Name of Place:
Macquarie Watchtower

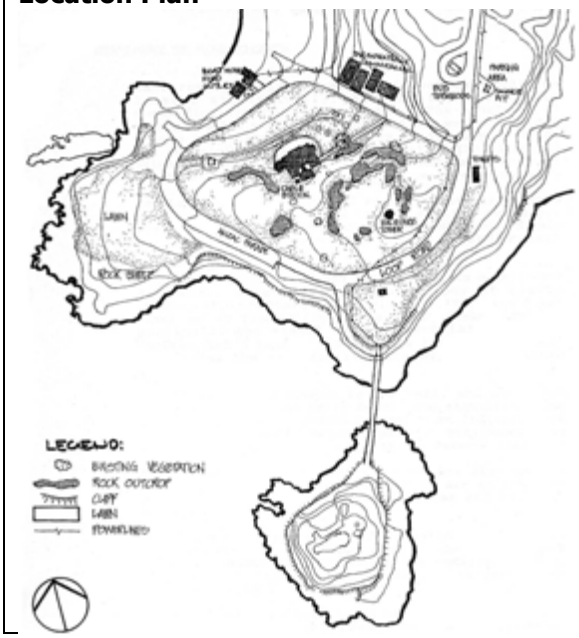
Inventory:
1

Current Use and Associated Items: No Current use, except storage. Nearby items are a cast concrete retaining wall, flagstone surround & sandstone block cistern.

Other/Former Uses and Names: Government troop outpost & watchtower to 1831; Customs out-station 1831-1904, 'Delapérouse'; caretaker accommodation to c.1960; from c.1960 landmark monument.

NPWS Item ID SHI ID

Location Plan



Photograph

Fig. 1 Macquarie Watchtower.

CONDITION: Good Fair Poor Ruinous Site Only **INTEGRITY : High Moderate Low**

Physical Description

Macquarie Watchtower is a two storey, octagonal Sydney sandstone tower with an exterior diameter of 7240mm and approximately 7240mm high. The external coursed, sandstone walls are 600mm wide. The c.1961 crenulated parapet wall sits approximately 1450mm above a concrete slab roof. The concrete roof and the two suspended reinforced concrete beams it sits on were also inserted in 1961. The beams are showing evidence of spalling. The roof is drained with short copper spouts on four sides. The four original windows on each level on the facets between the main compass points (ie north-east, south-east, north-west & south-west) have been infilled with sandstone blocks and the window sills have been repaired with cement render. The single Gothic arch headed wooden entrance door is on the southern wall facet. The circumference of the base of the tower has been paved with random flagstones set in mortar in an attempt to assist water to run away from the building. The insertion of the flagstones was also part of the 1961 works. The northwest walls are showing evidence of abrasive weather damage to individual stones and some of the mortar has been worn away. The interior is essentially an empty space with a fireplace set in the north wall facet and a single timber beam at first floor level. The floor is a reinforced concrete slab installed in 1961. A sacrificial plaster skin was applied in 2005 to around 1000 mm to intercept rising salts. The iron gate inside the tower is thought to have been used to close off part of the Barracks on Bare Island.

Brief Historical Background

Constructed c.1822 as a watchtower to house 'in lieu of huts' a small detachment of troops assigned to watch the Bay for smugglers and misguided vessels. (Kass 1989:15 Sydney Gazette, 22 March 1822) It is assumed that the reference to 'misguided' vessels is mainly to foreign incursions. The tower fulfilled this role until 1826. During that time the troops appropriated the garden established by Lapérouse in 1788.

The building appears to have been abandoned from 1826 when the troops left until 1829 when initial works were carried out so that it could function as accommodation for a caretaker, who would oversee the recently erected La Perouse monuments. However, in 1831 the Customs Department acquired the La Perouse stone tower to be one of a string of its coastal customs out-stations. It required significant repairs to accommodate the staff comprising a Tide-waiter[1] and two Boatmen. The additional accommodation requirements appear to have been met by the construction of a boatman's hut and a separate skillings[2] hut, mentioned in 1833 correspondence, and a privy. The repairs and improvements carried out c.1832 by James Walsh, a stonemason based in Castlereagh St were not entirely successful and the ingress of storm water through rooves and windows was an ongoing problem. A storm destroyed the windows and kitchen of the tower in 1835 and by 1837 it was considered near uninhabitable. In 1850 a proposal was put forward to replace the crenulated parapet and flat roof with a pitched roof probably covered with slate tiles. It is not clear whether the works were carried out in the 1850s or in the early 1860s. At some time between 1835 and 1850 a skillion roofed, cabbage tree slab building (possibly a replacement kitchen) was constructed butting against the tower. By 1863 skillion roofed additions occupied three sides of the octagonal tower. An 1850 assessment of the works required, proposed a new pitched roof to replace the extant flat, lead lined, roof and a new fireplace and oven in the tower, the replacement of window & door frames & other general repairs within the tower & to the semi-circular addition and certainly by 1864 a pitched roof had been added. The addition of the Boatmen's wives and families over time was too much for the available accommodation and by 1862, the Boatmen had built 3 new wooden huts and in 1863 a well was constructed by John Guile & Son – 'to serve as a tank for rainwater if no water was found' (Kass1989:22 SRNSW Colonial Architect correspondence). Based on Cole's recommendations for improvements the Colonial Architect, James Barnet drew up plans for a new stone walled skillion surround that was completed by 1864. From around 1864 to 1873 a room in the stone tower, was used as a school for the local children including Aboriginal children. Around this time the tower was re-named Delapérouse. (Cox et al, 2001:55) The Customs House Station was allowed to run down from the 1880s. In 1903 the Customs Station was transferred to the Commonwealth Government, who passed it on, to the Department of Internal Affairs in 1904 and it became a retirement home at least initially for former Customs Officers and it housed a succession of at least 6 tenants up to 1950. In 1950 the tower site was reserved and placed under the care of the La Perouse Monuments Trust, who installed a resident caretaker. On October 1, 1957 a fire gutted the building and caused the death of Mary Donnelly, the caretaker's wife.

After the fire, the decision was taken to 'clean up' the site and reveal the original tower form. The 1961 Lands Department reconstruction work on the tower was intended to match as closely as possible its 1820s form, except for blocking up the windows to prevent vandalism. The form of the crenulations was conjectural and subject to some dispute. (See Figure 11. of this inventory for what are thought to be the original crenulations, replaced by the pitched roof at some time between 1850 and c.1864.) The Trust also erected the low coping wall around the tower and used the building as a tool and boat store. Work comprised refacing exterior stone work; removal and replacement of stones, with the new stones set in cement based mortar; restoration of the doorway, construction of a concrete slab roof; laying of a reinforced concrete slab floor to threshold level & installation of a brass explanatory dedication above the doorway.

NPWS acquired the site in 1967. Rising damp has been an ongoing issue within the building and was subject to several works programs in 2006. Its main recent use has been as a landmark and for storage of cast iron gates thought to have been used on Bare Island.

[1] Customs officer or tide waiter; one who waited on the tide to collect duty on goods brought in (Definition from Google; Tide waiters in Old Occupations)
[2] Thought to refer to a skillion roofed hut or associated with one of the skills of the men stationed at the tower.

Chronology of known works	
c.1820	A small military detachment stationed at the Headland
c.1822	Octagonal stone tower noted in the March 1822 *Sydney Gazette*; Government troops stationed at the site. Likely constructed by Governor Macquarie or Governor King.
1824	Tower noted by Lycett and the crew of French vessel *Coquille.*
1825	Tower recorded by the French crew of the *Thetis* & *Esperance*
1826	Troops withdrawn; tower falls into disrepair (1/2 lead roof stripped) Norfolk Island pines said to be planted by Governor Darling
1827/28	Watchman installed (Patrick Lally)
1829	Director of Public Works called for repairs to the tower, half the flat lead roof stolen. Works include a shingle roof & sash windows to replace shutters. Flag staff located near tower.
1831	Repairs to the tower by Public Works Department (PWD). Tower described with a flat lead roof, open windows covered only by shutters, a stepladder and a single room on the lower floor. (PWD to Col Sec 12/6/1831 cited in Kass:17) Customs Department acquire tower as a Customs out-Station, tasks included combating tobacco & alcohol smuggling
1831 - 1833	Construction of skillion shed, boatman's hut & privy
1835	Storm destroys kitchen in tower
post-1835 (?)	Construction of a skillion attached to the tower (contains kitchen)
1850	Tower stonework in good order, the roof was corroded and the ceiling in the upper two rooms had been destroyed. The windows and doors on the south eastern side (the direction of the prevailing wind) were blocked up and the skillion section (containing the kitchen and fireplace) was 'scarcely serviceable'. (Report on the residence of the Customs Officer, 26.4.1850, Cox et al, 2001:54)
pre-1864	Construction of a pitched roof on the stone tower replacing the former flat roof and chimney raised, new brick oven & fireplace & replacement of windows, floors repaired & skillion re-shingled. (Kass:21)
1861 1862	Three wooden boat huts constructed along with some 'additions'
1863	Repairs on tower by tenderer Samuel Long. Skillion occupies three sides (north east, north and north west) of the octagonal, used as a bedroom and store. Accommodation in the tower consists of one room on the ground floor partially taken up with stairs and two small rooms on the upper floor. Well constructed (for use as a well or storage tank for roof runoff)
1864	Cabbage tree slab skillion demolished & new stone walled skillion attached to the tower constructed
1868	Room in tower dedicated as a schoolhouse – Botany Heads Provisional School. Customs building was being called 'Delaperouse' (Cox et al 2001:55, cite Mission Publications of Australia:5)
1873	School moved from the tower to a purpose built weatherboard schoolhouse constructed near the tower
1789 - 1881	Repairs and enlargements of boatmen's cottages (incl. new roofs and verandas)
1901	Federation

1903	Customs Station transferred to the NSW Government
1904	Customs operation ceases; management transferred to Commonwealth Department of Internal Affairs Tower houses a series of tenants-caretakers until 1957
1950	Tower site reserved and placed under the care of the La Perouse Monuments Trust
1957	Fire destroys much of the tower and results in death of caretakers wife, Mary Donnelly
pre-c.1960	Trust removes most of the fabric at the tower leaving only the stone facade
1961	Restoration commences under the direction of the D Davidson of the Dept. of Lands, carried out by an English stonemason, Jack Malkin. Works included a reinforced concrete slab roof, incorporating a hanging beam, stone replacements and repointing with cement mortars, installation of a concrete slab floor and the paving around the base of the tower. New crenulated turret (battlement) added; windows infilled with stone
1963-4	Tower used as a tool and boat store & the windows were blocked to prevent vandalism.
2005	Sacrificial render applied to intercept rising salts

Current Views

Fig. 2 Above: The brass explanatory plaque above the doorway installed as part of the 1961 restoration works by the Lands Department for the La Perouse Monuments Trust. (Photograph by Sheppard, October 2006

Fig. 3 Left: The tower and the present setting. (Photograph by Sheppard, October 2006)

Fig. 4 The west end of the hanging concrete beam under concrete slab roof, showing the exposed and rusting reinforcing rods. (Photograph by Sheppard, October 2006)

Fig. 5 (left) The degraded surfaces of the west facet of the octagon showing the abraded sandstone and the areas of missing and weathered mortar. Note also the concrete sills and infilled window openings. (Photograph by Sheppard, October 2006)

Fig. 6 (right) The current entrance door. The doorway was subject to restoration work in 1961 that probably included provision of a new door although the hinge is likely to be a re-used original fixture. The door is subject to weather damage and attacks by vandals. Note the sacrificial render on the interior up to approx 1 metre. (Photograph by Sheppard, October 2006)

Plans and Drawings

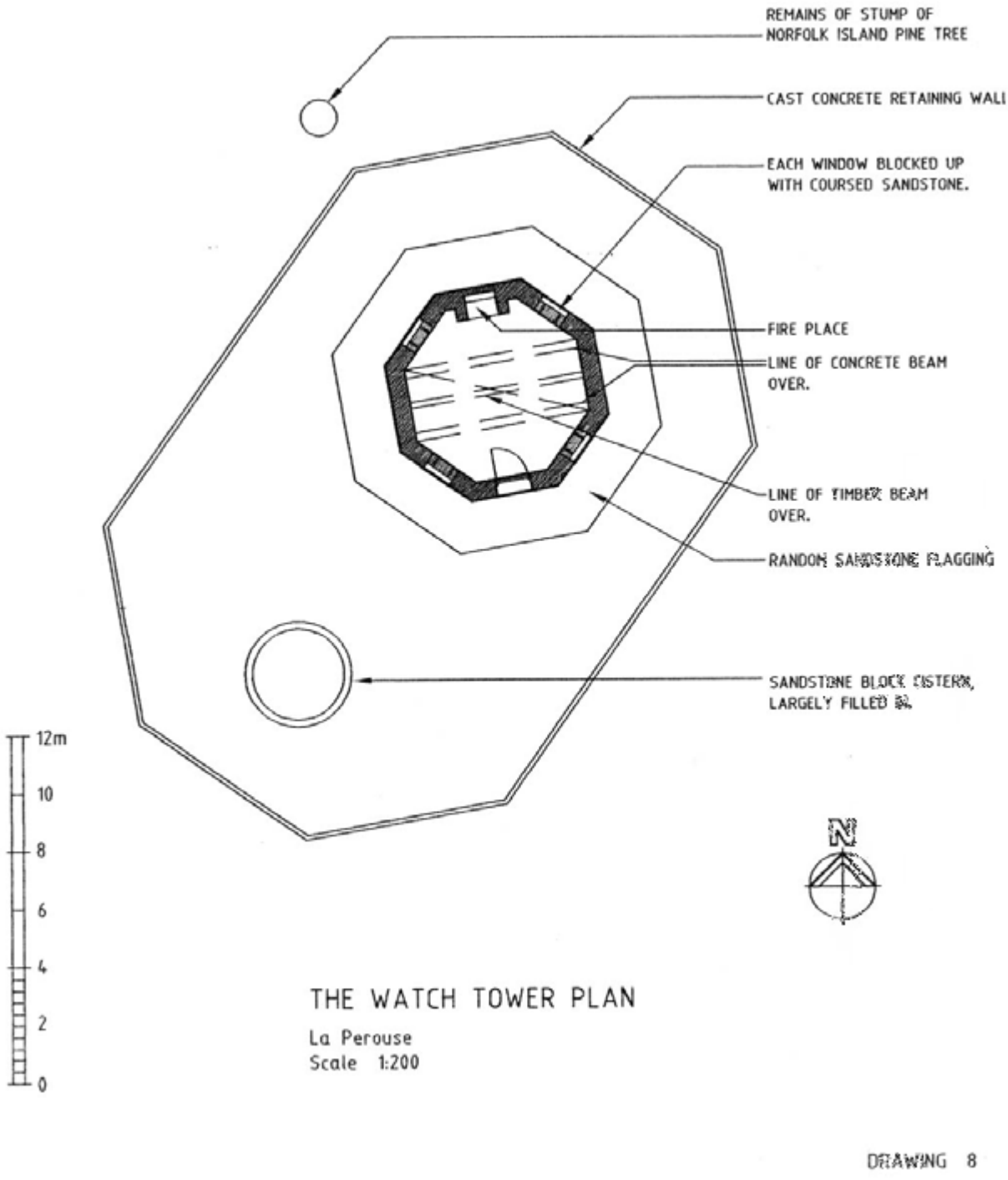


Fig.7 Contemporary plan of Macquarie Watchtower. Reproduced from Cox et al. 2001 Drawing 8.

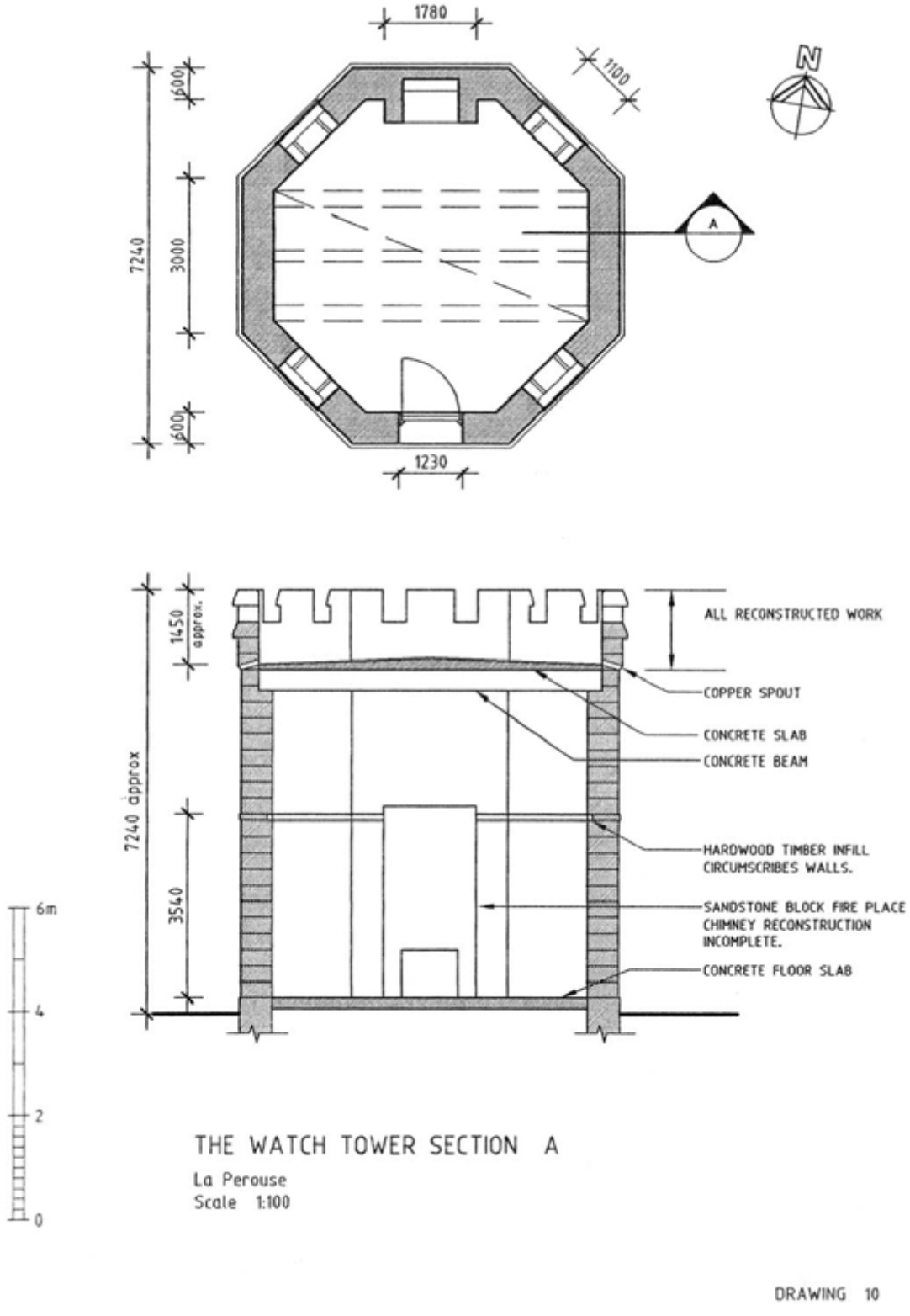


Fig. 8 Reproduced from Cox et al 2001 Drawing 10.

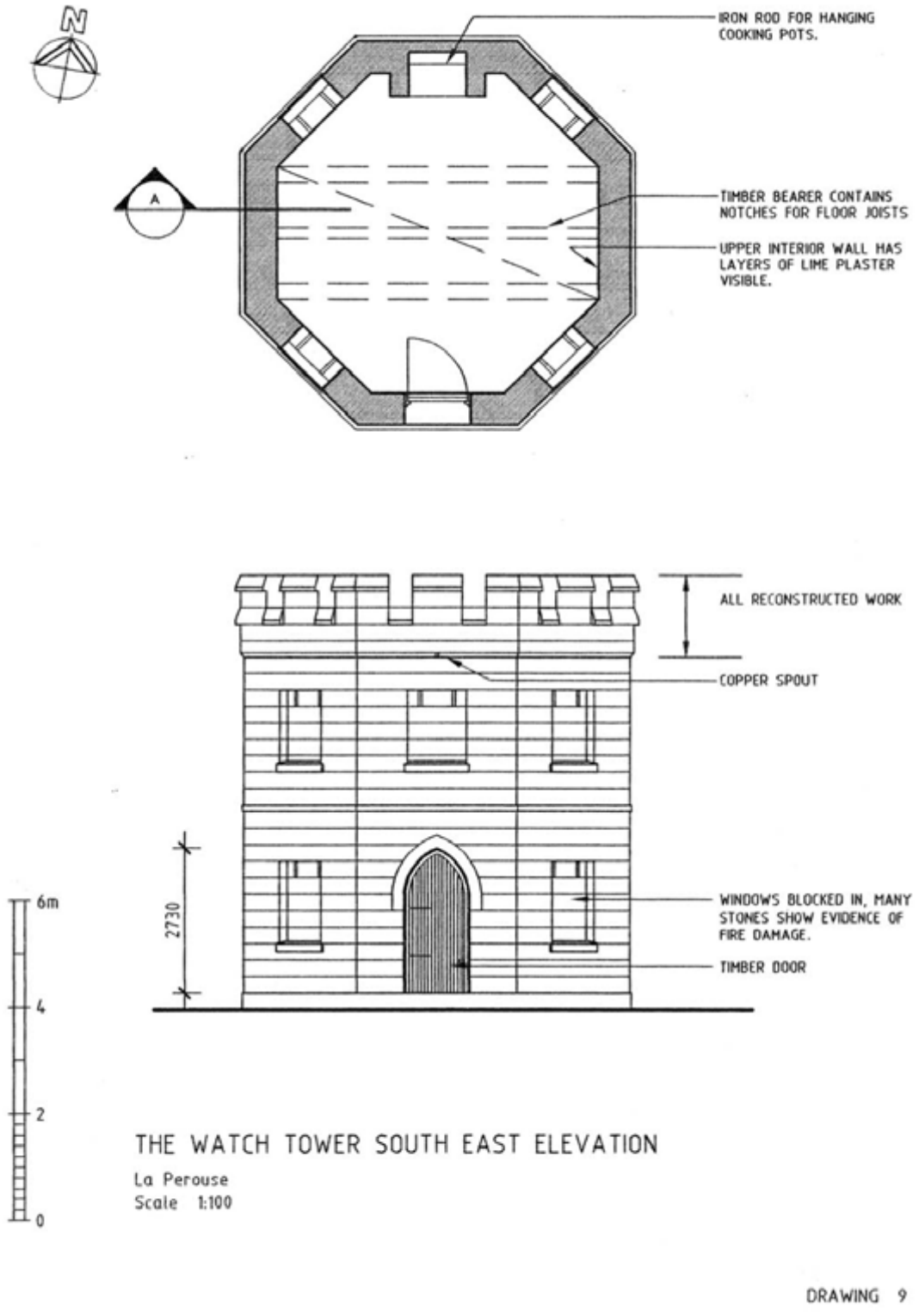


Fig. 9 Reproduced from Cox et al 2001 Drawing 9.

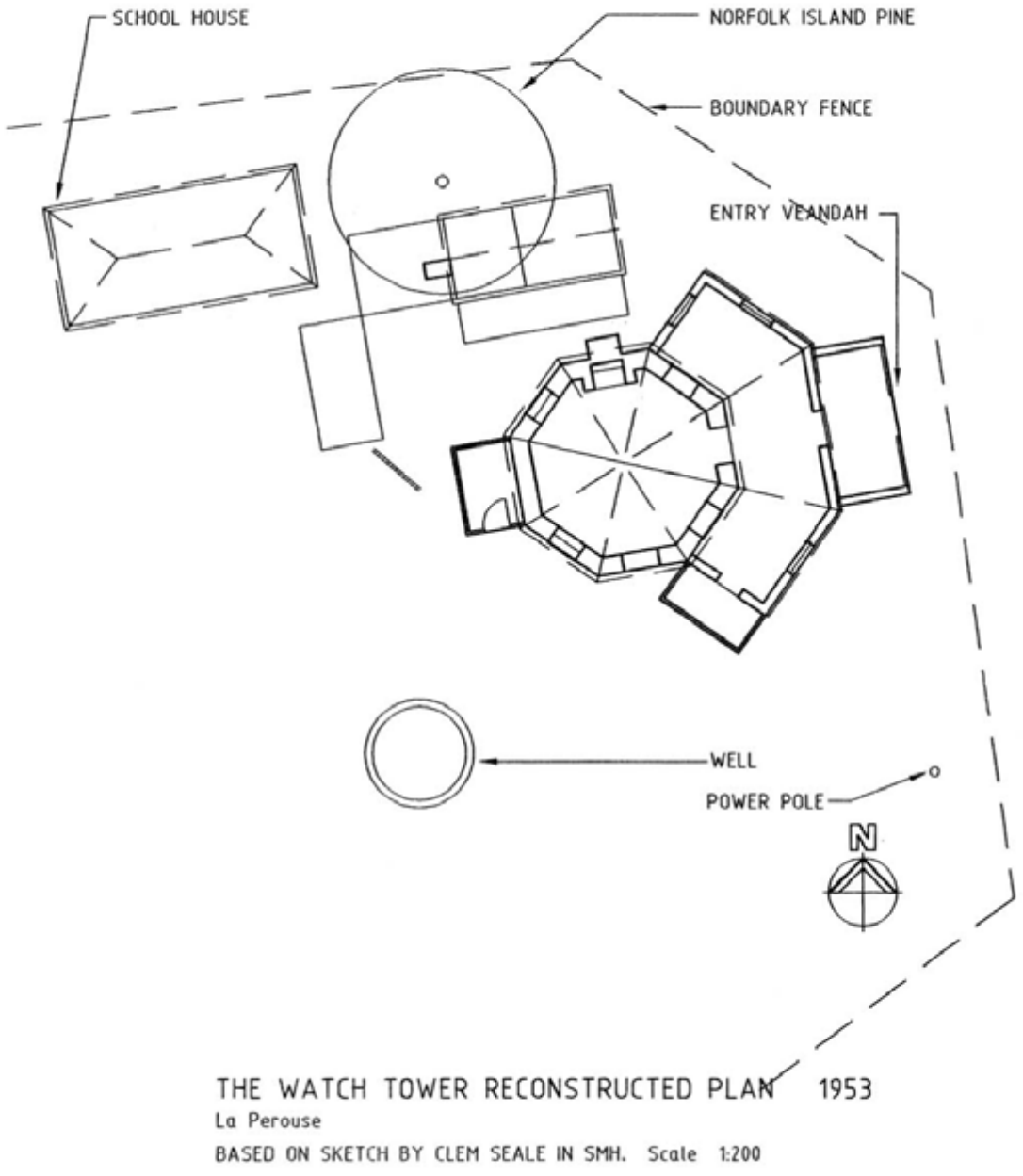


Fig. 10 Reproduced from Cox et al 2001 Drawing 6. Summary of potential archaeological evidence in the vicinity of the watchtower prior to the visible 1960s works comprising the dwarf wall and sandstone paving.

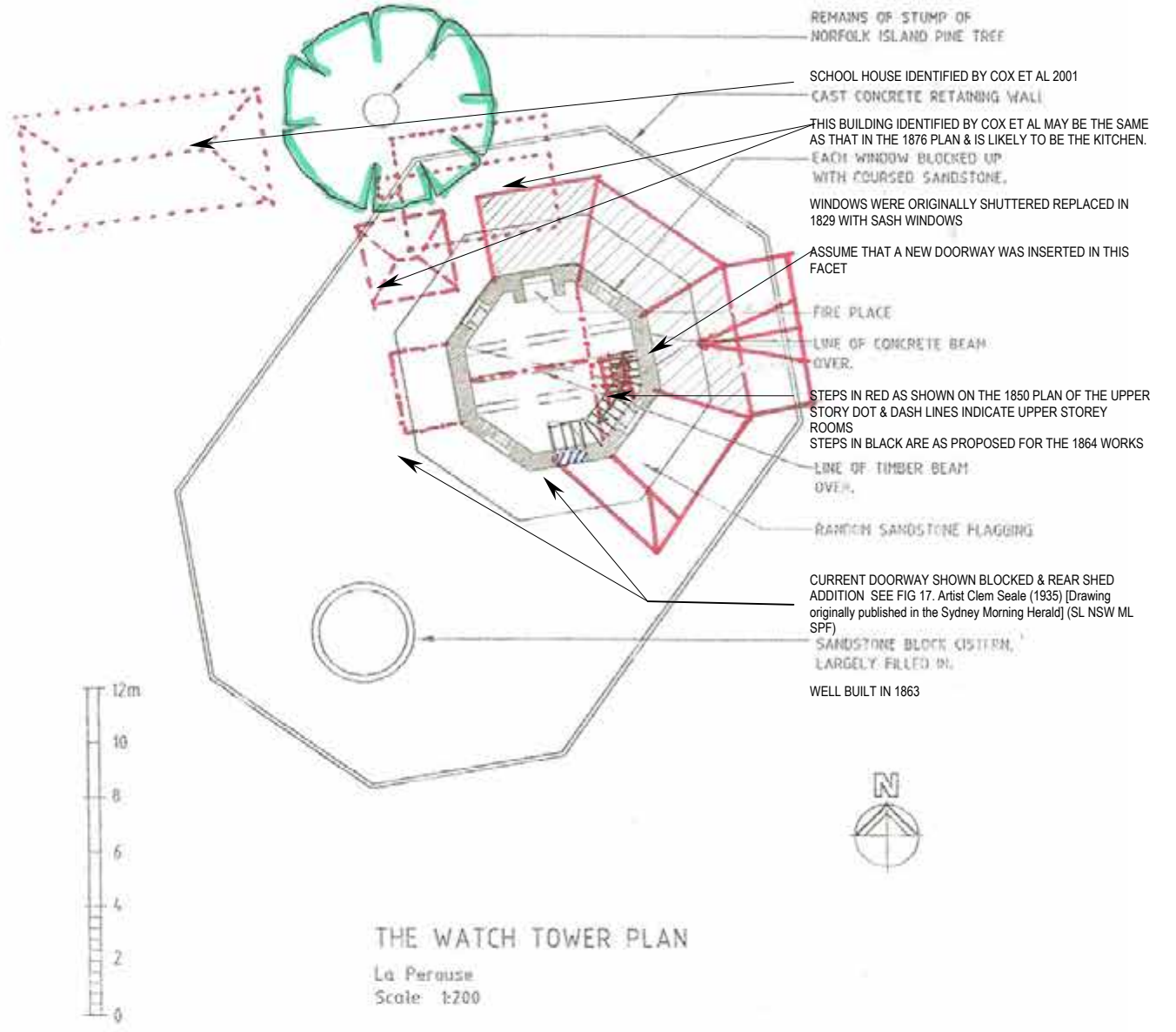


Fig 11. Base plan is Cox et al, 2001, reproduced in Figure 7 in this document. The 2001 plan of the Macquarie Watchtower is overlaid by known former buildings, alterations and additions.
Note: The skillion-roofed addition has always been on the north-east side of the tower and is not known to have sheltered the existing front door.

Historical Documentation

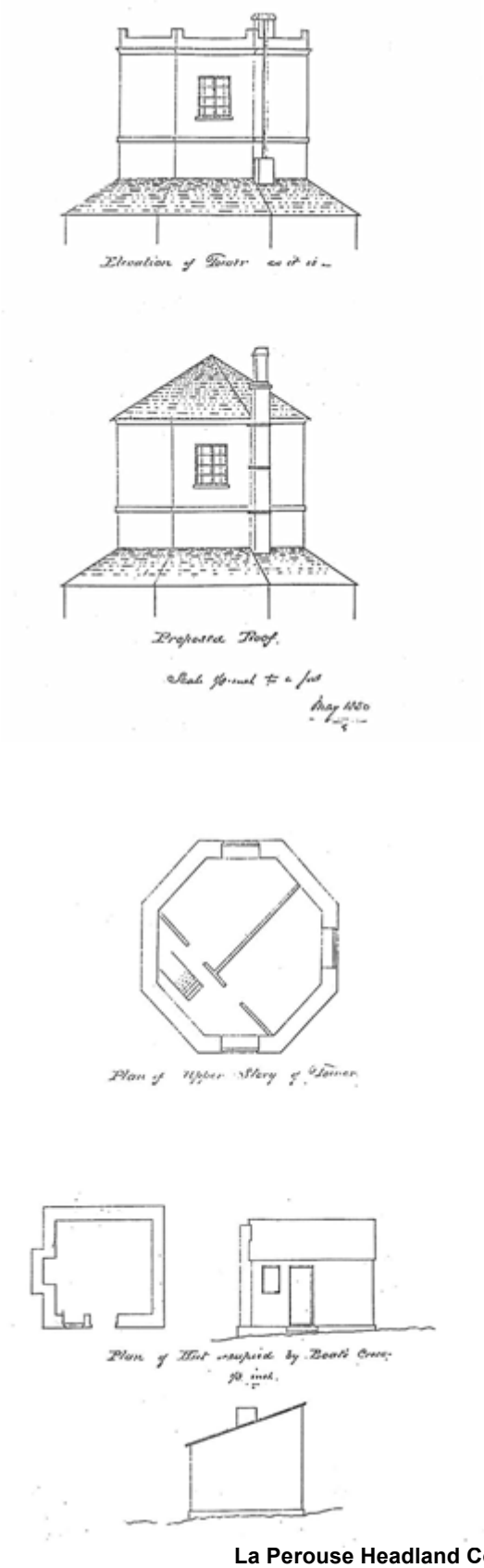


Fig. Drawings showing the planned repairs to the tower in may 1850. Reproduced from SRNSW AO 2/653. This image suggests that the crenellations only occurred at the junction of each facet and therefore there were only eight around the building parapet.

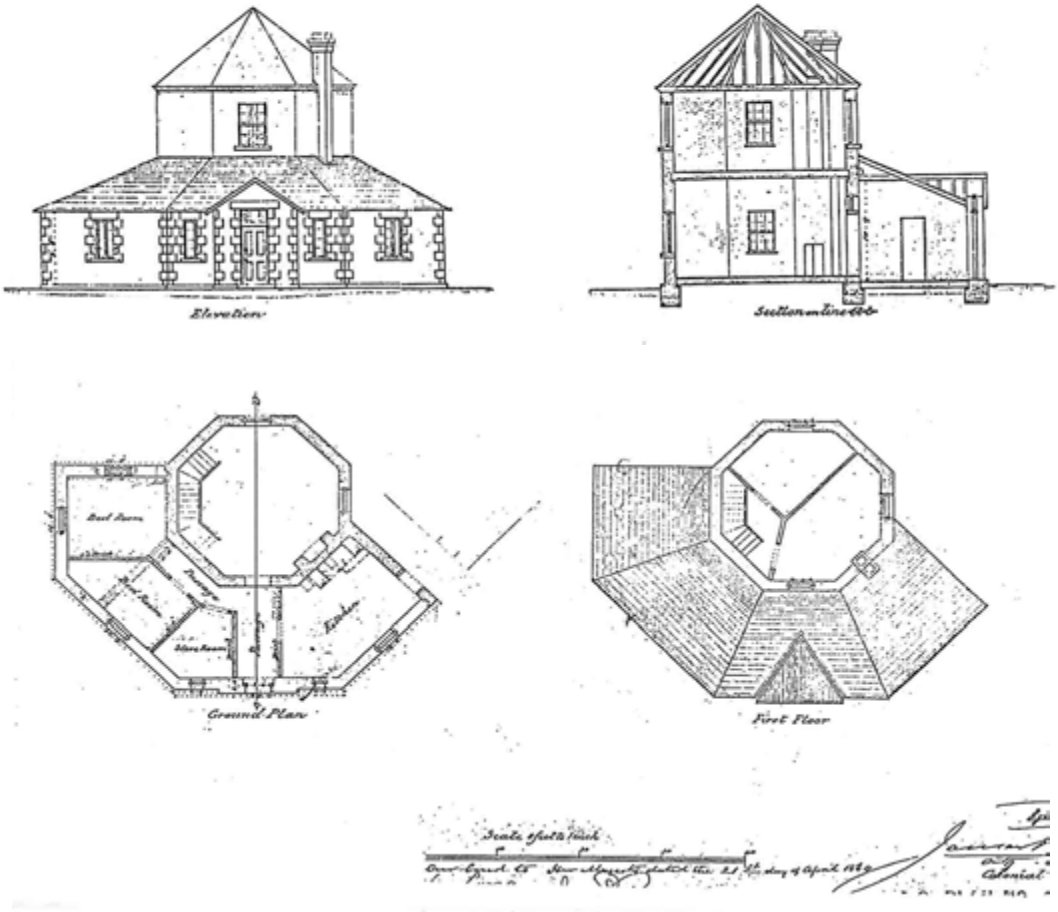


Fig. 13 Proposed alterations and additions to Customs Station Botany 1864. Reproduced from SRNSW AO Plan 1734.

Historical Images

Figure 14 Above. This is the earliest known photo of Macquarie Watchtower. It is a stereoscopic pair dating from around the late 1860s to the early 1870s (identifiable from the yellow backboard colour known to be from that era). The image when viewed through a stereoscope shows a well-defined path in the grassed area crossing the scene immediately behind the front rows of grass tufts. The water well looks as if it is new or well maintained. The men appear to be in uniform. (Photograph and analysis of the photo courtesy of Doug Morrison.)

Fig. 15 Above: Watch tower La Perouse, built in Governor Macquarie's time (September 1921). (SL NSW ML GPO 1-17667 &d1 17667)

Fig. 16 Right: Old Watch Tower at La Perouse, New South Wales c.1914-1941 (SLV Image No. AO8813)

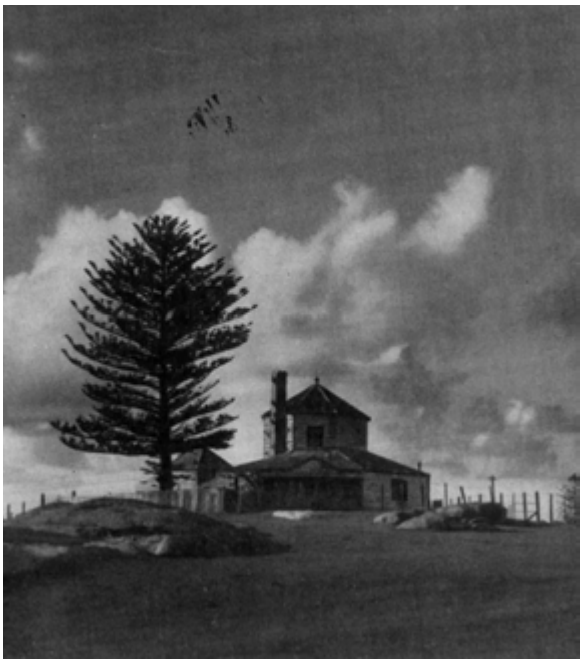
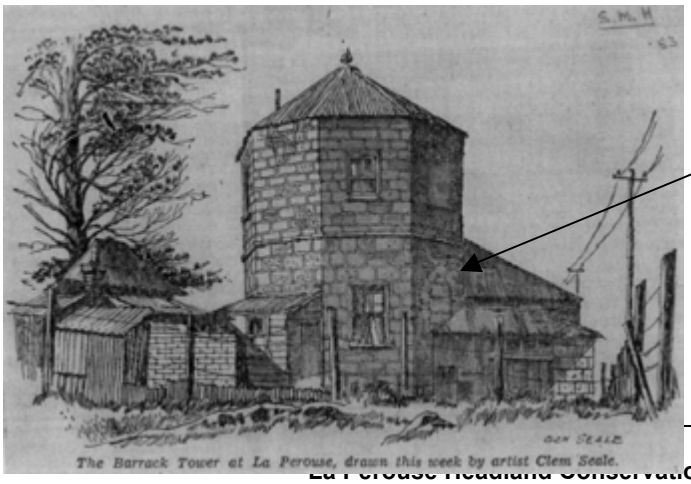


Fig. 17 Australia's First Customs House La Perouse c.1938. (SL NSW ML SPF). Note this photograph is reversed.

Fig. 18 Custom station no date (SLNSW ML SPF)



Note: the arch headed, blocked-in doorway

Fig. 19 The Barrack Tower at La Perouse, drawn this week by artist Clem Seale (1935) [Drawing originally published in the Sydney Morning Herald] (SL NSW ML SPF)

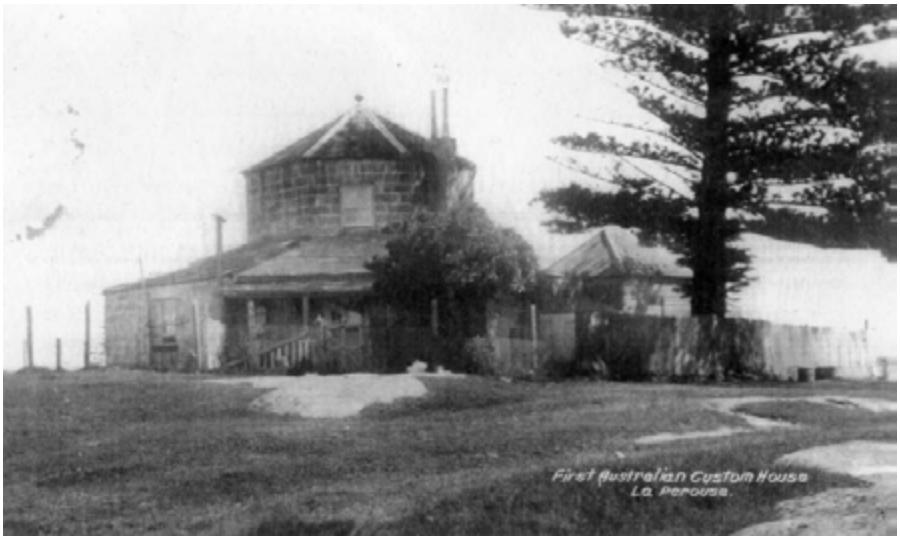


Fig. 20 First Australian Customs House, La Perouse. No date (SLNSW ML SPF)

Fig. 21 Benjamin Edward Minn's Tower built by Macquarie, La Perouse. No date. (SLNSW ML SPF & Z SVIA/LA PE/1)

Fig. 22 Macquarie Tower, 1956. (SLNSW ML SPF & Neg FM1/3374)

Fig. 23 Benjamin Edward Minn's Tower built by Macquarie, La Perouse. No date. (SLNSW ML SPF & Z SVIA/LA PE/1)

DAILY MIRROR 1.10.57

FIRE DEATH IN OLD HOME

A woman was burned to death today when a fire swept through this historic stone building on a windswept hill at La Perouse.

The charred body of the woman was found huddled under a brick staircase in the kitchen of the convict-built home.

She was Mrs. Mary Agnes Donnelly (47), who was alone when the fire started about 2.30 a.m.

Trapped

Police searched the ruins by torchlight fearing her husband, Henry Harold Donnelly, had also been burnt to death, but later found he was at work at the Captain Cook Landing Trust, Kurnell.

The ancient home, built more than 100 years ago and once Sydney's first customs house, had no electricity laid on and was lighted by candles.

Police believe Mrs. Donnelly was trying to escape from her top-floor bedroom when she was trapped by flames on the staircase.

They are investigating a theory that she stumbled and knocked over a kerosene lantern.

Later today Mr. Donnelly said that he and his wife had been married for more than 20 years, and he was deeply shocked by her death.

He said that all their possessions and furniture had been destroyed.

Fig. 24 Article and photograph in the Daily Mirror 1/10/1957 reporting the fire. (reproduced from Cox et Al., 2001 Macquarie Watchtower Appendix

FIRE DEATH IN OLD HOME

A woman was burned to death

She was Mrs. Mary Agnes Donnelly (87).

built more than 100 years ago and once

have hit her head and been stunned momen-

Fig. 25 Cutting from the Daily Mirror Sydney, Tuesday October 1st, 1957. (Reproduced fro Cox et al., 2001 Macquarie Watchtower Appendix)

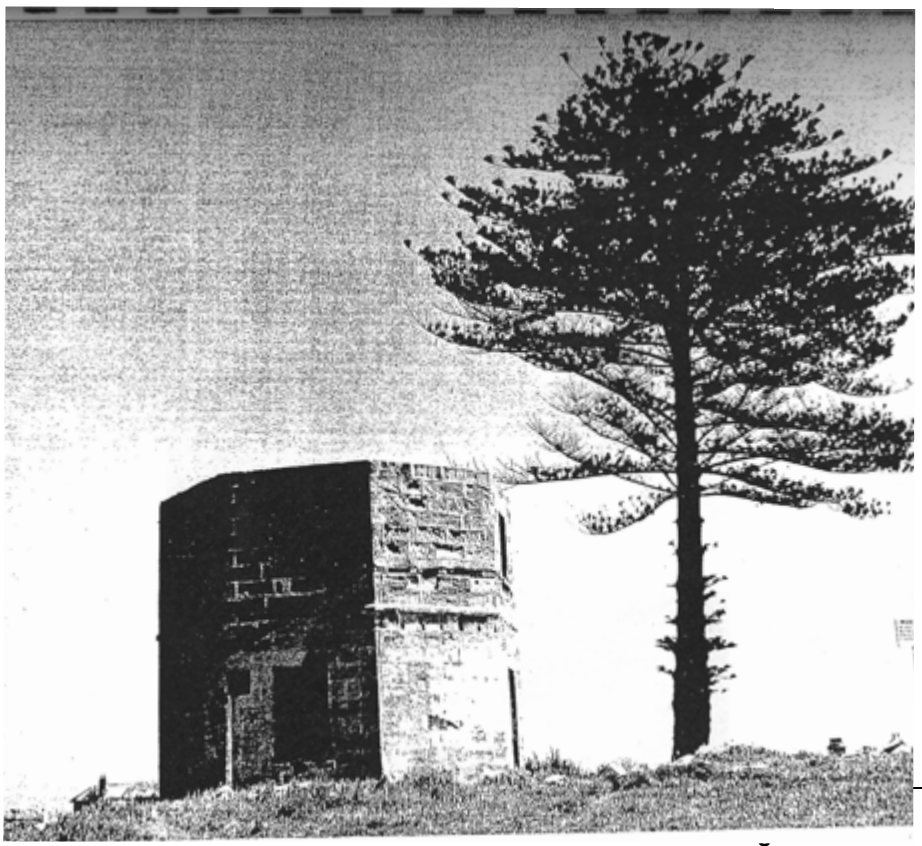


Fig. 26 A photograph, date stamped 9/3/61) of Macquarie Watchtower with all the debris associated with the fire cleared away. (Reproduced from Cox et al., 2001 Macquarie Watchtower Appendix)

Summary Statement of Significance

The Macquarie Watchtower constructed on the headland c.1820 overlooking Botany Bay is an item of State heritage significance value.

It is the only known coastal watchtower from the penal era specifically constructed for border protection and the prevention of smuggling in Australia. The Macquarie Watchtower is one of only two nineteenth century stand alone towers in New South Wales and is thought to be the oldest of the small group of nineteenth century towers in Australia. It became the first Customs outstation in Australia in 1829 under the newly formed Customs Department and operated as a Customs Station until 1903. The Tower is also a rare surviving symbol of the vexatious issue of customs barriers between the colonies, which was one of the main factors underlying the push for Federation.

The tower is the oldest surviving building in Botany Bay. The building is a local landmark and has a long association with photographic and artistic impressions of the La Perouse peninsular. Picturesque additions to the watchtower, destroyed by fire in 1957 are associated with the colonial architect James Barnet.

Risk Assessment – An assessment of potential risks that need to be considered by managers

Associated risks are High H Medium M Low L None N		**Risk Assessment Summary**
Structural Risk	**L**	The tower is essentially sound and has low levels of risk associated with fire and storm damage. There are no obvious visitor safety issues in the vicinity of the tower. Abrasive weathering is impacting the mortar and some stones are showing signs of severe weathering, but are not considered an immediate structural or visitor safety risk. The tower is subject to high wind loadings, which are borne out by previous damage to more fragile fabric in the past (eg in 1835). However, there is no comparatively fragile fabric like glazing in the current structure, so the high wind loading is not a current issue. Wind loading must considered in the event of planned changes to the structure.
Fire Risk	**L**	
Wind Loading	**H**	
Visitor Safety Issues	**L**	
Other		

Management Objective:

Retain and conserve the current building. If possible identify a future use for the building that includes interpretation and allows public access.

Conservation Policy

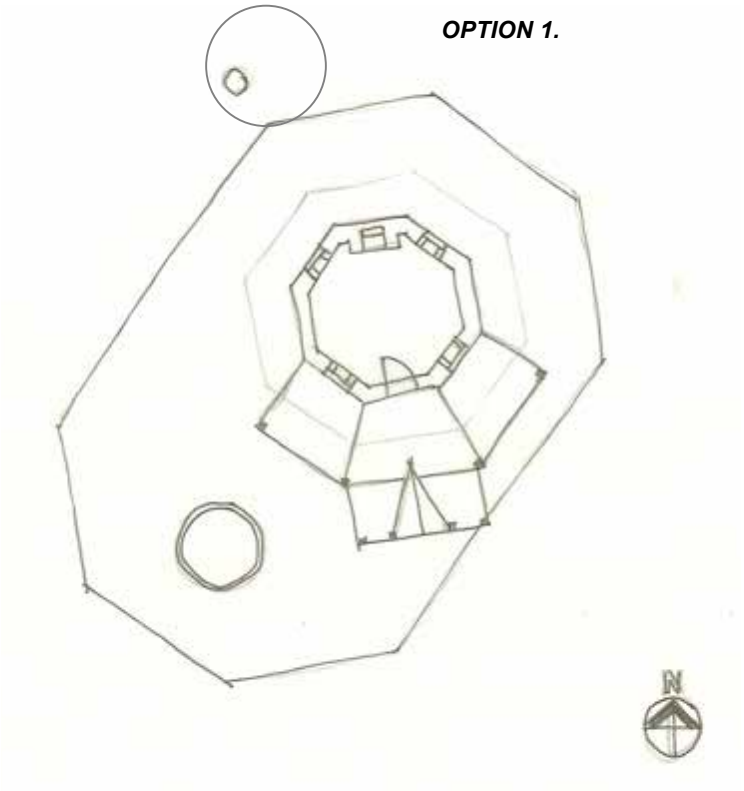
General

- **The Macquarie Watchtower should be treated in accordance with the guidelines and principles of the Burra Charter of Australia ICOMOS.**
- **Low impact uses for the building that include opportunities for public visitation and interpretation should be sought and preferred over continued treatment as a monument.**
- **The setting of the Macquarie Watchtower as the landmark feature on a rise in the La Perouse headland should be retained and if possible enhanced by replanting of historic vegetation, with consideration being given to the vegetation providing some shelter to the building from the prevailing weather.**
- **Minimum standards of maintenance and repair should be maintained in weatherproofing; fire protection; security; and essential maintenance.**
- **Reconstruction of known historic features could be considered if such works would make a future use of the building viable.**
- **New fabric may be introduced to the Macquarie Watchtower for sound practical reasons.**
- **Where possible any new work should be low impact and reversible. Any new work should respect the period and character of the current building.**

Adaptive Re-Use Opportunities

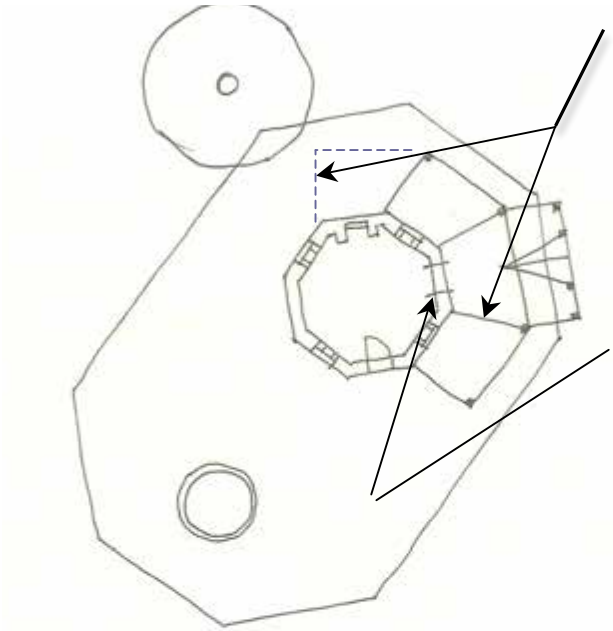
The interior of the tower would be suitable for interpretation of the history and use of the tower itself, and potentially for other low impact uses such as temporary displays, for short interpretive films and/or ticket selling for tours. Impacts on surviving original fabric should be avoided.
Consideration could be given to installing an open-sided, faceted, awning roof based on the 1864 skillion roofed addition (See Figures 11,13, 17 & 22) to provide additional shelter for the structure and shelter for visitors including groups waiting to go in the tower and groups (particularly wedding parties) being photographed in front of the tower. It might be possible to include modern services in a low-key way within a part of that structure which could be secured, allowing for example kiosk use.
The north east end of the skillion roof, screened by new tree/s, could include a stairway and viewing platform so that visitors could reach the original first floor level and see the view experienced by the Watchmen and Customs Officers. This is a high visitation area where a lookout is likely to be very popular for photographs and viewing.
Note: The historic location of the skillion-roofed addition is on the north-east side of the tower, not as one would assume cantered over the door in the southern facet. See below for an exploration of options, advantages & disadvantages.

OPTION 1.



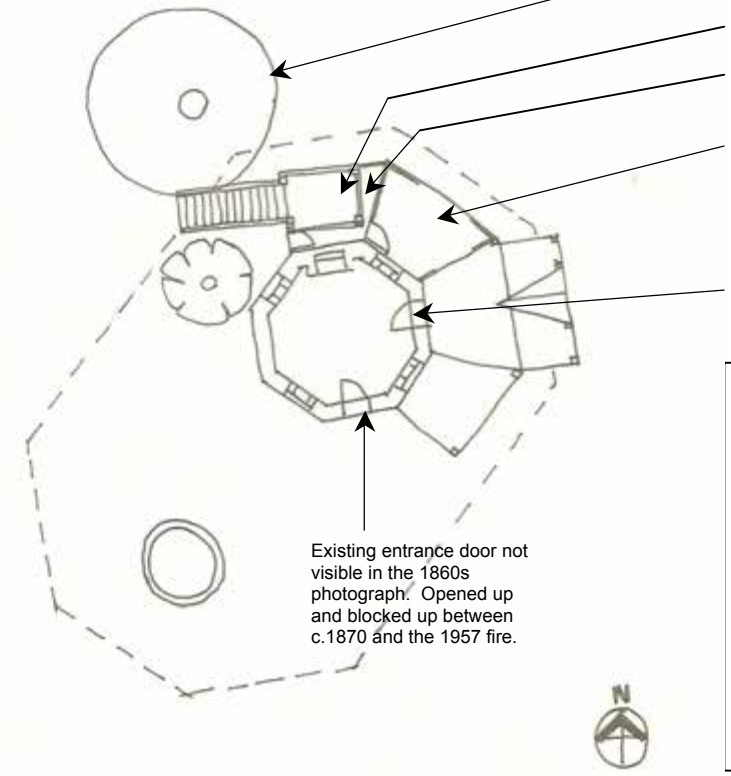
Adaptive Re-use Verandah Addition Option 1.
Advantages: - Shelters existing door;
Does not require a new door hole;
Picturesque;
Simple.
Disadvantages: - Not in the historic location;
Does not readily allow for the addition of a screened viewing platform or an enclosed room.

OPTION 2.



Adaptive Re-use Verandah Addition Option 2.
Advantages: - In the historic location, need not include the original northern facet shown with a dashed outline;
Presents the opportunity to put a doorway back into the tower giving visitors a throughway;
Picturesque.
Disadvantages: - Doorway would impact on 1961 fabric & style may be conjectural.
Does not readily allow for the addition of a screened viewing platform or an enclosed room.

OPTION 3.



Norfolk Pine or another recommended species to screen the stairs.

Viewing platform

Opportunity for secure storeroom under the viewing platform.

Opportunity to enclose one or more facets of the verandah roof to sensitively introduce modern services and provide for example a kiosk, ticket sellers room, guides room or another compatible use.

Opportunity to re-instate the former doorway, which will allow visitors to a through route when visiting the tower.

Adaptive Re-use Verandah Addition Option 3.
Advantages: - In the historic location;
Includes a lookout is located in the northern facet, screened by trees in or near the historic tree and planting locations;
Opportunity for a secure storeroom under the lookout platform;
Opportunity to enclose the north east facet, to sensitively introduces modern services and use for a kiosk, a ticket seller's room, guides room etc.
Opportunity to reinstate a doorway in the eastern facet to assist with through traffic of visitors.
Disadvantages: - A more complex construction;
Some impact to 1961 fabric in the site of the eastern doorway.

Catch-up Works

Immediate
- Clean rust off rusting reinforcing rods of the concrete roof structure. Coat with anti-rust and re-render.
- Clear all the grass from the paving around the base of the building and re-mortar gaps where necessary. Ensure that the paving slopes away from the building to carry water away from the walls.
- Infill the well with crushed granite or similar to reduce visitor safety risk and to assist with maintenance

Medium Term (1-5 years)
- Replace badly eroded sandstone blocks.
- Re-mortar areas of failed mortar around the sandstone blocks – with expert advice on the constituents of the mortar. (See Figure 3 p4/11)
- Replace the existing copper roof spouts (spitters) with longer spouts that direct stormwater further from the building.
- Assess the impact of the crazy paving on the stone condition and consider replacing with an alternative such as crushed granite.

Long term
- Undertake further investigation into the rising damp issue.
- Plug holes with mortar or sandstone.

Maintenance

Inspection: - Make a thorough inspection of the item at three (3) monthly intervals and identify maintenance and repair issues.

Exterior

- Check storm water will flow away from the structure.
- Check that grass/vegetation is not growing into storm water system or against building walls/footings.
- Check condition of window sills.
- Check rainwater drainage systems and clean/clear down pipes/guttering as required.
- Check timber elements exposed to weathering (door) and oil/repaint as required. Only oil/paint items previously painted or oiled.
- Carry out annual inspections for termites and vermin and take measures as required.

Interior

- Check sacrificial plaster condition and continue recommended course of works currently being undertaken.
- Inspect condition of concrete roofing and check reinforcement rods for rust. Treat as required.

Fire Protection:-Ensure vegetation and other material that could create a fire hazard is removed from the vicinity of the building and is not permitted to accumulate.

Security:- Continue to lock building.

Archaeology:- Ensure potential in-situ archaeological deposits are not disturbed by ad-hoc sub-surface excavation. Any substantive excavation proposed in areas of archaeological sensitivity should be discussed with the NPWS Site Manager who will advise on the appropriate strategy.

Interpretive opportunities

Interpret its own history

The main interpretive opportunity associated with the Macquarie Watchtower is the opportunity to interpret its own history and associations.

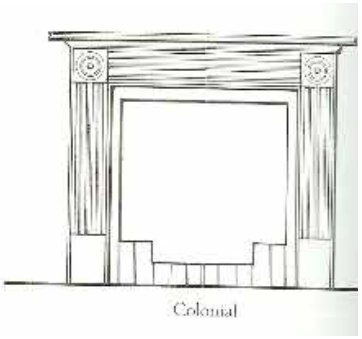
Opportunity to Create a minimalist space acting as a movie screen

It is important not to try to re-create an interior about which very little is known. However, a minimalist interpretation of the former occupation may be very effective for example: - The fireplace could be covered with a clear perspex sheet with a colonial period mantelpiece outlined on it and similarly the former stairs could be identified as an outline of typical colonial period staircase also on a piece of perspex following the curve of the wall. A white suspended ceiling at first floor level could, hide the concrete ceiling and hanging beam and together with the adjoining walls it could be used as a film screen with interpretive material projected onto. Visitors could simply walk into the space and press a button or one of several buttons to access grabs of specific images and information which would be kept short to facilitate people moving on at busy times.

Provide views – What the Watchmen saw!

Views from the top of the tower would also be of interest to visitors and it has been suggested in the *Adaptive Re-use* section of this inventory that a staircase and viewing platform screened by new tree plantings be added to the north east end of a roofed area added to the tower reflecting the design of the 1864 skillion roof, see Figure 12 in this inventory.

COLONIAL STYLE
MANTELPIECE & STAIRCASE
From Stapleton, 1983, *How to Restore the Old Aussie House*, Flannel Flower Press.



MACQUARIE WATCHTOWER INVENTORY APPENDIX 1 :

RECORDS FROM THE RANDWICK HISTORICAL SOCIETY FOR THE RECONSTRUCTION OF THE MACQUARIE WATCHTOWER, C.1961

Reproduced from Cox et al., *The La Perouse Headland Site, A Meeting Place of Three Cultures*, Conservation Management Plan for Botany Bay National Park, By University of Sydney, Faculty of Architecture, June 2001

WATCHTOWER

Reface or replace stones as marked in red (including crack over Doorway).
Remove stonework from Door and Window opening and redress or reface as necessary.
Clean up existing stonework. Remove down pipe hooks. Regrout as necessary.

Reface or replace stones as marked in red (including chasing and cracks over and under lower window opening). Remove stonework from window opening and redress or reface opening as necessary. Clean plaster from lower wall. Clean up existing stonework. Regrout as necessary.

Reface or redress stones as marked in red from rafter holes to top of wall. Clean plaster from lower wall. Regrout as necessary.

Reface or redress stones as marked in red. Redress or reface upper window opening. Remove doorstep and build up wall to form lower window opening - redress or reface lower window opening. Clean plaster from lower wall. Regrout as necessary.

Replace 3 stones at top of wall. Reface or redress stones as marked in red. Clean up lower wall. Regrout as necessary.

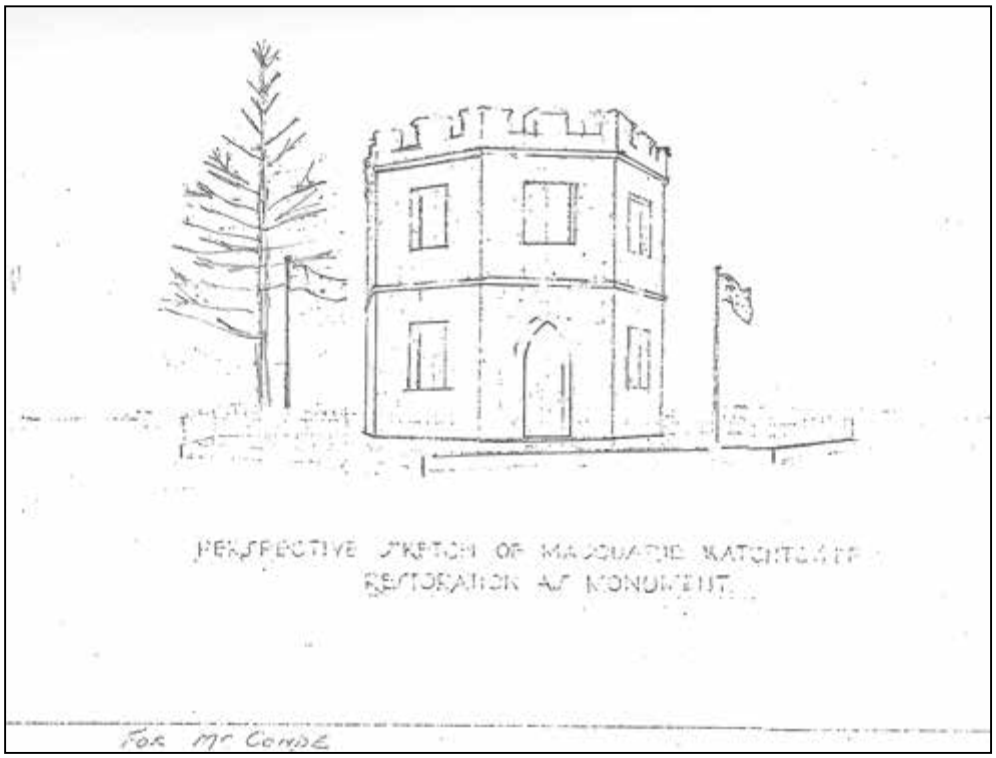
Redress or reface whole wall (including window openings), cracked stones under top window and above lower window to be replaced. Regrout as necessary.

Redress or reface stones as marked in red. Clean up wall. Regrout as necessary.

Redress, reface or replace stones as marked in red (including cracked stones over and under both window openings). Redress or reface window openings as necessary. Clean up wall. Regrout as necessary.

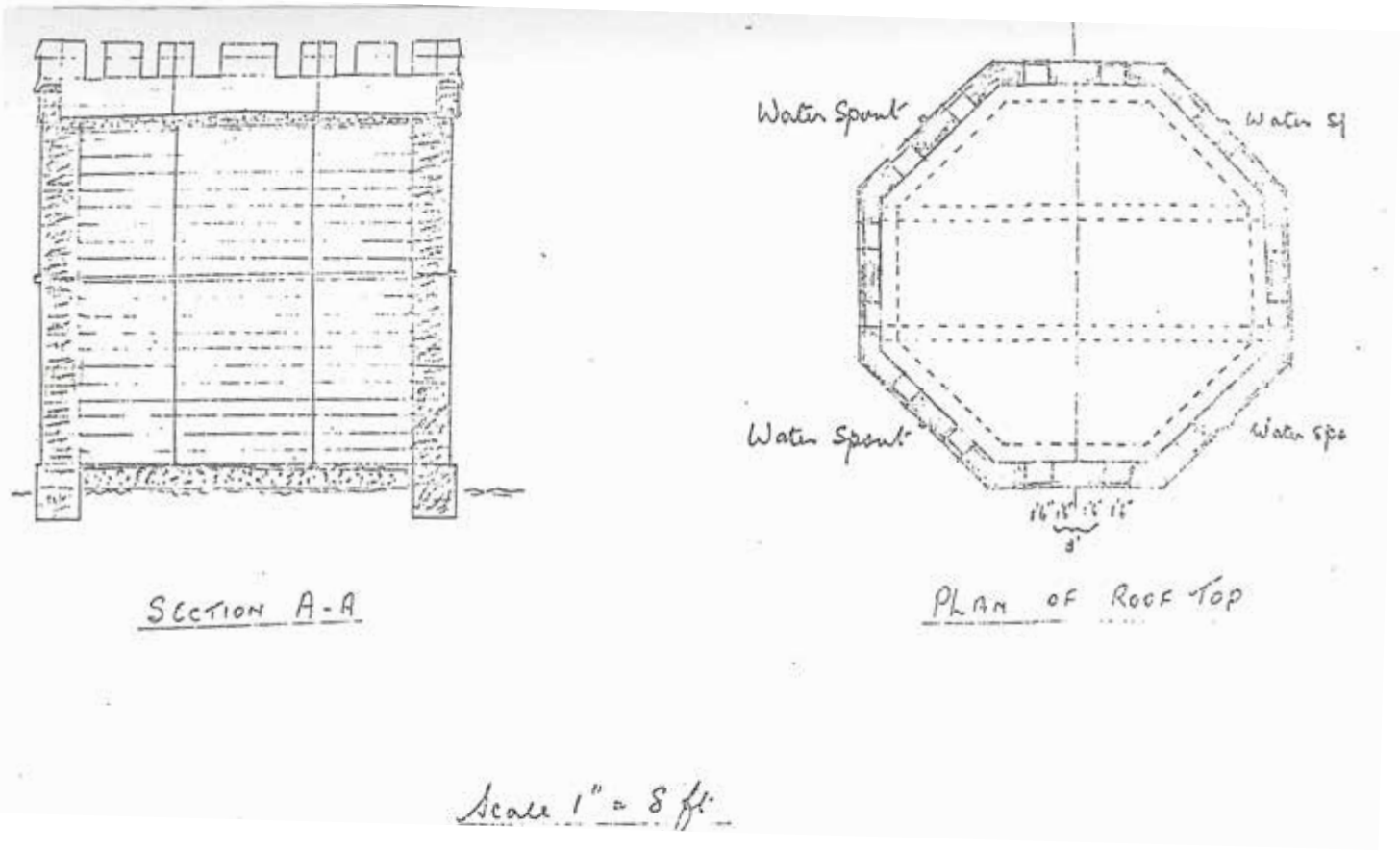
Remove any wooden plugs and iron hooks.

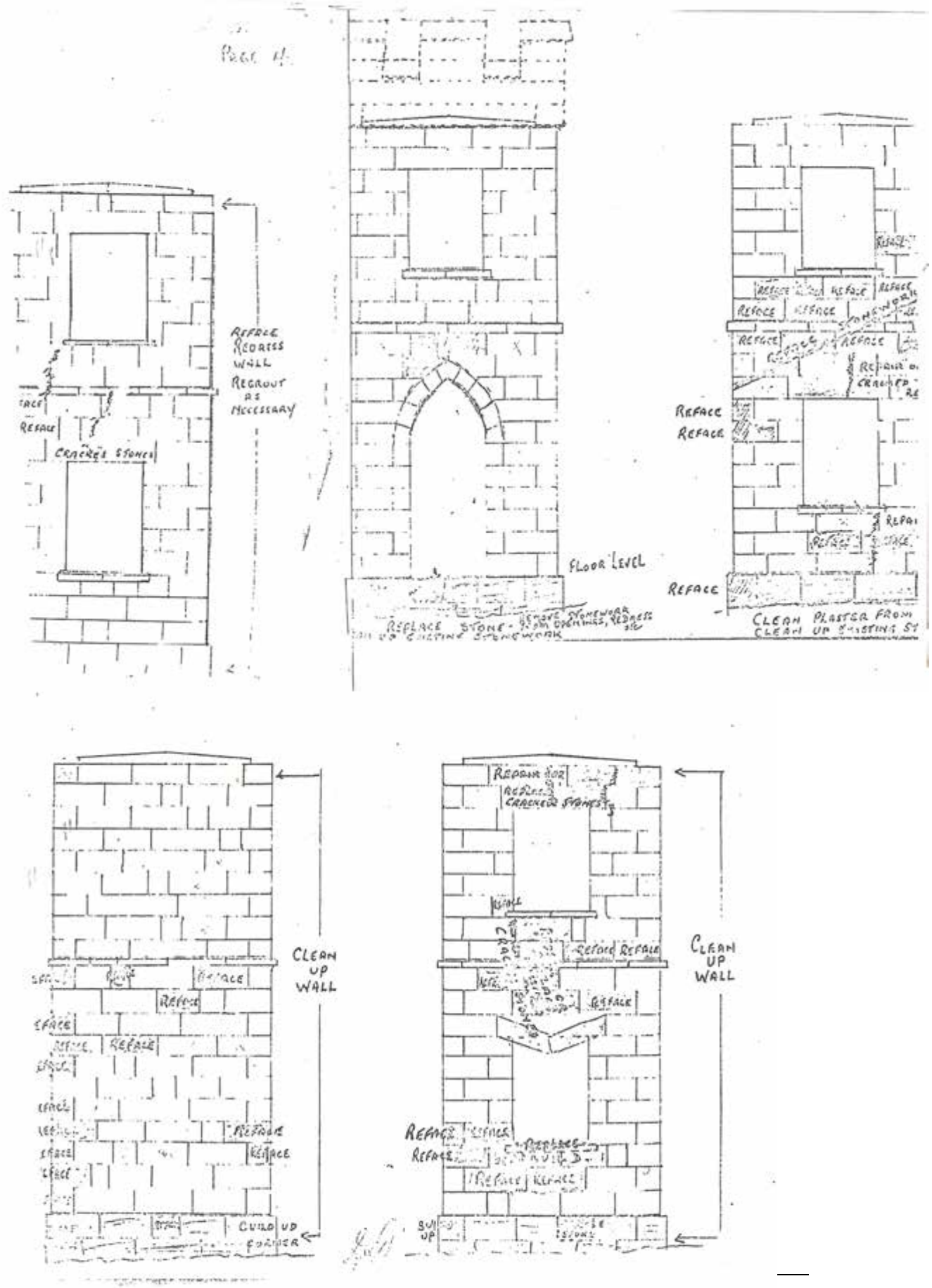
Cement - middle floor rafter holes. Regrout around all openings.

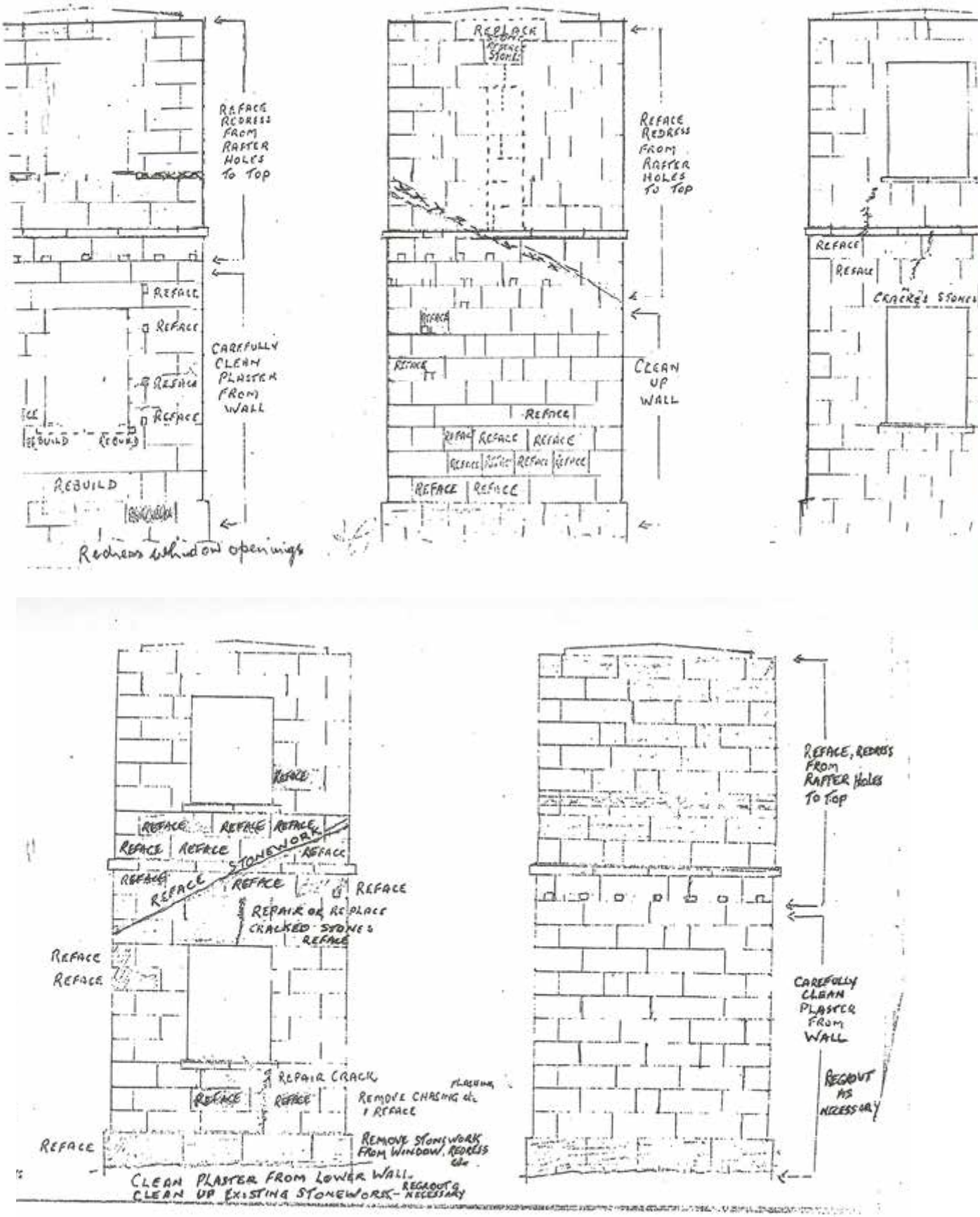


Sketch Title:
PERSPECTIVE SKETCH OF MACQUARIE WATCHTOWER RESTORATION AS A MONUMENT


DRAWING No V!
PAGE 1.
SCALE 1":1'


Water Spout
Water Spout
Water Spout
Water Spo
16" 15" 15" 16"
8'
SECTION A-A
PLAN OF ROOF TOP
Scale 1" = 8 ft.


REFACE
REPOINT AS NECESSARY
CRACKED STONE
FLOOR LEVEL
REFACE
REFACE
CLEAN UP WALL
CLEAN UP WALL
REFACE
REFACE


REFACE REDRESS FROM RAFTER HOLES TO TOP
REFACE
REFACE
CAREFULLY CLEAN PLASTER FROM WALL
REFACE
REFACE
REBUILD
REBUILD
Redress window openings
REPLACE
REFACE REDRESS FROM RAFTER HOLES TO TOP
CLEAN UP WALL
REFACE
REFACE
REFACE
REFACE
REFACE
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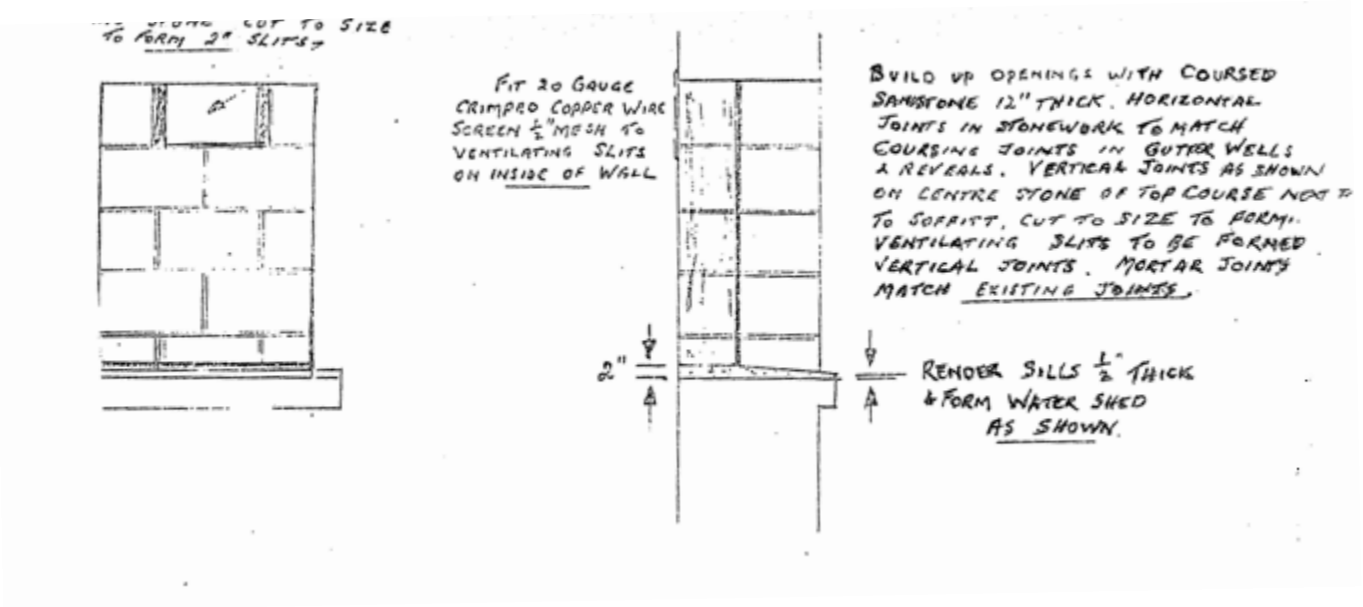
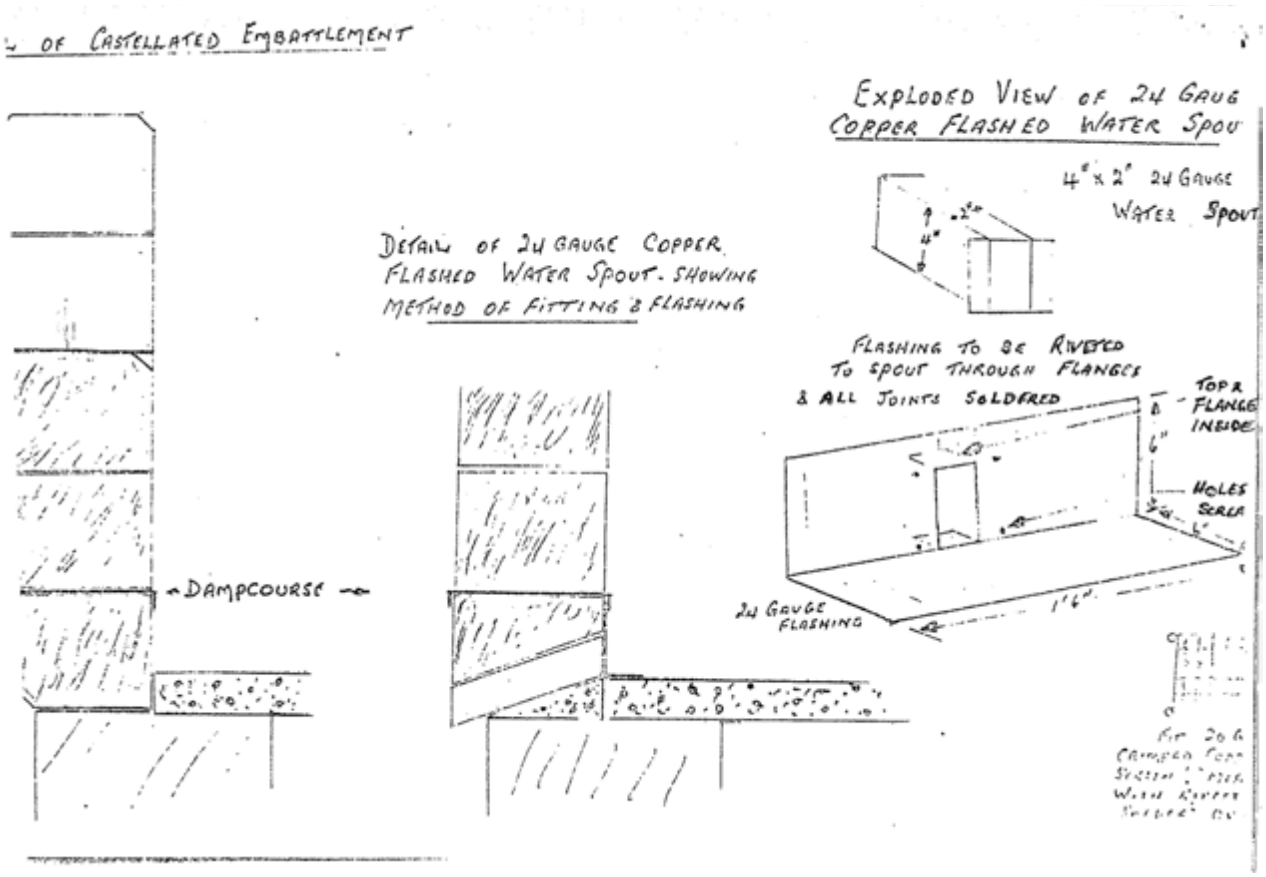
REFACE
REFACE
STONEWORK
REFACE
REFACE
REFACE
REFACE
REPAIR OR REPLACE CRACKED STONES
REFACE
REFACE
REFACE
REPAIR CRACK
REFACE
REFACE
REMOVE CHASING etc
REFACE
REFACE
REMOVE STONEWORK FROM WINDOW, REDRESS etc
CLEAN PLASTER FROM LOWER WALL.
CLEAN UP EXISTING STONEWORK - REGROUT IF NECESSARY
REFACE, REDRESS FROM RAFTER HOLES TO TOP
CAREFULLY CLEAN PLASTER FROM WALL
REGROUT AS NECESSARY


TO FORM 2" SLITS
FIT 20 GAUGE CRIMPED COPPER WIRE SCREEN ½" MESH TO VENTILATING SLITS ON INSIDE OF WALL
BUILD UP OPENINGS WITH COURSED SANDSTONE 12" THICK. HORIZONTAL JOINTS IN STONEWORK TO MATCH COURSING JOINTS IN GUTTER WELLS & REVEALS. VERTICAL JOINTS AS SHOWN ON CENTRE STONE OF TOP COURSE NOT TO SOFFITT, CUT TO SIZE TO FORM VENTILATING SLITS TO BE FORMED VERTICAL JOINTS. MORTAR JOINTS MATCH EXISTING JOINTS.
2"
RENDER SILLS ½" THICK & FORM WATER SHED AS SHOWN.


OF CASTELLATED EMBATTLEMENT
DETAIL OF 24 GAUGE COPPER FLASHED WATER SPOUT. SHOWING METHOD OF FITTING & FLASHING
DAMPCOURSE
EXPLODED VIEW OF 24 GAUGE COPPER FLASHED WATER SPOUT
4" x 2" 24 GAUGE WATER SPOUT
FLASHING TO BE RIVETED TO SPOUT THROUGH FLANGES & ALL JOINTS SOLDERED
TOP & FLANGE INSIDE
HOLES
24 GAUGE FLASHING
1'4"