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# Refuse and Reclamation: Objects of Everyday Life in Late 19th Century Dunedin

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## Introduction

This paper provides a brief summary of the archaeological sampling and recording of a substantial historic reclamation deposit located across the site of the new Emerson's brewery complex, located at 70-80 Anzac Avenue, Dunedin, carried out under Authority 2015/657. The site was previously used as a railway siding and coal yard, and most recently as the depot of Hall Bros Ltd. demolition and haulage contractors. The development involved the clearance of the existing site, which covered approximately 1.47ha, and the construction of a 2,500m$^2$ brewery building with services, car parks and landscaping (Figure 1).

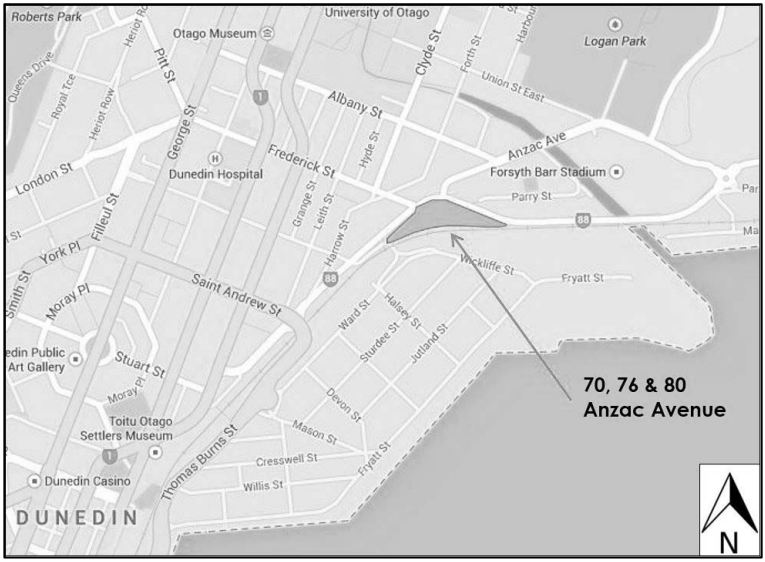


*Figure 1. The general location of the new Emerson's development site, Dunedin (Map: Google Maps 2016).*

The archaeological work commenced in April 2015 and was completed in December 2015 by Origin Consultants Ltd of Dunedin. This work focused on the monitoring and recording of excavations for a storm water main across the site, which cut through a substantial historic reclamation deposit located below 20th century fill layers that had been exposed during various phases of investigative ground works undertaken in 2014.

The aim of the archaeological investigation and recording programme was two-fold. The first was to record sufficient information relating to the historic late-19th century reclamation layer to determine its method of deposition, identify evidence for discrete 'dumping' activity, and evidence for different temporal phases that would indicate the timespan over which the layer was deposited. The second aim was to recover, catalogue and analyse a sufficient sample of the cultural refuse material that constituted much of the historic reclamation layer to understand the types, range, origination and technologies of the material, and any socio-economic and cultural trends capable of interpretation. From this analysis it was hoped to achieve greater knowledge, understanding and insights on the materiality of everyday life, trade and the vast array of goods imported into Dunedin from elsewhere in New Zealand and across the world in the later 19th century.

## Site Background

The Emerson's development site lay in what was the harbour foreshore zone of Dunedin city at the time of its European settlement in 1848. Despite phases of extensive reclamation work further south along the city shoreline between Rattray and Stuart Street, the site did not begin to be reclaimed until the 1870s construction of the City to Port Chalmers railway line took place, when a thin strip of shoreline was reclaimed to make the new rail embankment. This remained the status quo until c.1888, at which time the Milburn Lime and Cement Co Ltd was founded, having bought out the Milburn lime works of James McDonald (Tyrrell and Stewart 1995). The new company decided to build a cement works closer to the city and during 1889 constructed an island or spit just beyond the foreshore zone opposite the end of Frederick and Albany Streets (*New Zealand Tablet*, Vol. 18, 22 August 1900). This was accessed via an earth and stone causeway running slightly offset from the east end of Frederick Street across the foreshore and out to the spit. A railway siding that split from the main north line was also constructed along the causeway to serve the cement works. An early view of the Milburn Lime and Cement Co works taken probably not long after its opening in 1890 is shown in Figure 2.

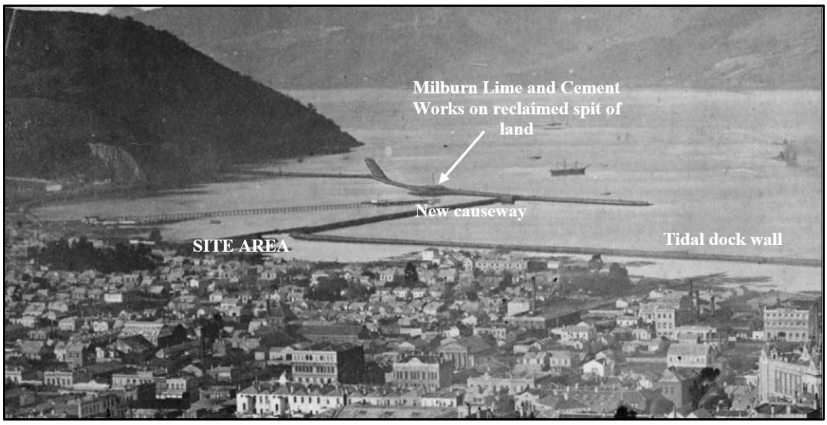


*Figure 2. Looking north-east from Roslyn circa early 1890s with the newly-constructed Milburn Lime and Cement Co works located on a spit of reclaimed land in the harbour (Ref: PAColl-5932-50. Alexander Turnbull Library, Wellington, New Zealand. /records/22311946).*

The early 1890s photograph also records an embankment running parallel with the shoreline between the Milburn Lime and Cement works causeway at the right of the image. This embankment or tidal wall was the first stage in the eventual reclamation of that section of foreshore and created a tidal dock, noted on maps of the time (e.g. Stone's 1889 Map of Dunedin). The first phase of reclamation on the Emerson's site occurred in the early 1890s, with photographs and maps of the time illustrating the site lying within an increasingly dry tidal basin. A report from the Otago Harbour Board meeting held on 29th September 1892 noted the following:

> 'THE RAILWAY RESERVE
> The Resident Engineer of Working Railways intimated that he was instructed to fill in the portion of the lagoon on the railway reserve between Hanover and Frederick Streets. The Secretary explained that the filling in was arranged to be done partly by the board and partly by the Railway Commissioners. The board's share of the work was being done by the dust carts.' (*Otago Daily Times,* 30 Sep 1892: p.4)

However, the filling-in of the lagoon using the dust carts' contents of general street refuse, collected household waste, nightsoil and other city waste soon became an issue, one that Wood (2005: 83-84) has previously explored in the

context of Dunedin and other cities; it was reported on in the *Otago Daily Times*, 16th December 1892: p. 4:

> …"I am informed by persons, who are willing to prove the accuracy of their statements, that the refuse of butchers' shops, fish shops, &c., is carted from Mornington, Caversham, South Dunedin, as well as from Dunedin, and thrown down at our doors…" Mr T.E. Shiel wrote on the same subject:- "…Cart-loads of putrid fish and other offensive matter lie baking in the sun…it was bad enough to have the nightsoil from nearly all the closets in town poured into the bay…but we now have all the dead cats, dogs, fish, and fowl put down at our doors."

From September 1892 until approximately 1902, the section of the enclosed foreshore known as the *lagoon* between Hanover and Frederick Streets (but not north of the cement works causeway) was gradually infilled with the city's refuse. This can be shown graphically in a 1902 photograph taken by Muir & Moody (Figure 3), which records the dry, former foreshore area south of the railway embankment and Frederick Street.

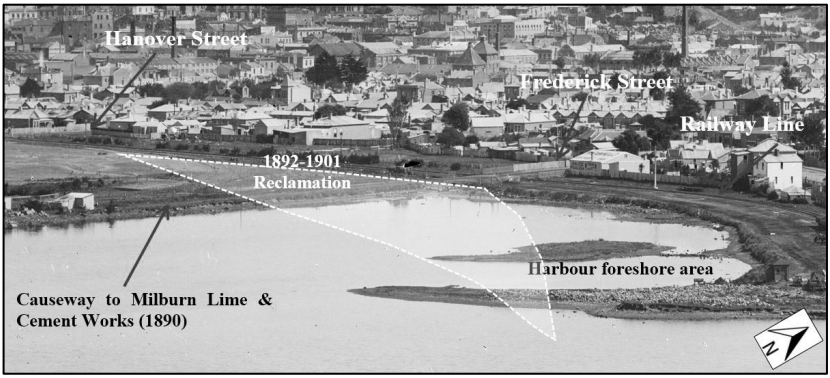


*Figure 3. Extract from a c.1902 photograph of Dunedin by Muir & Moody that records the dry state of the foreshore area south of Frederick Street (site indicated in white) (Museum of New Zealand/Te Papa Tongarewa; ref. PA.000184).*

From the completed excavation and recording work, analyses of the cultural material sample retrieved, and additional historical research, it was confirmed that the fill layers beneath the new Emerson's Brewery site were initiated with a historic refuse deposit laid down from about 1892 until 1902-03

directly onto the tidal foreshore. This deposit commenced at a depth of 2.8-3 metres where the natural foreshore bed was encountered (marine silts overlying rock), and continued to 1.8 metres below ground level. Overlying non-refuse deposits of clean fill material and harbour dredging were subsequently deposited in the 20th century, after this initial reclamation activity, and sealed the late nineteenth century refuse material beneath (Figures 4 and 5).


*Figure 4. Archaeological site assistant Nick Sutton washing the muddy residue from an historic reclamation deposit artefact sample during the excavation of stormwater pipe section 4 on 30th April 2015.*

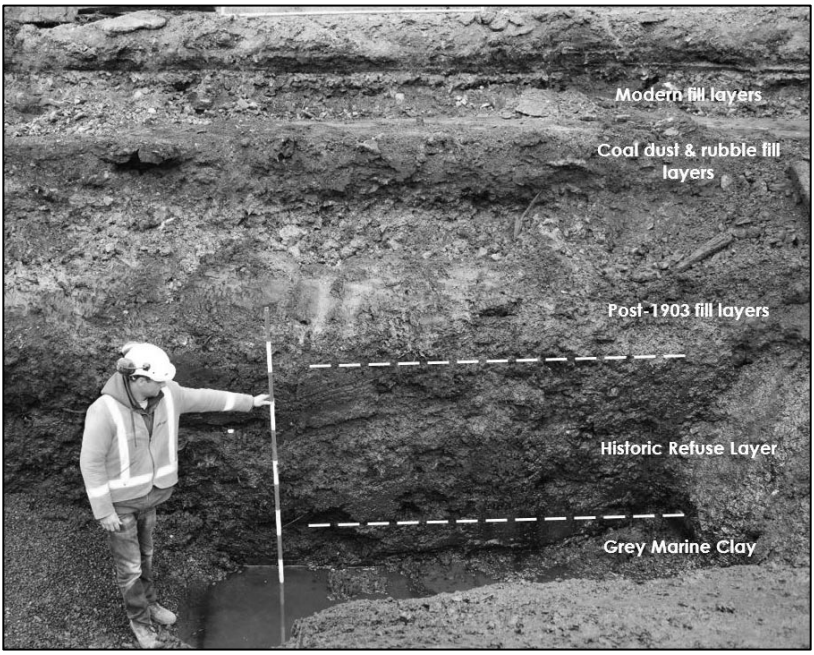


*Figure 5. Full section from stormwater pipe section 8 showing the sequence of fill deposits typical across the southern half of the site. Scale is 2 metres high and depth of trench is 3.5m (note: contractor's personnel in picture).*

## Archaeological Interpretation

Although the new Emerson's Brewery site only extended over part of a much more extensive historic reclamation area, the 3.5 metre deep, storm water main excavations indicated that the 1890s reclamation using city refuse in its first phase stopped at a point approximately in line with the western edge of the present Frederick Street alignment. From historical records, it does not appear that Frederick Street was ever formally extended beyond its terminus with the former 1870 railway formation (Anzac Avenue today). It appears, however, that an informal extension from Frederick Street was laid across the tidal foreshore, as the archaeological monitoring identified a shallow, but wide (approximately twenty metre) deposit of rubble rock forming a low bank or berm that pre-dated the historic refuse deposit. Petchey (2018 pers comm) notes this is almost exactly a chain (22 yards or 66 feet) the standard width of a road reserve. North of this bank, the reclamation took the form of harbour dredging fill with no historic refuse reclamation deposits found in

either excavations for a foul sewer trench or test pits undertaken in 2014 across the northern area of the site.

The 1880s causeway to the former Milburn Lime and Cement Works, to the east of the new Brewery site and postulated to have run across the site, was re-interpreted as running on a curving alignment to the east of the site, under the present railway line. It connected into the 1870s Dunedin and Port Chalmers railway formation to the south of the present Ward Street overpass, now occupied by the somewhat wider road alignment of Anzac Avenue.

## The Cultural Material Catalogue

In the early stages of the Emerson's Brewery project, it became evident that the investigation of the historic reclamation layer was likely to produce a very large quantity of mainly later nineteenth century cultural material in the form of a single historic refuse deposit. From the early samples recovered, a significant degree of repetition within the artefactual material was noticeable that in itself replicated many of the commonly known forms of ceramics, bottle glass, faunal deposits and other domestic material already recorded across Dunedin and other cities. There was also, not surprisingly, a high degree of replication with the forms and materials identified in the historic refuse deposits investigated by Middleton and Williams (2008; 2009) in the nearby reclaimed ground at the Chinese Gardens and Otago Polytechnic School of Art.

After discussions with the HNZPT Regional Archaeologist, it was agreed that a reiterative sampling strategy would be developed as the excavations progressed, which would initially retain familiar examples of artefactual material (e.g. common ceramic patterns and glass), but would then be gradually restricted to new and unusual examples. Artefacts that were commonly repeated in the excavated deposits were cleaned on site, recorded photographically in groups and noted on the context recording sheets for each pipe section and then discarded. In this way, a comprehensive record of the range of excavated artefactual material was obtained with a large physical sample still retained for further analysis (over 1,500 litres). Faunal material was the most difficult to sample due to the significantly higher proportion of material found and its highly disturbed nature, but from a visual assessment it soon became evident that this also had a limited variation in terms of species and butchering evidence, being dominated by sheep and butchery waste.

The condition of the assemblage was generally very good although the few textiles and some of the ubiquitous leather footwear were in a delicate

condition and easily damaged; the smaller animal bone, fish bone and shell were also very friable. The artefactual material was categorised into the following standard classes with examples provided of their typical forms, fabrics, etc (cf Adamson 2010; Holdaway 2006; Macready and Goodwyn 1990).

**Ceramics:**
*Forms and functions* – tableware (plates, bowls and ashets), hollowware (bowls, cups/mugs, dishes, tureens, lids, jugs, ewers, chamber pots, pots), teaware (cups and saucers, tea pots), ornaments, vases, candlesticks, toys/dolls, water filter, other;
*Fabrics* - refined earthenware (white, red, buff and yellow), porcelain, bone china, unrefined earthenware (red), dyed-body ware, Chinese wares, stoneware vessels and jars (ink bottles, porter, ale and ginger beer bottles, blacking bottles, miscellaneous storage pots/containers);
*Decoration* - underglazed transfer patterns, hand enamelling, moulded relief and hand-gilded decoration; banding and hairlining, cut sponge decoration;
*Miscellaneous* - clay pipes (tobacco); glazed tiles (wall and floor) and miscellaneous decorative items.

**Bottle glass:**
*Alcohol* - beer (ale, porter, other), whiskey (cylinder & flasks), wine, champagne, cognac, gin, assorted bitters;
*Pharmacy/chemist* (medicines, patent cures, phials, ointments and assorted local embossed chemist's bottles);
*Aerated/mineral water and cordials* (Codd, stick, torpedo patents);
*Personal:* perfume bottles (misc., Rimmel, Piesse & Lubin), ointments, baby feeders;
*Household:* inks, glue, polishes, blacking, cleaning, poison;
*Food:* pickles, jams and preserved fruits, condiments (misc. sauces, Worcestershire sauce (Lea & Perrins), vinegar, salad oils).

**Other glass:**
Window glass; vessels (decorated, ornamental and pressed glass), drinking glasses and dishes.

**Faunal:**
Animal bone; fish bone; shell.

**Textile:**
Material off-cuts; clothing remnants; hat; purse.

**Leather:**
Footwear (adults and children's' boots, shoes and slippers); cobbler's off-cuts; purse; belt; other.

**Metal:**
Manufacturing off-cuts; implements; tableware; wire; lamp base, other.

**Other:**
Composite items such as brushes; cork; architectural items (door handles); lamp holders; buttons; clothes pegs.

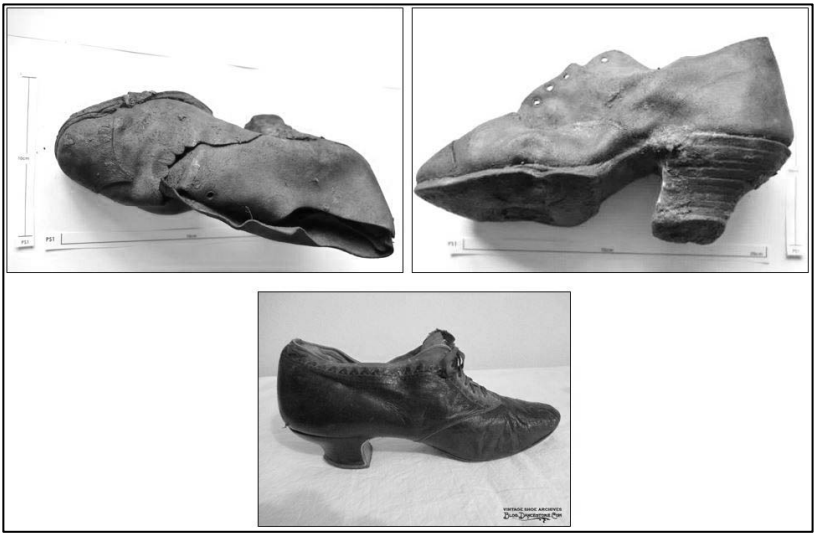

*Figure 6. An example from the Emerson's assemblage: Women's Oxford shoe recovered from the historic refuse layer (top) and comparable 1880s shoe from the USA (Lower image courtesy of http://blog.dancestore.com).*

In spite of only the relatively small portion that was sampled and retained for further analysis, the assemblage has provided a wealth of information on the range, nature and availability of products such as food, beverages, pharmaceuticals, clothing and personal care, to the inhabitants of Dunedin in the late 19th century. The dominant date range of the artefacts analysed supported the historical information that the reclamation of the Frederick Street foreshore was begun in the early 1890s and was completed by 1903. However, a broader range of dates identified from the artefacts was interpreted as reflecting the agency of various personal and social activities

such as the retention of older, valued plates and items kept until they were broken and discarded; the recycling of bottles due to a shortage of certain types of bottle glass (e.g. beer); and possibly the redeposition of refuse material that had already been deposited on other city tips and then relocated to the reclamation site under the direction of the city council. Although English manufacturers dominated the cultural material sample, as is often the case in nineteenth century New Zealand historical contexts, it was noticeable that there was a considerable number of Scottish ceramic producers represented, perhaps a reflection of the Scottish ancestry of many of Dunedin's early settlers. A similar pattern was also noted by Petchey (2004: 42) during his investigations at the Farmers Trading Company Site located at 150-182 George Street, Dunedin.

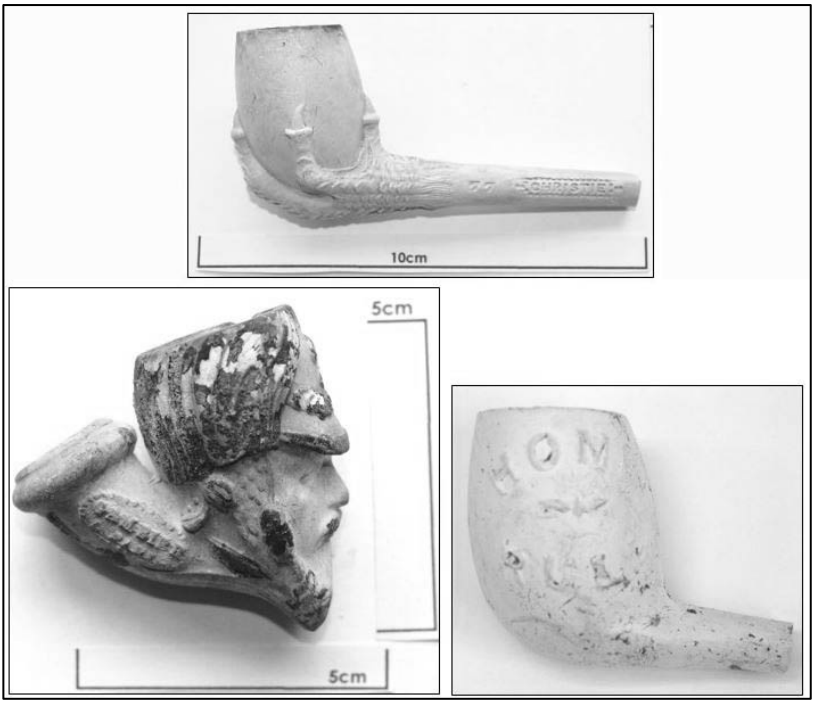


*Figure 7. Clay pipe designs: a Christie 'Bird's Claw' (top); Gambier's 'Alexander II (left)'; and the 'Home Rule' bowl (right).*

## Conclusions

The artefact sample from the Emerson's Brewery site investigations provided a comprehensive and almost 'standardised' catalogue of later nineteenth century artefacts, which have the potential to be used as a baseline reference for many Dunedin historical archaeological contexts and other, European historical sites across the country. Critical interpretation of this cultural material has been challenging, as the artefacts themselves were divorced from their original industrial, commercial and domestic contexts of production and use, created through the acts of their original disposal and subsequent deposition as reclamation fill. However, one notable conclusion was the corroboration of the employment (and foetid nature) of the refuse material itself – as both contemporary commentaries of the 1890s and later research by Wood (2005) purported. Even during the 2015 excavation of the historic refuse deposit, a certain odour and 'sludginess' was apparent, enveloping the newly exposed jumble of animal and fish bones, broken ceramics and glass and leather boots. As Wood (2005: 64) noted, quoting the mayor of North East Valley in 1900, '„he had no 10-acre blocks to reclaim with old boots, tin cans and broken bottles'.

What we have also been able to ascertain are a number of broader patterns and themes of human consumption, agency and discard that has shed more light on our knowledge of the late nineteenth century inhabitants of Dunedin, their tastes (both literal and figurative), and some of the social, commercial and personal influences shaping their consumption choices. Although we will never know the individual identities of these people, their refuse has left a legacy of cultural, historical, material and social knowledge that has allowed us to come just a little closer to knowing them.

The full Emerson's excavation report and photographic artefact catalogue are available from the HNZPT Digital Library (ref Farminer9 2016).

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