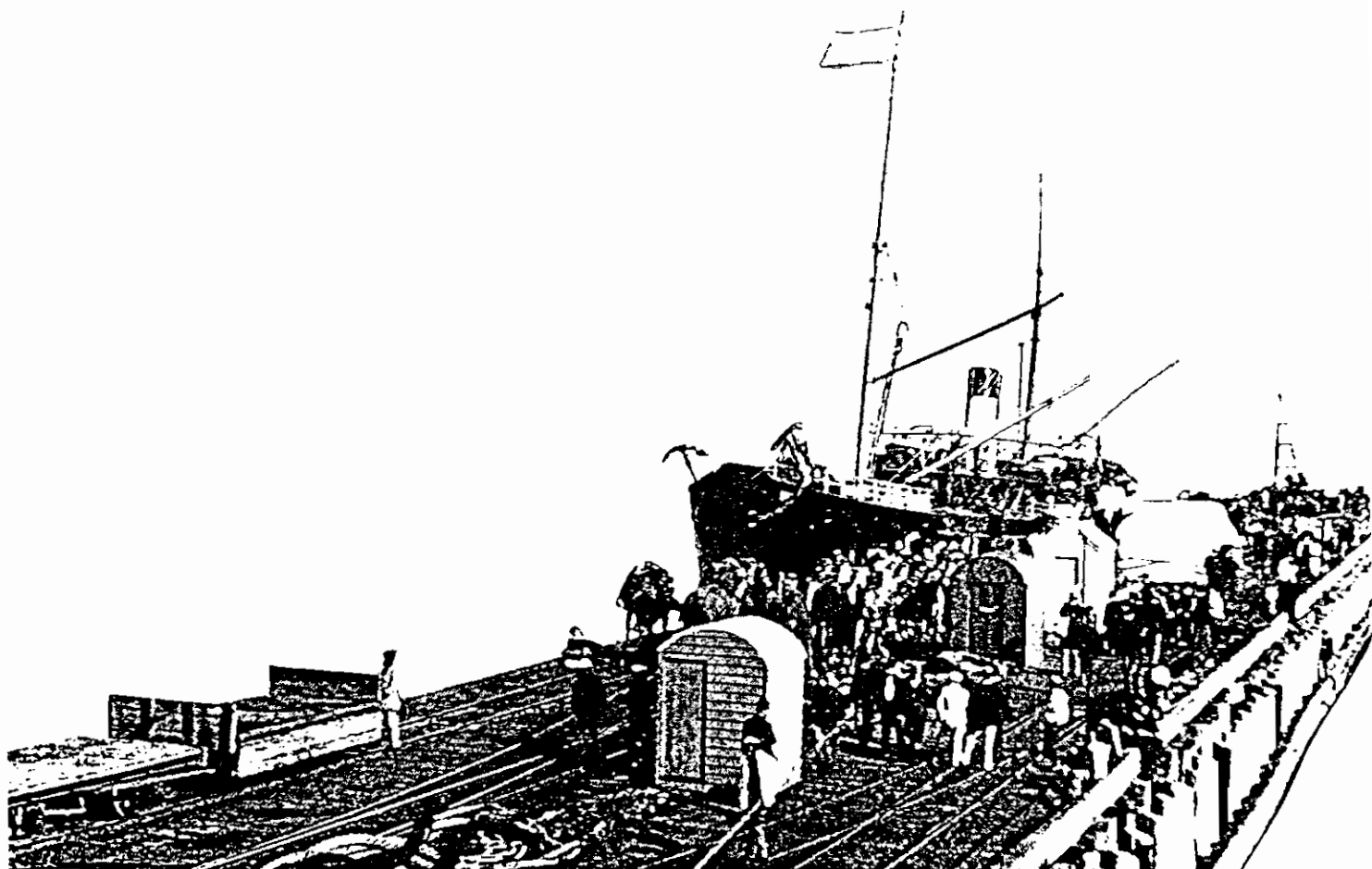


THE LONG JETTY EXCAVATION
14 July to 20 August, 1984

A Report on the Long Jetty Excavation

Compiled by Dena Garratt
Consulting Maritime Archaeologist



with contributions from
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Cover designed by Jon Carpenter

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ABSTRACT

In July 1984 the Western Australian Maritime Museum became aware of plans to build a marina in the vicinity of the Long Jetty. Challenger Harbour (as it was named), was designed for the yachts of the contenders for the America's Cup Challenge in 1987.

The plans showed that a significant portion of the visible remains of the jetty would be covered by the northern groyne of the new harbour. The expected time to the beginning of construction was one month. In what was effectively a case of salvage archaeology, the Museum instigated an immediate assessment of the impact of the harbour works on the jetty area. The project co-ordinator, Mike McCarthy was allocated a budget of \$2,000 to complete the project.

Time constraints necessitated that the archival research was to run concurrently with the excavation process. The author was responsible for conducting the archival research and producing a report outlining the historical significance of the Long Jetty and the Bathers Bay area.

The aims of the project were to map the remaining jetty structure, ascertain the spread of material and to gauge the extent to which it would be covered or disturbed by the development. A sampling of artefacts were later catalogued, conserved and prepared for display for public information and study purposes. Due to the enhanced public awareness created by the Long Jetty display and various press reports (see Appendix A), pressure was brought to bear to force the realignment of the harbour works so that only a small section of the jetty would be affected.

THE LONG JETTY EXCAVATION REPORT

PART A. ARCHIVAL RESEARCH

HISTORICAL BACKGROUND

Bathers Bay, Fremantle has been the site of continuous European occupation since the settlement of the Swan River Colony in January 1829. It was chosen as the site for Fremantle's first sea jetty, a rough limestone lightering jetty, constructed in 1831. In 1837 another limestone jetty was built for the Fremantle Whaling Company at Arthur Head. The South Jetty was built in 1857 and served as the colony's main berthing facility for twenty years until the Long Jetty, (originally known as Ocean Jetty), was completed in 1873.

The Long Jetty in Bathers Bay was a focal point of maritime activities in Western Australia from the 1870s to the 1920s. It was the centre for trade and communications for the Colony and served as the port of transshipment for both Perth and Fremantle until the opening of the Fremantle Harbour in 1897 usurped it's role as the Colony's gateway to the world.

Until the jetty was built, large vessels visiting Fremantle could only be loaded and unloaded by fleets of lighters (sailing barges), a slow and hazardous process (de Kerchove, 1961:454).

By the late 1860s the existing harbourage facilities of Fremantle were becoming inadequate to deal with the increased volume of shipping. Several plans had been mooted to construct a harbour at the mouth of the Swan River, but as reported in the *Fremantle Herald*, of 24 October 1868, the colony lacked the finances and the technology to cut a deep channel through the bar which formed a barrier at the river mouth. The correspondence of the Fremantle Town Trust of August 1871 show that as an alternative, the Governor instigated the construction of a deep water jetty at Anglesea Point, just to the north of the South Jetty. Tenders for construction were advertised in the *Government Gazette* of 20 August 1872.

The first section of the new jetty was built with jarrah, a local hardwood well known for it's capacity to resist bio-degradation.

The Colonial Secretary's Records of 7 February 1874 record that construction was completed in December 1873, and the Public Works Department Plan No. 19 shows that the jetty measured 15 ft wide (4.57 m) and extended in a south westerly direction to a length of 750 ft (288.6 m) with the depth of water at it's extremity at 12 ft (3.6 m). The Ocean Jetty could accommodate vessels up to 700 tonnes, however larger vessels were still required to anchor off shore.

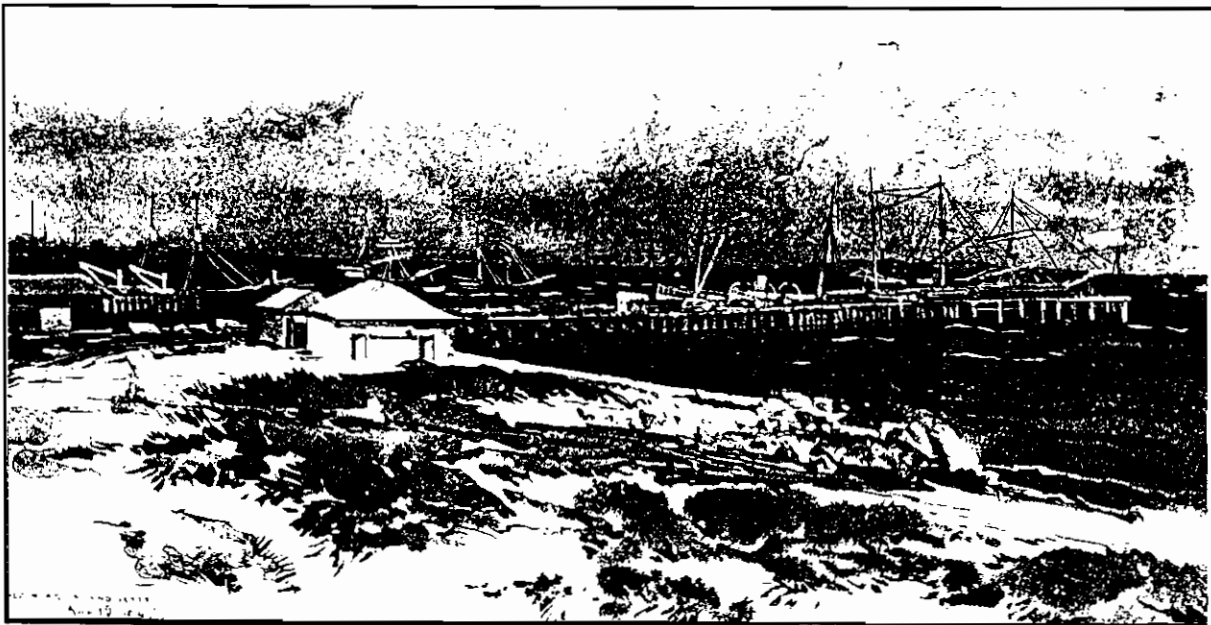


Figure 1. South Jetty and Ocean Jetty. (J. P. Ashton, 'Fremantle Harbour and Jetty Aug 15, 1887').

Much of the Colony's export commodities were bulky cargoes such as wool, wheat and timber, requiring shipment in vessels generally too large to berth at the Ocean Jetty. As a result lighters remained the primary method of loading and unloading cargo.

After successful lobbying for improved berthing facilities by vested interests in both Government agencies and private enterprise, the Government accepted a tender to extend the jetty. It is recorded in the Harbour Masters Journal that the extension was completed on 22 December 1887. According to the Public Works Department Plan No. 45, this new section was 42 ft (12.8m) wide and increased the length of the jetty to 2387 ft (864.7 m), allowing six vessels to be berthed in water up to 20 ft (6.0 m) deep. (PWD WA 45 Ocean Jetty, Fremantle. Extension for Eastern Railway, 12.9.1882).

After the addition Ocean Jetty became popularly known as the 'Long Jetty' and it retained that name after a final extension was built in April 1896. Another 457 ft (239.2 m) was added, giving the jetty a total length of 3,294 ft (1,004 m). This enabled eight vessels to berth however, the depth of water was only increased by 2 ft (0.6 m). (Building Management Authority, 1896).

The Long Jetty was not without its problems as a port facility however. Bathers Bay is open to westerly gales with the result that many vessels were damaged whilst in port. At that time, operation of the waterfront was not well organised and stevedores tended to be an unruly lot. Drunken behaviour was not uncommon. The following excerpts from letters by Captain D. B. Shaw (who was stuck for nearly two months alongside the Long Jetty in 1892) attest to these facts.

Shaw to his owners:

October 27

My crew are half drunk. Some of them have cleared out and the others too drunk to work.

November 8

Once in a while there is a terrific run comes in. Then I have to slack her off and let her go. It is impossible to hold her. She would tear herself all to pieces. She has done considerable damage to herself. My after bitts are broken off level with the deck. My stern chocks are pulled out and about ten ft of the rail all torn off including two stanchions. All my channel next to the deck are more or less damaged. About 8 feet of my main sail is split off and one hawse pipe gone. The bufalow of the starboard side of is certainly the worst place I or anyone ever saw. No place to send a ship of this size.

November 11

It is now blowing heavy from the S.W. and may last two or three days. Can't get clear of the wharf until it moderates. No steam power that can tow her. It is a bad job coming here.

Gentlemen, I have been in a good many places in my time, but this is the worst dam hole I ever saw. The stevedores are half drunk all the time and don't care what they do. The ship has to feed them and give them all the money and tobacco they want or they will make trouble. They are a dirty lot.

November 19

I was never so sick of a place in my life, and may the curse of Christ rest on Fremantle and every son of a bitch in it. God damn them all.

I remain, Gentlemen, your Obedient Servant,

D. B. Shaw

P.S. Any man that would send a ship here a second time is a damned ass. Still blowing a gale.

D.B.S.

Captain Shaw's letters are reproduced with the permission of Wilhelmsen Lynn Elder.

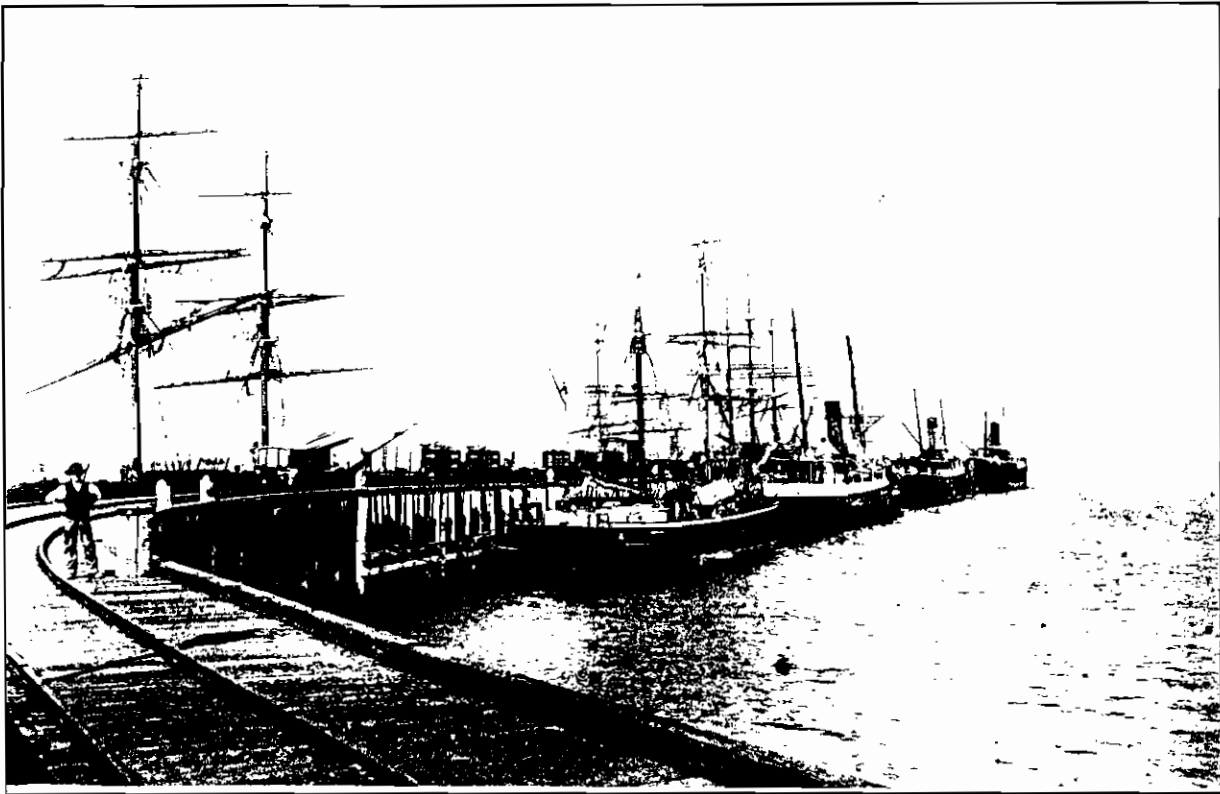


Figure 2. Long Jetty c1890. (Photo: Battye Library)

The Long Jetty reached its zenith in the gold rush days of the early 1890s, but because of the shallow water, lighters were still required. Fall (1972:129) notes that in 1890, 42 ships berthed in Fremantle and most required lightering. Even in 1897, when the last section of the jetty was in use, 216,000 tons of cargo in a total of 600,000 tons still had to be transhipped by lighters. With the opening of Fremantle Harbour later in that year, lighters were no longer necessary and the Long Jetty became obsolete.

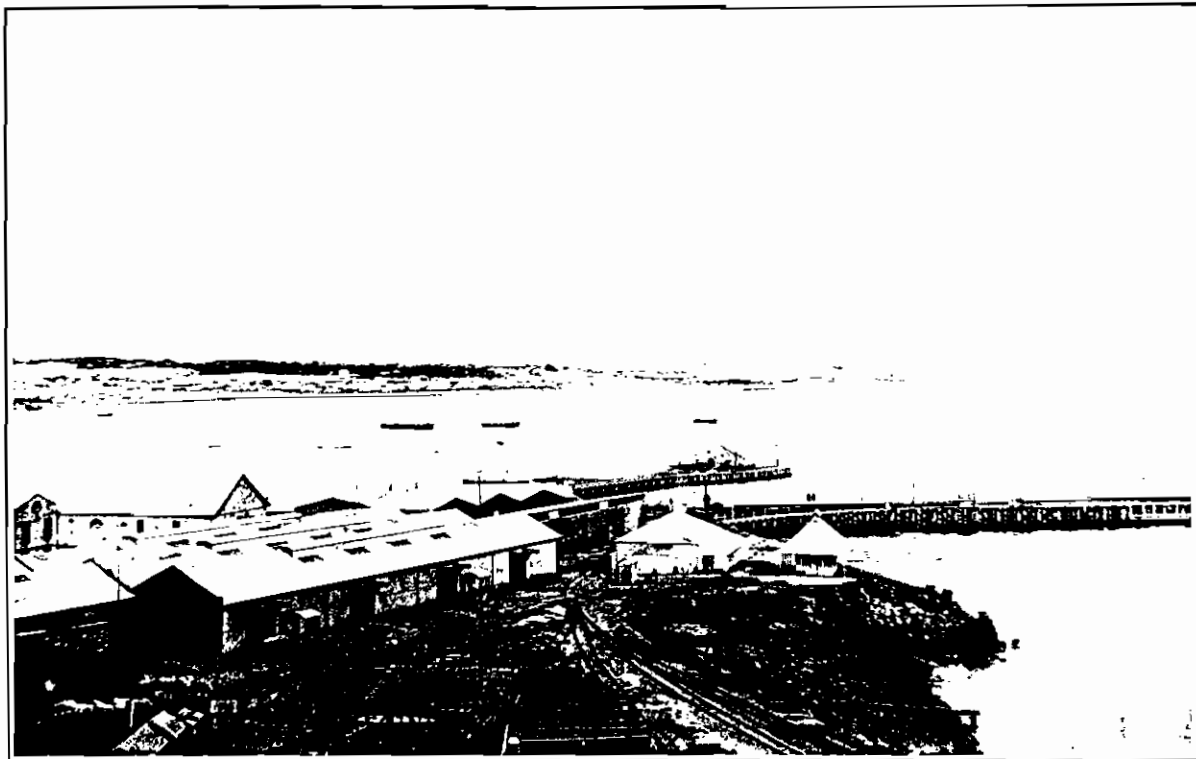


Figure 3. South Jetty and the first section of the Long Jetty prior to the construction of the Sea Baths.
(Photo; Battye Library)

During the 1890s public bathing gained popularity and several public baths were constructed in Perth waters and around the Fremantle foreshore. One of the most popular was the Municipal Sea Baths, situated between the Long Jetty and the South Jetty. The Sea Baths were finally demolished in 1917 and the original site is now covered by the northern sea-wall of the Fishing Boat Harbour.

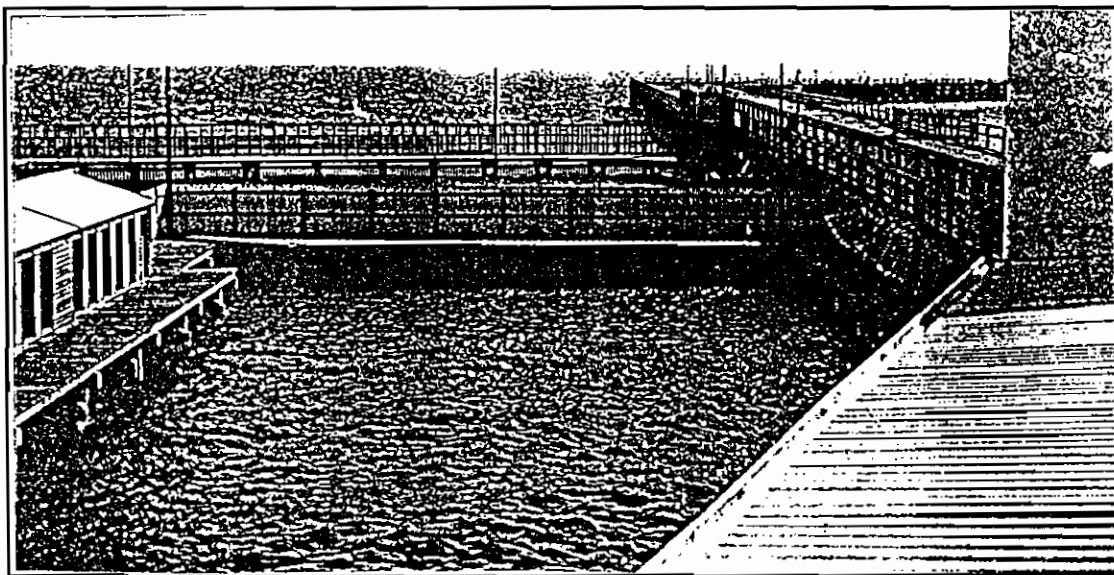


Figure 4. Fremantle Municipal Baths (Fremantle City Library, Print No. 729).

By the turn of the century the jetty had been all but abandoned, but in 1904 the jetty was converted into a promenade in the style of English seaside resorts (Fremantle Harbour Trust, 1904). A protective fence was erected in 1906 and a hall built at its extremity for entertainments, but this did not prove popular with the public and the jetty was closed to traffic in 1910 and gradually fell into disrepair. It was not until 1921 that the superstructure was finally removed and the piles cut down to the sea bed (Fremantle Town Council Minutes, 19 February 1921), leaving the original 750 ft (228.7 m) of Ocean Jetty.



Figure 5. Long Jetty Promenade. (Photo: WA Museum)

1.1 Historical significance

The area immediately involved and all that lying between Point Marquis (South Mole) and the southern shores of South Bay (now the Fishing Boat Harbour) was an anchorage and focal point for shipping from 1830 to the early 1900s. The jetty remains are one of the most tangible links with the past and represents a valuable historical resource, one that will help us focus on the economic and social activities of Fremantle's early years.

The site is also relevant with respect to immigration and the economic life of Western Australia in general.

PART B. PRE-EXCAVATION MANAGEMENT

2. IMPETUS FOR EXCAVATION

In July 1984 the Western Australian Maritime Museum became aware of plans to build a marina in the vicinity of the Long Jetty. Challenger Harbour (as it was named), was designed for the yachts of the contenders for the America's Cup Challenge in 1987.

The plans showed that a significant portion of the visible remains of the Long Jetty would be covered by the northern groyne of the new harbour. The construction of the groyne had the potential to destroy or damage any historical material in the vicinity. As a response to this prospect, the Museum instigated an immediate assessment of the impact of the harbour works on the jetty area.

3. PARTICIPANTS AND THEIR EXPERTISE

With such a limited budget, the project could not have been completed without the skilled volunteer assistance of members of the Maritime Archaeological Association of Western Australia. With a number of these volunteers proficient in such areas such as archival research and swim line searches, three MAAWA members were allocated specific areas of responsibility, ie. historical research, sea-bed search and a section of the artefact cataloguing and drawing. Museum staff included the project leader/archaeologist, a diving conservator, a boat skipper /diver and a mechanic /diver. Other volunteer assistance was provided by 'work experience' students from a local high school. Key participants are listed below:

<u>A. WA Maritime Museum Full-time personnel</u>	<u>Duties</u>
M. McCarthy	OIC/Diver/Photographer
G. Kimpton	Boat skipper/Diver
R. Richards	Engineer/Diver

Part time personnel

All staff invited to participate on an occasional basis as per their skills.

<u>B. Conservation</u> J. Carpenter	On site conservation/Diver
<u>C. MAAWA</u> Denis Robinson Dena Garratt Phil Clegg Plus a selected team of qualified and able MAAWA volunteers	Search co-ordinator/Diver Historical researcher/Diver MAAWA boat skipper/Diver

3.1 Facilities and equipment

A budget of \$2000.00 was allocated of which \$1315.00 was spent in the excavation phase of the project. Volunteer labour was the main on-site component.

Vessel: Maritime Museum work boat, *Beagle*

Excavation tools: water dredge, prop wash

Diving equipment: Hookah and SCUBA

Storage tubs

<u>Survey and search equipment</u>	<u>First Aid and safety equipment</u>
Chart of proposed marina	Diver's flags
Tape measure to 500 metres	Small dinghy and outboard motor
Weighted line to 500 metres	Oxy-viva resuscitation kit
Search line (jointed 12m pipeline 25 mm diam)	First Aid kit
Star pickets and hammer or anchors	Stand-by diver
Sample bags	
Two-way radios	
Compass & Binoculars	
Marker Buoys and Line	

4. THE SITE

The Long Jetty is situated in Bathers Bay, Fremantle. The bay is now bounded by the South Mole to the north and the northern breakwater of Challenger Harbour to the south.

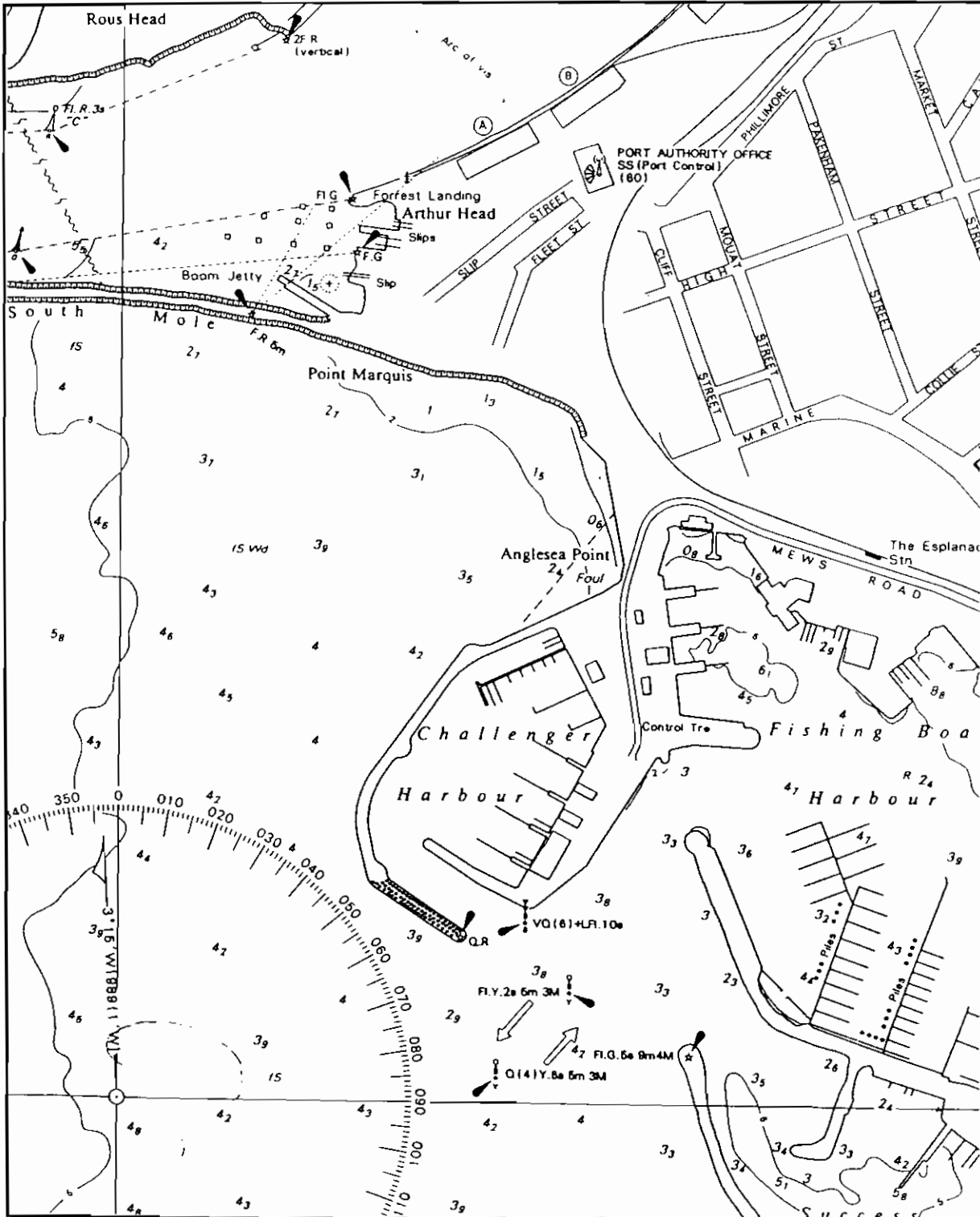


Figure 6. Anglesea Point. The dotted line indicates the position of the jetty remains. (Chart reference: AUS 113 Port of Fremantle 1: 7 500. 1982).

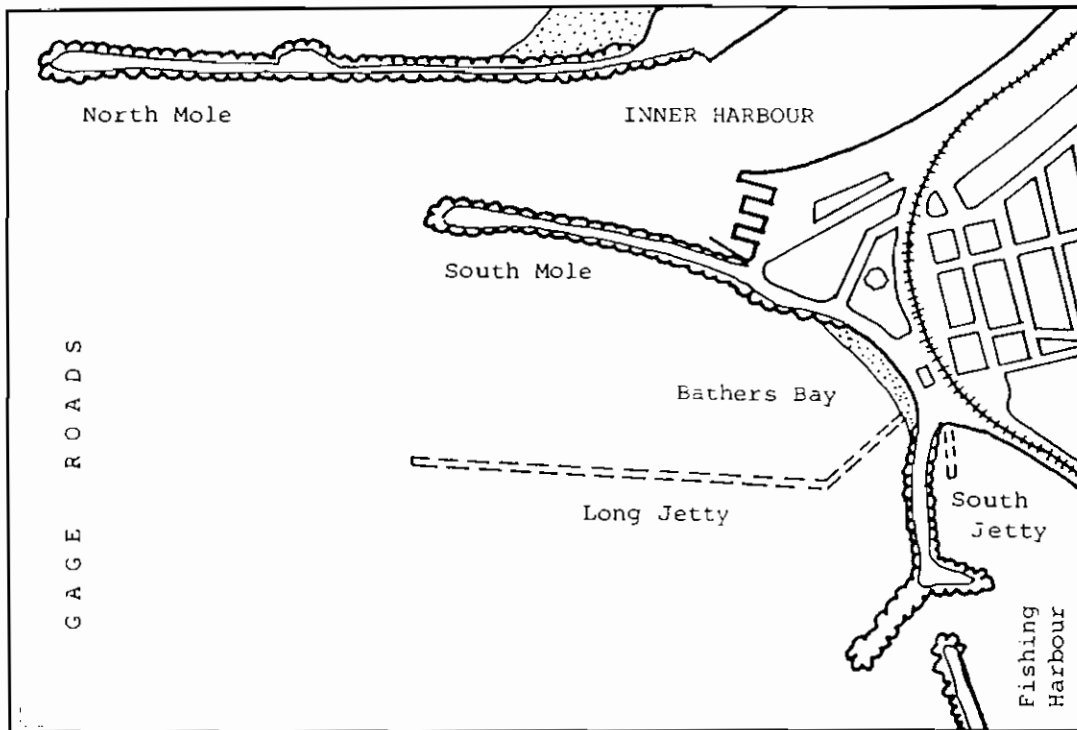


Figure 7. Sketch plan of Long Jetty site prior to the construction of Challenger Harbour. (Reproduced from *Port of Fremantle*, 7:10, 1984).

The visible remains of the jetty extend out to sea in a south-westerly direction from the shore on a bearing of 219° for 200 metres. Approximately 30 piles protrude from the water at low tide but on a high tide only one can be seen. Many submerged piles are discernible from the surface giving a clear indication of the width of the jetty and the direction to which it extends but its western extremity is obscured by deeper water. The water depth graduates from 0 to 5 metres along the length of the jetty.

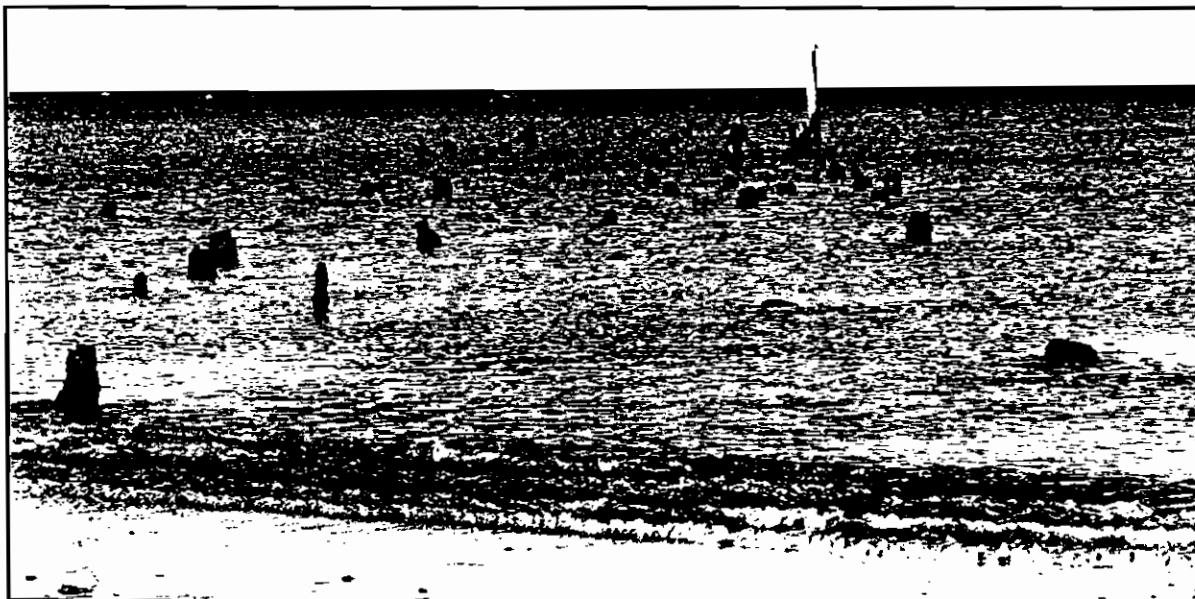


Figure 8. Extent of the visible remains of the jetty piles at low tide. (Photo: Jon Carpenter).

4.1 Predisturbance assessment

4.1.1 Sea conditions in the area

The area encompassing the jetty remains is bounded by harbour works to the north and south. The northern breakwater of the Fishing Boat Harbour provides protection from the strong southerly winds and heavy swells that prevail in the winter months while the south mole of Fremantle Harbour afford some protection from nor-westerly blows.

Visibility can vary between 0.5 m and 5 metres, depending on weather conditions, tides and the outgoing silt load from the mouth of the Swan River.

The bay is influenced by diurnal tides with an average tidal range of 0.8 metres.

4.1.2 Sea-bed geology and topography

Bathers Bay is bounded by a limestone reef platform on the north shore. A sandy beach forms the eastern shore and the seawall of the Fishing Boat Harbour forms the southern boundary of the bay. Within the bay the sea-bed is composed of sandy sediment, sparsely populated with marine flora and fauna. The entrance to the bay is covered with large patches of seagrass. The sea floor slopes gently from the shoreline to a maximum depth of 4.6 metres (MLW) in the centre of the bay. Some seasonal scouring of the sea bed occurs as a result of winter storms.

The sea-bed along the line of the jetty has been disturbed or "tilled" to a depth of approximately one metre by bottle collectors.

4.1.3 Contemporary use of the site

The remains of the jetty have been a favourite haunt for bottle collectors and souvenir hunters for 25 years. When hookah and SCUBA diving equipment became readily available in the 1970s, divers regularly scoured the sea-bed in search of bottles and other items of value using excavation tools such as probes, water dredges, air lifts and water jets.

Bathers beach is used for passive recreational activities such as swimming and snorkelling. The site is not subject to boating activities as the area encompassing the jetty piles is marked as foul ground on Admiralty charts, (see Figure 5).

4.1.4 Evidence of previous disturbance/salvage

In December 1987 a mooring anchor was recovered by the Maritime Museum from an area adjacent to the jetty site in what was known as South Bay before the construction of the Fishing Boat Harbour. (See Figure 6). The anchor was moved to prevent it being damaged during the construction of the new marina.

The sea-bed around the jetty site is pockmarked with the holes dug by bottle collectors. Bottle fragments litter the sea-bed. Divers have removed almost all attractive surface material that lay exposed, or partly exposed on the sea floor.

4.2 Initial archaeological assessment

The area immediately involved and all that lying between Point Marquis (South Mole) and the southern shores of South Bay (now the Fishing Boat Harbour) was an anchorage and focal point for shipping from 1830 to the early 1900s. Jetties were built and vast quantities of material were thrown or lost overboard from these structures and the ships that used them. Records show that the area chosen for the marina was once used for several activities and therefore a possible source of artefacts associated with the following:-

1. Bay whaling and the Whaling Jetty (1837)
2. Boat building industry (Mews boatshed and others)
3. South Jetty (1854)
4. Ocean Jetty (or Sea Jetty), later known as the Long Jetty (1872-1921)
5. Fremantle Municipal Sea Baths (c 1906-1917)
6. The shipwrecks *Marquis of Anglesea* (1830) and the *Priestman Dredge* (1893)

4.3 Pre-disturbance survey

MAAWA divers were responsible for conducting a systematic swim line search for artefacts lying on the sea-bed in the area to be covered by the proposed groyne. Teams of four (MAAWA) divers using SCUBA equipment swam abreast of each other along the projected line of the breakwater, searching for objects on the sea-bed. The search pattern was determined by the proposed order of construction of the groyne. Areas to be covered first were searched first, using the PWD plan as a guide. (PWD WA Plan No. 55582-1-1, Fremantle Northern Boat Harbour Breakwaters–Layout and Plan 29.5.1984).

Areas with high concentrations of material were marked with buoys for further investigation by Museum divers.(Robinson, 1984).

5. RESEARCH DESIGN FOR EXCAVATION

5.1 Constraints

Stringent temporal and financial constraints restricted the Museum to a limited exploratory excavation. The expected time to the beginning of construction was one month. A budget of \$2 000 was allocated for the project.

The temporal constraints were such that the initial phases of the project ie. archival research, sea-bed search and excavation were run concurrently. Diving commenced on 14 July and concluded on 20 August 1984, with 106 hours having been spent underwater. The excavation was forced to a halt as bulldozers dropped limestone boulders closer to the section of the jetty that was to be buried. The plume of silt that resulted from the earthworks caused the visibility to deteriorate to less than one metre. The silt plume is clearly visible in the photograph below.

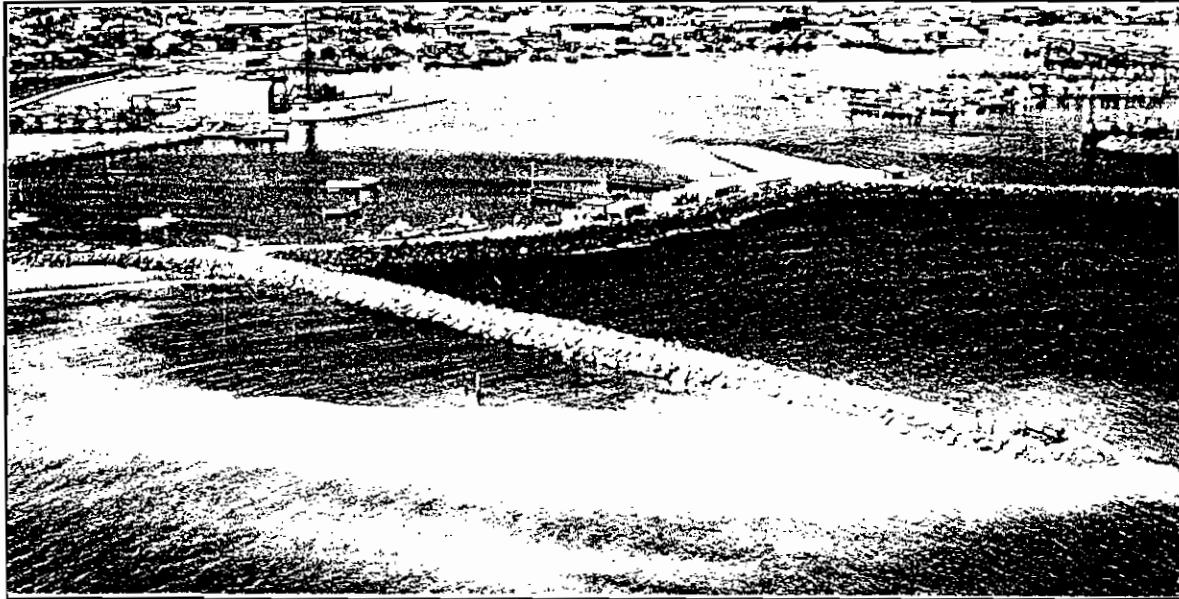


Figure 9. Bulldozer at work on the northern groyne of Challenger Harbour. August, 1984.
(Photo: Pat Baker, WA Maritime Museum)

The area under threat covered 50 000 square metres, a vast area to survey in such a short time. Archaeological material was known to lay beneath an overburden of sand up to 2 metres deep. This overburden had to be removed quickly under difficult environmental conditions.

5.2 Objectives

The aims of the project were to:

- (a) Map the remaining jetty structure, ascertain the spread of material and to gauge the extent to which it would be covered or disturbed by the development.
- (b) Raise, catalogue, conserve and display a representative sample of material from the threatened area for research, educational purposes.
- (c) Verify the heritage value of the Long Jetty with a view to gaining protection for the site, possibly under the Maritime Archaeology Act 1973.

5.3 Research hypothesis

Given that the sea-bed itself had been almost swept clean by the collectors and souvenir hunters, the prospects of material being found appeared slim. However, it is well known that following severe winter storms, debris again appears on the sea floor. It was hypothesised that vast quantities of historic material lay buried in the sand several metres below the sea-bed.

PART C. THE EXCAVATION PROCESS

6. EXCAVATION METHODOLOGY

The excavation was divided into two phases. The initial phase was a non-disturbance survey to plot the distribution of visible archaeological material on the sea-bed. The sea-bed search was organised and conducted by MAAWA volunteers at the request of the WA Maritime Museum. The second phase was the excavation of selected areas on the Long Jetty site.

6.1 Diving regime

The boat skipper was responsible for maintaining the search pattern by taking angle and distance measurements from a datum point which in this case was the tallest jetty pile. The first lanes ran parallel with the jetty piles on the southern side beginning 5 m out from the jetty with subsequent lanes 5 m apart.

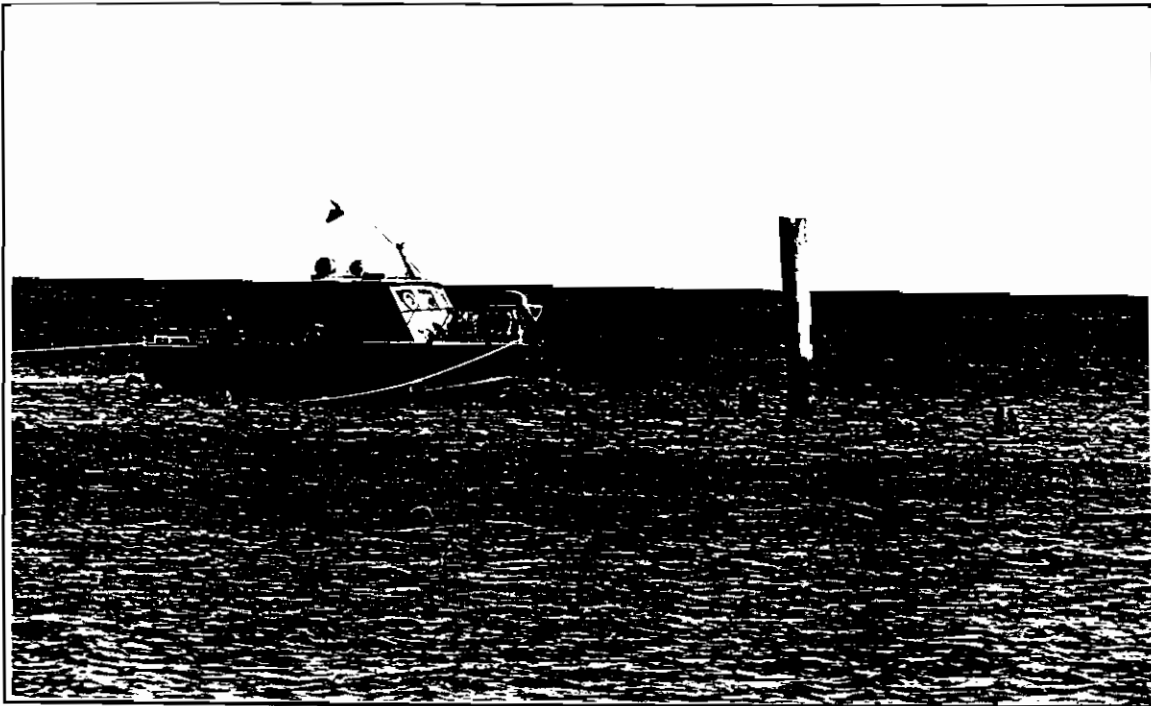


Figure 10. WA Museum work boat *Beagle* during excavation of the Long Jetty site.
(Photo: Jon Carpenter, WA Maritime Museum)



Figure 11. Prop wash in operation. (Photo: WA Maritime Museum)

6.2 Excavation techniques

Excavation using a water dredge initially proved too slow considering the vast area to be examined and the depth of the overburden. Many artefacts were buried to a depth of two metres below the sea-bed. Thus, a gross excavation tool, the propeller wash was used to great effect to expose large areas of sea-bed in a short time. A cowling was fitted over the stern of the Museum work boat to divert the propeller wash down onto the sea-bed below. By running the boat engine at 1,000 rpm, a crater approximately 5 m wide by 1 m to 1.5 m deep could be excavated in water 5 m deep over a period of twenty minutes. Holes were excavated at 5 m intervals. The position and depth of the holes was monitored by divers on the sea-bed who relayed instructions on the required strength and direction of the propeller wash to the boat skipper. This system worked best at a depth of 3-4 m but proved too gross a tool for depths less than 3 m. In all 70 holes were excavated using this method. An airlift was used in areas too shallow for the propeller wash and in amongst some of the piles that were inaccessible for the boat.



Figure 12. Diver inspecting artefacts exposed by the action of the propeller wash
(Photo: WA Maritime Museum)

6.3 Recording techniques

All the visible piles (above LWM) were plotted using triangulation. Their position and the position of each excavation hole was marked on the site plan. Every hole and the artefacts recovered from them were assigned an identifying number. This information was recorded in the artefact registration book and on the site plan.

Approximately 7,500 m² of the estimated total area of 50,000 m² was excavated and from this small area, only a tiny fraction of the material was recovered as a representative sample from a heavy concentration of artefacts in a layer over one metre deep. Over 1,143 artefacts were recovered and catalogued during the excavation. (McCarthy, 1984 Long Jetty Day Book).

A photographic record was made of every phase of the excavation.

6.4 Shortcomings of the excavation

The search phase was hampered by the less than optimum conditions. The low visibility normally encountered in rough winter seas was compounded by an outgoing flood of silted water from the Swan River due to heavy winter rainfalls and 'white-outs' caused by the commencement of limestone filling into the waters adjacent to the Long Jetty.

Time constraints and the vast area to be examined precluded the use of less aggressive excavation tools. For these same reasons, a detailed plan, indicating the position of each of the artefacts recovered from each hole has not been attempted. This is acknowledged as an area for future analysis.

A stratigraphical analysis of the excavation was not attempted, primarily because of the time factor and because it was known that the artefacts and the sandy matrix which contained them was subject to disturbances from storms and later, from widespread and indiscriminate excavation by hottle collectors. The time constraints imposed on the project, precluded any attempt to establish the degree to which any stratigraphical information may exist.

6.5 On-site management of artefacts

6.5.1 The underwater conditions found on-site in relation to the artefacts

Most material is protected from the destructive forces of seawater by an overburden of silty sand up to 2 m deep. This essentially anaerobic environment is periodically disturbed when winter storms (or bottle hunters) cause scouring of the sea-bed, exposing material to the seawater for days or weeks at a time.

6.5.2 On-site treatment, transportation and packaging

The close proximity of the Maritime Museum to the excavation site precluded the necessity for elaborate on-site conservation treatments. Recovered artefacts were immediately placed in plastic tubs of fresh water to start the desalination process. Fragile items were wrapped in soft nylon mesh to protect them from damage prior to registration.

PART D. POST EXCAVATION MANAGEMENT

7. MANAGEMENT CONSIDERATIONS

7.1 Assessment of Cultural Significance

Bathers Bay, and in particular the Long Jetty site is a substantial repository for cultural artefacts from Western Australia's colonial past. The remains of the Long Jetty is of considerable historic importance as the only visible evidence of early port structures in the vicinity of Fremantle.

7.2 Legislation

Even though the Long Jetty site was recognised as being of great cultural importance, it had not, until 1985, been considered for legislative protection. The results of the excavation had demonstrated that the site was rich in cultural material and as such deserved full protection under the law. The Museum sought to have the site gazetted as an Historic Precinct under the Maritime Archaeology Act 1973.

Course of events:

* 20 Sept. 1985

Marine and Harbours assumed control of a body of water which includes the jetty site in September, 1985 (*Government Gazette*, 20 Sept. 1985).

* 20 March 1986

MAAC Resolution 4/86

Resolved that the Director be asked to check the (previous ambiguous) advice from Crown Law and look at the possibility of declaring the whole of Bathers Bay Area including the jetty (as a part of the whole) historic.

* 1986

The Fremantle City Council proclaimed Arthur Head area as an "A" Class Reserve. The Reserve starts at the high water mark from a point near the wall of the Northern Boat Harbour to Point Marquis and includes the land based remains of the Long Jetty.

* 28 Nov 1986

Crown Law Department - interpretation of the Maritime Archaeology Act No. 66 of 1973.

On November 28 1986, Graham Delaney, Senior Assistant, Crown Solicitor in interpreting the 1973 Maritime Archaeology Act wrote that:

If there are known to be (or there are likely to be) objects* as referred to in 5.6(3) of the Maritime Archaeology Act in the vicinity of the Long Jetty, then that vicinity is a Maritime Archaeological site under the Act.

5.6(3) * "Any object which, in the opinion of the Director was abandoned in the State before the year 1900 and derives from or was associated with any ship, whether or not an historic ship..."

(WA Maritime Museum, File No. MA 124.84).

* 24 October 1988

The area encompassed by the first section of the jetty was declared an historic site under the Maritime Archaeology Act 1973.

8. MANAGEMENT STRATEGIES

8.1 Legal protection

As a consequence of the excavation, the jetty remains and the area around it have been given legal protection under the Western Australian Maritime Archaeology Act of 1973. Under the provisions of the Act, recreational diving is permitted in the area, however no material may be removed from the site nor must it be disturbed in any way.

In September 1991 Marine and Harbours installed two marker piles on the beach adjacent to the Long Jetty. Each marker lines up with a row of jetty pile stumps to indicate that the area to the south of the marker piles is foul ground. (File, Marine & Harbours 18/9/1991).

8.1.1 Site management

The structural and archaeological integrity of the site will be preserved and reserved for passive recreation only.

No archaeological procedures will be undertaken that could cause unnecessary disturbance or damage to the fabric of the site.

8.1.2 Monitoring of activities on the site

Monitoring of the site presents no problem, due to the site's close proximity to the Maritime Museum. Surveillance is also provided year round by the Fremantle Port Authority, (which is the controlling authority for the area) and the Department of Transport Marine Division (formerly Marine and Harbours).

8.1.3 Site inspections

The WA Maritime Museum and members of MAAWA carry out non-disturbance inspections on an ad hoc basis to report on any evidence of interference or disturbance to the site.

8.1.4 Site stabilisation

The northern breakwater of Challenger Harbour has physically sealed a significant quantity of mid to late 19th century and early 20th century material for the future.

8.1.5 Site interpretation

The purpose of site interpretation is to enhance public awareness of the location and historic status of the Long Jetty and to emphasise the public's responsibility towards all protected sites.

To this end, the WA Maritime Museum plans to develop the Bathers Bay Heritage Trail for non-divers which will include the site of the Historic shipwreck, *Marquis of Anglesea* (1829), the Lighter Jetty (1831), the Whaling Jetty and tunnel (1837), South Jetty (1857), the Sea Baths (1906) and the Long Jetty. The wreck of the *Priestman Dredge* (1893) in Bathers Bay and the Long Jetty site will be included in the proposed WA Maritime Museum publication, *Wrecks in the Cockburn Sound*.

Though it has been proposed by the WA Maritime Museum, there is at present, no interpretive signage specifically for the Long Jetty. Some information is included on a sign noting the areas of historic significance within Bathers Bay.

A facsimile of a section of the jetty is being erected on the foreshore at Bathers Beach, using piles removed from the Como and Coode Street jetties in the Swan River. Historic photographs of the jetty will be reproduced and displayed on a series of ceramic tiles, accompanied by a brief history of the site. These interpretive tiles will be attached to the piles.



Figure 13. The construction of the Long Jetty facsimile in progress, February 1994.
(Photo: Jon Carpenter, WA Maritime Museum).

8.2 Artefact Management

The artefacts have been catalogued, conserved and prepared for display for public information and study purposes.

A small sample of leather artefacts have been selected for experiments to develop more effective conservation techniques.

Members of the public in possession of Long Jetty relics are encouraged to pass them on to the WA Museum so that the artefacts may be conserved and documented.

8.2.1 Artefact Register

Over 1,143 artefacts (or groups of artefacts) were recovered from the site and recorded in an artefact register. Artefacts were allocated a registration number, classified by material composition and briefly described. The date of recovery and location of the artefact is recorded as a grid position.

8.2.2 Condition and treatments of finds

Due to the decision to mount a display of Long Jetty material before the site was inundated, the artefacts currently on display in the Maritime Museum have been desalinated but will require further conservation treatment in the future. (See page 32).

Items still undergoing conservation treatments are listed in the Conservation Status Report, (Appendix D).

8.2.3 Collection recording

A computer catalogue of artefacts has been completed using an Omnis database package on Macintosh hardware. (See Appendix C).

8.2.4 Object description

To Jan 1994, 40 artefacts have been drawn. (See figures 14–23). The drawings have been catalogued by material type.

One artefact has been photographed. (See Figure. 25).

The cartridges and projectiles recovered from the site have been examined and described and are listed in Appendix C.

8.2.5 Interpretation/identification of finds

Glass and stoneware bottles and containers: The vast majority of artefacts recovered are ceramics, particularly glass and stoneware bottles of various types. Most are of Australian or British origin but there are also some American and British Empire examples. A range of pickle jars, sauce bottles and medicine containers were excavated, some containing their original contents. The bottles have been dated from c1840 to c1920 with some modern types. Patents identified date from the 1870s. They include Codd, Hamilton, Lamont and Maughams with variations on these types. In all 279 alcohol bottles and 66 soft drink bottles, some quite rare, have been catalogued. (See figures 14, 15, 16 & 17).

Crockery: The crockery (and cutlery) found was mainly of shipping company origin, with most plates, bowls, cups, saucers etc. bearing the markings of the Adelaide Steamship Company but also others such as Howard Smith, Australian Steam Navigation Company, Ocean Steamship Company and the Huddart Parker Line. Many other steamship companies also operated out of Fremantle in the period but as the area excavated was in shallow water, only the smaller trading and coastal vessels are represented in this sample. Some domestic wares such as teapots and night soil containers were found and several pieces of Asian pottery were identified. (See figure 18).

Personal items: Among the personal belongings recovered were several leather items including shoes and the remnants of a purse. Pen-knives, a tooth brush and a signet ring were recovered. (See figure 19). Costume jewellery and hair fasteners were also found along with children's toys such as a whistle, a spinning top and marbles. (These artefacts are possibly associated with the Sea Baths).

Clothing: Clothing items such as buttons and buckles were identified, the majority being manufactured from mother of pearl (nacre) bone (ivory) or brass. (See figure 19).

Coins: Copper pennies and an early and a late Victorian shilling were recovered. Most of the coins were found in the vicinity of the jetty piles.

Clay pipes: Clay smoking pipes of different makes and styles and smoking paraphernalia such as match strikers were discovered. (See figures 20 & 21).

Munitions: Five cartridge cases, nine projectiles and four complete rounds of ammunition for various firearms were recovered, many date from the WWII period. (See Appendix C. for detailed information).

Ships fittings: Ships fittings of iron and occasionally brass and bronze were found, also lead scuppering, rigging, ropes, anchor and chains.

Huge quantities of coal litter the sea bed, presumably bunkering coal lost overboard whilst loading. Ballast blocks of various types are scattered throughout the area. Ballast mounds occur in places.

Building materials: Building materials such as water pipes, bricks and tiles of early manufacture were recovered. (See figure 17).

Whale bones and a harpoon: This material from the whaling era is in the north-east corner of Bathers Bay, but evidence of a greater distribution has been reported. (See figure 25).

Lead sinkers: A vast array of fishing sinkers were recovered, many of which have been drawn. (See figure 22).

Mooring anchor: The anchor has one fluke and as such, would probably have been used as a mooring anchor. While there is no evidence that the anchor is associated with an historic shipwreck, it is of a style commonly used from the 1830's well into the present century and as such is a strong visual reminder of 19th century mooring arrangements.

Miscellaneous items: Several tools and items of machinery were also located in close proximity to the jetty. A large auger was found in the vicinity of the piles, which may have been used in the construction of the jetty. A bell rattle, possibly from a horse harness was recovered and is now part of the Long Jetty display at the Maritime Museum. (See figure 19). Other items recovered include a lantern cap, a key and a ringbolt. (See figure 23). Several early vehicle number plates (c1920's) were found.

Scattered throughout the area is an immeasurable quantity of timber, unidentified concretions and other unidentified objects.

In June 1985, Dr James Boow traced the origins of some of the bottles recovered from the jetty excavation site. Bottles have been identified and date from the period 1870 to 1890.

Dr Boow's report is reproduced below:

Dyason & Co. were of Collingwood, Melbourne, supplying Emu Brand products. Examples of round, square, oval and conical bottles are recorded in Collector's publications. As stated on your lead-foil covered bottle tops (introduced in Australia in 1843) Dyason were agents for Prescott's Parramatta lime-juice, established in 1869, thus placing the bottle after the date.

Johnson's Brewery. No information. A Johnson & Towne imported Porter (Sydney Morning Herald, 12-8-1841 & 20-11-1847), but it is unlikely that there is any connection.

Crowder & Letchford. were Perth suppliers of soft drinks, using the Lion trade-mark. Maugham and cylindrical bottles are recorded in the Australian Bottle Review, 1891 7 (37)31 and 1980 6(36)26. Your Lamont is my first record of this type of bottle. The equipment and patent for a Lamont was issued in 1874 and such was the competition at that time, used and sold quickly. This places the bottle at least after 1875 and they continued in use here until c1905. In The Maugham, the long narrow cylindrical bottles, first introduced after c1845, remained in use here up to c1895.

Herberts. are also a Fremantle company (Bottle Collector's Review 1972 3(3)20). So far they only record a cylindrical Codd bottle and do not mention the Maugham type found by your people. Obviously Herberts must be a soft drink manufacturer in Fremantle or Perth between c1870 and c1895.

(Comm: Dr James Boow to MAD, 30 June, 1985).

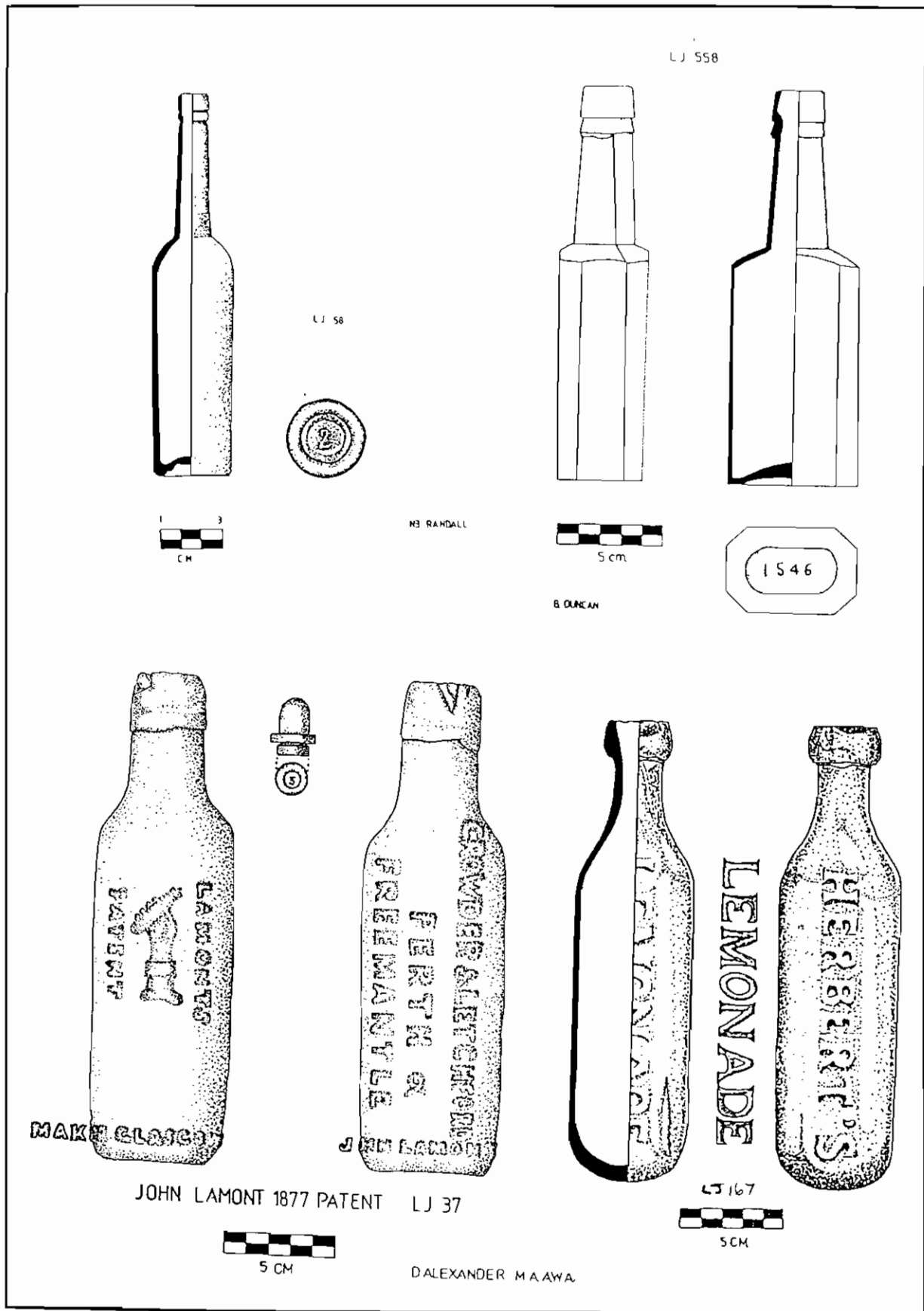


Figure 14. Bottles recovered from the Long Jetty excavation. (Artefacts drawn by MAAWA volunteers).

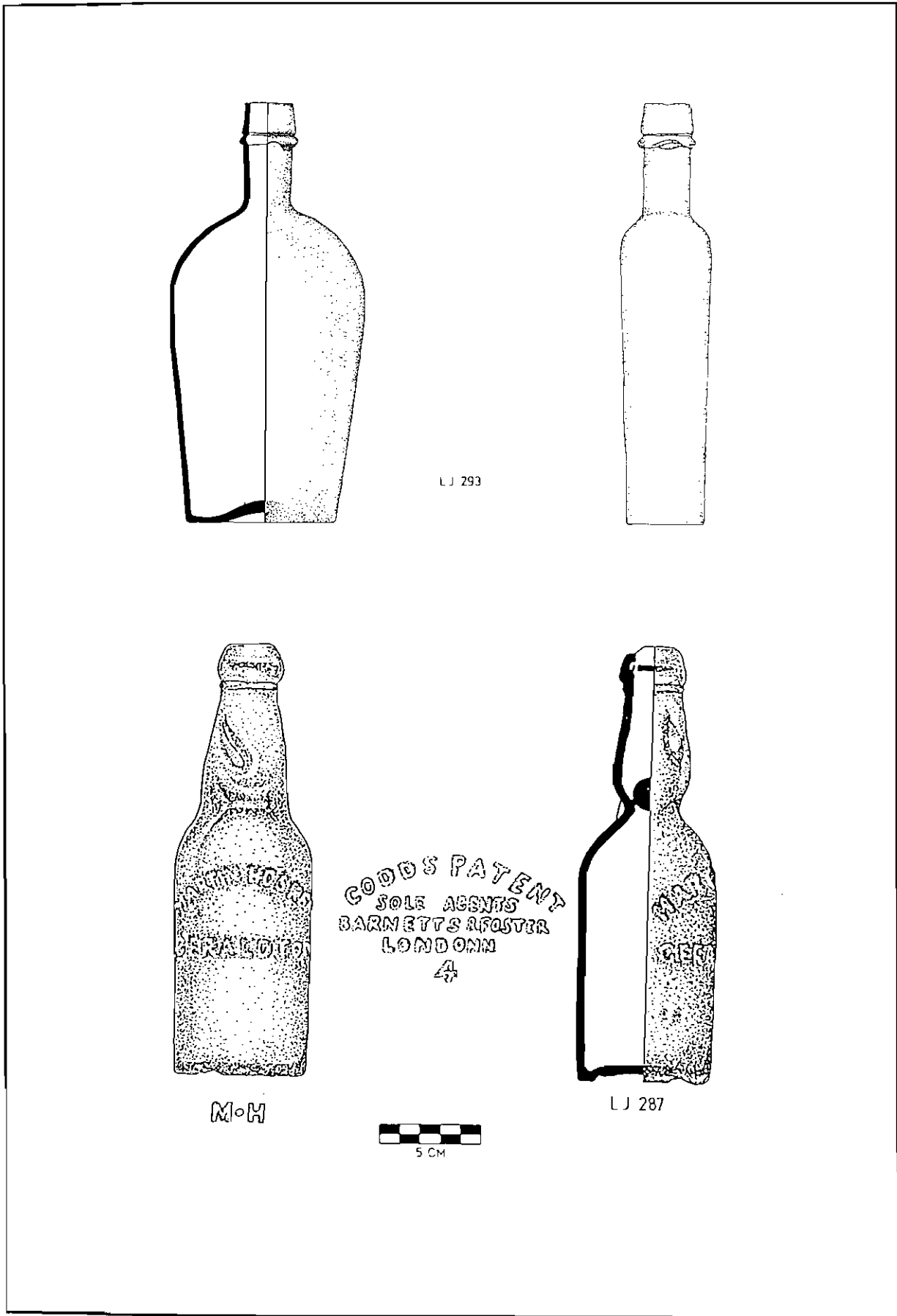


Figure 15. Bottles recovered from the Long Jetty excavation. (Drawn by D. Alexander).

Given below is a report on the identity of bottles from the Long Jetty site, researched by Jon Carpenter.

During the excavation to recover archaeological material from the site of the 'Long Jetty', Fremantle, many old bottles were found. Most of the bottles lack any embossed inscription which would provide that maker's name and/or indicate the type of contents. The paper labels used on 'plain glass' bottles have disintegrated long ago.

Corked bottles with original contents have been found and analysis of the contents (often in a state of decomposition) can determine what they held.

Generally it is only possible to obtain information from the style and shape of a bottle and compare it with known examples to determine its use and age etc.

Betts Patent Capsules

As the excavation proceeded a number of bottles and broken bottle necks were found to have metal caps attached. Importantly these caps, which seal the bottle contents, have embossed on them the manufacturer's name and trade mark. Occasionally the contents are named.

The glass bottle colour and style of neck and top to which each cap is fitted will help to determine which of the many uncapped bottles found are likely to have the same or similar contents/manufacturer.

Close inspection of the caps revealed a small inscription and trade mark, other than that of the bottle owner. The capsule maker was Betts & Co. of London. Enquires in London produced the following information:

Maison Betts Fondee 1804 (House of Betts founded in 1804)

In 1804 John Betts established Betts and Company as Brandy distillers in Bordeaux, France. The business was extended to London shortly afterwards where they produced 'Betts British Brandy'. A factory was set up in Kings Cross London in 1846 by William Betts son of the founder, for the production of tin capsules which he had seen used earlier in France. A patent was purchased from a Monsieur Dupre.

William Betts continued to develop the process of tin-foiling rolling and in 1849 patented a method of tin coating called Betts or B method. The cost of capsule making was cut out considerably by this development.

Separation of the capsule and brandy making businesses occurred in 1852. John (Jnr.) who owned a patent granted in 1843 for applying capsules to bottles ran the Brandy distillery. William concentrated upon the ever increasing volume of capsules being produced.

Charles Tanqueray who operated a distillery adjacent to Betts factory in London was the first customer to use Betts patent capsule outside their own use. Capsules were used for beer, fruit and pickles as well as for wine and spirits during the following years.

Illustrated are examples of Betts patent capsules recovered during the museum excavation 1984. The type of bottle associated with some of the capsules is shown. This 'champagne' style of bottle appears to have been the general container for beers and stout. Unfortunately no intact examples of capsules fitted to the black glass bottles have survived only the remnants of the metal seal (around the neck) which in this case have no inscription or marks.

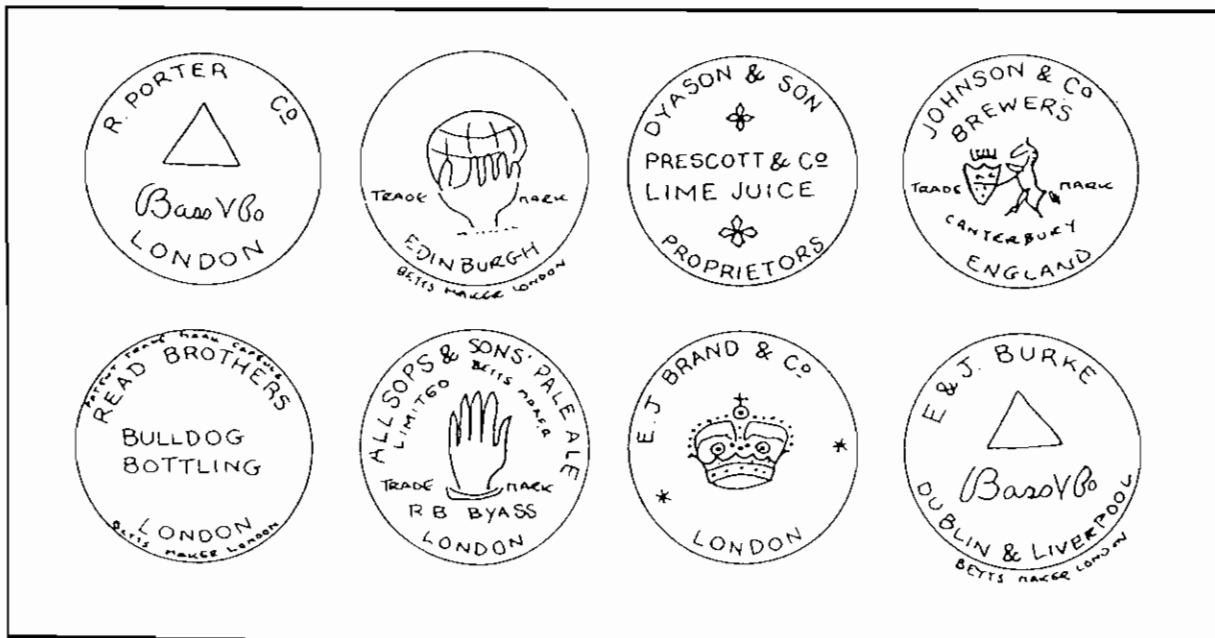


Figure 17. Metal capsules recovered from the Long Jetty. (Jon Carpenter, WA Maritime Museum).

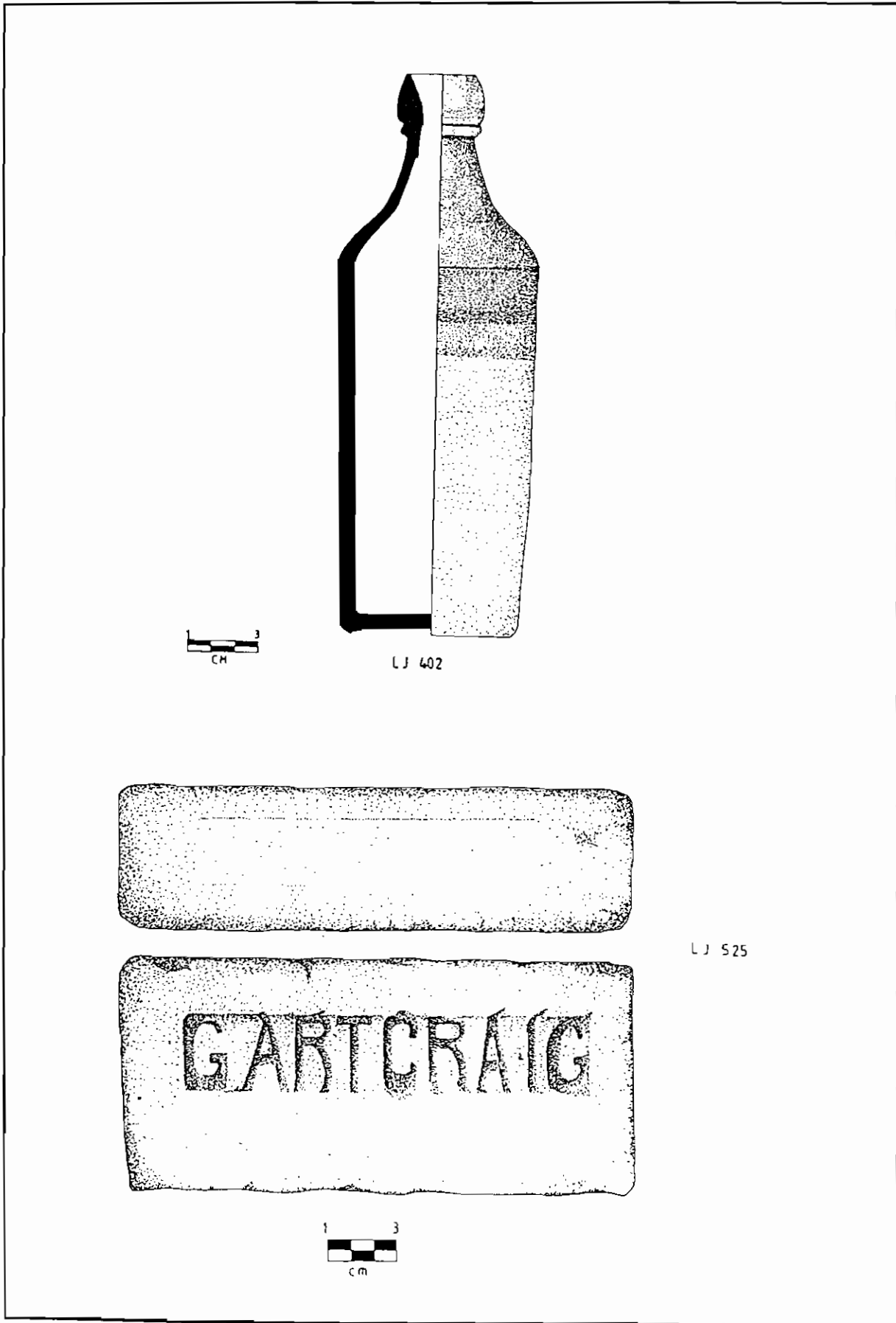


Figure 18. Stoneware bottle and brick from the Long Jetty excavation. (Drawn by N. Randall).

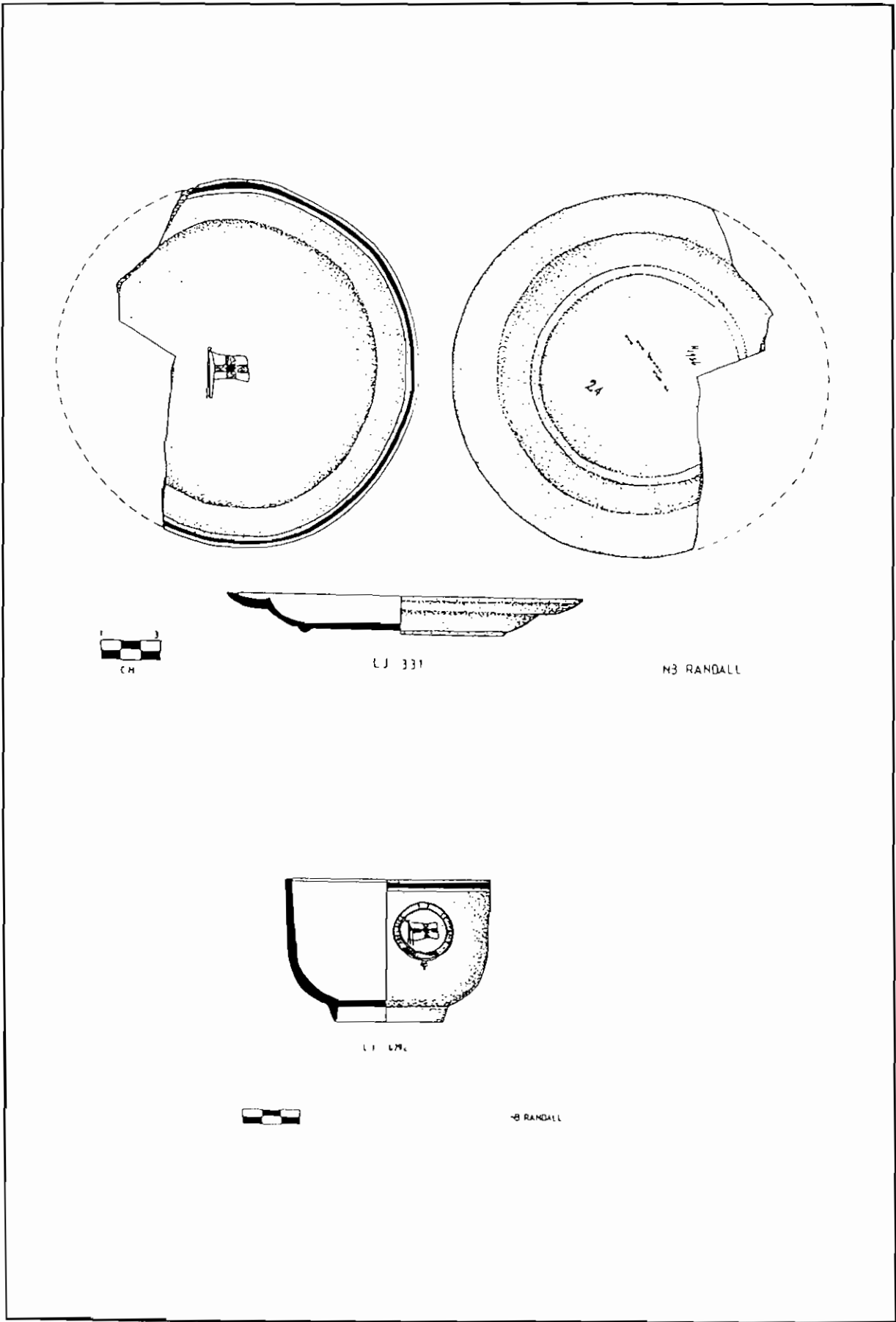


Figure 19. Ship's crockery from the Long Jetty excavation. (Drawn by N. Randall).

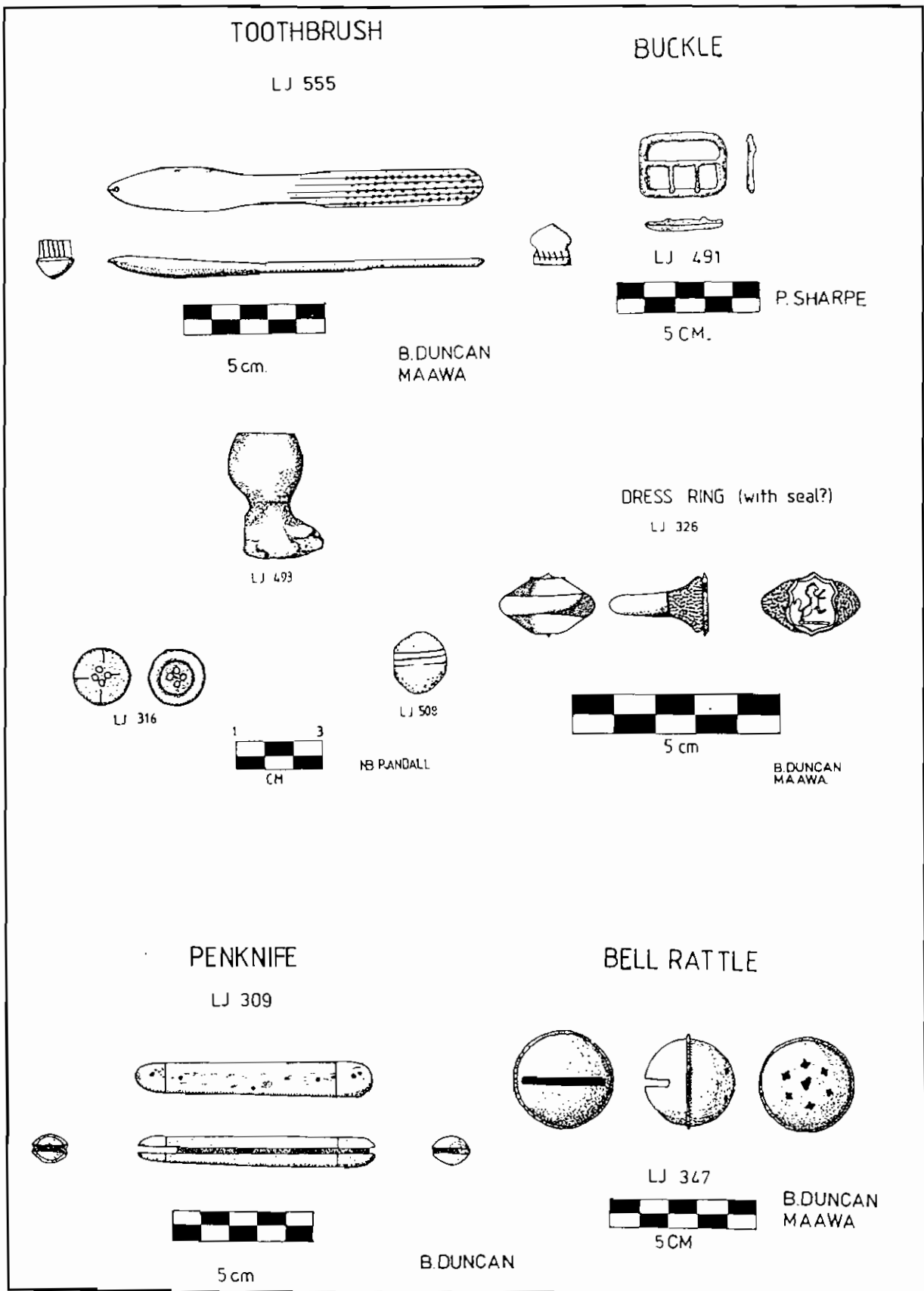


Figure 20. Personal items from the Long Jetty excavation. (Drawn by MAAWA volunteers).

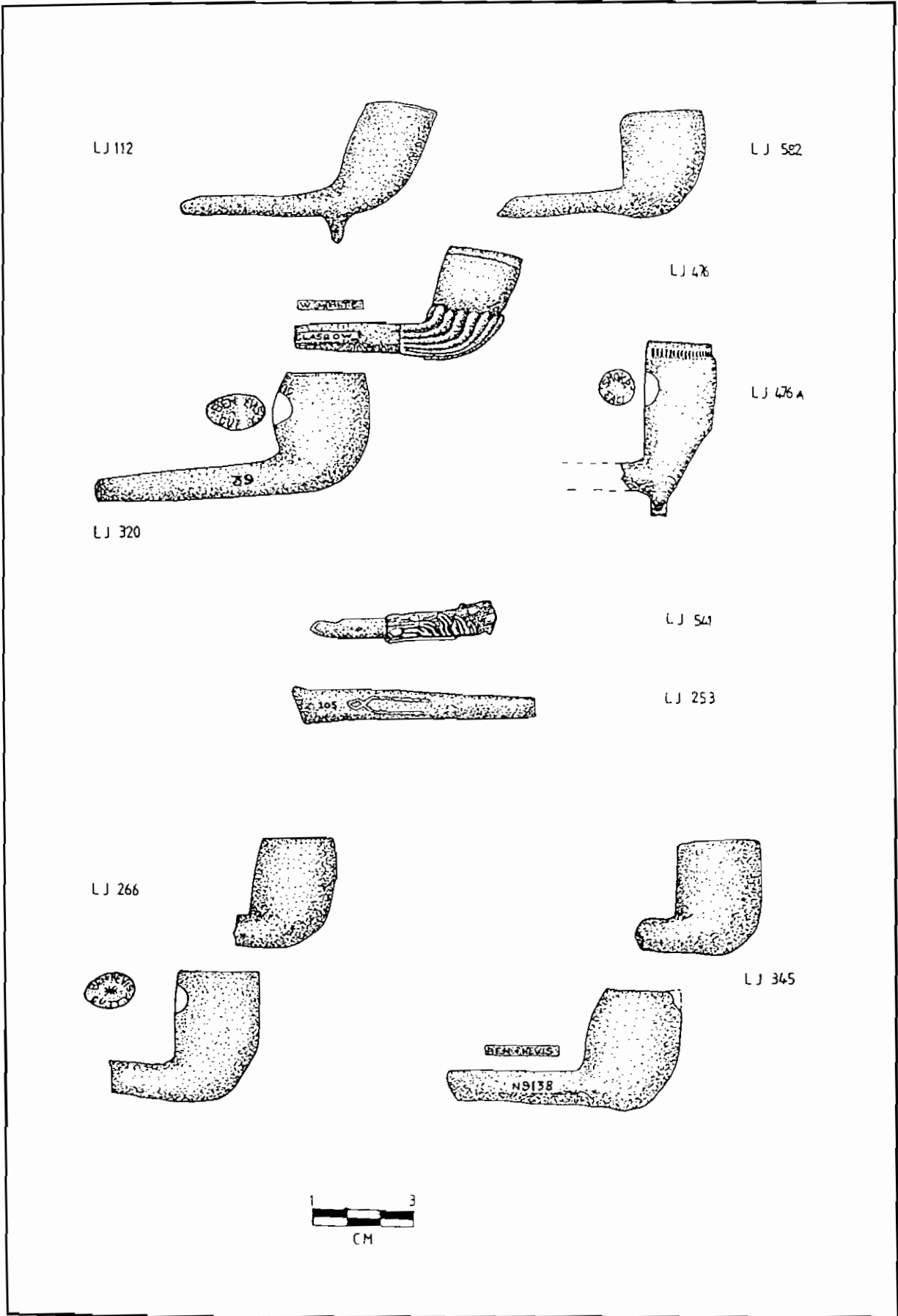


Figure 21. Clay pipes from the Long Jetty excavation. (Drawn by N. Randall).

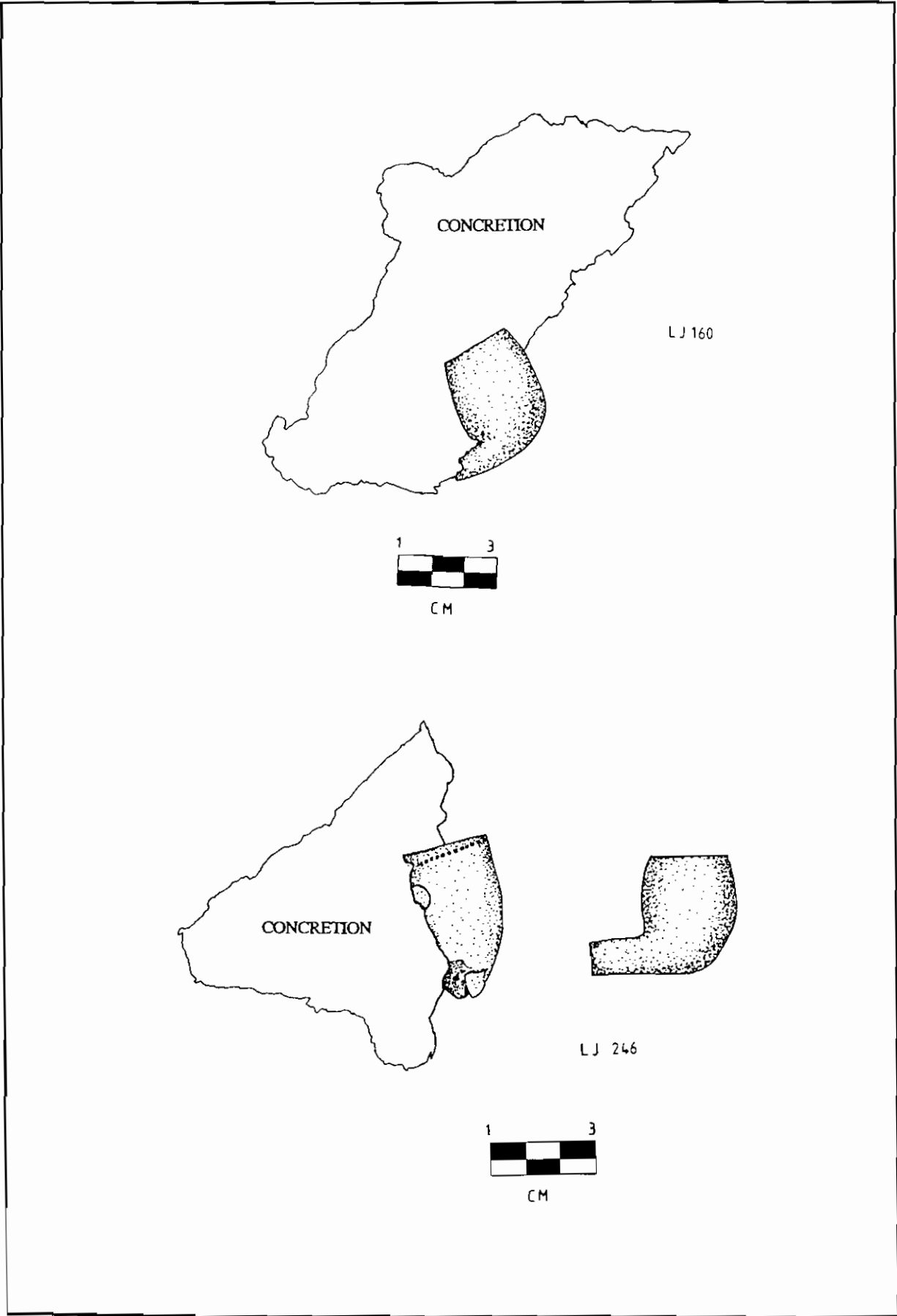
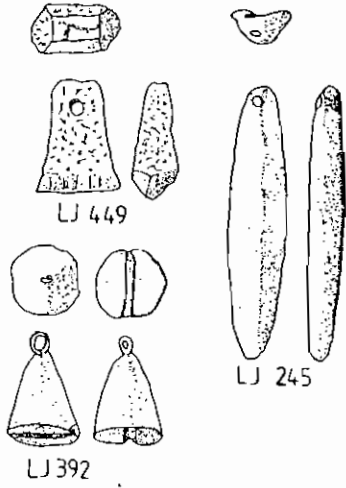
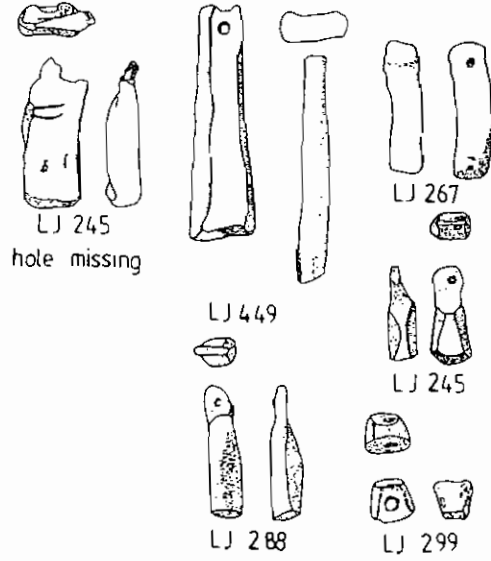


Figure 22. Clay pipes from the Long Jetty excavation. (Drawn by N. Randall).

CAST TYPE



SHAPED TYPE



ROLLED TYPE

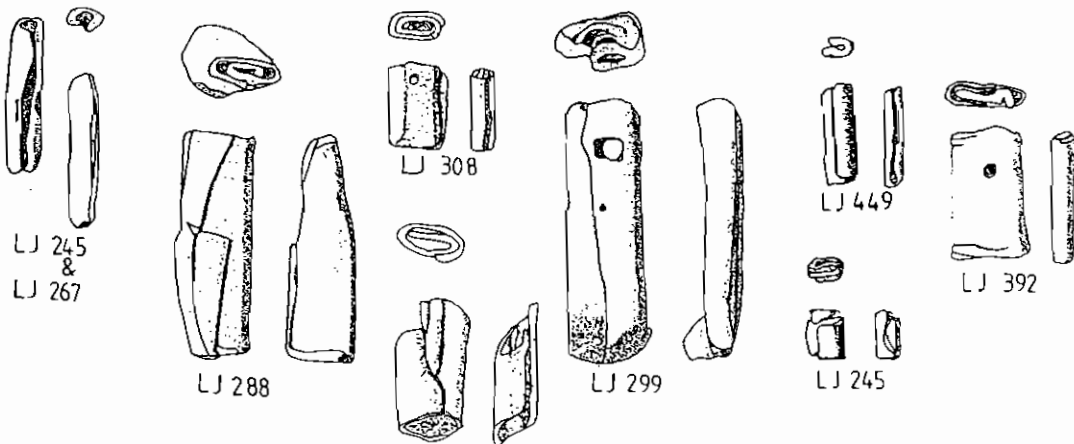
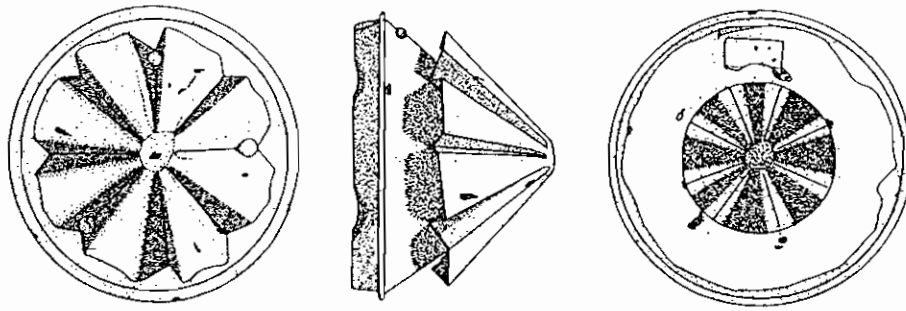


Figure 23. Lead sinkers from the Long Jetty excavation. (Drawn by S. Cunningham).

LANTERN CAP

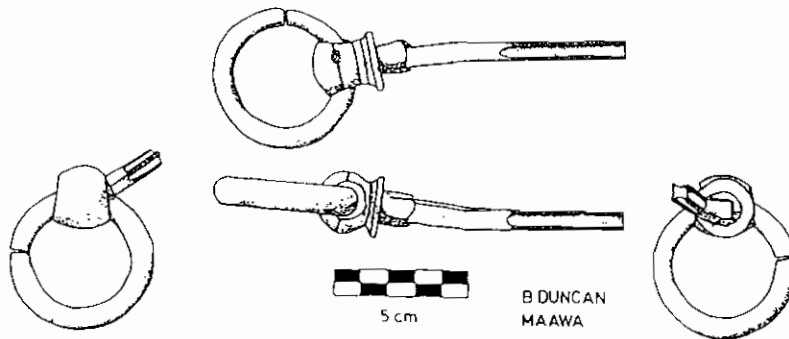
LJ 387



5 cm.

RINGBOLT

LJ 47

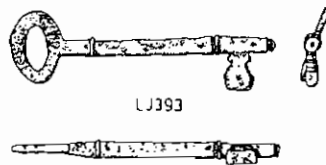


5 cm

B DUNCAN
MAAWA

KEY

LJ393



5cm

B DUNCAN
MAAWA

Figure 24. Miscellaneous artefacts from the Long Jetty excavation. (Drawn by B. Duncan).

Although the whaling activities in Bathers Bay have been extensively documented and an archaeological excavation of the shore-based try works has been completed (MacLroy, 1984), very little archaeological evidence of this activity has been found in the vicinity of the Long Jetty. Apart from whale bones, the blade and shaft sleeve of a killing lance is the only artefact in the collection that can be positively linked to whaling.

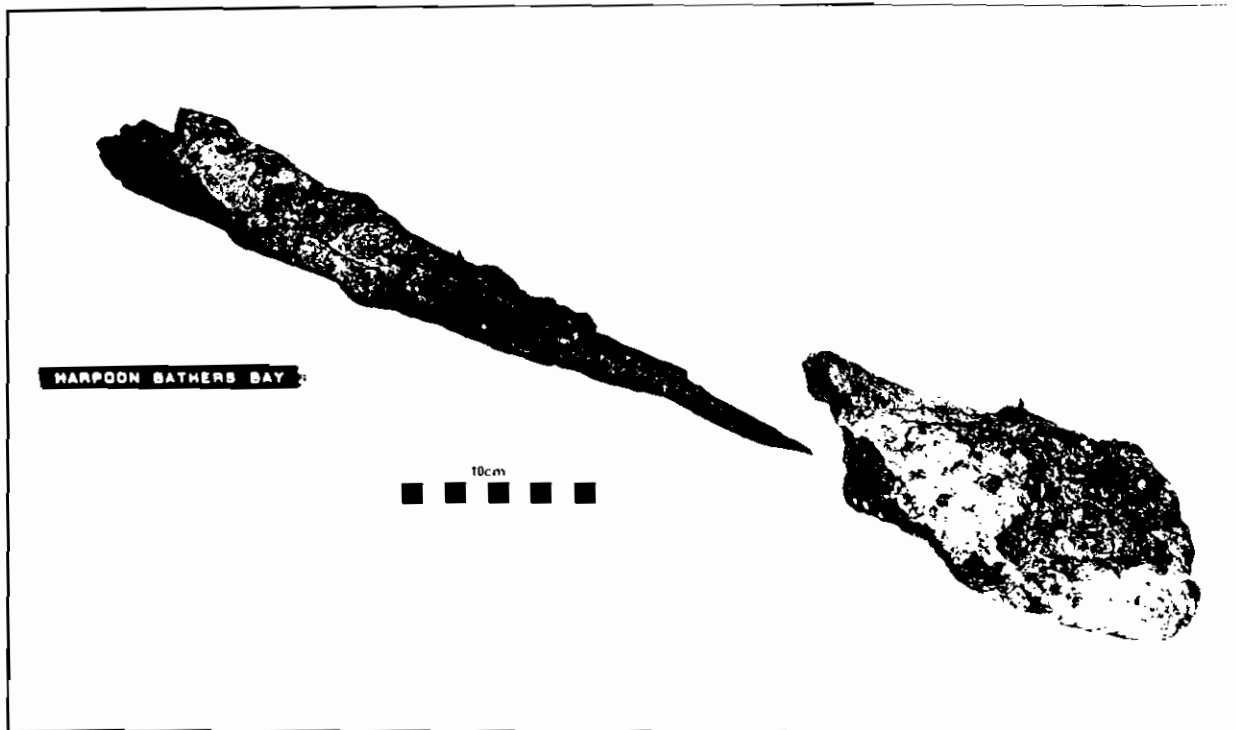


Figure 25. Whale harpoon - killing lance. (Photo: Jon Carpenter, WA Maritime Museum).

8.2.6 Collection Display

In October 1984, the WA Maritime Museum opened a display of material recovered from the Long Jetty, which permitted the general public to gain an historical insight into the economic and social development of the area, which in turn, heightened public awareness of the significance of the jetty and the surrounding area. Due to the enhanced public awareness created by the Long Jetty display, pressure was brought to bear to force the realignment of the harbour works so that only a small section would be affected.

Two hundred and eighty three artefacts from the Long Jetty are currently on display at the WA Maritime Museum, and sixty-eight items are on temporary display at the Albany Residency Museum. A list of the artefacts on display in each venue is given in Appendix E.

The condition and visual presentation of these artefacts will be reviewed regularly.

The mooring anchor raised from the adjacent area in December 1987 is now on permanent loan to the Fremantle Sailing Club and is displayed at the Club premises in Success Harbour.

8.3 Document Management

All Maritime Museum activity associated with site has been documented.

The documents and pictorial records are catalogued and stored in such a manner as to be accessible to bona fide researchers. The results of any further archaeological research will be published. Duplicates of photographs and transparencies from the photographic collection can be made available to other researchers. Documents generated by the museum are subject to copyright.

8.3.1 Department Files

- * The Department of Maritime Archaeology in the WA Maritime Museum maintains a file on the Long Jetty site which can be located in the File Index under "PROJECT-LONG JETTY", File Number 124.84 Vols. 1&2. "Long Jetty," File Number 121/84 was incorporated into the "Project-Long Jetty" file in November, 1989.
- * The Fieldwork Day Book and the Artefact Register are incorporated in one book.
- * Excavation plans (7 sheets) and underwater work sheets (16) are housed in the Department's map filing cabinet marked "Long Jetty".
- * The Conservation Department maintains records for artefacts that have received conservation treatments. (See Appendix D).

8.3.2 Publications (published externally)

Carpenter, J., 1984, Bathers Bay and the Long Jetty, *Port of Fremantle Quarterly*, 7 (10):1416.

Cliff, M., 1974, The history of the Long jetty. *MAAWA, 1974-1978. A review of the past four years in maritime archaeology and history.* Maritime Archaeological Association of WA.

8.3.3 In-house publications and unpublished articles

The publications listed below can be located in File No. MA 124.84.

Garratt, D., 1990, The Long Jetty: a case study in salvage archaeology. Report - Department of Maritime Archaeology, W A Maritime Museum, No. 57.

Garratt, D., 1991, Fremantle Long Jetty, *Your Museum*. WA Maritime Museum.

McCarthy, M. & Garratt, D., 1985, The Long Jetty and other submerged remains in Bathers Bay. Paper presented to the Royal Western Australian Historical Society.

McCarthy, M., (ND) The Ocean Jetty: the colonial beer garden? Department of Maritime Archaeology, WA Maritime Museum, Fremantle. Paper presented at an Historical Archaeology conference.

Robinson, D., 1984, MAAWA Report: Northern boat harbour project. in McCarthy, M., Unpublished report, Department of Maritime Archaeology, WA Maritime Museum.

8.3.4 Pictorial Collection

The Photographic collections are housed and maintained at the WA Maritime Museum. The collections have been catalogued and indexed and the records can be accessed on-line or via several printed indexes. (See Appendix G).

PART E. INTERPRETATION

9. INTERPRETATION OF THE SITE

9.1 Historical interpretation

The excerpts from letters by Captain D. B. Shaw help explain the reasons for such a rich variety of material and gives an insight into the Port of Fremantle and its problems at that time.

The excavation was proof of the wealth of historical material to be found in an area that was once considered to be of little archaeological value. The artefacts recovered clearly reflect the various economic, social and cultural activities associated with the site over a period of 90 years.

The vast majority of the material relates to ships and shipping activities. The prevalence of bottles that once contained alcoholic beverages gives insight into the social and cultural life of the port city of Fremantle. Whale bones and the harpoon are the remnants of the colony of Western Australia's first industry, bay whaling. Personal belongings such as costume jewellery, watches, toys and coins reflect the social activities associated with the jetty at a time when the Sea Baths and the promenade were in use. The spent rounds of ammunition suggests that the jetty has been used for target practice at some time, most probably during the war years, 1939-1941.

It is now clear that the remains of the Long Jetty and the area surrounding it is a tangible link with the history of not only Fremantle, but also the wider community.

9.2. Archaeological interpretation

The Long Jetty represents an atypical underwater archaeological site in that rather than being an homogeneous capsule of cultural material as in the case of a shipwreck, the artefacts were lost over a 90 year time span, randomly located over a vast area, and originated in several different countries, therefore this site should not be considered in the same manner as an individual, shipwreck. The stratigraphy usually associated with an archaeological excavation is less evident on this site and in some areas, dramatically altered, due to environmental and human activities. The sea bed has been continually 'tilled over' by the action of storms. As a testament to the mobile nature of the site, the internal mould of a barrel containing solidified cement was found to have rolled along the sea-bed for a distance of approximately 50 metres from where it had been located on a previous dive. A winter storm surge had caused it to move in a southerly direction towards the seawall of Challenger Harbour.



Figure 26. WA Museum Conservator, Alan Kendrick with the cement barrel on the Long Jetty site.
(Photo: Jon Carpenter, WA Maritime Museum)

Material has been exposed and moved around by the turbulence created from the propellers of steamers and tugs. To add to the problem, in recent times, bottle collectors using excavation tools such as air lifts and water dredges, have effectively destroyed any stratigraphy that may have existed.

In spite of this, a general pattern emerged showing greater concentrations of artefacts in the area 0–10 m either side of the jetty piles and again in the area 15–25 m either side of the jetty which indicated that the barren section corresponded with the alignment of vessels moored alongside the jetty. The type of artefacts found indicates that most of the material in the 0–10 m area was either dropped from the side of moored vessels or from the jetty itself whereas the artefacts found in the 15–25 m area tended to have a greater association with shipping and less with the jetty.

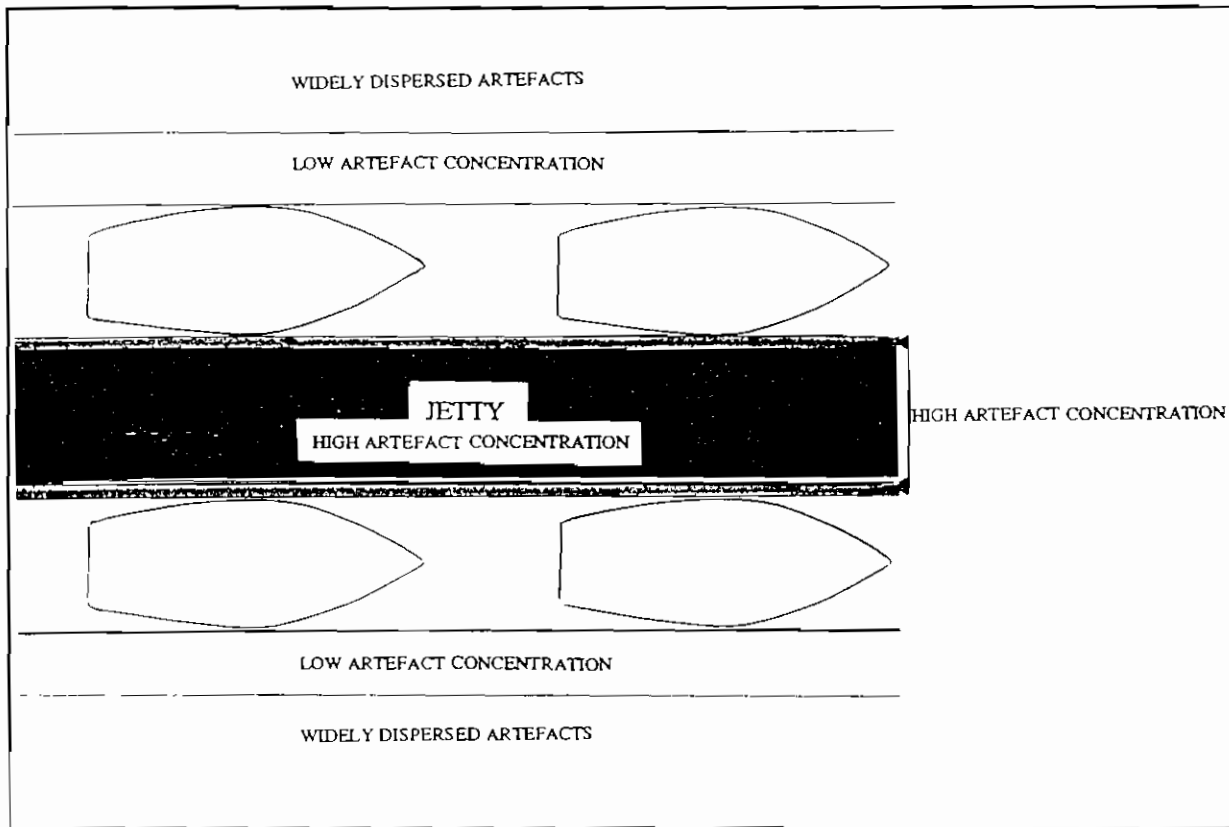


Figure 27. Distribution patterns of material from the Long Jetty site.

As a general hypothesis, it is expected that the age of archaeological deposits will match the time span of the jetty's existence. Hence, in an excavation of the area associated with the Ocean Jetty extension built in 1887, one would not expect to find significant amounts of material predating 1887 or post dating 1921.

10. FURTHER RESEARCH SUGGESTIONS

10.1 Historical

The Australian Heritage Commission is currently funding the Jetties and Port Related Structures Project with the view to document the history and archaeological record of all the historic maritime structures around the Australian coastline. The Long Jetty is to be included in this survey of maritime cultural heritage.

10.2 Archaeological

10.2.1 Distribution of finds

The general southerly movement of material may indicate the potential for a redeposition of artefacts at the base of the northern side of Challenger Harbour groyne. This hypothesis may be tested at some future date after studying the long term effects of the groyne on the inshore currents and the movement and/or stabilisation of the sandy sea-bed.

10.2.2 Artefact analysis and interpretation

There are many studies that could be initiated. One for example, is a catalogue of capsules recovered from the jetty. This is being compiled by Jon Carpenter. A study of similar capsule sealed bottles from colonial wreck sites in Western Australia and other states will be undertaken. Shipwrecks with capsule sealed bottles in their cargo, eg. *Sepia* 1898, *Carlisle Castle* 1899, may help define the period of use for bottles recovered from the Long Jetty.

The Museum may encourage private collectors with extensive bottle collections to become involved in the cataloguing, analysis and interpretation of their collections.

10.2.3 Comparative studies

Comparative studies of the archaeological record with similar excavations such as the Albany Town Jetty and the Albany Deepwater Jetty in Western Australia and the Holdfast Bay Jetty and the Morgan Wharf in South Australia should be undertaken.

10.3 Scientific

Most of the shoe leather recovered from the site is currently being used for experiments to establish improved conservation treatment methods.

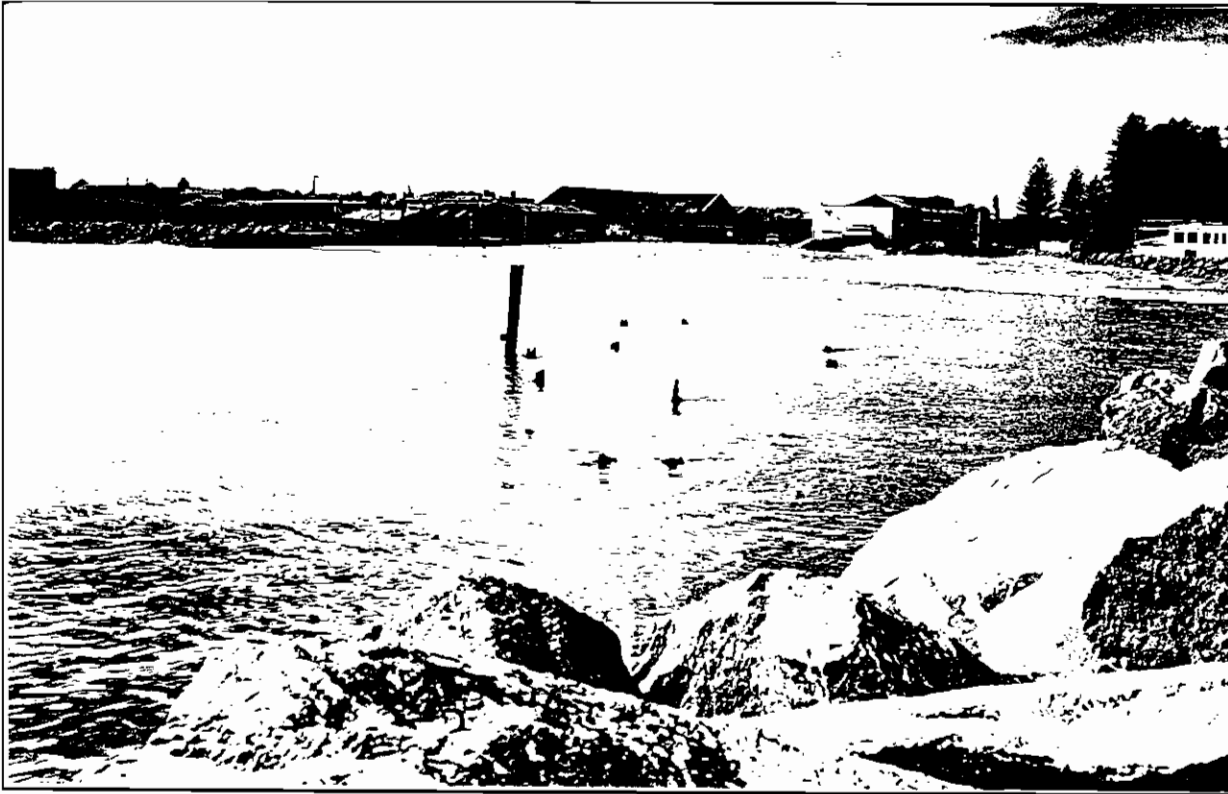
10.4 Publication

Scholarly research relating to the Long Jetty should be published and disseminated. Popular articles should be published for the general interest of the wider community.

10. CONCLUSIONS

This particular excavation proved that despite the ravages of time, tide and souvenir hunters, there remains a wealth of historical material in the vicinity of the Long Jetty. Ironically, the perceived threat to the jetty from the encroachment of the groyne has in fact, ensured that at least a small part of its historical material will be encapsulated beneath tonnes of limestone, thereby protecting it for generations to come. If projections are accurate, over 40,000 m³ of material (in a layer 40 m wide x 1 m deep x 1,004 m long) remain for the future.

In general, it can be seen that jetties have the potential to provide valuable cultural material, however some sites may present difficulties for archaeologist regarding the interpretation of the data, if the stratigraphy has been disturbed. This is highly likely in areas of continuous occupation where successive alterations, dredging or harbour works have occurred.



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APPENDIX A

ARCHIVAL MATERIALS

Plans

1. PWD WA 331 (Sheet 2) Proposed Ship Jetty, Transverse Section 15/11/1870, 28/3/1870.
2. PWD WA 331 1(Sheet 1). Plan & Vertical Section of Proposed Ship Jetty 5/11/1870.
3. PWD WA 331 (Sheet 3) Section of Proposed Ship Jetty 15/11/1870.
4. Clerk of Works Extension to the South Bay Jetty as proposed by Wallace Bickley Esq. 7/7/1871.
5. Clerk of Works Detail Drawings. South Bay Extension 7/7/1871.
6. PWD WA 335 Old Jetty, Fremantle. Extension for Eastern Railway 12 /9/1882.
7. PWD WA 45 Ocean Jetty Extension 25/5/1888.
8. PWD WA 15605 (Drawing No. 9) Fremantle Harbour & Gage Roads.-Harbour Works c1896.
9. PWD WA 9421 (Sheet 2). Fremantle Harbour Works, Progress Plan (Revised) 6/9/1902.
10. PWD WA 15300 Fremantle Harbour Works, Progress Plan (Revised) 31/12/1910.
11. PWD WA 54 750-6-1 Fremantle Fishing Boat Harbour North Breakwater Re-development. 1984.
12. PWD WA 55582-1-1 Fremantle Northern Boat Harbour Breakwaters-Layout & Plan 29/5/1984.
13. PWD WA 14250 (Sheet 90) Sea Baths. (Tracing by City of Fremantle-no date).
14. City of Fremantle File 3.17.42 Tracing of "A" Class Reserve, Long Jetty Surveyed Location. 18/6/1986.
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Photographs (Not held by the WA Maritime Museum)

1. Batty Library Reg. No. 3522B/1&2. A panoramic view of Fremantle taken from the Town Hall in the 1890's.
2. Fremantle City Library, Local History Collection. Print No. 927. Panorama of Fremantle looking to Anglesea Point, 1887.
3. Fremantle City Library, Local History Collection. Print No. 1611. View from lighthouse looking to Long Jetty, 1890's.
4. Fremantle City Library, Local History Collection. Print No. 567. Panorama of Fremantle looking to Anglesea Point, 1905.
5. Fremantle City Library, Local History Collection. Print No. 729.
6. PWD Engineering Dept. Photographic Ref. No. 01. Panorama from South Mole showing Long Jetty., 1904.
7. WA Historical Society. Ref. No. 1B. Arthur Head, including Long Jetty, 1889. (Water colour by Capt. Russell).

APPENDIX B

LONG JETTY ARTEFACT CATALOGUE

ID No.	Reg. No.	Museum Co.	2nd Loc	No.	Description
228	LJ0	CW	BLUE RACK	1	Horseshoe???
229	LJ0	CW	BLUE RACK	1	Padlock
14248	LJ1	CWC	Tub LJ 16	1	Slate
2501	LJ2	AL		1	Bottle, dark
9498	LJ2	MMW	LJ2	12	Bottles, "6 to the gallon"
4253	LJ3	MAL	Storage Oct. 1993	1	Bottle neck with cork
18981	LJ4			2	Jaw bone, lower- sheep. + vertebrae.
8982	LJ5			2	Spoon, nail. Spoon is silver plated?
19501	LJ6	MMW	LJ2	13	Bottles, "5 to the gallon", black
502	LJ6	AL		1	Bottle, dark
13947	LJ7	CLG		1	Handle, bone
2503	LJ8	AL		1	Bottle, case section
3983	LJ10	MAL		1	Bowl, Asian- total no' of sherds =18.
18992	LJ10A	MAL		16	Serving bowl sherd (Adelaide Steamship Co), saucer sherds w/ blue rim, over glaze color (8). Plate sherd, grey transfer. 2 cup sherds- blue/white line rim (thick , then thin line). Plate sherd, 2 brown glaze base sherds- asian e'ware- remains of handle.
116	LJ11	MAL	Storage July 1993	1	Bar
984	LJ12	MAL		1	Concretion w/ glass, bone, pottery.
18985	LJ13	MMW	LJ3	2	Ring seals, from Beer bottles, small.
737	LJ14	MAL	Storage Sept 1992	1	Stone frag
2504	LJ15	AL		1	Bottle, with marble
18735	LJ16	MAL	Storage Sept 1992	1	Glass frag
738	LJ16A	MAL	Storage Sept 1992.	1	Stone frag
986	LJ17	MMW	LJ3	10	Coal pieces
18987	LJ18			1	Handle, brass
1988	LJ19			0	Shoe fragments- 1 complete. No' of items?
2505	LJ20	MMW	LJ3	1	Brick, clay 'Gartcraig'
2506	LJ21	MMW	LJ3	3	Bottles, small green, ring seal glass
1989	LJ22	MAL		1	Bottle, cream.
18990	LJ23			6	Bottle, clear glass. De canter?
18991	LJ24	MAL		2	Serving bowl, round. grey transferware, handles.
1993	LJ25			3	Bones. One is 40cm in length.
2507	LJ26	AL		5	Bottle, dark
7227	LJ27	CWJ	BLUE RACK. 27B returned 17.18.92	1	Ring/chain link??
1994	LJ28			2	Pickle jars
19502	LJ29	MMW	LJ2	1	Bottle, stoneware, Gin
1978	LJ29	AL		1	Bottle, Gin, stoneware
199	LJ30	MMW	LJ3	8	Bottles, black, glass
6364	LJ30	AL		1	Bottle, dark
9503	LJ31	MMW	LJ2	1	Bottle, dark
199	LJ31	AL		1	Bottle, dark
195	LJ32			1	Bottle, green.
8996	LJ33			1	Bottle + ceramic concretion.
510	LJ34	MMW	LJ3	17	Bottles, small ring seal beer, glass
175	LJ34	MAL		1	Sinker, lead, conical
511	LJ35	MMW	LJ3	1	Bottle, black in concretion, glass
97	LJ36			1	Pickle jar, small.
512	LJ37	MMW	LJ2	1	Bottle, Lamont Patent, glass

ID No.	Reg. No.	Museum Co.	2nd Loc	No.	Description
18998	LJ38	MAL	Storage Sept 1992.	1	Plate rim w/ green print.
18999	LJ39	MAL	Storage Sept 1992	1	Plate sherd, green print.
19000	LJ40			2	Bottle bases- black and green. One fluted.
2513	LJ41	AL		1	Bottle base, blue torpedo
18735	LJ42	MAL	Storage Sept 1992	1	Stopper light blue glass
19001	LJ43	MMW	LJ2	1	Pickle jar
19002	LJ44			1	Screw Cap, bronze.
19003	LJ45			2	Lead pieces.
19004	LJ46			1	Bottle base, green- small.
19005	LJ47			1	Handle, door or cupboard.
19006	LJ48			0	Strap, copper- pieces. Check no'
2514	LJ49	AL		2	Mug, green transfer ware, ceramic
19007	LJ50	MAL		3	Jar lid- white, saucer frag (Adelaide steamship), W.A.S.N plate sherd.
19008	LJ51	MAL		12	Plate sherds (2- thick thin blue lines); plate sherd w/ single blue line (line width 3mm); plate sherd w/ 4 thin blue lines; Adelaide S.S emblem on sherd- possibly bowl-jar; 2 white plate sherds; saucer sherd w/ mauve ribbon; bowl, 1/ 2 brown pattern edged - transferware; Dinner plate sherd Adelaide steamship (diam 240mm); Adelaide Steamship bowl sherd, possible chamber pot? Stoneware wall sherd.
19009	LJ52	MAL		2	Jar neck w/ cork. Jar similar to LJ 88
6565	LJ53	AL		1	Soup bowl, base only ,ASSC, ceramic
18480	LJ53	MAL	Storage Sept 1992	25	Plate sherd, green glaze- wedgewood style-1. Bowl section, brown transferware-1. Sherd with hole, white underglaze-1. Mug side, white-1. Saucer sherd, white-1. Saucer sherd, white and embossed -1. Plate sherd, white -1. Bowl/dish base, white -2. Jar section, straight sided, stoneware -1 Jar sherd, " " " " with dots on rim -1. Platter base sherd, white - 1. Serving dish, brown lines-5 star flag-3. Serving dishes, bowl rims, brown lines - ASSC flag -3. Dish base , ASSC, with insignia and stamped 27-1. Cup sherd with insignia, ASSC. Rim diam= 105mm -1. Dinner plate sherd, red line- diam 240mm -1. Dish lid sherd, red pattern -1. Plate sherd, flag with blue cross + 5 stars (similar to 546), code in brown H 810 -1. Plate / bowl sherd, 2 blue lines-1.

ID No.	Reg. No.	Museum Co.	2nd Loc	No.	Description
					Plate sherd, blue line (diam 270mm), Union Ship Company ?-1.
2602	LJ53	MMW	LJ3	1	Dish centre ASSC ceramic
19010	LJ54			5	Leather frags.
14238	LJ55	CWC	Tub 16	2	Bricks
2515	LJ56AB	MMW	LJ2	2	Codd Bottles -sml. Volcanic type (A); Charles Allen (B).
19011	LJ57			8	Bottles, green. One ring seal of LJ 34 type; 1 seal, green type 2 or 3 black... (see register).
19012	LJ58			1	Caster oil bottle, blue.
2517	LJ59	AL	MA Storage?	8	Ink bottle, clear, complete; 1 ginger beer bottle; 1 cylindrical blob top; 1 clear glass bottle; 4 medicine bottles. Check..
19013	LJ60			2	Hamilton bottles-fragments.
16508	LJ61	AL		1	Bottle section, case.
2518	LJ62	AL		1	Stopper, from pickle bottle, glass.Plus glass lid.
19014	LJ63	MAL		17	Cup sherds, white -2. Plate sherd, white -1. Dish base sherd, white-1. Embossed whiteglazed sherd-1. White glazed sherd w/ remains of handle-1. Jar sherd, s'ware, as LJ 88 -1. Jar sherd, large, s'ware -1. Dish sherd, red lines (diam 280mm)-1. Soup plate sherd, brown lines (diam 240mm) similar to 624. Saucer, blue lines-1. Cup sherds, blue lines-2. Plate sherds, mauve ribbon pattern-4. Waved rim of dish sherd, brown lines -1.
19015	LJ64			11	Bottles, black.
19016	LJ65			1	Lamont bottle, enscribed 'Charles Allen'. W/ stopper.
19017	LJ66	MMW	LJ2	2	Maugham bottles.
19018	LJ67			1	Bottle, green glass.
19019	LJ68			2	Bottle, green glass + cork.
19020	LJ69			1	Lid or base, brass.
2519	LJ70	AL		1	Bottle ring seal, beer
19021	LJ70	MMW	LJ3	39	Ring seals, beer.
2520	LJ71	MMW	LJ2	1	Bottles, Codd, W. Letchford, class
19026	LJ72			1	Hamilton bottle - torpedo
19027	LJ73			1	Maugham bottle, flat bottomed.
19028	LJ74			1	Bone.
19029	LJ75			1	Condiment bottle.
2521	LJ76	MMW	LJ3	19	Bottles, black, glass- round shouldered uniform top.
19030	LJ78			3	Bottles, green.
19031	LJ79			1	Pipe w/ copper rivets, leather.
19032	LJ80	MAL		9	Saucer section, large -1. Bowl/dish sherd, white -1. Cup, porcelain, white -1. Cup handle, porcelain, white-1.
					Jar/mug base, fluted, white-1. Plate sherd, blue rim-3. Cup, ASSC, red rimed (rim diam 105mm), 1/2 only -1.

ID No.	Reg. No.	Museum Co.	2nd Loc	No.	Description
19033	LJ81			2	Rope sections.
19034	LJ82			1	Shoe, leather.
2522	LJ83	AL		1	Bottle, whisky, green glass.
19035	LJ84	MMW	LJ3	5	Bottles, black and small-sloping shoulders, uniform tops.
19037	LJ85			6	Hamilton fragments-torpedo bottle. 4 frags unembossed.
2523	LJ85	AL		1	Bottle, Torpedo
19036	LJ86			1	Pickle jar.
16509	LJ87	AL		1	Bottle, small green.
16510	LJ88	AL		1	Jar, ink, stoneware.
2605	LJ89	MMW	LJ2	1	Bottle, Stout, stoneware
19038	LJ90			1	Fresnel lens, section.
19039	LJ91			1	Bottle, Coca Cola
19040	LJ92			2	Shoes.
19041	LJ93			1	Bottle, spirits, green glass + contents.
2524	LJ94	AL		1	Bottle, black whisky
19042	LJ94	MMW	LJ3	3	Whisky bottles, black- 1 neck repaired.
19043	LJ95			1	Ring seal beer + contents.
19044	LJ96			1	Bottle w. crown seal.
2525	LJ97	MMW	LJ3	16	Bottles, black, glass. Similar to 5 or 6 gallon but smaller.
19045	LJ98			1	Medicine bottle, clear glass-rectangular. ??? Check register.
19046	LJ99			1	Blob top bottle.
19047	LJ100			1	Ring, concreted- broken.
19048	LJ101			1	Bottle, brown.
19049	LJ102			1	Carbon piece.
19050	LJ103			1	Rope fragments, large.
19025	LJ104			3	Rope frags, small.
19051	LJ104			1	Rope
19052	LJ105			1	Medicine bottle with cork.
19053	LJ106			3	Bottle seals.
19054	LJ107			1	Knife handle, bone.
19055	LJ108			1	Lamont patent bottle- Darner and Co'
19056	LJ109			1	Bottle, flat bottomed- Maugham Patent. Blob top corker.
19057	LJ110			1	Condiment bottle
19058	LJ111			1	Amber bottle. Fresh break in bottle.
2526	LJ112	AL		1	Pipe, clay . Mark BEN NEVIS G...Y
19059	LJ113	MAL		1	Bowl base, brown transferware. Joins with 53.
19060	LJ114			3	Bottles, black.
19061	LJ115			1	Bottle, light.
19062	LJ116			1	Seal.
19063	LJ117			1	Ring seal beer- P.B.E. Co'??
19064	LJ118			2	Medicine bottle + cork.
19065	LJ119			2	Cup section, ASSC (mug)-emblem and buckle different, no ornament on bottom of garter.
19066	LJ120			2	Soup plate sherd, ASSC. As 427.
19067	LJ121			1	Leather pieces.
19068	LJ122			2	Lamp glass base.
19069	LJ123			2	Bottle frags, 1 clear , 1 black.
19069	LJ123			1	Belt buckle, brass
16512	LJ124	AL		1	Bottle, green, wine.
2607	LJ125	MMW	LJ3	1	Bottle, green, sml. ring top, glass

ID No.	Reg. No.	Museum Co	2nd Loc	No.	Description
19070	LJ126			1	Pot, enamel-remains.
19071	LJ127			1	Gaelic whisky bottle
19072	LJ128	MAL		2	Teapot section, white Bowl section, white embosed Remains of handle
19073	LJ129AB	MAL	B=storage?	2	Lea + Perins Sauce bottles- contents also
19074	LJ130	AL		1	Jar lid, ceramic- embossed- J Delcroix London by Appointment 156 New Bond st.
19075	LJ131	MAL		1	Marble, unglazed. From a Codd bottle.
19076	LJ132	MAL		1	Plate edge sherd. mauve ribbon
19077	LJ133			1	Soda bottle, dump?
19078	LJ134	MMW	LJ3	11	Bottles, dark Similar to 5 or 6 gallon but small + machined base + kickups
19079	LJ135			1	Maugham patent bottle, flat bottomed- blob top corker.
19080	LJ136			2	Concretions
19081	LJ137			1	Rope fragment
19082	LJ138	MMW	LJ3	1	Lamp shade, ceramic
19083	LJ139			1	Maugham patent bottle flat bottomed + blob top corker
19084	LJ140			1	Bolt, brass
19085	LJ141			1	Seal, bottle
19086	LJ142			1	Bottle, w/ cork
19087	LJ143			1	Turtle bone
19088	LJ144			1	Pump gland
19089	LJ145			1	Pot, w/ cork
19090	LJ146			1	Amber beer
19091	LJ147	AL		1	Bottle, green
19092	LJ148			1	Shoes
19093	LJ149	AL	MAL?	1	Bottle, stoneware M Kennedy B
19094	LJ150			1	Maugham Patent bottle, flat bottomed + blob top corker.
19095	LJ621	MAL		2	Saucer fragments, large- wide blue line.
19096	LJ622	MAL		1	Plate rim, Willow pattern.
19097	LJ623	MAL		2	Saucer frags, ASSC- 2 red lines.
19098	LJ624	MAL		4	Plate sherd, small with 2 brown lines-185mm diam. Sherd- 5 red stars, base diam: 90mm. Code in brown 810?? 870, stamped 22. Plate (soup) sherd-2 brown lines w/ 5 stars-H810 X. Mug rim-2 brown lines-100mm diam.
19099	LJ625	MAL		1	Plate rim w. purple cable pattern
19100	LJ626	CWJ		1	Harpoon concretion- harpoon head with iron shaft + some wood, Killing Lance.
19101	LJ3411	CWJ	TUB 21 WET ROOM	1	Triangle w/ eye bolt

ID No.	Reg. No.	Museum Co.	2nd Loc	No.	Description
2608	LJ152	AL		1	Medicine bottles w/ corks
19091	LJ154	MMW	LJ2	1	Bottle frag- Mrs Winslows Soothing Syrup.
19092	LJ155			1	Bottle
19093	LJ156			1	Medicine bottle, top is broken.
19094	LJ157			1	Sheet/ sheathing metal.
19095	LJ158			1	Dish lid section, white.
2530	LJ158	AL		1	Cup section, 2 green lines, ceramic.
19096	LJ159	MAL		1	Bowl section -embosed with handle, white glazed.
19097	LJ160	MAL		2	Pipe bowls in concretion.
19098	LJ161			1	Codd bottle, Singapore Straits.
19099	LJ162			1	Tile, Mase.
19100	LJ163			1	Rim of tin can, remains.+ rope
19101	LJ164	MMW	LJ2	1	Maugham Bottle, flat bottomed
14249	LJ165	CWC	Tub LJ 16	1	Slate
19102	LJ166			1	Bottle - 'Western Wizard Oil'.
2531	LJ167	MMW	LJ2	1	Bottle, Herbert's Lemonade, glass
19103	LJ168			1	Bottle, Jacobs Oil.
2532	LJ169	AL		1	Bottle, small (medicine?)
19173	LJ171	CL	Tub 14?	1	Knife handle + concreted blade.
19174	LJ173	CW	Rope tub 20, tub 12,8.	3	Rope fragments.
19175	LJ174	CWJ	TUB 21 WET ROOM	1	Strap, brass, in concretion.
19175	LJ175			2	Concretions- w/ conc of tin can, one with glass (thrown out).
19176	LJ176			1	Marble.
19177	LJ177			1	Nail, copper.
19178	LJ178			1	Weight.
19179	LJ179			2	Tube and screw
19180	LJ180	MAL		2	Pot lid base, Medicine bottle lid (glass)
19181	LJ181	CW	Tub 8?	1	Bottle, Maugham, flat bottomed.
19182	LJ182	CW	Tub 14?	2	Bones.
19183	LJ183AB	CW	Dry?	2	Sinker (A), lead piece (B)
19184	LJ184			3	Screw, hone nozzle + fine rectangle
19185	LJ186			1	Pickle bottle.
19186	LJ187			1	Shot sole
19187	LJ188	MMW	LJ1	1	Bottle seal and neck
19188	LJ189			1	Turtle bone w. bored hole.
19189	LJ191	MMW	LJ1	1	Bottle neck and cap, glass, lead
19190	LJ192			1	Salad oil bottle, large- base only.
19191	LJ193	MAL		2	Sherd w/ green chain pattern. Black Wedgewood type sherd.
19192	LJ194			1	Canvas eyelet, brass.
14250	LJ195	CWC	Tub LJ 16	2	Slate pieces.
19193	LJ196			1	Fruit bottle.
19194	LJ197			2	Bottles, black.
19195	LJ198			1	Rope fragment
19196	LJ199			1	Leather strap
19197	LJ200			1	Pipe, plain bowl, broken stem, 1"
19198	LJ201			1	Concretion of can , 4"
19199	LJ202			3	Bottles, small. 1 white glass, 1 round, 1 rectangular.
19200	LJ204			2	Ceramic sherds.
19201	LJ205			1	Maughams Patent Bottle.
19202	LJ206	AL		1	Bottle, Codd with marble
19202	LJ208			1	Blob top corker, flat bottomed.
19203	LJ209			1	Sole, leather.
19204	LJ210			1	Jaw bone
14251	LJ211	CWC	Tub LJ 16	1	Slate

ID No.	Reg. No.	Museum Co.	2nd Loc	No.	Description
2618	LJ212	CWJ	TUB 21 WET ROOM	1	Wire rope
19251	LJ213			1	Hose section ,leather
14109	LJ214	CWA		1	Treenail
19205	LJ215	MAL		2	Bowl part, teapot part. Bowl base, small, white.
19206	LJ216			1	Concretion with wood and coil (?)
19207	LJ217			1	Bottle w. cork, small- embossed + contents. Eucalyptus oil.
19208	LJ218	MMW	LJ3	1	Handle in concretion.
19209	LJ219			1	Concretion, small.
19210	LJ220			6	Bottles, black.
2535	LJ221	AL		1	Bottle, green
19211	LJ222			1	Codd bottle, Johnsons Liverpool- green bottle, round shoulders + unfinished top.
19212	LJ223			1	Maugham bottle, flat bottomed. Blob top corker, flat bottomed.
16514	LJ224	AL		1	Shoe, with loose heel, leather
19213	LJ225			1	Bottle, black glass- broken sample.
19214	LJ227	MAL		1	Tube , brass, fluted.
19215	LJ228			12	Plate/bowl sherds, blue / white transferware (2) Saucer fragment-2 blue lines. Plate rim-2 red lines-diam 260mm. ASSC plate (soup) 1/2-2 red lines, flag -no garter, 235mm diam, code H1536, 25 embossed No'. ASSC soup plate, base sherd w/ no garter, code H...536, embossed no' 23. ASSC plate rim sherd-2 red lines. Ornamental handle base-red pattern. Polychrome frags (3)- plate section.
19216	LJ229			1	Drinking glasses - 1 stem and 3 tumblers.
19217	LJ230			1	Bullet cartridge
19218	LJ231			1	Case gin neck.
19219	LJ233			5	Glass sherds, brass strip + bolt head.
2536	LJ234	MMW	LJ1	1	Lid, Singletons Golden Eye Ointment
19220	LJ235			1	Lead piece- unid.
19221	LJ236			1	Rolands Hamilton bottle, plain torpedo.
19222	LJ238			1	Bottle "PiJ BE Co" (Check)
2537	LJ239	AL		1	Bottle, small green
19223	LJ240	MMW	LJ1	1	Skull and jaws, sheep
19224	LJ241	MAL		1	Bowl/ plate section, white. Bowl section-green line-...By + Co.. Bourne.
19225	LJ242			1	Pickle bottle
19226	LJ243	MAL		1	Ointment lid, embossed. Singletons Golden eye ointment.
2538	LJ244	MMW	LJ2	1	Bottle , small ink, stoneware
2539	LJ245	MMW	LJ1	1	Sinkers ,fishing, lead
2540	LJ246	AL		1	Pipe, clay in concretion. Cog wheel edge

ID No.	Reg. No.	Museum Co.	2nd Loc	No.	Description
14108	LJ247	CWA		1	Wood piece
19227	LJ248	MMW	LJ1	1	Keg, iron.
2541	LJ249	MMW	LJ1	2	Cartridges, copper/lead
19228	LJ250			1	Bottle stopper, perfume.
19229	LJ251			1	Bottle seal capsule.
19230	LJ252			1	Pencil
19231	LJ253	MAL		1	Pipe stem marked 105
19232	LJ254	CW	Tub 12	1	Marble
14239	LJ255	CWC	Tub LJ 16	1	Brick
19233	LJ256			1	Button, brass.
18681	LJ257	MAL	Storage 22/11/93	1	Ring brass [cf curtain ring]
19234	LJ258			1	Goblet fragment.
19492	LJ259	MAL		1	Cup sherd, wide blue line.
19235	LJ260			1	Rope eyelet.
19236	LJ261			1	Bone fragment
19237	LJ262			1	Unidentified brass piece
19238	LJ263			1	Rope fragment.
19239	LJ264	MAL		8	Dinner plate sections (2), purple cable, *WM Fairburns- possibly Robert Fairbourns of New Sunderland- Godden". ASSC plate sherd-emblem. Base 85mm diam. Marke i red-H2892. TCBWH M+CO. ASSC mug sherd w/ emblem. Plate sherd, 2 brown lines (goes w/ 624) H 1986. Diam 185mm. Plate sherd, green transferware. Type of gasket / packing material??composition.
19240	LJ265			1	Sole, leather.
2542	LJ266	AL		2	Pipe bowls , clay..1 w/ 'Ben Nevis*Cutty'.
19241	LJ267	MMW	LJ1	3	Sinkers
19242	LJ268			1	Knife handle
19243	LJ269			1	Galena Ore piece.
19244	LJ270	MAL		2	Marbles, 1 glass and 1 ceramic.
19245	LJ271			1	Bottle- Gipsland Hop Bitters
19246	LJ272			2	Bottles, clear glass with corks.
2543	LJ273	AL		1	Stopper/lid, stoneware
19493	LJ273			1	Mug Base part, blue/ white
19247	LJ274			2	Perfume bottles
16515	LJ275	AL		1	Stopper, glass
19248	LJ276			1	Fruit bottle
19249	LJ277			1	Lamont bottle 'C Ladd'
19250	LJ278			1	Bottle, small, clear glass.
2609	LJ280	MMW	LJ1	2	Shoes, leather
19252	LJ281			1	Bone piece, turtle.
19253	LJ282			1	Wine glass base
19254	LJ283	MAL		1	Cup / bowl base, white.
2544	LJ284	AL		1	Bottle, brown
19255	LJ285			1	Concretion with three projections.
19256	LJ286	MMW	LJ1	9	Bullets, pieces only
2545	LJ287	MMW	LJ2	1	Bottle, Codd's Patent, Hoskins, glass
2546	LJ288	MMW	LJ1	2	Sinker, fishing, lead
19257	LJ289			1	Stalactite/gmite
19258	LJ290	CW	Tub 18?	1	Rigging part- leather , rope , conc.
19259	LJ291			1	Strap ? brass
19260	LJ292			1	Bottle seal
547	LJ293	MMW	LJ2	1	Bottle, flat, clear, glass- hip flask.

ID No.	Reg. No.	Museum Co.	2nd Loc	No.	Description
19261	LJ294			1	Lamont patent "Crowder + Co"
19262	LJ295			1	Bottle, black
19263	LJ296			1	Bottle, Maugham -flat bottomed.
2548	LJ297	MMW	LJ3	1	Tea Cup, straight sided - 2 red lines.
19264	LJ298			1	Knife handle section.
2549	LJ299	MMW	LJ1	2	Sinkers, fishing, lead
19265	LJ300			1	Case gin neck
19266	LJ301			1	Bitters neck from bottle.
19267	LJ302			1	Hamilton base, blue.
19268	LJ303			2	Bottle neck with glass stopper
19269	LJ304			2	Maugham patent bottle "Downer + Co"
19270	LJ305			1	Knife handle
19494	LJ306	LO	Perth- S.Slack-Smith.	1	Cowrie shell. Local to Fremantle/Cockburn Sound. May still be found in C.Sound-not Fremantle. Cypra Ea friendii.
2550	LJ307	MMW	LJ1	1	Bullet head
2551	LJ308	MMW	LJ1	1	Sinker, fishing, lead
19271	LJ309			1	Pen knife
19272	LJ310			1	Buckle from braces.
2552	LJ311	MMW	LJ1	1	Pencil holder(?), brass
19273	LJ312			1	Leather piece with copper rivets.
19274	LJ313			0	Shoe leather fragments
19275	LJ314			1	Bottle seal
19276	LJ315	MAL		2	Asian sherd- porcelain, bowl base- white.
19277	LJ316	MAL		1	Button, 4-holes. material ?
2553	LJ318	AL		1	Bottle, small brown
19278	LJ319			1	Pulley sheave
19279	LJ320	MAL		2	Pipe bowl ' Ben Nevis * Cutty' on bowl. 39 on stem. Ben Nevis on stem...53
19280	LJ321			1	Hip flask, bottle
14240	LJ322	CWC	Tub LJ 16 Or Display??	1	Brick
19281	LJ323			1	Cane, ebony
19500	LJ324			1	Boot (wellington) + conc.
2554	LJ325	MMW	LJ1	2	Pennies, English, copper
2555	LJ326	MMW	LJ1	1	Ring, man's signet, gold
19282	LJ327			3	Shoe and laces in concretion.
2556	LJ328	MMW	LJ3	1	Conc. w/ bottle, glass, iron chain
2619	LJ329AB	MAL		1	Bolt + nails. De-concretion= A long large bolt, B + iron nails.
2557	LJ330	MMW	LJ3	1	Bottles , 2 in conc. glass
19283	LJ331			4	Plate sherd, blue key pattern. Diamond patterned glass sherd. ASSC cup sherd- 2 red lines- 10.5 diam ASSC soup bowl section - 2 red lines- 25.5 cms, H2892, stamped 21.
2558	LJ331	AL		1	Plate ,small, side section, ceramic
19284	LJ332			1	Brick
19285	LJ333			1	Bottle, clear glass- square.
19286	LJ334			1	Bottle lid.
19287	LJ335			1	Tumbler glass c.f Eg.
19288	LJ336	MMW	LJ2	1	Ink bottle.
2559	LJ337	AL		1	Bottle, clear
19289	LJ339			1	Blob top bottle w. cork.
19290	LJ340			1	Ring, brass.
19291	LJ341	CW	Tub 15?	1	Pipe filter

ID No.	Reg. No.	Museum Co.	2nd Loc	No.	Description
19292	LJ342			2	Sheathing, copper
19293	LJ343			1	Bottle with cork and contents.
19294	LJ344			2	Rope sections
19295	LJ345	MAL		3	Pipe bowls (2) 1 pipe frag.
19296	LJ346			1	Bottle stopper
19297	LJ347	MMW	LJ1	1	Bell, toy.
19298	LJ348			1	Pickle bottle
19299	LJ349			1	Bottle seal capsule 'Lime Juice'
19300	LJ350			3	Tops, pewter
2560	LJ351	MMW	LJ1	1	Spoon ,plated, table
19302	LJ352			1	Bottle w/ cork and top.
2561	LJ353	MMW	LJ1	3	Bullets, lead
19303	LJ355			1	Bottle, brown.
2562	LJ356	MMW	LJ2	1	Bottle, 'Hamiltons', Rowlands. glass
19304	LJ357			1	Perfume bottle
19305	LJ358	MAL	Storage 3.1.90	2	Safety pins, brass.
19306	LJ359	MAL		1	Jar lid, handmade. Makers- St Helens Lion Bros Limited
14241	LJ360	CWC	Tub LJ 16	1	Brick- embossed 'GarthCraig'
19307	LJ361			1	Rib bone, animal.
19308	LJ362	MAL		1	Plate sherd, ASSC- flag with garter.
19309	LJ363			1	Shoe
2563	LJ364	MMW	LJ1 (3 only)	8	Bone ,frogs, animal.
19310	LJ365	MAL		8	Jar base, large, salt glaze (4). Rim with hole-part, e'ware. Brown/ cream stoneware sherd. White glaze rim sherd. Bowl/plate section-Black/white transferware- chain and leaves.
19311	LJ366			1	Bottle, blue torpedo, clear.
19312	LJ367			1	Bottle, flat bottomed *Maugham Patent '-blob top corker.
19313	LJ368			1	Bottle, Joses Geraldton Hamilton patent - not returned , no' incorrect.
19314	LJ369			1	Canvas Eyelet, brass
19315	LJ370	MAL		1	Teapot spout
2564	LJ371	AL		1	Bottle, Codd with marble
19316	LJ372			1	Bucket handle, copper
19317	LJ373	MAL		7	Cups(2), Plate(1)- brown transferware sherds. WASN Co' Sherd. Jug sherd (cream, milk) 2 red lines. Bowl sherd (soup), 2 red lines, 210mm. Sherd, 2 brown lines.
19318	LJ374	MMW	LJ2	1	Medicine bottle, rectangular.
2565	LJ375	MMW	LJ1	2	Cartridges, copper.
19319	LJ376			1	Scapula bone- sheep?
19320	LJ377			1	Eyelet, canvas- brass.
19321	LJ378			1	Bottle, Maughams Patent ' Crowder + Letchford'.
19322	LJ379			1	Unid brass object.
19323	LJ380			1	Ring, iron.
19324	LJ381			2	Bottle , green, 2 pieces.
19325	LJ383			1	Bucket handle, brass.
19326	LJ384	CW		1	Jar lid.
19327	LJ385	MAL		3	Tile fragment, terracotta (house/Roof) ' Marseille'. WASN CO' Saucer sherd (5), Plate sherd (2) 2 blue lines. Plate sherd, 2 red lines- 210mm.

ID No.	Reg. No.	Museum Co.	2nd Loc	No.	Description
19328	LJ386			1	Bullet
2566	LJ387	MMW	LJ1	1	Lanten top, brass
19329	LJ388			1	Container concreted- sardine tin.
14242	LJ389	CWC	Tub LJ 16	1	Brick
19330	LJ391			1	Sheathing, squashed, copper.
2567	LJ392	MMW	LJ1	3	Sinkers, fishing. lead
19331	LJ393	MAL		1	Key
19332	LJ394			1	Bottle base. Liquer bottle?
19333	LJ395	MAL		1	Teapot spout-cream.
19334	LJ396			1	Ring from tin can base.
19335	LJ397	MAL		4	Jug sherd w/ 2 red lines. White embossed, wheaf sheaf plate/bowl-2. Cup base-white. Rope fragment.
19336	LJ398			1	Rope fragment.
14243	LJ399	CWC	Tub LJ 16	2	Brick
19337	LJ400			1	Pipe, brass- 14"
19338	LJ401			1	Bone
19339	LJ402	MAL	Storage 10.12.90	1	Bottle, s'ware
19340	LJ404			1	Bottle, square.
2568	LJ405	MMW	LJ2	1	Bottle, 'Hamiltons', glass
19341	LJ406			1	Bottle, flat bottomed Maughams Patent, blob top.
2569	LJ407	MMW	LJ2	1	Jar, pickle, glass
19342	LJ408			1	Bottle, rectangular-Sauce
19343	LJ409			1	Bottle, 3 piece mould- green.
19344	LJ410			1	Bottle base (dark blue torpedo)- Hamilton 'Jones Gran' ??
2570	LJ411	MMW	LJ3	1	Handle, axe or sledge, wood
19345	LJ412			1	Brick fragment
14244	LJ412	CWC	Tub LJ 16	1	Brick
19346	LJ413			1	Tin base
19347	LJ414	MAL		1	Bowl/plate sherd, ASSC, H2892
19348	LJ415			1	Sheathing, unid metal?
2571	LJ416	AL		1	Bottle, dark
19349	LJ417	MAL		2	Bottle 'M.Kennedy Barrowfield 24 Pottery Glasgow', white (s'ware)+ Bottle neck with cork. Bottle, black.
19350	LJ418			1	Bottle, black.
14106	LJ419	CWA		1	Coconut husk
19351	LJ420	MAL		1	Plate/bowl- mauve rope boarder.
19352	LJ421			1	Bone
14245	LJ422	CWC	Tub LJ 16	1	Brick -embossed
2614	LJ423	MMW	LJ1	1	Plug, bath, brass
19353	LJ424	MAL	Storage 4/3/92	3	Inkpot, s'ware, cork + sample of contents. '10 Doulton Lambeth'. Tin can concretion
19354	LJ426			1	Tin can concretion
19357	LJ427	MAL		2	Plate-ASSC-flag only, 2 red lines- hole on center. Diam 254mm, TCBW-HM +Co'. H 1536 no 20. Plate base sherd, white. Possibly similar to LJ80. Imperial, Iron Stone.
19355	LJ429			1	Lid and handle, concreted.
19356	LJ430	MAL		4	Plate sherd, brown transferware. Handle (2)- prob fit ASSC- 2 red lines. Sherd, black/white chain and leaves. See LJ 365.
19358	LJ431			1	Pipe rubber fragment.
19359	LJ432			1	Shoe fragment

ID No.	Reg. No.	Museum Co.	2nd Loc	No.	Description
19360	LJ433			1	Knife handle (in concretion)
19361	LJ434			1	Bottle, Hamilton, clear and embossed.
19362	LJ436			2	Pickle jars 'Calcutta'
19363	LJ437			1	Bottle, dump 'Royal German Spa', light brown spa.
14110	LJ438	CWA		1	Treenail or brass screw?
19364	LJ439			1	Modern electrical object?
19365	LJ440			1	Wine glass base.
19366	LJ441			1	Bottle , Hamilton- 'Anchor Trademark Portsmouth'.
19367	LJ442			1	Sheathing piece.
19368	LJ443	MAL		1	Bottle neck with cork.
19495	LJ443			1	Galena ore sample. CCheck registration
19369	LJ445			1	Skull part.
19370	LJ446			1	Bottle, flat bottomed- Maughams Patent- blob top corker.
19371	LJ447			1	Bottle with cork in conc.
19372	LJ448			1	Galena ore piece.
2572	LJ449	MMW	LJ1	4	Sinkers, lead
19496	LJ450	MAL		3	Cup sherd, ASSC-2 redlines. Diam 105mm. Plate rim sherd-2 redlines, diam 260mm. Ornamental sherd- as 549.
2573	LJ451	MMW	LJ2	1	Bottle, small medicine, w/ cork, glass
19373	LJ455	MAL		16	Jar, dark brown , Asian- jar complete (consist of 3 sherds). Coal pieces (11) Wood, bone.
19374	LJ456	MAL		2	Jug base, large-white-H2892 in red. ASSC emblem (cup?)
19375	LJ457	MAL		2	Serving dish, oval- 2 blue lines. Plate -2 blue lines.
19376	LJ458			1	Perfume bottle.
19377	LJ459			2	Sheathing pieces, copper
19374	LJ460	MMW	LJ3	1	Brick, insc. 'Burtt', clay
2575	LJ461	MMW	LJ1	3	Bulletsx2, lead. Shell, copper.
19378	LJ462			2	Buttons, brass
19379	LJ463			1	Buckle, clasp and chain, brass.
19380	LJ464			1	Sinker, fishing.
19381	LJ465	MAL		1	Broach backing, brass
19382	LJ466			1	Bottle fragments square- Schnapps.
19383	LJ467			1	Pencil lead piece- LOST!!
19384	LJ468	MAL		6	Bowl base, white. Handle section, blue/white. Jug section, black/white transferware. Stoneware section- 'Walte.. LA.. Chester. Hol.. Lon..' Base sherd, terracotta or e'ware. Sherd, e'ware- dark glaze.
19385	LJ469			1	Bottle stopper + copper ring.
19387	LJ470			1	Bottle, rectangular , clear.
19386	LJ471			1	Bottle, blob top, flat bottomed Maughams Patent.
194107	LJ472	CWA		1	Cask lid
19388	LJ473			4	Bottles, green.
19389	LJ474			2	Bottles, black.
194105	LJ475	CWA		1	Concretion, possibly a hammer? lead washer? Alan has a seed pod.

ID No.	Reg. No.	Museum Co.	2nd Loc	No.	Description
19390	LJ476AB			2	Pipe bowl, 1/2 (A), pipe bowl + part stem (B)- both used. Portcullis on each side of foot.
19391	LJ477			1	Spoon bowl.
2576	LJ478	MMW	LJ3	1	Lid, jar. white, ceramic
18479	LJ479	MAL	Storage Sept 1992	5	Jar/mug sherds, double blue lines=A (2) Plate sherd (B) ASSC cup, 1/2 only and fits with 546. Diam 105mm.-C ASSC mug sherd-D Sherd, dark , earthenware (2)-E.
2577	LJ479	AL		1	Cup, large, ceramic
19392	LJ480			1	Tip , concreted.
19393	LJ481			1	Sheathing, copper alloy.
14246	LJ482	CWC	Tub LJ 16	1	Brick
14254	LJ483AB	MAL	Storage October 1993	2	Bottle neck w/ cork A, also B - Base , moulded glass
19394	LJ484	MAL		1	Jar and contents- complete.
19395	LJ485			2	Bottles, black.
19396	LJ486			1	Bottle, green, small.
19397	LJ487			1	Pickle jar, clear.
19398	LJ488			1	Bottle, blob top, green.
14104	LJ489	CWA		1	Coconut husk. 1/2
2578	LJ490	MMW	LJ1	1	Cup handle section, ASSC , ceramic.
2579	LJ491	MMW	LJ1	1	Buckle, brass
2580	LJ492	MMW	LJ1	2	Bullets, lead
19399	LJ493	MAL		1	Stopper/knob- glass
19400	LJ494			1	Rope fragment
19401	LJ495			1	Rope, large.
19402	LJ496			1	Bone
2581	LJ497	AL	1 at AL only	3	Plate, dinner, ceramic- section only. Cup sherd, black/white transferware. Plate section- 2 blue lines.
19403	LJ498			2	Sheathing sections
2582	LJ499	AL		1	Bottle, green
19404	LJ500			1	Eyelet, canvas , brass.
14103	LJ501	CWA		1	Cork
19405	LJ502	MAL		1	Marble
19406	LJ503			2	Bottles, green
19407	LJ504	MMW	LJ1	1	Eye with screw, brass
19408	LJ505			1	Screw
19409	LJ506			2	Galena ore pieces.
19410	LJ507			1	Stopper, green glass.
19411	LJ508	MAL		1	Marble with three blue lines.
19412	LJ509			1	Screw
19413	LJ510			1	Glass piece- red.
19497	LJ511			4	Dish base section, Asiatic Pheasant. Bowl section, 2 brown lines. Stamped 21. Majolica sherd. E'ware sherd.
19414	LJ511	MAL		1	Bottle, black.
19415	LJ512			1	Bottle, dark green.
19416	LJ513			1	Bottle, light green
19417	LJ514			1	Lid in concretion- enamel
19420	LJ515	MAL		2	Plate sherd, white- ironstone. 'Iron stone China J+G Meakin'. Plate / bowl sherd, brown transferware ribbon. Plate sherd, white- ironstone.

ID No.	Reg. No.	Museum Co.	2nd Loc	No.	Description
19421	LJ516			3	Bottle seals.
19422	LJ517			1	Ring, brass.
19419	LJ518			1	Glass fragment, clear- thick.
19418	LJ519			1	Gimbal ring.
19423	LJ520			1	Button, possibly plastic
19424	LJ521			1	Sheathing tack.
19425	LJ522			1	Wine glass base, clear
2583	LJ523	MMW	LJ1	5	Bullets x2, shells x2, cartridge x1
14247	LJ525	CWC	Tub LJ 16	1	Brick 'GarthCraig'
19426	LJ526			2	Bottles, black
2584	LJ527	AL		1	Bottle, dark green
19427	LJ528	MMW	LJ2	1	Pickle bottle
19428	LJ529	MAL		3	Lid sherds, grey blue WASN bowl sherd. Lid sherds, grey/blue-2
19429	LJ530			1	Nut bolt + washer
19430	LJ531			48	Cowrie shell
19499	LJ532	CW		1	Cowrie shell
19431	LJ533			1	Lantern wick holder, brass
19432	LJ534			1	Base, glass
19433	LJ536			1	Pickle jar, clear glass
19434	LJ537			1	Pickle jar, green
2585	LJ538	MMW	LJ2	1	Bottle, Maughams Patent, broken, glass. 'Crowder + Letchford'
19435	LJ539			1	Shell
19437	LJ540			1	Bottle, clear.
19438	LJ541	MAL		1	Pipe stem w leaf stem
19439	LJ542			1	Lead ore piece
19440	LJ543			2	Sinkers
19441	LJ544			1	Bag rope
19442	LJ545			1	Ring, brass.
2586	LJ546	AL	MAL= Saucer	3	Cup large ASSC, ceramic- joins Saucer section, 2 brown lines + 5 star flag.
19443	LJ547			2	Bottles, green glass.
19444	LJ549	MAL		6	Serving dish, ASSC, round, section only (2). White sherd. Cup sherd, wide blue line Mug sherd, green leaves. Sherd- possibly willow pattern
2587	LJ550	AL		1	Shoe with loose heel, leather
19445	LJ551	MAL		1	Jar, incomplete.
16516	LJ552	AL		1	Pipe, clay, plain.
19446	LJ553	MAL		1	Plate glass.
19504	LJ555	AL	Listed as 55?	1	Toothbrush handle, bone.
2588	LJ555			1	Toothbrush, handle only, bone
19447	LJ556			1	Gauge/tube glass fragments.
19448	LJ557	MAL		1	Pipe bowl, plain, complete with part stem to go on.
19449	LJ558			1	Sauce bottle
19450	LJ559			1	Pulley sheave.
19451	LJ560	MAL		3	Cup/handle black/white transferware. See 497 Side plate-2 red lines, Diam 185mm. H2892 in red. Saucer section ASSC,2 brownlines,145 diam- H1986 in brown. Stamped 25

ID No.	Reg. No.	Museum Co.	2nd Loc	No.	Description
19452	LJ561			1	Knife handle, bone.
18733	LJ562	MAL	Storage Sept 1992	1	Glass frag
18734	LJ562B	MAL	Storage Sept 92	2	Coal frag
2589	LJ564	MMW	LJ3	2	Pickets, Jarrah, fence, wood
19453	LJ565			1	Rod carved with little spikes.
14102	LJ566	CWA		1	Unid. wood object. Head of carpenters tool?
19454	LJ567			1	Neck of vase- fluted, clear.
19455	LJ568			2	Shells- cowrie
19023	LJ569			1	Bottle capsule.
19022	LJ570	UN		2	Medicine bottle, small and clear + cork.
19024	LJ571			1	Knife handle
2590	LJ572	MMW	LJ1	1	Sinker, fishing, lead
19456	LJ573			3	Neck, cap and conc.
19457	LJ574			1	Pen knife
19458	LJ575	MAL	? Storage 8.1.90	1	Shilling, Victoria- 1838, 1887.
19459	LJ576			2	Nail head- copper.
19460	LJ577	MM	Woodblock?	1	Nail- copper.
19461	LJ578	MMW	LJ3	1	Lid, large.
2591	LJ579	AL		1	Door knob, ceramic
19462	LJ580	MAL	?	4	Saucer fragment, black/white transferware. Saucer fragment-deep blue printed floral. Spoon handle, deep blue, printed floral. Plate (small) sherd- 2 red lines. Diam 260mm.
2592	LJ581	AL		1	Stopper/lid, s'ware -Powell Bristol, stamped L.
19463	LJ582	MAL		1	Pipe, plain, 1 1/2 " stem broken.
19464	LJ583			1	Red glass fragment, from trainlight?
19465	LJ584			1	Port hole glass- 1, 1/2 circle piece of glass.
19466	LJ585			2	Neck and cap.
19467	LJ586			1	Ring, concreted, with coal.
19468	LJ587	MMW	LJ3	1	Slate lump.
19469	LJ588	MAL	?	1	Sharpening stone?
19470	LJ589			2	Sole and heel.
2593	LJ590	MMW	LJ1	1	Bone, beef
14101	LJ591	CWA		1	Sheave w/ brass coakes
19471	LJ592			1	Rope
19472	LJ593			1	Cylinder, hollow, with knob.
2594	LJ594	MMW	LJ1	2	Bottle necks, light green w/lead seals
19473	LJ595	MMW	LJ1	1	Cartridge, complete.
19474	LJ596			1	Cane with 572 plastic stopper.
19476	LJ598			1	Bottle, small, clear.
19477	LJ599			1	Marble, glass.
19478	LJ600			1	Glass base- small. 'Syrup Erkins'
19479	LJ601			1	Ink bottle
19480	LJ602			1	Bottle neck, blue.
19481	LJ603			1	Sheet glass, thick.
19482	LJ610			1	Wood sample
19483	LJ611			1	Jarrah plank- sleeper?
19484	LJ612	MMW	Long Jetty Display	0	Condiment set, white ceramic
19485	LJ613			1	Bottle, small, dark, shouldered- for experiments.
19486	LJ614	MAL		9	Bottle necks (6) + 3 corks (lost tags).
18731	LJ615	MAL	Storage Sept 92	2	Bottle neck w/ cork
18732	LJ616	MAL	Storage Sept 92	1	Stone frag

APPENDIX C

CARTRIDGES AND PROJECTILES FROM LONG JETTY

LJ 230

Cartridge Case (fired) .45 CAL (pistol or revolver). Probably US made (could be .45 CAL "OWEN" (AUST).

LJ 375

Cartridge Cases (both fired) .360 " CAL "ELEY"

LJ 307

Projectile (fired) .45 CAL.

LJ 353

Projectiles (3) fired .45 CAL.

LJ 386

Projectile (fired) .45 CAL.

LJ 249

Cartridge Cases (2) (fired) .450 CAL and .360 CAL.

LJ 461

1 Cartridge Case (fired) .360
2 Projectiles (fired) .310 and .303" (rifle)

LJ 286

2 .45 CAL projectiles (fired)
1 Cartridge Case .360 CAL (fired)

1 "Pin" fire cartridge case (unfired)

"ELEY" manufactured "LONDON" on case. 11 MM.

(Manufactured up till the mid 1930's and was the first Breech loading metallic cartridge to be adopted for Military use).

1 round complete .575" CAL (unfired) (rifle).

Projectile removed from case - contained gun powder.

This round is designed for use in a "SNIDER" breech loading conversion to the "ENFIELD" rifles of 1866. The round was developed by Colonel Boxer of the Royal Laboratory of Woolwich, and is .577 CAL. It was not successful.

S.R. Garcia

September 1984

An interpretation of the munitions in relation to the Long Jetty site appears on page 20 of the report.

APPENDIX D

CONSERVATION STATUS REPORT

Completion of Conservation treatments of Long Jetty artefacts as of 1 March 1994

LJ	1	1 slate
LJ	7	1 bone handle
LJ	55	1 brick
LJ	165	1 slate
LJ	195	1 slate
LJ	211	1 slate
LJ	255	1 brick
LJ	322	1 brick
LJ	360	1 brick
LJ	389	1 brick
LJ	399	1 brick
LJ	412	1 brick
LJ	422	1 brick
LJ	525	1 brick
LJ	532	1 cowry shell
LJ	18	1 Brass Handle
LJ	44	1 bronze screw cap
LJ	48	3 straps x Barrel bowl stopper
LJ	69	1 Brass lid or base
LJ	123	1 Strap fitting (brass)
LJ	140	1 brass bolt
LJ	157	1 sheet sheathing metal
LJ	163	remains of tin can rim
LJ	170	1 bronze Gudgeon
LJ	174	1 brass strap
LJ	177	1 copper nail riveted end
LJ	179	1 brass screw
LJ	179	1 brass tubing
LJ	184	3 screws
LJ	194	1 canvas eyelet (brass)
LJ	219	1 brass Pen knife
LJ	227	1 brass tube fitting
LJ	233	1 brass strip
LJ	233	1 brass fitting
LJ	260	1 brass canvas eyelet
LJ	291	1 piece brass (strap?)
LJ	310	1 brass buckle (3 bits)
LJ	340	1 brass ring 12" diameter
LJ	369	1 brass canvas eyelet
LJ	377	1 canvas eyelet (brass)
LJ	383	1 brass bucket handle
LJ	391	1 piece squashed sheathing
LJ	396	
LJ	400	1 brass roll sheet lead insert
LJ	413	1 tine base
LJ	438	1 brass screw
LJ	442	1 copper sheathing
LJ	459	4 pieces of copper sheathing

LJ	462	2 brass buttons
LJ	463	1 brass buckle
LJ	463	1 brass clasp
LJ	463	1 brass chair
LJ	465	1 brass back of brooch
LJ	475a	1 lead washer
LJ	481	1 copper sheathing
LJ	498	2 sheathing metal
LJ	500	1 canvas eyelet (brass)
LJ	504	1 brass screw threaded eye bolt
LJ	509	2 canvas eyelets (brass)
LJ	517	1 brass ring
LJ	519	1 gimbal ring
LJ	521	1 sheath tack
LJ	531	1 brass nut, bolt and washer
LJ	533	1 brass lantern wick holder
LJ	545	1 brass ring
LJ	574	1 Pen knife
LJ	576	1 fitting with spring
LJ	577	1 Copper nail riveted end
LJ	591	2 brass coake + sheave
LJ	593	Hollow brass cylinder knob
LJ	626	Harpoon concretion
LJ	627	1 brass strip
LJ	628	Brass screw fittings and screw thread
LJ	629	Broken bolt hollow
LJ	630	2 brass tubing 35cm 1cm diameter
LJ	631	1 brass screw

All material desalinating in Conservation Wet Room.

All material nearing end of treatment (approximately 2 months).

APPENDIX E

**A CATALOGUE OF THE 283 ARTEFACTS ON DISPLAY AT THE WA
MARITIME MUSEUM, FREMANTLE.**

7 FEBRUARY 1994

Maritime Archaeology Department Database printed by LOCATION

Printed as of: 12:31 : 7 FEB 94 Page 1

Reg. No.	Mus.Co.	Mus. Loc.	M.Co	No.	Description	Date 1	Date 2
LJ188	MMW	LJ1	33	1	Bottle seal and neck	24 JUL 84	
LJ191	MMW	LJ1	44	1	Bottle neck and cap, glass, lead	24 JUL 84	
LJ234	MMW	LJ1	3	1	Lid, Singletons Golden Eye Ointment	27 JUL 84	
LJ240	MMW	LJ1	41	3	Skull and jaws, sheep	27 JUL 84	
LJ245	MMW	LJ1	34	9	Sinkers, fishing, lead	27 JUL 84	
LJ248	MMW	LJ1	83	1	Keg, iron.	27 JUL 84	
LJ249	MMW	LJ1	32	2	Cartridges, copper/lead	27 JUL 84	
LJ267	MMW	LJ1	34	3	Sinkers	27 JUL 84	
LJ280	MMW	LJ1	46	2	Shoes, leather	1 FEB 85	28 JUL 84
LJ286	MMW	LJ1	32	9	Bullets, pieces only	27 JUL 84	
LJ288	MMW	LJ1	34	2	Sinker, fishing, lead	27 JUL 84	
LJ299	MMW	LJ1	34	2	Sinkers, fishing, lead	27 JUL 84	
LJ307	MMW	LJ1	34	1	Bullet head	27 JUL 84	
LJ308	MMW	LJ1	34	1	Sinker, fishing, lead	27 JUL 84	
LJ311	MMW	LJ1	32	1	Pencil holder{?}, brass	27 JUL 84	
LJ325	MMW	LJ1	32	2	Pennies, English, copper	27 JUL 84	
LJ326	MMW	LJ1	36	1	Ring, man's signet, gold	27 JUL 84	
LJ347	MMW	LJ1	32	1	Bell, toy.	31 JUL 84	
LJ351	MMW	LJ1	35	1	Spoon, plated, table	30 JUL 84	
LJ353	MMW	LJ1	34	3	Bullets, lead	31 JUL 84	
LJ375	MMW	LJ1	32	2	Cartridges, copper.	10 AUG 84	
LJ387	MMW	LJ1	32	1	Lanten top, brass	10 AUG 84	
LJ392	MMW	LJ1	34	3	Sinkers, fishing, lead	10 AUG 84	
LJ423	MMW	LJ1	32	1	Plug, bath, brass	1 FEB 85	85 AUG 84
LJ449	MMW	LJ1	34	4	Sinkers, lead	11 AUG 84	
LJ461	MMW	LJ1	32	3	Bulletsx2, lead. Shell, copper	11 AUG 84	
LJ490	MMW	LJ1	28	1	Cup handle section, ASSC, ceramic.	11 AUG 84	
LJ491	MMW	LJ1	32	1	Buckle, brass	11 AUG 84	
LJ492	MMW	LJ1	34	2	Bullets, lead	11 AUG 84	
LJ504	MMW	LJ1	32	1	Eye with screw, brass	13 MAY 84	
LJ523	MMW	LJ1	32	5	Bullets x2, shells x2, cartridge x1	13 AUG 84	
LJ572	MMW	LJ1	1	1	Sinker, fishing, lead	13 AUG 84	
LJ590	MMW	LJ1	41	1	Bone, beef		
LJ594	MMW	LJ1	44	2	Bottle necks, light green w/lead seals	1 FEB 85	
LJ595	MMW	LJ1	3	1	Cartridge, complete.		
LJ364	MMW	LJ1 (3 only)	41	8	Bone, frogs, animal.	10 AUG 84	
LJ2	MMW	LJ2	44	12	Bottles, "6 to the gallon"	17 JUL 84	
LJ6	MMW	LJ2	44	13	Bottles, "5 to the gallon", black	17 JUL 84	
LJ29	MMW	LJ2	21	1	Bottle, stoneware, Gin	17 JUL 84	
LJ31	MMW	LJ2	44	1	Bottle, dark	18 JUL 84	
LJ37	MMW	LJ2	44	1	Bottle, Lamont Patent, glass		
LJ43	MMW	LJ2	44	1	Pickle jar	18 JUL 84	
LJ56AB	MMW	LJ2	44	2	Codd Bottles -sml. Volcanic type (A); Charles Allen (B). Maugham bottles.	18 APR 78	
LJ66	MMW	LJ2	44	2	Bottles, Codd, W. Letchford, class	23 JUL 84	
LJ71	MMW	LJ2	44	2	Bottles, Codd, W. Letchford, class		
LJ89	MMW	LJ2	2	1	Bottle, Stout, stoneware	1 FEB 85	
LJ154	MMW	LJ2	44	1	Bottle frag- Mrs Winslows Soothing Syrup.	24 JUL 84	
LJ164	MMW	LJ2	44	1	Maugham Bottle, flat bottomed	24 JUL 84	
LJ167	MMW	LJ2	44	1	Bottle, Herbert's Lemonade, glass	24 JUL 84	
LJ244	MMW	LJ2	21	1	Bottle, small ink, stoneware	27 JUL 84	
LJ287	MMW	LJ2	44	1	Bottle, Codd's Patent, Hoskins, glass	27 JUL 84	
LJ293	MMW	LJ2	44	1	Bottle, flat, clear, glass- hip flask.	27 JUL 84	

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Reg. No.	Mus.Co.	Mus. Loc.	M.Co No.	Description	Date 1	Date 2
LJ336	MMW	LJ2	22 1	Ink bottle.	30 JUL 84	
LJ356	MMW	LJ2	44 1	Bottle, 'Hamiltons', Rowlands. glass	31 JUL 84	
LJ374	MMW	LJ2	44 1	Medicine bottle, rectangular.	10 AUG 84	
LJ405	MMW	LJ2	44 1	Bottle, 'Hamiltons', glass	10 AUG 84	
LJ407	MMW	LJ2	44 1	Jar, pickle, glass	10 AUG 84	
LJ451	MMW	LJ2	44 1	Bottle, small medicine, w/ cork, glass	11 AUG 84	
LJ528	MMW	LJ2	44 1	Pickle bottle	13 AUG 84	
LJ538	MMW	LJ2	44 1	Bottle, Maughams Patent, broken, glass .. 'Crowder + Letchford'.	13 AUG 84	
LJ13	MMW	LJ3	44 2	Ring seals, from Beer bottles, small.	17 JUL 84	
LJ17	MMW	LJ3	12 10	Coal pieces	18 JUL 84	
LJ20	MMW	LJ3	25 1	Brick, clay 'Gartcraig'		
LJ21	MMW	LJ3	44 3	Bottles, small green, ring seal glass		
LJ30	MMW	LJ3	44 8	Bottles, black, glass	1 FEB 85	
LJ34	MMW	LJ3	44 17	Bottles, small ring seal beer, glass	18 JUL 84	
LJ35	MMW	LJ3	44 1	Bottle, black in concretion, glass		
LJ53	MMW	LJ3	29 1	Dish centre ASSC ceramic	1 FEB 88	JUL 84
LJ70	MMW	LJ3	44 39	Ring seals, beer.	23 JUL 84	
LJ76	MMW	LJ3	44 19	Bottles, black, glass- round shouldered uniform top.	23 JUL 84	
LJ84	MMW	LJ3	44 5	Bottles, black and small- sloping shoulders, uniform tops.	23 JUL 84	
LJ94	MMW	LJ3	44 3	Whisky bottles, black- 1 neck repaired.	23 JUL 84	
LJ97	MMW	LJ3	44 16	Bottles, black, glass. Similar to 5 or 6 gallon but smaller	23 JUL 84	
LJ125	MMW	LJ3	44 1	Bottle, green, sml. ring top, glass	1 FEB 89	JUL 84
LJ134	MMW	LJ3	44 11	Bottles, dark. Similar to 5 or 6 gallon but small + machined base + kickups.	23 JUL 84	
LJ138	MMW	LJ3	2 1	Lamp shade, ceramic	24 JUL 84	
LJ218	MMW	LJ3	65 1	Handle in concretion.	27 JUL 84	
LJ297	MMW	LJ3	28 1	Tea Cup, straight sided - 2 red lines.	27 JUL 84	
LJ328	MMW	LJ3	86 1	Conc. w/ bottle, glass, iron chain	30 JUL 84	
LJ330	MMW	LJ3	44 1	Bottles, 2 in conc. glass	30 JUL 84	
LJ411	MMW	LJ3	65 1	Handle, axe or sledge, wood	10 AUG 84	
LJ460	MMW	LJ3	25 1	Brick, insc. 'Burtc', clay	11 AUG 84	
LJ478	MMW	LJ3	2 1	Lid, jar, white, ceramic	11 AUG 84	
LJ564	MMW	LJ3	6 2	Pickets, Jarrah, fence, wood	10 AUG 84	
LJ578	MMW	LJ3	21 1	Lid, large.	13 AUG 84	
LJ587	MMW	LJ3	11 1	Slate lump.		
LJ612	MMW	Long Jetty Display	22 0	Condiment set, white ceramic	17 JUN 85	

APPENDIX E

INTERPRETTIVE LABELS FOR LONG JETTY ARTEFACTS ON DISPLAY

COAL:

Coal for steamships was often kept in coal hulks (old ships used for storage purposes) and transferred to the steamers whilst alongside.

This coal had fallen overboard during the transfer process.

BOTTLES:

Vast quantities of spirits and 'soft' drink were consumed by fishermen, sailors, stevedores and visitors to the jetty.

The most common forms are the black and ring seal beers and the various soft drinks.

BOTTLES:

The Hamilton and Maughams Patents.

Upright bottles were found to be unsatisfactory for holding mineral waters and artificially aerated waters, soft drinks, carbonated drinks. As the cork dried out and shrank, the gas in the drink would escape leaving the drink flat.

The bottles shown here were recovered from the jetty and were one means of combating that problem in that they could not be left standing and therefore the cork would not dry.

The "Hamilton" patent for ovoid bottles was in the early 1800's and the Maughams type in 1840.

THE CODD BOTTLE

In 1870 Mr Hiram Codd invented the Codd type with a groove in the neck to hold a cork or rubber or gutta percha washer against which was forced (by gas pressure) a glass, wood, rubber or gutta percha ball.

The type was modified and improved continuously and appears in many variants.

During the period 1871-1885 almost 800 patents were taken out for mineral water bottles.

There were problems however with the dust collecting on the stopper and children delighted in smashing the bottles to obtain the stoppers for marbles.

The name 'Codd Wallop' became common for the drinks held therein.

Drunkenness and sloppy habits lead to the vast extent of the material and bottles on the jetty and it was not confined to the locals. The colony's second coastal steamer *Georgette* was beset with problems caused by drunkenness amongst the crew and at one stage in 1876 it was requested that she be not given a port clearance unless she had: "a proper crew in a proper state of sobriety".

The amount of bottles and broken pottery is then not surprising.

LABELS

Stone and Glass

Salads Oils and Vinegars

Pickles and Chutneys

Medicines

Whiskey

Stout Bottle

Lamp Shade

Herberts Lemonade - a rare Maughams patent soft drink bottle

Martin Hosken -a Codd patent

Smoking Pipes

Ink Bottles

Black Bottles - Black glass beers

Pot Lids - for ointments, toothpaste and other remedies

Ginger Beers

Ring Seal Beer Bottles - cork stoppered - assorted wines and beers

Bittens Bottle - in a chain concretion

Gin Bottles - the case gin

A blob top dump bottle - cork stoppered - the ring and blob give strength to the lip of the bottle

Bones - From the ships galleries or bait

Shells - apparently common in the early days

Munitions - a variety of WWII .45, .360, .310 and .303 calibre including a .575 round for use in a snider breech loading conversion to the Enfield rifles of 1866.

Coins - English pennies

Shoes - many shoes were recovered in good condition and were preserved in anaerobic conditions under 1-2 metres of sand.

Ring - man's dress ring (with seal?)

Crockery - much of the identifiable crockery has come from Adelaide Steam Ship Company vessels and was apparently thrown or lost overboard whilst the vessels were alongside. The crockery includes: teapots, plates, cups and saucers, sherds (fragments) and Chinese cooking-ware.

Many other Steamship Companies also operated out of Fremantle in the period but as the area was in shallow water only the smaller trading and coastal vessels are represented in this sample.

APPENDIX E

**A CATALOGUE OF THE 68 ARTEFACTS ON DISPLAY AT THE
RESIDENCY MUSEUM, ALBANY, WA.**

7 FEBRUARY 1994

Maritime Archaeology Department Database printed by LOCATION

Printed as of: 12:30 : 7 FEB 94 Page 1

Reg. No.	Mus. Co.	Mus. Loc.	M. Co	No.	Description	Date 1	Date 2
LJ2	AL		44	1	Bottle, dark	17 JUL 84	
LJ6	AL		44	1	Bottle, dark	17 JUL 84	
LJ8	AL		44	1	Bottle, case section		
LJ15	AL		44	1	Bottle, with marble		
LJ26	AL		44	5	Bottle, dark		
LJ29	AL		21	1	Bottle, Gin ,stoneware	18 JUL 84	
LJ30	AL		44	1	Bottle, dark	2 JAN 85	
LJ31	AL		44	1	Bottle, dark	18 JUL 84	
LJ41	AL		44	1	Bottle base, blue torpedo		
LJ49	AL		29	2	Mug, green transfer ware, ceramic	18 JUL 84	
LJ53	AL		29	1	Soup bowl, base only ,ASSC, ceramic	2 JAN 88 JUL 84	
LJ61	AL		44	1	Bottle section, case.		
LJ62	AL		44	1	Stopper, from pickle bottle, glass.Plus glass lid.	18 JUL 84	
LJ70	AL		44	1	Bottle ring seal, beer	18 JUL 84	
LJ83	AL		44	1	Bottle,whisky, green glass.	23 JUL 84	
LJ85	AL		44	1	Bottle, Torpedo		
LJ87	AL		44	1	Bottle,small green.		
LJ88	AL		21	1	Jar, ink, stoneware.	23 JUL 84	
LJ94	AL		44	1	Bottle, black whisky	18 JUL 84	
LJ112	AL		27	1	Pipe, clay . Mark BEN NEVIS G...Y	23 JUL 84	
LJ124	AL		44	1	Bottle,green,wine.	23 JUL 84	
LJ130	AL		29	1	Jar lid, ceramic- embossed- J. Delcroix London. by Appointment 156 New Bond st.	23 JUL 84	
LJ147	AL		44	1	Bottle, green	23 JUL 84	
LJ152	AL		44	1	Medicine bottles w/ corks	10 FEB289JUL 84	
LJ158	AL		29	1	Cup section, 2 green lines, ceramic.	24 JUL 84	
LJ169	AL		44	1	Bottle, small [medicine?]		
LJ206	AL		44	1	Bottle, Codd with marble	27 JUL 84	
LJ221	AL		44	1	Bottle, green	27 JUL 84	
LJ224	AL		41	1	Shoe, with loose heel, leather	27 JUL 84	
LJ239	AL		44	1	Bottle, small green	27 JUL 84	
LJ246	AL		27	1	Pipe, clay in concretion. Cog wheel edg	27 JUN 93	
LJ266	AL		27	2	e Pipe bowls , clay..1 w/ 'Ben Nevis*Cutty'.	27 JUL 84	
LJ273	AL		21	1	Stopper/lid, stoneware	27 JUL 84	
LJ275	AL		44	1	Stopper,glass	27 JUL 84	
LJ284	AL		44	1	Bottle, brown	27 JUL 84	
LJ318	AL		44	1	Bottle, small brown	27 JUL 84	
LJ331	AL		29	1	Plate ,small, side section, ceramic	30 JUL 84	
LJ337	AL		44	1	Bottle, clear	30 JUL 84	
LJ371	AL		44	1	Bottle, Codd with marble	10 AUG 84	
LJ416	AL		44	1	Bottle, dark	10 AUG 84	
LJ479	AL		29	1	Cup, large, ceramic		
LJ499	AL		44	1	Bottle, green	11 AUG 84	

Maritime Archaeology Department Database printed by LOCATION
 Printed as of: 12:30 : 7 FEB 94 Page 2

Reg. No.	Mus. Co.	Mus. Loc.	M. Co No.	Description	Date 1	Date 2
LJ527	AL		44 1	Bottle, dark green	13 AUG 84	
LJ550	AL		46 1	Shoe with loose heel, leather	13 AUG 84	
LJ552	AL		27 1	Pipe, clay, plain.	13 AUG 84	
LJ555	AL		41 1	Toothbrush handle, bone.	9 AUG 84	
LJ579	AL		28 1	Door knob, ceramic	13 AUG 84	
LJ581	AL		21 1	Stopper/lid, s'ware -Powell . Bristol, stamped L.	13 AUG 84	
LJ497	AL	1 at AL only	29 3	Plate, dinner, ceramic- section only. Cup sherd, black/white transferware.	11 AUG 84	
LJ59	AL	MA Storage?	44 8	Plate section- 2 blue lines. Ink bottle, clear, complete; 1 ginger beer bottle; 1 cylindrical blob top; 1 clear glass bottle; 4 medicine bottles. Check..	20 JUL 84	
LJ546	AL	MAL- Saucer	29 3	Cup large ASSC ,ceramic- joins with 479	13 AUG 84	

APPENDIX F

LONG JETTY ARTEFACT DRAWINGS. 14 December 1993

<u>Reg. No.</u>	<u>Description</u>
LJ525	ceramic - brick
LJ402	stoneware bottle
LJ331	earthenware plate
LJ479c	earthenware bowl
LJ112	clay pipe
LJ160	clay pipe
LJ246	clay pipe
LJ253	clay pipe
LJ266	clay pipe
LJ320	clay pipe
LJ345	clay pipe
LJ476	clay pipe
LJ476a	clay pipe
LJ541	clay pipe
LJ582	clay pipe
LJ37	glass - bottle
LJ58	sauce bottle
LJ129	sauce bottle
LJ167	bottle
LJ169	perfume bottle
LJ287	bottle
LJ293	bottle
LJ558	bottle
LJ359	lid
LJ493	stopper
LJ508	marble
LJ326	non-ferrous metal - dress ring
LJ347	bell rattle
LJ245	lead sinker
LJ267	lead sinker
LJ288	lead sinker
LJ299	lead sinker
LJ308	lead sinker
LJ392	lead sinker
LJ449	lead sinker
LJ47	ferrous metal - ringbolt
LJ387	lantern cap
LJ393	key
LJ491	buckle
LJ309	miscellaneous - pen knife
LJ316	button
LJ555	toothbrush

APPENDIX G

**WA Maritime Museum
LONG JETTY B&W PHOTO INDEX**

TYPE	DESCRIPTION	ADDITIONAL	FILM	FILM	FILM
			1	2	3
ART	Long Jetty-Misc	Ceramic	1084		
PLA	Bathers Bay	Excavation 1984	2520	2534	
PLA	Fremantle	Long Jetty	2528	2360	2367
PLA	Long Jetty-Fremantle	U/W	252		

LONG JETTY COLOUR SLIDE INDEX

NO	DRAWER	TITLE	DESCRIPTION	FILE SLIDE NO.
286	#F4	Long Jetty-Fremantle	-	MA/LJF 1-35
	MA/LJ/A	U/W	August 1984	1-21
	MA/LJ/B		-	

(See also **Bathers Beach** - Slide Nos. BB/166-176 & 235-242)