellow body	Semi-Vitreous	Porcelain	Stoneware	Terracotta	Total
Porter bottle							5		5
Stout bottle							12		12
Schnapps bottle							3		3
Gin bottle							1		1
Ginger beer bottle							3		3
Bottle							8		8
Crock							3		3
Pratt-ware lid	1								1
Miniature bowl	1					1			2
Miniature cup					1	1			2
Miniature plate						1			1
Miniature jar						1			1
Doll						10			10
Figurine	1					3			4
Beer tap handle					1				1
Flower pot								1	1
Non-diagnostic flatware	1								1
Non-diagnostic hollowware	3								3
Unknown	1				1	1			3
Total	369	3	2	2	102	31	55	1	568

Table 4.9. continued.

Decorative technique	Whiteware	Dyed body	Red body	Yellow body	Semi-vitreous	Porcelain	Total
Transfer printed	276						276
Transfer printed and painted	7						7
Edgebanded	11				1	2	14
Gilt edgebanded	2				23	3	28
Sprigged					64		64
Hand painted	8		1		8	7	24
Dyed body		1					1
Dyed body and relief moulding		2					2
Annular	3			1			4
Relief moulding	6				1	1	8
Shell edge	2						2
Slipped	5		1				7
Sponged	2						2
Undecorated	50				3	6	59
Other			1				1
Total	372	3	3	1	100	19	498

Table 4.10. Minimum numbers of ceramic vessel decoration types by fabric from the Wanganui Hotel site.

4.5. Willow pattern vessels: a, serving platter with unidentified backmark; b, plate, Dimmock and Smith backmark; c, plate, Pinder, Bourne and Hope backmark; d, plate; e, Vegetable dish cover; f, dish, W. T. Copeland backmark; g, vegetable dish.

Colour	MNV	Percentage
Blue	164	60
Black	19	7
Brown	5	2
Flow blue	9	3
Green	22	8
Grey	21	8
Purple	29	11
Red	2	1
Total	271	100

Table 4.11. Hotel site, Transfer printed vessels by colour.

the four most common patterns listed above. Other patterns occurring on plates and serving forms are represented by just one or two vessels. The Genevese vessels are interesting as they are almost certainly from the same manufacturer and were most likely purchased as a set. The plates whose rim diameters could be reconstructed are quite small, at just 200 mm, and the forms of the serving vessels are different from the Willow and Asiatic Pheasants ones. One possibility is that the Genevese vessels may have had a different function than the other more common tableware. The serving dish in Figure 4.1e could easily have been used to serve cakes or deserts, which would explain the smaller size of the plates accompanying the set. The Asiatic Pheasants and Rhine vessels are probably from a number of sources and include mainly plates and platters. A small set of Morea pattern plates must also have been purchased for the Hotel or associated household as shown by a stack of four complete plates recovered from Feature 621 (see Figure 4.1h). Like the Genevese vessels, the plates are unmarked save for the pattern name, which is indicative of potteries producing lower quality wares.

The teaware and associated forms such as side plates and bowls show a great deal more variety. Among these are several small groups of matching vessels from the same manufacturer. These include the six Kulat side plates and four Chain cups and saucers made by Pinder, Bourne and Hope, and the Lucerne cups and saucers. Other patterns on teaware forms, such as Bosphorus, Cleopatra and Hong, are represented by just one or two items.

Patterns on other forms are rarely represented by more than one vessel. Lazuli is an exception with a washbowl, chamberpot and toiletry dish (Figure 4.2 b, c). Sheet patterns such as Lazuli are commonly found on utilitarian wares such as these. An unidentified pattern in a similar style was found on a chamberpot and toiletry dish with matching lid (UCOL 013, Figure 4.2e). The Pansy pattern chamberpot is likewise quite minimalist, reflecting the form it is decorating.

Unidentified Patterns

Of the 73 unidentified patterns from the Wanganui Hotel site 60 only occur once; nine twice; three three times; and one four times (Table E.3). Only five unidentified patterns are common to the Wanganui Hotel site and the Bamber House site: UCOL 002, 020, 033, 081 and 101. This is comparable with other large assemblages such as His Majesty's Theatre where of the 434 individual patterns, 55% occurred only once (Bioresearches 1998: 35). This clearly illustrates the diversity of transfer printed ceramics available in the 19th century and the potential complexity involved in inter-site comparisons of ceramic assemblages.

Pattern	Feature	Vessel	Colour	Date	MNV
Alma	540	Eggcup	Flow blue	1854–70	1
Asiatic Pheasants	208	Plate	Blue		3
Asiatic Pheasants	208	Serving platter	Grey	1870–92	1
Asiatic Pheasants	208	Tureen	Blue		1
Asiatic Pheasants	278	Plate	Blue		1
Asiatic Pheasants	278	Plate	Grey		1
Asiatic Pheasants	320	Plate	Blue		1
Asiatic Pheasants	383	Plate	Grey		1
Asiatic Pheasants	464	Serving platter	Blue		1
Asiatic Pheasants	473	Serving/baking dish	Blue		1
Asiatic Pheasants	485	Plate	Blue		1
Asiatic Pheasants	515	Ladle	Blue		1
Asiatic Pheasants	515	Plate	Blue		1
Asiatic Pheasants	515	Plate	Grey		1
Asiatic Pheasants	515	Serving Platter	Blue		2
Asiatic Pheasants	621	Plate	Blue		
Asiatic Pheasants	621	Serving platter	Blue		
Asiatic Pheasants	621	Tureen	Blue		1
Ava	621	Chamber pot	Purple	1843–93	1
Bosphorus	515	Cup	Blue	1858–64	1
Bosphorus	515	Saucer	Blue	1858–64	1
Broseley	463	Saucer	Light blue		1
Broseley	525	Cup/bowl	Light blue		1
Broseley	540	Bowl	Light blue		1
Broseley	621	Side plate	Light blue		1
Cable	208	Saucer	Green		1
Cable	370	Cup	Green		1
Chain	515	Cup	Purple	1851–62	1
Chain	515	Saucer	Purple	1851–62	1
Chain	540	Cup	Purple	1851–62	1
Chain	540	Saucer	Purple	1851–62	1
Cleopatra	417	Saucer	Flow blue	1845–58	1
Dulcamara	515	Saucer	Green	1862–82	1
Fibre	285	Saucer	Grey		1
Fibre	540	Saucer	Black		1
Foliage	515	Cup	Green		1
Foliage	515	Plate	Purple		1
Foliage	515	Saucer	Green		1
Genevese	320	Plate	Blue		1
Genevese	515	Plate	Blue		3
Genevese	525	Plate	Blue		3
Genevese	525	Serving dish	Blue		1
Genevese	525	Serving plate	Blue		1
Genevese	525	Tureen lid	Blue		1
Genevese	540	Plate	Blue		2
Genevese	540	Tureen lid	Blue		2
Hong	515	Bowl	Flow blue		1
Hong	540	Bowl	Flow blue		1

Table 4.12. Summary of identified transfer printed patterns by vessel from the Wanganui Hotel site.

Pattern	Feature	Vessel	Colour	Date	MNV
Kulat	320	Plate	Blue	1851–62	1
Kulat	525	Side plate	Blue	1851–62	4
Kulat	540	Side plate	Blue	1851–62	1
Lazuli	417	Washbowl	Black	1836–50	1
Lazuli	515	Toiletry dish	Black	1836–50	1
Lazuli	540	Chamber pot	Black	1836–50	1
Lucerne	417	Cup	Blue		2
Lucerne	462	Cup	Blue		1
Lucerne	463	Saucer	Blue		1
Lucerne	525	Saucer	Blue		1
Lucerne	540	Saucer	Blue		1
Lucerne	540	Side plate	Blue		1
Martha	370	Mug	Green		1
Medici	515	Plate	Blue		1
Medici	541	Cup	Blue		1
Morea	540	Plate	Blue		2
Morea	621	Plate	Blue		4
Nymph	362	Milk jug	Purple		1
Nymph	462	Bowl	Flow blue		1
Olive	320	Plate	Purple		1
Olive	337	Soup plate	Purple		1
Olive	337	Plate	Purple		1
Olive	464	Plate	Purple		1
Pansey	485	Chamber pot	Green	1850–92	1
Pearl Wreath	308	Plate	Purple	1861–70s	1
Pearl Wreath	320	Plate	Purple	1861–70s	1
Rhine	208	Bowl	Grey		1
Rhine	208	Plate	Grey		2
Rhine	208	Serving dish	Grey		1
Rhine	320	Plate	Blue		1
Rhine	320	Plate	Grey		1
Rhine	337	Plate	Grey		1
Rhine	370	Plate	Grey		1
Rhine	383	Plate	Grey	1865–86	1
Rhine	464	Bowl	Grey		1
Rhine	492	Serving platter	Grey		1
Rhine	515	Plate	Black		1
Rhine	515	Plate	Grey		1
Rhine	525	Cup	Blue		1
Rhine	525	Cup	Grey	1865-1886	1
Rhine	621	Bowl	Grey		1
Rouen	208	Saucer	Brown		1
Slipper	515	Bedpan	Green		1
Teddesley	514	Plate	Black	1882–86	1
Teddesley	515	Saucer	Black		1
Verona	515	Plate	Blue	1847–91	2
Willow	208	Plate	Blue		2
Willow	208	Saucer	Blue		1
Willow	313	Plate	Blue		1
Willow	320	Lid	Blue		1

Table 4.12. continued…

Pattern	Feature	Vessel	Colour	Date	MNV
Willow	320	Plate	Blue		1
Willow	337	Plate	Blue		1
Willow	362	Plate	Blue		1
Willow	362	Side plate	Blue		1
Willow	383	Plate	Blue		1
Willow	402	Saucer	Blue		1
Willow	417	Plate	Blue	1842–59	1
Willow	417	Plate	Blue		1
Willow	417	Side plate	Blue		4
Willow	418	Saucer	Blue		2
Willow	442	Saucer	Blue		1
Willow	462	Lid	Blue		1
Willow	462	Saucer	Blue		1
Willow	463	Lid	Blue		2
Willow	463	Plate	Blue		3
Willow	463	Side plate	Blue	1847–67	1
Willow	463	Side plate	Blue		1
Willow	464	Plate	Blue		1
Willow	482	Mug	Blue	1847–67	1
Willow	515	Lid	Blue		1
Willow	515	Plate	Blue		2
Willow	515	Saucer	Blue		2
Willow	515	Serving dish	Blue	1870–87	1
Willow	515	Serving dish	Blue		2
Willow	515	Serving platter	Blue		1
Willow	515	Tureen	Blue		1
Willow	525	Plate	Blue	1851–62	2
Willow	525	Plate	Blue		1
Willow	525	Serving plate	Blue		2
Willow	525	Serving platter	Blue		1
Willow	525	Side plate	Blue		2
Willow	540	Baking dish	Blue		1
Willow	540	Plate	Blue		4
Willow	540	Serving platter	Blue		2
Willow	621	Plate	Blue	1847–67	1
Willow	621	Serving dish	Blue		3
					171

Table 4.12. continued.

Several patterns, however, do have parallels with other historic sites in New Zealand. Figure F.6 h, i illustrates two examples of the unidentified pattern UCOL 033, one with added enamel colour and one without. This same pattern has been previously recovered from the Victoria Hotel site (where it was given the informal name 'rope and flowers'), from Edmonds Ruins (Bay of Islands) and from the 40th Regiment Redoubt site (Te Awamutu) where pieces were marked by the firm of Pinder, Bourne and Co (Challis 1994: 83, Figure 44c; Brassey and Macready 1994: 43; Ritchie and Gumbley 1992). Another pattern UCOL 003, found on a cup in green has recently been recorded from the Blomfield House site in Russell in grey on the base of a bowl or cup (CFG Heritage report in preparation).

Other patterns which appear to be in common with other sites are UCOL 145, recorded as CE.11 by Plowman (Bioresearches 1998) and UCOL 010 recorded in the Department of Conservation reference collection as EA.22, both from His Majesty's Theatre. Many other patterns would presumably be found to be distributed more widely if the appropriate data was available from more sites.

Other Decoration

Sprigging is the second most common decorative technique from the Wanganui Hotel site, making up 13% of the total. Two different sprigged designs were identified, both of which were also found at the Bamber House site. Sprigged A is the most common with 52 vessels identified (Figure 4.3g, i). Sprigged B was found on 16 vessels. Many of the sprigged vessels also have lightly moulded body forms. Feature 621 had 25 sprigged vessels alone (23 in Sprigged A and 2 in Sprigged B).

Virtually all of the sprigged vessels are teaware forms: 28 cups and 37 saucers. The only other forms are one eggcup, three jugs and one small plate. Judging by the evidence from Feature 621 sprigged teaware may no longer have been in fashion as many of the vessels were discarded whole.

Vessels decorated solely with underglaze painted edgebands and hairlines are not common, with just 14 recovered. Similarly, fragments of just two shell edge plates were found.

Decoration involving handpainting is not common from the Wanganui Hotel site. Hand painted decoration on porcelain includes UCOL 034 which is a simple overglaze zigzag design around the rim in green and gilt found on plates, saucers, bowls and cups (Figure F.14c). Figure F.14m shows a floral design on the side of a porcelain cup or jug (UCOL 110). The saucer in Figure F.14n has a rather simple floral design in the centre, with a painters mark on the back (UCOL 111). On earthenware one of the few hand painted designs is UCOL 117, in underglaze red and blue on a plate (Figure F.14p). The saucer in Figure 4.3f (UCOL 035) has been decorated with a sponge to create a blotchy effect.

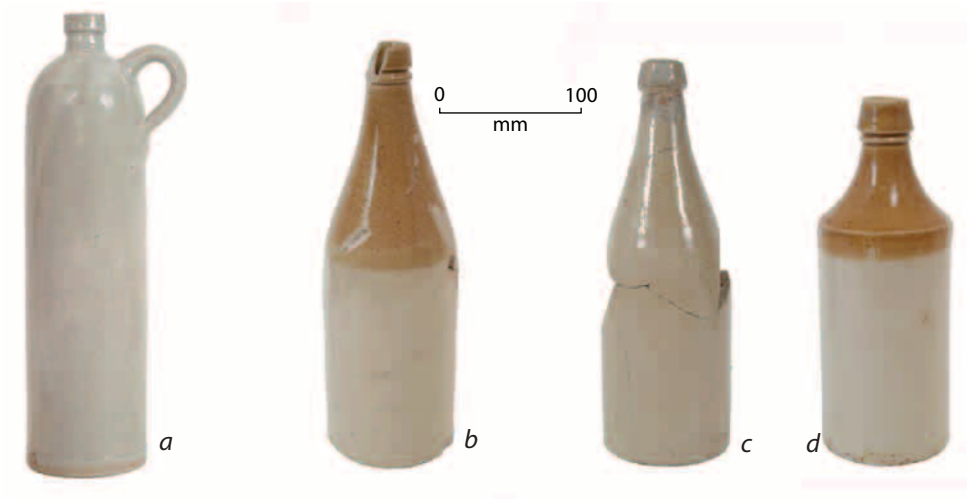
All three of the dyed body vessels from the Wanganui Hotel site are in blue, and are jugs. Two come from the hotel rubbish pits (Features 515 and 540). Figure 4.3b has a moulded body with some overglaze gilt highlights (UCOL 252), while Figure 4.3c is decorated with a moulded basket-weave type pattern.(UCOL 253). The other jug is only represented by handle fragments.

The most conspicuous items from the hotel site with slipped decoration are a set of three blue banded chamberpots from Feature 621. The pots have been decorated with bands of blue slip over a white body (Figure 4.3h). Like many of the other ceramics found in this feature the chamberpots would appear to have been whole when discarded.

Plain vessels with a clear glaze account for 12% of the hotel ceramics. Most of these are utilitarian vessels with no need of decoration. For example, 17 of the 59 plain vessels are storage jars. Other forms commonly not decorated include heavy mixing bowls and baking dishes for use in the kitchen and cups, saucers and plates made of more refined earthenware fabrics.

Stoneware

From the Wanganui Hotel site the most common type of stoneware vessels are bottles that contained beer or other alcohol (Table 4.13). Several two-toned Bristol-glazed stout bottles were recovered from the bottle pits and other hotel rubbish pits. A lesser number of porter bottles were recovered including one whole example from Feature 370. This bottle was 270 mm high with a base diameter of 92 mm and carried an impressed mark from the Port Dundas Pottery in Glasgow.



4.6. Stoneware: a, plain glazed gin or schnapps bottle; b, two-tone Bristol glazed porter style bottle; c, plain glazed porter style bottle; d, two-tone Bristol glazed stout style bottle.

Three stoneware schnapps or gin bottles were found, with two coming from the bottle pit Feature 339. One of these was whole, measuring 304 mm high with a base diameter of 82 mm, and decorated with a plain grey slip glaze (Figure 4.6a). Fragments of a salt-glazed stoneware gin bottle were found in Feature 253. None of these bottles were marked.

The next most common items are ink bottles in various sizes, with small 'penny inks' being the most numerous. Only one fragment is marked, being from the French firm of N. Antoine et Fils. Blacking bottles are also well represented, with four coming from Feature 337. The single jar from Feature 621 is incomplete but measures 73 mm to the shoulder and has a base diameter of 84 mm. The jar is Bristol-glazed with a two-toned finish and carries a circular impressed mark on the side 'STEPHEN GREEN/LAMBETH' with 'IMPERIAL/POTTERIES' in the centre. This particular piece cannot have been made any later than 1858 (thepotteries.org). Other vessel types include three ginger beer bottles and fragments of larger vessels such as crocks.

Manufacturers

A total of 21 manufacturers were identified from the Wanganui Hotel site. Like many historic assemblages in New Zealand, all are of British origin, with only a few from outside the Staffordshire district in England. The most common is Pinder, Bourne and Hope with 11 vessels in three different patterns. This company, and their successor Pinder, Bourne and Co, seem to have been more vigilant than other firms in marking their wares as five of the six Kulat side plates and both Chain saucers are marked. The next most common manufacturer is Hope and Carter with four plates recovered in the Olive pattern. W.T. Copeland is represented by three marks, two on Willow vessels and one on a UCOL 004 saucer.

There is little to suggest that sets of ceramics were being purchased by the hotel from particular makers, rather ceramics were chosen based on pattern. For instance, for Willow several manufacturers are represented among a range of dinner plates and serving vessels that were probably used concurrently in the Hotel.

The date ranges for the tableware and stoneware manufacturers show that the ceramics from the main rubbish pits probably include some of those used when the hotel was first established in the late 1850s. Manufacturing dates of ceramics from these features continue into the 1860s and 70s suggesting that some of the earlier items may have been in service for some time before finally being discarded.

Feature	Vessel	Height	Max. diameter (mm)	MNV (mm)
621	Jar		84	1
308	Bowl/basin			1
337	Blacking bottle	130	61	1
337	Blacking bottle	160	73	1
337	Blacking bottle	128	58	2
375	Blacking bottle		56	1
456	Blacking bottle	135	58	1
540	Blacking bottle	130	58	1
208	Ink		60	1
320	Ink	52	47	1
320	Ink	51	78	1
320	Ink	44	49	1
320	Ink	37.5	30.5	1
485	Ink	47	49	2
515	Ink	48	49	1
540	Ink	49	47	2
540	Ink	98	39	1
550	Ink	50	46	1
621	Ink	50	50	2
515	Porter bottle		87, 89	4
370	Porter bottle	270	92	1
208	Stout bottle			1
337	Stout bottle		88, 94	2
339	Stout bottle	246	91	2
473	Stout bottle		93	1
515	Stout bottle	253	90	1
515	Stout bottle			3
621	Stout bottle	245	86	1
621	Stout bottle	241	92	1
339	Schnapps bottle		81, 84	2
359	Schnapps bottle	305	84	1
253	Stone gin	265	86	1
208	Ginger beer			1
464	Ginger beer	165	67	1
621	Ginger beer	165	68	1
337	Crock/jar		145	1
515	Crock/jar			2
208	Bottle			1
337	Bottle		91	1
339	Bottle	160	60	1
339	Bottle		68	1
395	Bottle	232	92	1
526	Bottle		34	1
621	Bottle		70	1
621	Bottle	237	98	1
Total				58

Table 4.13. Summary of stoneware vessels, from the Wanganui Hotel site.

Feature	Maker	Date Range	Vessel	Pattern	MNV
208	Burgess and Leigh	c. 1862–	plate	Asiatic Pheasants	1
208	James F. Wileman	1870–92	plate	Asiatic Pheasants	1
308	George Jones and Co	c. 1861–c. 67	plate	Pearl Wreath	1
337	Hope and Carter	c. 1862–80	bowl	Olive	1
370	Port Dundas Pottery	c. 1850–1900	bottle		1
382	W.T. Copeland	1847–67	mug	Willow	1
383	Frederick Jones (and Co)	c. 1865–86	plate	Rhine	1
395	Joseph Bourne and Co	c. 1841–98	bottle		1
417	Dimmock and Smith*	c. 1842–59	plate	Willow	1
417	Francis Morley and Co.*	c. 1845–59	saucer	Cleopatra	1
417	Dillwyn and Co.*	c. 1836–50	washbowl	Lazuli	1
462	Barker and Son*	c. 1850–60	saucer	UCOL 77	1
463	W.T. Copeland	1847–67	plate	Willow	1
485	William Brownfield	1850–92	chamber pot	Pansy	1
514	Doulton and Co.	c. 1882–86	plate	Teddesley	1
515	David Methven and Sons	1847–c. 91	plate	Verona	1
515	J. J. and Co.†	c. 1826–54	serving dish	Willow	1
515	Malkin, Walker and Hulse	1858–64	saucer	Bosphorus	1
515	Pinder, Bourne and Hope	c. 1851–62	saucer	Chain	1
525	Frederick Jones (and Co)	c. 1865–86	plate	Rhine	1
525	Pinder, Bourne and Hope	c. 1851–62	plate	Kulat	4
525	Pinder, Bourne and Hope	c. 1851–62	plate	Willow	1
540	Pinder, Bourne and Hope	c. 1851–62	saucer	Chain	1
540	Dillwyn and Co.	c. 1836–50	chamber pot	Lazuli	1
540	John Thompson*	c. 1854–70	eggcup	Alma	1
540	Staffordshire Stone China	mid 19th century	serving platter	Willow	1
621	John Hawley and Co	1843–93	chamber pot	Ava	1
621	Joseph Bourne and Son	c. 1841–98	bottle		1
621	Stephen Green	c. 1820–58	jar		1
621	W.T. Copeland	1847–67	plate	Willow	1
621	W.T. Copeland	1847–67	saucer	UCOL 04	1

*Attributed to a maker only.
†Probably James Jamieson and Co, Bo'ness Pottery, Scotland.

Table 4.14. Identified manufacturers marks by feature from the Wanganui Hotel site.

Discussion

Out of the assemblage of 568 vessels recovered from the Wanganui Hotel site, most are directly related to the occupation of the hotel itself. There are no ceramics which date prior to the establishment of the hotel in the late 1850s, very few which date past the 1880s and virtually none from the period after 1892 when the hotel became a boarding house.

Over half the assemblage (298 of 568 vessels) come from three large rubbish pits (Features 515, 525 and 540) and a probable well (Feature 621), all dating to no later than the 1870s and associated with the hotel. Two of these pits had been fossicked and were only sampled, so the proportion of the total ceramics represented by these features would have originally been higher. The rubbish pits would appear to represent refuse from the day to day running of the hotel during the 1860s and 70s, though the disturbance to the fossicked pits makes more definite interpreta-

tion problematic, while the well (Feature 621) relates to domestic occupation of the hotel site. That the well is contemporary with the rubbish pits and related to the hotel occupation is suggested by the same style and type of ceramics found in each and by a cross-join between a chamberpot in the well and the handle from the same vessel found in Feature 540.

The composition of the assemblage is typical of most 19th century sites in New Zealand. Whiteware is the most common fabric accounting for 369 of 568 vessels, followed by semi-vitreous fabrics with 102 vessels. The relatively large number of semi-vitreous vessels is explained somewhat when one looks at decorative techniques. Transfer printing is the most common decorative technique in 19th century contexts and around half of the Wanganui Hotel assemblage is decorated in this way. However there are also a significant number of vessels decorated by sprigging (64 of 568), all of which occur on semi-vitreous fabrics. Feature 621 alone had 25 sprigged decorated vessels and 27 more were found in the main hotel rubbish pits.

Of the transfer prints Willow is the most common with 60 vessels and was found in all of the main hotel rubbish pits. Willow, then, would appear to have been the main dinner service in use at the hotel through the 1860s and 70s. There are a range of vessel forms and manufacturers represented, so it would appear that pieces of Willow were purchased as required rather than as a set. Other patterns such as Genevese may have been acquired as small sets.

5 Glass artefacts

Jaden Harris

A total of 3453 glass vessels and items were recovered from the UCOL excavations, making it one of the larger glassware assemblages analysed in New Zealand to date. The bulk of this material came from the Wanganui Hotel site, with only a sample collected from TS 78 and a small assemblage from the Bamber House site.

Methodology

All glassware was recovered from the Bamber House site. On TS 78 no features were excavated, but diagnostic glass was collected during machine scraping of the area. From the Wanganui Hotel site all diagnostic glass was retained for analysis and middle glass from selected features only. Diagnostic glass includes any top or base of a vessel, as well as embossed or decorated fragments which can identify the type of vessel.

All bottle middle glass and other fragmentary items such as window glass recovered were analysed on site and discarded. Diagnostic glass was sorted on site by bottle type and colour and returned to the lab in Auckland for detailed analysis. The diagnostic portions were measured and any attributes relating to function or manufacture recorded. For whole vessels this included recording the full dimensions of the bottle and its weight. The minimum number of vessels (MNV) for each area was then calculated by counting the number of tops and bases for each type, and adding the higher of the two numbers to the number for complete examples. Large discrete features such as rubbish pits were treated as single assemblages. Other samples which were not from discrete deposits were added together by area to obtain MNV values.

Weighing of bottle glass was initially carried out on all features, but was discontinued due to the amount of time involved and the low level of information being gained by this method. Weighing glass can be useful when looking at the spatial distribution of certain types, such as window glass. For bottle glass recovered from discrete deposits of rubbish, counting the tops, bases and whole vessels was sufficiently accurate means of quantifying the assemblage.

The recovery of a large number of bottles and fragments with paper labels on them from the Wanganui Hotel site presented a challenge not often encountered in archaeological sites. Due to their rarity and the high value of the information they contained, labelled glass was given priority during the on-site sorting and conservation of artefacts. Some labels on certain types of bottles were found to be relatively stable and could be left for a couple of days while others required immediate attention. In order to further protect these artefacts all deposits containing labelled bottles were excavated only when dry. During wet weather the site was covered over with a large tarpaulin.

Dirt was removed from labels by dry brushing and careful damp sponging. It was found that some items could be cleaned quite easily while for others only a minimal amount of dirt could be removed without degrading the label. Some labels were also damaged during excavation. Once cleaned, items were sprayed with a fixative lacquer commonly used for protecting charcoal drawings. The lacquer has a matt finish and effectively seals the labels from drying out and flaking off. Even after this conservation it was found that some labels, particularly on aqua Morton salad oil bottles were prone to flaking off. As a precautionary measure all labelled artefacts were photographed on site. Once they had been cleaned, stabilised and photographed, they were wrapped in tissue paper and bubble wrap and sent to Auckland for detailed analysis. Analysis in the lab included recording

any information present on the label and then having the artefacts professionally photographed.

The Bamber House site

A rather small assemblage of glassware was recovered from the Bamber House site. Only two secure contexts contained more than ten glass vessels (the well, Feature 46, and Feature 233). Around half of the total is made up of alcohol bottles (Table 5.1). The overlying fill layer yielded the highest number of bottles, but these are not discussed further as their relationship to the 19th century phases of occupation of the site is uncertain. For example, none of the glass soft drink bottles or stoneware soft drink bottles was recovered from secure contexts. Other features related to the Bamber House, such as postholes, contained only one or two items of glassware, probably in secondary deposition, and so are of little use for interpreting the site. The glass artefacts from these features are summarised in Table 5.1.

The well, Feature 46

Of the secure contexts, the well at the back of the section contained the greatest number of glass artefacts with 28 (Appendix A). The glass artefacts from the lower fill of the well would appear to date to around the late 1850s or early 1860s based on several diagnostic traits. The only ring seal in the well is a Cognac/Bordeaux shaped bottle with a crudely applied ring of glass around the top. An aqua gin bottle carries an applied seal near the base embossed 'BERNARDS & CO/SUPERIOR/No 1/GIN' and is most likely to date slightly earlier than the labelled examples dating to the 1860s from the Hotel site. The one complete case gin is of the pig-snout variety and at least one of the black beers has a clear bare-iron pontil mark on its base. Both these characteristics are uncommon after the 1860s. The few condiments also appear to date more towards the middle of the 19th century. Four of the five salad oil bottles are of the bell-type variety. One of these from the well is of the same form as those known to have been used by the firm of Hill and Ledger. As discussed in Appendix C, this manufacturer may have already been out of business by the early 1860s. A complete embossed Lea and Perrins bottle may also date to the 1860s. Taking the assumption that glassware has a much shorter curation time than ceramics, it is possible that the well had begun to be filled in before the end of the 1860s. Other artefacts such as the A. J. White pharmaceutical bottle were recovered from later fill overlying the main part of the well shaft.

Feature 233, pit

This feature was the only other on the Bamber House site which contained a significant number of glassware items. Unlike the assemblage from the well, however, none of the glass has any particularly distinguishing features by which it can be dated. The two complete black beers are of the standard shape and have conical kickups without any obvious pontil marks. The pit did contain a number of early ceramic items, including two clay tobacco pipes produced before 1861, and so the glassware probably dates to a similar period (Appendix A).

Discussion

The manufacturing dates obtained from the glassware, suggest that the fill of some of the features date to the early 1860s. The well would obviously have been used for some years before it was filled in and so it may have been dug to service the first dwelling (Phase 2) on the site, sometime in the 1850s. Material from other features

Category/type	MNV
Alcohol	
Black beer	42
Case gin	8
Gin	3
Cognac	1
Spirit	4
Ring seal	8
Wine	1
subtotal	67
Condiments	
Salad oil	5
Pickle	2
Lea & Perrins	3
Jar	1
Aqua glass	3
subtotal	13
Aerated water	
Codd	8
Torpedo	2
subtotal	10
Pharmaceutical	
Castor oil	1
Vial	2
Pill bottle	1
Aqua glass	5
Clear glass	6
subtotal	15
Miscellaneous	
Aqua glass	11
Yellow glass	1
subtotal	12
Glass tableware	
Tumbler	7
Stemmed glass	6
Bowl/vase	1
subtotal	14
Total	131

Table 5.1. Summary of glass vessels from the Bamber House site (all contexts).

and the fill layers show that domestic occupation continued on the site throughout the 19th century, as is already known from historical sources.

The assemblage is too small and disturbed to compare with other sites but a few general points can be made. The modest number of alcohol bottles from the well assemblage and the stemmed glassware suggest a relatively refined drinking culture in the Bamber household. The composition of the glassware from the well is also typical of what would be expected from a single domestic household, with alcohol bottles being the most numerous, followed by condiments and pharmaceutical bottles.

Town Section 78

No features were excavated on TS 78 and artefacts were not systematically collected. A sample of diagnostic items of glassware and whole bottles were collected from the surface after it had been cleaned down by a hydraulic excavator. Among these were the only complete examples of a ring-seal hock bottle and an Udolpho Wolfe's schnapps bottle. Several soft drink bottles were also recovered, with both Wellington and Wanganui aerated water companies represented. The assortment of glass and stoneware Thompson and Lewis bottles all probably relate to the Thompson and Lewis factory, which was on the site from 1896. The range of material represented indicates activity on this site mainly from the 1870s through to the end of the 19th century and into the 20th. Information on artefacts recovered from TS 78 is included in Appexix G.

The Wanganui Hotel site

A total of 3260 glass vessels and items were recovered from the Wanganui Hotel site. The number and types of glassware are summarised in Table 5.2. As would be expected from a hotel site alcohol bottles are the most numerous, making up

Category/type	MNV
Alcohol	
Black beer	1567
Case gin	211
Gin	144
Champagne-style	76
Small champagne	102
Cognac	52
Hock	2
Wine	2
Ring seal	275
Whisky	10
Spirit	33
Crown-seal beer	2
subtotal	2475
Condiments	
Jars	10
Pickle	21
Salad oil	53
Lea & Perrins	24
Vinegar	5
Essence of anchovies	2
Other	27
subtotal	142
Aerated water	
Codd	11
Torpedo	57
Crown-seal	1
subtotal	69

Table 5.2. Summary of glass vessels from the Wanganui Hotel site.

Category/type	MNV
Pharmaceutical	
Castor oil	6
Sarsaparilla	11
Schnapps	2
Bitters	5
Vial	28
Pill bottle	2
Perfume	7
Vaseline	1
Baby feeder	1
Aqua glass	52
Clear glass	15
Cobalt blue	2
subtotal	132
Miscellaneous	
Cottage ink	1
Aqua glass	154
Clear glass	21
Brown glass	12
Green glass	9
Olive glass	18
Blue glass	1
subtotal	216
Glass tableware	
Tumbler	190
Stemmed glass	23
Decanter	8
Bowl	3
Stemmed bowl	1
Vase	1
subtotal	226
Total	

Table 5.2. continued…

76% of the assemblage. As a comparison, from the Victoria Hotel site in Auckland, alcohol made up 80% of all bottle glass (Brassey and Macready 1994).

Alcohol

The Wanganui Hotel site alcohol bottle assemblage is dominated by black beers with ring seal bottles in various forms the second most common. Gin seems to have been the most popular spirit with evidence for whisky and other drinks being significantly less common (see also discussion of bottle labels, below). Numerous Bordeaux-shape ring seal bottles in green or aqua green glass would also have contained cognac, as shown by at least five different brands or companies represented by labels. The glassware assemblage is most notable for the number of labelled bottles present.

It should also be noted that an establishment such as a hotel would probably have purchased beer and spirits in bulk containers such as wooden casks and so the consumption of alcohol is underrepresented from the material evidence. The

recovery of one ceramic beer tap handle clearly shows that at least some beer was being served from such containers.

Bottle manufacturers

Several manufacturers were identified from the Wanganui Hotel site from embossing on black beer bases (Table 5.3). For details on the individual companies refer to Appendix C.

Embossing	Feature	MNV
COOPER & WOOD/PORTOBELLO	253	2
	337	1
	339	4
	395	5
	515	1
subtotal		13
COOPER & WOOD PORTOBELLO/MANUFACTURERS	339	1
	395	4
	515	1
subtotal		6
COOPER & WOOD/MANUFACTURERS	253	1
RICHd COOPER & Co/PORTOBELLO	253	2
	337	1
	339	7
	395	2
subtotal		12
R COOPER & CO/PORTOBELLO	515	3
COOPER & Co/PORTOBELLO	515	2
WOOD PORTOBELLO	339	1
	395	1
	515	1
subtotal		3
LYON/MAKERS/BROS	515	3
POWELL & Co./BRISTOL	540	1
GS & L	337	1
	339	2
	492	1
subtotal		4
GB253	5	
	337	3
	338	1
	339	7
	515	1
subtotal		17
AB & Co.	515	2
S & Co.	337	1
	339	1
subtotal		2
AA	253	1
Total		70

Table 5.3. Manufacturer embossing on black beer bottles from the Wanganui Hotel Site.

Condiments

Condiment bottles from the Wanganui Hotel site represent a range of different products from salad oil, pickles and sauces, through to syrups and essences. As with the alcohol bottles, many of the manufacturers and the products could be identified through surviving labels, bottle form or embossing.

Salad Oil

Salad oil bottles were the most commonly recovered condiment from the Wanganui Hotel site. Of these, almost half were J. T. Morton 'twirlies' with a few George Whybrow 'herringbone' pattern bottles. Whole Morton examples are 226–230 mm in height, with a base diameter of 47 mm and weighed between 206–227 g. The one complete Whybrow example is 228 mm high with a base diameter of 50 mm and weighs 240 g. Other common designs include six examples of fluted bottles with an 1855 registration mark on the base and one with an 1870 registration mark, found in Feature 621.

Pickles and sauces

A variety of pickle and sauce bottles were recovered with most examples only occurring once in the assemblage. Only a few condiments manufacturers were identified with a Crosse and Blackwell pickle bottle coming from Feature 621 and fragments of at least two J. T. Morton bottles from other features.

A glass seal from a bottle or jar was recovered embossed '*A. DUFOUR & Co/ BORDEAUX*' with 'PRUNES/D'ENTE' in the centre from Feature 540. The vessel this seal was from would have contained dried or preserved plums. Bordeaux was famed for its prunes in the 19th century (Hurlbert 1890: 492).

A total of 24 Lea and Perrins bottles were recovered from the Wanganui Hotel site. Fourteen of these were embossed on the base 'ACB Co', standing for the Aire and Calder Bottle Company. Feature 339 contained the most Worcestershire sauce bottles with eight. Interestingly, none were found in the other large Hotel rubbish pits (Features 540, 515 and 525 – the latter two had been fossicked prior to excavation).

Two brands of vinegar were identified with one being a labelled George Whybrow example and the other a 'Champion's Vinegar' bottle base found after the site had been cleared by machine. The whole vinegar bottles came from Features 339 and 621 respectively.

Jars

Only five condiment jars were found on the Wanganui Hotel site, three being of aqua glass and two of clear glass. The largest example has a rim 104 mm in diameter and a base 114 mm in diameter. Plain earthenware jars seem to have been more commonly used at the hotel site than glass ones and are discussed in Chapter 4.

Miscellaneous

An aqua glass bottle from Feature 485, 151 mm high and 51 mm in diameter most likely contained condiments of some type. One other bright aqua green coloured bottle from Feature 308 of a similar form is approximately 175 mm high and 47 mm in diameter. A bottle of this type from Blomfield House at Russell carried part of a J. T. Morton label but unfortunately the portion identifying the contents was not preserved (CFG Heritage report in preparation).

Aerated water

By far the most numerous aerated water bottle found at the Wanganui Hotel site were Hamilton Patents (torpedo bottles), with 57 recovered. Of these 15, including eight whole examples, had a large 'E' scratched into one side, which stood for Evans, a local bottler who reused bottles from other manufacturers (Mike Taylor pers. comm.). Ten of these marked bottles came from Feature 339, which dates to the 1860s and early 1870s, so Evans must have been operating at this time. Unlike the Hamiltons, none of the Codd Patent bottles were found in a secure context. Aerated water manufacturers included C. W. Brodie from Wellington, Thompson & Lewis, and local Wanganui firms Buisson and Harkness, J. Hart and Co., E. Hodren, and Gower. Most of these businesses date to the late 19th or early 20th century and only the Gower and Evans bottles relate to the period of the Wanganui Hotel. Information on individual manufacturers is included in Appendix C.

Pharmaceutical

The number of pharmaceutical bottles in the assemblage does not seem high, but this is skewed somewhat by the overwhelming number of alcohol bottles from the hotel bottle pits. Looking at the general rubbish pits the proportion of such bottles is much higher. From Feature 621 for example, alcohol accounts for 31 of the 121 vessels, pharmaceutical 26, and condiments 22. A significant number also came from Feature 515, a fossicked rubbish pit, where they account for 47 of 263 items of the glassware. A number of the pharmaceutical bottles are embossed or identifiable to a specific function or product, but just over half are plain generic containers that could have been used for any number of products.

Sarsaparilla

Eleven sarsaparilla bottles were recovered from the Wanganui Hotel site with the only embossed fragments identifying the brand as 'DR TOWNSEND'S// SARSAPARILLA// ALBANY/N.Y.' Feature 515 contained the remains of six sarsaparilla bottles, Feature 308 two with one apiece from Features 383, 473 and 485.

Schnapps

Fragments of just one glass schnapps bottle were recovered from the features on the Hotel site. The bottle base from Feature 383 is 72 mm square and has part of the regular embossing found on Udolpho Wolfe's bottles. The only other evidence for the consumption of schnapps is from two fragmentary stoneware schnapps or gin bottles in Feature 339 and one whole example from Feature 359.

Bitters

Bitters is represented by five bottles, three of which have partial labels from the German firm Senner's. The bottles would appear to have had only a modest capacity and would probably have been either consumed more as a tonic than an alcoholic drink or have been added to other drinks in the Hotel, much as it is today. The only other bottles likely to have contained bitters are two bottle bases embossed 'JOH von PEIN/ALTONA.' One each was recovered from the Hotel site rubbish pits Features 515 and 540.

Perfume

The perfume and related products in the rubbish pits clearly indicates a female presence in the household associated with the hotel. Historic references indicate that John Dunleavy who is recorded as a publican on the site from 1858 was married, with Mrs Dunleavy later being recorded as the sole owner of the property. It is likely that other publicans were also married and had families. The ability to purchase perfume from Paris and Germany implies some status, or at least spare cash, as these products would have been expensive.

Feature	Embossing	MNV
337	E. RIMMEL/LONDON	1
515	RIMMEL	1
515	PIESSE & LUBIN/LONDON	1
515	F WOLFF & SOHN/KARLSRUHE	1
525	ROGER & GALET/PARIS	1
540	...PARIS	1
621	EB PINAUD/PARFUMEUR/PARIS	1
621	JOHN GOSNELL & CO/LONDON	8
540	JOHN GOSNELL & CO/LONDON	2
	Total	17

Table 5.4. Embossing on perfume and personal beauty product bottles from the Wanganui Hotel site.

Other pharmaceutical bottles

Just six castor oil bottles are present in the Wanganui Hotel assemblage. All are of cobalt blue glass, with the complete example from Feature 621 measuring 215 mm high with a base diameter of 43 mm. There are 28 vials from the Hotel site, all small, round sectioned, clear glass containers with the exception of one octagonal sectioned vial in cobalt blue glass. None carry any embossing or distinguishing marks of any kind. Two pill bottles are small ovoid-sectioned bottles with wide rims and are likewise unmarked.

Embossed containers

Relatively few other pharmaceutical bottles carried embossing. The small number that do are summarised in Table 5.5. One of the more interesting items is the baby feeder bottle from Feature 514 which dates to between 1879 and the turn of the century. It suggests that children were still being raised in a household on or near the site during this period.

Glass Tableware

As can be seen from Table 5.6 a large assemblage of table glass was recovered from secure contexts at the Wanganui Hotel site. Of the 226 items of table glass recovered, 190 are tumblers. The number of such vessels from the hotel rubbish pits suggests that tumblers were routinely employed as drinking vessels in the hotel. Whether this was just for spirits or for beer as well is not known. Larger sized

Feature	Embossing	MNV
514	NEW ZEALAND/DRUG CO LIMD/KIWI/FEEDING BOTTLE	1
515	.. COWER/..NC CHEMIST/[WAN]GANUI NZ	1
515	BARRY'S//TRICOPHEROUS/FOR THE SKIN/AND HAIR// NEW YORK//DIRECTIONS/IN THE/PAMPHLET	1
515	EDWd CLEAVER/630 OXFORD ST	2
515	JOSEPH DAKIN/PO[P]LAR/[LONDO]N	1
515	AYER (base)	1
526	VASELINE/CHESEBROUGH/NEW-YORK	1
	Total	8

Table 5.5. Embossing on Pharmaceutical Type Bottles from the Wanganui Hotel site.

glasses, e.g., pint size, do not appear to have been used in 19th century hotels in New Zealand.

The stemmed glasses show more variety in form and were probably used in the consumption of a range of alcoholic drinks. Present are glasses with small bowls suitable for fortified wines and spirits such as sherry, port, brandy or cognac, larger fluted glasses suitable for champagne and sparkling wines and other more standard sized glasses that could have been used for a range of beverages. From bottle labels there is no evidence for the consumption of still wines other than the more medicinal product, Felton's, 'Quinine Still Champagne.'

The four decanters from feature 540 may have been used either in the private residence of the publican or landlord or in formal dining situations in the hotel, as from the evidence most of the spirits consumed in the hotel would appear to have come in bottles. Bowls and other forms of table glass are not common from the Wanganui Hotel site.

Feature	Feature type	Tableware type	Total
362	Posthole	Tumbler	10
417	Rubbish pit	Tumbler	21
463	Rubbish pit	Tumbler	9
463	Rubbish pit	Stemmed glass	1
515	Rubbish pit	Tumbler	18
525	Rubbish pit	Tumbler	22
525	Rubbish pit	Stemmed glass	6
540	Rubbish pit	Bowl	1
540	Rubbish pit	Decanter	4
540	Rubbish pit	Tumbler	36
540	Rubbish pit	Stemmed glass	4
621	Rubbish pit	Tumbler	19
621	Rubbish pit	Stemmed glass	2
	Total		153

Table 5.6. Features with more than 10 items of glass tableware from the Wanganui Hotel site.

Bottle pits

Several pits at the Wanganui Hotel site contained numerous bottles. Table 5.7 gives summary data for all pits with a bottle MNV greater than 10 and these are mapped in Figure 5.1.

Bottle pit Feature 253

All glass from Feature 253, the pit containing mostly smashed bottles (Chapter 3), was analysed. The fill of this pit was clean grey sand and the glass was easily separated from the sand by sieving it through a 6 mm mesh. All diagnostic portions were counted following the standard methodology described above. Non-diagnostic fragments of middle glass were all cleaned and dried but were not counted, only weighed.

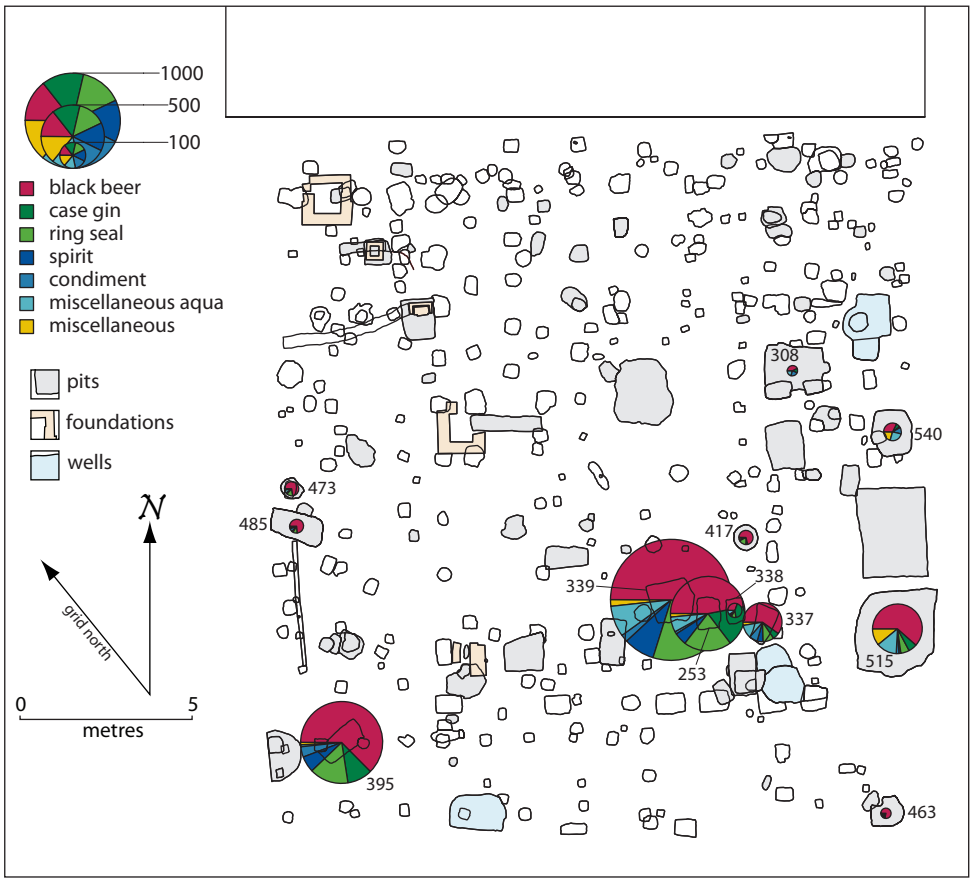
In Table 5.8, because aqua middle glass could not feasibly be allocated to subcategory, all aqua glass is given as a single category – this includes gin and spirits bottles, condiments bottles and aerated-water bottles. The green glass was all from ring seal bottles, and dark olive glass is separated into round black beer bottles and square case gin bottles. On the basis of tops and bottoms found, there were no other kinds of olive glass bottles. There was a small proportion of brown glass and nearly 5 kg of small glass fragments that were not counted. These two categories are shown in Table 5.8 but not in Figures 5.2 and 5.3. Nearly 224 kg of glass was recovered from this one feature, which measured 900 x 680 x 700 mm, an approximate volume of 0.43 m^3. Normally only tops and bases are considered diagnostic, but as Table 5.8 shows most of the glass from this feature (75.5% by weight) was non-diagnostic middle glass (this category includes necks and shoulders).

Figure 5.2 shows the total weight compared with MNV for each category. The proportions are roughly equal, indicating that essentially all of each bottle was recovered. Only 13 bottles were recovered whole, 8 black beer and 5 green ring seal bottles, all the rest were broken to one degree or another, and some were very broken. Figure 5.3 shows the proportions of tops bases and undiagnostic middle portions for each category as well as the whole bottles. It is clear from this that the different categories of bottle seem to break differently. Black beers, for instance, have heavy bases and so base fragments are a greater proportion of the weight. Top fragments of case gin are heavy, often including much of the shoulder while the bases tend to break along the bottom edge and have little attached middle glass, and so base fragments weigh a surprisingly small proportion. It would have been expected that green ring seal bottles would also have had heavy base fragments (particularly champagne bottles), especially compared to aqua bottles, but this does not seem to be the case. The proportion of aqua middle fragments is high because this category includes shoulders and necks, while the proportion of tops is low, as many of these were small, light fragments.

As Figure 5.2 shows, a count of MNV calculated as the greater of the counts of tops or bases is an accurate reflection of the weight of glass in a feature. The weight to MNV ratio for aqua bottles differs from the other categories. Aqua bottles are generally more lightly constructed than rather crudely made black beers with their heavy bases or ring seal bottles that have to contain pressurised beverages (aqua aerated water bottles are an exception) so this is not surprising. This simple analysis has demonstrated that each glass category is qualitatively different, even if it has only served to confirm our general assumptions about bottles – that breakage is dependant on bottle shape and distribution of glass within the vessel and that MNV is an accurate measure of how much glass is in an assemblage. Such an analysis would not normally be undertaken, but the unusual nature of the assem-

Feature	x (mm)	y (mm)	z (mm)	volume (m³)	Black beer	Case gin	Ring seal	Spirit	Condiment	Miscellaneous aqua	Miscellaneous	Total	Whole bottles
253	900	680	700	0.43	213	80	94	25	5	30	7	454	13
308	1770	1650	1500	4.38	6	2	0	0	3	3	0	14	4
337	1050	700	1080	0.79	86	8	13	7	10	16	4	144	6
338	700	550	350	0.13	9	12	3	1	1	3	0	29	4
339	1260	1150	130	0.19	574	40	233	88	21	88	19	1063	93
395	1450	700	1000	1.02	321	51	79	33	21	4	5	514	77
417	750	750	750	0.42	17	1	4	0	0	1	1	24	1
463	1000	870	1050	0.91	14	1	1	0	0	1	1	18	
473	1100	650	60	0.04	21	0	4	1	0	2	1	29	
485	1550	880	530	0.72	21	0	3	1	2	1	1	29	2
515	2360	2240	200	1.06	143	13	13	3	4	31	26	233	36
540	1290	1140	1550	2.28	14	3	1	0	5	11	9	43	

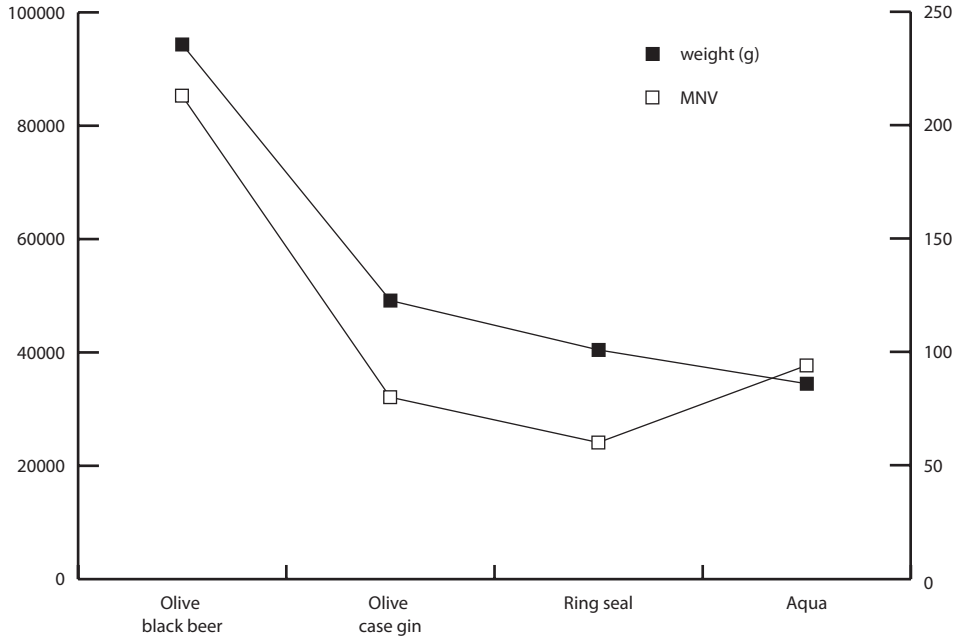
Table 5.7. Summary of bottle pit contents from the Wanganui Hotel site by MNV, with MNV > 10.



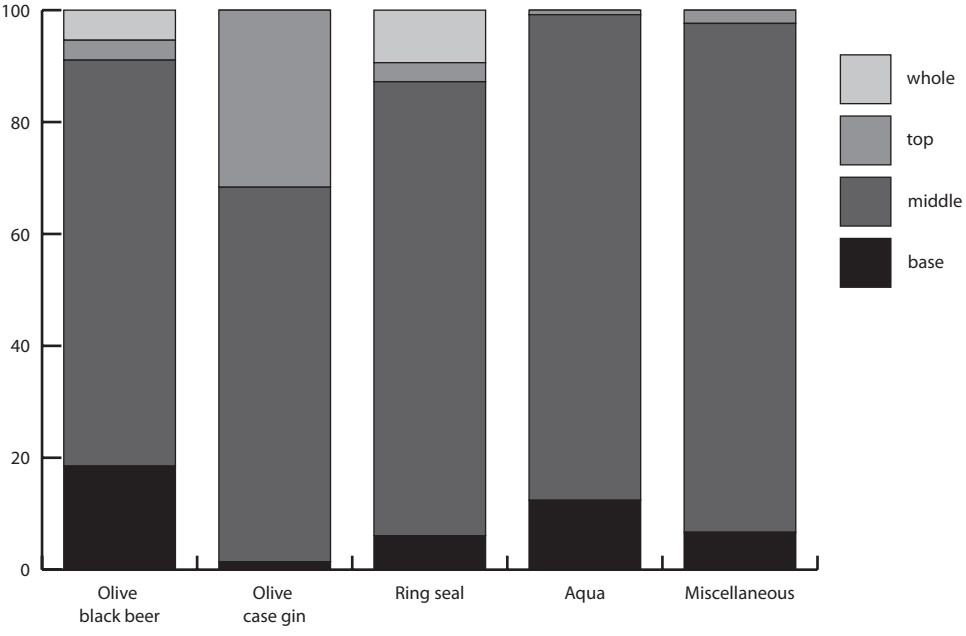
5.1. Distribution of bottle pit contents from the Wanganui Hotel site by MNV, with MNV > 10.

Type	bases (g)	middle (g)	tops (g)	whole (g)	Total (g)	MNV
Olive black beer	17471	68440	3357	5066	94334	213
Olive case gin	700	32898	15554		49152	80
Ring seal	2456	32809	1378	3797	40440	94
Aqua	4277	29918	280		34475	60
Miscellaneous	370	5031	131		5532	7
Miscellaneous residue		4913			4913	
Total	25274	174009	20700	8863	228846	454

Table 5.8. Weights and numbers for all glass from bottle pit Feature 253.



5.2. A comparison of total weights (left axis) and MNV (right axis) for main glass categories from bottle pit Feature 253.



5.3. Comparison of the proportions of body parts of bottles for the main glass categories from bottle pit Feature 253.

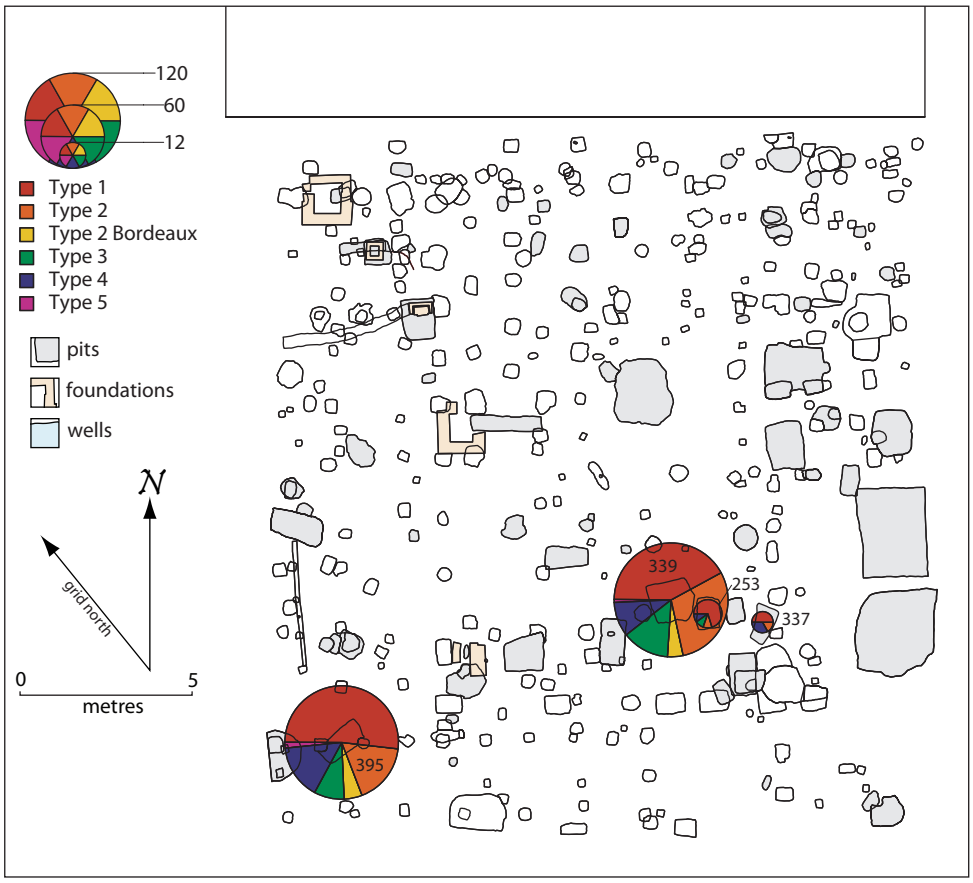
blage – deliberately smashed in situ and in a clean matrix – made it worthwhile to test these assumptions.

Paper labels

Feature 253 was one of four bottle pits where numerous well-preserved paper labels were recovered on a wide variety of bottles. The others were Features 337, 339 and 395 – there was also one label each from Features 535 and 627, both of which were postholes. These features were dug at the back of the Phase 3 hotel into clean alluvium. Very little organic material was recovered from these pits, and the nature of the fill indicates they were filled in one event, i.e., they were not left open and filled incrementally, so the conditions for preservation were excellent. The labels are discussed here as a separate category of artefact from the bottles. Clearly labels and, hence, contents are related to bottle type but this relationship is not always straightforward, as some of the labels demonstrate.

Type	Description	bottle type
Type 1	Beer	black beers
Type 2	Spirits (including cognac)	aqua (cognac in ring seals)
Type 3	Champagne/wine (excluding cognac)	ring seals
Type 4	Condiments	condiments
Type 5	Pharmaceuticals	bitters

Table 5.9. Typology of paper bottles labels from the Wanganui Hotel Site.



5.4. Distribution of bottle labels by type from the Wanganui Hotel site.

Type	Description	F 253	F 337	F 339	F 395	Total
1	Beer					
1a	John Barber				2	2
1b	Blood, Wolfe and Co	5	2	28	33	68
1c	Parsloe and Curran			3	15	18
1d	Robert Porter and Co	1		8	2	11
1e	Tennant's	1			4	5
1f	India pale ale		1	5	5	11
1g	Oval blue label		1	2		3
subtotal		7	4	46	61	118
2	Spirits					
2a	Bernard and Co	1		29		30
2b	Sir Robert Burnett and Co			2	15	17
2c	ames Mackenzie			1		1
2d	Miscellaneous whisky				2	2
2e	JAs Hennessy and Co			1	3	4
2f	J. Freych…			2	3	5
2g	D. and G. McLaren				2	2
2h	Miscellaneous cognac		1	2		3
2i	Miscellaneous spirits		1	2		3
subtotal		1	1	39	25	64
3	Champagne					
3a	Alfred Felton	1		6	3	10
3b	Deinhard and Co				7	7
3c	Kupferberg			5		5
3d	Sparkling champagne			4		4
subtotal		1		15	10	26
4	Condiments					
4a and 4b	J.T. Morton raspberry syrup		1	15		16
4c	George Whybrow salad oil			2		2
4d and 4e	Miscellaneous salad oil					2
4f	J.T. Morton pickle	1		1		2
4g	Lee and Perrins			1		1
4h	George Whybrow vinegar		1			1
4i	Batty and Co			2		2
4j	Lemon syrup				2	2
4k	Lemon essence			1		1
4l	Crosse and Blackwell			1		1
4m	Miscellaneous condiment				1	1
subtotal		1	2	23	3	31
5	Pharmaceuticals					
5a	Senner's bitters			1	2	3
Total		10	8	124	101	245

Table 5.10. Label types by context.

Black Beers, Type 1
John Barber, Dublin, Type 1a (Figure 5.5 h)

Two squat black beer bases carry partial labels from John Barber of Dublin. Both were found in Feature 395. The labels appear to have been rectangular, with all of the writing within a large oval inside this. The most complete example has, in

the middle, a partial number in red '...9961' then in black 'BOTTLED BY/JOHN BARBER/CONGLETON' with a partial address around the outside '...ES'S GATE DUBLIN'. The other label is of the same style but has a different number '79725.' The full address would read 'ST. JAMES'S GATE DUBLIN' which was the site of St. James's Gate Brewery. Arthur Guinness took over the St. James's Gate brewery in 1759 establishing the famous Guinness brand, so the bottles are almost certain to have contained Guinness stout. In the 19th century bottling beer for export was primarily carried out by merchants, who purchased beer from the breweries in bulk.

Blood, Wolfe and Co, Liverpool, Type 1b (Figure 5.5 a, b, e)

Labels from this firm were most numerous, with 68 black beer bottles, both large and pint sized, carrying partial labels. Both sizes of bottle were of the squat variety. Sixteen bottles with partial Blood, Wolfe and Co labels were recovered whole and dimensions are included in Table 5.11. Feature 395 had the most examples with 33, followed by Features 339 (28), 253 (5) and 337 (2). The bottles are labelled on both the front and back with oval labels. The front label has the brand name of the beer at the top 'BLOOD'S' with 'XXX' below. At the bottom is 'BOTTLED BY/BLOOD, WOLFE & Co/ LIVERPOOL.' Presumably this company was buying beer in barrels and bottling it for export. In the centre of the label is a 'Z' in a circle, imitating the lead capsule from the bottle top. The reverse label proclaims the benefits of the new patent lead capsule sealing the bottle. From the outside in it reads: 'ONLY GENUINE WHEN THE MOUTH OF THE BOTTLE IS SECURED BY A PATENT METAL CAPSULE/ IMPRESSED WITH THE NAME OF THE FIRM & TRADE MARK, & OF WHICH THE CENTRE OF THIS LABEL IS A COPY/ BLOOD, WOLFE & CO LIVERPOOL.' In the centre is the trademark, a large red 'Z' in a circle.

Stamped lead seals that would have covered the cork and top of the bottle were also found. The one complete example is stamped in relief around the outside 'BLOOD WOLFE & Co/LIVERPOOL' with a 'Z' in a circle in the centre painted red.

Blood, Wolfe and Co was run by Thomas Wolfe and Frederick Wolfe, both of Irish extraction, who established an export beer bottling and brewing business in Liverpool by the late 1850s .The 'Z' brand present on the Wanganui labels was used for beer from 1864 (Hughes 2006: 114). The March 24 1866 edition of *The Colonist* in Victoria, British Columbia, has an advertisement for the drinking establishment Blood, Wolfe and Co's (web.uvic.ca/vv/student/spirits/whiteproblem2.html). The fact that Blood, Wolfe and Co could set up their own tavern to promote their goods in the goldfields of British Columbia suggests that they were a well established company, involved in the export trade to the colonies. The company continued well into the 20th century.

Parsloe and Curran, Type 1c (Figure 5.5 c)

Eighteen large squat black beers carried labels by Parsloe and Curran. Fifteen of these were recovered from Feature 395 with three from Feature 339. The small rectangular green labels read 'BEST STOUT/PORTER' with 'BOTTLED/BY/ PARSLOE & CURRAN' in the centre. No references could be found to this company although from the evidence on the label they were clearly a merchant company involved in the bottling of beer at least. One bottle base from Feature 339 with a partial Parsloe and Curran label also had 'WOOD/PORTOBELLO' embossed on the base, dating it to after 1868.


BLOOD
INDIA
PALE ALE
0
100
mm
a
b
c
d
e
f
g
h
i
j
k
l

Label	Bottle type	Height (mm)	Base diameter (mm)	MNV
Blood, Wolfe & Co	Squat black beer	250–262	83–89	10
Blood, Wolfe & Co	Pint black beer	224–233	67–69	6
Parsloe & Curran	Squat black beer	245–264	87–90	4
Robert Porter & Co.	Squat pint black beer	205–208	73–75	2
Robert Porter & Co.	Standard black beer	303	77	1
Tennant's	Standard black beer	280–286	80–82	4
'India Pale Ale'	Standard black beer	300	78	1
'Blue Label'	Pint black beer	235	69	1
Bernard & Co's	Old Tom gin	278–280	76–77	6
Sir Robert Burnett & Co's	Old Tom gin	276–282	74–78	6
Alfred Felton	Champagne	302	90	1
Deinhard & Co.	Champagne	300–304	92	4
'Sparkling Champagne'	Small Champagne	250–255	72–73	2
JAs Hennessey & Co.	Cognac	300	78	1
J. Freych...	Cognac	285–286	73–74	2

Table 5.11. Dimensions for whole alcohol bottles with labels from the Wanganui Hotel.

Robert Porter and Co, London, Type 1d (Figure 5.5 i, j, k)

Eleven bottles carried partial labels from the London firm of Robert Porter. Nine of the labels were of the type 1d. All were on squat pint bottles and were found in Feature 339. The diamond shaped label is predominately red in colour, with white lettering edged in black. The label reads (from the top) 'Robert Porter & Co/London/Extra Stout.' In the centre is a white band with 'Robert Porter' in black cursive script and above this an oval trademark depicting a dockyard or similar scene. Two other more fragmentary rectangular labels (Type 1d1) also have 'Robert Porter' in cursive script. One was on a complete standard shaped bottle 303 mm high with a base diameter of 77 mm from Feature 395. Neither were particularly well preserved but the surviving label on a fragment of middle glass from Feature 253 reads: 'RO[BERT PORTER]/LO[NDON/ In con…ende of Numerous/future will be the Lite issued/1st October 1858.' References can be found on the internet to 'Robert Porter & Co.' labels and paraphernalia from the late 19th century and well into the 20th, but none to the period that these date to. From the context of the bottles, their manufacture and the date on the label it is clear that these items date to no later than the 1860s. In any event the labels certainly predate the use of the famous Robert Porter and Co 'Bull Dog' trade mark, first used and registered on 11 September 1879 (Hughes 2006: 119).

Tennant's, Glasgow, Type 1e (Figure 5.5 d)

Five partial Tennant's labels were found, all on tall black beer bottles. Four were recovered from Feature 395 and one from Feature 253. The oval yellow label has a prominent red 'T' with 'TRADE MARK' written inside it and 'J & R Tennant' over the top of it in black cursive script. Below the trademark is 'TENNANT'S' with 'WELL PARK BREWERY' around the outside top of the label and 'Pale Ale' below. Brothers John and Robert Tennant established a brewery and distillery in the Drygate area of Glasgow in the 1770s and later took over the adjacent brewery of William McLehose, renaming it Well Park Brewery. The brewery expanded and continued to be run by the Tennant family throughout the 19th century (www.

5.5 (opposite). Beer bottle labels. a, b, and e, Type 1b, Blood, Wolfe and Co, Liverpool; c, Type 1c, Parsloe and Curran; d, Type 1e, Tennant's Pale Ale; f – g, Type 1f, India Pale Ale; h, Type 1a, John Barber, Dublin; i – j, Type 1d, Robert Porter and Co, London; k, Type 1d1, Robert Porter and Co variant; l, Type 1g, unidentified oval blue label.

archives.gla.ac.uk). The Well Park brewery remains in production today as part of Tennant Caledonian Breweries Ltd.

India Pale Ale, Type 1f (Figure 5.5 f, g)

Several bottles and fragments carry partial labels where the name of the bottler or brewery is not preserved. Eleven fragments and one whole bottle have partially preserved large rectangular red and yellow labels 'INDIA PALE ALE' printed on them. Five examples were found in Feature 395, five in Feature 339, and one in Feature 337. India pale ale was originally a style of beer developed in the 18th century as a higher alcohol and hop content ale that could survive the long sea voyage to places like India. None of the labels are complete, so the name of the brewer or merchant is missing. Below 'India Pale Ale' however is the address or location 'VICTORIA STORES, LONDON E.' This may well refer to the merchant company of M. B. Foster and Sons, who in an 1896 directory have one of their places of business listed as Victoria Stores, North Woolwich E, with their main offices and warehouse being at 242–244 Marylebone Road (historyofstratford.co.uk/NorthWoolwich/NorthWoolwich-1896Directory.shtml).

Oval blue label, Type 1g (Figure 5.5 l)

Three other bottles carry partial oval blue labels (Type 1g) on which no lettering or other distinguishing designs are preserved. One complete bottle was recovered from Feature 339 and fragments from Feature 337.

Spirits, Type 2
Bernard and Co, Type 2a

Part or whole labels from the firm of Bernard and Co were found on six whole gin bottles and 33 fragments. The labels come in four variants and are all of a similar size being approximately 120–125 mm high by 95 mm wide. The variations in the labels most likely represent minor changes over a period of a few years, although in which order they may have been issued is not known.

The first type (Type 2a1) is the best preserved of the four with many fragments still having vibrant colours and legible wording (Figure 5.6 a). The label reads from top to bottom: BERNARD & COS/TRADE MARK/FINEST/NO. 1/OLD TOM/PATENT GIN/DISTILLED BY STEAM/ENTERED IN STATIONERS HALL. No reference could be found to Bernard and Co although from the type of bottle and the label it is clear that they were an English firm. The trademark design situated in the centre near the top of the bottle is a dancing bear. The bear is muzzled and raised up on his back legs, with his front paws extended out in front of him. The same design was found on one lead capsule (Feature 253) which would have covered the top of the bottle and the glass stopper sealing the contents. The capsule is embossed with the bear in the centre, painted red, with the words 'TRADE MARK' to either side. The words 'FINEST/NO. 1' before 'OLD TOM' is perhaps more of a marketing ploy rather than suggesting that the company had more than one grade of Old Tom gin. The reference to the patent steam distillation process once again has a self-promotional tone showing that the company has a modern distilling plant, presumably producing a consistent and superior product. The central part of the label is flanked by fantastical gryphon-like creatures. The final line at the bottom seems to refer to a copyright taken out on the design of the label. Stationer's Hall is the home of the old Company of London Stationer's, where from 1554 until 1842 copyrights for any printed work were registered. In 1842 legislation formalised copyright protection under a legal framework, but applicants were still

5.6 (opposite). Spirit Bottle Labels. a, Type 2a1, Bernard and Co gin; b, Type 2a2, Bernard and Co variant; c, Type 2a3, Bernard and Co variant; d – e, Type 2a4, Bernard and Co variant; f – g, Type 2b1, Sir Robert Burnett and Co gin; h, Type 2b2, Sir Robert Burnett and Co variant; i, Type 2c, James Mackenzie whisky; j, Type 2d, miscellaneous whisky.


BERNARD & Co
FINEST
No 1
OLD TOM
SIR ROBERT BURNETT & Co
OLD TOM GIN
0
100
mm

a b c d e f g h i j

required to register at Stationer's Hall. Statutory registrations at Stationer's Hall ended in 1912. Copyrights were often accompanied by a copy of the label, photograph or work being registered and these are still held in the National Archives at Kew, so a registration for this particular Bernard and Co label is still likely to exist, but no indexes are available for this period (www.nationalarchives.gov.uk/catalogue/Leaflets/ri2152.htm).

At least two other copies of this same label are present in the assemblage with slightly variant colour schemes. The label in Figure 5.6 b (Type 2a2) replaces the orange in Figure 5.6 a with gold for some of the lettering, the bear and the gryphons. Another version (Type 2a3), shown in Figure 5.6 c, is slightly different again, with the blue around the top lettering replaced with green and the bear showing minor changes. Both of these variants also have the bottom line 'ENTERED IN STATIONERS HALL.'

The other label (Type 2a4) contains many of the same elements as the first but is designed slightly differently. The two best preserved examples of this type are illustrated in Figures 5.6 d, e. Once again, the dancing bear trademark is prominent in the centre of the label, although this time in brown rather than orange, red or gold. The name of the firm 'BERNARD & Co' occurs below the bear with the line below this reading 'EXTRA QUALITY.' Unfortunately, none of the labels are particularly well preserved and the line above the bear could not be reconstructed. That the name of the firm is given as 'Bernard and Co' rather than 'Bernard and Co's', and that only a few poorly preserved fragments were found, suggests that this may be the earlier design.

Bernard and Co were also the manufacturers of the whole gin bottle with applied embossed seal from the well (Feature 46) at the Bamber House site – that bottle is thought to be slightly earlier than the labelled examples.

Sir Robert Burnett and Co, Type 2b

Part or whole labels from the firm of Sir Robert Burnett & Co's were found on 5 whole gin bottles and 27 fragments. Robert Burnett took over the distillery established by Sir Joseph Mawbey in the 1770s. By 1823 he had made substantial improvements to the property and the Burnett firm remained in possession of the distillery until it was taken over by the Distillers Company in 1928 (www.british-history.ac.uk/report.asp?compid=47063). The labels come in two variations, both including 'OLD TOM GIN.' Presumably, these two labels would not have been in use concurrently, as both represent the same product from the same company, although which is the older of the two is uncertain.

The more elaborate label (Type 2b1, Figure 5.6 f, g) is approximately 100 mm high and employs bold colouring. The label reads 'SIR ROBERT BURNETT & COS/OLD TOM GIN/PATENT GLASS STOPPERED BOTTLES.' The design in the centre is a copy of the trademark on the lead capsule that would have covered the glass stopper sealing the top of the bottle (Figure 5.6 f detail). Two whole examples of the capsule were found. The top is embossed with the letters 'F/H/A/C' in a red circle in the centre, with 'LONDON * OLD TOM *' around the outside. Exactly what the letters 'F/H/A/C' may refer to is not known. In very small lettering near the edge at the top is the wording 'PATENT TRADE [MARK CAPSULE]'and at the bottom 'BETTS MAKER LONDON'. Several capsules, representing four different brands, found at the Omata Stockade in Taranaki, also refer to Betts as the maker or to 'Betts Patent' or 'Trade Marked Capsules' (Prickett 1994: 41, Figure 2.27). William Betts patented a process in 1849, which he described as:

> The new manufacture of a material to be employed in the manufacture of capsules and for other purposes, consists in combining lead with tin, by covering the lead with tin over one or both surfaces of

> the lead, and reducing the two metals in their conjoined state into thin sheets, of a thickness suitable for the purposes to which they are to be applied. (Ardagh and Harrison 1862: 304)

From the evidence it would appear that this new material quickly became the product of choice for manufacturing bottle capsules

The other label (Type 2b2) may possibly be the slightly earlier of the two as it goes into some detail about the patent glass stopper. The label is predominantly red in colour and is slightly larger. The example in Figure 5.6 h also has a reversed imprint of a Parsloe and Curran label (Type 1c) from a black beer bottle over part of it. The top of the label reads 'SIR ROBERT BURNETT & COS/CELEBRATED/ OLD TOM GIN/VAUXHALL DISTILLERY. LONDON.' The next section reads 'WITH THE PATENT GLASS STOPPERED BOTTLES/WHICH WILL ENTIRELY PREVENT ANY POSSIBILITY OF DISCOLORIZATION/OR LOSS FROM EVAPORATION.' Then 'BY THIS ADVANCEMENT CORKSCREWS ARE FOREVER SUPERSEDED.' The next panel gives directions on how to open the bottle 'DIRECTIONS THE PATENT STOPPER IS TAKEN OUT BY PRESSING THE THUMB/FIRST ON ONE SIDE & THEN ON THE OTHER WHICH WILL EFFECTUALLY AERATE IT.' The last section at the bottom reads 'SOLE SHIPPING AGENTS/BLACKBURN & ROBINSON. LONDON.' This last line is interesting as it illustrates that the Sir Robert Burnett firm was exporting its gin through a merchant company. This may also have been the case with Bernards and Company.

James Mackenzie, Type 2c

Three aqua glass bottle fragments were recovered with partially preserved labels indicating that the original contents were whisky. One label has 'WHISKY/JAMES MACKEN[ZI]E/GLASGOW' (Figure 5.6 i). It also incorporates a line from Robbie Burns 'Auld Lang Syne' with 'WE TWA HAE PAIDL'T ...' being able to be made out. No information could be found about James Mackenzie and it is quite possible that he was just the bottler of the product rather than the producer.

Miscellaneous whisky, Type 2d

One other whisky bottle has a partial label with the wording 'OLD SCOTCH/ WHISKY/PURE…' (Figure 5.6 j). One further aqua coloured bottle base only has the edge of the label preserved.

JAs Hennessy and Co, Type 2e (Figure 5.7 a)

Several fragments and one whole bottle carried part labels from the firm of JAs Hennessy and Co. The whole example from Feature 395 measures 300 mm high with a base diameter of 78 mm and weighs 680 g. Fragments of two others were found in this feature and one from Feature 339. The label has a white background, with gold and black used for the lettering and the border of grapevines. The label reads 'JA.s HENNESSY & Co/COGNAC' in the centre with a line just above the bottom reading 'REGISTERED AT 304 ST[ATIONER's HALL].' Like the Bernard and Co gin label discussed above, this refers to a copyright taken out to protect the design of the label from being copied. An identical Hennessy label was recovered from the Halfway House Hotel site in Cromwell (Bedford 1986: Fig. 4e). Part of a lead capsule from this company was also recovered from the Wanganui Hotel site (Feature 308) although much of the detail is obscured because it was stuck to a piece of ferrous metal.

The Hennessy firm was established in France in 1765 with the trade name JAs Hennessy first being adopted by Jacques Hennessy in 1813 but it was reportedly not until 1856 that labels using 'JAs Hennessy & Co' were presented (www.queenanne wine.com/hencog.html). If this is the case then the present examples, which date to the 1860s, may still follow the original design from 1856. Branding was an important factor in marketing then as it is today and once a design had become associated with a particular firm it is unlikely that they would have changed it in a hurry. The Hennessy firm is still in existence today and is the largest producer and marketer of cognac in the world.

J. Freych..., Type 2f (Figure 5.7 b, c)

Two complete bottles and fragments of three others carried part cognac labels. Three were found in Feature 395 and two in Feature 339. The label is relatively plain, having a white background with grey lettering and a grey band outline. From the top it reads: 'CHATEAU de CU[R]S../J. FREYCH.../BORDEAUX'. Bordeaux was and still is the principle region in France where cognac is produced. No information could be found regarding this label, although Château Freychinet and Château de Cursol are both current labels in Bordeaux.

D and G. McLaren, Type 2g (Figure 5.7 j)

Fragments from just two bottles were found in Feature 395 with the labels bearing the name 'D. & G. McLaren.' The fragments are in aqua coloured glass but they are from Bordeaux shaped bottles and the label design incorporates a grapevine with grapes, so the contents were probably cognac. Bottles similar to cognac bottles were also commonly used for other spirits but this is probably not the case here. The label is in gold, black and green and is composed of a design in the centre, which incorporates a ship in the foreground with buildings behind, topped with the motto 'SIGILLUM OPPIDI DE LEITH', which translates as 'the seal of the fortified or walled town of Leith.' Below the design and motto is a date '1565.' It is not known what this date refers to – in Scottish history it was the year Mary Stuart married Lord Darnley who was then proclaimed King of Scots. Below this is the name of the firm 'D. & G. McLAREN/LEITH.' Although no information could be found regarding this name, it is likely to be that of a merchant business. Leith is the port for the city of Edinburgh (until 1920 they were separate municipalities) and is a likely location for any business involved in the export trade.

5.7 (opposite). Spirit and Wine Bottle Labels. a, Type 2e, Jas Hennessy and Co cognac; b – c, Type 2f, J. Freych... cognac; d and l, Type 3d, 'Sparkling Champagne'; e, Type 3b, Deinhard and Co; f – g, Type 3a, Alfred Felton 'Quinine Still Champagne'; h – i, Kupferberg 'Sparkling Moselle'; j, D. and G. McLaren; k, Type 2h, miscellaneous cognac; m – n, Type 2i, J. Thompson, Leith, miscellaneous spirit.

Miscellaneous cognac, type 2h

One label in blue and gold on an aqua green bottle fragment, which is notable for the number of air bubbles in the glass, was recovered from Feature 339 (Figure 5.7 k. At the bottom of the label the word 'COGNAC' can clearly be made out but the line above is not clear. The letters 'R' and 'E' can be made out, with the line possibly reading 'FRENCH'.

Three other fragments of green bottle glass from the same feature, possibly from the same bottle, carried part of a predominantly blue label. The largest fragment is on a bottle base 74 mm in diameter with a domed push-up. This base is unusual as it does not have the mamelon typical of most ring seal bottles of this period. No lettering or other diagnostic information could be gained from this label.

One other whole bottle from Feature 337, 285 mm high with a base diameter of 73 mm, only has the very edge of a rectangular label bordered in red and gold preserved.


a
b
c
d
e
f
h
i
j
k
0
100
mm
l
m
n
g

Miscellaneous spirits, Type 2i

Two aqua glass bases from Feature 339 with partial labels also probably contained spirits or alcohol of some kind. The bases are 74 mm in diameter and are mould blown with a dome shaped push-up, and there are also numerous air bubbles present in the glass. The label is oval with a white background and blue line edging. From the best preserved example (Figure 5.7 m) a large bunch of grapes can be seen along with a grape leaf on which is set the writing. From a fragment from another bottle it is clear that the label originally had at least three lines but only the bottom two are preserved (Figure 5.7 n). The legible wording reads 'J. THOMSON/LEITH.' This most likely refers to the firm J. G. Thomson who operated out of Leith from the mid 18th century, distributing a range of wines and spirits (www.archives.gla.ac.uk).

Champagne, Type 3

Ring seal bottles, generally thought to contain champagne and wine, are the second most common bottle type from the Wanganui Hotel site, after black beers. Where a label is present all contained either champagne or cognac, further suggesting that ring seals only contained these products. However, ten of the labels contained quinine champagne which could as easily be classified as a pharmaceutical. Cognac labels occur on Bordeaux shape ring seals, and these have been described under spirits.

Champagne labels were placed on the bottom third of the bottle, unlike the cognac labels, which were placed around the middle of the bottle.

Alfred Felton, Type 3a (Figure 5.7 f, g)

Ten examples of labels carrying the name of Alfred Felton were found, with six coming from Feature 339, three from Feature 395 and one from Feature 253. All are from champagne-style ring seal bottles with the whole example measuring 302 mm high with a base diameter of 90 mm and weighing 914 g. The label was placed near the base of the bottle and is largely white in colour with gold and black lettering. The edge of the label is bordered with a grapevine. A complete example would read FELTON's/ORIGINAL & GENUINE/QUININE/STILL CHAMPAGNE/ CAUTION! *The genuine Quinine Still/Champagne is Manufactured* ONLY *by/* ALFRED FELTON/SWANSTON ST. MELBOURNE.'

Alfred Felton set himself up as a merchant in Melbourne before becoming a wholesale druggist in 1861. In 1867 he purchased the interests of drug wholesaler, Youngman and Co, in partnership with its manager F.S. Grimwade. The company was renamed Felton, Grimwade and Co and continued successfully up until the time of Felton's death in 1904. Felton and Grimwade also established the Melbourne Glass Bottle Works in 1872, partly no doubt to meet their own demand for glass bottles and containers (adb.online.anu.edu.au). Therefore, 'Felton's Quinine Still Champagne' can be securely dated to between 1861 and 67.

Quinine is an anti-malarial, and while it seems unlikely that malaria was a concern in mid 19th century Wanganui, it was just as effective as a painkiller and muscle relaxant. It is also the primary flavour in tonic water (itself originally an anti-malarial) and so, while originally a pharmaceutical, could have been drunk at the Wanganui hotel as a flavouring or some form of mixer. Although produced by a druggist it has been classified as Type 3 here.

Deinhard and Co, Germany, Type 3b (Figure 5.7 e)

The most common champagne label was from Deinhard & Co, with part labels found on five whole bottles and two bottle bases. All were recovered from Feature 395. The whole examples range from 300–304 mm high, with base diameters of 92 mm and weights from 928 to 1046 g. Like the Felton labels the label was positioned near the base of the bottles. None of the examples are well preserved but through comparing them most of the details of the original could be reconstructed. The label is rectangular with an oval scene in the centre with the writing around the edge of it. On the left at the top is 'DEINHARD & Co' with the partial word ...LENZ' on the right. Beyond this word is the additional lettering in smaller script 'a/Rhein S.Mo...'. The original lettering on this side would probably have read 'COBLENZ a/Rhein S.Mosel'. At the bottom of the label the lettering reads from left to right 'MOSEL MOUSSEUX.'

Koblenz is a city situated at the confluence of the Moselle River with the Rhine and thus occupies an important strategic position for trade from both of these river valleys. Principal among the firms taking advantage of this was the "house of Deinhard and Co., dealing extensively both in the magnificent still vintages of the Rheingau and the Moselle, and the higher-class sparkling wines of these districts" (Vizetelly 1889: 178). Deinhard and Co exported their products around the world including to colonies such as Australia. It is probably from Sydney that their product made its way to Wanganui in New Zealand. Clearly, by the 1860s and 70s they were producing a great deal of sparkling wine which is when these particular labelled bottles date from.

Kupferberg, Sparkling Moselle, Type 3c

Eight fragments of large champagne ring seal bottles had part of the label illustrated in Figures 5.7 h, i. At least five bottles are represented with all coming from Feature 339. The label is positioned near the base of the bottle. The top line, if complete, would read 'SPARKLING MOSELLE' and the bottom line 'CHR. ADT. KUPFERBERG.' The oval scene in the centre of the label shows a large building on the right, with a church in the centre background and a park-like landscape in the foreground with people walking about. In the bottom right corner of the label can be seen a bearded gnome-like character.

The Kupferberg family established a winery in Mainz, Germany, in 1850 (www.kupferbergterrasse.de). 'Sparkling Moselle' is a style of sparkling wine which the company were renowned for.

Sparkling champagne, Type 3d (Figure 5.7 d, l)

Part labels were also found on smaller sized champagne ring seal bottles. At least four labels are represented from Feature 339. The two whole bottles are 253 and 255 mm high, with base diameters of 72 mm and weigh around 600 g. The label is placed near the base of the bottles and is largely white in colour with black lettering and a simple line border. The top line reads 'SPARKLING CHAMPAGNE', while the following lines are less complete. The lettering that can be made out reads 'ST. R.OY/..R.IM' and at the very bottom 'O..EE..INGTON. Sole age[nt].'

At the top of the label are two medallion-like designs. The one on the left features a bust of a middle-aged male and the one on the right just has writing. Unfortunately, none of the writing can be made-out but the images may represent the obverse and reverse sides of a coin or medal. The middle lines (of which little is legible) may refer to the manufacturer of the product, while the lower line clearly refers to a shipping agent.

Condiments, Type 4

J.T. Morton, London, Type 4a and 4b (Figure 5.8 a, b)

Diagnostic portions from 16 salad oil bottles, including five whole examples, carried partial J.T. Morton paper labels. All of the bottles are of aqua coloured glass and are of the type known as 'twirlies' by bottle collectors.

The main part of the label (Type 4a) reads 'J. T. MORTON/RASPBERRY SYRUP/104, 105 & 106/LEADENHALL St./LONDON. The 'RASPBERRY SYRUP' portion of the label is interesting, as this is actually on a thin strip of paper pasted over the top of 'RED CABBAGE'; all this being on a salad oil bottle. At the top of the label is a reference to an award: PRIZE MEDAL/FOR/PRESERVED/PROVISIONS. On the back of the bottles is a separate label (Type 4b) giving instructions on how to get the raspberry syrup out of the bottle 'J. T. MORTON/Should this Syrup become Crystalized Solid/Bottle In Hot Water which will ime.../... of water added to ...' It seems unlikely that a narrow necked salad oil bottle would have been suitable for red cabbage, which would presumably be a chunky pickle; rather Mortons may have run out of raspberry syrup labels and used whatever came to hand, not worrying too much about the niceties for the colonial market. The back label is more certainly the correct raspberry syrup label.

George Whybrow, London, Type 4c (Figure 5.8 g)

Two salad oil bottles were recovered with labels from the firm of George Whybrow. The body of the bottle is decorated vertically down the sides with a moulded 'herringbone' type pattern. Designs for salad oil and pickle bottles would appear to be specific to particular manufacturers as evidenced by the labelled examples found from the Hotel site, and from previously excavated sites. Unlike the Morton bottles, the Whybrow bottles have an area free of moulded decoration to accommodate the paper label.

Both of the labels are the same, being round and red and white in colour. The more complete example reads: SUBLIME SALAD OIL/G. WHYBROW/LONDON. The complete bottle also has a label around the neck, which unfortunately has a piece of rusty metal adhered to it. A salad oil bottle from the Conservatorium site in Sydney had a neck label reading 'SUBLIME SALAD OIL' with a partial body label with the name of G. Whybrow (Smith 2001: 3).

5.8 (opposite). Condiment and miscellaneous bottle labels. a, Type 4a, J. T. Morton 'Raspberry Syrup'; b, Type 4a and Type 4b (detail); c, Type 4d, miscellaneous salad oil; d, Type 4e, miscellaneous salad oil; e, Type 4f, J. T. Morton 'Cauliflower Pickle'; f, Type 4f1, J. T. Morton 'Picalilli Pickle'; g, Type 4c, George Whybrow salad oil; h, Type 4h, George Whybrow vinegar; i, Type 4i, Batty and Co 'Essence of Anchovies'; j,k, 'Superior Lemon Syrup'; l, Type 4k, 'Lemon Essence'; m, Type 5a, Senner's Bitters; n, Type 4g, Lea and Perrins, Worcestershire sauce; o, Type 4l, Crosse and Blackwell, custard powder; p, Type 4l (detail); q, Type 4m, miscellaneous condiment.

Miscellaneous salad oil labels, Type 4d and 4e

Part labels were found on two other complete salad oil bottles. The bell-shaped bottle in Figure 5.8 c is 220 mm high and weighs 228 g. Unlike the Morton and Whybrow bottles the glass is aqua blue in colour. A partial red coloured label (Type 4d) can be seen on the lower half of the bottle but unfortunately nothing could be reconstructed from it. Another aqua blue bottle in a similar type of pattern to the Morton bottles also carried a part label (Type 4e, Figure 5.8 d). The bottle is 232 mm high and narrower than the Morton bottles having a base diameter of only 32 mm. The label reads '[SAL]AD OI[L]' across the middle and has a lions head in a circle just above the base.The manufacturers of these two particular products are unknown.

J.T. Morton pickle, Type 4f (Figure 5.8 e, f)

Labelled fragments from a pickle bottle from Feature 253 have the word 'CAULIFLOWER', with the original contents presumably being cauliflower pickle. Another square bottle base 70 mm wide from Feature 339 has a part label read-

Jaden Harris
CFG Heritage Ltd

ing 'J. T. MORT[ON]/PICCALILI/104, 105 & 106/LEADENHALL ST./LONDON' (Type 4f1). Both pickle bottle forms are the same.

Lea and Perrins, Type 4g (Figure 5.8 p)

Four fragments from Lea and Perrins bottles, from a total MNV of 24, carried partial paper labels. None are particularly well preserved, although the original colour of the label would appear to be orange with black writing as it is today.

George Whybrow vinegar, type 4h (Figure 5.8 h)

One aqua vinegar bottle base 59 mm in diameter from Feature 337 had a partial George Whybrow label. The label is not very well preserved but is similar in style to the salad oil ones and 'G.[W]HYBRO[W]' can just be recognised at the bottom. One other base fragment, 72 mm in diameter with dimples down the side, may also be from George Whybrow.

Batty and Co Essence of Anchovies, Type 4i (Figure 5.8 i)

One of the more unusual labelled products recovered were fragments from two bottles from Feature 339. The bottles are of aqua glass and rectangular in section, measuring 59 x 43 mm, with chamfered corners. The main label covers both the front and sides of the bottles, with another separate label on the back. From the front it reads 'GENUINE ESSENCE/OF CORDOVA/ANCHOVIES/BATTY & Co./OIL, ITALIAN &/EXPORT PICKLE WAREHOUSE/15 & 16/PAVEMENT, FINSBURY,/LONDON.' The wording around the medal at the bottom reads 'Paris 1855 Mention Honorable', referring to the Exposition Universelle held in Paris in 1855 (en.wikipedia.org/wiki/Exposition_Universelle). The writing on the side panels is only partly preserved but the one on the left reads: '...in this/... Colonies/... of the Continent/induce them to call the/... of the Public/to the adoption of…' The panel on the right reads: '...prepared from the fin/est Gifts of Nature gath/ered in due Season and by the peculiar & Scien/tific application of/steam retains the/FRESH COLOR and/FLAVOR for any length/of time in all Clim.../& bear the Sign.../Batty & Co.' The back label starts 'International Exhibited' then 'Prize Medal' to the left and in the middle 'Awarded By ... To/For Pickles And/Preserved .../Purity & Co[nsistency]/Of Flav[or]'. Batty and Co was founded by George Batty and his wife in 1825 at Finsbury Pavement (en.wikipedia.org/wiki/Finsbury_Pavement). In 1905 the company was taken over by Heinz but the name of Batty and Co was retained for some years.

Lemon Syrup, Type 4j (Figure 5.8 k, l)

Fragments of two black beer bottles had labels identifying the contents as 'Lemon Syrup' rather than beer. The labels are predominantly red, black and green in colour. In the centre of the label is the wording 'SUPERIOR/LEMON SYRUP.' No other writing is present on the label. The label is bordered by an abstract vegetative design and there are two child-like figures in the left hand corner and at least one on the right. In the centre foreground there is a prominent wooden cask. Both of the bottles were found in Feature 395. Like the Morton raspberry syrup, the lemon syrup may have been used in the hotel in the preparation of drinks. That the labels were found on black beers indicates that the bottles were being re-used, and this may have been a colonial or even local product.

Lemon essence, Type 4k (Figure 5.8 j)

A small clear glass essence bottle from Feature 339 had part of a paper label still attached. The bottle is 102 mm high with a 43 mm diameter base. Little of the label is legible but across the top it reads '... Essences For Flavor' and in the centre in bold lettering 'LEMON'.

Crosse and Blackwell's custard powder, Type 4l (Figure 5.8 m)

A small aqua glass bottle 155 mm high with a base diameter of 50 mm may well have contained custard powder. Much of the label is degraded but 'CU' can just be made out on the left and 'ER' on the right, with the middle being illegible. At the bottom there would appear to be a reference to the London based condiment manufacturers Crosse and Blackwell's. The contents were probably custard powder, but "CU…ER" could as easily stand for curry powder. This company first started in 1830 and continued through the 19th century (Toulouse 1971: 113).

Miscellaneous condiment, Type 4m (Figure 5.8 q)

The only other miscellaneous condiment label is on a fragment of aqua glass from a jar or pickle bottle (1919). The label has a prominent trademark – a 'B' in a circle enclosed in a square, with 'ESTABLISHED' above and the word or date below missing. Above the trademark is written 'ENGLISH FRU...'. No information could be found to match this trademark with a particular company.

Pharmaceutical, Type 5
Senner's bitters, Type 5a (Figure 5.8 o)

Three Bitters bottles from the Hotel bottle pits (Features 395 and 339) are interesting as they have partially preserved labels identifying the brand as 'Senner's Stomach Bitter' from Dusseldorf, Germany. The bottles carry two labels with the main one reading 'SENNER'S/STOMACH/BITTER/DUSSELDORF/GERMANY'' Below this label is another one reading 'NOTICE! These justly *CELEBRATED STOMACH BITTERS* for/stimulating appetite are strongly recommended by the f.../Born Juin 1818.'

Discussion

One of the most intriguing aspects of the Wanganui Hotel assemblage is in the large number of bottles which retained part of their original paper labels. Other sites of significance in New Zealand where paper labels on glass vessels have been recovered include Omata Stockade, Taranaki (Prickett 1994), Alexandra East Redoubt, Pirongia (Warren Gumbley, pers. comm.) and the Halfway House Hotel, Cromwell Gorge (Bedford 1986). From other sites typically only a few fragments or vessels are found with any of the label preserved and often little or no information can be recorded. For Omata Stockade and Alexandra East Redoubt, which are both military sites, labels seem to have been preserved by rubbish being buried and sealed over quickly, as also appears to have been the case at the Wanganui Hotel. In the case of the Halfway House Hotel, labels were preserved more by the dry nature of the climate and the free draining alluvium in which the artefacts were buried.

Where labels are present they prove invaluable as they can not only identify the contents of the vessel, but can also provide information on the bottler or manufacturer of the product and its origins. Taking the example of Type 4a (Morton 'Raspberry Syrup'), the presence of labels can also show where bottles of a particu-

lar type, in this case salad oil, may in fact have been used for a completely different product. Overall, however, the majority of labels show that commonly assumed uses such as beer being bottled in 'black beer' bottles are generally correct. Labels can also help to identify specific bottle forms unique to individual manufacturers. Bottle labels from some firms also changed over time and so the labels can be used to date the vessel more precisely than can be achieved by looking at bottle manufacturing techniques and context alone.

Conclusion

The glassware assemblage from the Wanganui Hotel site is dominated by alcohol bottles discarded as part of the day to day running of the hotel from the late 1850s up to the 1870s. Given the nature of the business this comes as no surprise and alcohol bottles account for 76% of all glassware. This is similar to the Victoria Hotel site, Auckland, where alcohol made up 80% of the total (Brassey and Macready 1994). Other vessels, such as the large number of tumblers, are also likely to have been mainly used in the consumption of alcohol in the hotel.

The contents of the four large bottle pits are indicative of periods of cleaning out of the hotel, presumably of used bottles which may have been stored for possible reuse but then later discarded. The uniformity of the contents, the clean nature of the fill and other factors such as the preservation of labels, suggest that the pits were filled as single events. That the bottles had been stored for some time prior to disposal is indicated by variations in the labels from the same firms present in the same pit.

The other large rubbish pits associated with the hotel occupation (Feature 515, 525, and 540) show a much more general pattern of rubbish disposal, with more bottle types present, apart from being predominantly alcohol. For example from Feature 515 68% of the glassware is alcohol related (178 of 263) but there are also a range of condiment and pharmaceutical products present. From one of the probable wells, Feature 621, the range is even more varied with alcohol making up just 25% of the total (31 of 122). This shows that while most of the major features relate to the commercial side of the hotel, other features like 621 are more likely to relate to a domestic household, albeit one still associated with the hotel.

When looking specifically at the consumption of products in the Wanganui Hotel based on the glassware, it is clear that alcohol formed the mainstay of the business. From the bottle types and additional information gained from the labels the most popular drinks would appear to have been beer and gin. Most beers would have been either strong ales or stout, such as Guiness, as supported by the labelled examples. Gin was one of the cheapest spirits to produce and enjoyed wide-spread popularity in the 19th century. From the bottles it is clear that both English and Dutch gin were available in the hotel. Other bottled alcohol represented by ring seal bottles would have included products such as sparkling wines and spirits like cognac. While the number of bottles containing alcohol may seem significant it is important to remember that many of the cheaper spirits and a range of beers available at the hotel would likely have been purchased in wooden casks. Casks were reused and normally remained the property of the brewer or distributor and so were not very often discarded. Taking this into account the actual consumption of products like gin would actually have been much higher than the material record suggests.

Other non-alcoholic beverages do not appear to have been popular, with just 57 Hamilton patent aerated water bottles recovered. In comparison from the Settler's Hotel site, Whangarei, 84 of a total of 297 items of glassware from a single feature, were aerated water bottles (Campbell and Harris 2008: 26). This feature had been filled in with debris from a fire event in 1874 and so represented produce that had

been stocked in the hotel immediately prior to the fire. There is some evidence however, for the consumption of products other than alcohol at the Wanganui Hotel from the bottle labels. The 'raspberry syrup' and 'lemon syrup' products are more likely to have been used in the preparation of non-alcoholic drinks and products like Felton's quinine still champagne hint at a variety of beverages not readily apparent when looking at bottle types alone.

In the 1860s and 70s settlers and establishments in Wanganui would have been heavily dependent on material goods either imported directly from Britain or through Australia. This is especially true of the glassware, all of which during the period the hotel was running would have been produced overseas. Evidence from manufacturing marks on the vessels themselves and from paper labels shows that the majority of the glassware and the products they contained derived from Britain. Of the few exceptions are the Alfred Felton quinine still champagne from Australia and sparkling wine from Germany and cognac from France. While this is likely to have been imported directly from Australia, the German and French products are more likely to have been imported through a British agent.

Locally produced products are likely to have been used at the hotel but it is difficult to judge how significant these were compared to the imported goods. One of the few positively identified examples of a locally produced product are the Evans Hamilton patent aerated water bottles with a 'E' scratched on the side. Other local producers may have similarly reused imported bottles for their own goods as well, but without labels or other evidence the extent to which this contributed to the local market cannot be ascertained.

6 Miscellaneous artefacts

Jaden Harris

Miscellaneous artefacts are all those that are not ceramic and glass, Chapters 4 and 5. They are described in this chapter for the Bamber House and the Wanganui Hotel sites by category.

The Bamber House site

Clay tobacco pipes

A total of 230 clay pipe fragments were recovered from the Bamber House site, though many were small stem fragments from unsecured contexts. A minimum number of 47 was obtained from secure contexts. All of the pipes recovered from the Bamber House are plain, functional items. The Agnew and Murray pipes found in Feature 233 (a rubbish pit) point to an date early in the 1860s. The Balme pipe recovered from the well (Feature 46) is again consistent with that being an early feature.

Pipe form and decoration

The only form of decoration on clay pipes from the Bamber House site was the addition of a tan glaze to the bite end of some stem fragments. This was done to prevent the smokers lips from sticking to the porous clay rather than for decoration. Thirteen stem fragments showing traces of tan glaze were recovered. Two 'T. D.' style pipes were also recovered.

Clothing hardware

Buttons

A total of 16 buttons were recovered from the Bamber House site (Table 6.2). The majority of these are of metal, with just a single bone button and four small porcelain buttons. Notable amongst these are several British military buttons. Button dimensions in Tables 6.2 and 6.5 are given in lines, the standard 19th century measure for buttons, as well as mm.

Manufacturer	Date	Feature	MNI
John Agnew, Glasgow	1849–57	233	1
Balme, London	c. 1840s–76	2	1
Balme, London	c. 1840s–76	46	2
Balme, London	c. 1840s–76	247	1
Balme, London	c. 1840s–76	259	1
Balme, London	c. 1840s–76	260	1
Thomas Davidson & Co., Glasgow	c. 1861–91	2	1
Duncan McDougall & Co., Glasgow	1846–91	2	2
Duncan McDougall & Co., Glasgow	1846–91	233	1
William Murray & Co., Glasgow	1830–61	233	1
William White, Glasgow	1805–91	2	1
Dixon, Sydney	c. 1839–	2	1
Total			14

Table 6.1. Summary of identified clay pipes from the Bamber House site.

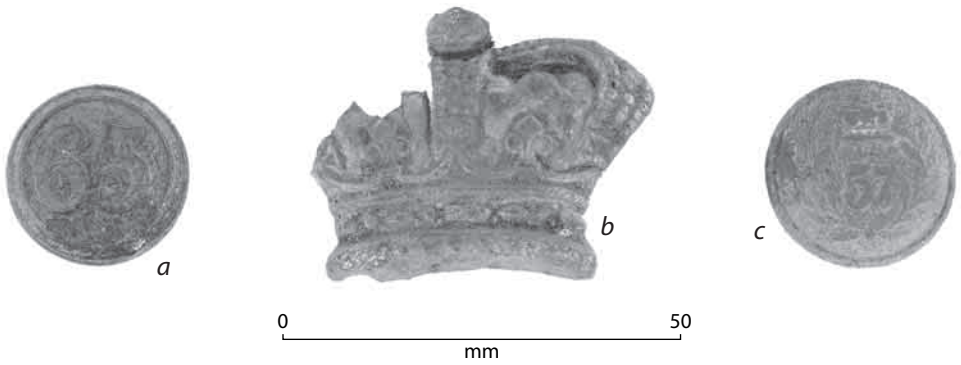
Feature	Material	Type and marks	Diameter mm	lines	MNI
lines	MNI				
2	Bone	1-piece; 4-hole	17.35	27	1
2	Brass	1-piece; 4-hole; JONES MAGNUSON & CO WANGANUI	17	27	1
2	Brass	2-piece; shanked	21	33	1
74	Brass	1-piece; 2-hole	17	27	1
69	Brass	1-piece; 4-hole	17	27	1
2	Brass	1-piece; 4-hole; DOUBLE RING EDGE	17	27	1
2	Brass	3-piece; shanked; military – 57th	24.5	39	1
2	Brass	3-piece; shanked; military – 57th; (back) ROGERS & CO KING ST COVENT GARDEN LONDON	24.5	39	1
259	Brass	3-piece; shanked; military – 57th; (back) ROGERS & CO KING ST COVENT GARDEN LONDON	24.5	39	1
2	Brass	3-piece; shanked; military – 65th; (back) ROGERS & CO KING ST COVENT GARDEN LONDON	24	38	1
247	Brass	3-piece; shanked; military – 57th; (back) ROGERS & CO KING ST COVENT GARDEN LONDON	24.5	39	1
83	Brass	3-piece; shanked; military – 57th	24.5	39	1
58	Ceramic	Prosser; 4-hole	15.5	24	1
120	Ceramic	Prosser; 2-hole	18	28	1
247	Ceramic	Prosser; 4-hole	9	14	1
46	Ceramic	Prosser; 4-hole	10.2	16	1
Total					16

Table 6.2. Distribution of buttons from the Bamber House site.

Militaria

Five buttons from the 57th regiment and one from the 65th were recovered from the Bamber House site. Also found was part of a crown from the top of a shako plate (Figure 6.1 b). The 57th West Middlesex Regiment of Foot served in New Zealand from 1861 to 1867 (Clough and Associates 2003: 187). For part of this time men from this regiment were based in Wanganui and were involved in the successful assault on Otapawa Pa in 1866. The 65th 2nd Yorkshire North Riding Regiment of Foot were the longest serving British regiment in New Zealand first arriving in 1846 and departing in 1865 (Clough et al. 2003: 188). In May of 1847 the hundred strong Grenadier Company of the 65th arrived in Wanganui aboard the *Inflexible* from Auckland (Cowan 1922: 134). On the 20th of July soldiers from the 58th and 65th regiments engaged with Maori in what became known as the battle of St. Johns Wood (Cowan 1922: 138). In 1848 an agreement was reached with the hostile natives and the situation in Wanganui remained relatively calm until the Hauhau uprising in 1864 (Cowan 1922: 139). In 1860, at the outbreak of war in Taranaki 200 men of the 65th were stationed in Wanganui (Cairns 2007).

The presence of militaria at the Bamber House may relate to Thomas Bamber's trade as a blacksmith. He is thought to have been Sergeant Farrier to the 58th and



6.1. Militaria from the Bamber House site: a, 65th regiment button; b, shako plate fragment; c, 57th regiment button.

65th regiments during their time in Wanganui and may well have continued this role for the 57th (BSM Group Architects 2004: 33). Another possibility is that the buttons may have come from military clothing acquired and worn by Bamber or members of his household.

Footwear

Just 30 artefacts relating to footwear were recovered from the Bamber House site with 11 of these coming from Feature 233 (rubbish pit). The most common was from the heel section. No complete shoes or boots were found. Heel sizes ranged from 50–75 mm in length and from 57–80 mm in width. Most were typically constructed of three or four heavy pieces of leather joined with iron nails to an iron heel plate. The size and construction of footwear remains from this site suggests that mainly men's boots are represented. A boot heel or toe piece from Feature 233 has an iron plate and is heavily nailed with two rows of iron nails around the outside. Another heel from the same feature was similarly clad with a flat iron heel plate. This is the sort of boot that Bamber or his associates might have worn at the forge.

All of the footwear would appear to have come from workboots with the exception of two smaller heels, which may be from a pair of child's or women's shoes. Bamber was marries with two sons but the presence of women and children is not strongly reflected in the footwear remains.

Metal

A much larger sample of metal was obtained from the Bamber House than from the Wanganui Hotel, but the sample is skewed with 66% of this by number coming from Feature 3 (Appendix D). Much of the material from Feature 3 would appear to have been hand manufactured and is discussed below under Blacksmithing. Feature 3 belonged to Phase 1 of the Bamber occupation, prior to the construction of the first (Phase 2) house, and is interpreted as a rubbish pit associated with the forge.

Fastenings

A large proportion of metal items consisted of nails and other fastenings. Unlike the Wanganui Hotel site, fastenings make up only 28% of the metal assemblage but if the material from Feature 3 is discounted the proportion rises to 72 %. Machine made cut nails are the dominant type, with only a handful of wire nails present.

Two wire leadhead roofing nails are probably intrusive and most likely relate to the demolition of the house.

Cut nails are so called because they are cut from a nail rod or plate and then headed to form the nail. Initially made by hand, commercially viable automated cutting and heading machines were developed early in the 19th century, with cut nails coming into mass production in the 1830s in America and from the 1850s in Britain (Adams 2002: 70). All of the cut nails from the Bamber House and Wanganui Hotel sites are of iron and are machine made. Machine made nails are uniform in size and display none of the characteristics of hand manufacture, such as hammer marks or irregularities in form. Iron cut nails were produced throughout most of the 19th century, but had disappeared completely by 1900, being replaced from the late 1880s by cheaper steel nails (Wells 1998: 87). Most of the cut nails are rectangular sectioned nails with chisel points and roseheads. Cut brads with 'L' shaped heads and other types are far less common.

The technique for producing wire nails was first patented in 1806 in France, with manufacture beginning around 1819 (Adams 2002: 69). However, it was not until late in the 19th century that wire nails began to make an impact on the market. Mass production began in North America from the mid 1880s, while in Britain the transition occurred earlier in the late 1860s and 1870s (Adams 2002: 69–70)

The spikes vary greatly in size and form, presumably reflecting a variety of different uses. Many of the spikes from Feature 3 would appear to have been hand manufactured.

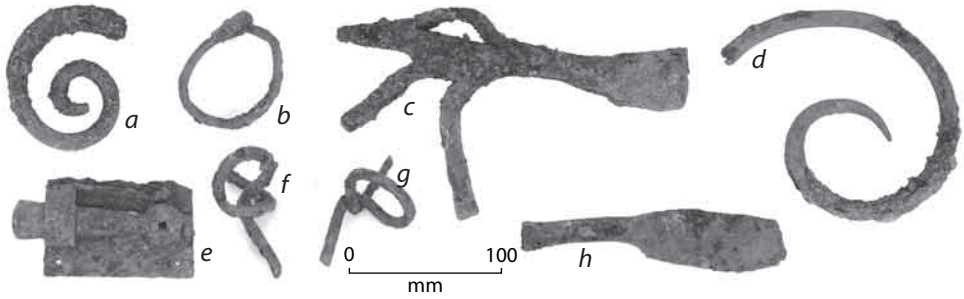
Type	Size range (mm)	MNI
Cut nails	50–130	271
Wire nails	50–105	22
Hand made nails	75–143	6
Spikes	65–165	43
Total		342

Table 6.3. Nail and spike types and size ranges from the Bamber House site.

Blacksmithing

A large number of wrought iron and hand forged items were recovered from Feature 3 (Figure 6.2). Direct evidence of a forge or smithy was not uncovered but blacksmithing in the vicinity was well attested by a number of pits and other features containing ashy slag and lumps of coal and coke from the furnace. Bamber continued his trade as a blacksmith until at least 1895; from 1896 onwards his occupation is only listed in street directories as Justice of the Peace. However, the smithy, owned by Bamber, was probablye run from 1895 until at least 1900 by John Rodgers, who is recorded in the same directories as a blacksmith residing next door to Bamber during these years.

Feature 3 was filled almost exclusively with metal items and appears to be a rubbish pit associated with the forge. Much of the material consisted of small offcuts of iron bar and plate. Other items were clearly either partially made or may have been collected for recycling. In the mid 19th century virtually all small items of hardware were supplied by the local blacksmith. Mass production of many goods did not become common until much later in the century. For example the Hager Hinge Company in St. Louis, one of the largest hinge manufacturers in the



6.2. Examples of blacksmithing from the forge rubbish pit, Feature 3: a, c, d, decorative ironwork; b, wire loop; e, door latch; f, g, twisted iron bar; h, partially reworked file.

world, did not acquire its first hinge-making machine until 1873 (Bealer 1976: 205). The only commonly mass produced items in the middle of the century were nails, although nails for specialised functions, such as horseshoe nails, were still supplied by smaller manufactories and blacksmiths.

The range of items present in the rubbish pit suggests that a range of small hardware items were being manufactured in the forge. The most interesting items from the rubbish pit are those that have been discarded partly finished, as these show the manufacturing techniques most clearly.

Most of the bolts and spikes are clearly handmade with signs of hand manufacture especially where the head is welded to the shank. One bolt has a length of bar only partly welded to the top of the shank to form the head. Other spikes and bolts have eye heads formed by bending the rod around into a circle at the end and welding it back into itself. Five nails have square sectioned shanks and were probably hand forged although the time involved in manufacturing small items probably meant that it was more economical to import nails in bulk.

A ferrous butt hinge measuring 85 x 65 mm is also a product of the smithy. Butt hinges are one of the simplest hinges to make.

Chain was also a mainstay of the 19th century blacksmith and several fragments of partially formed chain were identified. Handmade chains typically have large oval links, as this makes the process of joining and welding the links together easier. One fragment has links measuring 65 x 35 mm and other fragments of bar would appear to be partially formed chain links. Several pieces of decorative ironwork were also recovered. Decorative shapes could be created easily by the blacksmith simply by drawing a template on the workshop floor and working the metal to fit. Through this method duplicates of repetitive design elements for fences or gates could be created.

Numerous items show evidence for the recycling of iron that commonly took place in blacksmith shops. Most notable are several items which appear to be spade heads and one partial shovel head. One spade head 137 mm long by 196 mm wide appears to have had a handle hafted at the top but has had pieces cut off the bottom of the blade. This and other items suggest that much of the iron may have been collected for recycling. This seems to be the case with horseshoes as only three horseshoes were found complete compared to 19 other fragments. Horseshoes and other scrap metal could be drawn out into rods and bars which could then be used to manufacture new items.

Other miscellaneous items were also found in the pit such as several large iron hooks and a cold chisel. An oval, double lobed padlock measured 72 x 63 mm and had a brass keyhole cover. One ferrous lock plate measuring 102 x 71 mm still had part of the lock mechanism at the back, while another lock plate measured 90 x 46 mm. Twelve sheet metal lids 275 mm in diameter, with turned in rims, suggest that basic sheet metal work may also have been carried out in the smithy.

Horseshoes

Extensive evidence relating to horses was recovered from the Bamber House site. Nine whole horseshoes were recovered from the well (Feature 46) in several different sizes: 125 x125 mm; 130 x 130 mm; 125 x 135 mm; 135 x 130 mm; 145 x 155 mm; and 150 x 150 mm. Twenty-two horseshoe fragments, including three whole examples, were also recovered from Feature 3. This evidence clearly suggests that the repair and manufacture of horseshoes was probably part of Thomas Bamber's business as a blacksmith and also in his role as Sergeant Farrier.

Metal miscellany

Just one round sectioned tin fragment was identified from the Bamber House site and one matchbox. Other items include fragments of hoop iron and a brass plug 42 mm in diameter.

Miscellany
Tokens

Two penny trade tokens were recovered from the Bamber House site. One is from the Dunedin firm of Day and Mieville and reads 'DAY & MIEVILLE/MERCHANTS DUNEDIN/ OTAGO'. On the other side it reads 'NEW ZEALAND/1857' with a female figure sitting on a wooden cask holding out a set of scales in her right hand and a cornucopia in the other, with a ship in the distance. Day and Mieville are only known to have issued tokens in 1857. The tokens were made for them by W. J. Taylor of Melbourne (Lampard 1981: 39). The other token is from Australia and has 'PEACE & PLENTY' on one side with a coat of arms device below featuring a kangaroo on the right and an emu on the left. The reverse side has 'MELBOURNE VICTORIA/1858' with a seated female figure identical to the Day and Mieville token. Both of these penny tokens would have been legal currency at the time they were lost or discarded. The presence of an Australian token serves to illustrate just how closely trade in New Zealand was aligned with Australia at the time. The Day and Mieville token is 34 mm in diameter and the Peace & Plenty token is 34.3 mm in diameter.

Munitions

Two items of munitions came from the Bamber House site. One was a lead bullet of unknown type, 34.5 mm long, 15 mm diameter and weighing 51 g; the other was a used brass percussion cap.

Personal

From the Bamber House site the only item in this category was a small brass frame found in the well, Feature 46, which may have been part of a brooch.

Writing equipment

Just one fragment of slate pencil came from the Bamber House site (Feature 69) along with two fragments of writing slate (Feature 84 and 2). Nine stoneware 'penny ink' bottles were also recovered.

Household

The only household related artefacts from the Bamber House site were several items of table cutlery. One was part of an iron table fork head from Feature 217, with a bone handle 85 x 19 x 8 mm and a fragment of table knife blade from the forge rubbish pit (Feature 3) with a rat-tail tang 52 mm long. The only metal spoons were a tablespoon handle from the Feature 2 and a whole teaspoon from Feature 233, 145 mm long with a bowl 50 x 30 mm. A small bone or ivory spoon 117 mm long with a bowl 42 x 24 mm was also found in the well, Feature 46.

Sewing miscellany

Ten non-ferrous metal sewing pins were the only items relating to sewing recovered from the Bamber House.

Drainpipes

Several ceramic drains were uncovered around the Bamber House site. These drains most likely relate to the introduction of more formal sewage and stormwater systems in Wanganui but it is not known exactly when these services may have been introduced though their association with the Phase 3 house places them in the last quarter of the century. Samples of drainpipe from each were removed and analysed on site. All of the pipes are glazed and very uniform, with each pipe sampled being 20 mm thick and 140 mm in diameter. Pipe sections from Features 55 and 56 were impressed with 'R.O. CLARK/ HOBSONVILLE'. Another section of pipe from Feature 57 is impressed with 'PONSONBY/HOBSONVILLE.' Rice Owen Clark was a farmer in the Hobsonville area who first started producing field tiles to solve his own drainage problems around the 1860s. In c. 1862 Clark started the first brickworks in the Hobsonville area (Bioresearches 1998: 143). The other mark probably also relates to Clark's company.

The Wanganui Hotel site

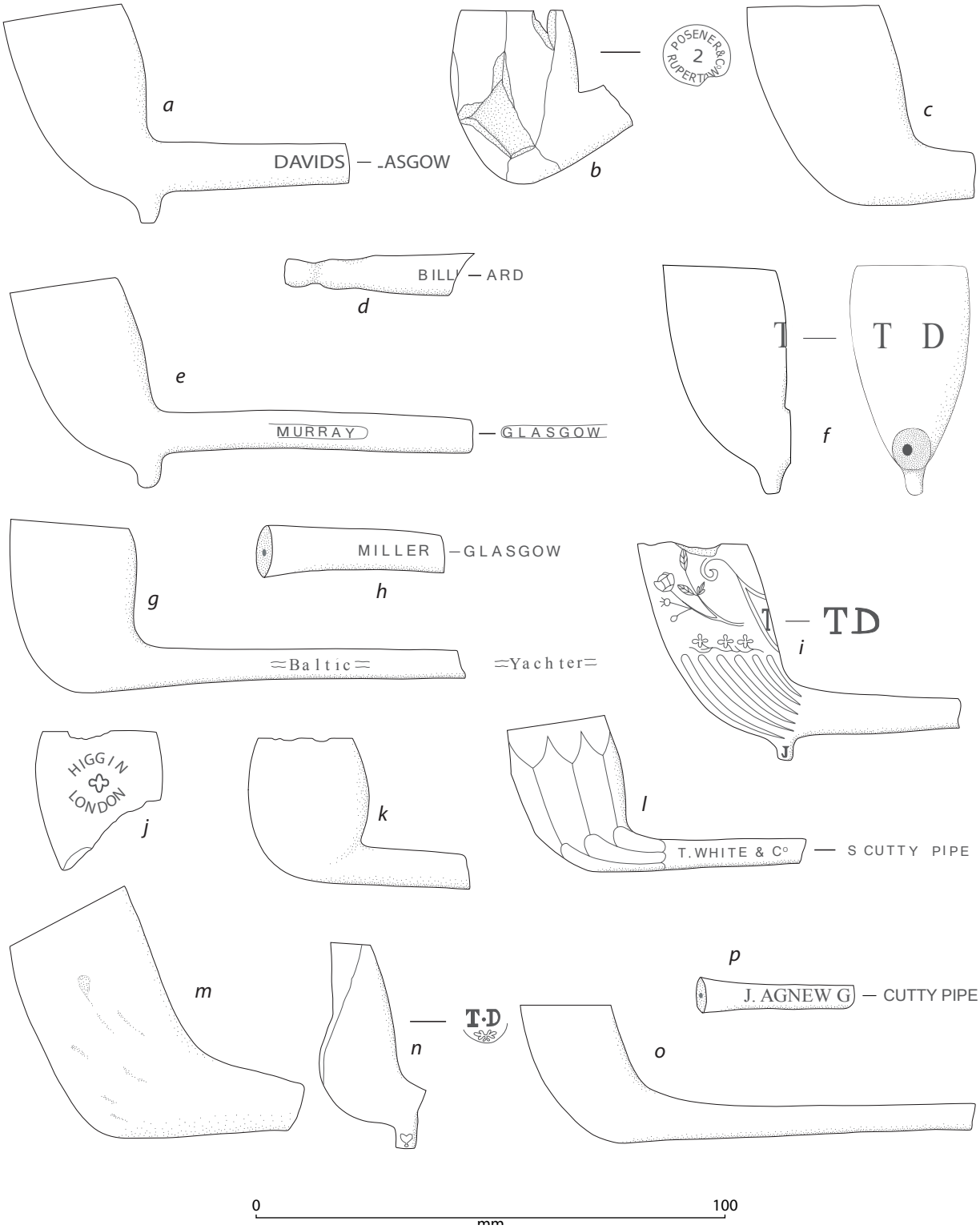
Clay Tobacco Pipes

A total of 164 clay pipe fragments were recovered from the Wanganui Hotel representing a minimum of 62 individual pipes.

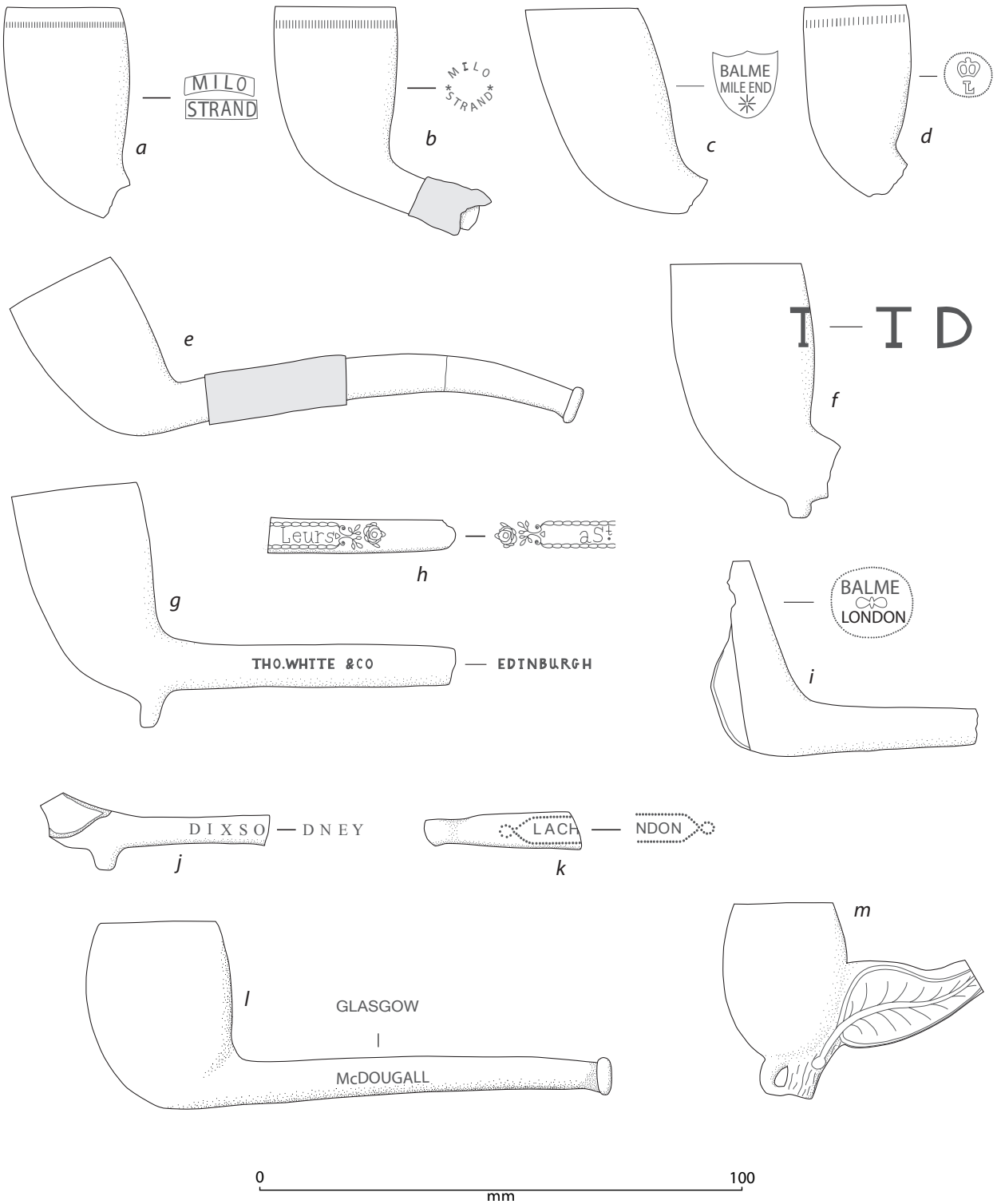
Pipe form and decoration

The majority of the Wanganui Hotel pipes are plain, utilitarian smoking vessels, with little or no decoration. Two complete pipes were recovered, one from Feature 540 and made by the firm of McDougall and Co. The other was found in Feature 337 and has been repaired with a piece of copper sheet to join a break in the stem (Figure 6.4 e). The pipe stem has broken again after the repair was effected, which was presumably when it was discarded. Clay tobacco pipes were cheap disposable items and it is surprising that such an effort has been spent to salvage the pipe. The length of the pipe is 120 mm while the bowl measure 35 mm high by 23 mm wide. The stem has a slight curve in it with the bowl sloping forward.

The most common form of decoration on clay pipes during the 19th century was a 'T. D.' marked on the back of the bowl. This is thought to have originally represented a British maker who manufactured quality pipes with the mark then copied by other makers (Bradley 2000: 116). Seven 'T. D.' pipes were recovered from the Hotel Site with the 'T. D.' variously being impressed or in relief. Very few frag-



6.3. Clay pipes: a, Davidson, Glasgow pipe bowl; b, Posener & Co, pipe bowl; c, pipe bowl; d, 'Billiard', pipe stem; e, Murray, Glasgow, pipe; f, 'T.D.' style pipe bowl; g, 'Baltic Yachter' style pipe; h, Miller, Glasgow, pipe stem; i, relief decorated 'T.D.' pipe bowl; j, Higgin, London, pipe bowl fragment; k, pipe bowl; l, T. White & Co, Burns Cutty Pipe; m, pipe bowl; n, 'T.D.' pipe bowl; o, pipe bowl and stem; p, J. Agnew, Glasgow, stem.



6.4. Clay pipes: a, Milo , Strand, pipe bowl; b, Milo, Strand, pipe bowl with copper sheath indicating repair; c, Balme, Mile End, pipe bowl; d, pipe bowl with unidentified marking; e, clay pipe repaired with copper sheath; f, 'T.D.' style pipe bowl; g, T. White & Co, Edinburgh, pipe; h, decorated pipe stem from the French firm, Dumeril; i, Balme, London, pipe bowl fragment; j; Dixon, Sydney, pipe stem; k, Lach..., London, pipe stem; l, complete McDougall, Glasgow, pipe; m, relief decorated pipe bowl.

ments had any form of relief moulded decoration, with just a few bowl fragments having some fluting and some stem fragments decorated with vegetative motifs.

Two pipe stems with the incomplete mark '..ARD/BILLI...' have not been able to be attributed to a maker. The second part of this mark probably refers to the style of the pipe as examples were recovered from the Victoria Hotel site in Auckland marked 'BILLIARD/PIPE' on the back of the bowl (Brassey and Macready 1994: 76).

Two other pipes from the Hotel site are 'Baltic Yachter' style pipes, with one stem having the full marking 'BALTIC/YACHTER'. McDougall's was just one of many manufacturer's who made such pipes. A complete example of this style was found at the Victoria Hotel site in Auckland (Brassey and Macready 1994: 85, P71).

Manufacturers

A total of 12 clay pipe manufacturers were identified from the Wanganui Hotel site. A summary of the distribution of marked pipes is given in Table 6.4. As is usual with historic sites in New Zealand a large number of pipes come from Scotland but also a significant number from London and a few of European origin. During the second half of the 19th century Scotland dominated the export trade in clay pipes to America and the colonies, with notable companies being McDougall, Davidson and W. White, all of Glasgow (Walker 1983: 11–12).

Manufacturer	Date	Feature	MNI
Balme, London	c. 1840s–76	208	1
Balme, London	c. 1840s–76	253	1
Balme, London	c. 1840s–76	337	1
Balme, London	c. 1840s–76	417	1
Balme, London	c. 1840s–76	525	1
Balme, London	c. 1840s–76	540	1
Thomas Davidson & Co., Glasgow	c. 1861–91	308	1
Thomas Davidson & Co., Glasgow	c. 1861–91	464	5
Thomas Davidson & Co., Glasgow	c. 1861–91	550	1
John Higgens, London	1862–91	464	1
Lach..., London	unknown	320	1
Dumeril, France	c. 1844–77	525	1
Duncan McDougall & Co., Glasgow	1846–91	540	1
Duncan McDougall & Co., Glasgow	1846–91	549	1
Duncan McDougall & Co., Glasgow	1846–91	632	1
John Miller, Glasgow	1866–88	208	1
John Miller, Glasgow	1866–88	320	1
Theophilus Milo, London	1860–70	540	2
William Murray & Co., Glasgow	1830–61	515	1
William Murray & Co., Glasgow	1830–61	540	3
Posener & Co.	unknown	395	1
Thomas White & Co., Edinburgh	1823–76	370	1
Thomas White & Co., Edinburgh	1823–76	525	1
Thomas White & Co., Edinburgh	1823–76	540	1
William White, Glasgow	1805–91	208	1
Total			32

Table 6.4. Summary of identified clay pipes from the Wanganui Hotel site.

Discussion

For a hotel the modest number of clay pipes recovered would seem to under-represent smoking as an activity on the site. One possibility is that clay pipes were disposed of on the ground where people were smoking, which would explain the low frequency of pipes from the features. For example from the Te Hoe shore whaling station site on the Mahia Peninsula in Hawke's Bay, a large number of clay pipe fragments were found scattered just outside a hut doorway (Harris and Smith 2005: 112). All of the clay pipes show clear signs of use with blackening on the bowls and salvaged pipes. The clearest examples of salvaged pipes are two repaired with a piece of copper tube (Figure 6.4 b, e).

A variety of manufacturers are represented among the clay pipes from the Wanganui Hotel site (12) compared to just six from Bamber House. Most of the pipes from the Hotel site are commonly recovered from New Zealand sites. The exceptions are the pipes from the French firm Dumeril and the unidentified firms 'Posener & Co' and 'Lach.../[Lo]ndon.' It is possible that many of these pipes may have been available for sale from the hotel itself. From the Victoria Hotel site in Auckland, which was destroyed by fire in 1865, a large assemblage of mainly unused clay pipes, representing 22 manufacturers, was recovered. The fact that many of the more obscure brands have few or no parallels from other sites in New Zealand suggests that proprietors may have stocked them more for their novelty value.

The dates from the clay pipes can also be used to help date some of the features. All of the pipes from the rubbish pits (Features 515 and 540) would appear to date to the 1860s. This agrees well with the fact that the hotel was not established until the late 1850s. The Balme pipe found in one of the bottle pits (Feature 337) would also agree with the 1860s date derived from the glassware. Feature 464 is also dated to around the 1860s or early 70s and the Davidson and Higgens pipes fit into this timeframe nicely.

Clothing hardware

Buttons

A total of 23 buttons were recovered in a range of different materials and sizes from the Wanganui Hotel site (Table 6.5).

Buckles and eyelets

Two brass buckles were recovered, with one measuring 40 x 25 mm and the other 70 x 41 mm. Plain buckles such as these were commonly used on work clothing. Several brass or copper alloy eyelets from footwear or clothing ranging from 15–40 mm diameter were also found.

Footwear

A total of 252 items relating to footwear were recovered from across the Wanganui Hotel site, most notably from Feature 621 (a probable well, not fully excavated) which contained 197 footwear related items. A minimum number of 33 pairs of shoes and boots was estimated for this feature. Very few items were recovered complete but the preservation of most pieces was generally very good.

What is unusual is about this particular collection is that most of the pairs would appear to represent children's footwear. Twenty-four boots and shoes or soles could be measured, and 11 of them (46%) are 180 mm in length or less. While this number may not seem that high, the other more fragmentary examples would all appear to be from children's footwear. Best suggests that footwear smaller than

Feature	Material	Type and marks	Diameter (mm)	(lines)	MNI
540	Bone	1-piece; 4-hole	17	27	3
362	Bone	1-piece; 4-hole	19	30	1
208	Glass and metal	3-piece; shanked	20.1	32	1
621	Glass and metal	2-piece; shanked	14.8	23	1
524	Brass	1-piece; 4-hole	13.5	21	1
208	Brass	1-piece; 4-hole; D.I.C. WELLINGTON	17.2	27	1
320	Brass	2-piece; 2-hole	16.9	27	1
463	Brass	1-piece; 4-hole; ... LONDON	16.5	26	1
388	Brass	1-piece; 4-hole	13	20	1
395	Brass	3-piece; shanked; military	25	39	1
540	Ceramic	Prosser; 4-hole	11.14	18	1
540	Ceramic	Prosser; 4-hole	11.07	17	1
540	Ceramic	Prosser; 4-hole	10.47	16	1
540	Ceramic	Prosser; 4-hole	9.04	14	1
540	Ceramic	Prosser; 4-hole; transfer-printed	11.22	18	1
540	Ceramic	Prosser; 4-hole; transfer-printed	11.1	17	1
540	Ceramic	Prosser; 4-hole	12.75	20	1
525	Ceramic	Prosser; 4-hole	11.2	18	1
525	Ceramic	Prosser; 4-hole; transfer printed	11.35	18	1
517	Shell	1-piece; 4-hole	7.6	12	1
550	Shell	1-piece; 2-hole	9	14	1
Total					23

Table 6.5. Distribution of buttons from the Wanganui Hotel site.

180 mm can only be children's while those 190 mm and above would cover adults of both sexes (Best 1992: 92).

Among the children's footwear several different styles are present, with some shoes and boots having all leather uppers and some material uppers or a combination of both. The fastening styles also differ with some having eyelets for laces and others holes for toggles or buttons. Figure 6.5 a and b shows examples of two pairs of single soled shoes. The shoe in Figure 6.5 a is 165 mm long with a black leather upper and a low heel. The heel is made up of one or two lifts of leather joined to the sole with pegs. The pegs are not metal and are most probably wooden. The few pairs of shoes present are all of this style. All of the other pairs of children's footwear are boots. Figure 6.5 d shows a pair of insoles and uppers from a pair of boots. The upper has a leather toepiece and heel with the rest being material. The material upper has four reinforced button holes, rather than eyelets for laces. Various other small boots are of a similar design with leather toe and heel pieces and material uppers (Figure 6.5 e, f). Figure 6.5 g and h shows examples of boot uppers with lace holes reinforced by brass eyelets and a strip of leather on the inside. A pair of soles (not illustrated) are 156 mm long and have strips of heavy leather on the inside to build up the insole. The soles also have a welting strip around the outside, by which the sole would have been stitched to the upper.

None of the heels or soles from the children's footwear are heavily constructed. Most heels are made up of a couple of lifts of thick leather with just enough copper nails around the edge to join them to the sole. None show any evidence of having extra nails or lifts of leather added to the sole or heel to extend the life of the footwear.

6.5. Children's leather footwear and clothing, the Wanganui Hotel site, Feature 621: a, b, black leather shoes; c, cap; d, pair of boots; e, f, uppers from boots with toggle fasteners; g, h, uppers from laceup boots.

Of the footwear over 190 mm in length, a pair of boots 215 mm long with leather toe and heel pieces and a material upper is the most complete item. The material part of the upper has ten holes reinforced by brass eyelets for laces. Some of the larger shoes, such as a partial one 280 mm long, have square toes, unlike the children's shoes which all have rounded toes. Again the larger sized footwear shows little sign of any repair or alteration.

Evidence of manufacturing methods is less clear. Most of the stitching, where visible, appears very regular, with the holes evenly spaced. Other items show evidence of hand stitching, suggesting that the footwear may have been made through a combination of machine-stitching and hand finishing. Boot and shoe makers were essential businesses in 19th century communities and so the footwear may just as easily have been produced in New Zealand as imported.

From other features only heels, heel plates or fragments of leather were recovered. One double sole from the general fill layer measured 210 mm long and had the two parts of the sole joined with copper nails and the heel made up of three lifts of leather joined with iron nails. Fragments of two pairs of small shoes approximately 190 mm long from Feature 320 and another pair from Feature 515 were similarly constructed with double soles joined together with copper nails. One heel from Feature 485, measuring 60 x 57 mm, was constructed of 4 or 5 lifts of leather joined with a double row of iron nails around the outside. A boot heel from Feature 515,

measuring 58 x 53 mm, and one from Feature 525, measuring 71 x 65 mm, were both constructed of three to four lifts of leather joined to an iron heel plate with iron nails. Boot heels such as these are most likely to be from men's boots. Another smaller pair of heels 50 x 43 mm comprised of three lifts of leather joined with both copper and iron nails, is more likely to be from a child's pair of boots.

Discussion

Apart from the items recovered from Feature 621 on the Wanganui Hotel site the survival of footwear material was generally poor. The lighter construction of the children's and possibly women's footwear would also mean that these items are less likely to survive. The presence of a number of children's shoes and boots in this feature clearly suggests that it is a rubbish pit from a domestic household, and so not directly associated with commercial activities at the hotel. Unlike the Bamber House site no men's work boots are represented. None of the shoes and boots show any signs of repair either, suggesting that the family was affluent enough to be able to purchase new footwear when the old ones wore out.

Miscellaneous Cloth

The only fragments of material were recovered from Feature 621. The most complete item appears to have been a child's cap (Figure 6.5 c). The cap consists of a circular piece of green cloth and a crescent shaped piece of leather 175 mm wide. The piece of leather has a row of holes around the inside edge corresponding to a line of holes on one side of the material and would have formed the peak of the cap. The size of the cap is quite small suggesting it most likely belonged to a child. Another strip of similar green material 550 x 78 mm has a small strip of leather sewn along one edge. Various fragments of fine black, brown and blue material may have once formed part of the uppers of some of the large collection of shoes dumped in the rubbish pit or may be from clothing. The only other material found in the pit was fragments of coarse sacking, erhaps the remnants of a sack that may have been full of shoes when it was discarded.

Metal

A much smaller assemblage of metal was recovered from the the Wanganui Hotel site than from the Bamber House site, though discounting Feature 3, the forge rubbish pit, the numbers are more approximately equal (Appendix A).

Fastenings

By far the majority of metal items consisted of nails and other fastenings, accounting for 84% of metal artefacts. Identification of nails and other ferrous metal objects is often made difficult by corrosion but generally most nails can be assigned to general manufacturing categories and size ranges established. The relative proportions of each nail type and the size ranges are outlined in Table 6.6. Like the cut nails, where the head type can be identified most of the wire examples have roseheads.

The spikes vary greatly in size and form, presumably reflecting a variety of different uses. Smaller square or rectangular spikes in the region of 120–160 mm long were probably used in general construction, while larger ones could have been used for any number of purposes. Other fastenings are represented mainly by bolts and a couple of screws and are far less common in the assemblage as a whole.

Type	Size range (mm)	MNI
Cut nails	50–80	454
Wire nails	50–105	90
Copper nails	40	4
Spikes	125–180	7
Total		548

Table 6.6. Nail and spike types and size ranges from the Wanganui Hotel site.

Hardware and tools

Hardware includes manufactured items such as hinges, fittings and locks or parts of such items. Two butt hinges were recovered from the Wanganui Hotel site, one ferrous and 76 x 50 mm (Feature 320) and one brass 75 x 30 mm (Feature 464). Two brass door knobs 48 mm in diameter and an oval brass keyhole cover 47 x 36 mm were found in Feature 621 suggesting that the while the kitchen sink may have been overlooked among the rubbish disposed of in this pit, the front door was not. Other items include an iron S-shaped hook 115 mm long from Feature 515 and a brass drawer handle 88 x 36 mm from Feature 525.

Horseshoes

Only two horseshoes were recovered from the Wanganui Hotel site, both from Feature 347. One measured 150 x 150 mm and the other 170 x 170 mm. No horseshoe nails or other associated horsegear was recovered from the site.

Tin Cans

Fragments from approximately a dozen round and rectangular tins were recovered from the Wanganui Hotel site. Four were rectangular cans and, although none were complete enough to be measured, they appeared to be of the sardine tin type. Several round sectioned tins were likewise very fragmentary and ranged in diameter from 65–73 mm. No tin cans were complete enough for manufacturing techniques to be identified but they are likely to have been either of the 'hole-and-cap' or 'hole-in-cap' style.

Matchboxes

Fourteen wax vesta matchboxes were recovered from the Wanganui Hotel site. The only complete examples came from Features 370 and 464 (Table 6.7). Two from Feature 464 carried embossing on the lids from the firm of Bell and Black. One matchbox is similar to Bedford's (1985: 46–47) type 1D and 1E but appears to differ slightly in that it is embossed 'BELL & BLACK/15 BOW LANE CHEAPSIDE LONDON/TRADE MARK.' The other is of a similar size but differs in that it has 'WAX VESTAS' on either side of the bell in the middle rather than 'TRADE MARK.' Both boxes have a small stamped and raised circle in the top right hand corner of the lid for holding lit wax vesta matches (Anson 1983: 128; Bedford 1985: 47, 1B and 1C). From comparison with other Bell and Black matchboxes recovered from securely dated historic sites in New Zealand these two examples would appear to date to the 1870s (Anson 1983: 134).

Feature	Length	Width	Height	Embossing	Total
370	70	40	27		1
370	72	36.4	23.8		1
370	71	38.6	22.5		1
464	75	44	27		1
464	75	40	24	BELL & BLACK/15 BOW LANE CHEAPSIDE LONDON/TRADE MARK	1
464	74	37	24	BELL & BLACK/15 BOW LANE CHEAPSIDE LONDON/WAX VESTAS	1
Total					6

Table 6.7. Whole matchboxes from the Wanganui Hotel site.

Metal Miscellany

Most of the remaining metal material consisted of small offcuts and fragments of sheeting, band and bar, and other miscellaneous pieces of both ferrous and non-ferrous metal. Wooden casks were commonly used for the storage and transportation of a wide range of goods from alcohol to nails, and fragments of hoop iron are often recovered from 19th century sites. Hoop iron from the Wanganui Hotel site varied in width from 30–52 mm, with smaller band in the region of 20–27 mm probably used as strapping. Other miscellaneous items recovered include a ferrous key 105 mm long from Feature 258, fragments from a kerosene lantern from Feature 339, one brass plug 42 mm in diameter from Feature 375 and a small brass tap 143 mm long from Feature 525.

Coins and tokens

Only eight coins and tokens were recovered, with only two having dates which could still be read (Table 6.8). The other examples were either too worn or corroded, or in the case of the H. J. Hall trade token did not have a date on it. The two sixpences are both made of silver and carry a 'young head' style bust of Queen Victoria on the obverse side. On the reverse they feature the British royal coat of arms.

The Hall token has on one side 'FAMILY GROCER/WINE & SPIRIT MERCHANT' and on the other side 'CHRISTCHURCH/COFFEE MILLS.' On

Feature	Type	Diameter (mm)	Date	MNI
308	penny trade token; Hall Christchurch	33.9		1
338	sixpence	19	1852	1
451	sixpence	19.4	1845	1
454	threepence	16.5		1
525	halfpenny	30		1
621	penny	35		2
621	penny	36		1

Table 6.8. Distribution of coins and tokens from the Wanganui Hotel site.

both sides in the centre of the token is the name of the merchant himself 'H.J.HALL'. Henry J. Hall is known to have made several issues of tokens, all supplied by the Melbourne firm W. J. Taylor (Lampard 1981: 43).

Personal items
Beads

Eight glass beads were recovered from the Wanganui Hotel site (Table 6.9). The teal coloured beads are of moulded opaque glass, with a hole through the centre, while the clear examples are hollow.

Feature	Colour	Diameter (mm)	MNI
525	Teal	8.5	2
332, 370	Teal	10	2
525	Clear	7.5	4

Table 6.9. Beads from the Wanganui Hotel site.

Marbles

Eight marbles were recovered and of these only the six coloured glass ones are certain to have been children's toys. The unglazed ceramic marbles were probably stoppers from aerated water bottles though these were often recycled by children as toy marbles. All of the glass marbles are decorated with internal swirls of glass, with the exception of one opaque green example. Feature 621 was the only secure context that contained more than one marble. A number of other items related to children, including doll parts and pieces from a miniature teaset, were also found in this feature (Chapter 4).

Material	Feature	Colour	Diameter	MNI
Ceramic	258	brown, glazed	16.65	1
Ceramic	308	unglazed	17	1
Glass	208	pink, red, blue, yellow and white	24	1
Glass	208	green and yellow	17	1
Glass	621	green	16.6	1
Glass	549	green, red, pink and white	12.9	1
Glass	621	green, yellow, pink and white	16.5	1

Table 6.10. Marbles from the Wanganui Hotel.

Combs and hairbrushes

Six fragments of combs and hairbrushes were recovered from the Wangnui Hotel site (Table 6.11). The bone comb is in a very fragmentary state, but is notably very fine-toothed. The tortoise shell comb is interesting as this material would probably have made it much more expensive than the bone or wooden combs. The vulcan-

ite comb fragment is double sided and is again very fine toothed. On one side the comb is marked 'VULCANITE CO LIMITED.' No exact match could be found for this company, but the Scottish Vulcanite Company was formed in 1861 chiefly for the manufacture of combs (oldandnewedinburgh.co.uk). The two wooden hairbrush heads are very similar in form and are ovoid in shape. One of them still has part of the wooden handle, which would have originally had a bone scale attached to each side. All of the hairbrushes are more likely to have been the personal possessions of women or girls.

Material	Feature	Type	Portion	Length (mm)	Width	MNI
bone	540	comb	fragments			1
bone	515	hairbrush	handle scale	102	31	1
tortoise shell	540	comb	fragments		30	1
vulcanite	337	comb	fragment		39	1
wood	320	hairbrush	head	128	45	1
wood	621	hairbrush	head	133	53	1

Table 6.11. Combs and Hairbrushes from the Wanganui Hotel site.

Other

Other miscellaneous items in the personal category include several from Feature 540. One mystery object of hand-carved bone or ivory is 66 mm long and 8 mm wide and is clearly broken at one end. It is decorated with incised lines on three sides and on the other it has the lettering 'M[RS] J.D.Y.' Also in the same feature was part of a bone toothbrush head; a bone domino tile; and a small flower cut out of brass or copper sheet. From Feature 621 part of a child's wooden recorder was found. Two black coloured bites, one each from Features 320 and 515, are from composite smoking pipes. The exact nature of the material is uncertain but it may be vulcanite or something similar. Such materials were not used for pipe bites until later in the 19th century.

Writing equipment

From the Wanganui Hotel site twelve fragments of slate pencil and five fragments of writing slate were recovered. All slate pencil fragments were round sectioned and between 5 and 6 mm in diameter. Writing slate is generally 4 to 5 mm thick, smooth on both sides and often has lines inscribed on one face.

Writing in ink must have also been practised, as shown by thirteen stoneware 'penny ink' bottles (Chapter 4). No associated paraphernalia, such as pen nibs, were recovered.

Household items
Table cutlery

Fragments of both composite and one-piece bone handles from knives and forks were recovered from the Wanganui Hotel site. One bone scale 56 x 15.5 mm is most likely from a fork handle (Figure 6.6 a, b). The scale has a copper alloy pin through each end where it would have been attached to the flat iron tang of the fork. Fragments of six bone handles from table knives were found, all being rec-

Object	Feature	Portion	MNI
Slate Pencil	360	fragment	1
Slate Pencil	374	fragment	1
Slate Pencil	370	fragment	1
Slate Pencil	515	fragment	2
Slate Pencil	525	fragment	2
Slate Pencil	540	fragment	1
Slate Pencil	550	fragment	1
Slate Pencil	621	fragment	2
Writing Slate	370	fragment	3
Writing Slate	540	fragment	1
Writing Slate	564	fragment	1

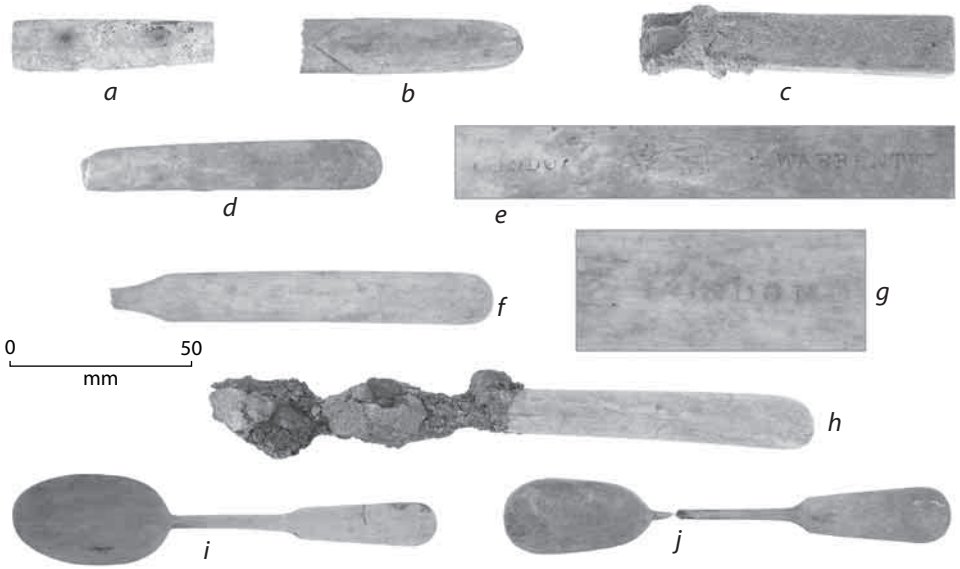
Table 6.12. Slate writing material from the Wanganui Hotel site.

tangular in section, with rounded edges, and being slightly wider at the butt end. One example 104 x14.5 mm is stamped on one side 'LONDON' in very small lettering (Figure 6.6 f, g). Another fragment 82 x 14 mm is stamped 'LONDON WARRANTED' with a lion between the two words (Figure 6.6 d, e). One complete handle, 77 x 15.7 x 7 mm, still has part of the iron knife blade attached (Figure 6.6 h). One other knife handle appears to be made of a synthetic material of some sort, meant to imitate bone.

Cutlery of this type, with an iron or steel blade and a bone or wooden handle is commonly referred to as composite cutlery. The single fork from the hotel site would most probably have had a flat tang, with scales pinned to either side. The rest of the knives and forks all appear to have rat-tail tangs, whereby the tang is simply

Feature	Type	Material	Length	Marks	MNI
208	Knife handle	Bone			1
320	Knife handle	Bone	82	LONDON WARRANTED	1
370	Fork handle scale	Bone	56		1
464	Knife handle	Bone			1
485	Knife handle	Synthetic	85		1
515	Knife handle	Bone	84		1
540	Knife handle	Bone	104	LONDON	1
540	Knife handle	Bone	77		1
320	Teaspoon	Metal			1
515	Teaspoon	Metal			1
520	Tablespoon	Metal			3
520	Teaspoon	Metal	140		1
525	Spoon	Bone	115		1
525	Teaspoon	Metal	133	NICKOLA/E.W.RUDDICK	1
540	Teaspoon	Metal	140		1
540	Teaspoon	Metal	150		2
540	Saltspoon	Metal	109	series of stamped marks	1
540	Tablespoon	Metal			1
Total					21

Table 6.13. Table Cutlery from the Wanganui Hotel site.



6.6: Bone cutlery: a, b, fork handle scale; c, knife handle; d, e, knife handle, detail 'London Warranted'; f, g, knife handle, detail 'London'; h, knife handle, with section of iron blade; i, bone spoon; j, bone spoon.

cemented or pinned into a slot in a one-piece handle. Both of these styles were in common use from the early 18th century and continued through to the 19th century. Many advancements were made in table cutlery technology from the middle of the century, especially in America, but in Britain the availability of cheap labour and the cost in taking up new technology resulted in old manufacturing methods being used right through to the 20th century (Dunning 2000: 40–41). The two marked examples clearly show that the Wanganui Hotel cutlery was coming from Britain. It is typical of what one would expect to find from sites dating to the 1860s and 1870s.

Spoons are generally less useful for dating as by the 19th century forms had become very standardised. No complete tablespoons were found but bowls from the Wanganui Hotel site measured 75 x 50 mm and 77 x 48 mm. Four complete teaspoons measured between 133 and 150 mm long, with bowls around 50 x 30 mm. One teaspoon is stamped on the back of the handle 'NICKOLA' and 'E.W.RUDDICK.' No reference could be found to this name. A complete salt spoon 109 mm long, with a bowl 25 x 30 mm, has a series of stamped marks on the back of the handle. Little is known or recorded about manufacturers producing spoons in non-precious metals and so these marks, even where names or initials are supplied, are rarely useful for dating. One of the more unusual items is a small spoon carved from bone or ivory. The spoon is relatively flat in section and measures 115 mm long with a bowl 40 x 21 mm (Figure 6.6 j). A similar spoon was found in Feature 46 from the Bamber House site (Figure 6.6 i). Such items might have been used to serve jam or mustard, but this is not clear.

Miscellany

A few other items from the Hotel site that would have been used around the house include a flat smoothing iron from Feature 338. The main part of the iron is 135 mm long, 90 mm wide and 68 mm thick; with the handle it stands 140 mm high. Parts of what would appear to be a non-ferrous metal teapot were also recovered from Feature 338. The teapot has been squashed and subjected to burning, but clearly has had a spout on the side and may well have been silver or at least silver plated. The remains of two wooden scrubbing brushes 250 mm long and 60 mm wide were found, one in Feature 320 and the other in Feature 540. One still had a

few tan coloured bristles, 20 mm long, attached. A more fragmentary example was recovered from Feature 621.

Sewing miscellany

Very few items were recovered relating to sewing. Thirteen non-ferrous metal sewing pins and a slightly squashed brass thimble from Feature 320, 27mm long, were recovered from the Wanganui Hotel. The length for complete pins ranged from 25 to 35 mm.

Bricks

Whole bricks were sampled from features and measured and photographed on site. Most were relatively consistent in size with those sampled ranging from 225 to 232 mm in length, 106 to 110 mm in width and 55 to 65 mm in thickness. A few show some evidence of early manufacture, with rectangular frogs suggesting that some of the bricks have been moulded by hand. One brick from Feature 483 measured 226 mm long, 108 mm wide and 67 mm thick with a frog-mark on one side. A brick from Feature 482 measured 210 mm long, 100 mm wide and 55 mm thick. The brick is frog-marked on one side and has a noticeable curve in its long axis, probably caused by variation in the drying or firing processes.

7 Faunal material

Stuart Hawkins

This chapter deals with the faunal remains, which include animal bones and animal teeth, shellfish and crustacean remains, that were recovered during the UCOL excavations.

Methodology

The faunal remains were recovered from within the fill of a number of features including postholes, pits, and wells as well as from the fill layers overlying both sites. All mammal and bird bone that was recovered was recorded, while only fish bone that could be identified to taxa, and fish vertebrae, were recorded – all unidentifiable fish bone was excluded from the analysis.

Identification

Identifications were made to the lowest taxonomic level possible: family, genus, or species. The most fragmented bone which could not be assigned to a taxonomic class was put into a broad mammal, fish, or bird category.

The faunal remains were identified by comparison with a variety of resources. The mammal bone was compared to a private reference collection of archaeological material previously identified using the Auckland University Anthropology Department collection, while mammal bone which could not be identified by this means was taken directly to the Anthropology Department reference collection. Published resource materials (Hillson 1992; Payne 1985; Prummel and Frisch 1986; Schmidt 1972; Sisson 1930) were also used as guides to identification. Fish and shell fish remains were identified by comparison with the University of Auckland reference collection with the aid of Leach (1997) and Parkinson (1999). Bird remains were identified by comparison with the Auckland War Memorial Museum ornithology collection.

Quantification

Quantifications that are applied, as appropriate, include number of identified specimens present (NISP), the minimum number of elements (MNE), the minimum number of individuals (MNI), the minimum animal unit (MAU) (Grayson 1984) and the minimum number of butchery cuts (MNBC) (Watson 2000). MNE, MNI, and MNBC values are aggregated by feature. Percentage of MAU values are based on MNE values aggregated by feature and summed together for the entire assemblage. Shell was quantified by MNI.

Taphonomy

Mammal skeletal element representation was calculated using percentage of minimal animal unit (%MAU) which takes into account the number of each element per animal ensuring that elements which have higher proportions than others per animal are not over represented. The NISP/MNE ratio was used to quantify rates of bone fragmentation where the higher the value the higher the level of fragmentation.

Modifications such as burning, carnivore gnawing, rodent gnawing and weathering were recorded as present/absent on each individual bone. Only weathering at stage 3 or greater (Behrensmeyer 1978) were recorded. Anything lower was dis-

regarded so as to reduce the amount of data collected considering time constraints while still gaining some information on higher degrees of bone weathering. A distinction was made between two types of burning, calcination and carbonisation which indicates the temperature at which the bones were burnt. Carbonized bones appear black/dark brown and represent bones that have been burnt at medium to low temperatures. Bones which have been calcined appear white/blue/grey and usually represent bones that have been burnt at higher temperatures.

Butchery modifications such as cut marks, fresh fractures, indicating chopping, and saw marks were recorded. These indicate dismemberment of skeletal elements into butchered units using saws and cleavers, while cut marks indicate skinning and removal of meat using a knife.

Butchery cut definitions follow Watson (2000: Figure 3.3) for pork, beef and mutton, and Schulz and Gust (1983: Figure 1) for beef. Bones were assigned to butchery cuts to the limits possible with the available reference collections. Some elements such as ribs and thoracic vertebrae are difficult to assign to a butchery cut because they can come from more than one cut and are difficult to identify to a specific location along the axial skeleton.

Animal age and sex estimation

Animal age at time of death is estimated based on rates of epiphyseal fusion and timetables for tooth eruption (Silver 1969; Bull and Payne 1982; Grant 1982) and is expressed as age ranges in years for MNI. In some cases the age ranges were broad and generally unhelpful, for example when only unfused late fusing elements were recovered such as unfused cattle vertebrae which gave an age range of 0–7/8 years for many individuals. An indication of the sex of some pigs was determined from the morphology of the canines where closed root canines are female and open root canines are male (Schmid 1972). Juvenile and adult birds could be identified based on whether the epiphysis of long bones were fused or not. The sex of chicken and turkeys was assessed by the presence or absence of spurs on tarsometatarsal bones.

The Bamber House site

Taxa diversity and richness

A total of 4 bird taxa, 5 mammal taxa, 1 fish species, and 5 shellfish taxa were identified (Table 7.1).

The 4 bird taxa identified include chicken (*Gallus gallus*), turkey (*Meleagris gallopavo*), a species of duck (Anatidae) and goose (*Anser anser*). While geese, chicken, and turkey are introduced species, the duck specimen could represent either introduced or native species. The 5 mammal species are all European introduced species which include cattle (*Bos taurus*), sheep (*Ovis aries*), pig (*Sus scrofa*), at least one species of rat (*Rattus* sp.) and cat (*Felis catus*). Although there is a small possibility the rat species could be the Polynesian introduced rat kiore (*R. exulans*) it is much more likely to be one of the introduced European species, ship rat (*R. rattus*) or Norway rat (*R. norvegicus*). The single fish species identified was snapper (*Pagrus auratus*). Five shellfish taxa were identified which include oyster (Ostreidae), pipi (*Paphies australis*), large turret shell (*Maoricolpus roseus*), Mud snail (*Amphibola crenata*), and a mussel species (*Aulacomya atra maoriana*). These represent both soft shore and rocky shore species.

Taxa	Common name	NISP	MNE	MNI
Bird		20	11	4
Gallus gallus	chicken	25	24	8
Meleagris gallopavo	turkey	2	2	2
Anatidae	duck	2	1	1
Anser anser	goose	1	1	1
cf. *Meleagris gallopavo*		1	1	0
Mammal		997	8	4
Bos taurus	cattle	842	368	52
Ovis aries	sheep	471	257	50
Sus scrofa	pig	322	184	35
Rattus sp.	rat	1	1	1
Felis catus	cat	1	1	1
cf. sheep/pig		134	7	0
cf. *Sus scrofa*		2	0	0
cf. *Ovis aries*		4	1	0
Fish		15	14	2
Pagrus auratus	snapper	7	7	2
Shellfish				
Ostreidae	oyster	42	42	42
Paphies australis	pipi	10	12	6
Maoricolpus roseus	large turret	3	3	3
Amphibola crenata	mudsnail	1	1	1
Aulacomya atra maoriana	ribbed mussel	1	1	1
Total		2904	947	216

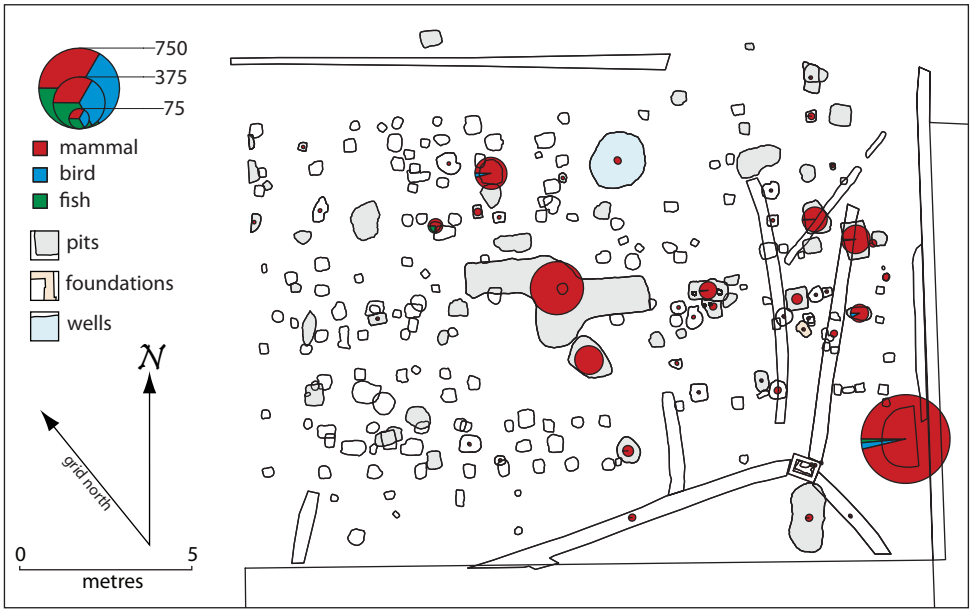
Table 7.1. Identified taxa NISP from the Bamber House site.

Relative abundance

A total of 2847 animal bones, bone fragments and teeth were recovered and identified from the Bamber House site. Of these the majority were mammal, making up 97.4% of the assemblage, followed by bird making up 1.8% and fish at 0.8% (Figure 7.1). Of the identified mammal taxa, cattle are clearly about twice as abundant as sheep or pig over the whole site. Most of the faunal remains were concentrated in three features: the well Feature 46, disturbed demolition fill layer (Feature 2), and pit Feature 84. Smaller clusters of faunal remains were found in pit Features 69, 217, and 233.

Cattle remains are mostly concentrated in the well, Feature 46, and there are three other concentrations in Feature 2 a fill layer covering the site, and pit Features 84 and 69 (Table 7.2, Figure 7.2). Cattle remains are also the dominant taxa in most features, with the exception of pit Feature 233 where sheep remains are clearly dominant. Sheep remains are clustered in Features 2 and 46 with smaller concentrations in Features 84 and 233. There is one single large cluster of pig remains in the well, Feature 46, with smaller clusters in Features 2 and 84. Rat and cat remains are represented by only a single bone each. The cat bone was recovered from the fill layer, Feature 2, while the rat bone was recovered from the fill of posthole Feature 30.

There were very few bird remains recovered from the Bamber House site. Chicken remains were by far the most frequently recovered bird followed distantly by turkey, duck, and goose (Table 7.3). The bird remains were sparsely distributed



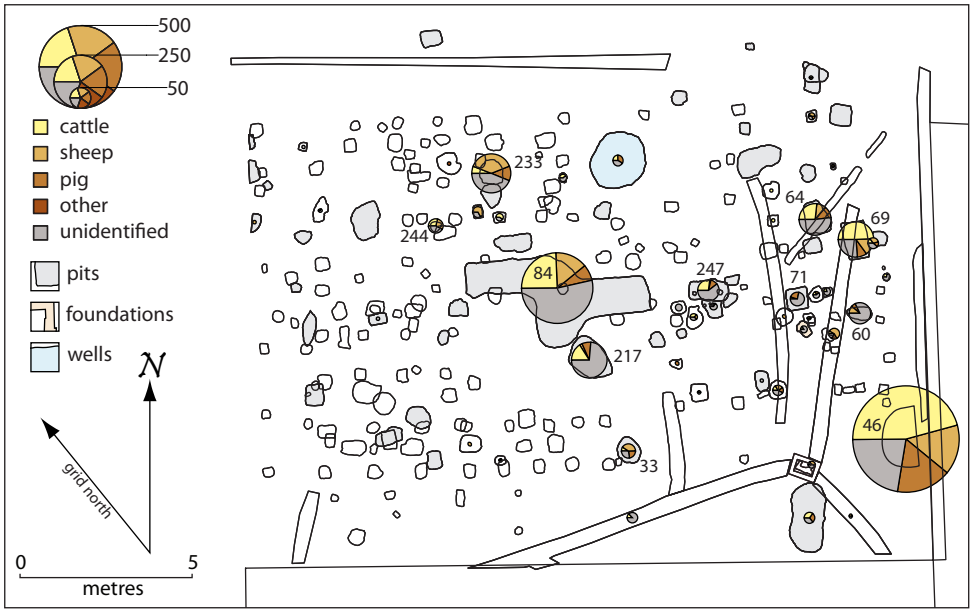
7.1. Relative abundance by NISP for the different classes of animal bone from the Bamber House site.

Feature	cattle	sheep	pig	other	unidentified
2	168	131	63	1	299
33	2	9	5	0	6
46	385	127	139	0	187
60	0	5	3	0	36
64	25	9	11	0	48
69	57	18	10	0	30
71	1	0	5	0	15
83	16	7	1	0	14
84	96	57	29	0	208
217	20	3	10	0	91
233	9	57	18	0	65
244	7	7	0	0	10
247	15	1	6	0	33

Table 7.2. Mammal NISP by feature with NISP > 20 for the Bamber House site.

Feature	chicken	turkey	duck	goose	unidentified
2	5	0	0	0	8
46	11	2	2	1	4
55	1	0	0	0	0
60	0	0	0	0	4
64	0	0	0	0	1
69	2	0	0	0	0
159	0	0	0	0	2
233	6	0	0	0	1
244	0	0	0	0	1

Table 7.3. Bird NISP per feature from the Bamber House site.



7.2. Mammal NISP by species from the Bamber House site.

in only nine features. Most of the bird remains were recovered from well Feature 46 and fill layer Feature 2.

Fish remains were even sparser than bird remains and distributed in only four features (Table 7.4). Snapper was the only species identified, from fill layer, Feature 2, and Feature 244. Unidentifiable fish remains were also recovered from well, Feature 46, and Feature 247.

Feature	snapper	unidentified
2	2	2
46	0	5
244	5	7
247	0	1

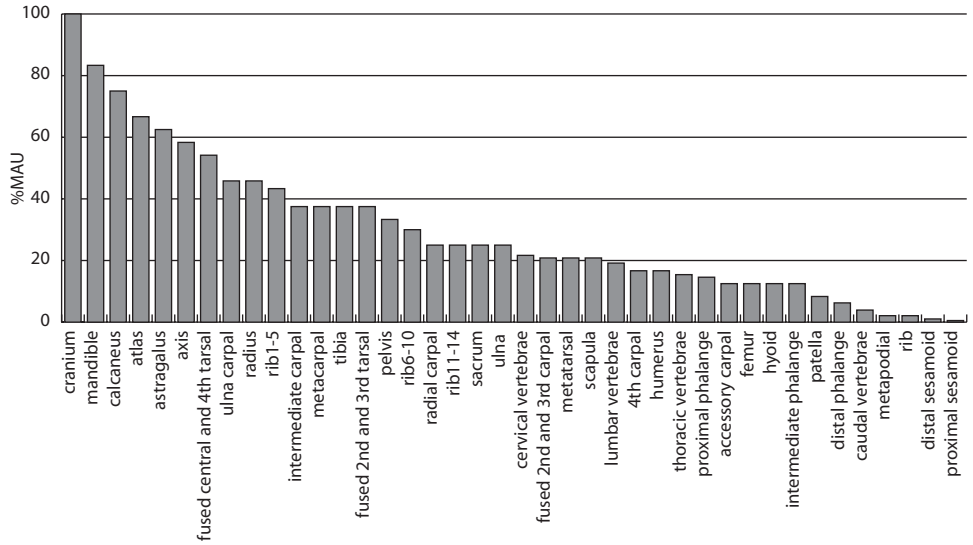
Table 7.4. Fish NISP per feature from the Bamber house site.

A few shellfish remains were recovered from the Bamber House site (MNI=52), most of which were oysters from Feature 244 (MNI=32). Oysters were also recovered in small numbers from fill layer Feature 2, the well Feature 46, and Feature 33. Pipi, mudsnail, mussel and large turret shell were the other species recovered.

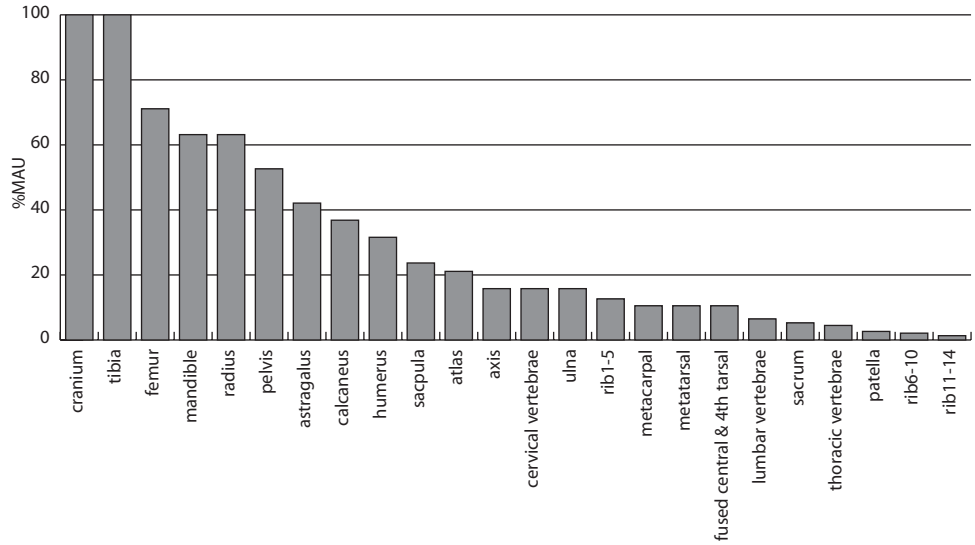
Taphonomy

Skeletal element representation

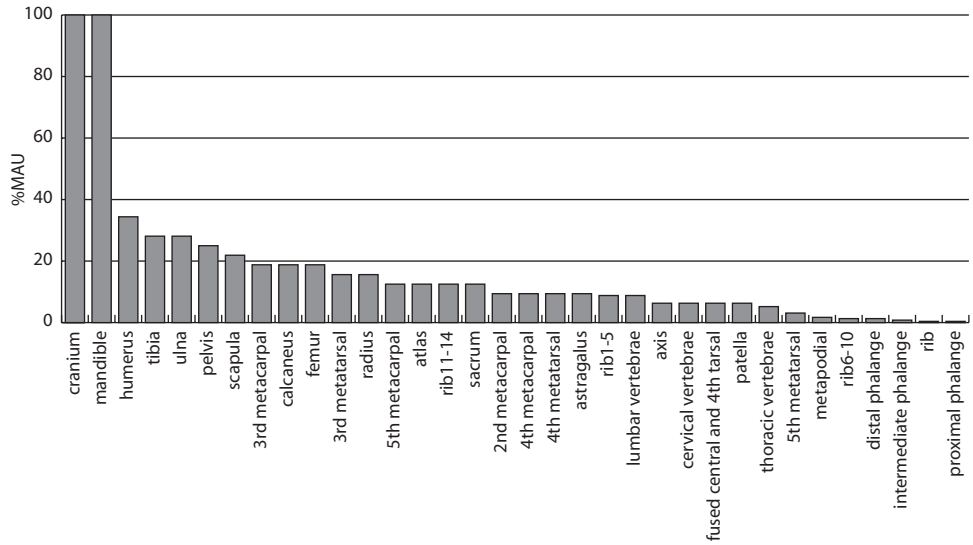
The most common cattle elements were crania and mandibles followed by tarsals, carpals and the axis and atlas (Figure 7.3). There were also a significant number of ribs, radii, tibiae and pelves. This suggests complete animal carcasses were brought onsite and that many of the beef remains represent butchery waste with a slightly smaller consumption component occurring on site, as crania and carpals do not tend to be incorporated into beef butchery cuts.



7.3. Cattle %MAU from the Bamber House site.



7.4. Sheep %MAU from the Bamber House site.



7.5. Pig %MAU from the Bamber House site.

Sheep skeletal elements are dominated by crania and tibiae, with a high proportion of femora, mandibles, radii and pelves suggesting that whole sheep were butchered and consumed onsite (Figure 7.4).

Pig skeletal elements are completely dominated by crania and mandibles suggesting that the pig assemblage is mostly butchery waste with the other elements transported off site for consumption. However, the pig crania and mandibles are most likely to have been brought onsite as discreet butchery cuts in greater numbers with respect to other butchery cuts. Brawn and trotters were common low cost butchery cuts (Figure 7.5). Some of the mandibular and cranial fragments had been butchered which suggests they were reduced into consumable butchered units.

Butchery

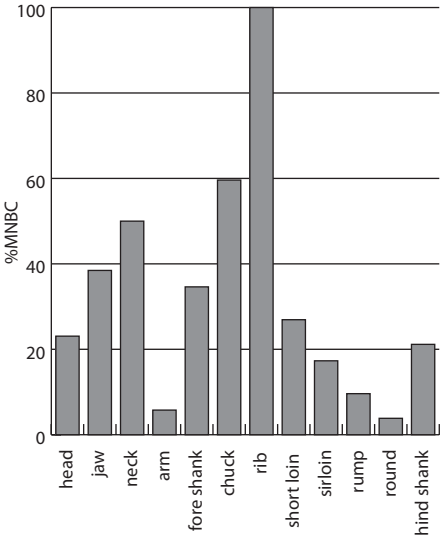
The most common butchery modification of bones recovered from the Bamber House site is sawing, where 20% of all bones had shown some sign of having been sawn.

The most common beef cuts in the Bamber house assemblage were rib, chuck, neck, jaw and fore shank cuts (Figure 7.6). While rib cuts are one of the highest quality beef cuts, the other cuts are of more marginal quality. Other high quality cuts present in the assemblage but in smaller numbers are short loin and sirloin. The most common sheep cuts in the assemblage are leg and forequarter cuts followed by hind foot jaw and head cuts (Figure 7.7). Pork cuts are dominated by trotters followed by leg and hand cuts[1] and then head and jaw cuts (Figure 7.8).

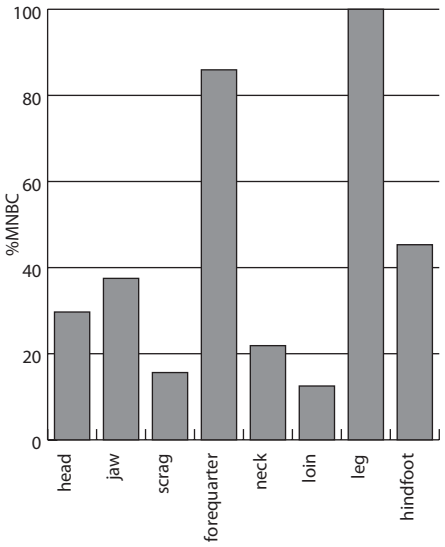
Other taphonomic agents

Figure 7.9 demonstrates the degree of taphonomic agents observed on the bone assemblage. Overall complete ele-

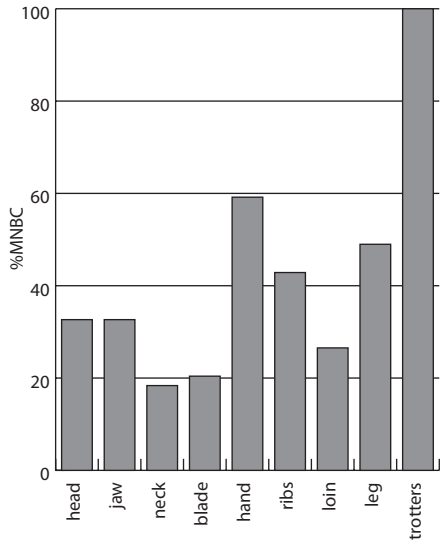
[1] Hand cuts are an English definition of a pork cut which includes humerii, ulnae, scapulae, and radii elements, not to be confused with forequarters of sheep.



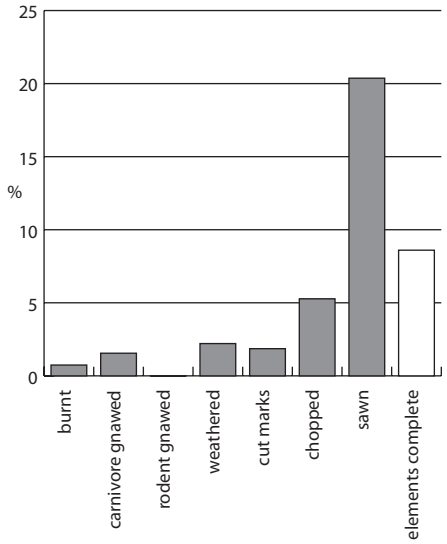
7.6. Cattle %MNBC from the Bamber House site.



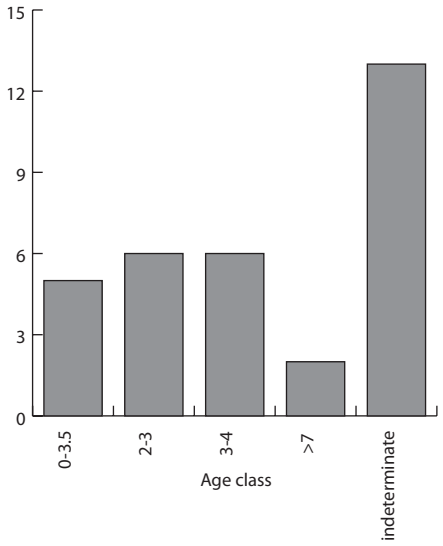
7.7. Sheep %MNBC from the Bamber House site.



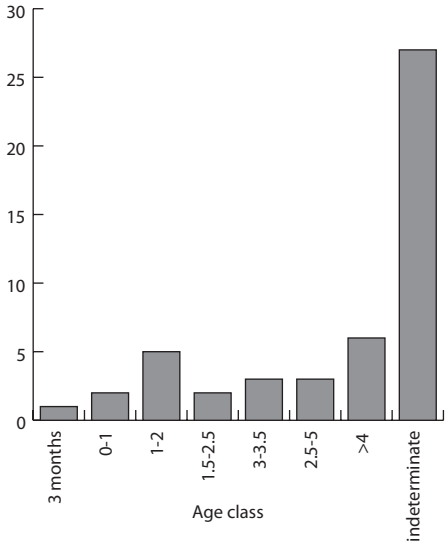
7.8. Pig %MNBC from the Bamber House site.



7.9. Animal bone modification from the Bamber House site.



7.10. Cattle MNI mortality profile from the Bamber House site.



7.11. Sheep MNI mortality profile from the Bamber House site.

ments make up 8.6% of the bone assemblage the rest are broken in some way and NISP/MNE ratio is 3.21, that is 3.21 bones per single minimum number of element. Overall it suggests that some degree of fragmentation of the bones over a period of time occurred. The NISP/MNE for the fill layer Feature 2 is 3.48, much the same as the overall ratio, indicating that processes associated with house demolition did not substantially contribute to bone fragmentation. Butchery appears to be the greatest taphonomic influence on the bone assemblage.

Animal age and sex profile

The cattle mortality profile (Figure 7.10) shows that most cattle were killed between 2 and 4 years of age. At this age they are close to their prime, suggesting that that these were probably steers bred purely for slaughter. Only a few mature adults of the 7–9 year age range were killed.

A number of sheep were killed under 3 years including lambs 0–1 years and hogget 1–2 years. Fewer were killed at 3 years or older. There were also a few mature adult individuals 4–5 years old and over (Figure 7.11). This suggests a varied subsistence strategy.

While there is a relatively more even spread across the age ranges of pig there is a concentration under 2 years old including both juveniles 0–1 years old and sub adults 1–2 years old (Figure 7.12). A few pigs were killed during adult and mature adult years between 2–3.5 years and 4–7 years and over respectively. Only male pig canines were identified.

The cat bone was that of an adult individual. Most of the bird remains were from adult specimens although there were a few juvenile or sub adult chicken remains.

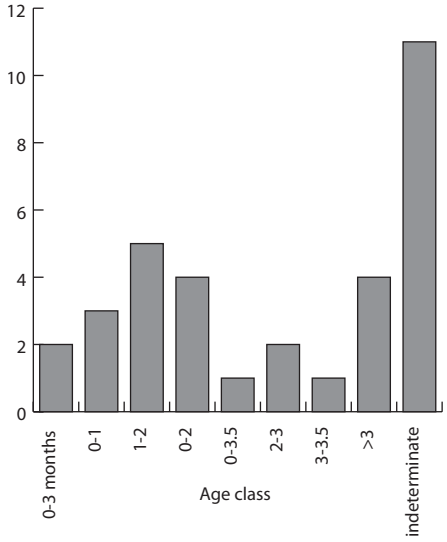
The Wanganui Hotel site

Taxonomic diversity and richness

Twenty-two mammal, bird and fish taxa were identified from the Wanganui Hotel site (Table 7.5) including 6 mammal, 9 bird and 7 fish taxa. Most of these remains were domesticated mammal but a significant amount were domesticated birds. Wild taxa were also present including a good sized fish assemblage, a moderate amount of shell fish, a few native/endemic bird species and a small number of introduced rabbits/hares that were also probably wild.

The six mammal taxa identified include pig (*Sus scrofa*), sheep (*Ovis aries*), cattle (*Bos taurus*), rabbit/hare (Leporidae), domestic cat (*Felis catus*) and at least one species of rat (*Rattus* sp). Nine bird taxa were identified, including chicken (*Gallus gallus*), turkey (*Meleagris gallopavo*), goose (*Anser anser*), duck (Anatidae), flesh footed shearwater (muttonbird, *Puffinis carneipes*), black bird (*Turdus merula*), New Zealand pigeon (*Hemiphaga novaeseelandiae*), a rail (Rallidae) and a noddy (Megalopterinae).

Seven fish taxa were identified including snapper (*Pagrus auratus*), kahawai (*Arripis trutta*), blue moki (*Latridopsis ciliaris*), trevally (*Pseudocaranx dentex*), shark/ray (Chondrichthyes), red gurnard (*Chelidonichthys kumu*) and red cod (*Pseudophycis bachus*).



7.12. Pig MNI mortality and sex profile from the Bamber House site.

Taxa	Common Name	NISP	MNE	MNI
Mammal		1103	16	4
Sus scrofa	pig	758	405	52
Bos taurus	cattle	460	275	52
Ovis aries	sheep	437	327	70
Rattus sp.	rat	6	6	3
Leporidae	rabbit/hare	8	8	3
Felis catus	cat	3	3	2
cf. *Bos taurus*		1	0	0
cf. sheep/pig		318	20	3
cf. *Sus scrofa*		27	2	0
cf. *Felis catus*		1	1	1
cf. *Ovis aries*		2	0	0
Bird		295	71	4
Gallus gallus	chicken	141	128	26
Meleagris gallopavo	turkey	46	38	9
Anser anser	goose	39	32	12
Anatidae	duck	16	13	4
Turdus merula	black bird	1	1	1
Puffinis carneipes	flesh footed shearwater	2	2	2
Hemiphaga novaeseelandiae	New Zealand pigeon	1	1	1
Rallidae	rail	1	1	1
Megalopterinae	noddy	1	1	1
cf. *Meleagris gallopavo*	turkey	1	1	0
cf. *Gallus gallus*	chicken	1	0	0

Table 7.5. Animal bone quantification by NISP, MNE and MNI for the Wanganui Hotel site.

Taxa	Common Name	NISP	MNE	MNI
Fish		277	277	6
Pagrus auratus	snapper	252	225	32
Arripis trutta	kahawai	43	42	9
Latridopsis ciliaris	blue moki	9	9	3
Pseudocaranx dentex	trevally	2	2	1
Chondrichthyes	shark/ray	2	2	2
Chelidonichthys kumu	red gurnard	1	1	1
Pseudophycis bachus	red cod	3	3	1

Table 7.5. continued…

Taxa	Common name	Habitat	MNI
Ostreidae	oyster	Rocky shore	182
Perna canaliculus	green mussell	Rocky shore	39
Haliotis iris	paua	Rocky shore	11
Paphies australis	pipi	Mud, sand flats, estuaries	9
Austrovenus stutchburyi	common cockle	Intertidal mud flats	4
Mactra discors	large trough shell	Sandy beach	2
Tucetona laticostata	large dog cockle	Moderate depths, sandy	2
Evechinus chloroticus	sea egg	Coastal shoreline	1
Venericardia purpurata	purple cockle	Moderate depths, sandy	1
Struthiolaria vermis vermis	small ostrich foot	Tidal mudflats	1
Maoricolpus roseus	large turret	Intertidal mud, sand	1
Total			253

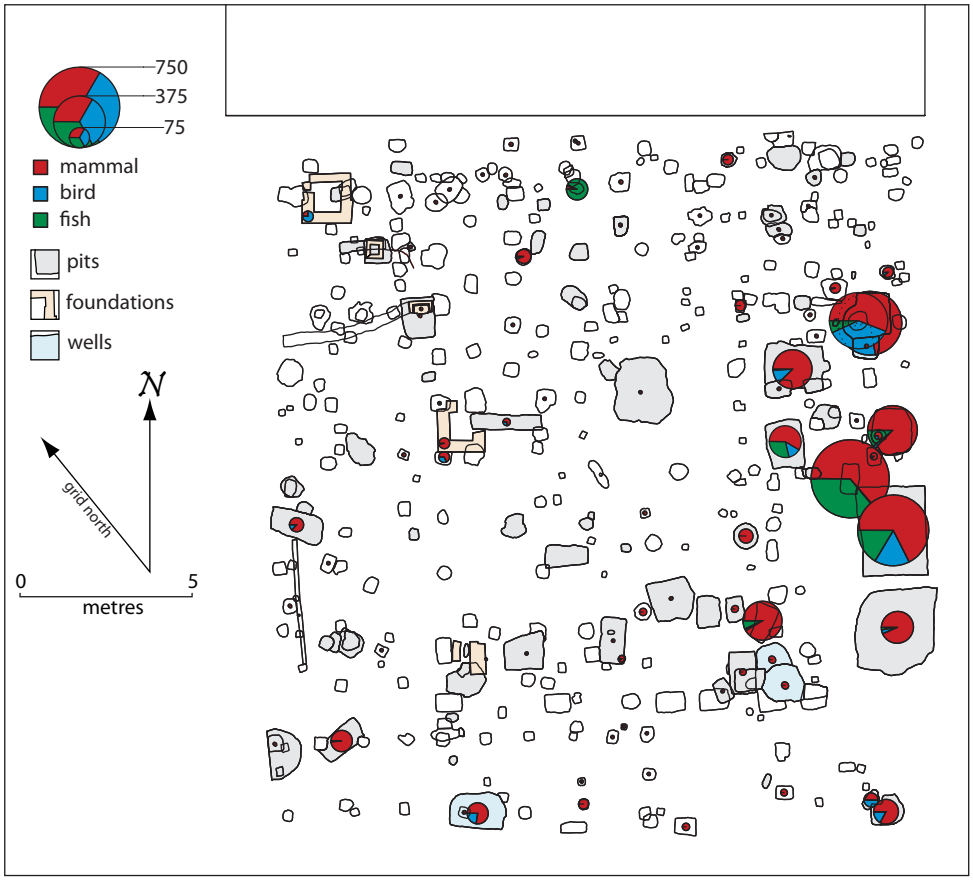
Table 7.6. Shell fish and crustacean MNIs for the Wanganui Hotel site.

Relative abundance

A total of 4264 animal bones, bone fragments and teeth were recovered and analysed from the Wanganui Hotel site (Table 7.5). Most of these remains are mammal, comprising 73.4% by NISP of the assemblage, followed by fish and bird remains which make up 13.8% and 12.8% respectively (Figure 7.13). Fish remains would have made up a much greater proportion if all the non diagnostic fish bone was included in the quantification. Unidentified mammal remains make up a quarter of all animal remains.

The majority of identified mammal bones were comprised of pig, sheep, and cattle. Overall pig remains were more than a third more numerous than sheep or cattle remains.

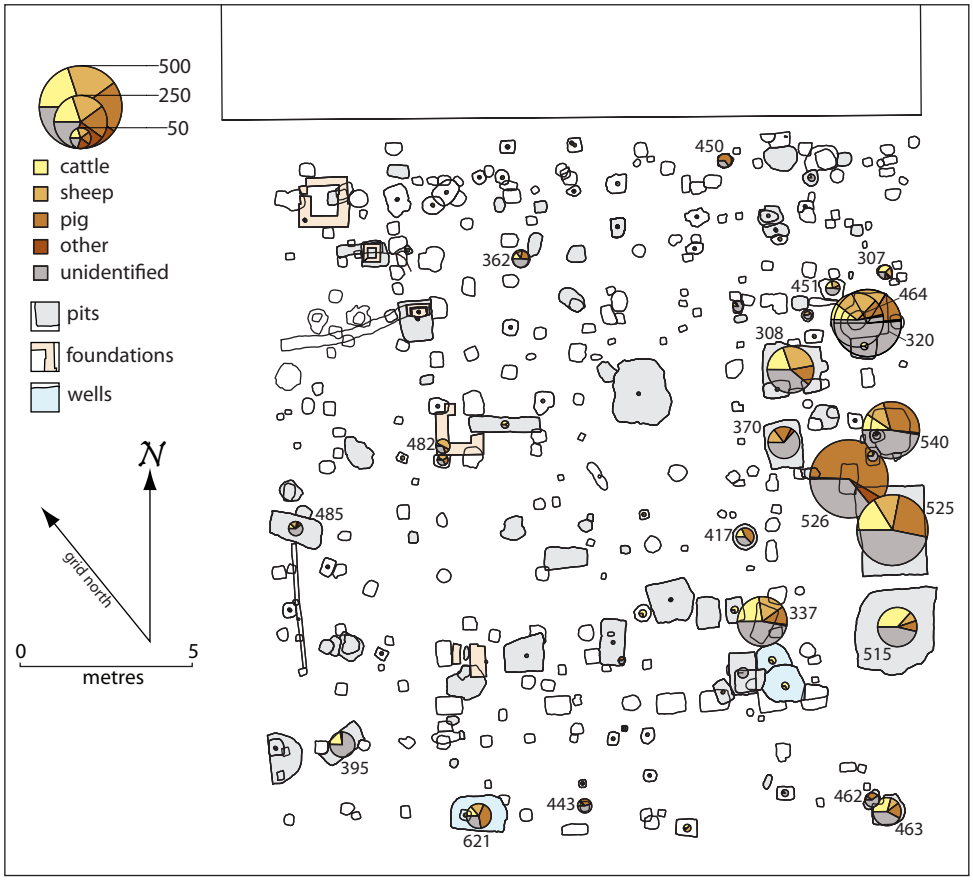
Mammal bones were particularly concentrated in pit Features 526, 525, and 320 with high concentrations also in other pit features, mostly along the south east edge of the site (Table 7.7, Figure 7.14). Table 7.7 gives mammal NISPs for features with a NISP of more than 20. There is one large single concentration of pig bones in Feature 526 with very small amounts of cattle and sheep. Otherwise pig, sheep and cattle are spread around a number of features in various quantities. Pig remains predominate in some features while in others cattle or sheep predominate – there is no clear pattern. The other three mammal species – rabbit, rat and cat – were sparse by comparison.



7.13. Relative abundance by NISP for the different classes of animal bone from the Wanganui Hotel site.

Feature	pig	cattle	sheep	other	unidentified	total
208	9	9	10	5	13	46
307	1	8	5	3	4	21
308	26	37	51	24	49	187
320	54	64	63	35	159	375
337	25	47	36	31	68	207
362	8	5	4	5	11	33
370	17	0	14	15	49	95
395	0	16	2	1	52	71
417	16	7	0	0	14	37
443	6	2	1	1	10	20
450	18	0	0	2	8	28
451	2	5	5	2	9	23
462	6	0	2	0	12	20
463	15	25	9	6	30	85
464	22	24	64	54	74	238
482	3	2	13	1	7	26
485	1	3	4	2	15	25
515	13	54	12	12	56	151
525	104	67	49	52	141	413
526	280	1	2	65	109	457
540	88	27	32	32	103	282
621	23	8	10	1	15	57

Table 7.7. Mammal NISP by feature with NISP > 20 for the Wanganui Hotel site.

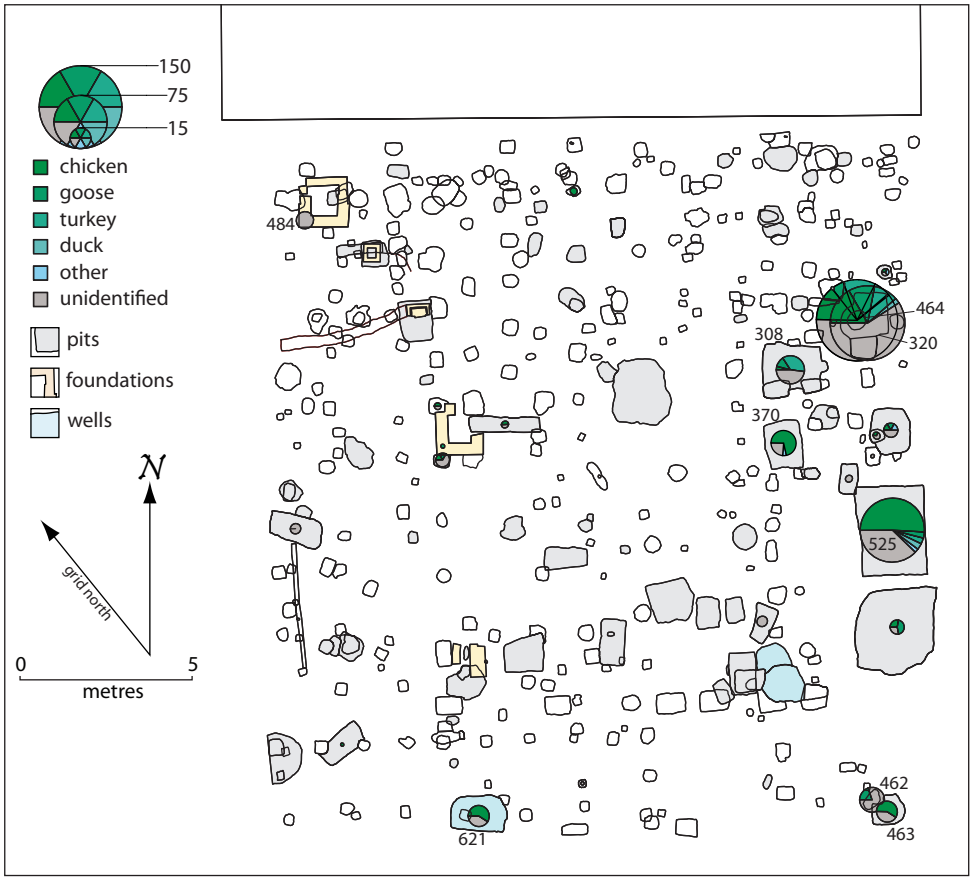


7.14. Mammal NISP by species from the Wanganui Hotel site.

Bird bone was less frequently recovered than mammal and has a smaller distribution across the site (Table 7.8, Figure 7.15). The most frequent bird taxa identified across the site was clearly chicken and there was also a relatively significant quantity of turkey and goose remains and to a lesser extent duck. The other bird taxa identified were only represented by one or two bones. Bird bone was more frequent in the fill of Features 464, 320 and 525 with moderate to very small numbers in a number of other features. Flesh footed shearwater remains were identified from Feature 525, a New Zealand wood pigeon from Feature 370, an unidentified noddy species from Feature 540, a black bird from Feature 307 and an unidentified rail species from Feature 464.

Feature	chicken	goose	turkey	duck	other	unidentified
308	1	3	9	0	0	12
320	22	15	14	3	1	77
370	15	0	0	0	1	5
462	0	4	0	0	0	16
463	10	0	0	0	0	7
464	22	8	20	10	2	94
484	0	0	0	0	0	12
525	50	3	3	3	2	37
621	10	0	0	0	0	7

Table 7.8.Bird NISP by feature where NISP >10 from the Wanganui Hotel site.

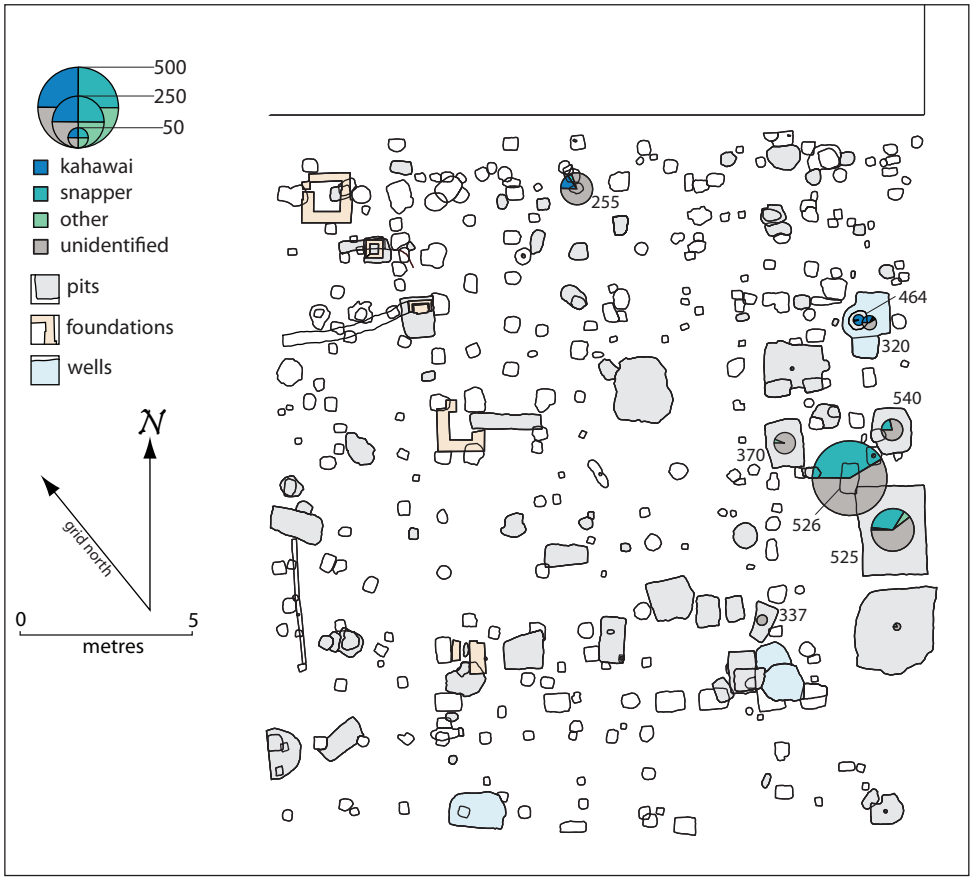


7.15. Bird NISP by species from the Wanganui Hotel site.

Fish remains were present in even fewer features than bird remains (Table 7.9, Figure 7.16). Snapper was by far the most abundant fish taxa recovered across the site and there were also a large number of kahawai. The other fish species are represented by only a few specimens. Fish remains are most frequently present in Feature 526. There are also large concentrations in pit Features 525, while Feature 255 contained partial remains of a whole kahawai .

Feature	fish	kahawai	snapper	blue moki	trevally	shark/ray	red gurnard	red cod
255	55	14	4	0	0	0	0	0
320	4	8	1	0	0	0	1	0
337	16	0	0	0	0	0	0	0
370	44	0	0	0	0	0	0	3
464	11	18	0	1	0	0	0	0
525	35	3	54	8	2	0	0	0
526	76	0	183	0	0	1	0	0
540	26	0	10	0	0	0	0	0

Table 7.9. Fish NISP by feature, where NISP > 10, for the Wanganui Hotel site.



7.16. Fish NISP by species from the Wanganui Hotel site.

Shellfish remains are frequently present in the assemblage although not in great numbers (Table 7.10). Oysters were the most common shell fish taxa recovered from the site followed by mussel, paua and pipi. There are two large concentrations of oyster in Features 308 and 337 and a single large concentration of mussel in Feature 526.

Taphonomy

Feature	cockle	sea egg	oyster	green mussel	pipi	large turret	large trough shell	small ostrich foot	paua
308	0	0	62	0	0	0	0	0	0
320	1	0	14	1	0	1	0	0	0
337	0	0	48	0	1	0	0	0	0
370	1	0	19	1	1	0	1	1	0
464	0	0	9	1	0	0	0	0	0
526	0	1	0	32	2	0	0	0	8

Table 7.10. Shellfish MNI by feature, where MNI > 10, for the Wanganui Hotel site.

It is difficult to assess the taphonomic factors because many of the bones were still encrusted with dirt often making observation difficult. Of the observations recorded butchery and cultural deposition appears to have been the largest factor in the formation of the animal bone assemblage.

Skeletal element representation

The cattle assemblage is characterized by very few cranial and mandibular elements and mostly pelves, radii, and tibiae, with a significant amount of tarsals, carpals and lumbar vertebra (Figure 7.17). This is clearly an assemblage that characterizes consumer choice on a local market with cuts being selected off site for consumption on site.

Sheep skeletal elements are dominated by femora and tibiae followed by pelves crania, calcaneum and astragalus (Figure 7.18) representing a wide range of elements with the focus on consumption and butchery indicating that complete animals were butchered and consumed on site.

A wide range of pig elements were recovered and identified. Crania elements were most frequent followed by mandibles, tibiae, pelves and femora (Figure 7.19). Smaller but significant amounts of forelimb elements are also established in the assemblage. A number of foot bones and small amounts or vertebrae are also represented. This suggests that either whole animals were butchered and consumed on site and that much of the missing elements are the result of taphonomic processes or more likely that brawn and trotters were a significant component of the diet.

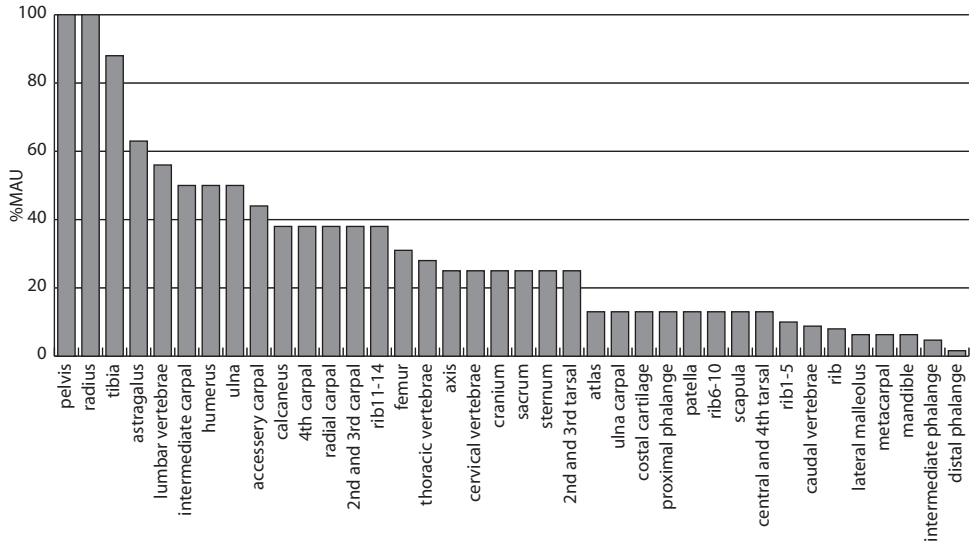
Only small amounts of cat and rabbit elements were recovered. Cat elements are represented by 2 humerii, and an unidentified tooth but these are unlikely to be food waste and probably represent the remains of individuals which died naturally and were subsequently affected by taphonomic processes. The few rabbit elements recovered are represented by crania, foot bones and long bones. There is not really a big enough sample to form an assessment but these are most likely the remains of animals hunted off site and butchered and consumed on site.

Both cranial and post cranial fish elements were recovered indicating complete fish were consumed on site. A wide range of bird elements were recovered and identified reflecting complete animals being butchered and consumed on site any variations in element composition are likely to be taphonomic.

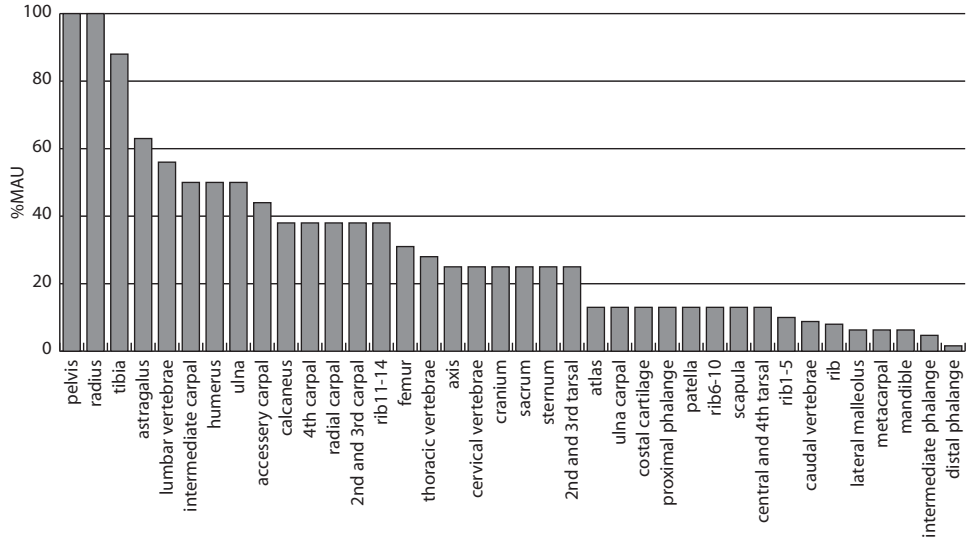
Butchery

The most common form of modification of animal bones recovered from the Wanganui Hotel site was butchery (Figure 7.23). Nearly 20% of all animal bone was sawn. Sawing was the most common form of butchery employed followed by chopping and cut marks. Butchery marks were observed mostly on the domesticated animals (pig, cattle and sheep) as well as on domesticated birds (chicken, turkey and geese) as well as taxa such as rabbit and duck that may be domesticated but may also have been wild.

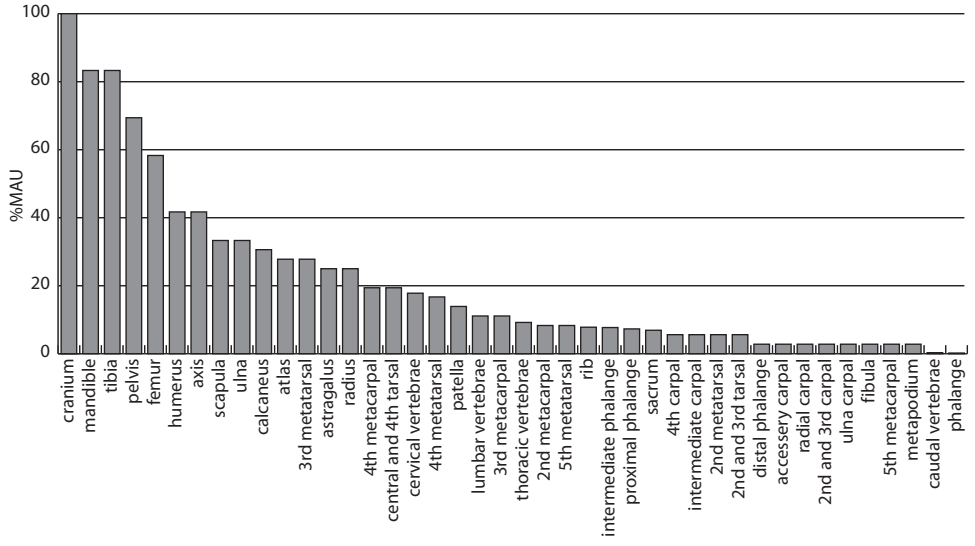
The most common beef cuts were rib and short loin, two of the highest quality beef cuts, while fore shank cuts were also frequent (Figure 7.20). Many of the short loin and sirloin cuts were small retail cuts which had been sawn twice to produce steaks. Other high quality beef cuts were also present in the assemblage including sirloin, rump and round in smaller numbers while all the lower quality cuts were also present in smaller numbers. The most frequent sheep cuts were leg cuts (Figure 7.21) but forequarter and neck cuts were also present in significant numbers. Some loin, scrag and head cuts were also present. The most common pork cuts in the assemblage were trotters, leg, rib and hand cuts (Figure 7.22).



7.17. Cattle %MAU from the Wanganui Hotel site.



7.18. Sheep %MAU from the Wanganui Hotel site.



7.19. Pig %MAU from the Wanganui Hotel site.

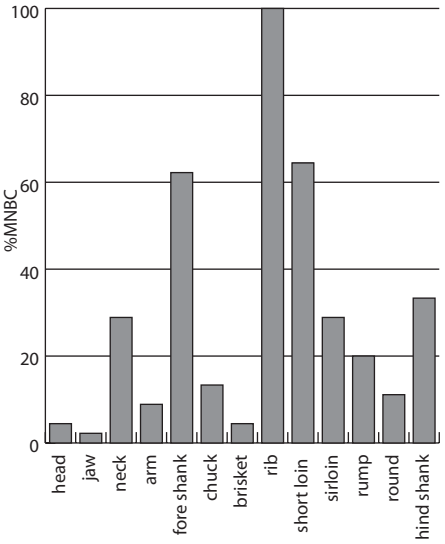
Other taphonomic agents

Figure 7.23 shows the percentages of all the taphonomic agents observed visually on the bones. Quite clearly burning, animal gnawing and weathering appear to be insubstantial taphonomic agents over the entire assemblage as a whole. Burnt bone, however, was very common in Feature 362, a small pit containing charcoal and ash. Weathering was the most common taphonomic agent besides butchery and many of the features have high percentages of weathered bone. Most of these features had very small samples, but three features in particular had large samples of bone and an unusually high percentage of weathered bone: Features 442, 520 nad 621. The bones from Feature 621 were particularly affected by moisture damage and were generally in a very poor, brittle condition. Carnivore gnawing was recorded in a number of features but was generally infrequent. It is most common in Feature 383. Rat gnawing was infrequent and recorded on bones in much fewer features, though relatively more common in Feature 482. Despite all the various taphonomic processes impacting on the assemblage the element completeness rate is nearly 20% and the NISP/MNE ratio is rather low at just over 2 suggesting that most of the taphonomic processes had only a moderate affect on the assemblage.

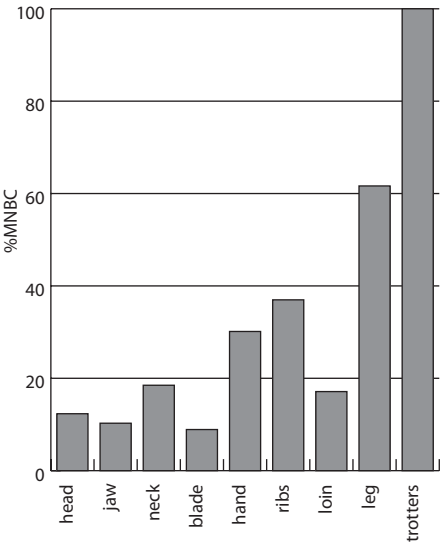
Age profile and sex characteristics

The cattle mortality profile has two age concentrations (Figure 7.24). Cattle were slaughtered at either 3.5 years or younger or 7 to 9 years or older with very little in between. This indicates that beef was procured from young steers in their prime or from older cows past their reproductive and milking productivity. This suggests a rather intensified beef production system that catered to a demanding market.

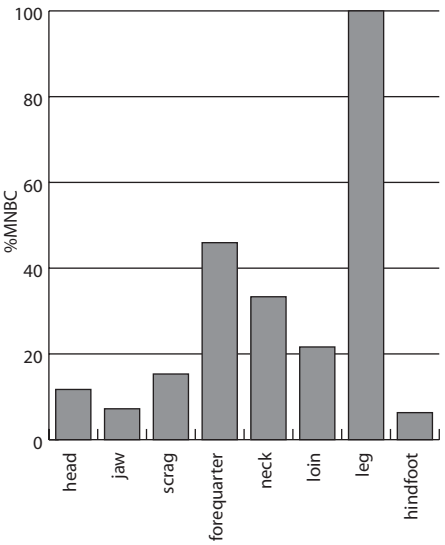
The majority of sheep remains were from individuals 3.5 years of age or under, including a number of juvenile



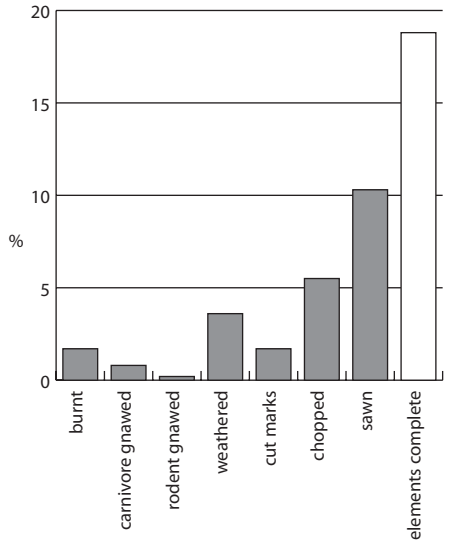
7.20. Cattle %MNBC from the Wanganui Hotel site.



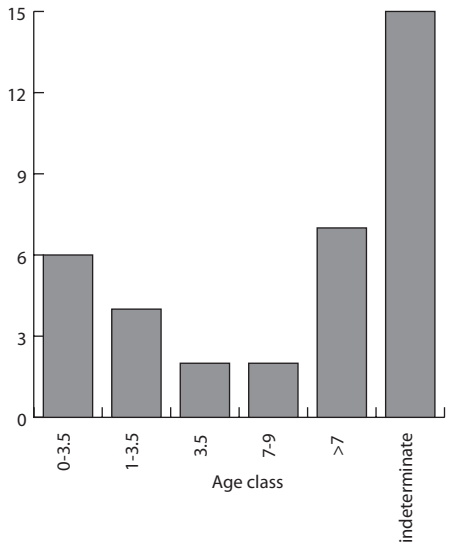
7.21. Sheep %MNBC from the Wanganui Hotel site.



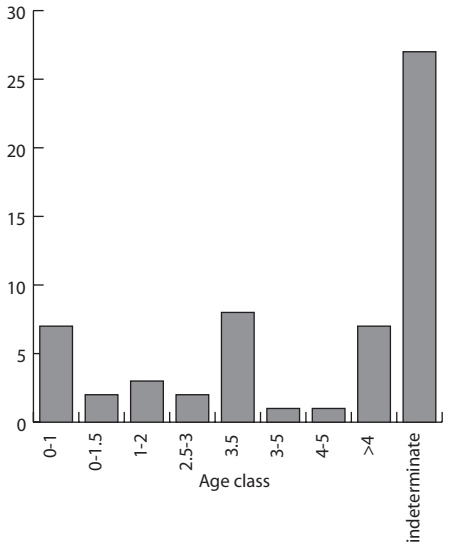
7.22. Pig %MNBC from the Wanganui Hotel site.



7.23. Percentage of animal bone NISP modified for all features from the Wanganui Hotel site.



7.24. Cattle MNI mortality profile from the Wanganui Hotel site.



7.25. Sheep MNI mortality profile from the Wanganui Hotel site.

individuals under 1 years of age and a number of sub adults 1–2 years of age (Figure 7.25). There were also a significant number of more mature adults 4–5 years or older. Such a varied age range suggests that the market supply was not so specialised or that the supply was tailored to meet the demand of the consumer who could choose a range of cuts of lamb, hogget or mutton depending on their tastes or income. It could also indicate that supply was concentrated in the hands of the occupants of the site who could choose from a range of individuals from a large sheep population for slaughter.

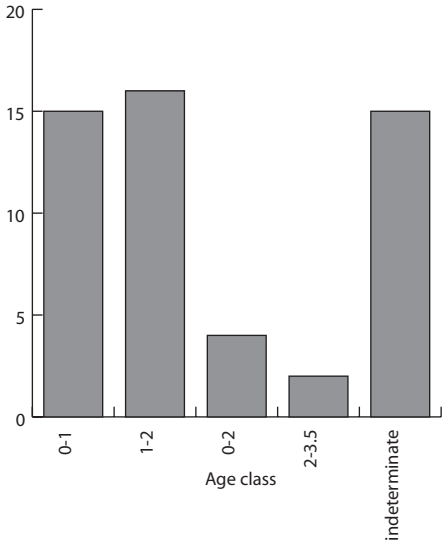
Most of the pig remains were from animals killed when they were under 2 years of age and most of them were the remains of male individuals indicating that pig cuts were procured from specialist pig farmers who bred pigs solely for market consumption (Figure 7.26). Very few individuals were 3 years or older and there were only two female canines recovered both of them from Feature 308 where two individuals were aged at older than 2 years. They are likely to be the same two individuals which would suggest that females were killed when they past their reproductive prime.

The cat remains are those of a juvenile individual/s. The rabbit remains were from an adult specimen. Most of the bird remains were adult, however, a number of chicken bones were from juvenile to sub-adult individuals. A mixture of male and female chickens are present in the assemblage. While 1 male turkey was present the rest were females.

Phasing

The rubbish pits containing large faunal assemblages are all associated with the hotel though they are assigned to all phases from Phase 2 to Phase 6. The majority of faunal remains were found in features along the south east edge of the site indicating that this remained the preferred place for on site disposal of organic waste. This contrasts with

the bottle pits (see Chapter 5) which are largely in Phase 3 features along the south west boundary of the hotel curtilage as it was at that time. There are, however, no clear patterns of changing consumption through time, with the faunal composition of Feature 308, from Phase 3, being much the same as that of Feature 525, from Phase 5. The faunal assemblage of the Wanganui Hotel site shows a standard pattern of consumption for a 19th century urban hotel in New Zealand (Hawkins et al. in press).



7.26. Pig MNI mortality profile from the Wanganui Hotel site

Conclusions

There appear to have been differing rates of bone fragmentation between the Bamber House and the Wanganui Hotel assemblages, where the Bamber house assemblage suffered much higher rates of fragmentation. Overall the assemblages for both sites appear to have been affected by similar rates of bone modification and similar rates of sawing, chopping and cut marks.

There also appears to have been different subsistence practices operating at each site. The Wanganui Hotel site had a much greater taxonomic diversity including mainly European domesticated mammals and birds supplemented with wild bird, fish, shellfish and mammal taxa. Some of the wild taxa included delicacies such as mutton bird, a coastal migratory bird which were traditionally hunted by Maori where juveniles were usually clubbed or snared as they left their nests (Anderson 1997), and wood pigeon which thrive near forest areas both rural and urban. The noddy species is a small coastal bird, not normally eaten and probably intrusive. Fishing was focused on inshore species such as snapper and kahawai which readily take baited hooks (Ayling and Cox 1982). Small amounts of European introduced rabbits were also hunted for the menu as shown by their fragmented and uneven element distribution and butchery marks observed on a number of the bones

The Bamber House site, on the other hand, had a much reduced taxonomic diversity and relied mainly on the three European introduced domesticates with some domesticated birds and a very small amount of snapper. This is not an unexpected result as the hotel would need a varied menu to cater to their clientele.

Pigs dominate the Wanganui Hotel assemblage by NISP although there was a significant amount of cattle remains that would have provided far more beef than pork. The Bamber House site, by contrast is dominated by cattle remains, with lesser, but still significant, amounts of sheep and pig. Crania and mandibles are the most frequent pig elements at both sites and they also appear to have been consumed at both sites as butchery marks were common on these elements. Pig heads are more commonly used to make brawns, stocks and soups. This suggests that maybe head and jaw cuts were one of the most commonly consumed cut in the area due to popular consumer choice based on taste and/or price. Pork leg and shoulder cuts were also common from both sites suggesting hams were being cured. The age mortality profiles of domesticated mammals are very similar for both sites also suggesting a common supply. Most pigs from both sites were males killed under 2 years of age, either juveniles or sub-adults, suggesting that specialized pork production was taking place. Sheep from both sites were mainly mutton with a significant component of hogget and lamb. There were some differences in the mortality profile of cattle where it was more focused on young adult cattle, most likely steers, at the Bamber House site suggesting a specialised beef production while the Wanganui Hotel site had a more equal proportion of young adults (steers) and

mature adults which were most likely cows past their reproductive and milk producing prime. This may reflect procurement from different beef suppliers.

The composition of the butchery cuts is also revealing. Higher quality beef cuts dominate the Wanganui Hotel assemblage compared to those at the Bamber House site, another not so surprising result. Lamb/hogget/mutton and pork cuts were similar between the two sites where leg and shoulder/hand and trotter cuts were predominant, which is probably the result of these cuts having the most skeletal elements although there were relatively fewer higher quality cuts in the Bamber House site assemblage.

8 Discussion and Conclusion

Matthew Campbell, Warren Gumbley and Beatrice Hudson

The Bamber House and the Wanganui Hotel sites have much in common – both date to the same period, were the product of the same historical colonising processes, and contained many similar items of material culture. They also have obvious differences – the Bamber House was a relatively stable domestic site while the Wanganui Hotel site gave evidence of rapidly changing commercial activity. Although there were different phases of activity at the Bamber house site – first relating to the smithy only, then to a small dwelling, and finally to a much larger dwelling – this remained the domestic centre of one family over a long period of time. In contrast, at the Wanganui Hotel site there was rapid expansion – of both the hotel buildings, which underwent several additions and changes, and of the many other businesses and structures that were built and demolished on the site. This site gives an impression of dynamic commercial activity from the 1860s to the late 1890s.

The archaeology of the Bamber House site showed that Bamber's forge was in use before the first house was built – we don't know exactly when it was built, or where the Bamber family was living before this. It was clear from historical photographs that the house was much changed by the late 1870s, but it could not be seen from the pictures whether the later house was a modification of the first or whether it had been completely rebuilt. The archaeology however supports the latter scenario.

There were few pits containing domestic rubbish at the Bamber house site, which raises the question of what was being done with this – municipal collection or dumping somewhere else, perhaps on the adjacent Town Section 78, which remained unoccupied much longer than those around it. The practice of using an adjacent empty section for burying rubbish was evident from the archaeology of the Pipitea Street site, Wellington and may have been a common 19th century practice (Campbell 2009). Waste from the forge was buried on vacant land in TS79 that was subsequently occupied by the first house. Another possibility is that a lot of rubbish was dumped across from Taupo Quay when land reclamation was in process, which is known to have been a common practice in Wellington and Auckland during foreshore reclamation (Bickler et al. 2004), though the reclamation was not underway during the early years of Bamber's occupation.

The general lack of buried rubbish at the Bamber house site was in clear contrast to the Wanganui Hotel site, where large rubbish pits were dug to deal with the quantity of refuse created by the commercial activity of the hotel as well a pits containing the domestic refuse of the various proprietors. This is well reflected in the material culture recovered from the Wanganui Hotel site; the number and type of glass bottles, the large amount and type of ceramics and the wider variety of faunal remains that indicate a varied menu for the hotel clientele.

Other commercial ventures on the site – of the corn merchant, livery service, auctioneer/s, ironmonger, seedsman or soft drink factory that all operated somewhere on the section for a period of time – are not represented by material culture in the same way as that of the hotel, which reflects the nature of the hotel's business. Structural evidence did remain for the premises of several of these however, and the increased density of activity on the site is also reflected in the fact that their encroachment on TS77 changed the way the hotel used the land for rubbish pits.

The density of postholes on the Wanganui Hotel site would have been extremely difficult to interpret without the use of the historic photographs. While many postholes could be seen to be aligned with each other, and these alignments were oriented on the street, organising them into buildings was difficult, and assigning

functions to buildings would have been impossible without the historic record. The same situation often applies at pre-European Maori sites, except that there are no historic photographs to aid interpretation, alignments are less clear and structures last only a few seasons at most and so are constantly rebuilt. It is little wonder, then, that structural evidence on pre-European sites so often defies interpretation.

The archaeology of women and children has come under increasing focus in recent decades (e.g., Conkey and Spector 1984; Kamp 2001). Attention has been drawn to the fact that women and children tend to remain shadowy figures in the background of archaeological interpretations, so often focussed on adult males. This, unfortunately, remains the case at the Bamber House site which, despite being a domestic site, sheds little light on the lives of the woman and children who were no doubt at the centre of the domestic sphere. While historical documents relating to the land and the structures on it give us some picture of Thomas Bamber, the other occupants of the house go unmentioned. Some women do appear in the rates rolls, usually as 'Wife', 'Widow' or 'Spinster' by occupation, but as Euphemia Bamber owned no land here, she is not listed. Unfortunately, with the lack of domestic refuse at the site, in this case the archaeology does little to represent her or the children at the Bamber house site – only a single miniature cup and saucer were found.

Caroline Dunleavy, as the widowed owner of the Wanganui hotel, is mentioned in the historical records, but there was nothing in the archaeology that could specifically be related to her. Several items were found that relate to women and children, particularly small size shoes, dolls, miniature tea sets and a child's mug with 'Martha' printed on it. Also, one feature contained what seemed to be a clear-out of a great deal of domestic material, perhaps when one proprietor replaced another. Unfortunately, the turnover in proprietors at the hotel was high, and we are unable to assign these evidences of domestic life to any particular family.

The Bamber household was not showy and probably did not do a lot of formal entertaining – there were very few serving vessels recovered, for instance. In a word, the material aspect of the Bamber household may be characterised as unpretentious. The Wanganui Hotel did not cater to an exclusive or high end clientele but to the artisans and industrial workers that surrounded it. At both sites, Willow pattern ware was not bought as sets, but from a variety of manufacturers as replacements were required – there is no evidence of a best dinner service. By nature of its function, the hotel has a wider material culture and faunal assemblage. Like previously analysed assemblages from 19th century hotels in New Zealand the Wanganui Hotel faunal assemblage contains wild bird remains, though in small quantities; wild birds are more common in rural than urban settings, whether domestic or commercial (Hawkins et al. in press). Even so, the impression is one of simplicity and convenience, catering to the unpretentious tastes of visitors not requiring more than modest levels of comfort. The lack of rubbish pits relating to the boarding house period means we cannot say whether the standard or character of the establishment changed significantly during that period.

Neither the Bamber household nor the Wanganui Hotel, then, were high class establishments. We hesitate to call them working class – rather they reflect a simple, practical pioneering ethos and the unsophisticated nature of the material culture of the site must, to some degree, reflect the fact that Wanganui was a remote British outpost for the first couple of decades of its existance. The degree to which this stance was consciously adopted rather than imposed by circumstance – limited choice of imported material goods, the 'tyranny of distance', the necessity of nation building rather than reaping the rewards – is a matter for debate. Bamber, as a blacksmith, was working class (although he was elected Mayor), though as an artisan he would have been much better off than the working classes of Victorian Britain. We may also venture that his, and his children's, outlook on the future

would have been more optimistic than those of his contemporaries in Britain with potential for greater political influence and access to the mechanisms for advancement, such as education, greater than at home.

The Wanganui Hotel was not a classy joint, but perhaps only the Wanganui Club and the garrison officer's mess were ever particularly classy or gentrified in 19th century Wanganui. The various hotels around town may have catered to various clienteles – the Wanganui Hotel, in an industrial/commercial corner of town, would have catered to commercial travellers and working men like Bamber or, in the case of the Rutland Hotel, men of the garrison. Nonetheless, among them there was likely to be a commonality. Such men were not discerning or fussy and probably would not have wanted to be described as such.

This is not to say that such men were not keen to improve their lot – the mere fact that they emigrated implies some ambition. The history and archaeology of the land on which Bamber and his family lived indicates a story of a man improving his lot as a settler in New Zealand. Thomas Bamber moves beyond a typical image of a 19th century blacksmith as a working-class man. Rates rolls chart a story by progressively referring to him as blacksmith, mayor, gentleman and then settler. As he mostly likely had another blacksmith running the forge while it was still in his possession, he seems to have gained some social standing and the enlargement of his house no doubt also indicates an improved situation. But this doesn't mean his tastes or outlook changed.

Ian Smith (2004) has called for historical archaeology in New Zealand to be an archaeology of identity. By this he means an archaeology of how people view themselves and are viewed by others; how identities of Maori and Pakeha arose out of the 19th century colonial context; and how these themselves encompass multiple identities, consciously constructed or organically composed. The archaeology of the UCOL sites have made some small contribution to this endeavour.

The early European citizens of Wanganui remained firmly attached to mother Britain economically and materially. For several decades most of the town's citizens were born overseas and their material culture reflects patterns of behaviour grafted from Europe onto what was, to them, a blank canvas. This economic attachment is clearly apparent in the material goods disposed of at two both the Bamber House and Wanganui Hotel sites. The alteration and growth of the structures at both sites also reflects the drive to develop, exploit and improve the local environment, both social and economic, which New Zealander's take to be an axiomatic attitude of pioneering European settlers and which modern New Zealanders have mythologised as a foundation of our social and psychological fabric. Bamber's life history, in some ways, may be regarded as a template of this ethos, which marks an important shift from the rigid class mind-set of Britain to a more ambitious and fluid society.

References

Anderson, A. 1997. Historical and Archaeological Aspects of Muttonbirding in New Zealand. *New Zealand Journal of Archaeology*, 17: 35–55.

Anson, D. 1983 Typology and seriation of wax vesta tin matchboxes from Central Otago: a new method of dating historic sites in New Zealand. *New Zealand Journal of Archaeology*, 5: 115–138.

Ardagh, W.D. and R.A. Harrison 1862. *Upper Canda Law Journal and Municipal and Local Courts' Gazette; Volume VIII. From January To December, 1862*. W. C. Chewitt and& Co, Toronto. Available via http://books.google.com

Attwell, B. 2006. *The Wharves of Wanganui: How Maritime Commerce Built a City*. Hilltop Publishing, Wanganui.

Ayling, T. and G.J. Cox. 1982. *Collins Guide to the Sea Fishes of New Zealand*. Collins, Auckland.

Baugher-Perlin, S. 1982. Analyzing glass bottles for chronology, function, and trade networks. In R. S. Dickens (ed) *Archaeology of Urban America: The Search for Pattern & Process*, 259–290. Academic Press, New York.

Bealer, A.W. 1976. *The Art of Blacksmithing*. Funk and Wagnall, New York.

Bedford, S. 1985. A simplified classification for tin wax vesta matchboxes. *New Zealand Archaeological Association Newsletter*, 28(1):P 44–64.

Bedford, S. 1986. The History and Archaeology of the Halfway House Hotel Site, Cromwell Gorge. New Zealand Historic Places Trust.

Behrensmeyer, A. K. 1978. Taphonomic and ecologic information from bone weathering. *Paleobiology*, 4(2): 150–162.

Best, S. 1992. The Queen Street gaol: Auckland's first courthouse, common gaol and house of correction (site R11/1559). *Auckland Conservancy Historic Resource Series*, 2. Department of Conservation.

Bickler, S. 2006. New Zealand historical ceramics database. Online database http://www.bickler.co.nz/china/

Bickler, S.H., B. Baquie and R. Clough. 2004. Excavations At Britomart, Auckland. *Archaeology in New Zealand*, 47(2):136–152.

Bioresearches 1998. His Majesty's theatre excavations (R11/1624): final archaeological report Vol. 1 and Vol. 2. M. Felgate (ed).

Boessneck, J. 1969. Osteological differences between sheep (*Ovis aries* Linne) and goat (*Capra hircus* Linne). In D. R. Brothwell and E. S. Higgs (ed) *Science in Archaeology: a Survey of Progress and Research*, 331–358. Thames and Hudson, London.

Bradley, C.S. 2000. Smoking pipes for the archaeologist. In K. Karklin (ed) *Studies in Material Culture Research*, 104–133. Society for Historical Archaeology, California, PA.

Brassey, R. 1989. Rediscovering Fort Ligar: archaeology at R11/1656, Auckland. Vol. 2: analysis of the artefact assemblages and faunal material. *Science and Research Internal Report*, 41. Department of Conservation, Auckland.

Brassey, R. and S. Macready 1994. The history and archaeology of the Victoria Hotel, Fort Street, Auckland (Site R11/1530). *Auckland Conservancy Historic Resources Series*, 10. Department of Conservation, Auckland.

Brooks, A. 2005. *An Archaeological Guide to British Ceramics in Australia 1788–1901*. The Australasian Society for Historical Archaeology and The La Trobe University Archaeology Program.

BSM Group Architects 2004. Wanganui UCOL Quay School of Arts 14–24 Taupo Quay and 7 Rutland Street, Wanganui, cultural heritage assessment. Unpublished Report to UCOL.

Bull, G. and S. Payne. 1982. Tooth eruption and epiphyseal fusion in pigs and wild boar. In B. Wilson, C. Grigson, and S. Payne (eds.) *Ageing and sexing animal bones from archaeological sites*. British Archaeological Reports British Series, 109: 55–71. Oxford.

Busch, J. 2000. Second time around: a look at bottle reuse. In D.R. Brauner (ed) *Approaches To Material Culture: Research for Historical Archaeologists*, 175–178. Society for Historical Archaeology, California, PA.

Cameron, F.R. 1985. Analysis of buttons, clothing hardware and textiles of the nineteenth century Chinese goldminers of Central Otago. Unpublished B.A. (Hons) Dissertation, Anthropology Department, University of Otago.

Campbell, M. 2009. Archaeological investigation of 1–15 Pipitea Street, Wellington. Unpublished CFG Heritage report to The New Zealand Historic Places Trust, The Pipitea Street Trust and RCP

Campbell. M. and L. Furey 2007. Archaeological investigations at the Westney Farmstead, Mangere. Unpublished CFG Heritage report to the New Zealand Historic Places Trust.

Carvalho, D.N. 2004. *Forty Centuries of Ink*. Kessinger Publishing, Whitefish.

Challis, A. 1994. Edmond's Ruins, Kerikeri Inlet, Bay of Islands: the stone structures and the artefact assemblage. *Science and Research Series*, 68. Department of Conservation, Wellington.

Chapple, L.J.B. and H.C. Veitch 1939. *Wanganui*. Hawera Star Publishing, Hawera.

Clough and Associates 2003. Excavation of the Albert Barracks (R11/833): University of Auckland Student Amenities Project. Unpublished report to The University of Auckland.

Collard, E. 1983. *The Potter's View of Canada: Canadian Scenes on Nineteenth-Century Earthenware*. McGill–Queen's University Press, Kingston and Montreal.

Conkey, M. W. and J. D. Spector 1984. Archaeology and the study of gender. In M. Schiffer (ed) *Advances in Archaeological Method and Theory*, 7: 1–38. Academic Press, New York.

Copeland, R. 1980. *Spode's Willow Pattern and Other Designs after the Chinese*. Rizzoli, New York.

Cowan, J. 1983. *The New Zealand Wars: A History of the Maori Campaigns and the Pioneering Period, Vol. 1*. P.D. Hasselberg, Government Printer, Wellington.

Coysh, A.W. and Henrywood, R.K. 1982 (reprint 2001). *The Dictionary of Blue and White Printed Pottery, 1780–1880, Volume I*. Antique Collectors Club, Woodbridge.

Coysh, A.W. and Henrywood, R.K. 1989 (reprint 2001.) *The Dictionary of Blue and White Printed Pottery, 1780–1880, Volume II*. Antique Collectors Club, Woodbridge.

Dunning, P. 2000. Composite table cutlery from 1700 to 1930. In K. Karklins (ed) *Studies in Material Culture Research*, 32–45. Society for Historical Archaeology, California PA.

Fike, R.E. 1987 (2006 reprint). *The Bottle Book: A Comprehensive Guide to*

Historic Embossed Medicine Bottles. The Blackburn Press, New Jersey.

Fraser, J. 2002. The domestic front: an archaeological investigation of the Albert Barracks ceramics assemblage. Unpublished Honours Thesis, University of Auckland.

Jones, O. 2000. A Guide to Dating Glass Tableware: 1800 to 1940. In K. Karklins (ed) *Studies in Material Culture Research*, 1412–232. Society for Historical Archaeology, California PA.

Fisher, P. 2004. *Capital Thirst: Wellington's Soft Drink Industry 1843–1988*. Wellington.

George, S. 1999. Unbuttoned: archaeological perspectives of convicts and whalers' clothing in nineteenth century Tasmania. Unpublished Honours Thesis, La Trobe University.

Godden, G.A. 1991. *Encyclopedia of British Pottery and Porcelain Marks*. Barrie and Jenkins, London.

Grant, A. 1982. The use of tooth wear as a guide to the age of domestic ungulates. In B. Wilson, C. Grigson, and S. Payne (eds) *Ageing and sexing animal bones from archaeological sites*. British Archaeological Reports British Series, 109: 91–108. Oxford.

Grayson, D. K. 1984. *Quantitative Zooarchaeology: Topics in the Analysis of Archaeological Faunas*. Academic Press, New York.

Grigson, C. 1982. Sex and age determination of some bones and teeth of domestic cattle: A review of the literature. In *Aging and Sexing Animal bones from Archaeological Sites*. In B. Wilson, C. Grigson, and S. Payne (eds) *Ageing and sexing animal bones from archaeological sites*. British Archaeological Reports British Series, 109: 7–23.

Harris, J. and I. Smith 2005. The Te Hoe shore whaling station artefact assemblage. Unpublished report, Anthropology Department, University of Otago.

Hawkins, S., W. Gumbley and M. Campbell in press. Late 19th century Colonial bird exploitation at Rutland Street, Wanganui, New Zealand. In R. Barkhuis (ed) *Proceedings of the 6th Bird Working Group Meeting*.

Hillson, S. W. 1992. *Mammal Bones and Teeth: an Introductory Guide to Methods of Identification*. Institute of Archaeology, University College London, London.

Hughes, D. 2006. *"A Bottle of Guinness Please": The colourful history of Guinness*. Phimboy, Wokingham, Berkshire.

Hurlbert, W. H. 1890. *France and the Republic: A record of things seen and learned in the French Provinces during the 'Centennial' year 1889*. Longmans, Green and Co, London. http://www.gutenberg.org/files/21498/21498-h/21498-h.htm Accessed 3 July 2007.

Jones, O. 2000. Glass bottle push-ups and pontil marks. In D.R. Brauner (ed) *Approaches To Material Culture: Research for Historical Archaeologists*, 149-160. Society for Historical Archaeology, California PA.

Kamp, K.A. 2001. Where have all the children gone? The archaeology of childhood. *Journal of Archaeological Method and Theory*, 8(1): 1–34.

King A.D. 1990. *Urbanism, Colonialism, and the World Economy: Cultural and Spatial Foundations of the World Urban System*. Routledge, London.

Kowalsky, A.A and D.E. Kowalsky 1999. *Encyclopedia of Marks On American, English, and European Earthenware, Ironstone, and Stoneware 1780–1980*. Schiffer, Atglen PA.

Lampard, W. H. 1981. Catalogue of New Zealand coins, currency tokens, Presbyterian Communion tokens and bank notes. New Zealand Numismatic Journal, 16(1).

Lawrence, S. 2004. Excavating Tasmanian whaling stations. Unpublished Draft Manuscript.

Leach, B.F. 1997. *A Guide to the Identification of Fish Remains from New Zealand Archaeological Sites*. New Zealand Journal of Archaeology Special Publication.

Macready S. 1990. Slums and Self-improvement: The History and Archaeology of the Mechanics Institute, Auckland, and its Chancery Street Neighbourhood. Department of Conservation, Wellington.

Mayne A. and T. Murray 2001. *The Archaeology of Urban Landscapes: Exploration in Slumland*. Cambridge University Press, Melbourne.

Miller, G.L. 2004. 'Smear glaze of dyed body wares' Article posted on http://www.greatestjournal. com/community/potterynews/8988.html Accessed 14 July 2007.

Miller, G. L. and C. Sullivan 2000. Machine-made glass containers and the end of production for mouth-blown bottles. In D.R. Brauner (ed) *Approaches To Material Culture: Research for Historical Archaeologists*, 161–174. California, Penn.: Society for Historical Archaeology, California PA.

Oswald, A. 1975. *Clay Pipes for the Archaeologist*. British Archaeological Reports, 14, Oxford.

Parkinson, B. 1999. *Common Seashells of New Zealand*. Mobil New Zealand Nature Series. Reed, Auckland.

Paul, L. 1997. *Marine Fishes of New Zealand*. Mobil New Zealand Nature Series No 1 and 2. Reed, Auckland.

Payne, S. 1985. Morphological distinctions between the mandibular teeth of young sheep, Ovis, and goats, Capra. *Journal of Archaeological Science*, 12(2): 139–147.

Phillips, K. 1994. Historic Ceramic Analysis. Unpublished. Experimental and Ethnographic Archaeology, Essay Two.

Plowman, M.C. 2000. The archaeological use of historic ceramics as indicators of status and class : His Majesty's Theatre ceramic assemblage: a case study. Unpublished MA Thesis, Auckland University.

Prickett, 1994. Archaeological excavations at the Omata Stockade and Warea Redoubt, Taranaki. *New Zealand Archaeological Association Monograph*, 20. New Zealand Archaeological Association, Auckland.

Prummel, W. and H.J. Frisch 1986. A guide for the distinction of species, sex, and body side in bones of sheep and goat. *Journal of Archaeological Science*, 13(6): 567–77.

Ritchie, N.A. 1986 Archaeology and history of the Chinese in southern New Zealand during the nineteenth century: A study of acculturation, adaptation and change. Unpublished Ph.D. Thesis, University of Otago.

Ritchie N.A. and W. Gumbley W.1 992. The 40th Regiment redoubt site, Te Awamutu, S15/173: archaeological excavations, 1991. Unpublished report. Department of Conservation, Hamilton

Robson, P. 1995. *The aerated water and soft drink industry in New Zealand, 1845–1986*. New Zealand Soft Drink Manufacturers Association, Auckland.

Schulz, P.D. and S.M. Gust. 1983. Faunal remains and social status in 19th Century Sacramento. *Historical Archaeology*, 17(1): 44–53.

Schmid, E. 1972. *Atlas of Animal Bones for Prehistorians, Archaeologists, and Quaternary Geologists*. Elsevier Science Publishers, Amsterdam.

Silver, I.A. 1969. The ageing of domestic animals. In D.R. Brothwell and E.S. Higgs (eds.), *Science in Archaeology: a Survey of Progress and Research*, 283–302. New York: Praeger publishing.

Sisson, Septimus. 1930. *The Anatomy of the Domestic Mammals*. W.B. Saunders Company, Philadelphia.

Smith, I. 2004. Archaeologies of identity: historical archaeology for the 21st century. In L. Furey and S. Holdaway (eds) *Change Through Time: 50 Years of New Zealand Archaeology*, 251–262. New Zealand Archaeological Association, Auckland.

Sprague, R. 2002 China or Prosser button identification and dating. *Historical Archaeology*, 36(2):111-127.

Stelle, L. J. 2001. *An Archaeological Guide to Historic Artifacts of the Upper Sangamon Basin*. Center For Social Research, Parkland College. http://virtual.parkland.edu/lstelle1/len/archguide/documents/arcguide.htm

Sutherland, A. 1939. *Numismatic History of New Zealand. Part III, Tokens of New Zealand*. T. Avery and Sons, New Plymouth.

Tasker, J. 1989. *Old New Zealand Bottles and Bygones*. Heinemann Reed, Auckland.

Taylor, M. and A. Sutton 2006. Archaeological assessment of the proposed UCOL development, Taupo Quay and Rutland Street, Wanganui. Unpublished Report.

The Cyclopedia Company 1897. *The Cyclopedia of New Zealand [Wellington Provincial District]*. Cyclopedia Company Limited, Wellington. http://www.nzetc.org/tm/scholarly/tei-Cyc01Cycl-t1-body-d4-d172-d5.html#name-415777-mention; accessed 20 April 2009

Toulouse, J. H. 1971. *Bottle Makers And Their Marks*. The Blackburn Press, New Jersey.

Toulouse, J. H. 1969. A primer on mold seams. *The Western Collector*. http://www.sha.org/bottle/pdffiles/mold-seams.pdf Accessed 3 July 2007.

Veres, M. 2005. Introduction to the analysis of archaeological footwear. *Australian Historical Archaeology*, 23: 89–96.

Vizetelly, H. 1889. *Facts About Champagne and Other Sparkling Wines, Collected During Numerous Visits to the Champagne and other Viticultural Districts of France, and the Principal Remaining Wine-Producing Countries of Europe*. Ward, Lock and Co, London. http://www.gutenberg.org/etext/20889

Waitangi Tribunal 1999. *The Whanganui River Report*, Wai 167. GP Publications, Wellington.

Walker, I.C. 1983. Nineteenth century clay tobacco pipes in Canada. In, P. Davies (ed) *The Archaeology of the Clay Tobacco Pipe VIII, America*. BAR International Series 175, 1–87. British Archaeological Reports, Oxford.

Walzl, T. 2006. *Occupation History of Sections 71–79 Wanganui City 1842–1920*. Unpublished Walghan Partners report to CFG Heritage Ltd.

Watson, K. A. 2000. A land of plenty: butchery patterns and food supply in 19th Century New Zealand. Unpublished M.A. Thesis, University of Otago.

Warr, C.J. 1996. The people behind the plates: using New Zealand historical ceramics to determine the socioeconomic status and occupation type of the past occupants of Miners Bay, Kawau Island. Unpublished MA Thesis, University of Auckland.

Online Resources

Cairns, B. 2007 65th (2nd Yorkshire North Riding) Regiment of Foot. Online webpage http://hicketypip.tripod.com/ Accessed 13 August 2007. Last updated 27 July 2007.

http://www.sthelens-connect.net/forums/index.php?s=ee3a4985f025b477e5ab7617b967183d&showtopic=32690&pid=224000&st=0&#entry224000 Keywords: Lyon Brothers, glass. Accessed 10 May 2007.

http://www.nmm.ac.uk/collections/explore/object.cfm?ID=AAA2270 Keywords: Powell & Co, Bristol, bottle. Accessed 10 May 2007

http://www.antiquebottles.com/companies.html#Townsend. Keywords: Dr Townsend's Sarsaparilla. Accessed 15 May 2007.

William Hogarth's Gin Lane (1751). http://en.wikipedia.org/wiki/Image:GinLane.jpg

William Hogarth's Beer Street (1751). http://en.wikipedia.org/wiki/Image:BeerStreet.jpg

http://www.tastings.com/spirits/gin.html Keywords: Old Tom gin Accessed 20 June 2007.

http://www.sha.org/bottle/igco_1906.htm Keywords: Illinois Glass Company Catalog 1906 Accessed: 20 June 2007.

http://www.british-history.ac.uk/report.asp?compid=47063 Keywords: Sir Robert Burnett Accessed 20 June 2007.

http://www.nationalarchives.gov.uk/catalogue/Leaflets/ri2152.htm Keywords: Stationer's Hall Accessed 21 June 2007.

http://www.antiquebottles.co.za/Pages/Categories/StoneGins.htm Keywords: Hulstkamp Zoon Molyn Accessed 21 June 2007.

http://www.blipfoto.com/view.php?id=36269&month=6&year=2007 Keywords: Sigillum Leith Accessed 25 June 2007. (image showing latin motto in Leith)

http://www.adb.online.anu.edu.au/biogs/A040171b.htm Keywords: Alfred Felton Accessed 25 June 2007.

http://en.wikipedia.org/wiki/Champagne_%28wine%29 Keywords: Champagne Accessed 25 June 2007.

www.deinhard.com/html/10_news/vintage_letter.pdf Keywords: Deinhard & Co PDF document, accessed 25 June 2007.

http://www.answers.com/topic/mousseux Keywords: mousseux Accessed 25 June 2007.

http://www.queenannewine.com/hencog.html Keywords: Jas Hennessy & Co Accessed 25 June 2007.

http://www.adb.online.anu.edu.au/biogs/AS10420b.htm Keywords: Ross Bros Accessed 25 June 2007.

http://en.wikipedia.org/wiki/Leadenhall_Street Keywords: Leadenhall Street Accessed 26 June 2007.

2005. Archaeological Investigation Non-Indigenous Archaeology, 1 Smith Street, Parramatta. Report for Sydney Water. Casey & Lowe Pty Ltd. http://www.planning.nsw.gov.au/asp/pdf/06_0333_appendix_c_european_archaeological_reports.pdf Accessed 26 June 2007.

http://en.wikipedia.org/wiki/Exposition_Universelle_(1855) Keywords: Paris Exposition 1855 Accessed 26 June 2007.

http://en.wikipedia.org/wiki/Altona%2C_Hamburg Keywords: Altona Hamburg Accessed 27 June 2007.

http://beautyexclusive.com/rogergallet.html Keywords: Roger & Gallet Paris Accessed 27 June 2007.

http://www.johngosnell.com/index2.htm Keywords: John Gosnell Accessed 27 June 2007.

http://www.hairquackery.com/hairquackery/historicalquackery/006barrystricopherous.shtml Keywords: Barry's Tricopherous Accessed 27 June 2007.

Corley, T. A. B. 1987 Interactions between the British and American Patent Medicine Industries 1708–1014 In Business & Economic History, second series, volume 16, Pp.111-129. PDF article downloaded from http://www.h-net.org/~business/bhcweb/ publications/BEHprint/v016/p0111-p0132.pdf 1 June 2006.

Dictionary of New Zealand Biography http://www.dnzb.govt.nz/dnzb/default.asp?Find_Quick.asp?PersonEssay=1K8 Keywords: Kempthorne Prosser Accessed 27 June 2007.

Goldmine For Genealogists. Friends of the Hocken Collections. Bulletin Number 23:March 1998.

http://www.library.otago.ac.nz/pdf/hoc_fr_bulletins/23_bulletin.pdf Keywords: Kempthorne, Prosser & Co Downloaded 27 June 2007.

Watts, S. 2005 'Allenburys foods and feeders' Pharmaceutical Society of Australia. Vol. 3, No.26 October 2005. http://www.psa.org.au/site.php?id=1273#allen

http://www.theartchive.co.uk/callands.htm Keywords: Sirius pattern Accessed 2 July 2007.

Historic Glass Bottle Identification and Information Website. http://www.sha.org/bottle/index.htm Last updated 4 May 2007.

http://antiquebottles.co.za/Pages/Categories/PrintedPots.htm Keywords: Holloways Accessed 4 July 2007.

http://www.spartacus.schoolnet.co.uk/PRpeel.htm Keywords: Sir Robert Peel. Accessed 5 April 2007.

http://www.museumoflondon.org.uk/ceramics/pages/object.asp?obj_id=69473 Keywords: This slipper should Accessed 13 April 2007.

http://books.google.com/books?id=oli0GXftrvAC&pg=RA1-PA22&lpg=RA1-PA22&dq=%22acadia+pattern%22+ceramic&source=web&ots=uHxjSaufJI&sig=XCC0l6BvxLuP-N_ClAyvT5N8zn4 Book preview for Collard, E. 1983 The Potters View of Canada Plates 19 & 20. Keywords: Acadia pattern, ceramic Accessed 15 May 2007.

http://www.biographi.ca/EN/ShowBio.asp?BioId=38502 Dictionary of Canadian Biography Online. Keywords: Sir Samuel Cunard Accessed 15 May 2007.

http://www.littletechshoppe.com/ns1625/nshist08.html Keywords: Cunard Steamship Company, Acadia Accessed 15 May 2007.

http://www.bl.uk/catalogues/evanion/results.asp?key=N.+Antoine+%26+Fils&source=showlist.asp&type=Heading&searchtype=&id=737 Keywords: Antoine Fils Accessed 20 August 2007.

Appendix A
Summary of contents of secure contexts

Category	Type	Number
Feature 3		
Glass		
Alcohol		
	black beer	4
Miscellaneous		
	clay tobacco pipe	1
	window glass (17 g)	
Metal		
	nails	9
	spikes	34
	horseshoes	22
	tools	10
	hardware items	54
	metal band	27
	metal bar/rod	218
	hooks	7
	metal pipe	5
	metal sheeting	155
	wire	9
	miscellaneous	255
Feature 46		
Ceramics		
Transfer Printed		
	light blue Broseley cup	1
	black Fibre cup	1
	black Fibre lid/dish	1
	blue Fibre saucer	1
	blue Fruit plate	1
	Holloways Ointment pot	1
	blue Lucerne cup	1
	purple Nymph cup	3
	purple Nymph saucer	3
	black Rhine cup/bowl	1
	grey Rhine baking/serving dish	1
	grey Rhine plate	3
	blue Willow plate	4
	blue Willow saucer	1
	blue Willow serving dish	2
	blue UCOL 002 cup	1
	blue UCOL 002 saucer	2
	blue UCOL 020 plate	1
	blue UCOL 023 saucer	1
	flow blue UCOL 024 bowl	1

*Table A1. Summary of contents for secure contexts from the Bamber House site. Numbers are MNI/MNV, except for all faunal material or numbers marked *, which are NISP.*

Category	Type	Number	
	purple UCOL 081 unidentified	1	
	flow blue UCOL 119 jug	1	
	blue UCOL 120 cup	1	
	blue UCOL 121 plate	1	
	purple UCOL 122 bowl	1	
	black UCOL 172 bowl/jug	1	
	brown UCOL 173 cup	1	
	black UCOL 174 mug/jug	1	
	flow blue UCOL 175 plate	1	
	blue UCOL 176 saucer	1	
	blue UCOL 177 plate	1	
	blue UCOL 178 saucer	1	
	blue UCOL 179 plate/saucer	1	
	black UCOL 180 saucer	1	
	flow blue non-diagnostic cup	1	
subtotal			46
Hand Painted			
	polychrome UCOL 167 cup	1	
	polychrome UCOL 168 saucer	1	
	polychrome UCOL 169 cup	1	
	polychrome UCOL 170 cup	1	
	polychrome UCOL 171 cup	1	
	polychrome UCOL 246 bowl	1	
subtotal			6
Other			
	brown annular cup/mug	1	
	polychrome edgebanded cup	1	
	blue edgebanded cup/bowl	1	
	blue edgebanded saucer	2	
	Sprigged eggcup	1	
	Sprigged C cup	1	
	Sprigged C jug	1	
	Sprigged C saucer	1	
	blue Shell Edge plate	1	
	Mocha chamber pot	1	
	brown glazed teapot	1	
	blue UCOL 022 jug	1	
	gold edgebanded cup	1	
	gold edgebanded saucer	2	
	polychrome slipped bowl	1	
subtotal			17
Undecorated			
	white chamber pot	1	
	white jar	1	
	white pot/jar	1	
	white saucer	2	
	white miniature cup	1	
	white miniature saucer	1	
subtotal			7

Table A1. continued…

Category	Type	Number	
Stoneware			
	jar	1	
	brown jar/bottle	1	
	blacking bottle	7	
	ink bottle	5	
subtotal			14
total			90
Glass			
Alcohol			
	black beer	9	
	case gin	3	
	gin	1	
	cognac	1	
subtotal		14	
Condiments			
	Lea and Perrins	1	
	salad oil	5	
subtotal		6	
Pharmaceutical			
	clear glass (embossed)	1	
	vial	1	
subtotal		2	
Miscellaneous glass			
	aqua glass	2	
Table glass			
	tumbler	1	
	stemmed glass	3	
subtotal			4
total			28
Miscellaneous			
	clay tobacco pipe	3	
	Prosser button	1	
	footwear	3*	
	percussion cap	1	
	bone spoon	1	
	brass brooch frame	1	
Metal			
	nails and spikes	27	
	horsehoes	9	
	metal hardware	2	
	metal bar/rod	10	
	matchbox	1	
	metal sheeting	1	
	metal wire	1	
	brass miscellany	1	

Table A1. continued…

Category	Type	Number	
Faunal			
Mammal			
	cattle	385	
	sheep	127	
	pig	139	
	other and unidentified mammal	187	
Bird			
	chicken	11	
	turkey	2	
	duck	2	
	goose	1	
	other and unidentified bird	4	
Fish			
	unidentified	5	
Shellfish			
	oyster	3	
Feature 120			
Ceramics			
Transfer Printed			
	blue Triumphal Car chamber pot	1	
	blue Wild Rose plate	1	
	blue Willow plate	3	
	brown UCOL 123 plate	1	
	blue UCOL 126 saucer	1	
	green UCOL 128 plate	1	
subtotal			8
Other			
	polychrome UCOL 127 chamber pot/bowl	1	
	polychrome annular chamber pot/bowl	2	
	polychrome UCOL 131 cup	1	
	red UCOL 132 cup	1	
subtotal			5
Stoneware			
	bottle	1	
total			14
Miscellaneous			
	clay tobacco pipe	2	
	Prosser button	1	
	footwear	6*	
	sewing pin	1	
Metal			
	nails	2	
Feature 217			
Ceramics			
Transfer Printed			
	green Japan Flowers plate	1	
	blue Willow plate	3	
	blue UCOL 101 mug/bowl	1	

Table A1. continued…

Category	Type	Number	
	blue UCOL 154 cup	1	
	dark blue UCOL 156 saucer	1	
	blue UCOL 157 saucer	1	
	blue UCOL 158 plate	1	
	blue UCOL 159 saucer	1	
	blue UCOL 160 saucer	1	
	blue UCOL 161 bowl	1	
	blue UCOL 161 saucer	1	
	blue UCOL 162 cup	1	
	flow blue UCOL 163 cup	1	
	flow blue UCOL 164 cup	1	
	blue UCOL 166 mug/bowl	1	
	blue UCOL 179 saucer	1	
	blue UCOL 191 plate	1	
subtotal			19
Other			
	blue Chinese porcelain jar	1	
	Sprigged B saucer	1	
	polychrome annular mug/bowl	1	
subtotal			3
total			22
Miscellaneous			
	footwear	1*	
	table fork handle	1	
Faunal			
Mammal			
	cattle	20	
	sheep	3	
	pig	10	
	other and unidentified mammal	91	
Feature 233			
Ceramics			
Transfer Printed			
	flow blue Acadia cup	1	
	blue Willow plate	2	
	blue Willow serving platter	1	
	blue non-diagnostic jug	1	
	blue UCOL 143 plate	1	
	blue UCOL 144 plate	1	
	flow blue UCOL 145 saucer	1	
	blue UCOL 179 plate	1	
	blue UCOL 208 plate	1	
	black UCOL 209 saucer	1	
	blue UCOL 210 saucer	1	
subtotal			12

Table A1. continued…

Category	Type	Number
Other		
	green dyed-body plate	1
	gold edgebanded saucer	1
subtotal		2
Stoneware		
	bottle	1
total		15
Glass		
Alcohol		
	black beer	12
	case gin	1
	spirit	1
subtotal		14
Condiment		
	jar	1
Pharmaceutical		
	castor oil	1
Table glass		
	tumbler	4
total		20
Miscellaneous		
	clay tobacco pipe	3
	footwear	11*
Faunal		
Mammal		
	cattle	9
	sheep	57
	pig	18
	other and unidentified mammal	65
Bird		
	chicken	6
	other and unidentified bird	1
Shellfish		3
Feature 259		
Ceramics		
Transfer Printed		
	light blue Broseley saucer	1
	blue Fibre saucer	1
	blue Medici plate	1
	purple Olive bowl	1
	blue Willow serving platter	1
	green non-diagnostic plate/saucer	1
	blue UCOL 143 bowl	1
	blue UCOL 202 plate	1
	brown UCOL 203 cup	1
	blue UCOL 204 saucer	1
	black UCOL 205 bowl	1
subtotal		11

Table A1. continued…

Category	Type	Number	
Other			
	Mocha bowl	1	
total			12
Glass			
Alcohol			
	black beer	3	
	spirit	1	
subtotal			4
Miscellaneous			
	aqua glass	1	
Table glass			
	tumbler	1	
total			6
Miscellaneous			
	clay tobacco pipe	1	
	military button	1	
Metal			
	nails	2	
Faunal			
Mammal			
	cattle	3	
	pig	4	
	other and unidentified mammal	5	
Feature 253			
Ceramics			
Undecorated	white jar	1	
Stoneware	gin bottle	1	
total			2
Glass			
Alcohol			
	black beer (11 embossed, 7 labelled)	213	
	case gin	80	
	gin (1 labelled)	24	
	champagne (1 labelled)	11	
	small champagne	22	
	cognac	11	
	ring-seal	51	
	whisky (embossed)	1	
	spirit	2	
subtotal			414
Condiments			
	Lea and Perrins (embossed)	1	
	pickle	3	
	salad oil	1	
	aqua glass	1	
subtotal		6	
Aerated Water			
	Hamilton patent (3 inscribed E)	9	

Table A1. continued…

Category	Type	Number	
Miscellaneous			
	aqua glass	20	
	brown glass	2	
	olive glass	5	
subtotal			27
Table glass			
	tumbler	1	
	stemmed glass	1	
subtotal			2
total			458
Feature 308			
Ceramics			
Transfer printed			
	purple Pearl Wreath plate	1	
Stoneware			
	bowl/basin	1	
total			2
Glass			
Alcohol			
	black beer	7	
	case gin	2	
subtotal			9
Condiments			
	salad oil	1	
	aqua glass	2	
subtotal			3
Aerated water			
	Hamilton patent	1	
Pharmaceutical			
	sarsaparilla	2	
	aqua glass	1	
subtotal			3
Miscellaneous			
	aqua glass	2	
Table glass			
	tumbler	3	
	stemmed glass	1	
subtotal			4
total			22
Miscellaneous Artefacts			
	clay tobacco pipe	2	
	ceramic marble	1	
	trade token	1	
Metal Artefacts			
	nails	50	
	brass knob	1	
	matchbox	1	
total			52

Table A1. continued…

Category	Type	Number	
Faunal			
Mammal			
	cattle	37	
	sheep	51	
	pig	26	
	other and unidentified mammal	73	
Bird			
	chicken	1	
	turkey	9	
	goose	3	
	other and unidentified bird	12	
Fish			2
Shellfish			
	oyster	62	
Feature 320			
Ceramics			
Transfer printed			
	blue Asiatic Pheasants plate	1	
	blue Genevese plate	1	
	blue Kulat plate	1	
	purple Olive plate	1	
	purple Pearl Wreath plate	1	
	blue Rhine plate	2	
	blue Willow plate	1	
	blue Willow serving dish lid	1	
	blue UCOL 020 plate	1	
	green UCOL 068 serving dish	1	
	flow blue UCOL 069 cup	1	
	brown UCOL 071 saucer	1	
	black UCOL 072 saucer	1	
	black UCOL 073 eggcup	1	
subtotal			15
Other			
	polychrome UCOL 034 plate	1	
	polychrome UCOL 070 saucer	1	
	Sprigged A cup	1	
	Sprigged A saucer	1	
	gold edgebanded cup	1	
	gold edgebanded saucer	2	
	gold edgebanded plate	1	
	figurine	1	
subtotal			9
Undecorated			
	white cup	1	
	white plate	1	
	white jar	1	
	white jar/bowl	1	
	white jug	1	

TTable A1. continued…

Category	Type	Number
	white pot/jar	1
	white soap dish	1
subtotal		7
Stoneware		
	salt-glaze ink	4
total		35
Glass		
Alcohol		
	black beer	2
	case gin	1
	ring-seal	1
subtotal		4
Condiments		
	pickle	2
	aqua glass	1
subtotal		3
Pharmaceutical		
	vial	2
	aqua glass	3
	clear glass	2
subtotal		7
Miscellaneous		
	aqua glass	3
Table glass		
	bowl	1
total		18
Miscellaneous Artefacts		
	clay tobacco pipe	3
	metal button	1
	footwear	9*
	bricks	9
	hairbrush	1
	composite pipe bite	1
	scrubbing brush	1
	thimble	1
	table knife handle	1
	teaspoon	1
Metal Artefacts		
	nails	37
	metal hardware	1
	band	1
	can/container	2
	metal sheeting	1
	miscellaneous	2
total		44

Table A1. continued…

Category	Type	Number	
Faunal			
Mammal			
	cattle	64	
	sheep	63	
	pig	54	
	other and unidentified mammal	194	
Bird			
	chicken	22	
	turkey	14	
	goose	15	
	duck	3	
	other and unidentified bird	77	
Fish			
	kahawai	8	
	snapper	1	
	other and unidentified	5	
Shellfish			
	oyster	14	
other		3	
Feature 337			
Ceramics			
Transfer printed			
	purple Olive bowl	1	
	purple Olive plate	1	
	grey Rhine plate	1	
	blue Willow plate	1	
	purple UCOL 86 eggcup	1	
subtotal			5
Hand painted			
	polychrome UCOL 34 bowl	1	
	polychrome UCOL 34 cup	1	
subtotal			2
Other			
	gold edgebanded eggcup	1	
Undecorated			
	white cup	1	
	white jar	2	
	white saucer	2	
	white eggcup	1	
subtotal			6
Stoneware			
	bottle	1	
	two-tone bottle	1	
	blacking bottle	4	
	large bottle	2	
subtotal			8
total			22

Table A1. continued…

Category	Type	Number	
Glass			
Alcohol			
	black beer (5 embossed, 3 labelled)	86	
	case gin	8	
	Gin	1	
	champagne	1	
	cognac	4	
	ring-seal	13	
	spirit	11	
subtotal			116
Condiments			
	aqua glass	4	
	Lea and Perrins	3	
	pickle	1	
	salad oil (2 labelled)	2	
	vinegar	2	
subtotal			11
Aerated Water			
	torpedo (1 inscribed E, 1 embossed and inscribed E)	9	
Pharmaceutical			
	aqua glass	1	
	clear glass	1	
	perfume	1	
	subtotal		3
Miscellaneous			
	aqua glass	8	
	brown glass	1	
	clear glass	2	
subtotal			11
Table glass			
	tumbler	5	
	stemmed glass	2	
subtotal			7
total			164
Miscellaneous artefacts			
	clay pipe	2	
	bricks (+ numerous fragments including firebrick)	3	
	vulcanite comb	1	
Metal Artefacts			
	metal band	3	
	metal bar	1	
	metal sheeting	1	
	zinc sheeting	1	
	sardine-type tin can	1	
	round tin can	1	
total			8

Table A1. continued…

Category	Type	Number	
Faunal			
Mammal			
	cattle	47	
	pig	25	
	sheep	36	
	other and unidentified mammal	99	
Bird			4
Fish			16
Shellfish			
	oyster	48	
	pipi	1	
Feature 338			
Ceramics			
Hand painted			
	polychrome UCOL 111 saucer	1	
Undecorated			
	white bowl/chamber pot	1	
total			2
Glass			
Alcohol			
	black beer (1 embossed)	9	
	case gin	1	
	gin (12 embossed)	12	
	small champagne	2	
	ring-seal	1	
subtotal			25
Condiments			
	salad oil	1	
	aqua glass	1	
subtotal			2
Aerated Water			
	Hamilton patent (2 inscribed E)	3	
Miscellaneous			
	aqua glass	1	
Table glass			
	tumbler	5	
	stemmed glass	2	
subtotal			7
total			38
Miscellaneous Artefacts			
	metal teapot	1	
	1852 sixpence	1	
Metal Artefacts			
	small barrel	1	
	clothes iron	1	

Table A.1. continued…

Category	Type	Number	
Faunal			
Mammal			
	cattle	5	
	other and unidentified mammal	2	
Feature 339			
Ceramics			
Transfer Printed			
	purple UCOL 083 jug	1	
	purple UCOL 084 saucer	1	
subtotal			2
Undecorated			
	white jar	1	
Stoneware			
	schnapps bottle	3	
	stout bottle	2	
	bottle	2	
subtotal			7
total			10
Glass			
Alcohol			
	black beer (23 embossed, 46 labelled, 1 embossed and labelled)	574	
	case gin	40	
	gin (45 embossed, 11 labelled, 19 embossed and labelled)	85	
	champagne (9 labelled)	25	
	small champagne (5 labelled)	66	
	cognac (6 labelled)	13	
	ring-seal	142	
	hock ring-seal	1	
	whisky (4 embossed, 1 labelled)	6	
	spirit (1 embossed, 2 labelled)	4	
subtotal			956
Condiments			
	Lemon Essence	1	
	Essence of Anchovies	2	
	Lea and Perrins (1 labelled)	8	
	pickle (1 labelled)	3	
	salad oil (5 labelled)	7	
	vinegar	1	
	aqua glass	1	
subtotal			23
Aerated Water			
	Hamilton patent (10 inscribed E)	20	
Miscellaneous			
	aqua glass	61	
	olive glass	11	
	brown glass	5	

Table A.1. continued…

Category	Type	Number	
	clear glass	4	
	green glass	2	
subtotal			83
total			
1082			
Miscellaneous Artefacts			
	lantern part	1	
Faunal			
Mammal			
	cattle	1	
	pig	1	
Feature 362			
Ceramic			
Transfer Printed			
	purple Nymph jug	1	
	blue Willow plate	2	
	flow blue UCOL 078 cup	1	
total			4
Glass			
Alcohol			
	black beer	11	
Condiments			
	pickle	1	
	aqua glass	4	
subtotal			5
Pharmaceutical			
	vial	1	
Miscellaneous			
	aqua glass	4	
Table glass			
	tumbler	10	
total			31
Miscellaneous Artefacts			
	clay tobacco pipe	1	
	bone button	1	
Metal Artefacts			
	nails	1	
	sardine tin	1	
	total		2
Faunal			
Mammal			
	cattle	5	
	sheep	4	
	pig	8	
	other and unidentified mammal	16	
Fish			2

Table A.1. continued…

Category	Type	Number	
Feature 370			
Ceramic			
Transfer Printed			
	green Cable cup	1	
	green 'Martha' mug	1	
	grey Rhine plate	1	
	black UCOL 066 cup	1	
	green UCOL 108 cup	1	
subtotal			5
Other			
	red edgebanded cup	1	
	polychrome UCOL 033 plate	1	
subtotal			2
Undecorated			
	white cup	1	
	white saucer	1	
	terracotta flower pot	1	
subtotal			3
Stoneware			
	porter bottle	1	
total			11
Glass			
Miscellaneous			
	aqua glass	1	
Table glass			
	tumbler	1	
total			2
Miscellaneous Artefacts			
	glass bead	1	
	clay tobacco pipe	1	
	bone handle scale	1	
	bricks	2	
	writing slate	3*	
	slate pencil	1*	
	window glass (328 g)		
Metal Artefacts			
	nails	54	
	metal band	1	
	can/container	3	
	matchbox	6	
	metal sheeting	1	
	misellaneous	1	
total			66
Faunal			
Mammal			
	sheep	14	
	pig	17	
	other and unidentified mammal	60	

Table A.1. continued…

Category	Type	Number	
Feature 370			
Bird			
	chicken	15	
	other and unidentified bird	6	
Fish			47
Shellfish			
	oyster	19	
	other	5	
Feature 383			
Ceramic			
Transfer Printed			
	grey Asiatic Pheasants plate	1	
	grey Rhine plate	1	
	blue Willow plate	1	
	grey UCOL 033 plate	1	
subtotal			4
Other			
	polychrome UCOL 114 cup	1	
	polychrome UCOL 115 plate/saucer	1	
	blue UCOL 116 jug/bowl	1	
	gold edgebanded saucer	1	
subtotal			4
Undecorated			
	white cup	1	
total			9
Glass			
Alcohol			
	black beer	2	
	spirit	2	
	ring-seal	1	
subtotal			5
Condiments			
	Lea and Perrins	1	
	pickle	1	
	salad oil	1	
	green glass	1	
subtotal			4
Aerated Water			
	Codd patent	1	
Pharmaceutical			
	vial	2	
	sarsaparilla	1	
	schnapps	1	
	clear glass	1	
subtotal			5
Miscellaneous			
	cottage ink	1	
	aqua glass	1	
subtotal			2

Table A.1. continued…

Category	Type	Number	
Table glass			
	tumbler	4	
	decanter	1	
subtotal			5
total			22
Miscellaneous Artefacts			
	window glass (171 g)		
Metal Artefacts			
	nails	5	
	metal bar	1	
	metal pipe	1	
	metal sheeting	5	
	wire	1	
total			13
Faunal			
Mammal			
	cattle	6	
	sheep	3	
Feature 395			
Ceramic			
Stoneware			
	bottle	1	
Glass			
Alcohol			
	black beer (12 embossed, 59 labelled)	319	
	case gin	51	
	gin (16 labelled)	17	
	champagne (10 labelled)	30	
	small champagne	9	
	cognac (6 labelled)	10	
	ring-seal	37	
	whisky (1 embossed, 1 labelled)	2	
	spirit	15	
	wine	1	
subtotal			493
Condiments			
	Lea and Perrins	1	
	salad oil (15 labelled)	19	
	superior lemon syrup	2	
	aqua glass	1	
subtotal			23
Aerated Water			
	Hamilton patent (1 inscribed E)	1	
Pharmaceutical			
	bitters	2	
	aqua glass	1	
subtotal			3
Miscellaneous			

Table A.1. continued…

Category	Type	Number
	aqua glass	1
	clear glass	1
subtotal		2
Table glass		
	tumbler	1
total		525
Miscellaneous Artefacts		
	clay tobacco pipe	3
Metal Artefacts		
	metal band	2
Faunal		
Mammal		
	cattle	16
	sheep	2
	other and unidentified mammal	52
Bird		
	chicken	1
Feature 417		
Ceramic		
Transfer Printed		
	flow blue Cleopatra saucer	1
	black Lazuli wash bowl	1
	blue Lucerne cup	2
	blue Willow plate	6
	flow blue UCOL 076 eggcup	1
subtotal		11
Other		
	Sprigged B cup	2
	polychrome annular chamber pot	1
	moulded and painted unidentified	1
subtotal		4
total		15
Glass		
Alcohol		
	black beer	17
	case gin	1
	champagne	1
	cognac	3
	wine	1
subtotal		23
Pharmaceutical		
	aqua glass	1
Table glass		
	tumbler	21
	total	45
Miscellaneous Artefacts		
	clay tobacco pipe	2

Table A.1. continued…

Category	Type	Number	
Metal Artefacts			
	spade head	1	
	nails	3	
	zinc sheeting	1	
	metal band	1	
total			6
Faunal			
Mammal			
	cattle	7	
	pig	16	
	other and unidentified mammal	14	
Shellfish			
	oyster	2	
Feature 462			
Ceramic			
Transfer Printed			
	flow blue Nymph bowl	1	
	blue Lucerne cup	1	
	blue Willow saucer	1	
	blue Willow serving dish lid	1	
	flow blue UCOL 077 saucer	1	
total			5
Glass			
Alcohol			
	black beer	5	
Pharmaceutical			
	castor oil	1	
Miscellaneous			
	aqua glass	1	
	blue glass	1	
subtotal			2
Table glass			
	tumbler	3	
total			11
Miscellaneous Artefacts			
	window glass (11 g)		
Faunal			
Mammal			
	sheep	2	
	pig	6	
	other and unidentified mammal	12	
Bird			
	goose	4	
	other and unidentified bird	16	

Table A.1. continued…

Category	Type	Number	
Feature 463			
Ceramic			
Transfer Printed			
	light blue Broseley saucer	1	
	blue Lucerne saucer	1	
	blue Willow plate	8	
	blue Willow serving dish lid	2	
	flow blue UCOL 077 saucer	1	
	dark blue UCOL 078 saucer	1	
	dark blue UCOL 079 jug	1	
	purple UCOL 081 chamber pot/bowl	1	
subtotal			16
Other			
	Sprigged B cup	1	
	polychrome UCOL 080 unidentified	1	
subtotal			2
Undecorated			
	white moulded jug	1	
	white jar	1	
	white chamber pot	1	
subtotal			3
total			21
Glass			
Alcohol			
	black beer	14	
	case gin	1	
	small champagne	1	
subtotal			16
Condiments			
	jar	1	
Aerated Water			
	Hamilton patent	1	
Miscellaneous			
	aqua glass	1	
	brown glass	1	
subtotal			2
Table glass			
	tumbler	9	
	stemmed glass	1	
subtotal			10
total			30
Miscellaneous Artefacts			
	clay tobacco pipe	2	
	metal button	1	
	window glass (53 g)		
Metal Artefacts			
	nails	8	
	metal rod	1	
	can	1	
total			10

Table A.1. continued…

Category	Type	Number	
Faunal			
Mammal			
	cattle	25	
	sheep	9	
	pig	15	
	other	36	
Bird			
	chicken	10	
	other and unidentified bird	7	
Fish			1
Shellfish			
	oyster	5	
Feature 464			
Ceramic			
Transfer Printed			
	blue Asiatic Pheasants serving dish	1	
	purple Olive plate	1	
	grey Rhine bowl	1	
	blue Willow plate	1	
subtotal			4
Other			
	polychrome UCOL 034 cup	1	
	polychrome UCOL 034 saucer	1	
	polychrome UCOL 034 plate	1	
	polychrome UCOL 070 saucer	1	
	polychrome UCOL 110 cup/jug	1	
	gold edgebanded cup	2	
	gold edgebanded saucer	2	
	Sprigged A saucer	1	
subtotal			10
Undecorated			
	white eggcup	1	
	white plate	1	
subtotal			2
Stoneware			
	ginger beer bottle		1
total			17
Glass			
Alcohol			
	black beer	2	
	gin	2	
subtotal			4
Condiments			
	Lea and Perrins		2
Pharmaceutical			
	clear glass		3

Table A.1. continued…

Category	Type	Number	
Miscellaneous			
	aqua glass	1	
	clear glass	2	
	green glass	2	
subtotal			5
Table glass			
	tumbler	1	
	bowl	1	
subtotal			2
total			16
Miscellaneous Artefacts			
	clay tobacco pipe	5	
	table knife handle	1	
	footwear	11*	
Metal Artefacts			
	nails	28	
	hinge	1	
	matchbox	3	
	metal pipe	1	
	metal sheeting	1	
	lamp part	1	
total			35
Faunal			
Mammal			
	cattle	24	
	sheep	64	
	pig	22	
	other and unidentified mammal	128	
Bird			
	chicken	22	
	turkey	20	
	duck	10	
	goose	8	
	other and unidentified bird	96	
Fish			
	kahawai	18	
	other and unidentified fish	12	
Shellfish			
	oyster	9	
	other	1	
Feature 473			
Ceramic			
Transfer Printed			
	blue Asiatic Pheasants serving/baking dish	1	
Stoneware			
	stout bottle	1	
total			2

Table A.1. continued…

Category	Type	Number	
Glass			
Alcohol			
	black beer	21	
	gin	1	
	cognac	1	
	ring-seal	3	
subtotal			26
Pharmaceutical			
	sarsaparilla		1
Miscellaneous			
	aqua glass		1
Table glass			
	tumbler	1	
	decanter	1	
subtotal			2
total			30
Feature 485			
Ceramic			
Transfer Printed			
	blue Asiatic Pheasants plate	1	
	green Pansy chamber pot	1	
	purple UCOL 063 saucer	1	
	black UCOL 087 plate	1	
subtotal			4
Other			
	pink edgebanded saucer	1	
	Sprigged A eggcup	1	
	gold edgebanded bowl	1	
	gold edgebanded bowl/jug	1	
	porcelain figurine	1	
subtotal			5
Undecorated			
	white cup		1
Stoneware			
	ink bottle		2
total			12
Glass			
Alcohol			
	black beer	22	
	gin	1	
	champagne	2	
	ring-seal	1	
subtotal			26
Condiments			
	aqua glass		2
Pharmaceutical			
	sarsaparilla	1	
	aqua glass	1	
subtotal			2

Table A.1. continued…

Category	Type	Number	
Miscellaneous			
	aqua glass		1
Table glass			
	tumbler	2	
	stemmed glass	1	
subtotal			3
total			33
Miscellaneous Artefacts			
	table knife handle	1	
	footwear	3*	
	window glass (116 g)		
Metal Artefacts			
	nails	7	
	metal band	1	
	matchbox	1	
	metal pipe	1	
total			10
Faunal			
Mammal			
	cattle	3	
	sheep	4	
	pig	1	
	other	15	
Bird			
	other and unidentified bird	4	
Feature 515			
Ceramic			
Transfer Printed			
	blue Asiatic Pheasants ladle	1	
	blue Asiatic Pheasants plate	1	
	black Asiatic Pheasants plate	1	
	blue Asiatic Pheasants serving vessel	2	
	blue Bosphorus cup	2	
	blue Bosphorus saucer	1	
	purple Chain cup	1	
	purple Chain saucer	1	
	green Dulcamara saucer	1	
	green Foliage cup	1	
	green Foliage saucer	1	
	purple Foliage plate	1	
	blue Genevese plate	3	
	flow blue Hong bowl	1	
	black Rhine plate	1	
	grey Rhine plate	1	
	green Slipper bedpan	1	
	black Teddesley saucer	1	
	blue Verona plate	2	
	blue Willow plate	2	
	blue Willow saucer	2	

Table A.1. continued…

Category	Type	Number	
	blue Willow serving vessel	4	
	blue Willow serving dish lid	1	
	blue Willow tureen	1	
	black non-diagnostic dish	1	
	dark blue UCOL 025 serving vessel	1	
	black UCOL 033 plate	1	
	blue UCOL 038 chamber pot	1	
	blue UCOL 047 saucer	1	
	grey UCOL 048 plate	1	
	blue UCOL 049 lid	1	
	black UCOL 050 chamber pot	1	
	green UCOL 051 dish	1	
	green UCOL 051 serving/baking dish	1	
	brown UCOL 054 saucer	1	
	blue UCOL 058 chamber pot	1	
	blue UCOL 060 chamber pot	1	
	purple UCOL 061 chamber pot	1	
	blue UCOL 062 plate	1	
	purple UCOL 063 plate	1	
	black UCOL 066 cup	1	
	purple UCOL 067 chamber pot	1	
subtotal			52
Other			
	polychrome UCOL 034 plate	1	
	polychrome UCOL 053 plate	1	
	red UCOL 055 plate/saucer	1	
	polychrome UCOL 056 unidentified	1	
	red UCOL 057 unidentified	1	
	blue UCOL 064 plate	1	
	polychrome annular mug/jug	1	
	blue edgebanded saucer	1	
	red edgebanded saucer	1	
	gold edgebanded cup	1	
	gold edgebanded eggcup	1	
	gold edgebanded mug	1	
	gold edgebanded saucer	2	
	Sprigged A cup	2	
	Sprigged A saucer	2	
	Sprigged B cup	2	
	Sprigged B saucer	1	
	polychrome porcelain unidentified	1	
	polychrome hand painted bowl	1	
	blue UCOL 253 jug	1	
	porcelain doll/figurine	1	
subtotal			25
Undecorated			
	white chamber pot	2	
	white cup	1	
	white ewer/jug	1	
	white jar	4	

Table A.1. continued…

Category	Type	Number	
	white miniature bowl/plate	1	
	white plate	2	
subtotal			11
Stoneware			
	ink bottle	1	
	grey bottle	2	
	two-tone bottle	6	
	crock/large bottle	2	
subtotal			11
total			99
Glass			
Alcohol			
	black beer (19 embossed)	143	
	case gin	13	
	champagne	6	
	cognac	2	
	ring-seal	11	
	spirit	3	
subtotal			178
Condiments			
	Lea and Perrins	2	
	jar	1	
	pickle	2	
	salad oil	1	
Aerated Water			
	Codd patent (embossed)	1	
	crown-seal (embossed)	1	
subtotal			2
Pharmaceutical			
	sarsaparilla	6	
	perfume (embossed)	2	
	castor oil	2	
	bitters	1	
	vial	8	
	pill bottle	2	
	aqua glass (3 embossed)	21	
	clear glass (3 embossed)	5	
subtotal			47
Miscellaneous			
	aqua glass	6	
	brown glass	2	
	clear glass (1 embossed)	3	
	green glass	1	
subtotal			11
Table glass			
	tumbler		18
total			263
Miscellaneous Artefacts			
	clay tobacco pipe	2	
	footwear	6*	

Table A.1. continued…

Category	Type	Number
	marble	1
	window glass (200 g)	
	composite pipe bite	1
	bone hairbrush handle scale	1
	table knife handle	1
	slate pencil	1
	teaspoon	1
	modern coke can	1
	modern grinding disc	1
Metal Artefacts		
	nails	11
	spikes	1
	metal band	2
	hook	1
	metal sheeting	1
total		16
Faunal		
Mammal		
	cattle	54
	sheep	12
	pig	13
	other and unidentified mammal	68
Bird		
	chicken	2
	goose	3
	other and unidentified bird	2
Fish		4
Shellfish		
	oyster	3
	other	2
Feature 525		
Ceramic		
Transfer Printed		
	light blue Broseley cup/bowl	1
	blue Genevese plate	3
	blue Genevese serving vessel	2
	blue Genevese serving vessel lid	1
	flow blue Hong bowl	1
	blue Kulat plate	4
	blue Lucerne saucer	1
	blue Rhine cup	1
	grey Rhine plate	1
	blue Willow plate	5
	blue Willow serving vessel	3
	blue UCOL 020 plate	1
	blue UCOL 025 serving vessel lid	1
	blue UCOL 026 serving vessel	1
	green UCOL 029 saucer	1
	purple UCOL 030 bowl/jug	1

Table A.1. continued…

Category	Type	Number	
	blue UCOL 032 plate	1	
	black UCOL 033 plate	1	
subtotal			30
Other			
	gold edgebanded saucer	1	
	polychrome UCOL 033 plate	1	
	polychrome UCOL 034 saucer	1	
	polychrome UCOL 192 mug	1	
	blue edgebanded plate	1	
	red edgebanded saucer	1	
	Sprigged A cup	4	
	Sprigged A saucer	7	
	Sprigged B saucer	1	
	blue hand painted feeding cup	1	
	blue moulded jug	1	
	miniature blue banded jar	1	
subtotal			21
Undecorated			
	yellow baking dish	1	
	white bowl	1	
	white cup	1	
	white jar	3	
	white miniature plate	1	
subtotal			7
total			58
Glass			
Alcohol			
	black beer	24	
	case gin	4	
	gin	1	
	champagne	1	
	cognac	1	
	ring-seal	3	
	spirit	1	
subtotal			35
Condiments			
	salad oil	1	
	jar	1	
	aqua glass	1	
subtotal			3
Pharmaceutical			
	vial	1	
	perfume (embossed)	1	
	clear glass	1	
subtotal			3
Miscellaneous			
	aqua glass	5	
	brown glass	1	

Table A.1. continued…

Category	Type	Number
	clear glass	1
	olive glass	1
subtotal		8
Table glass		
	tumbler	22
	stemmed glass	6
subtotal		28
total		77
Miscellaneous Artefacts		
	clay tobacco pipe	3
	Prosser button	2
	footwear	4*
	aqua glass marble	2
	glass bead	1
	halfpenny	1
	brick	1
	slate pencil	1
	bone teaspoon	1
	teaspoon	1
Metal Artefacts		
	brass tap	1
	brass draw handle	1
	metal band	1
	wire	1
total		4
Faunal		
Mammal		
	cattle	67
	sheep	49
	pig	104
	other and unidentified mammal	193
Bird		
	chicken	50
	turkey	3
	duck	3
	goose	3
	other and unidentified bird	39
Fish		
	snapper	54
	kahawai	3
	other and unidentified fish	45
Shellfish		
	oyster	1
	paua	3
	other	2
Feature 526		
Ceramic		
Transfer Printed		
	blue Asiatic Pheasants plate	1

Table A.1. continued…

Category	Type	Number
Other		
	porcelain doll	1
Stoneware		
	ginger beer bottle	1
total		3
Glass		
Miscellaneous		
	aqua glass	1
	green glass	2
subtotal		3
Condiment		
	salad oil	1
Pharmaceutical		
	vaseline jar	1
total		5
Miscellaneous Artefacts		
window glass (60 g)		
Metal Artefacts		
	nails	3
	metal bar	1
	tin can	3
total		7
Faunal		
Mammal		
	cattle	1
	sheep	2
	pig	280
	other and unidentified mammal	174
Bird		
	other and unidentified bird	3
Fish		
	snapper	183
	other and unidentified fish	77
Shellfish		
	green lipped mussel	32
	paua	8
	other	3
Feature 540		
Ceramic		
Transfer Printed		
	flow blue Alma eggcup	1
	light blue Broseley bowl	1
	purple Chain cup	1
	purple Chainsaucer	1
	black Fibre saucer	1
	blue Genevese plate	2
	blue Genevese serving vessel lid	2
	flow blue Hong bowl	1
	blue Kulat plate	1

Table A.1. continued…

Category	Type	Number
	black Lazuli chamber pot	1
	blue Lucerne plate	1
	blue Lucerne saucer	1
	blue Morea plate	2
	blue Willow baking dish	1
	blue Willow plate	5
	blue Willow serving vessel	2
	black UCOL 013 chamber pot	1
	blue UCOL 038 chamber pot	1
	blue UCOL 041 saucer	1
	flow blue UCOL 042 cup	1
	flow blue UCOL 043 saucer	1
	brown UCOL 045 bowl/saucer	1
	green UCOL 046 jug	1
subtotal		31
Other		
	blue banded chamber pot	1
	gold edgebanded eggcup	1
	blue UCOL 035 saucer	1
	flow blue UCOL 044 jug	1
	polychrome UCOL 192 mug	1
	blue annular bowl	1
	Sprigged A cup	4
	Sprigged A saucer	2
	Sprigged B saucer	2
	blue shell edge plate	1
	blue UCOL 252 jug	1
	blue dyed-body jug	1
	porcelain figurine	1
subtotal		18
Undecorated		
	white jar	2
Stoneware		
	ink bottle	3
	blacking bottle	1
subtotal		4
total		55
Glass		
Alcohol		
	black beer (1 embossed)	14
	case gin	3
	ring-seal	2
subtotal		19
Condiments		
	pickle	2
	salad oil	1
	jar	3
	aqua glass	2
subtotal		8

Table A.1. continued…

Category	Type	Number
Aerated Water		
	Hamilton patent	1
Pharmaceutical		
	perfume (embossed)	1
	bitters	1
	vial	4
	aqua blue (embossed)	3
	aqua glass	1
subtotal		10
Miscellaneous		
	aqua glass	8
	brown glass	1
subtotal		9
Table glass		
	tumbler	36
	stemmed glass	4
	decanter	4
	bowl	1
subtotal		45
total		92
Miscellaneous Artefacts		
	clay tobacco pipe	14
	brass buckle	1
	Prosser button	7
	bone button	3
	brass eyelet	2
	footwear	5*
	window glass (266 g)	
	glass bead	4
	bone object	1
	bone comb	1
	tortoise shell comb	1
	domino	1
	table knife handle	2
	sewing pins	10
	slate pencil	1*
	writing slate	1*
	bone toothbrush	1
	scrubbing brush	1
	salt spoon	1
	teaspoon	3
	tablespoon	1
Metal Artefacts		
	nails	69
	bolt	1
	matchbox	1
total		71

Table A.1. continued…

Category	Type	Number
Faunal		
Mammal		
	cattle	27
	sheep	32
	pig	88
	other and unidentified mammal	135
Bird		
	chicken	1
	goose	1
	other and unidentified bird	4
Fish		
	snapper	10
	other and unidentified fish	26
Shellfish		
	oyster	1
	other	**2**
Feature 621		
Ceramic		
Transfer Printed		
	blue Asiatic Pheasants plate	1
	blue Asiatic Pheasants serving vessel	2
	blue Asiatic Pheasants tureen	1
	purple Ava chamber pot	1
	light blue Broseley plate	1
	black Lazuli chamber pot	1
	blue Morea plate	4
	grey Rhine bowl	1
	blue Willow plate	1
	blue Willow serving vessel	3
	grey UCOL 001 chamber pot	1
	blue UCOL 002 saucer	1
	green UCOL 003 cup	1
	grey UCOL 004 saucer	1
	blue UCOL 005 lid	1
	green UCOL 008 plate	1
	green UCOL 009 bowl/dish	1
	green UCOL 010 bowl/dish	1
	blue UCOL 012 cup	1
	black UCOL 013 toiletry dish	1
	red UCOL 014 plate	1
	red UCOL 015 unidentified	1
	blue UCOL 016 bowl	1
	black UCOL 013 unidentified	1
	polychrome pot lid	1
subtotal		31
Other		
	blue banded chamber pot	3
	polychrome UCOL 006 saucer	1
	green UCOL 007 plate	1

Table A.1. continued…

Category	Type	Number
	polychrome annular bowl	1
	gold edgebanded cup	2
	Sprigged A cup	6
	Sprigged A saucer	16
	Sprigged A jug	1
	Sprigged B saucer	2
	hand painted pot lid	1
	porcelain doll	8
subtotal		42
Undecorated		
	white eggcup	1
	white serving vessel	1
	white miniature cup	1
	white miniature bowl	1
	white miniature unidentified	1
subtotal		5
Stoneware		
	stout bottle	2
	ink bottle	2
	two tone jar	1
	bottle	3
subtotal		8
total		86
Glass		
Alcohol		
	black beer	23
	case gin	3
	cognac	4
	spirit	1
subtotal		31
Condiments		
	jar (1 embossed)	3
	Lea and Perrins	2
	pickle	6
	salad oil (7 embossed)	11
	vinegar	1
subtotal		23
Aerated Water		
	Hamilton patent (1 embossed)	4
Pharmaceutical		
	castor oil	1
	perfume (1 embossed)	2
	vial	7
	aqua glass (8 embossed)	14
	clear glass	1
	cobalt blue glass	1
subtotal		26

Table A.1. continued…

Category	Type	Number
Miscellaneous		
	aqua glass	10
	clear glass	6
	cobalt blue vase	1
subtotal		17
Table glass		
	tumbler	19
	stemmed glass	2
subtotal		21
total		122
Miscellaneous Artefacts		
	clay tobacco pipe	3
	glass button	1
	footwear	197*
	material	10*
	childs cap	1
	window glass (29 g)	
	scrubbing brush	1
	penny	3
	hairbrush	1
	wooden recorder	1
	slate pencil	2*
Metal Artefacts		
	nails	1
	brass door knob	2
	metal band	1
	zinc sheeting	1
	brass miscellany	1
total		6
Faunal		
Mammal		
	cattle	8
	sheep	10
	pig	23
	other and unidentified mammal	16
Bird		
	chicken	10
	other and unidentified bird	7
Shellfish		
	oyster	1
	other	2

Table A.1. continued…

Appendix B Ceramic categories

Vessel fabric

The methodology for identifying fabrics followed Brooks (2005: 26–35). No attempt was made to identify refined whiteware fabrics such as ironstone, as in a mid to late 19th century context this is generally not instructive. The term 'semi-vitreous' was employed as opposed to using 'bone china' to maintain consistency with past archaeological reports.

Whiteware

This category includes all white-bodied, clear glazed refined earthenware.

Other earthenware

Other refined earthenware fabrics were used for specific forms and utilitarian wares. Red-bodied and buff-bodied fabrics are often found in the form of teapots, while yellow-bodied fabrics are most common in utiliarian forms such as heavy mixing bowls and chamberpots.

Semi-vitreous

The term semi-vitreous is here used to describe what is otherwise called 'bone china'. Bone china was the dominant porcelain type produced in Britain in the 19th century and differs from true porcelain through the addition of bone powder to the clay (Brooks 2005: 27). Semi-vitreous vessels most often ocurr in the form of teawares and are commonly decorated by sprigging or gilt enameling.

Porcelain

'True porcelain is a hard, non-porous, vitrified (glassy) and slightly translucent material formed by firing a highly specific mixture of clays at temperatures of about 1280-1400 degrees celsius' (Brooks 2005: 31). While significantly less common than other fabrics in 19th century sites, its characteristics make it readily identifiable. Occasionally different types of porcelain are recovered such as fragments from Chinese porcelain storage jars.

Stoneware

Stoneware is a vitrified, highly fired ware used mainly for utilitarian vessels and forms. The most common forms encountered are usually bottles in various shapes and sizes. Drain pipes and other industrial fittings can also be made of stoneware.

Vessel form

During analysis each vessel was assigned to a broad functional category and to a specific vessel type. Where this was not possible sherds were assigned to more general types, such as cup/bowl.

Tableware

This category includes those vessels used in both the serving and consumption of food and beverages at the table.

Kitchen/Utilitarian

Items used in the kitchen for the storage or preparation of food tend to be plainer in both form and decoration. Mixing bowls for instance tend to be more heavily potted than their tableware counterparts and can also be made of coarser fabrics such as yellow-ware.

Bedroom and bathroom

The Bedroom and bathroom category includes sanitary vessels such as chamber-pots and washbowls, ointment and cosmetic pots and candlesticks.

Other

All other vessel forms, including stoneware bottles are included in this category. For the purposes of general discussion many of the vessel types in this category are excluded.

Decorative techniques

The process of decorating ceramics can often involve the combination of two or more techniques so vessels were classified according to their primary decoration. Stoneware and other miscellaneous items such as dolls and figurines were not assigned to decorative categories.

Transfer printing

As would be expected for 19th century sites transfer printing is by far the dominant technique represented, accounting for 61% of the total UCOL ceramics assemblage by MNV. The history of the development of transfer printing and the processes have been well described elsewhere (Coysh and Henrywood 1982: 8–11; Copeland 1980). Blue is the most common colour in the 19th century but by the late 1820s a wide range of colours including black, brown, red, green and purple was available. In the 1830s a new technique was introduced which produced a slightly blurred or flown effect to the design. The most common colour for flown prints is dark blue with black and mulberry examples also sometimes found.

Sprigging

Sprigging refers to those vessels decorated with small moulded sprigs of decoration. All sprigged vessels from the Bamber House and Wanganui Hotel sites are teaware forms or associated small plates and jugs and have white semi-vitreous bodies with the sprigs coloured purple or blue. Research from England suggests that sprigged decoration such as this was being produced from at least 1820 onwards (Brooks 2005: 43). Commonly referred to as 'Imitation Jasper' this type of ceramic has been recovered in New Zealand sites from contexts dating from the 1830s right through to the end of the 19th century.

Edgebanding and hairlines

Edgebanding, as the name suggests, involves the application of a painted band around the edge of the vessel, often in association with one or more hairlines below this. Care needs to be taken when attributing a vessel to this technique, as some hand painted floral designs also include an edgeband around the rim and for small fragments it may not be immediately obvious which is the primary decorative technique. Typically this type of decoration is applied in a single colour, most commonly blue, red or green, but variations employing concentric bands of more than one colour can also be found. The most common vessel forms are whiteware cups, saucers, plates and bowls.

Gilt edgebanding

Gilt edged decoration is similar to edgebanding except that it is more common on semi-vitreous and porcelain fabrics, especially teaware forms, and employs the use of gilt paint. Gilt decoration is usually applied over the glaze and so is prone to wearing off. Most common are hairlines around the rim and down handles but 'tealeaf' or similar designs can occur in the centre of vessels. The 'tealeaf' motif was first introduced in the mid 1850s by Anthony Shaw and its popularity quickly saw it imitated by a number of other manufacturers (Kowalsky and Kowalsky 1999: 15). In New Zealand gilt decorated wares became more prominent in Auckland newspaper advertisements from the late 1860s (Plowman 2000: 60).

Shell edge

One of the more temporally sensitive edged styles is shell edge with various designs having quite well known periods of production. All of the shell edge sherds from the Bamber House and Wanganui Hotel sites are from plates that have a scalloped rim with impressed curved lines decorated in underglaze blue. Miller suggests that this style waned in popularity after 1830 and was not produced past about 1845, replaced by plates with unscalloped rims (Stelle 2001). Most of Miller's research is based on American and Canadian data, but as North America was the major export market for the Staffordshire potters it is unlikely that older styles would have continued in production alongside the new styles to service minor markets such as New Zealand. Shell edge is rarely found in archaeological contexts in New Zealand from contexts after the 1860s.

Handpainting

One of the more varied styles of decoration are those involving hand decoration. Hand painted decoration can range from simple freeform floral designs to outline transfer printed designs which have been coloured in by hand. Examples where the colour has been applied over the glaze are referred to as enamelled.

Sponged

This term encompasses sponged, cut-sponged, and spatter decoration. Standard sponged decoration employs a sponge to apply the colour or pigment directly onto the vessels surface. The cut sponged technique employs the use of shapes or designs cut out of a hard piece of sponge, which are then used to stamp the colour onto the vessel. Decoration described as spatter does not actually use a sponge at all. The colour is dusted onto the surface of the vessel to create a similar effect. As

with other techniques vessels with sponged decoration can often have other hand painted elements or edgebands as well.

Dyed-body ware

While technically describing an attribute of the fabric, colouring the body of a vessel is also a decorative technique. Vessels featuring a dyed body occur in both clear-glazed earthenwares and more highly fired semi-vitrified fabrics with a thin 'smear' glaze (Brooks 2005: 30). Earthenware examples typically occur in the form of cups, saucers, bowls and plates and are undecorated save for the dyed body. More highly fired vessels typically occur in the form of jugs and are usually decorated with relief moulding. Formulas for producing a wide range of different coloured bodies were well established in the pottery industry by the 1820s and were produced throughout the 19th century so dyed body ware is generally not temporally sensitive (Miller 2004). The most common colour for such vessels from New Zealand archaeological sites is blue, with green, grey, yellow and buff coloured bodies also known.

Slipped

Such decoration is normally referred to under the term 'industrial slip', to distinguish vessels decorated with clay slips from designs which have been painted on using paint or pigment. One of the more common styles is 'annular' where the vessel, typically a bowl, has been decorated with horizontal bands of different coloured slip. Annular decoration can often occur in conjunction with other design elements. Another common industrial slip type decoration is Mocha. Mocha is readily identifiable by the dentritic fern-like designs, from which the technique gains its name. In early vessels the design is applied in dark colours over a lighter brown to orange slip, while on later wares the design is applied in blue or less commonly green over a band of white or cream slip (Brooks 2005: 40). Alternatively vessels can simply be decorated with an all over slip, usually in earthen tones, although this style is rare after the middle of the 19th century.

Relief-moulding

Relief-moulding is a cheap and easy way of decorating pottery, as the decoration is formed during the potting process itself. More often than not, however, vessels with moulded bodies or relief-moulded elements also employ other decorative techniques.

Undecorated

Decoration is closely tied to function and the more utilitarian an item is the lesser the need to decorate it. Ceramic storage jars or kitchen mixing bowls, for example are rarely decorated. More refined earthenware fabrics dating to the late 19th century are also commonly left plain.

Transfer printed patterns

Of the 491 transfer printed vessels from the Bamber House, Wanganui Hotel and TS 78 sites, 230 individual patterns or designs were able to be identified. Of these just 42 were able to be assigned a formal pattern name. The most common colour was blue comprising approximately 60% of all transfer printed vessels from both the Bamber House site and the Wanganui Hotel site. Summary data for each

assemblage is given in Tables 4.5 and 4.12. To enable the future identification and full comparison of patterns between sites, an illustrated catalogue of unidentified patterns is provided in Appendix F.

Acadia

This is a pattern in flow-blue, with a distinctive border. Fragments of just one cup were recovered from the Bamber House site (Feature 231). This pattern was identified through comparison with an example illustrated by Plowman from His Majesty's Theatre (Plowman 2000: 105, Figure 3.15). In 1840 "Samuel Cunard of Halifax became the first to span the Atlantic with a fleet of wooden paddle-wheelers carrying royal mails and committed to regular schedules" (Collard 1983: 33). The first four ships which began service in 1840 were the *Britannia*, *Acadia*, *Caledonia*, and *Columbia*. The pattern gets its name from the steamship *Acadia* which was named to represent Novia Scotia.

Two potteries are recorded as producing a pattern of this name, James and Thomas Edwards, Burslem, c. 1839–42; and William Hackwood, Hanley, c. 1827–43 (Kowalsky and Kowalsky 1999: 469, 184, 217). The identity of the potter or potters however remains unknown as marked pieces simply have the pattern name in a garter device encircling a steamship with no makers initials below (Collard 1983: 34, Figure 6). There is evidence from the Canadian market that the pattern may not have been produced beyond the late 1840s or early 1850s (Collard 1983: 35).

Alma

One eggcup bowl in flow-blue from the Wanganui Hotel site (Feature 540) was identified as Alma through comparison with a marked washbowl from the Albert Barracks (Clough et al. 2003: 86, Figure50).

Asiatic Pheasants

Asiatic Pheasants is one of the most commonly recovered patterns from New Zealand historic sites, along with Willow. It is easily identifiable by its floral border and central scene with one or more pheasants depicted among a floral arrangement. Several vessels from the Wanganui Hotel site were able to be almost fully reconstructed. The tureen in Figure 4.1c measures 350 mm long by 250 mm wide and 158 mm high. A complete serving platter, albeit in 10 pieces, measures 345 mm long by 285 mm wide and 34 mm high. Dimensions for reconstructed plates are given in Table E.2 and E.4. Asiatic Pheasants is generally found in contexts dating to the 1860s and later and makers' marks seem to confirm this. Identified printed backmarks include Burgess and Leigh (c. 1862–) James F. Wileman (1870–92) and Ralph Malkin (c. 1864–81). Four other vessels carried partial printed marks.
The Wanganui Hotel site: 8 plates in blue and 3 in grey; 5 serving platters in blue and 1 in grey; 1 serving/baking dish in blue; 2 tureens in blue; 1 ladle in blue.
The Bamber House site: 1 plate in blue and 1 in grey; 1 serving dish in grey.
Lot 78: 3 plates in blue and 1 serving platter in blue.

Ava

This pattern is represented by one chamberpot in purple from the Wanganui Hotel site (Feature 621). The pattern shows herons set amongst floral arrangements (Figure 4.2a). The chamberpot is 152 mm high with a rim diameter of 238 mm. The vessel is marked on the base with 'AVA' in a border and below this 'J.Hawley & Co' (1843–93) again printed in purple.

Bosphorus

This is a scenic pattern in blue on one saucer marked with the pattern name and 'Malkin, Walker & Hulse' (c. 1858–64) and one cup from the Hotel Site. The saucer measures 34 mm high with a diameter of 178 mm; the cup has a rim diameter of c. 100 mm. The pattern appears to be different to 'Bosphorus' and 'The Bosphorus' described by Coysh and Henrywood (1984: 48) and those of the same name illustrated and described by Williams (1978: 202). The present example has a border of intertwined stems of vegetation and alternating vignettes, one showing a boat on water in front of a town and the other showing a group of three musicians, with the town in the background. The surviving portion of the central scene shows a man sitting in a wheelbarrow or cart and another seated figure playing a stringed instrument in the foreground, a body of water with numerous boats in the mid-ground, and a city or town with minarets and mountains behind in the background.

Bouquet

Bouquet is a simple pattern with a floral border and central floral motif; in this instance in black. This pattern is commonly recovered from historic sites in New Zealand and is known to have been produced from the early 1860s by Pinder, Bourne and Co. (Brassey and Macready 1994: 46). This design differs from the pattern of the same name produced by William Ridgway from the Wellington Inner City Bypass excavations (CFG Heritage report in preparation). A partial garter-style backmark on a saucer fragment not found in a fixed context from the Bamber House site carried the last two letters of the pattern name, while another fragment from the Bamber House site (Feature 46, the well) had the maker's initials 'P.B. & Co'.

Broseley

Broseley is a similar style chinoiserie pattern to Willow, containing many of the same motifs, but with a different border and arrangement, typically printed in a very light shade of blue. One bowl from the Wanganui Hotel site (Feature 540) was able to be reconstructed (Figure F.1c) and measures 86 mm high with a rim diameter of 165 mm. Fragments of another bowl or cup, two saucers and one side plate were also found. The base of one cup was recovered from the Bamber House site (Feature 46, the well).

Cable

Like many transfer printed patterns from the second half of the 19th century Cable is a simple border pattern, consisting of two ribbons intertwined around a central cable. Fragments of a cup and saucer in green were found at the Wanganui Hotel site (Features 208 and 370). This pattern also commonly occurs in purple and other colours.

Chain

Chain is another simple repetitive design, consisting of cables or ribbons linked together like a chain. Fragments of two cups and two saucers printed in purple were found at the Wanganui Hotel site (Features 515 and 540). The saucers both carried partial printed garter-style marks, one with 'P. B. & H.' (Pinder, Bourne and Hope, 1851–62) and part of the pattern name, and the other with the full name 'CHAIN.'

Cleopatra

One largely complete saucer in flow-blue was found in the Cleopatra pattern from the Wanganui Hotel site (Feature 464). The saucer measures 33 mm high and has a rim diameter of 175 mm. On the back is a printed cartouche showing a large obelisk and a tablet inscribed with the title 'CLEOPATRA', to the side is a small printed 'F.' Coysh and Henrywood identify this pattern as produced by Francis Morley and Co, with the pattern registered in May 1845, the first year of the firm's existence (Coysh and Henrywood 1989: 59). Francis and Morley were in business from c. 1845 to 1859 (Kowalsky and Kowalsky 1999: 291). Another possible maker is presented by Kowalsky and Kowalsky (1999: 362, Kad No. B2385) who illustrate the same mark and attribute it to Edward Walley, c. 1845–1858. Either way this saucer dates to around 1850. The obelisks the pattern is based on "were erected at Heliopolis by Thothmes III in about 1450 BC but were taken to Egypt in 23 BC where they became associated with Cleopatra who had recently died ... one was eventually brought to London in 1878 and set up in its present position on the Embankment, where it is generally known as Cleopatra's Needle" (Coysh and Henrywood 1989: 59).

Crystal

Crystal is an abstract design found predominantly on cups and saucers. The single fragment of a saucer from TS 78 is printed in brown. Cup and saucer fragments from the Blomfield House site in Russell have recently been recorded in blue, black and green (CFG Heritage report in preparation).

Dulcamara

Dulcamara is a simple abstract design consisting of a border of stylised leaves and a small central motif. Two fragments of saucer in green from the Hotel Site were found. One piece had a garter-style mark on the base with the pattern name and 'P.B. & Co.' (Pinder, Bourne and Co., 1862–82).

Fibre

Fibre is one of the most common patterns recovered from 19th century New Zealand sites, consisting of a repetitive pattern of fibrous tentacles which can cover all or most of the vessels printed surface. The pattern is most commonly found on cups, saucers and bowls, as is the case here.
The Wanganui Hotel site: 1 saucer in grey; 1 saucer in black with pattern name in border.
The Bamber House site: 2 cups in blue, 2 in black, and 1 in grey; 2 saucers in blue, and 1 in grey; 1 lid from a small dish in black.

Foliage

Foliage is a rather simple stylised border pattern in the same vein as Dulcamara. Fragments of one cup in green, one plate in purple and one saucer in green were recovered from the Wanganui Hotel site (Feature 515). No backmarks were preserved, but patterns such as this were commonly manufactured either by Pinder, Bourne & Hope or Pinder, Bourne & Co, dating them to between 1851 and 1882.

Forest

Fragments of three vessels were found at the Bamber House site; one saucer in blue (Feature 247), one saucer in green (Feature 2) and one green cup/bowl (Feature 83). Forest is a simple repetitive design featuring abstract tree boughs or vegetation. Recorded manufacturers include Samuel Alcock, and pieces carrying marks attributable to this firm having been recovered from Blomfield House (CFG Heritage report in preparation) and Albert Barracks (Fraser 2002: 78).

Fruit

As the name suggests the central part of the pattern is occupied by an arrangement of fruit, with a floral border around the outside of the plate. Two fragments were found in the general fill layer around the Bamber House site and one in Feature 46 (the well). One rim sherd was marked on the back with 'FRUIT' in a border of grapes, flowers and other fruit, with 'STONE WARE/D' below. This mark is attributable to Thomas Dimmock (Jr) and Co., c. 1829–59.

Genevese

Genevese is a blue printed pattern originally developed by Minton "featuring alpine chalets in a romantic setting" (Coysh and Henrywood 1984: 151). The pattern name is printed on the back of the plates in a floral cartouche, along with 'Opaque China.' Minton and subsequent partnerships are recorded as producing this pattern but none of the marks carry any makers initials. All Genevese vessels were found at the Wanganui Hotel site with one plate from Feature 320; three from Feature 515; two from Feature 540 along with two serving dish lids; and three plates, two serving dishes, and a serving dish lid from Feature 525. One of the serving dish lids was reconstructed and measures 120 mm high with a diameter of 220 mm. The lids are all the same as that illustrated in Figure 4.1f, with an open handle at the top. The serving vessel in Figure 4.1e is on a stand and is 71 mm high with a diameter of 255 mm. The lids would appear to belong to this type of vessel. The plates were quite fragmented but would appear to be in two sizes, the larger being approximately 200 mm in diameter and the other slightly smaller.

Holloway's Ointment

Thomas Holloway first began producing his famous ointment in 1837 and advertised it widely as a cure-all for a raft of ailments and diseases. His distinctive transfer printed pots are known in at least 20 different variants (antiquebottles.co.za). Fragments of two small pots were found among the fill layer at the Bamber House site, while a larger, complete pot with lid was recovered from Feature 46, the well. The pot stands 46 mm high with a diameter of 79 mm and has a label printed on the lid in black. The label reads 'HOLLOWAY'S/OINTMENT/Sold by the Proprietor/244 STRAND/LONDON' (Figure F.1 h). One of the smaller pot fragments has the address '244 The Strand', while the other has 'Oxford St'. Thomas Holloway was based at 244 The Strand from 1842 to 1867, when he moved to 533 Oxford Street, staying there until 1881 (Prickett 1994: 55; antiquebottles.co.za).

Hong

Hong is a flow-blue chinoiserie style pattern showing scenes with oriental architecture broken by prominent floral arrangements. Parts of two bowls from the Wanganui Hotel site were identified. The bowl in Figure F.1 g, from Feature 540,

stands 82 mm high with a rim diameter of 163 mm. The bowl is marked on the base with 'B. D. & Co SYDNEY.' This printed mark most likely refers to a retailer or merchant in Sydney, with the vessel itself made in England. Fragments of another bowl of the same size from Feature 515 have the pattern name 'HONG' printed on the base in a border.

Japan Flowers

Japan Flowers is described as a "generic title which embraces several different floral patterns by John and William Ridgway; Ridgway, Morley, Wear and Co.; and Ridgway and Morley" (Coysh and Henrywood 1984:197). The present examples are marked by Ridgway, Morley, Wear and Co., dating their production to c. 1836–42. However, one of the plates also has an additional William Ridgway and Co impressed backmark, so they could have been produced at any time from 1836 up to 1854. The pattern has a floral border with oriental themed scenic reserves and the central part of the design follows this theme with more flowers and Japanese style architecture. Three plates are in green while a fragment of another is in blue. All are from the Bamber House site (Features 83, 84 and 217).

Kulat

Kulat is an Asiatic scenery style pattern with a border consisting of intertwined stems of vegetation and reserves showing a castle by a lake or river with two men fishing in the foreground. The central scene shows three small figures in the midground, two sitting and one standing, in the entranceway to a large open courtyard, with two large columns on either side. The scene is flanked by palm trees with a minaret and mountains behind this in the background. Four of the five plates from the Wanganui Hotel site carried complete backmarks with the pattern name in a border and 'P. B. & H.' below (Pinder, Bourne and Hope, 1851–62).

Lazuli

This is a sheet pattern consisting of black veining, found on a washbowl, a toiletry dish and a chamberpot from the Wanganui Hotel site (Features 417, 515 and 540). Coysh and Henrywood describe it as being produced predominantly in flow-blue on toiletwares by Dillwyn and Co. of Swansea (Coysh and Henrywood 1982: 216). The base of the chamberpot carries a very faint printed mark in black with the pattern name '...ZULI' in a border. An identical mark is illustrated by Kowalsky and Kowalsky and attributed to Dillwyn and Co and dates to the period c. 1836–1850 (Kowalsky and Kowalsky 1999: 174).

Lucerne

Lucerne is a blue printed pattern with a central scene depicting Swiss style chalets set among conifers. The border consists of a repetitive design of seaweed-like strands, strung with small flowers. Three cups and three saucers were identified from the Wanganui Hotel site and one cup from the Bamber House site. One saucer fragment from Feature 540 was backmarked with 'Lucerne' printed in blue.

'Martha'

Fragments of a mug from the Wanganui Hotel site in green had 'Martha' printed on the side (Figure F.4f). Having your name on the side of a mug would more likely

appeal to children and it is likely that such pieces were produced with this market in mind.

Medici

Medici is a classical style pattern with a border of concentric lines and scrolls and urns. The central scene has a prominent urn in the foreground, with classical style buildings in the background. Fragments from a dinner plate and a fragment of cup with the same border were identified from both the Wanganui Hotel site and the Bamber House site. A complete example is illustrated in Coysh and Henrywood (1984: 242).

Morea

Six blue plates from the Wanganui Hotel site were marked on the base with 'MOREA' in a cartouche with 'STONE CHINA' below. Coysh and Herywood (1984: 252) describe it as "a series of romantic scenes of classical ruins noted on dinner wares" by an unknown maker or makers. Morea is the name formerly used for the peninsula making up the southern part of Greece, now known as the Peloponnese. Four of the plates were found stacked together in Feature 621, with all of them being complete and one unbroken.

Moss Rose

Moss Rose is a floral style pattern in flow-blue represented by one plate fragment from The Bamber House site. The sherd is printed on the back 'Moss Rose' in a floral border, with the initials 'R. & M.' below (Ridgway and Morley, c. 1842–45).

Nymph

Nymph is a stylised floral design in purple and flow-blue found on teaware. Three saucers and three cups came from the well (Feature 46) at the Bamber House site. One saucer was marked on the base with the pattern name and the initials 'H.W.' The closest match for these initials is 'H. & W.' standing for Hancock and Wittingham, 1873–1879 (Kowalsky and Kowalsky 1999: 524) although this is late compared to the date for other artefacts from this feature. A small cream or milk jug in purple and a bowl in flow-blue were found at the Wanganui Hotel site (Features 362 and 462).

Olive

Olive is an abstract design in dark purple. Fragments of one bowl and three plates were identified from the Wanganui Hotel site, as well as a few sherds of plate from the Bamber House site. One garter-style mark on the back of a rim sherd was printed with 'OLIVE/H & C'. This represents Hope and Carter who were in business from c. 1862–1880. The base of another plate was printed with '...B. Pearce/[L]udgate Hill/London'. A small saucer in an unidentified pattern from the Blomfield House Site in Russell, was recently identified printed with 'ALFRED B. PEARCE & CO/39 LUDGATE HILL/LONDON E.C.' (CFG Heritage report in preparation). This is the address of a firm of retailers active from 1866 to 1940 (Godden 1991: 486).

Pansy

Pansy is a rather abstract floral design in green found on a chamber pot from the Wanganui Hotel site. Marked on the base with a garter-style mark and 'PANSY/ WB', standing for William Brownfield, 1850–1871.

Pearl Wreath

Pearl Wreath is a simple repetitive border design in purple found on plates. Two plates come from the Wanganui Hotel site (Features 308 and 320), one printed on the base 'PEARL WREATH' then a 'G J & Co' monogram and a partial diamond registration mark. There is also a small impressed 'H' at the bottom of the monogram. The monogram stands for George Jones (1861–1907) so the pattern must have been registered between 1861 and 1867 when the style of diamond registration marks changed.

Rhine

Rhine is the pattern title used for a series of romantic style scenes found on tableware and teaware. The central scenes consist of a lake or river in the foreground, with people on boats; a castle in the background; and the whole flanked by trees and vegetation to the sides. The border pattern usually remains the same. It is most commonly found in grey, but is also known from archaeological assemblages in blue, black and green. A large serving platter from the Wanganui Hotel site (Figure F.2 c) measured 390 mm long by 315 mm wide and 37 mm high. Only two plates carried manufacturers marks, both with 'RHINE' in a border and 'F. JONES' below (c.1865-86).
The Wanganui Hotel site: 3 bowls in grey; 1 cup in blue and 1 in grey; 1 plate in black, 1 in blue and 7 in grey; 1 serving dish in grey; 1 serving platter in grey.
The Bamber House site: 1 plate in blue and 1 in grey; 1 serving/baking dish in grey.

Rouen

Rouen is a similar style pattern to Dulcamara, with a stylised border and small central motif. One saucer fragment in brown from the Wanganui Hotel site carried a printed garter-style mark on the base with 'ROUEN/ P.B. & Co.', dating it to between 1862 and 1882.

Sirius

Four sherds from a single cup from the Bamber House site have been identified as Sirius, based upon comparison with photographs of marked vessels from Callands Pottery in Wales (www.theartchive.co.uk/callands.htm). The cup from the Bamber House site has the same border, with a row of small flowers around both the inside and outside rim and a wide band of organic tendrils with larger flowers set within it below this on the inside. The building also matches the one on the right-hand side of the scene shown in several photographs on the website. Several slight variants of the pattern have been noted (www.theartchive.co.uk/callands.htm). Callands Pottery was established in 1852 and closed shortly after in 1856, with many of their copper plates later being used by Llanelly Pottery (www.theartchive.co.uk/callands.htm). Kowalsky and Kowalsky (1999: 509) also record a 'Sirius' pattern being produced by the Staffordshire potteries James and Thomas Edwards (c. 1839–42) and Thomas Edwards (c. 1841–48). The pattern has previously been recovered

from Rewa's Pa in Russelll, where a blue-and-white sherd carried the partial pattern name 'irius' but was not identified (Best 2002: 51). The pattern was also recovered from His Majesty's Theatre where it was recorded under the Department of Conservation ceramic reference collection number E.A.300 (Bioresearches 1998). Sherds have recently been identified from the Blomfield House site in Russell (CFG Heritage report in preparation).

Sir Robert Peel MP

Sir Robert Peel was born in Lancashire in 1788 to a wealthy cotton manufacturer and Member of Parliament for Tamworth. After first entering the House of Commons in 1809 he enjoyed a distinguished parliamentary career, introducing numerous reform bills and twice being Prime Minister in the 1830s (www.spartacus.schoolnet.co.uk/PRpeel.htm). He died as a result of a riding accident in 1850. A saucer fragment from the Bamber House site is printed in black with '[Si]r ROBT PEEL MP.' and the bottom of what would have been a head and shoulders portrait of the man himself. Presumably such commemorative objects would date from either his time in office or shortly after his death; probably the latter.

'Slipper'

One of the more unusual items recovered, was a fragment of bedpan from Feature 515 at the Wanganui Hotel site. The fragment is printed in light green with the title 'SLIPPER' and instructions on the use of the object. Most of the lettering is preserved (Figure F.4 l) and if complete would read: 'This Slipper should be passed under/the patient in front between the legs./If a flannel cap is made for the/blade fastened by strings under/the handle considerable comfort will be/afforded.'

Springfield

Springfield is a basic border design in black incorporating a ribbon twined around a stem. Fragments from just one vessel, a heavy mixing bowl, were recovered from TS 78. This pattern has been previously recorded from the Britomart Reclamation in Auckland, where it was backmarked by William Fairbairns (www.bickler.co.nz/china/ index.php). This attribution and the style of the pattern date it to the 1870s or 1880s.

Teddesley

Teddesley is a rather simple floral border design in black produced by Pinder, Bourne and Co. and continued by Doulton. The back of one plate from the Wanganui Hotel site is printed with 'DOULTON'S TEDDESLEY' along with a circular impressed mark 'DOULTON/ BURSLEM'. Doulton took over the firm of Pinder, Bourne and Co. in 1878, but continued to use their patterns and marks until 1882. After this date they employed their own marks and obviously still continued some of the previous company's patterns. The style of the mark dates to the 1880s or early 1890s. Fragments of another plate were recovered from the Bamber House site.

Triumphal Car

One chamberpot in blue was recovered from the Bamber House site in this pattern. Eleven sherds came from Feature 120 and a further four sherds from Feature 84 (Figure F.2 b). Several versions of this pattern are known and were produced by various makers. The Bamber House site example is the 'swan' version by J. and M.P.

Bell & Co. and depicts a classical style scene with swans drawing a Greek warrior in a boat. The complete central scene is illustrated in Coysh and Henrywood (1982: 370). Only part of the backmark is preserved but this matches exactly with known examples (Kowalsky and Kowalsky 1999: 110).

Verona

Several variations of a pattern entitled Verona are known, but in this case it depicts a scene of classical ruins enclosed by a grapevine and medallion border. Five fragments in blue were identified from the Wanganui Hotel site, with one fragment printed on the base 'VERONA' in an elaborate cartouche, with 'METHVEN & SO[NS]' below. This stands for David Methven and Sons (1847–91).

Wild Rose

Fragments from just two plates were recovered in this pattern from the Bamber House site. Wild Rose was apparently most popular between the 1830s and 1850s and has a rustic central scene with a cottage by a bridge and two punts in the foreground (Coysh and Henrywood 1982: 399–400).

Willow

Willow is the most commonly recovered pattern from mid 19th century sites in New Zealand. The UCOL excavations are no exception with 60 Willow pattern vessels recovered from the Wanganui Hotel site and 31 from the Bamber House site. The serving platter in Figure 4.5 a measures 385 mm long by 295 mm wide and 44 mm high. The vessel is marked on the back of the rim 'STAFFORDSHIRE BONE CHINA.' The other serving platter (not illustrated) is unmarked and measures 345 mm long by 275 mm wide and 59 mm high. Six serving dishes and five lids of the type illustrated in Figures 4.5 e were found. The dishes are square and measure approximately 220 mm across and are 55 mm high. The lids measure 185 mm across and are 85 mm high. Such vessels seem to be commonly referred to in collector's literature, such as Coysh and Henrywood (1982, 1989) as vegetable dishes. The plate in Figure 4.5 d (of which there were two complete examples) is 22 mm high with a rim diameter of 198 mm.

A range of manufacturers marks were identified on Willow vessels. Relatively few vessels from the Wanganui Hotel site were marked. There were two 'W. T. Copeland' marks, one on a mug (Figure 4.5 f) the other on a plate (1847–67;) one 'Pinder, Bourne & Hope.' mark on a plate (c. 1851–62; Figure 4.5 c) a 'J. J. & Co' mark on a serving dish (attributable to either J. Jamieson and Co, c. 1826–1854; or J. Jackson and Co, c. 1870–87) and a mark attributable to 'Dimmock & Smith' on a plate (c. 1842–59; Figure 4.5 b). From the Bamber House site three plates had 'Barker & Till' marks (c. 1846–50) one saucer with a partial 'Copeland & Garrett' mark (1833–47) a plate with a 'W. T. Copeland' mark and a serving platter marked on the back of the rim with an 'Old Hall Earthenware Company' mark (1862-86).
The Wanganui Hotel site: 23 plates; 9 side plates; 8 saucers; 1 mug; 4 serving platters; 2 serving plates; 6 serving dishes; 5 serving dish lids; 1 tureen; 1 baking dish
The Bamber House site: 21 plates; 4 saucers; 6 serving platters

Winton

Winton is an abstract design printed in red. The single plate fragment recovered from the Bamber House site is marked with a Grimwade Brothers backstamp, including the pattern name and part of a registered number dating to 1892.

Manufacturers

From impressed or printed backmarks 32 manufacturers could be identified from the UCOL assemblages. Several marks or patterns are attributed to a manufacturer only, rather than being positively identified through a complete backmark.
Note: where marks are recorded in Godden or Kowalsky and Kowalsky, the reference numbers for the marks are given, rather than page numbers, as the reference numbers remain constant from edition to edition. The abbreviation Kad refers to the reference system used by Kowalsky and Kowalsky.

Barker and Son, Burslem, Staffordshire, c. 1850–1860 (Kad No. B161, Godden No. 256)

The printed initials 'B & S' were recorded on the back of a flow-blue saucer in an unidentified pattern (UCOL 77) from the Wanganui Hotel site (Feature 462). The edge of the pattern name border is preserved but unfortunately, not the name itself. A fragment of another saucer in the same pattern also carries the edge of the pattern border and can be attributed to the same maker.

Barker and Till, Burslem, Staffordshire, c. 1846–1850

Two printed scroll style backmarks on Willow pattern plates have 'STONE WARE' above and 'BARKER & TILL' in the centre (the Bamber House site Features 83 and 217). One of the plates also has an additional impressed mark. Another fragment of Willow plate has only the end of the scroll surviving along with an impressed anchor mark, and is also likely to have been manufactured by Barker and Till.

J. and M.P. Bell and Co., Glasgow, Scotland, c. 1842–1910 (Kad No. B223)

Only one vessel could be attributed to this maker, a blue printed chamberpot in the Triumphal Car pattern from the Bamber House site (Feature 120). The backmark is incomplete but shows part of an eagle with the sun behind, that would have been holding a scroll in his talons with the pattern name written on it. Below this would have been the makers initials. The 'swan version' of Triumphal Car is known to have been produced only by J. and M.P. Bell (Coysh and Henrywood 1982: 370). This piece was most likely manufactured between c. 1850 and 1870.

William Brownfield, Cobridge, Staffordshire, 1850–1892 (Kad No. B388, Godden No. 660)

One garter-style mark on the base of a chamberpot printed in green has the pattern name 'Pansy' and the initials 'W.B.' from the Wanganui Hotel site (Feature 485). This mark dates to the period 1850 to 1871, as after this date '& S' or '& Sons' was added to marks.

Burgess and Leigh, Burslem, Staffordshire, c. 1862–1889 (Kad No. B407, Godden No. 715)

A partial backmark on a blue printed Asiatic Pheasant plate from Wanganui Hotel (Feature 208) has 'HILL P[OTTERY]' above part of the floral cartouche, which would have contained the pattern name. The trade name 'Hill Pottery' was used by both Burgess and Leigh, and the earlier company Samuel Alcock and Co

(Kowalsky and Kowalsky 1999: 558). Several potters were based in the area known as the hill or hill top in Burslem during the 19th century (www.thepotteries.org/works/burslem/old_hill_pottery.htm). The style of the mark and the pattern suggest that Burgess and Leigh are the more likely manufacturer.

Robert Cochran and Co, Glasgow, Scotland, c. 1846–1891 (Kad No. B603)

A printed mark in black on the base of an otherwise undecorated chamberpot from Lot 78 employs a coat-of-arms device in the centre, with '[ROBERT CO]CHRAN & Co GLASGOW' above, and '[IMPERI]AL/[IRONSTONE] CHINA' below.

Copeland and Garrett, Stoke-on-Trent, Staffordshire, 1838–1847 (Kad No. B629)

One rather fragmentary Willow pattern saucer from the Bamber House site (Feature 33) carried a partial printed backmark in blue which would read, if complete, 'COPELAND & GARRETT/NEW/BLANCHE' and be topped with a crown. An example is illustrated by Kowalsky and Kowalsky (1999: 159).

W. T. Copeland, Stoke-on-Trent, Staffordshire, 1847–1867 (Kad No. B635, Godden No. 1068)

Several marks incorporate 'Copeland/Late Spode', four on Willow pattern vessels in blue and one on a grey saucer in an unidentified pattern (UCOL 04). All of the marks are printed but one of the Willow plates also has 'Copeland' impressed, and the grey saucer also has an additional impressed mark. Copeland marks were recovered from the Wanganui Hotel site (Features 382, 463, and 621) and the Bamber House site (Feature 83).

Davenport, Longport, Staffordshire, c. 1835–1887 (Kad No. B698)

A partial printed mark in blue '...NP...' on the back of a Willow plate fragment recovered from the Bamber House site (Feature 56) is from the firm of Davenport. The use of 'DAVENPORT' printed in upper case dates to between c. 1835–1887. Davenport is normally one of the more commonly represented manufacturers from New Zealand sites and it is surprising that only one mark is present from the UCOL excavations.

Dillwyn and Co., Swansea, Wales, c. 1810–1850 (Kad No. B760)

A washbowl and a chamberpot from the Wanganui Hotel site (Feature 417) in the Lazuli pattern are attributable to this pottery. The chamberpot carries a printed backmark with the pattern name, known to have been used by Dillwyn between c. 1836 and 1850.

Dimmock and Smith, Hanley, Staffordshire c. 1842–1859 (Kad No. B765, Godden No. 1302)

One Willow pattern plate recovered from the Wanganui Hotel site (Feature 417) carries a printed backmark from the firm of Dimmock and Smith. The mark has 'WARRANTED' then 'STAFFORDSHIRE' in a ribbon, with the initials 'D. & S.' below.

Thomas Dimmock (Jr) and Co, Hanley, Staffordshire, c. 1828–1859 (Kad No. B774, Godden No. 1297)

Only one vessel could be attributed to this maker, a blue 'Fruit' pattern plate from the well at the back of the Bamber House site (Feature 46). The plate is backmarked on the back of the rim, with 'Fruit' in a border and 'STONE WARE/D' below.

Doulton and Co, Burslem, Staffordshire, c. 1882–c. 1891 (Kad No. B793 & B&95)

The back of a 'Teddesley' pattern dinner plate in black from the Wanganui Hotel site (Feature 514), was backmarked with 'DOULTON'S TEDDESLEY' and a circular impressed mark 'DOULTON/ BURSLEM.' Doulton took over the firm of Pinder, Bourne and Co in 1878, but did not produce earthenware under their own name until 1882 (Kowalsky and Kowalsky 1999: 177).

Grimwade Brothers, Stoke-on-Trent, Staffordshire, 1892–1900 (Kad No. B1119, Godden No. 1823)

A printed mark in red on the base of a Winton pattern plate from the Bamber House site (Feature 2) has the pattern name 'Winton', a registration number and a circular mark with the trade mark 'G Bros' in a star, in the centre, and 'HANLEY STAFFO[RDSHIRE ENGLA]ND' running around the outside. The registration number dates to 1892 and so this plate must have been made after this date and before the company changed to Grimwades Ltd around 1900.

John Hawley and Co, Fenton, Staffordshire, 1843–1893

One nearly complete chamberpot from the Wanganui Hotel site (Feature 621) is printed on the base 'AVA' in a border, and below this 'J.HAWLEY & CO.' The style of the pattern dates this piece to the 1850s or 1860s.

Hope and Carter, Burslem, Staffordshire, c. 1862–1880 (Kad No. B1311, Godden No. 2088)

One garter-style mark on the back of the rim of an Olive pattern bowl or soup plate has the initials 'H & C' plus the pattern name. Five Olive vessels were found at the Wanganui Hotel site (Features 320, 337 and 464) and The Bamber House site (Feature 259) and as the pattern is not common, can presumably all be attributed to Hope and Carter. One other plate also had part of a retailers name and address printed on the back, '... Pearce /..dgate Hill/London.' This refers to the retail firm of Alfred B. Pearce of Ludgate Hill, London, in business from 1866 to 1940 (Godden 1991: 486).

J. J. and Co

One printed mark on the base of a Willow pattern serving or baking dish from the Wanganui Hotel site carries these initials (Feature 515). The mark incorporates a beehive in the centre, flanked by sprigs of vegetation, with 'J.J & Co' in a scroll above, topped with a crown. This may stand for James Jamieson and Co, Bo'ness Pottery, Scotland (c.1826—1854) (Kad No. B1361) or J. Jackson and Co, Rotherham, Yorkshire (c.1870—1887) (Kad No. B1351; Godden No. 2153). The former is possibly more likely as ceramics attributable to James Jamieson have been recovered from the Wellington Inner City Bypass excavations (personal observation).

Frederick Jones (and Co), Longton, Staffordshire, c. 1865–1886 (Kad No. B1385, Godden No. 2215)

Two grey Rhine pattern plates from the Wanganui Hotel site (Features 383 and 525) carry backmarks from the firm of Frederick Jones. Both are marked the same with a typical 'Rhine' pattern name mark in a cartouche, and 'F. Jones' below. The plates also have a small circular impressed mark.

George Jones (and Co), Stoke, Staffordshire, c. 1861–

A purple printed backmark on a 'Pearl Wreath' plate from the Wanganui Hotel site (Feature 308) carries the pattern name, a monogram 'G J & Co' and part of a diamond registration mark, as well as a small impressed 'H.' This mark most likely represents the firm of George Jones, although neither Godden or Kowalsky refer the pottery as 'George Jones & Co', only George Jones, and George Jones & Sons from 1873. The National Archives in Britain have registers for pottery designs and patterns for George Jones & Co. up to the year 1865 but by 1867 designs are registered under the name George Jones (www.national archives.gov.uk/designregisters/). The year and month ciphers are missing from the registration mark, but it dates to the period 1842–67. Based on this evidence, this plate and one other in the same pattern must have been made between 1861 and 1867.

Malkin, Walker and Hulse, Longton, Staffordshire, 1858–1864

One blue printed mark is present on the base of a saucer from the Wanganui Hotel site (Feature 515) reading 'BOSPHORUS' with 'MALKIN WALKER & HULSE' beneath, all enclosed in a border consisting of a woody stem with tendrils of vegetation around it. As noted above this particular Bosphorus pattern appears to be different to those previously recorded.

Ralph Malkin, Fenton, Staffordshire, c. 1864–1881 (Kad No. B1510, Godden No. 2493)

A printed backmark on a fragment of Asiatic Pheasants pattern plate in grey from the Bamber House site (Feature 2) is attributable to Ralph Malkin. The mark has the pattern name in a scroll with the initials 'R.M.' below.

David Methven and Sons, Kirkcaldy, Scotland, 1847–c. 1891

A printed mark on the back of a Verona pattern dinner plate from the Wanganui Hotel site (Feature 515) has the pattern name in an elaborate cartouche and 'METHVEN & SO[NS]' below. The firm of David Methven & Sons continued until 1928, but this particular plate is likely to date from the 1850s or 1860s.

Francis Morley and Co., Hanley, Staffordshire, c. 1845–1859

A printed mark on a flow-blue saucer in the Cleopatra pattern from the Wanganui Hotel site (Feature 417) is attributed by Coysh and Henrywood to Francis Morley (1989: 59). The mark carries no makers initials apart from a printed 'F' off to one side. Similar printed 'F's have been noted on other flow-blue printed vessels and may simply be a code used by potters to refer to flow-blue (personal observation, Jaden Harris).

Old Hall Earthenware Co Ltd, Hanley, Staffordshire, 1862–1886 (Kad No. B1823, Godden No. 2917)

The base of one blue Willow pattern serving platter from the Bamber House site (Feature 46, the well) has a partial printed mark with a lion and the initials 'O. H. E .', and an impressed anchor mark to the side. The use of the lion motif is not noted in Godden or Kowalsky and Kowalsky, although the initials clearly suggest that Old Hall Earthenware Company is the manufacturer. Asiatic Pheasants vessels from this company are also commonly recovered from historic sites in New Zealand.

Pinder, Bourne and Hope, Burslem, Staffordshire, c. 1851–1862

Several vessels in various patterns carried Pinder, Bourne and Hope backmarks. A Willow pattern plate has a blue printed backmark with 'WARRANTED' then a scroll and the initials 'P.B.& H.' below. Of the six Kulat side plates, five have full or partial printed backmarks with 'KULAT' in a border of leafy stems and the initials 'P.B.& H.' below. Two saucers and two cups were found in the Chain pattern in purple. Both saucers are marked with partial garter-style marks, one having the pattern name and the other the maker's initials 'P.B. & H.' Pinder, Bourne and Hope marked vessels were recovered from the Wanganui Hotel site (Features 515, 525 and 540).

Pinder, Bourne and Co, Burslem, Staffordshire, 1861–1882 (Kad No. B1881, Godden No. 3038)

A black Boquet pattern saucer from the Bamber House site (Feature 46) and a brown Rouen pattern saucer from TS 78 carried Pinder, Bourne & Co backmarks. Both are printed garter-style marks, incorporating the pattern name at the top and the maker's initials 'P.B. & Co.' at the bottom. Pinder, Bourne and Co or Pinder, Bourne and Hope are also the most likely manufacturer of the Dulcamara and Foliage pattern vessels in the assemblage.

Ridgway and Morley, Shelton, Hanley, Staffordshire c. 1842–1845 (Kad No. B1979, Godden 3276)

A printed backmark in flow-blue on a Moss Rose pattern plate from the Bamber House site (Feature 83) has the pattern name in an elaborate floral border and the initials 'R.& M.' below. The Ridgway and Morley partnership is one of several involving the Ridgway family throughout the 19th century (see Kowalsky and Kowalsky 1999: 317 for a summary of the Ridgway history).

Ridgway, Morley, Wear and Co, Shelton, Hanley, Staffordshire, c. 1836–1842 (Kad No. B2032, Godden 3274)

Two green printed plates in the Japan Flowers pattern from the Bamber House site (Features 83 and 217) carried Ridgway, Morley, Wear and Co backmarks. The more complete example has a ship in a shield, superimposed on an anchor, with the pattern name and maker's intials 'RMW & Co' in a scroll below. The other mark only has part of the printed design, but also has an impressed mark with 'Opaque/Granite/China/W. R. & Co' in a shield in the centre, flanked by a lion on the left and a unicorn on the right (see Kowalsky and Kowalsky 1999: Kad No. B2048, p.323). This mark was used by William Ridgway (c. 1834–1854) and it is

not implausible that this company produced the blank plates, with Rigway, Morley, Wear and Co printing them. A single fragment from a blue printed plate, only carries part of the pattern name. None of these vessels can have been manufactured any later than 1854.

Joseph Robinson, Burslem, Staffordshire, 1876–1898 (Kad No. B2080, Godden 3337A)

Two vessels in the Asiatic Pheasants pattern were recovered from TS 78 with backmarks from this firm. The complete mark, printed on the back of a serving platter rim, has the standard floral cartouche with the pattern name and above this in a banner 'GENUINE IRONSTONE' and below 'SUPERIOR QUALITY.' Just above the bottom banner is 'J. ROBINSON/BURSLEM.'

Sampson Bridgwood and Sons Ltd, Longton, Stoke-on-Trent, c. 1853+

Two joining fragments of plate recovered from the Bamber House site (Feature 67) carry a backmark from this firm. The mark is incomplete and has part of a brown printed crown and the word 'OPAQ[UE].' To the side is an impressed circular mark with 'LIMOGES' around the outside, and the initials 'PG' in the centre. This mark was used by Sampson Bridgwood and Sons (www.thepotteries.org). The company moved to the Anchor pottery in 1853, and it is after this date that the present piece was made.

Sewell, Newcastle-upon-Tyne, Northumberland, c. 1804–1878 (Kad No. B2106, Godden 3664A)

Two vessels carried impressed Sewell backmarks (Figures F.3i and F.9k). One, on the base of cup in an unidentified pattern (UCOL 136) from the Bamber House site (Feature 2) has the maker's name 'SEWEL[L]' in slightly curved fashion, with a '1' below, and a small star above. A fragmentary saucer in the same pattern can also be attributed to Sewell. The scenic style pattern is printed in grey and most probably dates to around the middle of the century. The other marked piece, also from the Bamber House site (Feature 120), is a saucer in an unidentified blue printed floral design (UCOL 126). The saucer is marked the same as the cup, but the number under the maker's name cannot be read. Both of these patterns probably date from around the middle of the 19th century.

John Thompson (and Sons), Glasgow, Scotland, c. 1826–1888

Just one vessel, a flow-blue printed 'Alma' eggcup, from the Wanganui Hotel site (Feature 540) could be attributed to this maker. If the pattern name derives from the Crimean War battle on the banks of the Alma River in 1854, then this eggcup must have been produced after this date and before 1888.

James F. Wileman, Fenton, Staffordshire, 1870–1892 (Kad No. B2449, Godden No. 4162)

One printed mark on the base of an Asiatic Pheasants plate from the Wanganui Hotel site (Feature 208) carried the pattern name in the typical floral cartouche and the initials 'J. F. W.' and 'Foley Potteries' below. An identical mark is illustrated in Kowalsky and Kowalsky (1999: 371).

Unidentified Marks

Several partial and complete backmarks have not been able to be identified to a manufacturer. One blue printed mark on the back of a Willow plate rim from the Bamber House site (Feature 56) has 'IRON STONE CH[INA]' in a scroll or ribbon, with a 'R' below. Another printed mark on the back of a serving platter rim from the Wanganui Hotel site (Feature 540) has 'STAFFORDSHIRE/STONE CHINA' in a rectangular border filled with pseudo Chinese characters. No known makers of Willow pattern could be matched to these marks. Several other less complete marks are also present on Willow pattern vessels. One has part of a coat-of-arms device with a unicorn on the right and a shield in the centre (the Wanganui Hotel site Feature 337), and another has part of the word '[W]ARRAN[TED]' and an impressed anchor mark (the Bamber House site Feature 2). Several other different patterns also have partial printed or impressed marks that cannot be attributed to a manufacturer.

Stoneware

Stoneware is a tough durable fabric fired to a high enough temperature to completely vitrify the body. This makes the body impervious to water but most stoneware vessels are usually also glazed with either a thin clay slip or by salt-glazing. Stoneware is functionally quite different from earthenware and porcelain and was generally used for utilitarian forms such as bottles and jars, used for a wide range of foodstuffs, beverages and non-food products. Unless marked stoneware is generally not useful for dating purposes, as most items are plain utilitarian vessels whose form changed little over time.

Four different types of bottle that most likely contained alcohol were identified from the UCOL excavations. Stoneware beer bottles come in two different forms. Porter bottles are usually cream in colour and of the shape illustrated in Figure 4.6 b, c. Stout bottles differ in that they have a distinct break at the shoulder and are usually decorated with a two-tone glaze (Figure 4.6d). Both types of bottle are generally Bristol-glazed. This is an industrial type slip glaze first developed by William Powell of Bristol around 1835 and is characterised by a smooth finish and is usually cream in colour or in the case of some vessels the top can be tan with a cream body (Brookes 2005: 28). Gin was also exported from the Netherlands in stoneware bottles. Stone gin bottles are typically tall tan coloured salt-glazed vessels, often with a small round handle on the shoulder. Similar vessels decorated with a grey slip-glaze may have contained either gin or schnapps.

Other stoneware bottles commonly recovered are ink bottles in various sizes, with small 'penny inks' being the most numerous. Only one fragment is marked, being from the French firm of N. Antoine et Fils. Blacking bottles are also common. Blacking was used for cleaning and polishing stoves and usually came in salt-glazed bottles with wide mouths. Ginger beer and other softdrinks were also be bottled in stoneware containers. Jars and larger vessels such as crocks are not common in the Bamber House or Wanganui Hotel assemblages.

Manufacturers and marks

Joseph Bourne (and Co) (and Son), Denby, Derbyshire, c. 1809–

One large bottle 237 mm high by 98 mm in diameter from the Wanganui Hotel site (Feature 621) has the impressed mark 'VITREOUS STONE BOTTLES/ WARRANTED NOT TO ABSORB/J.BOURNE & SON/PATENTEES/CODNOR PARK/NEAR DERBY.' The Codnor Park Pottery was run by the Bourne firm from c. 1833 to 1860 and so this particular bottle probably dates to the 1850s. One other

from Feature 395, 232 mm high by 92 mm in diameter is impressed 'J.BOURNE & CO/PATENTED/DENBY POTTERY' and dates to later in the 19th century. A mark on the back of a Thompson and Lewis ginger beer bottle from TS 78, which reads 'BOURNE/DENBY' with an 'F' in the middle dates to the first decade of the 20th century.

N. Antoine et Fils

A fragment of brown salt-glazed bottle from the Wanganui Hotel site had the impressed mark 'ENCRE JAPONAISE/N. ANTOINE & FILS'. The mark also has a large 'P' set just above it. N. Antoine and Fils were a French company based in Paris and would have produced the ink that filled the bottle, but not the container itself. An 1879 advertisement in the British Library lists numerous outlets selling their products in Britain and the colonies, including retailers in Melbourne, Sydney and Adelaide (www.bl.uk). 'Encre Japonaise' was a dark violet to black coloured ink first marketed by this firm in 1853 (Carvalho 2004: 158) .

Enoch Fowler, Sydney, 1837–1873

Enoch Fowler owned a number of potteries around Sydney between 1837 and 1873 (Macready and Goodwyn 1990: 44). One stoneware bottle from the Bamber House site (Feature 2) has an impressed mark on the side near the base which reads 'FOWLER/POTTER/SYDNEY.' The bottle most likely contained ginger beer or something similar.

Stephen Green, Lambeth, London, c. 1820–1858 (Godden No. 1792)

An impressed mark on the side of a Bristol-glazed stoneware jar from the Wanganui Hotel site (Feature 621) read 'STEPHEN GREEN / IMPERIAL POTTERIES / LAMBETH.'

Port Dundas Pottery Co., Glasgow mid 19th century–1932

One complete porter bottle 271 mm high by 92 mm diameter from the Wanganui Hotel site (Feature 370) has an impressed mark 'PORT DUNDAS/POTTERY COY' with 'GLASGOW' in the centre and an 'N' to the side. One other bottle from TS 78 with a base diameter of 68 mm has the same marking with an impressed 'J' beside it.

Thomson Lewis and Co.

Fragments of several ginger beer bottles with transfer printed labels from this firm were recovered from TS 78, where the Thomson Lewis bottling plant was located in the early 20th century, and the Bamber House site. Two types of bottle are represented, with the greater number having squat necks with blob tops and an internal thread for the stopper. The other type has a tapering neck with a bead and taper top for a Lightning-style closure. The Lightning closure was first patented in 1875 and employs a small stopper attached to a wire which is secured around the neck of the bottle and opened or closed by means of a lever wire (www.sha.org/bottle/closures.htm). One white ceramic stopper 22 mm long by 25 mm in diameter from this type of closure was found. The stopper has a hole through the middle for the wire and is printed in red with 'Thomson Lewis & Co New Zealand.' The label on the bottle fragments lists plants in Wellington, Petone, Wanganui and Otaki, dating these items to between 1905 and 1909 (Fisher 2004: 233).

Miscellaneous Marks

Several of the stout bottles have impressed letters near the base. Two have an impressed 'E', two an 'M', and one each with a 'W' and an 'R'. The fact that impressed letters were also present on the 'Port Dundas' bottles suggests that they represent some form of marking used internally in the pottery rather than manufacturers marks.

Appendix C Glass Categories

Bottle manufacture and attributes

Looking at aspects of bottle manufacture and other attributes is the main method for dating historic glassware. Various technological advancements that were introduced during the 19th century are well documented (Baugher-Perlin 1982; Stelle 2001; Tasker 1989). From Table C.1 it can be seen that many of these production methods overlap and so a combination of factors has to be taken into account when dating a bottle. Several articles and online resources go into detail about bottle manufacturing techniques and attributes and so only a brief introduction will be given here (Jones 2000; Stelle 2001; www.sha.org/bottle/index.htm). It is important to note that many of the online resources relate to American manufactured glass. Most of the bottles found in New Zealand typically come from Britain or Europe where the uptake of new technology was generally much slower.

Formation Process		Production Range	Median
Free hand blown			
	Bottles, jars, etc	to 1835	NA
	Table, art, and specialty wares	to present	NA
	South Jersey tableware	to 1860	NA
Dip mould			
	Bottles	to 1860	NA
	Bottles with seams	1818–1860	1839
Two piece mould – bottles			
	With blowpipe pontil	1818–1860	1839
	With improved pontil	1840–1875	1858
	Snap case	1860–1875	1868
Three piece, dip bottom mould – bottles			
	With blowpipe pontil	1830–1860	1845
	With improved pontil	1830–1875	1853
	Snap case (1)	1860–1905	1883
Three piece, plate bottom mould – bottles			
	With blowpipe pontil (1)	1858–1860	1859
	With improved pontil	1858–1875	1867
	Snap case	1860–1915	1888
Turn/paste mould - bottles		1880–1905	1893
Fully automatic bottling machine –bottles			
	With Owens-Machine scar	1903 to present	NA
	With v-shaped gob fed scar	1917 to present	NA

Table C.1. Bottle formation process attributes and general production ranges (adapted from Stelle 2001).

Archaeologists rarely deal with complete or whole objects and so have to rely on methodologies based on diagnostic portions. With bottles the most diagnostic portion regarding manufacture is the base. Before the 1850s most bottles had a pontil scar on the base. The pontil scar was created by an iron rod or glass blowpipe being attached by various methods to the base of the partially formed bottle, to enable the top of the bottle to be finished off. The empontiling techniques identified

from the Bamber House and Wanganui Hotel assemblages include the glass tipped pontil, the improved pontil or bare-iron pontil, and the blowpipe pontil. The glass tipped pontil was simply an iron rod to which a small amount of molten glass was applied so that it would adhere firmly to the bottle base. Once the top was finished the rod then had to be detached, resulting in a scar of jagged fragments of glass left from the tip of the rod, or pulled out from the base of the bottle. Occasionally bottles are found with so much glass protruding from the base via this method that they do not stand up properly. The improved pontil was an attempt to rectify this problem. An iron rod, usually with a cone shaped end, was heated red-hot and then attached bare to the base of the bottle. This usually forms a distinctive conical pushup, covering half or more of the base, sometimes with a deposit of iron oxide left behind on the glass surface. This method was used from 1845 up to as late as 1880 (Baugher-Perlin 1982: 267). In the blowpipe pontil method the blowpipe itself was used as the pontil. A small amount of glass was placed on the tip of the blowpipe and then it was attached to the base of the bottle, resulting in a small circular ring with either fragments of glass left behind or torn out of the base. While not common, this technique is most often seen in New Zealand on small pharmaceutical bottles and case gin bottles.

From the 1850s new methods were developed which held the bottle around the body rather than by the base. Two such inventions were the sabot and the snap-case, which largely replaced the use of a pontil from the 1850s and 1860s (www.sha.org/bottle/ glassmaking.htm). Although it was possible to apply embossing to the bases of bottles before the snap-case, its development saw the practice become far more common from the mid 1850s.

For less fragmentary bottles and whole examples, mould seams, or lack of them, can also be used for dating purposes. Virtually all bottles found in New Zealand historic sites have been produced in a mould of some sort. The most common type for black beers would appear to be the three-piece dip mould. One part of the mould forms the main body of the bottle while the other two pieces come together to form the shoulder, neck and top. For bottles with moulded bases this is formed by a separate base plate. Bottles produced in these moulds are slightly tapered towards the bottom, so that they could be removed from the main dip-mould. Mould lines are usually evident running horizontally around the widest part of the body with a vertical line on each side running from here up towards the top. The vertical lines usually stop short of the top, as they are partially removed by the process of finishing the top. Bottles were produced by this method until the end of the 19th century.

The treatment of the top is also useful for dating, especially with alcohol bottles. Bottles such as the common 'black beers' were mass produced and are more likely to be roughly finished, leaving evidence of the process of manufacture. The first tools to finish the tops of bottles were developed in England in the 1830s (Toulouse 1969). These early jawed 'finishing tools' were:

> a sort of pliers-shaped clamp having a central mandrell to enter the bottle mouth and prevent it from collapsing under the pressure from the jaws, and two opposing jaws that were cut with the desired finish contour on their inner surfaces. The jaws were squeezed together while the bottle (or the tool) was being rotated between them, so that the contour was impressed as a complete circle about the neck of the bottle. (Toulouse 1969).

Usually a small amount of extra glass was applied to the top of the bottle during this process, often resulting in a small folds of surplus glass where the finish meets the neck. From 1870 more advanced finishing tools were designed along with improved methods for heating the top of the bottle during finishing and so tops become far more regular from this time (Toulouse 1969).

Often noted with regard to machine-made bottles is the patenting by Michael Owens of the Libbey Glass Works in Toledo, Ohio, of a fully automatic glass-blowing machine in 1903 (Miller and Sullivan 2000: 163). The Owens machine was a very large and expensive piece of plant that was only suited to glass containers which had very large runs. Of greater impact to the glass making industry between the 1890s and the early 20th century were the number of smaller semi-automatic machines in use. The development of these first began in America with Philip Arbogast patenting a machine in 1881 and later in England one patented by Howard Ashley in 1886 (Miller and Sullivan 2000: 163). In Britain, Sykes and Macvey of Castleford were the first to install an Ashley machine in 1887 and although they did not enjoy success themselves, some of their machines were purchased by Cannington, Shaw and Co and were still in use in 1916 (Toulouse 1971: 477–78, 148). Machine-made bottles are typically more uniform than their hand-made counterparts and exhibit characteristic features such as mould marks running up and over the rim of the bottle and suction scars on the base. Fully machine-made bottles did not become commonplace until after World War 1..

Alcohol bottles

The Bamber House and Wanganui Hotel bottle glass assemblages are, unsurprisingly, dominated by alcohol bottles. We know that certain types of bottle contained alcohol from bottle manufacturer catalogues, advertisements and from labelled or embossed examples. Typically, in mid 19th century New Zealand virtually all bottled alcohol was imported from Britain or Europe.

Black Beer

Black beer bottles are the most common type found and while most of these bottles probably contained beer, black glass bottles were also utility containers which could be reused several times. Jones (1986) lists black beer bottles as containing wine, fortified wines, porter, ale and cider, to which can be added vinegar and castor oil (Prickett 1994: 38). At least two black beers would seem to have contained Lemon Syrup the last time they were used, according to preserved labels (see Chapter 5). Black beer bottles are generally assumed to have been convenient and serviceable containers used for a wide range of purposes and discarded only when they broke.

They came in two basic forms: the standard form was a tall bottle with a body tapering in slightly towards the base, a rounded shoulder and a bulge neck; the other main variety was a squat form, which had a wider base and a shorter body, again with a rounded shoulder and a bulge neck. Both of these varieties came in large and pint sizes. Other forms such as porter bottles, which did not have a rounded shoulder or bulge neck, are less common. The size ranges for black beers as recorded from whole bottles recovered from the Bamber House and Wanganui Hotel sites are included in Table C.2. As can be seen there was a great deal of morphological variation within the same forms. This is largely due to the process of hand manufacture by which these bottles were made.

From the evidence uncovered, especially from the Wanganui Hotel site, there is little suggestion of any form of re-use. All of the labelled bottles from the large bottle pits from the hotel site, still had their original British labels on them when they were discarded. This situation can possibly be explained by the concept of the frontier, where towns and communities are largely engaged in one-way trade. For example, evidence from western mining towns in America where "empty beer and liquor bottles were so abundant that in some towns they were used to build houses and sidewalks" (Busch 2000: 180) suggests that commercial reuse was dependent

Form	Height	Mean height	Diameter	Mean diameter
Standard	274–303	290	78–82	80
Squat	241–265	253	84–92	88.3
Porter	278–288	283	82–84	83
Standard pint	225–257	236	63–70	67
Squat pint	205–220	211	73–75	73.6

Table C.2. Size ranges for whole black beers, the Bamber House and Wanganui Hotel sites. All sizes are given in mm.

on the feasibility of returning bottles to the market. Another possibility is that, with the garrisoning of British troops in Wanganui during the New Zealand Wars, regular supplies may have been flowing into the town, reducing any need for reuse.

Bottle Manufacturers

Many black beer bottles have embossed marks on the base. These usually refer to the manufacturer of the bottle, although it is not unknown for breweries and other companies to have bottles made for them embossed with their initials or mark.

Cooper and Wood, Portobello, Scotland, 1859–1928

Numerous examples of several different styles of embossed mark with the name 'Cooper' or 'Wood', or both, were recovered (see Table C.3). All of these bottles were produced in Portobello in Scotland. The following information on the Cooper and Wood partnership and their subsequent trading as separate companies comes from Toulouse (1971: 141–143, 524–527). Richard Cooper was a partner in a glass bottle works run by William Bailey in Portobello. When Bailey died in 1859, Cooper acquired the works and went into business with his brother-in-law, Thomas Wood, trading under the name 'Cooper & Wood'. This arrangement lasted until somewhere between 1866 and 1868, at which time the partnership was split, with Cooper retaining the older part of the works and Wood the house and adjacent land on which he later built a new plant. Both companies continued to successfully manufacture bottles From the context the bottles were found in and the manufacturing techniques employed it would seem that most if not all of these items date to the 1860s and 1870s. The bottles with 'Cooper & Wood' must have been manufactured no later than 1868, while those with either Cooper or Wood were probably made shortly after in the late 1860s or 1870s.

Lyon Brothers

Three 'black beer' type bottles in dark green glass were found with 'LYON/ MAKERS/BROS' embossed on the base. Like many British glass manufacturers very little information is available but apparently the company was based in Merseyside (Liverpool) in north-west England. In Worrall's trade directory for 1876 there is an entry for Lyon Brothers, Glass Bottle Manufacturers, Peasley Cross Bottle Works (Liverpool office; 27 Hanover Street). The Lyon Brothers ceased manufacture at their Peasley Cross Bottle Works in October 1890, with the works subsequently taken over by Cannington and Shaw. By 1895 there is no reference to anyone named Lyon in the glass bottle industry in the trade directories (www.sthelens-connect.net/forums/index.php).

Powell & Co., Bristol

A single black beer bottle was embossed on the base 'POWELL & Co/BRISTOL' (Figure C.1 a). No specific dates regarding this company could be uncovered, although an embossed bottle base from the fateful expedition of Sir John Franklin to find the Northwest Passage in 1845, shows that the company was in operation

from at least this time (http://www.nmm.ac.uk). From the finishing of the bottle it would appear to date to the 1850s or 1860s.

Miscellaneous embossed bases

Many black beer bases have letters or numbers embossed on them which cannot be associated with any particular maker or bottler. Examples which may represent bottle manufacturers are included in Table C.4. Another possibility is that some of the marks may represent breweries who have had runs of bottles produced for them. Other letters and numerals probably represent mould numbers or marks used by the manufacturer (Table C.5). All embossed black beer bases were from the Wanganui Hotel site.

Embossing	Total
AA	1
AB & Co	2
GB	17
GS & L (or CS & L)	3
S & Co	2
	25

Table C.4. Possible manufacturers marks on black beer bottles

Embossing	Total
'B' (and 6 dots)	1
'C / 14'	1
'D / 8'	4
(diamond design)	1
'N'	7
'P'	1
'P / 3'	2
'1'	6
'2'	8
'3'	1
'5'	4
'7'	2
'8'	1
'10'	3
'11'	3
'12'	4
'21'	3
	53

Table C.5. Other embossed marks on black beer bases.

C.1 (opposite). Alcohol bottles. a, 'Powell & Co, Bristol' beer (WH, F.540); b, 'Bernard's & Co, Superior No.1 Gin' (BH, F.46); c, 'Pig-snout' case gin (WH, F.540); d, Hock style wine bottle (TS 78); e, 'Hulstkamp Zoon & Molyn, Rotterdam' (WH, F.208); f, 'Wynandfockink, Amsterdam' (WH, F.339); g, 'Joh von Pein, Altona' (WH, F.540); h, 'John Stewart & Co, Kirkliston' whisky (WH, F.339); i, 'James Stewart & Co, Saucel, Paisley' whisky (WH, F.339).

Gin

In the 19th century there were two predominant sources of gin: Holland and England. The Dutch dominated the gin export trade in the 19th century and the distinctive olive-green, square-sectioned case gin bottles with crude hand applied tops are found around the world (Figure C.1 c). Dutch gin also came in stoneware bottles, discussed in Chapter 4. A total of 221 case gin bottles was recovered, counting bases. Only 214 tops were recovered of which 197 (92%) were cone-and-collar tops. While both types are hand applied the pig-snout variety is more common in early 19th century contexts and was not used after approximately 1875 (Tasker 1989: 48). The cone-and-collar type tops continued in use into the 20th century on machine-made bottles. The size range for complete vessels showed some variety with the smallest 220 mm high and the largest 261 mm high.

Gin was one of the most popular spirits in 19th century Britain, largely because it was cheap to produce and a large number of distilleries did so in quantity. It is no surprise then that English gin bottles are found in the colonies. English gin usually

came in tall aqua-glass bottles, with a bulge-neck and sealed with a cork or glass stopper. Such bottles are generally only identified as having probably contained spirits, because without a label it is impossible to know for certain what a bottle may have been last used for.

The large number of aqua glass spirit bottles that could be identified as containing gin was greatly aided by a large number with partially preserved labels. Other bottles without labels could be identified as gin, by comparing the manufacturing techniques displayed on the labelled examples. In total 148 bottles were identified as positively having contained gin. Whole examples, unlike the case gin bottles, were quite regular in size with bottle heights ranging from 276–282 mm and bottle bases from 74–78 mm.

The labels also identified the contents of the bottles as a particular type of gin known as Old Tom. This was a lightly sweetened gin first made popular in 18th century England. It continued in production through the 19th century but its consumption declined in the early 20th century in the face of the London gin commonly consumed today. The style of gin was obviously quite popular as even in their 1906 catalogue the Illinois Glass Company still has a Tom gin bottle listed and illustrated as one of the bottle types available (www.sha.org/bottle/igco_1906.htm P.139). It is also interesting to note that the Tom gin, along with the majority of the bottles in this catalogue, werere still mould blown rather than machine made.

Like the black beer bottles discussed above, the manufacturing evidence for Old Tom gin bottles recovered suggests a date in the 1860s and early 1870s.

Spirits

In total 51 aqua glass bottles or fragments were identified as probably containing spirits such as whisky, gin or brandy. Most of these are of a similar size to the labelled gins, but without any distinguishing features which can help determine exactly what may have been in them. Several bottle bases also carried embossing which identified them as having probably contained whisky. Three are embossed 'JAMES STEWART & CO/SAUCEL PAISLEY' (Figure C.1 i). One of the bases has the embossing imparted in mirror image, clearly an error on the part of the mould maker or bottle manufacturer. James Stewart & Co ran Saucel Distillery in the town of Paisley, in Saucel Parish, from at least the 1830s (http://www.peatfreak.com/alfred-barnard-saucel.php). Examples of these bottles from the Conservatorium site in Sydney have been dated to 1870–1902 (Smith 2001: 1). Four other bases are marked 'JOHN STEWART & CO/KIRKLISTON' (Figure C.1 h). The distillery at Kirkliston was purchased by John Stewart & Co in 1855 and subsequently sold to the Distillers Company Ltd in 1878 (www.peatfreak.com/alfred-barnard-kirkliston.php). Five aqua glass stoppers, embossed J GILLON & Co LEITH are also likely to be from whisky bottles.

One of the more interesting items in this category is a complete olive-green bottle 236 mm tall, with a base diameter of 70 mm, embossed on the base 'HULSTKAMP & ZOON & MOLYN/ROTERDAM' (Figure C.1 e). Hulstkamp, Zoon & Molyn is a Dutch company who were one of the most prolific gin distillers and distributers from 1850 to 1920 (www.antiquebottles.co.za/Pages/Categories/StoneGins.htm). While more well known for their marked stone-gin bottles, the company obviously employed glass bottles for the export of their products as well. Another base from a brown glass bottle 87 mm in diameter is embossed 'WYNAND FOCKINK/AMSTERDAM' (Figure C.1 f). Like Hulstkamp, Zoon & Molyn, Wynand Fockink were also a well known Dutch gin and liquor distiller. The base has the embossing around the outside with a small domed pushup in the centre. Wynand Fockink reportedly started using the Rickett's mould in 1837 to emboss their name on the base. The Rickett's mould was developed around 1821 as a means to impart

embossing on the bases of bottles, by placing a ring with the engraved lettering on it at the bottom of the bottle mould (Jones 2000:153-4).

Champagne and wine

The most common bottles used for champagne and wine are plain ring seals, which get their name from the ring of glass around the top that provides a firm anchorage for the wire holding down the corks of sparkling wines (Tasker 1989: 40). This also made them ideally suited for other carbonated beverages and they were commonly used for beer in New Zealand from the late 19th century. Most ring seals also usually have a deep indentation in the base, with a small rounded projection of glass called a mamelon. This deep push-up has been variously described as a means to encourage any sediment in the wine to settle at the base of the bottle; to help strengthen the bottle from the internal pressures created by sparkling wines; or as a means to deviously reduce the capacity of a bottle. The first two reasons are probably more relevant.

Generally, they are made of green or aqua coloured glass and come in a limited variety of shapes. The champagne-style bottle is still widely used today for most sparkling wines. The main variation in champagne bottles is in their size with larger bottles in the Wanganui Hotel assemblage standing about 300–305 mm high with bases 90–94 mm in diameter and smaller ones being 248–255 mm high with base diameters from 73–77 mm. The other ring seal type that commonly contained sparkling wine is called a hock bottle. These are tall narrow bottles with the only complete example from TS 78 being 306 mm high with a base diameter of 60 mm (Figure C.1 d). Unlike the other ring seals hocks generally do not have the deep push-up at the base. Hocks came in a variety of colours, with two amber glass tops from the Wanganui Hotel site being the other two examples recovered. Sparkling Hocks originated in Germany early in the 19th century.

The other common shape is the Bordeaux type. Bordeaux bottles have a distinct break at the shoulder, which is rounded, and have a straight neck. Normally, they come in lighter shades of glass such as aqua green or sea green, but also in plain aqua. Because they were used for still products such as cognac, they are generally of lighter construction than for sparkling wines. This is also reflected in the application of the ring of glass around the top, which was often quite crude and irregular, and would not be suitable for securing a cork under any kind of internal pressure. Complete cognac bottles ranged from 285–304 mm in height with base diameters between 73–79 mm. Due to the overlap in size and colour between the different types of ring seal it is not possible to assign each fragmentary bottle to a particular type.

Wine also came in different types of bottles. Three examples of black glass bottles in the Bordeaux shape were recovered from the Wanganui Hotel site. The complete vessel from Feature 339 measures 312 mm high with a base diameter of 75 mm. The top has a narrow band similar to a ring seal, while the base exhibits a conical kick-up produced by a bare-iron pontil rod similar to many of the black beers.

Crown-Seal Beer

Fragments of two amber or brown quart bottles were recovered from the top layer of Wanganui Hotel. Both are machine-made, crown-seal bottles. One base was embossed 'ABC AUCKLAND' with the year of manufacture '1940' on the base. Fragments of another bottle were embossed with 'WANGANUI BREWERY COY LTD.' The practice of New Zealand breweries using their own specially embossed bottles was common in the 1920s and largely discontinued by the 1940s.

Condiments

In an age when transportation of goods from one country to another was more a matter of months than days food preservation technologies were a necessity. The increasing movement of commodities and people between Britain and its colonies in the 19th century created a much greater demand for provisions. Entrepreneurial merchants were quick to take up the challenge and by the middle of the 19th century there were several large companies producing preserved foodstuffs for export. A vast array of food products were bottled, canned and preserved in wooden casks. Unlike metal and wood however, glass containers are far more durable in archaeological contexts and so it is these objects from which most of our information regarding imported foodstuffs is gained.

Salad Oil

Salad oil typically came in tall slender bottles, often with embossed or moulded decorated bodies. These bottles contained olive oil which was used as a dressing at the dinner table. This is one of the reasons why the bottles are decorated, the other is that designs for salad oil and pickle bottles would appear to be specific to particular manufacturers, as shown by the labelled examples found from the Wanganui Hotel site (Chapter 5) and from previously excavated sites. Labelled examples of Mortons, Whybrows, and Cross and Blackwell came from the Alexandra East Redoubt excavation in Pirongia, Waikato, and it is certain that bottle designs were specific to manufacturers (pers. comm. Warren Gumbley). The same applies to pickle bottles. Companies sometimes also registered their designs to prevent their competitors from copying them.

Two salad oil bottle designs could be attributed to a manufacturer. The 'twirlie' style bottles used by J. T. Morton are 226–230 mm in height and 46–47 mm in diameter. The 'herringbone' pattern bottles used by George Whybrow are approximately 228 mm high and 50 mm in diameter. Other varieties present include bottles with fluted sides, in two sizes. The larger sized ones are 258–263 mm in height, with base diameters of 60 mm. On the base is an embossed diamond registration mark for the date 10 February 1855 (Figure C.2 c). Registration diamonds were used by condiments manufacturers to try and protect their unique bottle designs from being copied. A smaller bottle with fluted decoration is 206 mm high with a diameter of 50 mm and has a diamond registration mark on the base for April 1870. Examples with the 1855 registration mark on the base have been previously recovered from Fort Ligar, Auckland (Brassey 1989: 15). A bell shaped salad oil from Feature 46 on the Bamber House site is the same form as a top, with intact stopper and lead capsule, found at Fort Ligar (Figure C.2 d). The capsule was embossed with 'HILL & LEDGER LONDON' (Brassey 1989: 15, Figure 5). It is highly likely that this bottle was from the same London firm. Little information is available regarding Hill and Ledger but it is interesting to note that their business in the oil merchant trade was suspended in 1862, with debts amounting to £20,000 (*The Bankers' Magazine and Jounal of the Money Market* 1862, books.google.com). Another bottle from the well at Bamber House (Feature 46) stands 297 mm high with a base 59 mm in diameter (Figure C.2 b). The main decoration is wide flutes running vertically down the body with two ribs around the base of the neck, which is plain. A registration diamond embossed on the base dates to 3 May 1850. A base from this type of bottle was recovered from Albert Barracks, Auckland (Bioresearches 1998: Figure G48). A 'twirlie' variant with a part label is from a manufacturer other than J. T. Morton (the Wanganui Hotel, Feature 535). The bottle is much narrower with a base diameter of 32 mm and stands 232 mm high. The glass is also aqua blue in colour rather than the aqua or aqua green used for Morton bottles. This may well represent an

C.2 (opposite) Condiment bottles. a, Vinegar (WH, F.621); b, Salad oil with registration diamond on base for 3 May 1850 (BH, F.46); c, Salad oil with registration diamond on base for 10 February 1855 (WH, F.621); d, Salad oil (BH, F.46); e – g, Pickle bottles (WH, F.621); h, Miscellaneous condiment (WH, F.525).

attempt by a competitor to cash in on Morton's established bottle design. All salad oil bottles are in aqua coloured glass.

J. T. Morton, London

The firm of J. T. Morton was identified primarily from labels found on 'twirlie' style salad oil bottles. Morton started business as a provision merchant in Aberdeen in

1849. In 1872 he opened a factory in Millwall in London on the Isle of Dogs to meet the demands of the export trade. This factory produced a wide range of canned and preserved foods largely for the overseas market, including supplying the expeditions of Shackleton and Scott to the pole as well as the British Army during World War I (www.british-history.ac.uk/report.asp?compid=46511). However, no reference could be found in relation to Morton's business at 104, 105 and 106 Leadenhall Street, London; as listed on the bottle labels. Whether J. T. Morton's Leadenhall Street branch was a distribution warehouse, central offices, factory, or a combination of the above could not be established.

George Whybrow, London

Several salad oil bottles decorated vertically down the sides with a moulded 'herringbone' type pattern are from the firm of George Whybrow. George Whybrow was in business from 1845 to 1910 (Smith 2001: 4). One complete bottle with a partial label is 228 mm high with a base diameter of 50 mm and weighs 240 g. Unlike the Morton bottles, the Whybrow bottles have an area free of moulded decoration to accomodate the paper label. Stoppers fitting these bottles are also embossed 'GEORGE WHYBROW.'

Pickles & Sauces

Figures C.2 e–h illustrate a range of bottles which probably contained pickles or other preserved foodstuffs. Pickle bottles were typically square or rectangular sectioned bottles in aqua glass with a wide mouth. Like the salad oil bottles discussed below, often they were elaborately moulded, with styles specific to certain manufacturers. A pickle bottle of the same form as Figure C.2 e was found at Omata Stockade, Taranaki, where it carried a Crosse & Blackwell 'Mixed Pickle' label (Prickett 1994: 48). The Wanganui Hotel example is 235 mm high with rectangular base 74 x 60 mm. The Omata examples averaged 237 mm high, with bases 75 x 60 mm. Another bottle from the Wanganui Hotel which has a ribbed front and a shamrock design may have originally contained mustard or pepper sauce. Examples of this type of bottle have been found at His Majesty's Theatre, Auckland and at Omata Stockade, Taranaki and Chancery Street, Auckland (Bioresearches 1998: Vol 1. 92; Prickett 1994: 48; Macready and Goodwyn 1990: 82). One square bottle base 70 mm wide with slightly curved panels and chamfered corners has part of a J. T. Morton label. Another bottle base 65 mm square also has part of a Morton label. Other types include that illustrated in Figure C.2 g, which is a rectangular-sectioned bottle 210 mm high with a base 77 x 60 mm. The bottle has a faintly embossed diamond registration mark on the base which cannot be read. Figure C.2 f shows a round-sectioned bottle 221 mm high by 76 mm in diameter.

Lea and Perrins

Lea and Perrins is one of the most commonly recovered condiment bottles from 19th century sites in New Zealand. Fragments and complete examples of 28 Lea and Perrins bottles were found. Whole examples ranged from 176 to 178 mm in height with base diameters from 50 to 53 mm and weighed between 211 and 260 g. The bottles are easily distinguished as the shape remains relatively unchanged today. All early examples were embossed 'LEA & PERRINS' down the side and 'WORCESTERSHIRE SAUCE' around the shoulder. The glass stoppers were also embossed with 'LEA & PERRINS.' Whole stoppers had a maximum diameter of 25 mm and length of 30 mm. Fourteen bottles were embossed on the base 'ACB Co.' This stands for the Aire and Calder Bottle Company, Castleford, Yorkshire, and

bottles with this marking are known from the late 1850s right through to the 1920s (www.sha.org/bottle/food.htm). The firm started life as Breffit & Co in 1832, with the factory name being the Aire and Calder Glass Bottle works from approximately the 1850s. The firm subsequently became part of United Glass in 1913 (Toulouse 1971:79-80). The present examples date to the 1860s and 1870s.

Vinegar

Vinegar bottles like their salad oil counterparts, were often quite highly decorated as vinegar was as much for use at the table as in the kitchen. The two complete examples are tall aqua glass bottles 358 and 350 mm high, with base diameters of 71 and 73 mm. The taller of the two is decorated with flutes on the lower half of the body and then diamond pattern moulding on the upper half and neck (Figure C.2 a). The other bottle is decorated with scalloped flutes running down the length of the body. We know that such bottles contained vinegar, as examples are occasionally recovered with paper labels or embossing. One aqua bottle base decorated with rows of dimples down the sides had a partial George Whybrow label. As for the salad oil and pickle bottles it is very likely that this dimpled type was only used by George Whybrow.

One other base fragment with fluted sides, carries part of the embossing for the brand 'Champion's Vinegar.' Champion's vinegar brewery was established in 1763 in London and continued until 1910 (Casey and Lowe 2005). The bottle manufacturing technique narrows down the date to between about 1850 and 1900.

Jars

Very few jars that may have been used for preserved foods or condiments were recovered. No common forms such as glass preserving jars were present. Earthenware jars seem to have been more widely used for food storage and are discussed under ceramics.

Aerated Water

Aerated water bottles come in a wide variety of designs and are often useful to the archaeologist as many are often embossed with the name of the bottler or bottle manufacturer allowing them to be dated quite closely. Certain patents and technological innovations are also temporally sensitive. Soft drink such as ginger beer also came in stoneware bottles discussed in Chapter 4.

Hamilton Patent

The Hamilton patent was invented as a response to the increasingly popularity of aerated water in the early 19th century. Traditionally shaped bottles which stood on their bases had the problem for aerated water of gas escaping when the cork dried out. The distinctive shape of the Hamilton patent, also commonly called torpedo bottles, solved this problem by having a curved base which meant they could only be stored on their sides. This ensured that the cork remained moist thus providing a tight seal. By the 1880s and 1890s the torpedo had largely been superseded by new patents such as the Codd.

Codd Patent

All of the Codd bottles recovered were broken and most were collected from on or near the surface after the overburden had been cleared with a hydraulic excavator.

This is reflected in the dates of the bottles which mainly relate to either just before or after the turn of the century. Most are from local Wanganui or Wellington soft drink manufacturers. All of the bottles were manufactured in either Britain or Australia. None were recovered from a secure context.

Aerated Water Manufacturers
C. W. Brodie, Wellington

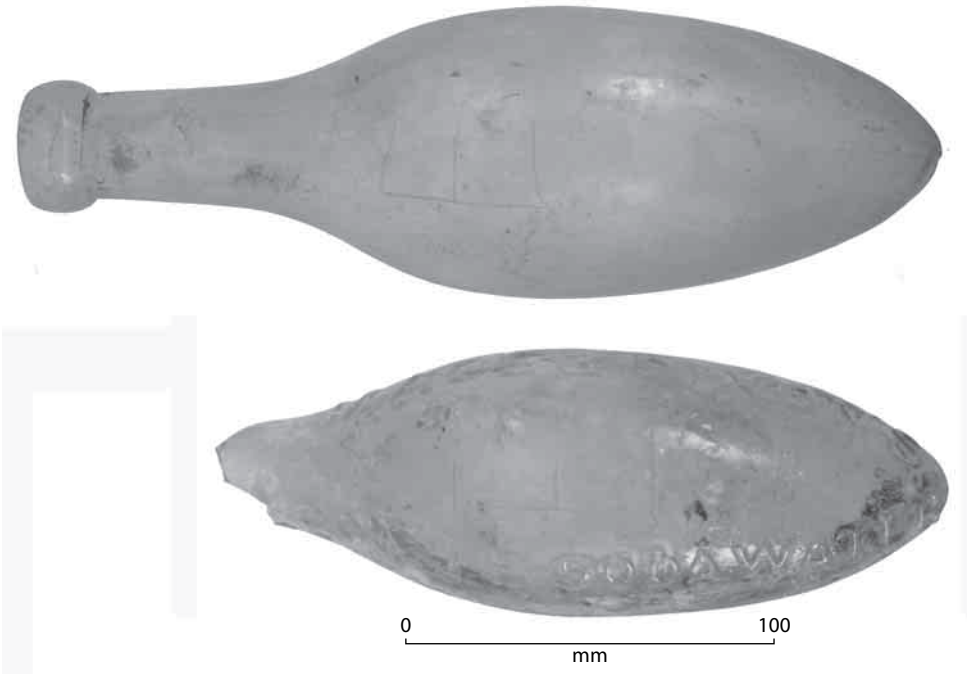
Charles William Brodie took over the aerated water business of George Cooper when he married the widowed Mrs Cooper in April 1888. In 1906 the business was sold to A. G. Saunders (Fisher 2004: 231).

Buisson and Harkness, Nixon Place, Wanganui

It is not known when this firm commenced business but in September 1904 they sold their aerated water factory to J. Hart and Co (*Wanganui Herald* 7 September 1904: paperspast.natlib.govt.nz). Partnerships in the aerated water trade changed regularly and Harkness for instance, seems to have been involved in another business as Kincade and Harkness (members.tripod.com/kiwiiconz/rated_ bottles. htm), but whether this was earlier or later is not known.

Evans, Wanganui

Fifteen torpedos from the Wanganui Hotel site had a large 'E' scratched into one side, which is believed to stand for Evans (Figure C.3). It unknown exactly where his premises were located or at what time he was active. Interestingly one of the bottles inscribed with an 'E' is also embossed with 'MACE & DIXON'S/DOUBLE SODA WATER/HOKITIKA' (the Wanganui Hotel, Feature 337). This graphically illustrates how bottles were moving about the country and hints at the degree of reuse of glass containers in the aerated water industry, at least.



C.3: 'Evans' Hamilton patent aerated water bottles with incised 'E'. The bottle below was originally produced for the firm of Mace and Dixon, Hokitika, and carries the embossing: MACE & DIXON'S/ DOUBLE SODA WATER/ HOKITIKA/NZ (WH, F.339 and F.337).

J. Hart and Co, Nixon Place, Wanganui

As mentioned above J. Hart and Co took over the aerated water factory of Buisson and Harkness in 1904. By August 1909 Joseph Hart had died and the business was put up for tender as a going concern (*Wanganui Herald* 14 August 1909: paperspast.natlib.govt.nz).

E. Hodren, Liverpool Street, Wanganui

E. Hodren was establish in Wanganui from the early 1880s and by May 1898 his business known as the Wanganui Steam Aerated Water and Cordial Factory in Liverpool Street had been taken over by Walter Hodren (*Wanganui Herald* 6 May 1898: paperspast.natlib.govt.nz). Just a few months later in August of 1898 the aerated water factory formerly known as E. Hodren and Sons in Liverpool Street, which was presumably the same business as above, had been taken over by J. McLachlan (*Wanganui Herald* 27 August 1898: paperspast.natlib.govt.nz).

Gower's, Wanganui

Little information was available about this company but there appears to have been a Gower's aerated water factory based in Ridgway Street in the second half of the 19th century. Numerous torpedo bottles associated with Gower's aerated water business were found in Pit Y during salvage excavations in Ridgway Street, conducted following a fire in 1994. The dated ceramics from the pit all post-dated 1860 (Phillips 1994). Robson gives the dates for G. Gower's aerated water manufactory in Wanganui as 1875 – 1883 (Robson 1995: 193).

Mace and Dixon, Hamilton Street, Hokitika

The one bottle from this firm has been recycled by a local Wanganui manufacturer (Figure C.3) but it is interesting to note that Mace and Dixon were established in Hokitika from at least 1865 and only lasted until 1876 (*West Coast Times*: paperspast.natlib.govt.nz).

Thomson and Lewis

The Thomson and Lewis partnership began in 1887 when the Wellington Aerated Water Co went into liquidation and Alfred Lewis purchased the operation. In the same year Alexander Thomson, of Thomson and Co in Dunedin, bought a half share in the company. In 1889 the company name was officially changed to Thomson & Lewis, with the partnership lasting until 1903, when Thomson sold his interests to Lewis. Lewis continued the business, retaining the Thomson and Lewis name (Fisher 2004: 232). In 1893 the company became Thomson Lewis and Co and expanded with branches progressively opened up in Otaki, Wanganui and Petone. The various dates of these branches are well known allowing for accurate dating of Thomson Lewis and Co bottles. In 1896 Thomson and Lewis opened a factory in Wanganui on part of TS 78 (see Chapter 2). The Wanganui branch continued to operate through to the 1970s, changing address from Campbell Street (adjacent to the Wanganui Hotel excavation site) to Glasgow Street in 1965 (Fisher 2004: 233). A crown-seal Thomson and Lewis bottle marked on the base 'AGM/1930/NZ' is likely related to the Wanganui branch.

Bottle Manufacturers
W.M. Barnard and Sons, London

The history of this company is unknown but this company's mark has been recorded on bottles used by Wellington soft drink manufacturers for the period 1900–1912 (Fisher 2004: 258).

Cannington and Shaw Co Ltd, St Helens

The company was started in 1875 by Edwin Cannington and John Shaw. One of their more prominent products were Codd's patent internal stopper bottles. In 1913 Cannington and Shaw along with three other companies, joined together to

Type and Embossing	Date	Total
Hamiltons		
Inscribed 'E'		15
GOWER'S/LEMONADE/WANGANUI		1
MACE & DIXON'S/DOUBLE SODA WATER/HOKITIKA		
Other marks: Inscribed 'E'		1
Codds		
E.BREFFIT & Co ... (base) 1885	1885	1
C.W.BRODIE/WELLINGTON (base) C.W.B	1888–1906	1
BUISSON & HARKNESS/WANGANUI		1
EXTRA STRONG/GLASS/DAN RYLANDS LD/4/ MAKER / BARNSLEY		1
J. HART & CO/WANGANUI		1
E. HODREN/WANGANUI		
Base: E.H. 8442	1897–	1
THOMSON LEWIS & Co/WELLINGTON		
Maker: SYDNEY/ROSS BROS/BOTTLE MAKERS	1894–	1
THOMSON LEWIS & Co/WELLINGTON, WANGANUI & OTAKI		
Maker: CANNINGTON & SHAW CO LTD/MAKERS/ST HELENS		
Base: 3582	1893-1905	8
THOMSON LEWIS & Co/WELLINGTON, WANGANUI & OTAKI		
Maker: CANNINGTON & SHAW CO LTD/MAKERS/ST HELENS		
Base: 1904	1904	6
THOMSON LEWIS & Co/WELLINGTON, WANGANUI & OTAKI		
Maker: WM BARNARD & SONS/LONDON	1893–1905	2
THOMSON LEWIS & Co/WELLINGTON, WANGANUI, OTAKI & PETONE	1905–1909	2
THOMSON LEWIS & Co/WELLINGTON, WANGANUI, OTAKI & PETONE		
Maker: WM BARNARD & SONS/LONDON	1905–1909	1
THOMSON LEWIS & Co/WELLINGTON, WANGANUI, OTAKI, PETONE & LEVIN	1909–1912	1
THOMSON & LEWIS & Co/WELLINGTON, WANGANUI, OTAKI, PETONE & LEVIN	1909–1912	1
Maker: WM BARNARD & SONS/LONDON	1905–1909	1
Crown-Seal		
THOMSON LEWIS & CO LTD/WELLINGTON, PETONE & WANGANUI		
Maker: AGM 1930 NZ	1930	1
Total		37

Table C.6. Embossing and marks on aerated water bottles.

form what would become United Glass Bottle Manufacturers Ltd (Toulouse 1971: 148–49).

Ross Brothers, Sydney

The Ross Brothers bottle works were formed by two sons of Joseph Ross in 1894, after their father's glass business had been bought out by a competitor and demolished (www.adb.online.anu.edu.au/biogs/AS10420b.htm).

AGM, Penrose, New Zealand

The Australasian Glass Manufactory did not acquire a clear glass kiln at its Penrose plant for the production of small mouthed containers until 1927. Often on these early products the year of production is embossed on the base.

Pharmaceutical

Pharmaceutical bottles can come in all shapes and sizes but many share common attributes such as the type of top and neck finish and certain types of product were more likely to come in particular shaped bottles. These characteristics and common types are well described by, for instance, Fike (1987: 7–17) and Tasker (1989: 3–34, 71–83). Many of the medicinal bottles found are plain generic containers, where the original contents or producer can only be guessed at. Most of these would once have had paper labels but in most archaeological contexts these do not survive. The more informative bottles are those which carry embossing on either the body or the base, that conveys information about either the manufacturer of the bottle or the product it contained.

Changes in bottle making technology meant that in the second half of the 19th century it became easier and more cost efficient to produce embossed containers. By the 1890s about forty percent of glass bottles in America were embossed (Fike 1987: 4). One of the biggest markets for this service was among the thousands of entrepreneurs producing patent and proprietary medicines. Patent medicines were those where the formula itself has been patented, whereas with proprietary medicines it was usually only the container, brand name or label that was patented (Fike 1987: 3). Both these types of medicine could be sold without prescriptions and most were based more on quackery and deception than science. Some products claimed to cure up to twenty or thirty ailments, but most of them contained little more than alcohol, sugar and water (Fike 1987: 3).

Chemists and other licensed practitioners also used embossed glass containers. Prior to the 1880s the situation in New Zealand was somewhat ambiguous because there was no formal regulation of pharmacists. This changed in 1880 with the passing of the Pharmacy Act, which required all practising chemists to be registered from 1 January 1881 and by 1883, 270 chemists had done so (Tasker 1989: 78). It was around this time that chemists began using bottles with their name and address embossed on the glass (*ibid*).

Sarsaparilla

In the 19th century sarsaparilla was promoted for its supposed medicinal properties, with various other ingredients being added by individual producers to improve these qualities. At least five bottles from UCOL carry part of the embossing 'DR TOWNSEND'S //SARSAPARILLA//ALBANY/N.Y.' although all eleven sarsaparilla bottles are likely to be from this firm. None are complete but all are in the same shade of emerald-green glass and have the same French-square shape,

with chamfered corners. The bottle fragments are embossed on three sides with the plain side reserved for the paper label. Samuel Townsend first sold his sarsaparilla in 1839 and later moved to New York in 1846, where he patented the brand. In 1851 he sold the rights to the brand and it continued to be marketed up to the end of the 1880s. Embossed bottles, such as the present examples, were discontinued in the 1870s (Fike 1987: 220).

Schnapps

Today considered a purely alcoholic beverage, schnapps was marketed almost exclusively for its medicinal properties in the 19th century. Only three glass schnapps bottles were recovered, including one complete example, all by the company of Udolpho Wolfe. A complete bottle from TS 78, 73 mm square by 231 mm high, is embossed on three sides and reads 'UDOLPHO WOLFE's//AROMATIC SCHNAPPS//SCHIEDAM'. Udolpho Wolfe did not start using this inscription until 1861, with the first recorded shipment to New Zealand not arriving until October 1863 (Low 2005: 142). The use of the word 'Schiedam' would appear to be a marketing ploy, as Wolfe was in fact based in New York (Fike 1987: 187). Schnapps continued to be popular in New Zealand into the 1920s (Tasker 1989: 52).

Bitters

Just five bottles were recovered which most likely contained bitters. Bitters were generally high alcohol concoctions, in the region of twenty to forty percent, with a range of herbs and other substances added, marketed for their medicinal properties in curing stomach complaints and a raft of other diseases. The herbs and other ingredients often gave the brews a bitter taste, hence the name. Fragments of three brown glass bottles were found with partly preserved paper labels (the Wanganui Hotel site, Features 339 and 395). The bottles have a base diameter of 68 mm and would appear to have a bulge neck. The partial labels identify the brand as 'Senner's Stomach Bitter' from Dusseldorf in Germany. No further information could be found about this company. Two other brown bottle bases of a similar size, 68 mm in diameter, are embossed around the edge 'JOH von PEIN/ALTONA' (Figure C.1 g). Again no information could be found regarding this mark, although the bottle is likely to have contained either bitters or other alcohol.

Perfume

Perfume bottles are easily distinguished as they are usually of high quality clear glass, have a small capacity (1 to 2 fluid ounces) and have carefully finished tops, with a tightly fitting glass stopper. Many bottles were embossed with the name of the manufacturer. The most commonly recovered perfume and personal beauty product manufacturer represented in the assemblage is John Gosnell and Co of London. The company traces its roots back to 1677 but was most prolific in the Victorian era trading under the name of John Gosnell and Co (www.johngosnell.com). The company is still in existence today. Ten bottles were recovered in two different shapes. Two of the bottles are rectangular sectioned and of blue coloured glass. The complete example measures 135 mm high, with a base 52 x 33 mm. Both are embossed around the edge of the base 'JOHN GOSNELL & CO LONDON.' Eight of the bottles are roughly rectangular in section with a flat front and back and the side panels being curved. The three whole examples measure 125 mm high, with a base 52 x 42 mm. All are of aqua coloured glass and embossed the same as the blue bottles. It is not known exactly what product either of these two bottle types may have contained.

Other perfume bottles include two from the Rimmel company, started by Eugene Rimmel in London in 1834 and still in business today. The bottle embossed 'E RIMMEL/ LONDON' stands 79 mm high and has a base diameter of 36 mm and probably dates between the middle of the century and 1887 when Eugene Rimmel died. The other bottle is 126 mm high and has a rectangular base 53 x 32 mm and probably dates after 1887 (Figure C.4 e).

A bottle embossed 'ED PINAUD/PARFUMEUR/PARIS' (80 mm high with a base diameter of 38 mm) is from the firm of Edouard Pinaud established early in the 19th century and continuing today. Another rectangular bottle, 88 mm high with a base 43 x 26 mm, is embossed 'PIESSE & LUBIN/LONDON' with '1½ Oz' on the base (Figure C.4 h). A round-sectioned bottle, 89 mm high with a base diameter of 43 mm, is embossed 'ROGER & GALLET/PARIS' with an additional 'R & G' monogram in the centre (Figure C.4 j). Roger and Gallet were established in Paris in 1862 and continue to this day (beautyexclusive.com/rogergallet.html). A fragmentary bottle has the partial embossing 'PARIS' and may be from one of these two French companies (Figure C.4 i). One other bottle, 92 mm high with a base diameter of 42 mm, is embossed 'F WOLFF & SOHN/KARLSRUHE' and is from Germany (Figure C.4 k).

Castor Oil

In the 19th century castor oil was used primarily for medicinal purposes. Four castor oil bottles were recovered. All are of cobalt blue glass, with the one complete example measuring 215 mm high with a base diameter of 43 mm.

Vials

Vials are small bottles, usually round sectioned and of clear glass, that were used for products such as oil extracts that were only meant to be taken in small doses. Typically, they had pressed lips and would have been sealed with a cork. None of the examples from UCOL were embossed. Of the fifteen complete clear glass vials the length varies from 130 to 40 mm, with the base diameters ranging from 19 to 29 mm. Only one different style vial was found, an octagonal section one 70 mm high, with a base width of 20 mm.

Pill Bottles

Pill bottles are normally small bottles which have a wide mouth in relation to their body size and come in a range of shapes and sizes. The single embossed example was found in the footing trench for the brick wall along the back of Bamber House section. The bottle is of brown glass and measures 65 mm high with a rectangular base 29 x 20 mm. It is embossed: 'MORSE'S INDIAN/ROOT PILLS// W.H.COMSTOCK//DOSE 2 TO 4' and on the base 'BLOWN IN USA'. William Howes Comstock, originally from London, moved to Morristown, New York, in the late 1870s and established W.H. Comstock Co. (Fike 1987: 202). At one time the company even had offices in New Zealand and it is not known exactly when the Comstock name became disassociated with the product. Morse's Indian root pills were apparently "... a general corrective for people who eat too much and drink too much" (Fike 1987: 202).

Vaseline

One clear glass jar with a screwtop finish from Feature 526 on the Hotel site is embossed 'VASELINE/CHESEBROUGH/NEW YORK' (Figure C.4 g). The

machine-made jar is 82 mm high with a diameter of 52 mm and threaded closure. Threaded closures were introduced for vaseline jars in 1908 (Fike 1987: 56).

Baby Feeder

One of the more interesting items recovered was a banjo shaped baby feeder bottle from Feature 514 on the Wanganui Hotel site. The bottle is of clear glass and is 143

mm with a body 100 mm wide and 52 mm thick. The front is embossed 'NEW ZEALAND DRUG CO LTD/KIWI FEEDING BOTTLE' (Figure C.4 f). This company was set up in Dunedin in 1879 as a limited liability company by the already established firm of Kempthorne, Prosser and Co (www.dnzb.govt.nz). Kempthorne, Prosser and Co's New Zealand Drug Co Ltd imported drugs and medical supplies, and also manufactured pills and patent medicines. Warehouses were established in Auckland, Wellington, Christchurch and Dunedin. (www.dnzb.govt.nz). The New Zealand Drug Co Ltd existed until 1978 (www.library.otago.ac.nz/pdf/hoc_fr_bulletins/23_ bulletin.pdf). The 'banjo' shape of the feeding bottle represents an older style probably dating to the 1880s or 1890s. Already by 1895 new designs were coming on the market with the chief concern of the older style vessels being safety and hygeine. The new bottles had an opening at both ends and could be flushed out and cleaned more efficiently. The older style bottle was difficult to clean properly but remained in use for over twenty years, despite the medical profession having grave doubts over the high mortality rate linked with its use (Watts 2005).

Miscellaneous

Barry's Tricopherous

Barry's Tricopherous was a hair product marketed as stimulating hair growth. The ingredients were reportedly 97 percent alcohol, 1.5 percent castor oil and the remainder tincture of cantharides, otherwise known as Spanish fly (www.hair-quackery.com). Alexander C. Barry is first recorded as being associated with this product in 1851 and it continued to be produced by various firms as late as 1982 (Fike 1987:122). One complete aqua blue bottle was found, measuring 153 mm high with a rectangular base 54 x 31 mm (the Wanganui Hotel, Feature 515). The bottle is embossed: 'BARRY'S//TRICOPHEROUS/FOR THE SKIN/AND HAIR//NEW YORK//DIRECTIONS/IN THE/PAMPHLET' (Figure C.4 a).

Edward Cleaver, 63 Oxford Street

Two clear glass bottles were found in Feature 515 at the Wanganui Hotel site embossed down the sides 'EDWd CLEAVER//63 OXFORD STREET' (Figure C.4 d). Both bottles are rectangular sectioned: one is 111 high with a bas measuring 51 x 32 mm; the other is 99 mm high with a base measuring 41x 26 mm. In 1863 Edward Cleaver was advertising himself as a 'patent medicine vendor, perfumer, chemist, and druggist' from an address at 63 Oxford Street, London (www.archive.org/details/houseofharrisonb00harrrich).

Joseph Dakin

A virtually complete blue coloured bottle 141 mm high with a rectangular base 58 x 38 mm is embossed 'JOSEPH DAKIN/POPLAR/[LONDO]N' (the Wanganui Hotel, Feature 540). In 1853 Joseph Dakin was listed as a chemist based at 248 High Street, Poplar (www.nationalarchive.gov.uk). Poplar is an area in southeast London.

A. J. White

A small rectangular sectioned clear glass bottle 126 mm high with a base 45 x 24 mm is embossed 'A. J. WHITE//MADE IN ENGLAND//LONDON' (the Bamber House, Feature 46). Alfred J. White was initially based in New York, producing popular remedies and medicines, but in 1884 he established A. J. White Ltd in London and shifted the majority of his operations there (Corley 1987:119). In 1897

C.4 (opposite). a, Barry's Tricopherous (WH, F.515); b, Cower chemist, Wanganui (WH, F.515); c, ink (WH, F.383); d, Edward Cleaver (WH, F.515); e, Rimmel, toiletry bottle (WH, F.515); f, New Zealand Drug Co Ltd, Kiwi Feeding Bottle (WH, F.514); g, Vaseline (WH, F.320); h – k Perfume, h, Piesse & Lubin, London (WH, F.515); i, 'Paris' (WH, F.540); j, Roger & Gallet, Paris (WH, F.540); k, F. Wolff & Sohn, Karlsruhe (WH, F.515); l, decanter (WH, F.540); m, Dietz and Co bowl base (WH, F.464); n, Stemmed glass (WH, F.525); o, Stemmed glass (WH, F.540); p, Stemmed glass (WH, F.621); q, Tumblers (WH, F.417 and 621).

he sold the business but a new venture under the same name was floated and continued until 1956 (Corley 1987:119, 122).

Ayer

A rectangular sectioned aqua glass bottle, 78 mm wide by 37 mm thick and 190 mm high, is embossed on the base 'AYER' (the Wanganui Hotel site, Feature 515). James Cook Ayer started his business from a drugstore in Lowell, Massachusetts in 1841 and by 1847 was selling his products in embossed containers (Fike 1987: 94). He died in 1878 and the business was taken over by Frederick Ayer and continues to be run by the family today.

Embossed Miscellany

One side fragment from an aqua rectangular sectioned bottle carries the partial embossing 'BOSTON', and is likely to be from an American company.

Glass Tableware

Glass tableware was typically made of clear glass. In the first half of the 19th century clear or colourless glass was achieved by adding a potash-lead flux to the glass batch to negate or change the effects of impurities in the sand. In 1864 William Leighton developed a formula in America for soda-lime glass which produced colourless glass which was lighter and cheaper than lead glass, and practically all new designs introduced after the 1860s were made of this glass (Jones 2000: 151). Items of glass tableware are both practical and aesthetic with most decorated in some way. This can take the form of simple or complex mould imparted designs, extra glass or different coloured glass added to a vessel, or designs cut or etched into the surface. While non-mechanised techniques continued in use throughout the century for high-end lines, machine pressed glass began to be used for a wide range of glass tableware from 1828 (Jones 2000: 161).

Tumblers

Plain pressed glass tumblers are the most common item of glass tableware recovered from 19th century archaeological contexts in New Zealand. The Bamber House and Wanganui Hotel sites are no exception with 204 of 247 items of glass tableware being tumblers. The majority of these were found on the Wanganui Hotel site. Virtually all the tumblers are decorated with panels or flutes down the sides. Pressed panelled tumblers were first introduced in the late 1830s and continue in use today (Jones 2000: 225). Several whole or nearly complete tumblers (Figure C.4 q) ranged in height from 92–103 mm, with two single examples being 113 mm and 140 mm high. A few bases from smaller sized tumblers were also recovered.

Stemmed Glasses

While less common than tumblers the stemmed glassware showed more variety (see Figures C.4 n, o, p). Round bases range from 52 to 57 mm in diameter, with two being slightly larger at 65 mm. Most of the bowl fragments are decorated, with fluting being the most common. Smaller glasses were also represented with three hexagonal shaped bases being 46 mm wide, with a starburst pattern moulded on the base and a diamond pattern on the bowl fragments. Two other round bases are 48 mm in diameter. The variety suggests that a range of alcohol, from still and sparkling wine through to sherry/port and brandy was being consumed.

Of the six stemmed glasses found at Bamber House three came from Feature 46, the well. Only the bases were recovered, all plain and between 56 and 58 mm in diameter.

Decanters

Decanters were only found at the Wanganui Hotel site with 6 tops and 2 stoppers recovered. Only Feature 540 contained more than one diagnostic part. Three of the four tops have wide flared out rims and three ribs of glass running horizontally around the neck (Figure C.4 l). Both the tops and the ribs show evidence of hand manufacture. One other decanter top of the same form was recovered from Feature 591. These tops probably represent part of a set. A decanter of the same form was recovered from the Victoria Hotel site, Auckland, dated to 1865 or before (Brassey and Macready 1994: 110).

Other

Other items of glass tableware from the Wanganui Hotel site include the base of a bowl 72 mm in diameter embossed on the underside 'DIETZ & CO/NEW YORK' (Figure C.4 m). No information could be found about this mark so it is not known whether it represents a manufacturer or retailer. The fragment has mould imparted decoration and a pedestal style base with the sides flaring out from this. The inside of the bowl has small runs of glass and the glass itself has air bubbles within it suggesting a date around the middle of the 19th century. Fragments of other bowls or dishes were also found decorated with either simple panels or flutes, or no decoration.

The only other items of decorative glassware were fragments of a cobalt blue vase from Feature 621 decorated with hand-painted cream coloured leaves and flowers with gilt highlights.

Other Glass
Window Glass

Very little window glass was recovered from either site in general and none that can be directly associated with an individual building or phase of a building. Generally, fragments of window glass are not useful for analysis, as the variations caused by different methods of manufacture are not readily apparent in small pieces. Just 1895 g of window glass was recovered from the Wanganui Hotel site, ranging in thickness from 1.5 to 3 mm. A single piece of thicker glass from a door window 7.5 mm thick and reinforced with wire mesh was also recovered. The only interesting piece was a fragment 2.3 mm thick weighing 29 g from Feature 621 which had part of a printed sheet of paper stuck to one side. The paper shows a Victorian street scene with the wording at the bottom 'London ... Harwood, 26 Fenchurch...'. John and Frederick Harwood were based at 26 Fenchurch Street, London, in the mid 19th century (www.nationalarchive.gov.uk). Whether they were artists or merely the printers or publishers of scenes bearing their name is unclear.

Even less was found on the Bamber House site, with just 1080 g recovered. Virtually all of this was found within disturbed contexts incorporating building rubble and debris from the demolition of the house and so probably relates to the later phases of the occupation of the house and its demolition.

Appendix D Metal artefacts

Feature	Nails	Spikes	Horseshoe	Hardware	Tool	Band	Bar/rod	Can/container	Matchbox	Hook	Pipe	Sheeting	Wire	Brass miscellany	Miscellaneous	Total
2	452	4	4	2	2	2			1	6	1	4		73		
3	9 34	22	54	10	27	218		7	5	155	9		255	805		
14	2													2		
21	7				1	1								9		
22	2				1									3		
29	3				1								1	5		
30					1	1								2		
32	1													1		
33	5						1			1				7		
37						1				2				3		
41	1													1		
45	2													2		
46	252	9	2			10		1		1	1	1		52		
52	1													1		
54	4	1												5		
55	2													2		
56	4													4		
64	9	2				1							1	13		
66													1	1		
69	8		2			2								12		
71	5				1									6		
72					1									1		
73	3				1									4		
80	2													2		
82	1													1		
83	1									2		1		4		
84	8													8		
85	1													1		
90	1													1		
93	2													2		
102	10		1		1	1								1	14	
106		4													4	
109	4														4	
114	1														1	
117	1														1	
120	2														2	
121	2														2	
125						1									1	
126	1														1	
127	2										1				3	
131					1	1					19			1	22	
137	5														5	

Table D.1. Metal artefacts from the Bamber House, minimum numbers.

Feature	Nails	Spikes	Horseshoe	Hardware	Tool	Band	Bar/rod	Can/container	Matchbox	Hook	Pipe	Sheeting	Wire	Brass miscellany	Miscellaneous	Total
142	5															5
147	2															2
148	21															21
149	1															1
154	3															3
159	2															2
164	1															1
165	1															1
170	2															2
183	2															2
184	3															3
188	2															2
192	2															2
194	4															4
200	7					1						4				12
204	1															1
209	3															3
211	3															3
218	2															2
220	1															1
230	1															1
232	5															5
233	23	1													2	26
235							1									1
244	9														1	10
247	5														1	6
259	2															2
260	4															4
	299	43	39	62	14	40	237	1	1	7	6	191	11	6	264	1221

Table D.1. continued…

Feature	Nails	Spikes	Horseshoe	Hardware	Tool	Band	Bar/rod	Can/container	Matchbox	Hook	Pipe	Sheeting	Wire	Brass miscellany	Miscellaneous	Total
208	23	2								1	1			2	1	30
255	1															1
256	5															5
258	1														1	2
266	1															1
267	2															2
269	1															1
274	1					1										2
277		1														1
278	2															2
282	4															4
286	1															1
287	1															1
288	8															8
304	8															8
307	8					1					1	2	1		2	15
308	50			1					1							52
309	17								1							18
315	1															1
319	2															2
320	37			1		1		2				1			2	44
325	1															1
331	2															2
332	2															2
337						2	1	3				2				8
338								1							1	2
339															1	1
341	1															1
343	6															6
344	1															1
346	3															3
347	16		2													18
359	7					1		1								9
360	31				1							1				33
361	2															2
362	1							1								2
365	2															2
369	1															1
370	54					1		3	6			1			1	66
374								1								1
375														1		1
379	1	1														2
382	1															1
383	5						1				1	5	1			13

Table D.2. Metal artefacts from the Wanganui Hotel site, minimum numbers.

Feature	Nails	Spikes	Horseshoe	Hardware	Tool	Band	Bar/rod	Can/container	Matchbox	Hook	Pipe	Sheeting	Wire	Brass miscellany	Miscellaneous	Total
387									1							1
395						2										2
396	5															5
411													1			1
417	3				1	1						1				6
420	1															1
424	2															2
432	1															1
434	3															3
442	1															1
443	2															2
448	1															1
449	1															1
451	4															4
454	1															1
455	1															1
456	4															4
463	8						1	1								10
464	28			1					3		1	1		1		35
468	13															13
475	3															3
479												1				1
482	10			1												11
485	7					1			1		1					10
487	8	1														9
489	1															1
492								1								1
496	3															3
502	1															1
504	2															2
512	1															1
515	11	1				2				1		1				16
520	1															1
521	5															5
525				2		1							1			4
526	3						1	2								6
530	2															2
540	69			1					1							71
546												1	1			2
547	1															1
548	6														1	7
550	9										1					10
563		1														1
565	1															1

Table D.2. continued…

Feature	Nails	Spikes	Horseshoe	Hardware	Tool	Band	Bar/rod	Can/container	Matchbox	Hook	Pipe	Sheeting	Wire	Brass miscellany	Miscellaneous	Total
575	5															5
589	3															3
601	1															1
621	1			2		1						1		1		6
	544	7	2	9	2	15	4	16	14	2	6	18	5	5	10	659

Table D.2. continued…

Appendix E Ceramics data

Pattern	Feature	Colour	Vessel	Fabric	MNV	Total
UCOL 002	46	Blue	Cup	Whiteware	1	3
UCOL 002	46	Blue	Saucer	Whiteware	2	
UCOL 020	46	Light blue	Plate	Whiteware	1	1
UCOL 023	46	Blue	Saucer	Whiteware	1	1
UCOL 024	46	Blue	Bowl	Whiteware	1	1
UCOL 033	205	Polychrome	Plate	Whiteware	1	1
UCOL 081	46	Purple	Unidentified	Whiteware	1	1
UCOL 101	217	Blue	Mug/bowl	Whiteware	1	1
UCOL 119	46	Flow blue	Jug	Whiteware	1	1
UCOL 120	46	Blue	Cup	Whiteware	1	2
UCOL 120	184	Blue	Saucer	Whiteware	1	
UCOL 121	46	Blue	Plate	Whiteware	1	1
UCOL 122	46	Purple	Bowl	Whiteware	1	1
UCOL 123	120	Brown	Plate	Whiteware	1	1
UCOL 126	120	Blue	Saucer	Whiteware	1	1
UCOL 127*	120	Polychrome	Unidentified	Whiteware	1	1
UCOL 128	120	Green	Plate	Whiteware	1	1
UCOL 129	120	Brown	Cup/jug	Whiteware	1	1
UCOL 135	69	Blue	Cup	Whiteware	1	1
UCOL 136	2	Grey	Cup	Whiteware	1	3
UCOL 136	2	Grey	Saucer	Whiteware	1	
UCOL 136	69	Grey	Cup	Whiteware	1	
UCOL 138	69	Green	Cup	Whiteware	1	1
UCOL 139	228	Green	Chamber pot	Whiteware	1	1
UCOL 140	228	Blue	Cup	Whiteware	1	1
UCOL 141	228	Green	Chamber pot	Whiteware	1	1
UCOL 143	233	Blue	Plate	Whiteware	1	2
UCOL 143	259	Blue	Bowl	Whiteware	1	
UCOL 144	233	Blue	Plate	Whiteware	1	1
UCOL 145	233	Flow blue	Saucer	Whiteware	1	1
UCOL 153	12	Blue	Cup	Whiteware	1	2
UCOL 153	148	Blue	Saucer	Whiteware	1	
UCOL 154	217	Blue	Cup	Whiteware	1	1
UCOL 156	217	Dark blue	Saucer	Whiteware	1	1
UCOL 157	217	Blue	Saucer	Whiteware	1	1
UCOL 158	217	Blue	Plate	Whiteware	1	1
UCOL 159	217	Blue	Saucer	Whiteware	1	1
UCOL 160	217	Blue	Saucer	Whiteware	1	1
UCOL 161	217	Blue	Bowl	Whiteware	1	2
UCOL 161	217	Blue	Saucer	Whiteware	1	
UCOL 162	217	Blue	Cup	Whiteware	1	1
UCOL 163	217	Flow blue	Cup	Whiteware	1	1
UCOL 164	217	Flow blue	Cup	Whiteware	1	1
UCOL 166	217	Blue	Mug/bowl	Whiteware	1	1
UCOL 172	46	Black	Bowl/jug	Whiteware	1	1
UCOL 173	46	Brown	Cup	Whiteware	1	1
UCOL 174	46	Black	Mug/jug	Whiteware	1	1
UCOL 175	46	Flow blue	Plate	Whiteware	1	2

Table E.1. Unidentified transfer printed patterns from the Bamber House site

Pattern	Feature	Colour	Vessel	Fabric	MNV	Total
UCOL 175	54	Flow blue	Cup	Whiteware	1	
UCOL 176	46	Blue	Saucer	Whiteware	1	1
UCOL 177	46	Blue	Plate	Whiteware	1	1
UCOL 178	46	Blue	Saucer	Whiteware	1	1
UCOL 179	46	Blue	Plate/saucer	Whiteware	1	3
UCOL 179	217	Blue	Saucer	Whiteware	1	
UCOL 179	233	Blue	Plate	Whiteware	1	
UCOL 180	46	Black	Saucer	Whiteware	1	1
UCOL 181	2	Purple	Saucer	Whiteware	1	1
UCOL 182	2	Purple	Saucer	Whiteware	1	1
UCOL 183	2	Purple	Saucer	Whiteware	1	1
UCOL 184	2	Black	Saucer	Whiteware	1	1
UCOL 186	2	Green	Plate	Whiteware	1	1
UCOL 187	2	Green	Plate/saucer	Whiteware	1	1
UCOL 188	2	Green	Cup	Whiteware	1	1
UCOL 189	2	Brown	Saucer	Whiteware	1	1
UCOL 191	217	Blue	Plate	Whiteware	1	1
UCOL 193	71	Dark blue	Plate	Whiteware	1	1
UCOL 194	7	Blue	Saucer	Whiteware	1	1
UCOL 195	7	Blue	Cup	Whiteware	1	1
UCOL 198	45	Red	Saucer	Whiteware	1	1
UCOL 199	19	Light blue	Saucer	Whiteware	1	1
UCOL 200	19	Flow blue	Cup	Whiteware	1	1
UCOL 201	19	Flow blue	Saucer	Whiteware	1	1
UCOL 202	259	Blue	Plate	Whiteware	1	1
UCOL 203	259	Brown	Cup	Whiteware	1	1
UCOL 204	259	Blue	Saucer	Whiteware	1	1
UCOL 205	259	Black	Bowl	Whiteware	1	1
UCOL 206	72	Flow Blue	Plate	Whiteware	1	1
UCOL 208	233	Blue	Plate	Whiteware	1	1
UCOL 209	233	Black	Saucer	Whiteware	1	1
UCOL 210	233	Blue	Saucer	Whiteware	1	1
UCOL 211*	33	Polychrome	Plate/saucer	Semi-Vitreous	1	2
UCOL 211*	84	Polychrome	Cup	Whiteware	1	
UCOL 212*	2	Polychrome	Plate	Whiteware	1	2
UCOL 212*	2	Polychrome	Saucer	Whiteware	1	
UCOL 213	64	Blue	Plate	Whiteware	1	1
UCOL 214	72	Green	Cup	Whiteware	1	2
UCOL 214	83	Green	Saucer	Whiteware	1	
UCOL 216	83	Blue	Saucer	Whiteware	1	1
UCOL 217	83	Blue	Cup	Whiteware	1	1
UCOL 218	83	Blue	Jug	Whiteware	1	2
UCOL 218	120	Blue	Jug	Whiteware	1	
UCOL 220	247	Purple	Saucer	Whiteware	1	1
UCOL 221	244	Grey	Saucer	Whiteware	1	1
UCOL 226	2	Blue	Saucer	Whiteware	1	1
UCOL 227	2	Blue	Cup	Whiteware	1	1
UCOL 228	2	Blue	Cup	Whiteware	1	1
UCOL 229	2	Blue	Cup	Whiteware	1	1
UCOL 230	2	Blue	Saucer	Whiteware	1	1

Table E.1. continued…

Pattern	Feature	Colour	Vessel	Fabric	MNV	Total
UCOL 231	2	Blue	Cup	Whiteware	1	1
UCOL 232	2	Blue	Saucer	Whiteware	1	1
UCOL 233	2	Blue	Cup	Whiteware	1	1
UCOL 234	2	Blue	Plate	Whiteware	1	1
UCOL 235	2	Blue	Saucer	Whiteware	1	1
UCOL 236	2	Blue	Bowl/tureen	Whiteware	1	1
UCOL 239	2	Flow blue	Bowl/dish	Whiteware	1	1

*Pattern also has enameled or painted decoration.

Table E.1. continued…

Feature	Vessel	Pattern	Height (mm)	Diameter (mm)*	Length (mm)	Width	MNV
46	Cup	Nymph	84	105			3
46	Saucer	Nymph	37	167			3
46	Cup	UCOL 002	67	120			1
46	Plate	Rhine	30	262			1
46	Plate	Willow	26	260			1
46	Serving platter	Willow	36		330	250	1
46	Plate	UCOL 020	23	200			1
46	Saucer	UCOL 023	34	160			1
233	Plate	Willow		c. 223			1

*Diameter refers to the maximum diameter

Table E.2. Dimensions for reassembled transfer printed vessels from the Bamber House site.

Pattern	Feature	Colour	Vessel	Fabric	MNV	Total
UCOL 001	621	Grey	Chamber pot	Whiteware	1	1
UCOL 002	621	Blue	Saucer	Whiteware	1	1
UCOL 003	621	Green	Cup	Whiteware	1	1
UCOL 004	621	Grey	Saucer	Whiteware	1	1
UCOL 005	621	Blue	Lid	Whiteware	1	1
UCOL 008	621	Green	Plate	Whiteware	1	1
UCOL 009	621	Green	Bowl?	Whiteware	1	1
UCOL 010	621	Green	Bowl/dish	Whiteware	1	1
UCOL 012	621	Blue	Cup	Whiteware	1	1
UCOL 013	540	Black	Chamber pot	Whiteware	1	2
UCOL 013	621	Black	Dish	Whiteware	1	
UCOL 013	359	Black	Dish Lid	Whiteware	1	
UCOL 014	621	Red	Plate/saucer	Whiteware	1	1
UCOL 015	621	Red	Bowl?	Whiteware	1	1
UCOL 016	621	Blue	Bowl	Whiteware	1	1
UCOL 020	320	Light blue	Plate	Whiteware	1	3
UCOL 020	525	Light blue	Plate	Whiteware	1	
UCOL 025	515	Blue	Tureen/serving dish lid	Whiteware	1	1

Table E.3. Unidentified transfer printed patterns from the Wanganui Hotel site

Pattern	Feature	Colour	Vessel	Fabric	MNV	Total
UCOL 026	525	Blue	Serving dish/ tureen stand	Whiteware	1	1
UCOL 029	525	Green	Saucer	Whiteware	1	1
UCOL 030	525	Purple	Cup/saucer	Whiteware	1	1
UCOL 032	525	Blue	Plate	Whiteware	1	1
UCOL 033*	370	Polychrome	Plate	Whiteware	1	4
UCOL 033	383	Grey	Plate	Whiteware	1	
UCOL 033*	515	Black	Plate	Whiteware	1	
UCOL 033*	525	Black	Plate	Whiteware	1	
UCOL 038	540	Blue	Chamber pot	Whiteware	1	1
UCOL 041	540	Blue	Saucer	Whiteware	1	1
UCOL 042	540	Flow blue	Cup	Whiteware	1	1
UCOL 043	540	Flow blue	Saucer	Whiteware	1	1
UCOL 045	540	Brown	Bowl	Whiteware	1	1
UCOL 046	540	Green	Jug	Whiteware	1	1
UCOL 047	208	Blue	Saucer	Whiteware	1	2
UCOL 047	515	Blue	Saucer	Whiteware	1	
UCOL 048	515	Grey	Plate	Whiteware	1	1
UCOL 049	515	Blue	Lid	Whiteware	1	1
UCOL 050	515	Black	Chamber pot	Whiteware	1	1
UCOL 051	515	Green	Bowl/serving dish	Whiteware	1	2
UCOL 051	515	Green	Bowl/dish	Whiteware	1	
UCOL 054	515	Brown	Saucer	Whiteware	1	1
UCOL 061	515	Purple	Chamber pot	Whiteware	1	1
UCOL 063	485	Purple	Saucer	Whiteware	1	2
UCOL 063	515	Plate	Purple	Whiteware	1	
UCOL 066	370	Black	Cup	Whiteware	1	2
UCOL 066	515	Black	Cup	Whiteware	1	
UCOL 067	515	Purple	Chamber pot	Whiteware	1	1
UCOL 068	320	Green	Serving platter	Whiteware	1	1
UCOL 069	320	Flow blue	Cup	Whiteware	1	1
UCOL 070*	320	Polychrome	Saucer	Whiteware	1	2
UCOL 070*	464	Polychrome	Saucer	Whiteware	1	
UCOL 071	320	Brown	Saucer	Whiteware	1	1
UCOL 072	320	Black	Saucer	Whiteware	1	1
UCOL 073	320	Blue	Eggcup	Whiteware	1	1
UCOL 076	417	Flow blue	Eggcup	Whiteware	1	1
UCOL 077	462	Flow blue	Saucer	Whiteware	1	2
UCOL 077	463	Flow blue	Saucer	Whiteware	1	
UCOL 078	362	Dark blue	Saucer	Whiteware	1	2
UCOL 078	463	Flow blue	Cup	Whiteware	1	
UCOL 079	463	Dark blue	Jug	Whiteware	1	1
UCOL 081	463	Purple	Bowl/chamber pot	Whiteware	1	1
UCOL 083	339	Purple	Jug	Whiteware	1	1
UCOL 084	208	Purple	Saucer	Whiteware	1	3
UCOL 084	339	Purple	Saucer	Whiteware	1	
UCOL 084	418	Purple	Cup	Whiteware	1	
UCOL 086	337	Purple	Eggcup	Whiteware	1	1
UCOL 087	485	Black	Plate	Whiteware	1	1

Table E.3. continued…

Pattern	Feature	Colour	Vessel	Fabric	MNV	Total
UCOL 089	208	Brown	Cup	Whiteware	1	1
UCOL 091	208	Purple	Cup	Whiteware	1	2
UCOL 091	208	Purple	Saucer	Whiteware	1	
UCOL 092	208	Green	Saucer	Whiteware	1	1
UCOL 093	208	Green	Cup	Whiteware	1	1
UCOL 094	208	Green	Bowl	Whiteware	1	1
UCOL 095	208	Green	Cup	Whiteware	1	1
UCOL 096	208	Blue	Saucer	Whiteware	1	1
UCOL 097	208	Blue	Saucer	Whiteware	1	1
UCOL 099	208	Blue	Cup	Whiteware	1	1
UCOL 100	208	Blue	Cup	Whiteware	1	1
UCOL 101	208	Blue	Mug	Whiteware	1	1
UCOL 102	309	Blue	Cup	Whiteware	1	3
UCOL 102	350	Purple	Cup	Whiteware	1	
UCOL 102	370	Purple	Saucer	Whiteware	1	
UCOL 103	350	Blue	Cup	Whiteware	1	1
UCOL 104	480	Blue	Cup	Whiteware	1	1
UCOL 106	524	Blue	Saucer	Whiteware	1	1
UCOL 107	521	Blue	Unidentified	Whiteware	1	1
UCOL 108	370	Green	Cup	Whiteware	1	1
UCOL 112	492	Blue	Plate	Whiteware	1	1
UCOL 113	492	Grey	Plate	Whiteware	1	1
UCOL 114 *	383	Polychrome	Cup	Whiteware	1	1
UCOL 115*	383	Polychrome	Unidentified	Whiteware	1	1
UCOL 116	383	Blue	Jug/Bowl	Whiteware	1	1

*Pattern also has enameled or painted decoration.

Table E.3. continued…

Feature	Vessel	Pattern	Height (mm)	Diameter (mm)*	Length (mm)	Width	MNV
278	Plate	Asiatic Pheasants	27	c. 215			1
383	Plate	Asiatic Pheasants	30	c. 270			1
485	Plate	Asiatic Pheasants	30	270			1
621	Plate	Asiatic Pheasants	18	170			1
621	Serving plate	Asiatic Pheasants	56	270			1
621	Tureen	Asiatic Pheasants	158		350	250	1
621	Chamber pot	Ava	152	238			1
515	Saucer	Bosphorus	34	178			1
515	Cup	Bosphorus	c. 84	c. 100			1
540	Bowl	Broseley	86	165			1

Table E.4. Dimensions for reassembled transfer-printed vessels from the Wanganui Hotel site

Feature	Vessel	Pattern	Height (mm)	Diameter (mm)*	Length (mm)	Width	MNV
540	Saucer	Chain	33	172			1
417	Saucer	Cleopatra	33	175			1
515	Plate	Genevese	25	200			1
540	Tureen lid	Genevese	120	220			2
540	Bowl	Hong	82	163			1
525	Plate	Kulat	21	188			4
417	Cup	Lucerne	71	c. 110			2
540	Plate	Morea	24	220			2
621	Plate	Morea	24	220			4
485	Chamber pot	Pansy	150	240			1
492	Serving platter	Rhine	37		390	315	1
514	Plate	Teddesley	25	c. 260			1
621	Chamber pot	UCOL 001	137	224			1
621	Saucer	UCOL 004	29	c. 160			1
525	Tureen lid	UCOL 025	72	217			1
540	Chamber pot	UCOL 036	132	220			1
417	Wash bowl	UCOL 037	128	378			1
540	Chamber pot	UCOL 037	153	238			1
540	Chamber Pot	UCOL 038	130	230			1
540	Eggcup	UCOL 040	43	50			1
515	Chamber pot	UCOL 067	138	c. 235			1
320	Serving platter	UCOL 068	38		c. 235	200	1
362	Cup	UCOL 078	75	c. 110			1
337	Eggcup	UCOL 086	43	53			1
515	Plate	Verona	32	c. 245			1
362	Plate	Willow	c. 19	c. 182			1
362	Plate	Willow	27	c. 240			1
417	Plate	Willow	c. 28	c. 230			1
417	Plate	Willow	c. 32	c. 235			1
417	Plate	Willow	20	200			1
417	Plate	Willow	20	182			3
462	Saucer	Willow	19	c. 162			1
463	Plate	Willow	27	c. 227			1
463	Plate	Willow	20	180			1
464	Plate	Willow	30	c. 225			1
515	Serving dish lid	Willow	85		185	185	1
515	Serving dish	Willow	55		c. 220	c. 220	1
525	Plate	Willow	28	267			1
540	Plate	Willow	22	197			1
540	Plate	Willow	21	198			1
540	Plate	Willow	22	c. 200			1
540	Serving platter	Willow	44		385	295	1
621	Serving platter	Willow	60		345	c. 275	2

*Diameter refers to the maximum diameter

Table E.4. continued…

Feature	Vessel	Decoration	Height (mm)	Diameter (mm)*	MNV
208	Eggcup	Gilt edgebanded	62	47	1
320	Saucer	Gilt edgebanded	31	170	1
417	Cup	Sprigged	68	110	2
485	Bowl	Gilt edgebanded	84	145	1
520	Eggcup	Gilt edgebanded	67	50	1
525	Saucer	Sprigged	31	165	1
525	Saucer	Sprigged	34	165	4
525	Saucer	Sprigged	33	160	3
540	Cup	Sprigged	80	96	2
540	Saucer	Sprigged	33	167	1
621	Cup	Gilt edgebanded	87	98	2
621	Cup	Sprigged	83	95	3
621	Saucer	Sprigged	33	160	1
621	Saucer	Sprigged	35	160	1
621	Saucer	Sprigged	33	165	1
621	Saucer	Sprigged	34	165	3
621	Saucer	Sprigged	33	166	2
621	Saucer	Sprigged	26	175	1
621	Saucer	Sprigged	31	166	1
621	Saucer	Sprigged	34	164	1
621	Saucer	Sprigged	34	167	2

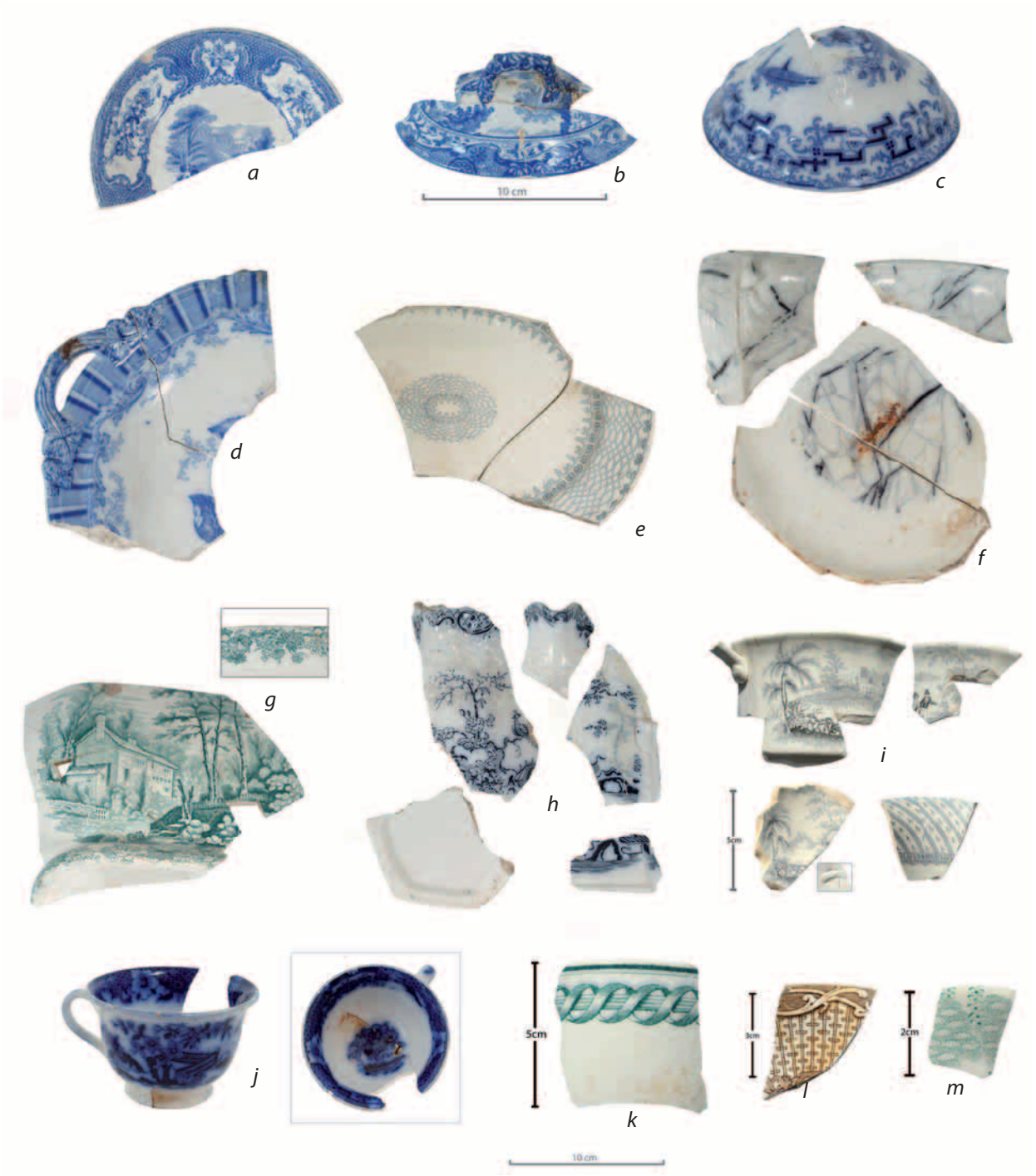
*Diameter refers to the maximum diameter

Table E.5. Dimensions for semi-vitreous vessels, the Wanganui Hotel site.

Appendix F Illustrated catalogue of ceramic patterns and designs

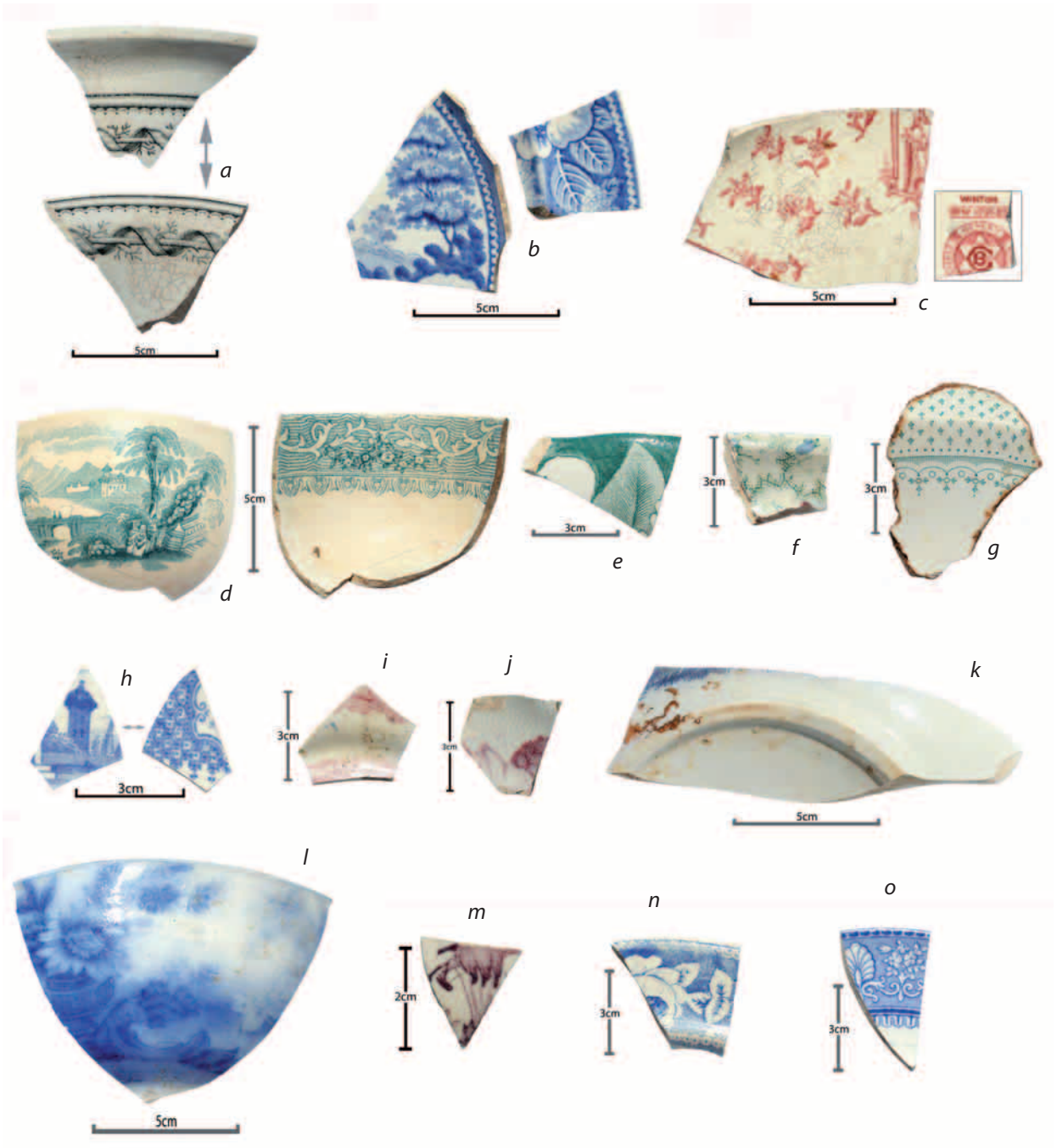
F.1. a, Bosphorus saucer, Malkin, Walker and Hulse backmark (WH, F.515); b, Bouquet saucer (BH); c, Broseley bowl (WH, F.540); d, Chain saucer, Pinder, Bourne and Hope backmark (WH, F.540); e, Cleopatra saucer (WH, F.417); f, Fruit plate, Thomas Dimmock backmark (BH, F.46); g, Hong bowl, 'B. D. and Co Sydney' backmark (WH, F.540); h, Holloway's ointment pot (BH, F.46); i, Japan Flowers plate, Ridgway, Morley, Wear and Co backmark (BH, F.217); j, Lucerne cup (WH F.417); k, Nymph saucer with 'H. W.' backmark (BH, F.46); l, Kulat side plate, Pinder, Bourne and Hope backmark (WH, F.525).

F.2. a, Rhine plate (BH, F.46); b, Triumphal Car chamberpot (BH, F.84, 120); c, Rhine platter (WH, F.492); d, Medici plate (WH, F.515); e, Teddesley plate, Doulton backmark (WH, F.514); f, Alma eggcup (WH, F.540); g, Verona plate, D. Methven and Sons backmark (WH, F.417); h, UCOL 020 plate (BH, F.46); i, UCOL 002 cup (BH, F.46); j, UCOL 004 saucer, W. T. Copeland backmark (WH, F.621).



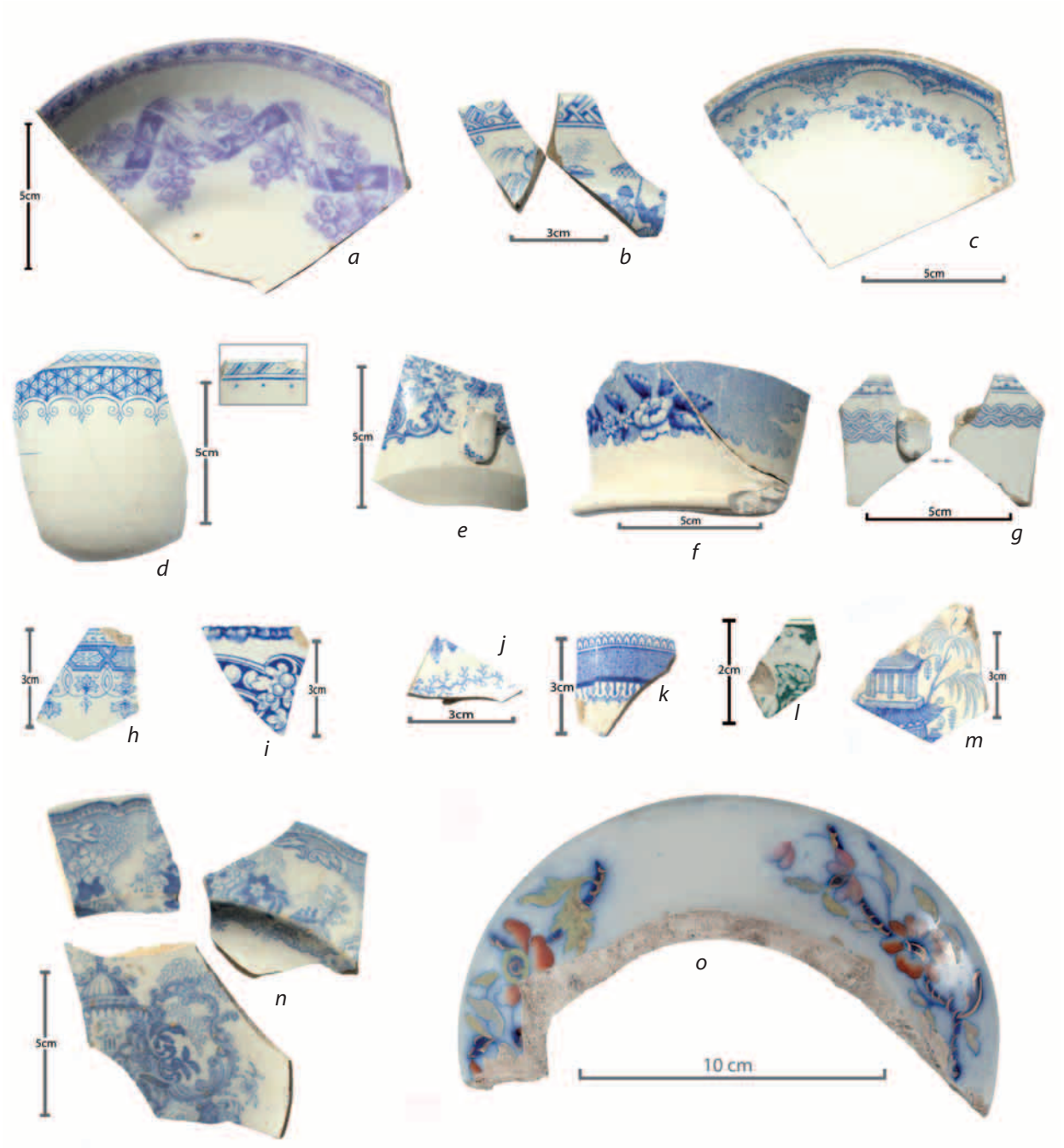
F.3. a, UCOL 023 saucer (BH, F.46); b, UCOL 005 lid (WH, F.621); c, UCOL 025 tureen lid (WH, F.525); d, UCOL 026 serving vessel (WH, F.525); e, Lattice serving platter (UCOL 048) (WH, F.515); f, UCOL 050 chamberpot (WH, F.515); g, UCOL 051 serving dish (WH, F.515); h, UCOL 079 jug (WH, F.463); i, UCOL 136 cup, Sewell backmark (BH); j, UCOL 078 cup (WH, F.361, 362); k, Cable cup (WH, F.370); l, Crystal saucer (TS 78); m, Forest saucer (BH).

F.4. a, Pansy chamberpot, William Brownfied backmark (WH, F.485); b, UCOL 067 chamberpot (WH, F.515); c, UCOL 068 serving platter (WH, F.320); d, Dulcamara saucer, Pinder, Bourne and Co backmark (WH, F.515); e, Lucerne side plate (WH, F.540); f, Martha child's mug (WH, F.370); g, Moss Rose plate, Ridgway and Morley backmark (BH, F.83); h, Pearl Wreath plate, George Jones backmark (WH, F.308); i, Foliage cup (WH, F.350); j, Sir Robert Peel MP saucer (BH, F.260); k, Sirius cup (BH); l, Slipper bedpan (WH, F.515).

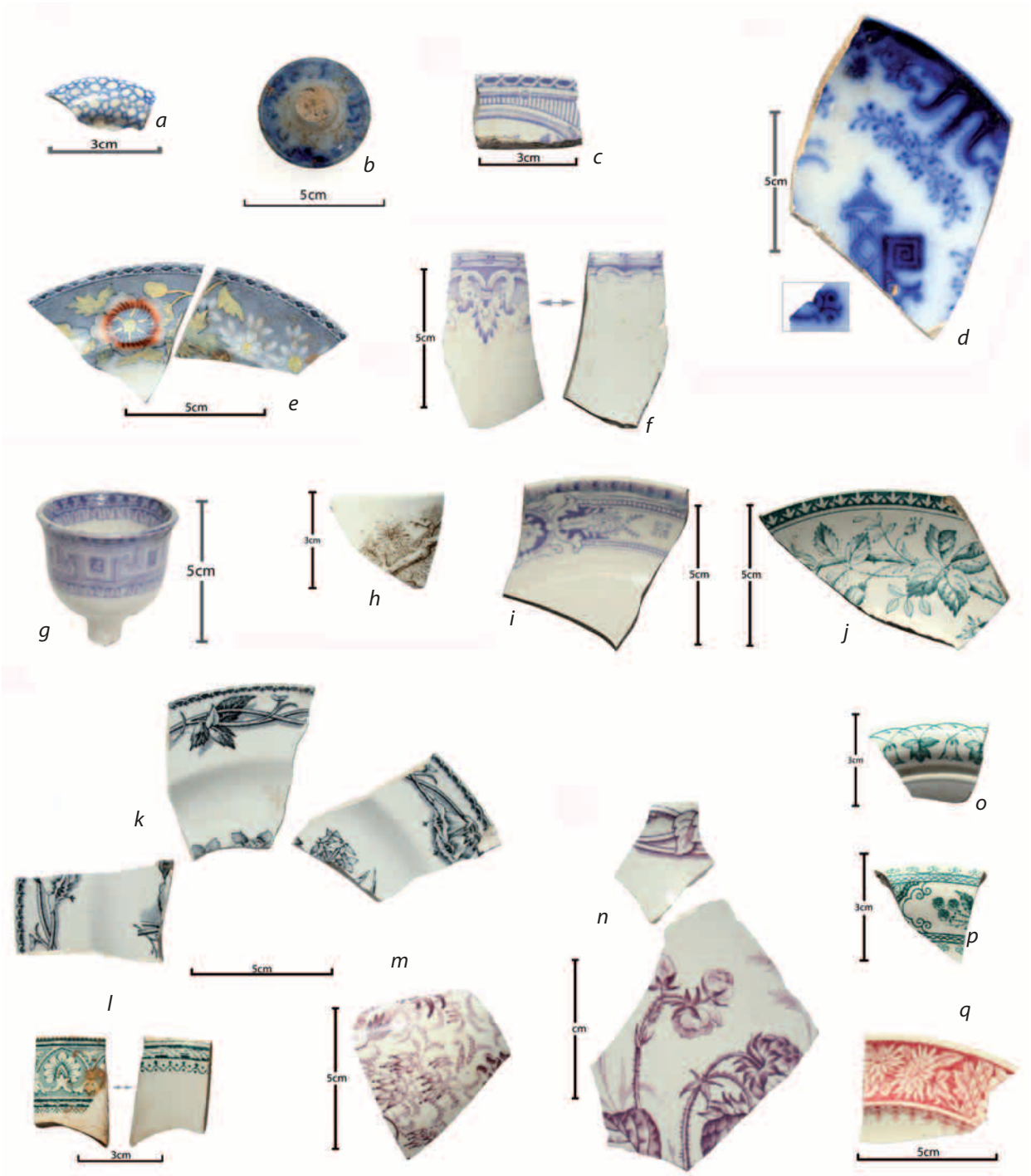


F.5. a, Springfield bowl (TS 78); b, Wild Rose plate (BH, F.120); c, Winton plate, Grimwade Bros backmark (BH); d, UCOL 003 cup (WH, F.621); e, UCOL 008 plate (WH, F.621); f, UCOL 009 bowl (WH, F.621); g, UCOL 010 bowl (WH, F.621); h, UCOL 012 cup (WH, F.621); i, UCOL 014 plate (WH, F.621); j, UCOL 015 unidentified (WH, F.621); k, UCOL 016 unidentified (WH, F.621); l, UCOL 024 bowl (BH, F.46); m, UCOL 030 cup/bowl (WH, F.525); n, UCOL 032 plate (WH, F.525); o, UCOL 041 saucer (WH, F.540).

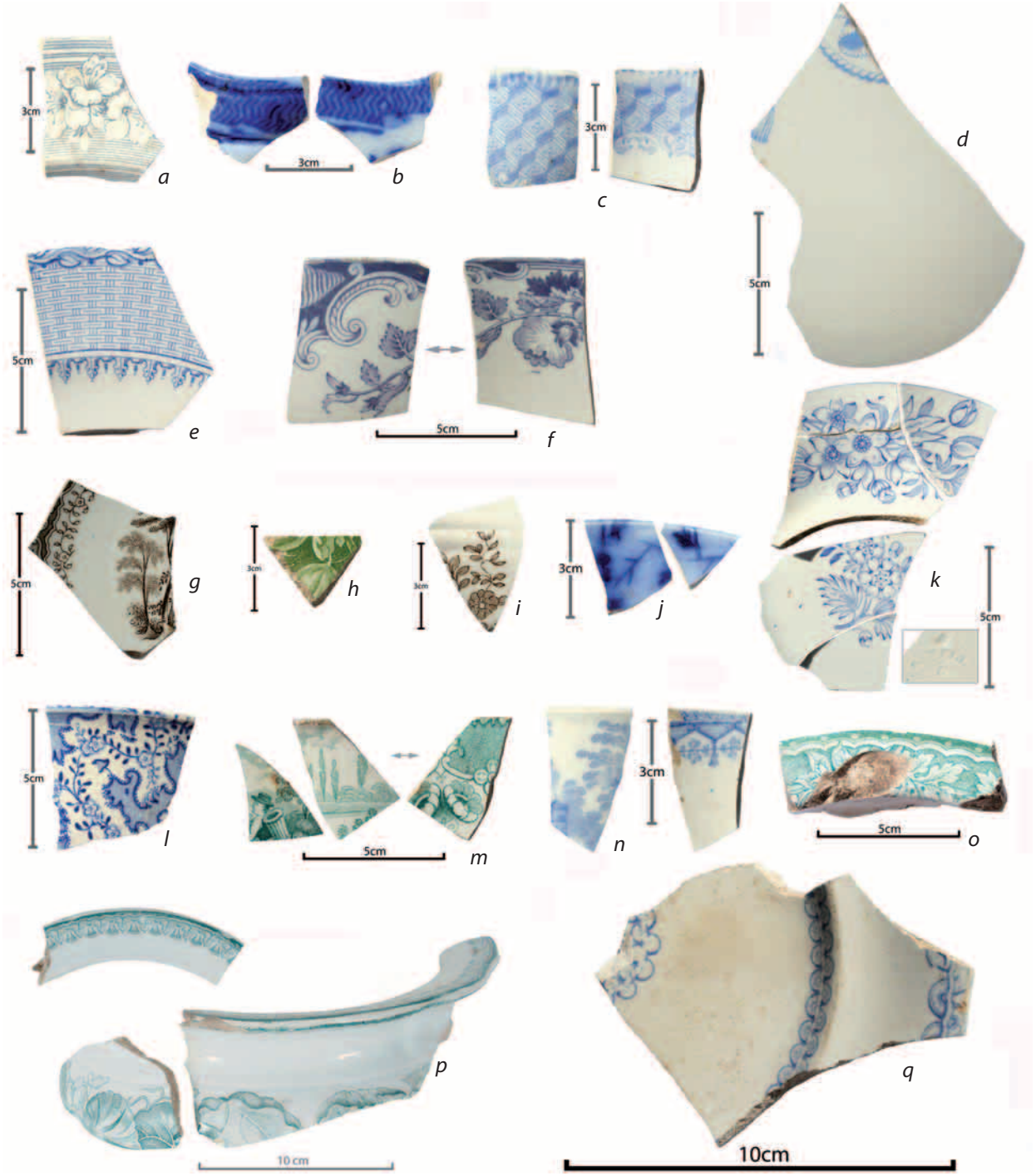
F.6. a, UCOL 042 cup (WH, F.540); b, UCOL 043 saucer (WH, F.540); c, UCOL 045 saucer (WH, F.540); d, UCOL 046 bowl/ jug (WH, F.540); e, UCOL 047 saucer (TS 78); f, UCOL 054 saucer (WH, F.515); g, UCOL 058 chamberpot (WH, F.515); h, UCOL 033 plate (WH, F.383); i, UCOL 033 plate (WH, F.525); j, UCOL 066 cup (WH, F.370); k, UCOL 071 saucer (WH, F.320); l, UCOL 072 saucer (WH, F.320); m, UCOL 060 chamberpot (WH, F.515); n, UCOL 061 chamberpot (WH, F.515); o, UCOL 069 cup (WH, F.320).



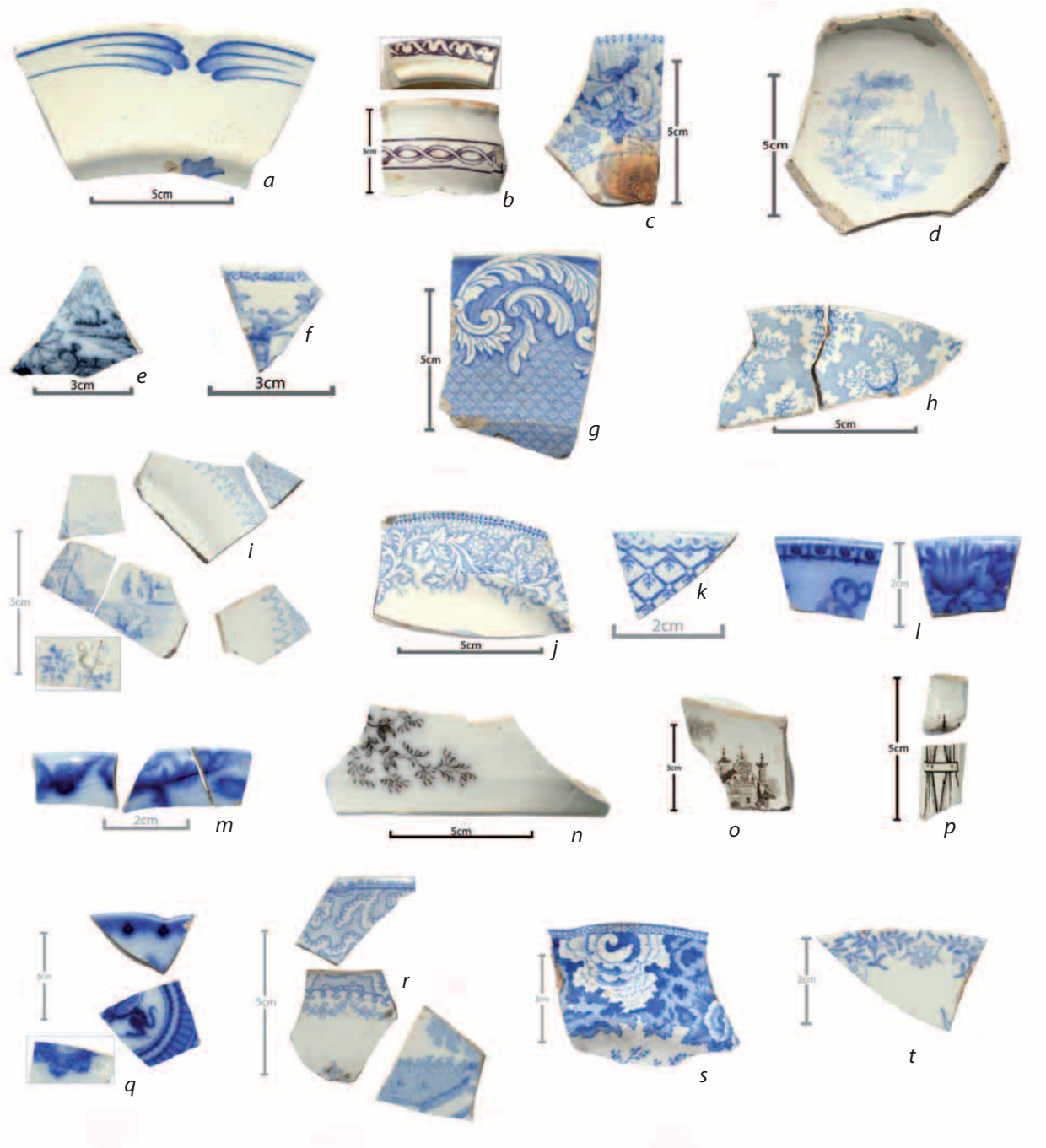
F.7. a, UCOL 084 saucer (WH); b, UCOL 096 saucer (WH); c, UCOL 097 saucer (WH); d, UCOL 099 cup (WH); e, UCOL 100 cup (WH); f, UCOL 101 unidentified (BH, F.217); g, UCOL 102 cup (WH, F.350); h, UCOL 103 cup (WH, F.350); i, UCOL 104 cup (WH, F.480): j, UCOL 106 saucer (WH, F.524); k, UCOL 107 jug (WH, F.521); l, UCOL 108 cup (WH, F.370); m, UCOL 109 plate (WH, F.550); n, UCOL 112 plate (WH, F.492); o, UCOL 127 unidentified (BH, F.69).



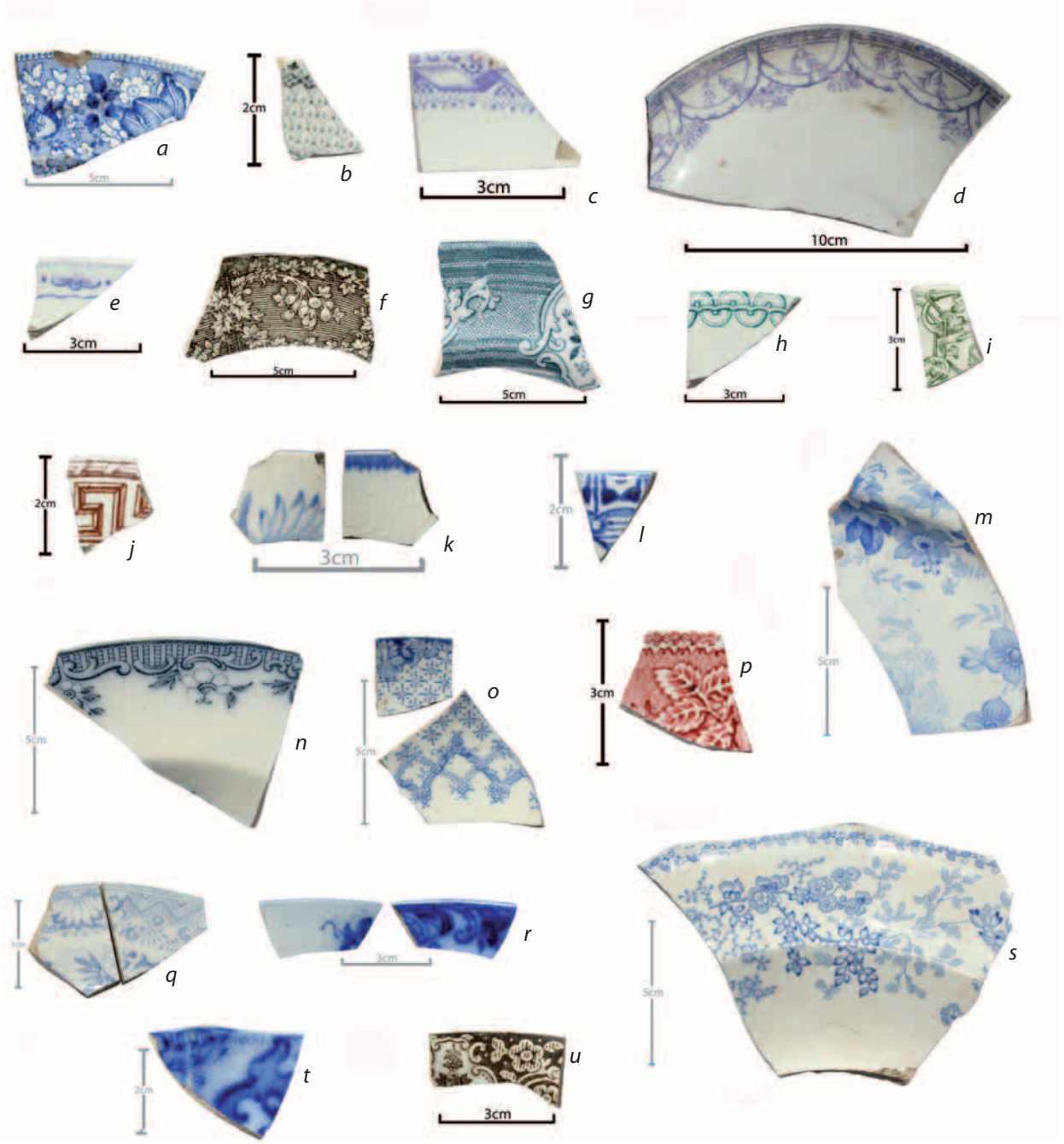
F.8. a, UCOL 073 eggcup (WH, F.320); b, UCOL 076 eggcup (WH, F.417); c, UCOL 063 plate (WH, F.383); d, UCOL 077 saucer (WH, F.463); e, UCOL 070 plate (WH, F.320); f, UCOL 075 cup (TS 78); g, UCOL 086 eggcup (WH, F.337); h, UCOL 089 cup (WH); i, UCOL 091 saucer (WH); j, UCOL 092 saucer (WH); k, UCOL 087 plate (WH, F.485); l, UCOL 095 cup (WH); m, UCOL 081 unidentified (WH, F.463); n, UCOL 083 jug (WH, F.339); o, UCOL 094 bowl (WH); p, UCOL 093 cup (WH); q, UCOL 088 saucer (WH).



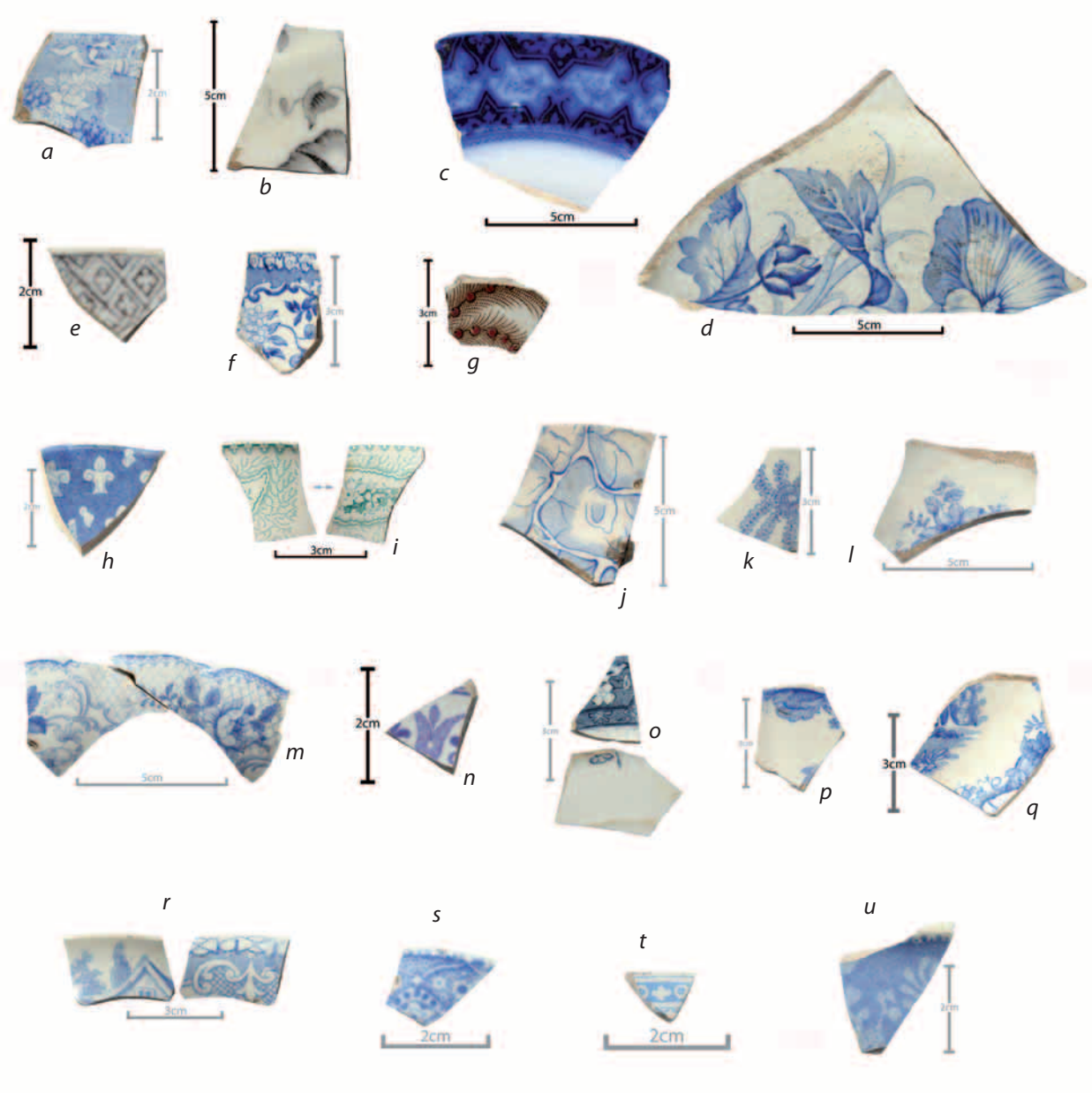
F.9. a, UCOL 113 plate (WH, F.492); b, UCOL 119 jug (BH, F.46); c, UCOL 120 cup (BH, F.46); d, UCOL 116 jug/ewer (WH, F.383); e, UCOL 121 plate (BH, F.46); f, UCOL 122 bowl (BH, F.46); g, UCOL 123 saucer (BH, F.120); h, UCOL 128 plate (BH, F.120); i, UCOL 129 jug (BH, F.120); j, UCOL 145 saucer (BH, F.233); k, UCOL 126 plate, Sewell backmark (BH, F.120); l, UCOL 135 cup (BH, F.69); m, UCOL 138 cup (BH, F.69); n, UCOL 140 cup (BH, F.228); o, UCOL 141 chamberpot (BH, F.228); p, UCOL 139 chamberpot (BH, F.228); q, UCOL 144 plate (BH, F.233).



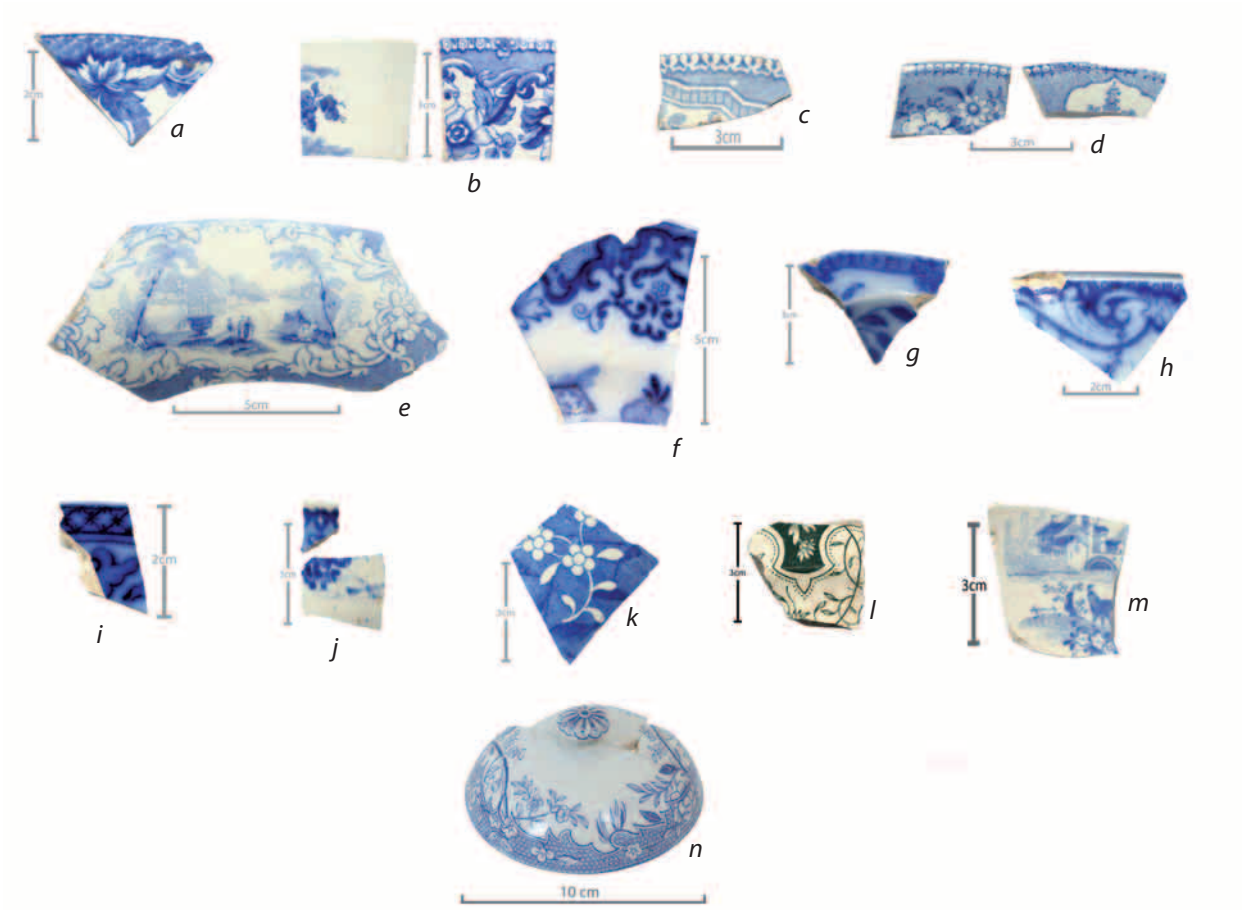
F.10. a, UCOL 143 plate (BH, F.233); b, UCOL 151 dish (TS 78); c, UCOL 153 saucer (BH, F.148); d, UCOL 154 cup (BH, F.217); e, UCOL 156 saucer (BH, F.217); f, UCOL 157 saucer (BH, F.217); g, UCOL 158 plate (BH, F.217); h, UCOL 159 saucer (BH, F.217); i, UCOL 160 plate (Verano) (BH, F.217); j, UCOL 161 saucer (BH, F.217); k, UCOL 162 cup (BH, F.217); l, UCOL 163 cup (BH, F.217); m, UCOL 164 cup (BH, F.217); n, UCOL 172 jug (BH, F.46); o, UCOL 173 cup (BH, F.46); p, UCOL 174 jug (BH, F.46); q, UCOL 175 plate (BH, F.46); r, UCOL 176 saucer (BH, F.46); s, UCOL 177 plate (BH); t, UCOL 178 saucer (BH, F.46).



F.11. a, UCOL 179 plate (BH, F.233); b, UCOL 180 saucer (BH, F.46); c, UCOL 182 saucer (BH); d, UCOL 181 saucer (BH); e, UCOL 183 saucer (BH); f, UCOL 184 saucer (BH); g, UCOL 186 plate (BH); h, UCOL 187 saucer (BH); i, UCOL 188 cup (BH, F.259); j, UCOL 189 saucer (BH); k, UCOL 190 cup (BH, F.136); l, UCOL 195 cup (BH, F.7); m, UCOL 191 plate (BH, F.217); n, UCOL 193 plate (BH, F.71); o, UCOL 194 saucer (BH, F.83); p, UCOL 198 saucer (BH, F.45); q, UCOL 199 saucer (BH, F.19); r, UCOL 200 cup (BH, F.19); s, UCOL 202 plate (BH, F.259); t, UCOL 201 saucer (BH, F.19); u, UCOL 203 cup (BH, F.259).

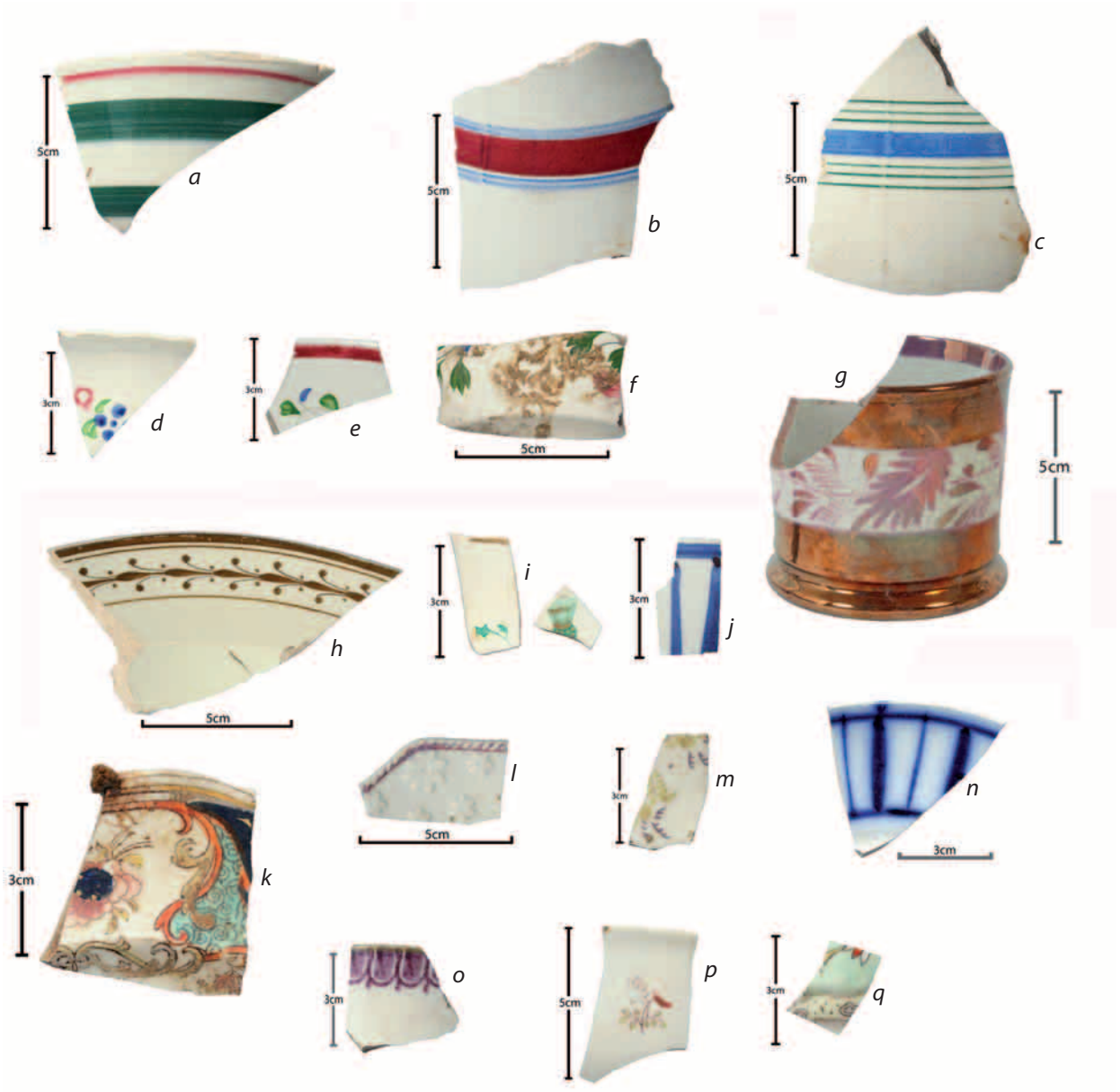


F.12. a, UCOL 204 saucer (BH, F.259); b, UCOL 205 bowl (BH, F.259); c, UCOL 206 plate (BH, F.72); d, UCOL 208 plate (BH, F.233); e, UCOL 209 saucer (BH, F.233); f, UCOL 210 saucer (BH, F.233); g, UCOL 212 saucer (BH, F.247); h, UCOL 213 saucer (BH, F.64); i, UCOL 214 cup (BH, F.72); j, UCOL 216 saucer (BH, F.83); k, UCOL 217 cup (BH, F.83); l, UCOL 218 jug (BH, F.83); m, UCOL 219 unidentified (BH, F.83); n, UCOL 220 saucer (BH, F.247); o, UCOL 221 saucer (BH, F.244); p, UCOL 226 saucer (BH); q, UCOL 227 saucer (BH); r, UCOL 228 cup (BH); s, UCOL 229 cup (BH); t, UCOL 230 saucer (BH); u, UCOL 231 cup (BH).



F.13. a, UCOL 232 saucer (BH); b, UCOL 233 cup (BH); c, UCOL 234 unidentified (BH); d, UCOL 235 saucer (BH); e, UCOL 236 unidentified (BH); f, UCOL 237 saucer (BH); g, UCOL 239 dish (BH); h, UCOL 240 cup (BH); i, UCOL 241 saucer (BH); j, UCOL 245 cup (BH, F.71); k, UCOL 249 cup (BH); l, UCOL 250 plate (BH); m, UCOL 251 cup (BH); n, UCOL 049 lid (WH, F.515).

F.14. a, UCOL 006 saucer (WH, F.621); b, UCOL 007 plate (WH, F.621); c, UCOL 034 plate (WH, F.464); d, UCOL 044 jug (WH, F.540); e, UCOL 053 plate (WH); f, UCOL 055 plate (WH, F.515); g, UCOL 056 unidentified (WH, F.515); h, UCOL 064 plate (WH, F.515); i, UCOL 105 cup (WH, F.390); j, UCOL 080 cup (WH); k, UCOL 090 saucer (WH); l, UCOL 057 unidentified (WH, F.515); m, UCOL 110 cup/jug (WH, F.464); n, UCOL 111 saucer (WH, F.338); o, UCOL 114 cup (WH, F.383); p, UCOL 117 plate (WH, F.442); q, UCOL 131 cup (BH, F.120); r, UCOL 132 cup (BH); s, Prattware pot lid (WH, F.621).



F.15. a, UCOL 147 bowl (TS 78); b, UCOL 148 jug (TS 78); c, UCOL 149 unidentified (TS 78); d, UCOL 167 cup (BH, F.46); e, UCOL 168 saucer (BH, F.46); f, UCOL 169 cup (BH, F.46); g, UCOL 192 mug (WH, F.540); h, UCOL 196 plate (BH); i, UCOL 170 cup (BH); j, UCOL 197 cup (BH, F.45); k, UCOL 211 saucer (BH); l, UCOL 222 plate/dish (BH, F.247); m, UCOL 225 saucer (BH, F.247); n, UCOL 238 saucer (BH); o, UCOL 242 cup/jug (BH); p, UCOL 243 cup (BH); q, UCOL 244 cup (BH).

Appendix G Miscellaneous artefact categories

Clay pipes

Clay tobacco pipes are useful to the archaeologist as they were cheap to produce and only had a relatively short use-life. This means that they were readily discarded when they broke and are found in a wide range of sites. Minimum numbers were quantified using standard archaeological criteria as outlined by Bradley (2000: 104–110). Diagnostic portions were counted from each feature and the number of whole bowls and bowl/stem junctions, or manufactured bites used to establish the MNI (minimum number of individuals). Plain stem and bowl fragments were recorded and discarded. All the clay tobacco pipes are of unglazed white ball-clay.

Pipe forms proliferated in the 19th century meaning analysis of bowl designs or stem shapes is not particularly useful for dating assemblages from this period.

The most useful manufacturers for dating purposes are those who were only involved in the business for a few years. These dates can be further refined by looking at the style of the pipe and the context in which it was found.

Manufacturers
John Agnew, Glasgow 1849–57

A single stem fragment was found marked 'J.AGNEW/[BURNS] CUTTY PIPE.' A Burns Cutty was just one of many different pipe forms produced in the 19th century. In 1900 a price list of Scottish pipes lists the type as being produced by five Glasgow firms as well as in Edinburgh and Aberdeen (Walker 1983: 10).

Balme, Mile End, London c. 1840–76

Six clay pipe fragments carry the impressed mark on the back of the bowl 'BALME/LONDON' or 'BALME/MILE END' variously enclosed in either a shield or a circle of dots. Oswald lists several Balmes based at Mile End in his London index including George Balme 1867–76, Paul Balme 1832–66, Thomas Balme 1805–45 and William Balme 1856–61 (Oswald 1975). It is not known for sure whether the various Balme's were related but it is well documented that many pipemaking businesses were relatively small family based affairs. The production of these pipes probably dates to between the middle of the century and 1876. The prominence of Mile End on some of the pipes rather than London is interesting as this is where the Ford family of pipemakers were based and it was not uncommon at the time for makers to try and cash in on the reputation of their competitors (Walker 1983: 21).

Thomas Davidson and Co, Glasgow 1861–91

Davidson and Co, along with McDougall and W. White, were one of a handful of Glasgow firms who dominated the export trade to America during the 19th century (Bradley 2000: 17). The strength of Davidson's position in the market can be seen by the fact that they opened offices in London in 1869, with McDougall following in 1878 and White in 1884 (Walker 1983: 12). Seven pipe stem fragments were recovered marked 'DAVIDSON/GLASGOW'. Thomas Davidson succeeded William Murray around 1861 and it may be that he was Murray's manager at this time (Walker 1983: 13).

Hugh Dixon, Sydney

Hugh Dixon was a tobacco merchant, who is known to have ordered his pipes from Glasgow manufacturers. One pipe from the Adventure Bay whaling station site in Tasmania was found impressed with both his name and that of Murray, a Glasgow pipemaker active from 1830 to 1861 (Lawrence 2004). Dixon was in business during the periods c. 1839–1859 and 1863–1902 (Clough and Associates 2003: 130). The single example from the Bamber House was marked 'DIXON/SYDNEY.'

John Higgens, Aldersgate 1862–91

A single pipe marked 'HIGGIN/LONDON' most likely refers to John Higgens, as the only other 19th century maker of similar name is William Higgins, who is only listed for the year 1840 (Oswald 1975: 138). The variation in spelling is a minor issue and Prickett (1994: 65) notes that John Higgens name is also given as Higgins. The pipe bowl fragment from the Wanganui Hotel is of the same design as those recovered from the Omata Stockade (Prickett 1994: 64, Figure 2.46 L).

'LACH... / LONDON'

No match could be found for this particular marking in the list of London pipe manufacturers in Oswald (1975). A John Miller pipe from the same feature dates to the period 1866–88.

'LEURS / a.ST....'

This pipe was probably made by the French firm of Duméril (c. 1844–77) also known as Duméril-Leurs (Walker 1983: 30). The stem fragment is also relief moulded with vegetative motifs trailing along the stem.

Duncan McDougall and Co, Glasgow 1846–91

Two stem fragments were recovered marked 'McDOUGALL/ GLASGOW.' One whole pipe was also recovered with the same marking. The pipe is quite short being just 111 mm in length with a bowl 39 mm high and 27.5 mm wide. Although only established in 1846, McDougall's must have immediately been producing pipes for the export market as shown by McDougall pipes found in a California site securely dated 1846 to 1852 (Walker 1983: 12). In directories from the 1890s McDougall's advertised themselves as the "largest export manufacturer in the world" (Walker 1983: 12). McDougall pipes are one of the more frequently recovered from sites in New Zealand.

John Miller, Glasgow 1866–88

Two stem fragments marked 'MILLER/GLASGOW' and '..LLER/GLASGOW' were almost certainly made by John Miller. No other Glasgow manufacturers listed in Oswald match this marking.

Theophilus Milo, Finch Lane, Strand, London 1860–70

Two complete bowls were marked similarly with 'MILO/STRAND.' Pipes from London are less common in archaeological sites after the middle of the century due to a collapse in the London clay tobacco pipe industry brought about by changing smoking habits (Walker 1983: 10).

William Murray and Co, Glasgow 1830–61

Four pipe stems were found impressed with 'MURRAY/GLASGOW.' William Murray's products have been found in America and Canada, as well as Australia and New Zealand. Around 1861 the firm was taken over by one of his managers, Thomas Davidson.

'POSENER & CO/RUPERT…W'

No information has as yet been able to be traced regarding this mark, although the name is more suggestive of a European company than a British one. This maker would appear to be previously unrecorded from New Zealand sites. The pipe was recovered from the bottle pit (the Wanganui Hotel, Feature 395) where all of the bottle glass dated to the 1860s or early 1870s at the latest, and so Posener and Co probably dates to this period as well.

Thomas White and Co, Edinburgh 1823–76

Thomas White and Co appear to have been one of the few Scottish firms outside of Glasgow exporting their wares during the 19th century. The firm is represented by at least three pipes, two marked on the stem 'THOS. WHITE & CO/EDINBURGH.' Pipes are also known from this maker with the abbreviated marking 'T.W.& CO/EDINR' in relief. One other complete bowl and stem fragment is marked on the stem 'T.WHITE & CO/BURNS CUTTY PIPE.' The Burns Cutty pipe as mentioned above, was simply a style popular at the time White was in business.

William White, Glasgow 1805–91

The last of the prominent Glasgow pipe manufacturers represented in the assemblage is William White, with one stem marked 'W. WHITE/GLASGOW.' Along with McDougall and Davidson, this firm is commonly represented in New Zealand archaeological sites.

Buttons

Buttons are potentially useful for dating as specific materials and manufacturing techniques are temporally sensitive. Buttons can also provide an indication of the type of clothing people were wearing, the fabric of which is not often found in archaeological contexts. The most basic level at which this information can be obtained is through button size and form. For example, small plain buttons are likely to have been used on undergarments, while a decorated button would have been used on outer garments where it could be seen.

In the 19th century the line was the standard unit of measurement for buttons and equates to 0.635 of a millimetre (Sprague 2002: 122–123). In Britain the size range of buttons intended for men's clothing was: small buttons for underwear and shirts, 14–24 lines; medium buttons of 26–34 lines for trousers; and large buttons more than 34 lines for coats (George 1999: 16). With this in mind, measurements are given in both millimetres and lines.

Bone

Bone buttons were used on utilitarian clothing such as shirts and underwear and so are generally plain. By the mid 19th century most bone buttons were made by machine and so show little in the way of irregularities that are often present in

hand-made examples (Cameron 1985:95). Bone buttons are least useful as temporal indicators as they were plain utilitarian items whose form did not change between about 1800 and 1930 when they fell out of fashion (Cameron 1985:96). The most common type was the four-hole button, with two-hole and even single-hole examples being produced.

Shell

Shell buttons were cheap, mass-produced utilitarian items made from the non-diagnostic portion of various shell species, mainly for use on lighter clothing such as shirts and undergarments. The British industry was centred around Birmingham and had peaked by the 1870s (Ritchie 1986:514). Initially made by hand, by the middle of the century they were made by an almost entirely mechanised process (Cameron 1985). The two shell buttons from the Wanganui Hotel are simple plain discs with holes drilled in them.

Ceramic

Small white ceramic buttons are common finds in sites dating from the mid-19th century or later. The process for making high quality ceramic buttons was first patented by Richard Prosser of Birmingham in 1840 and so such items cannot date to before this period (Sprague 2002: 111). Buttons made by this process are easily distinguishable from later milk-glass products, due to a rough orange-peel like surface on the back of the button. Such items should be refered to as 'Prosser buttons' so as to avoid any confusion with inferior earthenware buttons or milk-glass buttons. Initially produced in Britain, ceramic buttons were generally used on shirts and undergarments. By the mid-1840s a Frenchman, Jean-Felix Bapterosses, had patented a machine capable of pressing 500 buttons at a time and this, coupled with cheap labour, effectively pushed the British out of the market (Sprague 2002: 115). Three of the porcelain buttons are decorated with transfer printed red stripes and would be referred to as 'calico's' by collectors. Ceramic buttons continued to be produced in numbers throughout the 19th century.

Metal

Metal buttons were most commonly made of brass as it was cheap and easy to work. Ferrous metal is also sometimes used, especially in the construction of two or three-piece buttons, where two or more pieces of metal are stamped together, often with an attached shank. One or two-piece buttons were mass-produced by machine from the 1850s and quickly came to dominate the market (Cameron 1985:26). Occasionally buttons can also be found that incorporate more than one material in their construction, such as metal and glass. Some of the metal buttons also have maker's names or generic terms, such as 'Best Ring Edge', implying quality, stamped or embossed on them.

Metal artefacts

Historic sites often yield large quantities of metal which provide various issues of transporting, storing and analysing this material. To alleviate this problem all metal, save for special items like buttons and a few other select artefacts, were analysed and discarded on site. Due to the quantity of artefacts from the site and the necessary time constraints, analysis of metal was focused on identifiable objects. Small fragments, mainly of ferrous metal, with limited documentary value were not quantified.

Tokens

Trade tokens are a curious artefact of the past introduced by traders and merchants as a response to a critical lack of British coinage in New Zealand. Tokens were first issued in Auckland and Dunedin in 1857, in penny and halfpenny denominations (www.rbnz.govt.nz). Trade tokens continued to be issued up to 1881 and remained in circulation until 1897 when they were decried by legislation (Sutherland 1939).

Appendix H Artefacts from Town Section 78

Vessel Form	Whiteware	Buff-body	Semi-vitreous	Porcelain	Stoneware	Total
Tableware						
Plate	12		1			13
Cup	5		2			7
Cup/bowl	1					1
Saucer	6		1			7
Bowl	1		1			2
Serving dish	1					1
Serving plate	1					1
Teapot		1				1
Kitchen/utilitarian						
Bowl	2					2
Bowl/jar	1					1
Bowl/jug	1					1
Jug	1					1
Candlestick			1			1
Other						
Bowl/chamberpot	1					1
Figurine				1		1
Ginger beer bottle					3	3
Selters bottle					1	1
Bottle					4	4
Non-diagnostic hollowware	1					1
	34	1	6	1	8	50

Table H.1. Ceramic vessel forms and fabric, minimum numbers, from TS 78.

Decorative technique	Whiteware	Buff-body	Semi-vitreous	Total
Transfer printed	16			16
Edgebanded	9			9
Gilt edgebanded			1	1
Handpainted	2		1	3
Annular	1			1
Shell edge	1			1
Slipped/colour glazed	1	1	2	
Undecorated	5		3	8
	34	1	6	41

Table H.2. Ceramic decoration type by fabric, minimum numbers, from TS 78.

Pattern	Feature	Vessel	Colour	Date	MNV	Total
Asiatic Pheasants	81	Plate	Blue		3	4
Asiatic Pheasants	81	Serving platter	Blue		1	
Crystal	81	Saucer	Brown		1	1
Rhine	81	Plate	Grey		1	3
Rhine	81	Plate	Black		1	
Rhine	81	Serving plate	Blue		1	
Rouen	168	Plate	Brown	1861–82	1	1
Springfield	81	Mixing bowl	Black		1	1
Teddesley	168	Plate	Black		1	1
						11

Table H.3. Summary of named transfer-printed vessels from TS 78.

Code	Type	Colour	Vessel	Fabric	MNV	Total
UCOL 047	Transfer print	Light blue	Cup	Whiteware	1	1
UCOL 075	Transfer print	Purple	Cup	Whiteware	1	2
UCOL 075	Transfer print	Purple	Saucer	Whiteware	1	
UCOL 095	Transfer print	Green	Cup	Whiteware	1	1
UCOL 147	Annular	Green/red	Bowl	Semi-vitreous	1	1
UCOL 148	Hand painted	Red/blue	Jug	Whiteware	1	1
UCOL 149	Hand painted	Blue/green	Bowl/ chamber pot	Whiteware		
UCOL 151	Transfer print	Purple	Bowl/pot	Whiteware	1	1
						7

Table H.4. Unidentified ceramic patterns and designs from TS 78.

Feature	Maker	Date Range	Vessel	Pattern	MNV
81	Joseph Bourne & Co	c. 1809-	Bottle		1
81	Robert Cochran & Co	c. 1846-	Chamber pot		1
168	Pinder, Bourne & Co	1861-82	Plate	Rouen	1
81	Port Dundas Pottery	c. 1850-1934	Bottle		1
81	Joseph Robinson	1876-98	Serving platter	Asiatic Pheasants	1
81	Joseph Robinson	1876-98	Plate	Asiatic Pheasants	1

Table H.5. Identified ceramic manufacturers marks from TS 78.

Category	Embossing/label	MNV
Alcohol		
Black beer		8
Case gin		2
Gin		1
Champagne style		3
Small champagne		2
Hock		1
Ring seal		10
Spirit		7
Condiments		
Lea & Perrins		1
Pickle		1
Aerated water		
Torpedo	[THOMSON] LEWIS & CO	1
Codd	C.W.BRODIE / WELLINGTON (base) C.W.B	1
	THOMSON LEWIS & Co/ WELLINGTON (base) SYDNEY ROSS BROs/BOTTLE MAKERS	1
	THOMSON LEWIS & Co/ WELLINGTON, WANGANUI, OTAKI, & PETONE	1
	THOMSON LEWIS & Co/ WELLINGTON, WANGANUI & OTAKI	1
	THOMSON LEWIS & Co/ WELLINGTON, WANGANUI, OTAKI (back) CANNINGTON & SHAW CO LTD/MAKERS/ ST HELENS (base) 3532	1
	EXTRA STRONG/GLASS/DAN RYLANDS Ld/ … MAKER/ BARNSLEY	1
	BUISSON & HARKNESS/ WANGANUI	1
	E BREFFIT & Co/[LOND]ON (base) 1885	1
	(base) 1904	1
Pharmaceutical		
Schnapps	UDOLPHO WOLFE's	2
Miscellaneous		
Aqua Glass		3
Green Glass		1
Olive Glass		1
Milk-Glass		1
Figurine		1
Tableglass		
Tumbler		7
Total		62

Table H.6. Summary of glass vessels from TS 78.