



Additional information

Ordinary Meeting of Council

Wednesday, 28 April 2021, 6.00pm

Table of Contents

Contents		Page
PC2104-7	PAGET STREET, NO. 91 (LOT 1179), HILTON – DEMOLITION OF SINGLE HOUSE, RETAINING AND SITE WORKS (TG DA0046/21)	2
PC2104-9	THE HEART OF BEACONSFIELD MASTERPLAN – OUTCOMES OF ADVERTISING AND FINAL ADOPTION	31
FPOL2104-8	ADOPTION OF MODEL CODE OF CONDUCT FOR COUNCIL AND MODEL STANDARDS FOR EMPLOYING CHIEF EXECUTIVE OFFICERS	32
FPOL2104-11	ROUND HOUSE CONSERVATION MANAGEMENT PLAN	54

PC2104-7 PAGET STREET, NO. 91 (LOT 1179), HILTON – DEMOLITION OF SINGLE HOUSE, RETAINING AND SITE WORKS (TG DA0046/21)

Additional Information 1 – Heritage assessment

Heritage Comment - Internal

Address: 91 Paget Street
Application number: DA0046-21
Proposal: Demolition
Requesting officer: Tom Geddes
Date: 24/02/2021



91 Paget Street, ESRI Mapping, 24/02/2021

INTRODUCTION

The purpose of this heritage comment is to assess the changes to the place that are proposed in DA0046/21 and the affect that they will have upon the heritage values of 91 Paget Street, Hilton. The proposed changes include:

- Demolition

HERITAGE LISTINGS

State Register of Heritage Places

The place is not included in the State Register of Heritage Places – a referral to DPLH Heritage is not required.

Inherit

Inherit Database number - 04211

Heritage List and LHS

The place is not included on the City of Fremantle's Heritage List.

Heritage Area

The place is included in the Hilton Heritage Area.

The Hilton Heritage Area is designated as a Heritage Area in accordance with clauses 7.2.1 and 7.2.9 of Local Planning Scheme No. 4.

RELEVANT PREVIOUS DEALINGS

Recent meetings or discussions:

- N/A

Previous relevant DAs:

- N/A

Previous relevant legal dealings: N/A

BACKGROUND

Historical Information

The "Hilton Garden Suburb Precinct" Heritage Area is of cultural heritage significance within the City of Fremantle as an example of a substantially intact 'Garden Suburb' dating from the immediate post World War 2 period and characterised by its curvilinear road layout, parks, large and irregular shaped lots.

It has historical value as an area developed by the State Housing Commission to provide affordable housing at a time of increased housing demand in Australia, particularly to house new arrivals: returned servicemen and immigrants. It also has historical significance for its association with the importation of prefabricated homes from Austria and for the timber homes designed by prominent architect Marshall Clifton, many of which remain extant in the area. House design was influenced by the modernist movement in architecture which prevailed widely in the post-war period. The designs were functional without being decorative.

Hilton was developed in two phases resulting in the distinctive areas of houses West of Collick Street (built mainly in the 1940's and 1950's) and east of Collick Street (built mainly in the 1960's).¹

91 Paget Street can be seen on the earliest aerial photograph of Hilton taken in 1953.

¹ Hilton Residential Redevelopment Policy & Urban Design Guidelines



1953 Aerial – 91 Paget Street, Hilton, CoF ESRI Mapping, 24/02/2021

Physical Description

Paget Street runs in a north - south direction.

91 Paget Street is located on the corner of Winterfold Street and Paget Street and is located on the southern most edge of the Hilton Heritage Precinct. It is a single storey brick and tile house.



91 Paget Street, Hilton, Street view, Googlemaps, 24/02/2021

IMPACT ASSESSMENT

Statement of Significance

The "Hilton Garden Suburb Precinct" Heritage Area is of cultural heritage significance within the City of Fremantle as an example of a substantially intact 'Garden Suburb' dating from the immediate post World War 2 period and characterised by its curvilinear road layout, parks, large and irregular shaped lots.	Major impact
	The demolition of 91 Paget Street will result in the loss of a house designed and sited as part of the original and early part of the Hilton Garden Suburb.
It has historical value as an area developed by the State Housing Commission to provide affordable housing at a time of increased housing demand in Australia, particularly to house new arrivals: returned servicemen and immigrants. It also has historical significance for its association with the importation of prefabricated homes from Austria and for the timber homes designed by prominent architect Marshall Clifton.	Minor impact

Hilton has aesthetic value for its parks, streetscapes, mature trees, areas of indigenous vegetation and birdlife. Its stock of relatively intact modest housing, including both timber and brick cottages, set on large lots, many with mature trees and gardens, contribute to the ambiance of the area and create a distinct and cohesive streetscape character.	Major impact
	91 Paget Street is an original brick house, set on a large lot with mature trees and gardens which contributes to the distinct and cohesive streetscape character.
It has social value to the people who live there for the range of community facilities provided and the diversity of the local community including private owners, Department of Housing tenants, elderly people and families.	Medium impact

Impact on Significance

Aesthetic value	Major impact	Condition	No discernible impact
Historic value	Medium impact	Integrity	Major impact
Scientific value	No discernible impact	Authenticity	Major impact
Social value	Medium impact	Historical evolution	Major impact
Rarity	No discernible impact	Streetscape	Major impact
Representativeness	Major impact		

Heritage Impact Comments

The proposed demolition of 91 Chadwick Street will result in the loss of an original and early part of the Hilton Garden Suburb. The 1953 aerial photograph clearly indicates that 91 Paget Street was built during the early stages of the Hilton Garden Suburb development.

91 Paget Street is further significant as being located on the southern boundary of the Hilton Heritage Area it is an important element in the delineation of the Heritage Area.

The demolition of this house will reduce the significance of the Hilton Heritage Area and as such is not supported from a heritage perspective.

RECOMMENDATIONS:

Generally this proposal is not supported on heritage grounds as it is one of the original houses constructed in the early stages of the Hilton Garden Suburb. Further, being located on the southern boundary of the Heritage Area it is an important element in the delineation of the Heritage Area.

Additional Information 2 – Applicant photos

91 Paget Street – Photos Submitted by Applicant on 16 March 2021





































Additional Information 3 – Site Photos
22 March 2021



Photo 1 – South west (rear) corner of subject dwelling)



Photo 2 – Southern façade of dwelling (facing Winterfold Road)



Photo 3 – North eastern corner of site showing later addition



Photo 4 – northern façade of dwelling showing later addition



Photo 5 – view from Paget street showing later addition



Photo 5 – original portion of dwelling from Paget Street



Photo 7 – South east corner of original portion of dwelling



Photo 8 – Subject dwelling from across Winferfold road

Additional Information 4 – Applicant letter supporting demolition

marilyn hopkins

lawyer and mediator

Uo (honours)
diploma in education
nationally accredited mediator

p o box 52
margaret river
wa 6285
tel: 08 9758 7467
fax: 08 9758 8568
mob: 0418 941 056
e: mhopkins@iinet.net.au

My ref: MH/20016/M

18th March 2021

City of Fremantle
P O Box 807
FREMANTLE
WA 6959

Attention: Tom Geddes
By email: tomge@fremantle.wa.gov.au

Dear Sir,

Re: 91 Paget Street Hilton

I refer to our telephone conversation of today and confirm I act for the proprietor of the above property, M.C.M.C. Pty Ltd.

You would be aware from your meeting with the directors of my client, that the property was purchased recently with a view to its subdivision into 3 cleared parcels of land.

Although the property is not heritage listed, it is acknowledged that it borders the Hilton Heritage Precinct.

In support of an application for demolition, my client submits that the property has been redesigned beyond all recognition and now has little to no significant heritage value.

I understand you have received some photographs to support my client's submission, but to clarify points which may not be obvious from those photographs:

- (1) The only original feature from the early home is the chimney;
- (2) One wall of the early home was completely removed to make way for a staircase to a 2 storey extension believed to have been completed in 1971 (an additional photograph is enclosed);

Liability limited by a scheme approved under Professional Standards Legislation

2

- (3) A central section of the early home (less the wall) remains but has been clad in a brick veneer;
- (4) The kitchen and bathroom fittings throughout are 1971 additions

It is submitted that, other than the chimney:

- no original features of the property remain
- this property is not of heritage significance
- any value the property may once have had as a heritage property was lost when it was renovated in 1971

I trust the City's planning committee will consider the submissions made in this letter at its meeting on 7 April and grant the demolition order.

I acknowledge that my client and/or its representatives may attend the planning committee meeting and make oral submissions. Please advise if you require notice of any proposed attendance.

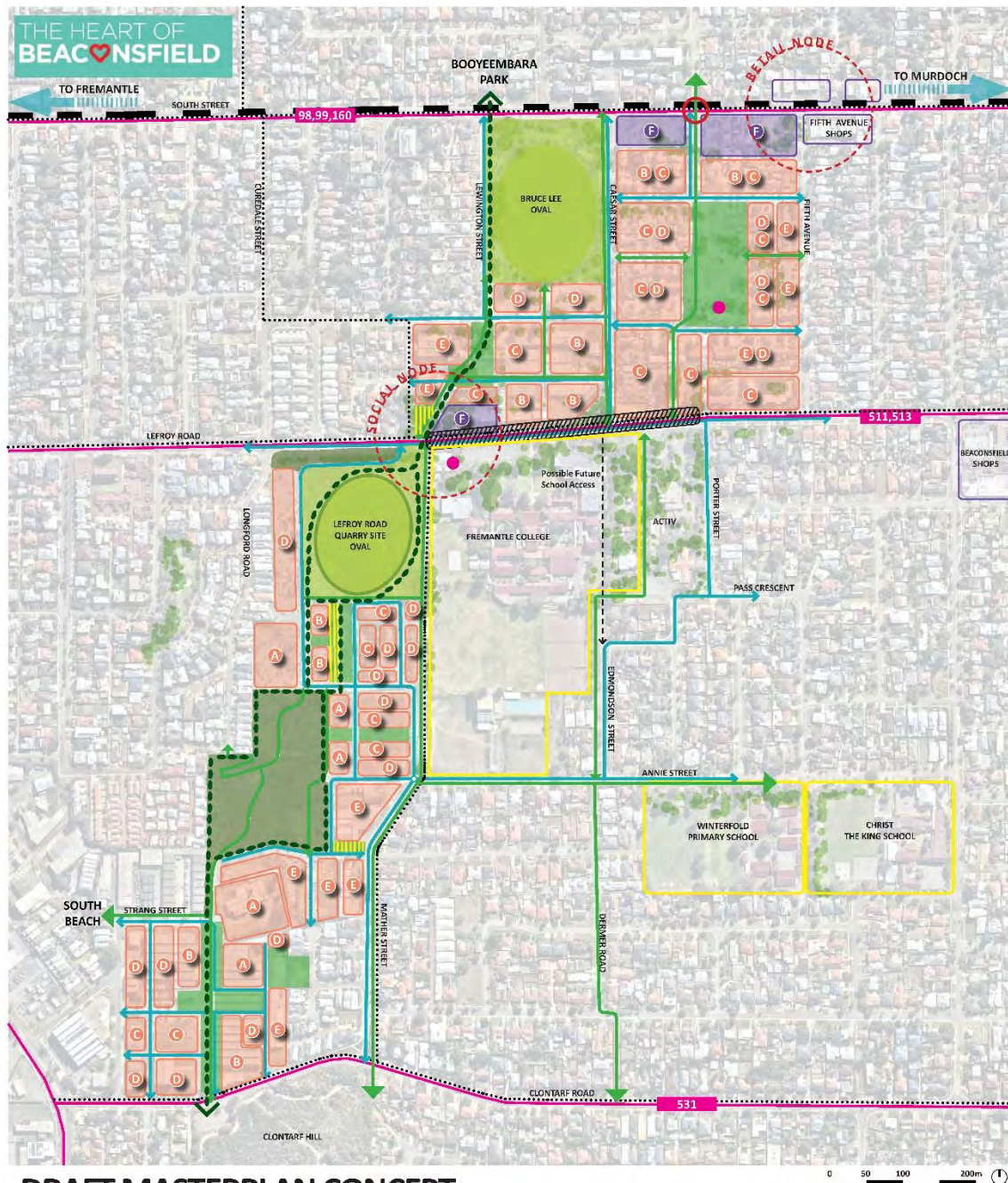
Yours sincerely,

Marilyn Hopkins

MARILYN HOPKINS

PC2104-9 THE HEART OF BEACONSFIELD MASTERPLAN – OUTCOMES OF ADVERTISING AND FINAL ADOPTION

Additional Information 1 – Draft Masterplan Concept (Advertised)



DRAFT MASTERPLAN CONCEPT

This Masterplan provides an indication of how multiple sites in the 'heart of Beaconsfield' might redevelop over time to make the most of the suburb's great attributes, and to bring further improvements along the way. It was formulated in consultation with key landowners and the community, and provides an illustration of how various community objectives for the area might be met over time. It includes improved connections (particularly for cyclists and pedestrians) throughout the area, a greater range of housing types and sizes, retention of existing parks and community focal points and the creation of new ones (including a new oval), and protection of trees where possible. Delivery of the plan would occur in stages as different landowners redevelop, and details may change through further design and approval processes, however the Masterplan seeks to provide an overarching concept of how different components can work together.

THE HEART OF BEACONSFIELD IS A CITY OF FREMANTLE PROJECT IN PARTNERSHIP WITH



Available in alternative formats on request

LEGEND

- | | |
|---|---------------------------------------|
| A High rise apartments 8+ storeys | Public open space |
| B Medium rise apartments 5-8 storeys | Natural open space |
| C Low rise apartments 3-5 storeys | Recreation/ passive open space |
| D Townhouses and maisonettes 2-3 storeys | Active open space/ Sports |
| E Family houses 1-2 storeys | Drainage/ passive open space |
| F Mixed/ community use | Green Link |
| S Schools | Pedestrian link |
| CC Existing Childcare Centre | Vehicle access |
| TS Traffic calming and school drop-off | Transit corridor Link |
| N Nodes - social/ retail | Cycle network |
| T Existing trees | Bus routes |
| | Proposed Traffic Signal |

**FPOL2104-8 ADOPTION OF MODEL CODE OF CONDUCT FOR COUNCIL AND
MODEL STANDARDS FOR EMPLOYING CHIEF EXECUTIVE
OFFICERS**

Additional Information 1 – Current Elected and Committee Members Code of Conduct



Elected and Committee Members Code of Conduct 2018

Contents

Preamble	3
1. Principles of Behaviour	4
1.1 Harassment and Discrimination	4
2. Roles	5
2.1 Role of Elected Member	5
2.2 Role of Council	5
2.3 Appointments to External Committees	5
3. Conflict and Disclosure of Interest	6
3.1 Financial, Indirect Financial, Proximity Interests	6
3.2 Impartiality Interests	7
3.3 City of Fremantle additional requirements for declaration of interests	7
4. Personal Benefit	8
4.1 Use of Confidential Information	8
4.2 Securing personal advantage or disadvantaging others	8
5. Gifts and Contributions to Travel	9
5. Gifts and Contributions to Travel continued	10
6. Conduct of Council and Committee Members	11
6.1 Communication and Public Relations	11
6.2 Corporate Obligations	11
6.3 Dealing with applicants of statutory approvals	12
6.4 Lobbying	12
6.5 Discretionary decisions of council and Personal statutory applications	12
6.6 Involvement in administration	13
6.7 Access to Administration Area and Contact with City Employees	13
6.8 Relations with local government employees	13
6.9 Record Keeping Obligations	14
7. Dealing with Council Property	15
7.1 Use of the City's Resources	15
8. Complaints	16
8.1 Complaints about behaviour considered to be outside of the standards set by Council	16
8.2 Complaints of a suspected breach of the Local Government (Rules of Conduct) Regulations 2007	16
9. Additional Reporting Agencies	17
9.1 Reporting misconduct to the Corruption and Crime Commission	17
9.2 Public Interest Disclosure Act 2003	17

Code of Conduct for Elected and Committee Members

Preamble

This Code of Conduct has been adopted to satisfy the requirements of S5.103 of the Local Government Act. The contents of this code are based on statutory sources, which are collated to form this Code. Where it is appropriate, original statutory sources are referenced throughout the document.

Clauses of this code relevant to the Local Government (Rules of Conduct) Regulations 2007 are subject to statutory disciplinary processes and penalties.

Clauses of this code that have been adopted by Council, as an expected standard of behaviour for elected and committee members, have no statutory disciplinary processes and penalties applied to them and will be addressed by the Chief Executive Officer in consultation with the Mayor.

In the interests of clarity, each provision is followed by a summary of the statutory requirements. These summaries are clearly identified as such and do not form part of the Code, nor are they a substitute for the source statutory requirement. They are included as explanatory notes, and may be adjusted administratively as and when legislation or interpretation of legislation changes. It is important to note that those explanatory notes should not be used for legal interpretation of the original statutory sources.

The matters dealt with in this Code include those that are direct references to existing legislation including;

- ❖ Local Government Act 1995;
- ❖ Local Government (Rules of Conduct) Regulations 2007;
- ❖ Local Government (Administration) Regulations 1996.

1. Principles of Behaviour

The General principles to guide the behaviour of council members are set out in Regulation 3 of the Local Government (Rules of Conduct) Regulations.

Elected and Committee Members are encouraged to:

- *act with reasonable care and diligence; and*
- *act with honesty and integrity; and*
- *act lawfully; and*
- *avoid damage to the reputation of the local government; and*
- *be open and accountable to the public; and*
- *base decisions on relevant and factually correct information; and*
- *treat others with respect and fairness; and*
- *not be impaired by mind affecting substances.*

Explanatory note, not to be considered as legal interpretation

1.1 Harassment and Discrimination

An elected or committee member must not harass, discriminate against, or support others who harass, and discriminate against any person, colleagues or members of the public.

All people have a right to work in an environment that is free from sexual harassment. Sexual harassment will not be tolerated in the City of Fremantle. Any elected or committee members found to be committing sexual harassment will be subject to disciplinary proceedings.

2. Roles

2.1 Role of Elected Member

This is dealt with in section 2.10 of the Local Government Act.

A councillor —

- *represents the interests of electors, ratepayers and residents of the district; and*
- *provides leadership and guidance to the community in the district; and*
- *facilitates communication between the community and the council; and*
- *participates in the local government's decision-making processes at council and committee meetings; and*
- *performs such other functions as are given to a councillor by this Act or any other written law.*

Explanatory note, not to be considered as legal interpretation

2.2 Role of Council

This is dealt with in section 2.7 of the Local Government Act.

Council —

- *governs the local government's affairs; and*
- *is responsible for the performance of the local government's functions.*

Council is to —

- *oversee the allocation of the local government's finances and resources; and*
- *determine the local government's policies.*

Explanatory note, not to be considered as legal interpretation

2.3 Appointments to External Committees

Council will appoint representatives to government specific external committees every two years following the ordinary elections or upon request by an external organisation.

Elected members representing council on government specific external committees have a duty to exercise voting rights as a member of the committee and should have regard to council policies and strategies when exercising their right to vote.

Representatives are also required to provide council with regular information and feedback from the committee meetings in which the elected member considers would be of interest or concern to the council.

3. Conflict and Disclosure of Interest

3.1 Financial, Indirect Financial, Proximity Interests

This is dealt with in sections 5.60 and 5.61 of the Local Government Act.

The Local Government Act 1995 (the Act) places specific obligations on elected members of council, local government employees and other persons involved in making decisions or giving advice on Council matters to act honestly and responsibly in carrying out their functions. Those obligations include the lodgement of disclosure of interest returns, the lodgement of written declarations and the verbal disclosure of financial interests at council and council committee meetings.

An Elected or Committee Member has an interest in a matter if either —

- *the elected or committee member; or*
- *a person with whom the elected or committee member is closely associated,*

has —

- *a direct or indirect financial interest in the matter; or*
- *a proximity interest in the matter.*

Financial interest

An elected or committee member has a financial interest in a matter if it is reasonable to expect that the matter will, if dealt with by the local government, in a particular way, result in a financial gain, loss, benefit or detriment for that elected or committee member.

Indirect financial interests

An indirect financial interest of an elected or committee member in a matter includes a reference to a financial relationship between that person and another person who requires a local government decision in relation to the matter.

Proximity interest

An elected or committee member has a proximity interest in a matter if the matter concerns —

- *a proposed change to a planning scheme affecting land that adjoins the person's land; or*
- *a proposed change to the zoning or use of land that adjoins the person's land; or*
- *a proposed development, maintenance or management of the land or of services or facilities on the land that adjoins the person's land.*

Explanatory note, not to be considered as legal interpretation

3.2 Impartiality Interests

This is dealt with in Regulation 11 of the Local Government (Rules of Conduct) Regulations and Regulation 34C of the Local Government (Administration) Regulations 1996

Local government elected members are required to disclose an interest that may adversely affect their impartiality in any matter discussed at a council or committee meeting.

interest means an interest that could, or could reasonably be perceived to, adversely affect the impartiality of the person having the interest and includes an interest arising from kinship, friendship or membership of an association.

If the matter in which an elected or committee member has an interest affecting impartiality is to be discussed at a council or committee meeting, the elected or committee member is to disclose the interest either in a written notice given to the CEO before the meeting or verbally at the meeting immediately before the matter is discussed.

The existence of an interest affecting impartiality is dependent on –

- *the elected or committee member having an association with a person or organisation that has a matter being discussed at a council or committee meeting;*
- *the type of matter being discussed at a council or committee meeting.*

Explanatory note, not to be considered as legal interpretation

3.3 City of Fremantle additional requirements for declaration of interests

Elected and committee members who have a financial or impartiality interest in an item being prepared for, appearing on or which may appear on, a meeting agenda for the City, must:

- a. avoid any debate and or comment in relation to that item in any form
- b. excuse themselves from any discussion involving that item at informal gatherings of elected and committee members.

It is at the discretion of the elected or committee member as to their involvement in any preliminary discussions on an item being prepared for, appearing on or which may appear on, a meeting agenda for the City, for which they have an Interest affecting their impartiality.

4. Personal Benefit

4.1 Use of Confidential Information

This is dealt with in Regulation 6 of the Local Government (Rules of Conduct) Regulations.

An elected or committee member must not disclose information that the Member derived from a confidential document or information that the Member acquired at a closed meeting other than information that was derived from a non-confidential document.

An elected or committee member may only disclose information from a closed meeting:

- *As specified by Council and subject to any conditions specified by the Council,*
- *Information that is already in the public domain, or*
- *to an officer of the Department of Local Government, Sport and Cultural Industries, or*
- *to the Minister for Local Government, or*
- *to a legal practitioner for the purpose of obtaining legal advice, or*
- *If the disclosure is permitted by law.*

Explanatory note, not to be considered as legal interpretation

4.2 Securing personal advantage or disadvantaging others

This is dealt with in Regulation 7 of the Local Government (Rules of Conduct) Regulations.

An elected or committee member must not make improper use of their office as an elected or committee member to gain, directly or indirectly an advantage for themselves or any other person or to cause detriment to the City of Fremantle or any other person.

Explanatory note, not to be considered as legal interpretation

5. Gifts and Contributions to Travel

This is dealt with in Sections 5.62, 5.82 and 5.83 of the Local Government Act 1995
Regulation 12 of the Local Government (Rules of Conduct) Regulations

Elected members and senior employees are required by legislation to declare the receipt of certain gifts, donations and contributions to travel.

When accepting gifts of any kind, elected members should consider their potential impact on their ability to take part in any decision making processes.

It is important to remember, with regards to the acceptance of gifts and travel contributions, once a gift has been accepted that requires a disclosure in either the Electoral Gift Register or the Gift Register under section 5.82 or 5.83 of the Local Government Act 1995, the contributors become 'closely associated' with you under section 5.62 of the Act. That means that any financial or proximity interests they have in a matter before council is a financial or proximity interest for you too.

Donors of gifts disclosed in the Gift Register under the Rules of Conduct will not be considered 'closely associated', unless the value of their gifts in a particular financial year exceeds the \$200.

There are four categories of gift disclosures:

1. Regulation 12 of the Local Government (Rules of Conduct) Regulations 2007 sets out the parameters for acceptance, non-acceptance and disclosure of gifts by elected members from a donor undertaking or seeking to undertake an activity involving local government discretion or where it is reasonable to believe that the person is intending to do so.

In accordance with regulation 12:

A **Notifiable Gift** is a gift of between \$50 and \$300 or 2 or more gifts within a six month period that in total are worth between \$50 and \$300, from a person who is undertaking, or is likely to undertake an activity involving a local government discretion.

A **Prohibited Gift** is a gift of \$300 or more, or 2 or more gifts within a six month period that in total are worth more than \$300 from a person who is undertaking, or is likely to undertake an activity involving a local government discretion.

Elected members who accept a gift of between \$50 and \$300, (a notifiable gift) are required to notify the CEO of acceptance within 10 days of accepting the gift, through completion of the Gift Declaration Form, which is then recorded in the gifts register. Information to be disclosed includes:

- The name of the person who gave and received the gift;
- The date of receipt of the gift;
- A description and the estimated value of the gift;
- The nature of the relationship between the elected member and the person who gave the gift.
- Details of any other gifts received from the same person/company within the preceding 6 month period.

Failure to disclose the acceptance of a notifiable gift or acceptance of a prohibited gift constitutes a minor breach of the Local Government Act 1995 for contravening a provision of the Local Government (Rules of Conduct) 2007 as prescribed by section 5.105(1)(a) of the Local Government Act 1995. Any breach of these rules will be dealt with under the process set out in sections 5.105 to 5.125 of the Local Government Act 1995.

Explanatory note, not to be considered as legal interpretation.

5. Gifts and Contributions to Travel continued...

2. *Section 5.82 of the Local Government Act 1995 requires elected members to disclose each gift received over the prescribed amount of \$200, including accumulative gifts received from the same donor totalling more than \$200 over one year. The disclosure is to be made in writing to the CEO within 10 days of receipt of the gift. Information to be disclosed includes:*
 - *The name and address of the person who gave and received the gift;*
 - *The date of receipt of the gift;*
 - *A description and the estimated value of the gift;*
 - *The nature of the relationship between the elected member and the person who gave the gift.*
3. *Section 5.83 of the Local Government Act 1995 requires elected members to disclose contributions to travel in writing to the CEO within 10 days of receipt of the acceptance. Information to be disclosed includes:*
 - *a description of the contribution;*
 - *the name and address of the person who made the contribution;*
 - *the date on which the contribution was received;*
 - *the estimated value of the contribution at the time it was made;*
 - *the nature of the relationship between the relevant person and the person who made the contribution;*
 - *a description of the travel; and*
 - *the date of travel.*

Councillors should be aware that under section 5.62 of the Local Government Act 1995, a donor of a gift under section 5.83 becomes a closely associated person and therefore a councillor would be required to disclose any financial or proximity interests when a matter is before Council.

4. *Under the Local Government Act 1995 and Local Government (Elections) Regulations 1997 Candidates are required to disclose gifts received or promised during the election period. A person who gives you a notifiable gift in relation to the election at which you were last elected, or a gift since you were last elected, is deemed to be a "closely associated" person within the meaning of the Act if you were required by the Local Government (Elections) Regulations 1997 to provide information on that gift. Accordingly, for the term of your office you must disclose an interest in any matter that the person has before a meeting of which you are in attendance as a member.*

Explanatory note, not to be considered as legal interpretation

6. Conduct of Council and Committee Members

6.1 Communication and Public Relations

Section 2.8 of the *Local Government Act 1995* prescribes the Mayor as spokesperson for the City of Fremantle and, as such, any official statement regarding the position of Council must be communicated through them, or the Chief Executive Officer with the Mayors authorisation.

Communication by elected and committee members (including verbal, written or personal), involving the City of Fremantle's activities should reflect the status and objectives of the City of Fremantle. Communications should be accurate, polite and professional.

Electronic communication by elected and committee members involving City of Fremantle's activities should copy in all elected members to ensure the appropriate dissemination of information.

6.2 Corporate Obligations

As representatives of the community, elected and committee members must not only be responsive to community views, but to also adequately communicate the attitudes and decisions of the Council.

In doing so, elected and committee members should acknowledge that:

- a. as an elected or committee member of the Council there is respect for the decision making processes of the Council which are based on a decision of the majority of the Council;
- b. information relating to decisions of the Council on approvals, permits and so on ought be communicated in an official capacity by a designated employee of the City;
- c. information concerning adopted policies, procedures and decisions of the Council is conveyed accurately; and
- d. information of a confidential nature shall not be communicated until it is no longer treated as confidential.

6.3 Dealing with applicants of statutory approvals

An elected or committee member must:

- a. not make any statements or express any views to an applicant or interested person which purports to be on behalf of the council or the City;
- b. be alert to the motives and interests of an applicant or interested person;
- c. be aware of which person, organisation or company that the applicant or interested person is representing;
- d. not give any undertaking to an applicant or interested person in regard to the Proposal;
- e. not do or say anything which could be viewed as giving an applicant or interested person preferential treatment;
- f. ensure that an applicant or interested person is treated fairly and consistently;
- g. be alert to attempts by an applicant or interested person to encourage elected or committee members to consider matters which are extraneous or irrelevant to the merits of the decision under consideration; and
- h. provide any information received to all elected or committee members accordingly.

6.4 Lobbying

- a. Elected and committee members should exercise judgement when deciding whether to be involved in private meetings with people seeking to influence a council decision. Suspicions of inappropriate lobbying can occur when lobbying is not open to public scrutiny.
- b. The lobbying of elected and committee members by tenderers is NOT permitted.

6.5 Discretionary decisions of council and Personal statutory applications

- a. Elected and committee members must lodge applications in the City's usual way, available to all community members
- b. Elected and committee members who are seeking a discretionary decision of council or have lodged applications with the City must only discuss the matter with the Chief Executive Officer or relevant Director and, only if approved by the Chief Executive Officer or Director, with other employees.

6.6 Involvement in administration

This is dealt with in Regulation 9 of the Local Government (Rules of Conduct) Regulations 2007.

Elected and committee members must not undertake a task that contributes to the administration of the local government unless authorised by the council or by the CEO to undertake that task. This does not apply to anything that an elected or committee member does as part of the deliberations at a council or committee meeting.

Explanatory note, not to be considered as legal interpretation

6.7 Access to Administration Area and Contact with City Employees

- a. Elected members may only access the administration area in the Administration Building with the understanding of either the Chief Executive Officer or a Director.
- b. Elected members are to include the Chief Executive Officer or a Director in all communication with the City relating to administration matters including decisions of council, enquiries, complaints and comments.

6.8 Relations with local government employees

This is dealt with in Regulation 10 of the Local Government (Rules of Conduct) Regulations 2007.

Elected and committee members may not —

- *direct or attempt to direct employees; or*
- *attempt to influence the conduct of an employee by means of a threat or the promise of a reward;*
- *make a statement that an employee is incompetent or dishonest; or*
- *use offensive or objectionable expressions in reference to an employee.*

Explanatory note, not to be considered as legal interpretation

6.9 Record Keeping Obligations

Councillors must comply with obligations under the State Records Act 2000 as follows –

- a. Adhere to the relevant City of Fremantle Recordkeeping policies and create and maintain records relating to their role in the decision making processes of Council. Records such as correspondence or petitions from ratepayers or community members; relating to lobbying or other matters regardless of whether lobbying itself is of local government or community interest.
- b. Create and keep records of communications or transactions, which convey information relating to local government business or functions involving them. These records must be forwarded to the City's administration for capture in the City's official recordkeeping system. Records may take a variety of forms including letters, email, facsimiles etc.

If an elected member believes that some of the records forwarded for capture in the City's recordkeeping system are highly sensitive or confidential, the elected member must contact the Chief Executive Officer to arrange the necessary security to restrict access to those records.

7. Dealing with Council Property

This is dealt with in Regulation 8 of the Local Government (Rules of Conduct) Regulations

7.1 Use of the City's Resources

Elected and committee members must not:

- *use the Local Government's resources (including the services of City employees) for private purposes, unless properly authorised to do so, and appropriate payments are made (as determined by the Chief Executive Officer).*
- *indirectly or directly use the resources of the City (which includes employees) for the purposes of persuading electors to vote in a particular way at an election, referendum or other poll held under the Local Government Act 1995, the Electoral Act 1907 or the Commonwealth Electoral Act 1918.*

Explanatory note, not to be considered as legal interpretation.

8. Complaints

8.1 Complaints about behaviour considered to be outside of the standards set by Council

Any person who believes that the conduct of an elected or committee member falls outside of the standards as set out in this code of conduct, *other than* those matters set out in the *Local Government (Rules of Conduct) Regulations 2007*, may refer the matter in writing to the Chief Executive Officer for consideration.

As indicated in the preamble to this code:

Clauses of this code relevant to the Local Government (Rules of Conduct) Regulations 2007 are subject to statutory disciplinary processes and penalties.

Clauses of this code that have been adopted by Council, as an expected standard of behaviour for elected and committee members, have no statutory disciplinary processes and penalties applied to them and will be addressed by the Chief Executive Officer in consultation with the Mayor.

If the Chief Executive Officer has reason to believe that a complaint made constitutes a breach of the standards of conduct in the *Local Government (Rules of Conduct) Regulations 2007* he or she may refer the matter to Local Government Standards Panel (Act s.5.107[3]).

8.2 Complaints of a suspected breach of the Local Government (Rules of Conduct) Regulations 2007

Any person who has reason to believe that the personal behaviour of an elected or committee member breaches the standards of conduct set out in the *Local Government (Rules of Conduct) Regulations 2007* may refer the matter as follows:

- a. A complaint is drafted using the Complaint of Minor Breach Form (appendix 1) with appropriate and relevant supporting evidence attached.
- b. The complainant lodges the Complaint of Minor Breach Form and supporting evidence with the Chief Executive Officer. The Chief Executive Officer may also initiate complaints under the Act (s.5.109).
- c. The Chief Executive Officer, within 14 days:
 - i. contacts the complainant acknowledging that the complaint has been received;
 - ii. provides the council member who is the subject of the complaint with a copy of the complaint; and
 - iii. sends the complaint to the Local Government Standards Panel (Act s.5.107[3]).

If the Chief Executive Officer believes that a complaint discloses a serious breach (rather than a minor breach), they are required to refer it to the Department (Act s.5.115).

9. Additional Reporting Agencies

9.1 Reporting misconduct to the Corruption and Crime Commission

The Chief Executive Officer, being a 'principal officer of a notifying authority' (for the purposes of the Corruption and Crime Commission Act 2003) has a statutory obligation to report to the Corruption and Crime Commission:

- a. any allegation of misconduct; or
- b. any situation that otherwise comes to their attention involving misconduct, where the Chief Executive Officer suspects on reasonable grounds concerns or may concern misconduct and is of relevance or concern to the Chief Executive Officer in their official capacity.

Notwithstanding, any elected or committee member or any other person may report directly to the Corruption and Crime Commission any matter which that person suspects on reasonable grounds concerns or may concern misconduct that:

- a. has or may have occurred;
- b. is or may be occurring;
- c. is or may be about to occur; or
- d. is likely to occur.

9.2 Public Interest Disclosure Act 2003

The Public Interest Disclosure Act 2003 facilitates the reporting of public interest information and provides protection for those who report this information under that Act.

Elected and committee members are encouraged to contact the City's nominated Public Interest Disclosure Officer to seek guidance on their disclosure and to lodge completed Public Interest Disclosure forms.

A person who makes an appropriate disclosure of public interest information to the City's nominated Public Interest Disclosure Officer under section 5 of the *Public Interest Disclosure Act 2003*:

- a. incurs no civil or criminal liability for doing so;
- b. is not, for doing so, liable:
 - i. to any disciplinary action under a written law;
 - ii. to be dismissed;
 - iii. to have their services dispensed with or otherwise terminated; or
 - iv. for any breach of duty of secrecy or confidentiality or any other restriction on disclosure (whether or not imposed by a written law) applicable to the person (Section 13).

Elected and Committee Members Code of Conduct 2018

Definitions and abbreviations

Nil.

Review information and related documentation

Reviewing officer:	Manager Governance
Policy adopted:	23 May 2018 [FPOL1805-15]
Policy amended:	
Legislation:	Statutory References <i>Corruption, Crime and Misconduct Act 2003</i> <i>Equal Opportunity Act 1984</i> <i>Freedom of Information Act 1992</i> <i>Local Government Act 1995</i> <i>Local Government (Administration) Regulations 1996</i> <i>Local Government (Financial Management) Regulations 1996</i> <i>Local Government (Rules of Conduct) Regulations 2007</i> <i>Occupational Safety and Health Act 1984</i> <i>Public Interest Disclosure Act 2003</i> <i>Public Sector Management Act 1994</i> <i>Public Service Act 1999 Cth</i> <i>Sex Discrimination Act 1984 Cth</i> <i>State Records Act 2000</i>
Delegations:	NA
Related documents:	Elected Member Policies
Next review date:	23 May 2020

Elected and Committee Members Code of Conduct 2018

Appendix 1

COMPLAINT OF MINOR BREACH FORM

(Breach of the Local Government (Rules of Conduct) Regulations 2007)
(Subsections 5.107(1) and (2) of the *Local Government Act 1995* ("the LG Act"))

NOTE: A person who includes information in a complaint knowing it to be false or misleading in a material particular commits an offence (maximum penalty: \$5,000). If this complaint is made during the campaign period for a local government election (that is, during the period from opening of nominations to the Election Day), the fact of making the complaint and its details must be kept confidential during that period (maximum penalty: \$5,000).

The law requires a copy of this complaint to be given to the Council member complained about.

NAME OF PERSON WHO IS MAKING THE COMPLAINT:
Name: _____ <u>Given Name(s)</u> <u>Family Name</u>
NAME OF THE LOCAL GOVERNMENT (CITY, TOWN, SHIRE) CONCERNED:
NAME OF COUNCIL MEMBER/S ALLEGED TO HAVE COMMITTED BREACH:
WHAT IS YOUR COMPLAINT:
State the type of your complaint by ticking the box of the particular breach alleged to have occurred under the <i>Local Government (Rules of Conduct) Regulations 2007</i>. ☐ Regulation 4 – Breach of a local law relating to conduct at meetings ☐ Regulation 6 – Improper disclosure of information ☐ Regulation 7 – Securing personal advantage or disadvantaging others ☐ Regulation 8 – Misuse of local government resources ☐ Regulation 9 – Prohibition against involvement in administration ☐ Regulation 10 – Relations with local government employees ☐ Regulation 11 – Non-disclosure of interest adverse to impartiality ☐ Regulation 12 – Acceptance of gifts <i>(State full details of What Happened in that section on the next page)</i>
DATE OF INCIDENT:
_____ [day] / _____ [month] / _____ [year]

Elected and Committee Members Code of Conduct 2018

WHAT HAPPENED?

What are the details of the contravention that is alleged to have resulted in the breach?
[Attach further information if insufficient space]

SIGNED:

Complainant's Signature:

Date of signing: _____ / _____ / 20____

Additional Information 2 – Current CEO recruitment and performance management policy

Council Policy



Chief Executive Officer Recruitment and Performance Management

Policy scope

This policy applies to activity undertaken by the elected Council and candidates or incumbents of the Chief Executive Officer (CEO) position.

Policy statement

The employment cycle of a CEO is a core responsibility of the elected Council. The Council will establish a CEO Employment Committee chaired by the Mayor. The Director People & Culture will provide support to the Committee namely

- Coordinating meetings of the Committee.
- Obtain quotes for approval of recruitment process.
- Liaise with contractors and arrange payments.
- Prepare relevant documentation including reports to Council and contractual documents.
- Maintain appropriate records regarding performance reviews.

Recruitment and Appointment of CEO

Council will engage an independent and suitably qualified recruitment agency that is able to demonstrate the understanding of attracting diversity of candidates to support the recruitment and appointment of a CEO. The Committee will make recommendations to Council when appointing a recruitment agency, determining the CEO selection criteria and developing the CEO contract.

Contractual Requirements

The CEO contract will at minimum outline:

- The responsibilities of the position.
- Conflict of interest management requirements.
- Remuneration.
- Legislative obligations including those continuing after appointment.
- Processes for managing unsatisfactory performance or early termination.

Remuneration

The remuneration package provided to the CEO will be guided by the SAT remuneration bands. Remuneration will be reviewed annually in accordance with the CEO Performance review and contract requirements.

Expenses

The Chief Executive Officer may be provided a Corporate Purchase Card to use for expenses related to the role of CEO. Corporate purchase card transactions will be reviewed and approved by the Mayor and all CEO corporate purchase card transactions, will be included in the monthly schedule of payments report to the Ordinary Meeting of Council, in accordance with Regulation 13 of the *Local Government (Financial Management) Regulations 1996*.

The Council will meet expenses incurred by the CEO including:

- Membership and subscription fees payable to professional associations which are reasonably necessary or desirable in performance of duties
- Reasonable costs incurred where attending conferences, seminars or undertaking study
- Reasonable costs incurred in performance of duties.

CEO Performance Plan

The Council will adopt an annual performance plan for the CEO. The Performance Plan will be developed in conjunction with the CEO and CEO Performance review committee. The Performance Plan will document agreed objectives and outcomes to be delivered over a twelve-month period. The CEO will provide progress reports to the Committee at each review.

Contract Expiry

The Committee must make recommendation to Council six months prior to the expiry of the CEO contract to:

- Reappoint the CEO.
- Advertise for recruitment the role of CEO.

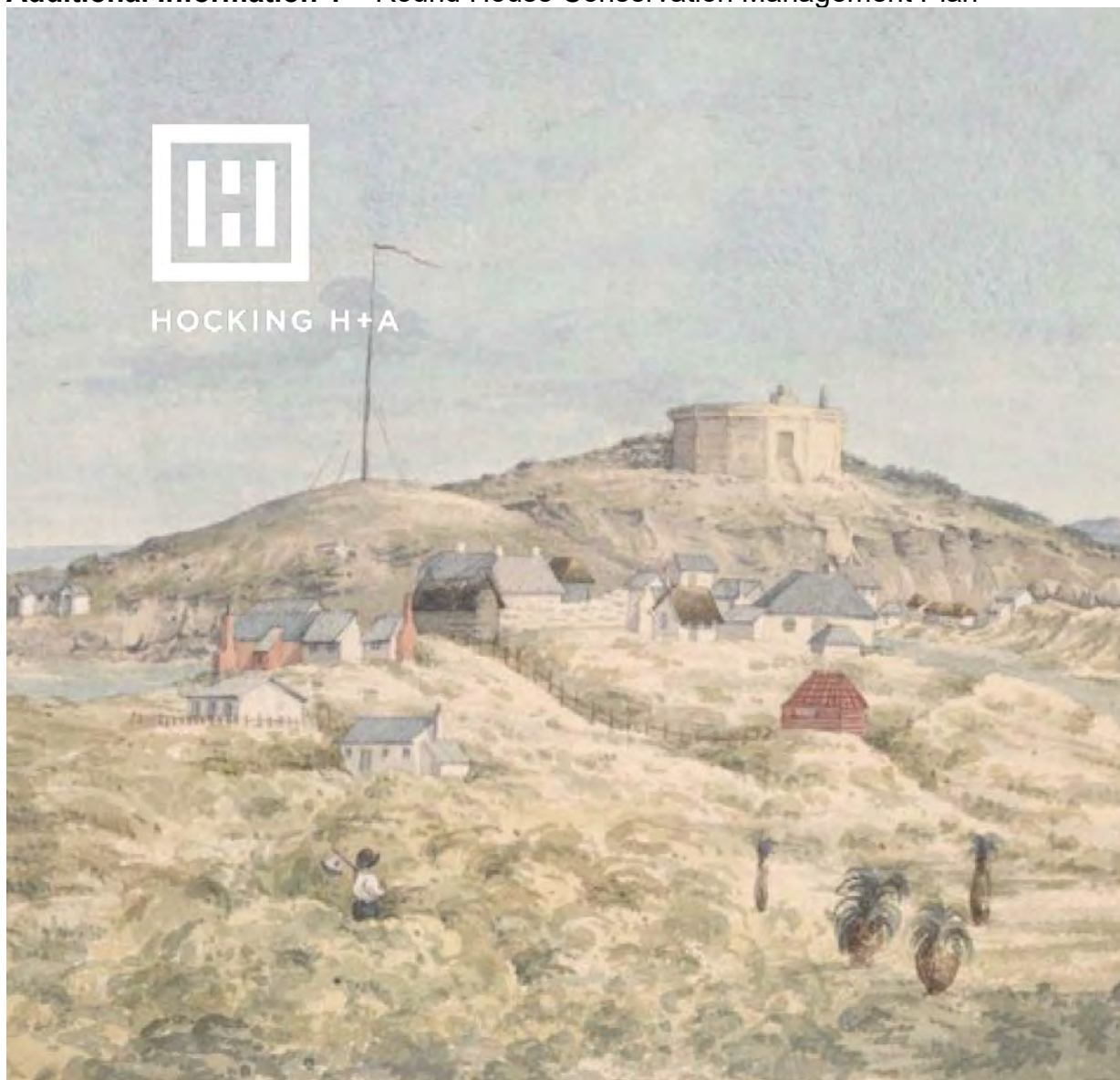
Definitions and abbreviations

“Chief Executive Officer – The Chief Executive Officer of the City of Fremantle

Responsibility and review information	
Responsible officer:	Director People and Culture
Document adoption/approval details	Approval/adoption date: 24 June 2020 Proof of adoption/approval – Ordinary Meeting of Council C2006-22
Document amendment details	Amendment approval/adoption date Proof of adoption/approval - meeting name or document no#

FPOL2104-11 ROUND HOUSE CONSERVATION MANAGEMENT PLAN

Additional Information 1 – Round House Conservation Management Plan



HOCKING H+A

Round House Fremantle
Conservation Management Plan

December 2020

Round House, Fremantle - Conservation Management Plan

2020

Cover Image, View of Fremantle Western Australia, 1831, Jane Currie Courtesy Mitchell Library of Australia.

COPYRIGHT

This report is copyright to the City of Fremantle and Hocking Planning & Architecture Pty Ltd, trading as Hocking Heritage + Architecture. This report cannot be reproduced, in whole or in part, for any purposes apart from those permitted under the Copyright Act or use for professional or financial benefit by other professional consultants and / or building trade contractors without prior approval of the City of Fremantle and Hocking Heritage + Architecture

Rev No	Author	Date	Reviewer	Date
	Prue Griffin Gemma Dewar	Jan 2020	City of Fremantle	Feb 2020
A	Prue Griffin Gemma Dewar Renaë Canterbury	May 2020	City of Fremantle	July 2020
B	Prue Griffin Gemma Dewar	August 2020	Community Submissions	November 2020
C	Prue Griffin Gemma Dewar	December 2020		



Page | 3

CONTENTS

CONTENTS.....	3
FIGURES	6
EXECUTIVE SUMMARY	10
Historic overview	10
Key Recommendations.....	11
1.0 INTRODUCTION	16
1.1 Background	16
1.2 Methodology	16
1.3 Strategic Objectives of the Conservation Management Plan	16
1.4 Recommendations	17
1.5 Study Team	17
1.6 Acknowledgements	17
1.7 Study Area	18
1.8 Heritage Listings.....	19
1.9 Definitions and Acronyms.....	20
2.0 DOCUMENTARY EVIDENCE	21
2.1 Geological Background	21
2.2 Pre 1829	26
2.3 1829 Settlement of the Swan River Colony	28
2.4 1830 - 1831 Construction of the Round House	29
2.5 Prisoners and Prison Life	32
2.6 The Round House in the townscape	36
2.7 1830s - Adjacent Works and Plans	37
2.8 1844 -Second floor addition.....	39
2.9 1850 -1886 Round House and Convict Transportation	40
2.10 1880s – 1910s Police Lock Up and Staff Quarters	45
2.11 1904 – 1919 Fort Arthur battery	47
2.12 1919-1959 Decline and Recognition	51
2.13 1939-1945 World War Two – Fort arthur's Head	60
2.14 1950s a growing appreciation of the Round House	61
2.15 1960-1982 Development of conservation practice	65
2.16 1982-2020 City of Fremantle.....	72
2.17 Chronology of development.....	73
2.18 Associations.....	76
3.0 PHYSICAL EVIDENCE	78
3.1 Site, Setting and Landscape.....	78
3.2 Description of Fabric	88
3.3 Exterior.....	89
3.4 Internal Courtyard.....	103
3.5 Condition	133
3.6 Materials analysis	137
3.7 Analysis of Development	143
4.0 COMPARATIVE ANALYSIS	149
4.1 The Quod (Wadjemup/Rottnest Island)	149
4.2 Old Court House, Perth	150
4.3 The Tannery (fmr), Fremantle	151
4.4 Rottnest buildings	152
4.5 Fremantle Prison	152
4.6 Old Perth Goal.....	153



5.0	SIGNIFICANCE ASSESSMENT	154
5.1	Introduction	154
5.2	Nature of Significance	154
5.2.1	Importance in demonstrating the evolution or pattern of Western Australia's history	154
5.2.2	Importance in Demonstrating Rare, Uncommon or Endangered Aspects of Western Australia's Heritage	154
5.2.3	Potential to yield information that will contribute to an understanding of Western Australia's history	155
5.2.4	Importance in demonstrating the characteristics of a broader class of places	155
5.2.5	Any strong or special meaning it may have for any group or community because of social, cultural or spiritual associations	156
5.2.6	Its importance in exhibiting particular aesthetic characteristics valued by any group or community	156
5.2.7	Any special association it may have with the life or work of a person, group or organisation of importance in Western Australia's history	157
5.2.8	Its importance in demonstrating a high degree of creative or technical achievement	157
5.2.9	Any other characteristic it may have that in the opinion of the Council is relevant to the assessment of cultural Heritage significance	158
5.3	Degree of Significance	158
5.3.1	Integrity	158
5.3.2	Authenticity	158
5.4	Graded Zones and Elements Of Significance	159
5.4.1	Generally	159
5.4.2	Significance of the Place	160
5.4.3	Zones of Significance	160
5.4.4	Elements of Significance	162
5.4.5	Archaeological Significance	165
6.0	STATEMENT OF SIGNIFICANCE	166
6.1	National significance assessment	166
6.1	State Significance	166
7.0	CONSERVATION RECOMMENDATIONS	167
7.1	Introduction	167
7.1.1	Guide to Conservation Recommendations	168
7.1.2	Key Statements	169
7.1.3	Burra Charter	170
7.2	Recommendations Arising out of the Graded Zones of Significance	172
7.3	Recommendations Relating to the Setting of the Place	173
7.3.1	Setting, Landscaping and Views	173
7.3.2	Parking	175
7.4	Recommendations Arising From the Physical Condition of the Place	176
7.4.1	Form	176
7.4.2	Fabric	176
7.5	Recommendations Relating to the Archaeological Significance of the Place	186
7.6	Recommendations Relating to Renewable Energy	187
8.0	GOVERNANCE RECOMMENDATIONS	188
8.1	Introduction	188
8.2	Key Statements	188
8.3	Recommendations Arising from External Requirements	188
8.3.1	Current Heritage Listings	188
8.4	Recommendations Relating to Future Use and Development	191
8.4.1	Future Use	191
8.4.2	Future Development	192



Round House, Fremantle - Conservation Management Plan	2020
8.5 Recommendations Relating to Records and Ongoing Management.....	193
9.0 COMMUNITY AND STAKEHOLDER ENGAGEMENT	194
10.0 INTERPRETATION.....	195
11.0 IMPLEMENTATION AND RECOMMENDATIONS	197
12.0 CONSERVATION AND MAINTENANCE WORK SCHEDULES	197
12.1 Conservation Work Schedule	197
12.2 Recommended Maintenance Schedule	198
13.0 APPENDICES	200
13.1 Archaeological Management Plan – Round House, Fremantle	201
13.2 Landscape Assessment – Round House, Fremantle.....	202
13.3 Structural Assessment – Round House, Fremantle	203
13.4 Building Condition Assessment	204
13.5 Cost estimates	205
13.6 Materials analysis	206
14.0 REFERENCES	207



FIGURES

Figure 1:	Arthur Head Reserve, 2019.....	18
Figure 2:	Extent of Study Area.....	19
Figure 3:	Plan showing Arthurs Head, 1846.....	23
Figure 4:	Development Sequence, Arthur Head Reserve, 1829-1887.....	24
Figure 5:	Development Sequence, Arthur Head Reserve, 1900-2010.....	25
Figure 6:	Map showing extent of the Whadjuk Noongar Region.....	26
Figure 7:	Portion of 1841 survey by Stokes	27
Figure 8:	Plan of Fremantle Jail, undated.	30
Figure 9:	Tender to supply articles for the Fremantle Jail.	34
Figure 10:	View of Fremantle, Western Australia. From Church Hill, East of the Town' by Richard Morrell, August 1832.	36
Figure 11:	Portion of a watercolour 'Panorama of the Swan River Settlement', 1832 by Jane Currie.	37
Figure 12:	Portion of a Fremantle Plan, 1844 showing alignment of steps from High Street, tunnel, Court House and Harbour Master's House,.....	38
Figure 13:	Plan of proposed additions to the Fremantle Jail, c1850	41
Figure 14:	View of Arthur Head showing complex of buildings, c1863.....	42
Figure 15:	Sketch by Harbour Master George Andrew Forsyth, 1870 showing steps up the cliff face to the Court House at right, Harbour Master's House at the left, and portion of the Round House at far right.....	43
Figure 16:	View of the Round House from the Lighthouse, 1879 showing the timber dividing wall and casement windows and flat roof over the cells.	44
Figure 17:	View of Round House from High Street, 1890s.	46
Figure 18:	View of Round House from Town Hall 1891.	46
Figure 19:	View of the Round House from the Lighthouse, 1902 showing the remnant of the timber-dividing wall.....	47
Figure 20:	Laying cable through the tunnel from the Powerhouse to the Car Barn in High Street.	48
Figure 21:	Laying tram tracks in High Street in 1905, Round House in Background.....	49
Figure 22:	Plan of the Old Prison, conversion to Caretaker' Quarters. PWD104. 1914.....	50
Figure 23:	Detail showing upper floor of the Old Prison, 1914	50
Figure 24:	Detail showing Ground Floor of the Old Prison, 1914.....	51
Figure 25:	View of Round House from High Street, 1920s	52
Figure 26:	Captain Rivers, a friend and Peggy Rivers, inside the Round House, 1922.....	54
Figure 27:	View of Front Steps and Front Door, 1926.	54
Figure 28:	Prior to the repairs April 1929 showing the collapsed wall and loose stones.	56
Figure 29:	During repairs May 1929.....	56
Figure 30:	Different views on retention of the Round House 1929	57
Figure 31:	Creation of the grassed area alongside the Round House, 1937	58
Figure 32:	Creation of the grassed area alongside the Round House, 1938.....	58
Figure 33:	Site Visit, 1938 showing casement windows at Ground Level.....	59
Figure 34:	Site Visit, 1938 showing repairs to the steps.	60
Figure 35:	View of Arthur Head, 3 Nov 1942.....	61
Figure 36:	Internal view of the Round House, 1949.....	62
Figure 37:	View of the south side of the Round House. 1951.....	63
Figure 38:	Journalist Athol Thomas within the Round House, May 1958.	63
Figure 39:	Repairs to the Round House, May 1959, note the render on the walls.....	64
Figure 40:	School group visiting the Round House, August 1959, showing the rendered internal walls and boarded up window openings.....	65
Figure 41:	CCE Plan 57235	66
Figure 42:	Sequence of images showing Round House access stairs before and after demolition in March 1966.....	67
Figure 43:	Stabilisation of the cliff face, March 1966.....	67
Figure 44:	Land allocation and ownership 1974.	68
Figure 45:	Round House prior to conservation works, 1975.....	69
Figure 46:	Detail of Roof works, 1975.	70
Figure 47:	Flat roof on upper level prior to works, 1975.....	71



Figure 48:	Well conservation works, 1975.....	71
Figure 49:	Reserve 21563 within City of Fremantle.....	78
Figure 50:	Aerial photograph showing Reserve 21563.....	79
Figure 51:	Aerial photograph showing access to the Round House.....	80
Figure 52:	Round House viewed from High Street.....	81
Figure 53:	Steps leading up to the top of Arthur Head Reserve	81
Figure 54:	Steps leading up to the top of Arthur Head Reserve	82
Figure 55:	The Round House viewed from the top of the steps	82
Figure 56:	Paving in front of the Round House	82
Figure 57:	High Street looking from the Round House	83
Figure 58:	Pilot Cottage adjacent to the Round House	83
Figure 59:	Captain Lane to the north of the Round House	83
Figure 60:	Pilot Cottage	84
Figure 61:	Grassed area to south of the Round House	84
Figure 62:	Grassed area to south of the Round House	84
Figure 63:	Grassed area to south of the Round House	84
Figure 64:	View from the grassed area north towards Fleet Street	85
Figure 65:	View from the top of the Reserve over Bathers Bay	85
Figure 66:	View from the top of the reserve towards Fremantle marina.....	85
Figure 67:	View from Bathers Beach to the Signal Station	85
Figure 68:	View from Bathers Beach to the Signal Station. Tunnel entrance canopy in the foreground.	86
Figure 69:	View to west entrance of Whaling Tunnel.....	86
Figure 70:	View through Whaling Tunnel under the Round House	87
Figure 71:	View towards the Round House from Mrs Trivett Place	87
Figure 72:	Public amenities along Mrs Trivett Place	87
Figure 73:	Metricized plan of R McK Campbell's 1980 Drawing of the Fremantle Round House	88
Figure 74:	Section through the walls of the Round House, c1920s	90
Figure 75:	Plan showing the numbering of cells and faces in this document.....	91
Figure 76:	Timber and stone steps leading to the entrance.....	91
Figure 77:	Plaque on steps commemorating the replacement of the timber stapes in 1983	92
Figure 78:	Plaque on façade of Round House	92
Figure 79:	Plaque on façade of Round House	92
Figure 80:	Pediment	92
Figure 81:	Stone string course below parapet	93
Figure 82:	Parapet detail	93
Figure 83:	Underside of string course with angled stones	93
Figure 84:	Southern face of the parapet.....	93
Figure 85:	Entrance doors	94
Figure 86:	Timber steps leading up to entrance doors	94
Figure 87:	Face 1 and 12, main entrance steps and Bakehouse	94
Figure 88:	Rendered limestone balustrade and wall to Round House steps, incorporating former Bakehouse.....	95
Figure 89:	Entrance of Bakehouse	95
Figure 90:	Faces 1, 2, 2 and 12 and pathway along southern side of Round House.....	95
Figure 91:	Typical stonework with pointing form 2004	96
Figure 92:	Face 3 – typical of Face 2-12	96
Figure 93:	South view of Round House with Signal mast to the west	96
Figure 94:	Capstone to the south west of the Round House and mast ties.....	97
Figure 95:	Mast ties connected into the cap stone	97
Figure 96:	Evidence of previous repairs to external walls.....	97
Figure 97:	Timber packers in joints.....	97
Figure 98:	Remnant rope fixings from earlier Signal Mast	98
Figure 99:	West wall (Face 7) with signal mast ropes attached.....	98
Figure 100:	Vegetation at rear of Round House.....	98
Figure 101:	Part of face 12 looking towards face 11	99
Figure 102:	Face 11	99



Round House, Fremantle - Conservation Management Plan

2020

Figure 103:	Rendered and un-rendered sections of plinths to faces 12 and 11	99
Figure 104:	Timber deck with canon	100
Figure 105:	Lookout with canon	100
Figure 106:	View from canon back towards the Round House	100
Figure 107:	The signal mast	100
Figure 108:	Signal mast yard arms and ropes	101
Figure 109:	Change in levels between the look out and the rear of the Round House	101
Figure 110:	Timber belaying at base of signal mast	101
Figure 111:	Timber belaying pins at base of signal mast	102
Figure 112:	Inside the Bakehouse with interpretation showing where the oven originally was located	102
Figure 113:	Inside the Bakehouse	102
Figure 114:	Vaulted brick ceiling to the Bakehouse	103
Figure 115:	Inside the Bakehouse	103
Figure 116:	Internal Plan of the Round House	104
Figure 117:	View east across courtyard to main entrance	106
Figure 118:	View east across the front of Cells 1 and 2.....	106
Figure 119:	View east across the front of Cells 3 and 4.....	106
Figure 120:	Rendered north wall of Room 13.....	107
Figure 121:	Rendered south wall of Room 15	107
Figure 122:	Internal doors looking towards external doors.....	107
Figure 123:	Internal doors.....	108
Figure 124:	Shingle roof over Cell 4.....	108
Figure 125:	Aerial view of the Round House.....	108
Figure 126:	Aerial view of the Round House.....	109
Figure 127:	Aerial view of the Round House.....	109
Figure 128:	Shingle roof to Cell 4 abutting remnants of former cell	109
Figure 129:	Shingle roof over cells 1 and 2	109
Figure 130:	Vent to Cell 2.....	110
Figure 131:	View west across court yard.....	110
Figure 132:	Relationship of signal mast and the rigging to the Round House	110
Figure 133:	Non-original buttress walls constructed to stabilise the Round House following the collapse of the cells	111
Figure 134:	Termination of buttress wall and interpretation of where the original cell wall terminated	111
Figure 135:	View north across rear (west) wall towards Cell 3.....	111
Figure 136:	Buttress wall containing remnant fabric from demolished cells.....	112
Figure 137:	Typical cell door.....	112
Figure 138:	Typical replacement timber framed casement window	113
Figure 139:	Copper rainwater head	113
Figure 140:	Well	113
Figure 141:	Bell.....	114
Figure 142:	Bell.....	114
Figure 143:	View north through Room 13.....	115
Figure 144:	East wall of Room 13	116
Figure 145:	Ceiling of Room 13	116
Figure 146:	View north through Room 14 looking into Room 13	116
Figure 147:	View south through Room 14 looking into Room 15	117
Figure 148:	Ceiling of Room 14	117
Figure 149:	East and south walls of Room 14	117
Figure 150:	Floor to Room 14	118
Figure 151:	Window in Room 15.....	118
Figure 152:	View south through Room 15	119
Figure 153:	East wall of Room 15	119
Figure 154:	Floor of Room 15	120
Figure 155:	Room 1 – Main Entrance	120
Figure 156:	Steep timber stair (ladder stair) from Room 1 to Room 14	121
Figure 157:	Timber treads	121
Figure 158:	Tight bottom step of timber stair	122



Page | 8

Round House, Fremantle - Conservation Management Plan

2020

Figure 159:	Ceiling to Room 1, underside of floor to Room 14	122
Figure 160:	Yorkshire flag stone flooring to Room 1	123
Figure 161:	Main exit doors in east wall of Room 1	123
Figure 162:	Room 3 looking south from Room 1	124
Figure 163:	Timber floor of Room 2.....	124
Figure 164:	Timber ceiling in Room 2	124
Figure 165:	View north through Room 2.....	125
Figure 166:	Room 12 looking north from Room 1	125
Figure 167:	Fireplace in Room 12.....	125
Figure 168:	View south through Room 12	126
Figure 169:	Timber ceiling in Room 12, underside of floor to Room 13 above	126
Figure 170:	Cell 4.....	126
Figure 171:	Timber raked ceiling to Cell 4.....	127
Figure 172:	White washed walls in Cell 4.....	127
Figure 173:	Partially rendered wall in Cell 4.....	127
Figure 174:	Displays in Cell 3.....	128
Figure 175:	Timber ceiling in Cell 3	128
Figure 176:	North wall of Cell 3.....	129
Figure 177:	Connection of existing interpretation into concrete floor, Cell 3	129
Figure 178:	Concrete floor, Cell 3.....	129
Figure 179:	Illustrative thickness of cell walls.....	130
Figure 180:	Cell door, Cell 3.....	130
Figure 181:	Cell 1	131
Figure 182:	Painted timber ceiling in Cell 1	131
Figure 183:	Vent in Cell 1	131
Figure 184:	East wall of Cell 1	132
Figure 185:	Cell 2.....	132
Figure 186:	Timber ceiling in Cell 2	132
Figure 187:	South wall in Cell 2.....	133
Figure 188:	Vent in Cell 2.....	133
Figure 189:	Stone replacements.....	134
Figure 190:	Rottnest Prison, 1900-1910.	149
Figure 191:	Old Court House.	150
Figure 192:	The Tannery (fmr)	151
Figure 193:	Vincent Way, Rottnest	152
Figure 194:	Fremantle Prison, 2019.	152
Figure 195:	Old Perth Goal	153
Figure 196:	Zones of Significance within Study Area	161
Figure 197:	Elements of Significance	163
Figure 198:	Zones of Significance – upper level	164
Figure 199:	Areas of potential archaeological significance.....	165



EXECUTIVE SUMMARY

HISTORIC OVERVIEW

Fremantle Round House built in 1830-1831 was the first permanent public building constructed in the Swan River Colony and demonstrates the priorities of the colonial administrator, Lieutenant Governor Captain James Stirling. Located prominently on Arthur Head, visible from land and sea, the Round House was a visual reminder of the rule of law to the early settlers and visiting seafarers. For the Whadjuk Noongar, the original occupants of the land, the building represented how radically their world had changed with the arrival of settlers in 1829.

Constructed of limestone, the twelve-sided structure appears circular from a distance and soon became commonly known as the Round House. Civil engineer Henry Willey Reveley, influenced by the theories of prison reformer Jeremy Bentham, designed the prison. In the early years, the Round House incarcerated local settlers and seafarers and the jailer and his family lived within the building.

The prison population soon included the Whadjuk Noongar people incarcerated for behaviours that transgressed the British rule of law but had little or no rationale under the Noongar cultural systems. With the establishment of the Rottnest Native Penal Establishment in 1840, the Round House became a place of transition from the mainland to Rottnest Island for Aboriginal men and boys from all over Western Australia.

During the first decades of the Swan River Colony, Arthur Head was the law and order precinct of the colony. The courthouses (1835-1851), police station, lighthouse that provided essential services to shipping, and the Round House were all located on this prominent site above the Fremantle settlement.

The transportation of convicts to the Swan River Colony in 1850 required a new, more substantial prison. In 1855, the Fremantle Prison, the Establishment, took in its first prisoners, the new Perth Gaol opened in 1856 and the Round House closed as a prison. The two new facilities were intended to provide the majority of the incarceration needs of the colony but the Round House reopened in 1866 because of the demands on the prison system. The Round House continued to function as a Lock-up and transfer station for Aborigines on route to Rottnest until c1888.

After c1888, the Round House closed as a prison and served for some years as accommodation for public servants, including police officers, harbour staff and their families. With the easing of accommodation needs in the early 1900s, the Round House no longer served that function and appears to have been vacant or used for storage, and its condition declined.

In 1905, all of Arthur Head was acquired by the Commonwealth Government because of its strategic importance at the entrance to Fremantle Harbour. During World War 1, military equipment and structures were installed on Arthur Head as part of the defence system known as 'Fremantle Fortress'. The Round House was part of this defence scheme and appears to have been used for accommodation or storage. The entire headland was off limits to the public and the same controls were exercised during World War 2 when a similar defence strategy was employed.

In the inter war years the Round House was in poor condition and its value to the community was debated in the local press. On several occasions, the Round House was close to demolition because of its poor condition but was saved because of the action of a few vocal and prominent citizens. After these occasions, the Round House underwent repairs including repointing with cementitious mortar.

In 1959, all of the Fort Arthur Battery was transferred to the Fremantle Harbour Trust and the Round House was opened to the public through the contribution of volunteers from the WA Historical Society Trust. The site remained largely obscured and difficult to access and had low visitation.

In 1966, the construction of the standard gauge railway line at the base of the Arthur Head cliff face lead to the demolition of the original stairs to High Street and construction of new access



stairs parallel to the cliff face. This project required the co-ordination of many different government agencies and stakeholders.

In the early 1970s, comprehensive conservation works were undertaken under the supervision of architect Robin McK Campbell. It was one of the first major conservation projects in Western Australia and informed heritage practice in the state.

With the transfer of the property to the City of Fremantle in 1982, a systematic approach to the whole Arthur Head Reserve began. In 1985, a significant commonwealth government grant enabled further conservation works, the collection of archival material relevant to the site and archaeological investigations of the well in the centre of the Round House.

Since 1985, the City of Fremantle have overseen several programs of conservation work at the Round House, archaeological investigations of the former bakery beneath the main stairs.

The Round House is managed by the Fremantle Volunteer Guides who open the Round House every day of the year except for Christmas Day and Good Friday. The Volunteer Guides have been successful in an application to Lotterywest to install new interpretation for the Round House and these designs are currently [2020] being prepared.

KEY RECOMMENDATIONS

The Conservation Management Plan seeks to establish a range of recommendations to help guide on-going management of the place.

The recommendations have been derived from the assessed cultural significance of the place and seek to reinforce the strategic objectives set out above. All proposed and actual works should be consistent with the recommendations set out in this report and not damage the significance of the Round House. It is not feasible that all proposed works will be consistent with all recommendations however all actions must still result in a good heritage outcome.

The recommendations seek to conserve significance and reduce the occurrence of adverse impacts. They are designed to help inform decision-making and create a transparent decision making process. The intentions of the recommendations outlined in this document are to:

- Provide guidance to the owners and managers of the Round House, regarding the significance of the place;
- Conserve the documented heritage values of Round House;
- To understand and prioritise conservation actions in a practical manner;
- To establish a monitoring and maintenance program to address and retard further conservation issues and deterioration of significant fabric; and
- To preserve the heritage values of Round House in accordance with best heritage practice.

Round House is impacted by the following factors:

- Prominent position on top of Arthur Head Reserve means the structure is subject to harsh environmental conditions including heat, wind and salt;
- Complex management responsibilities: owned by City of Fremantle but operated by Fremantle Volunteer Heritage Guides;
- Subjected to numerous phases of conservation works but as conservation standards and knowledge has developed, not all past actions are deemed to be appropriate in 2020. A number of these works have been reversed however there are still actions that need to be undertaken to ensure the on-going stability and viability of the place.
- Lack of on-going maintenance between conservation works resulting in further deterioration of significant fabric.

The Round House should be conserved with minimal change to its external and internal appearance and planning. The original use through retained fabric and interpretation and, as far as practicable, the original presentation of the place should remain as the key objective for the conservation of the place. Works and use should be guided by the recommendations



within the Conservation Management Plan and should not confuse or obscure the significance of the place.

The on-going management and conservation of Round House should take account of the fact that the place forms parts of a larger precinct at Arthur Head Reserve and should not be seen in isolation. Conservation of the fabric of Round House is a separate issue however the wider management of the place should be considered in a holistic manner for the entire Reserve.

The setting of the Round House should be maintained and conserved in a manner that retains and enhances the significance of the place, respecting the landmark qualities of the Round House and also respectful of the previous use and additional development that occurred at the Arthur Head Reserve including the Court House and Cottages.

The Round House is a place of recognised cultural significance that is open to the public on a daily basis. Whilst there is scope to introduce additional events within the Round House and its surroundings, these must be respectful of the original use and the emotions associated with the place. In considering additional uses of the place and managing the changes required for additional uses, if any, are to be guided by this Conservation Management Plan.

Detailed recommendations are included at Sections 7.0, 8.0, 9.0 and 10.0; the following key recommendations are reproduced here as the overall approach to the management of the Round House, Fremantle.

Recommendation 1.

The assessment of cultural heritage significance for Round House as described in section 5 of this Conservation Management Plan should be accepted as the basis for decision making about conservation, interpretation and future use of the place.

Recommendation 2.

The conservation recommendations established in this report should guide the future conservation and management of the place by owners and relevant authorities.

Recommendation 3.

This Conservation Management Plan should be reviewed by the owners of the Round House periodically to consider the continued applicability of the recommendations and to assess the manner in which they have been implemented.

Recommendation 4.

All works undertaken to conserve the place should be appropriate to the assessed significance of the place and should be guided and supervised by experienced conservation practitioners.

Recommendation 5.

Research into the place should continue and any new information should be made available to the owners and managers of the place for incorporation into updated conservation management plans and other relevant documentation.

Recommendation 6.

The policies, principles and processes of the Burra Charter should be followed to guide the on-going conservation and management of the Round House.

Recommendation 7.

The higher the level of significance of a zone or elements of the place, the greater the level of care required to ensure actions do not irreversibly harm it.

Recommendation 8.

Zones and elements identified as having exceptional significance must be retained and conserved.

Recommendation 9.

Zones and elements identified as having considerable significance should be retained and conserved. These elements may be modified in keeping with the overall aims of the conservation recommendations.



Recommendation 10.

Zones and elements identified as being of some significance should be retained and conserved where possible.

Recommendation 11.

Zones and elements identified as being of little significance may be retained, removed or altered depending on user requirements. If altered, change should occur in accordance with the conservation recommendations.

Recommendation 12.

Zones and elements identified as intrusive should be removed when no longer required or if impacting negatively on zones and elements of higher significance.

Recommendation 20.

The views of the Round House should be retained and not obstructed by development outside the Reserve or within the Reserve.

Recommendation 83.

The assessed significance of the place as defined within this Conservation Management Plan should be accepted as the basis for decision making about the conservation, interpretation and use of the place.

Recommendation 84.

Ownership of the place should remain with City of Fremantle and not transferred to private ownership.

Recommendation 85.

Any works requiring a development application must be submitted to the Western Australian Planning Commission (WAPC) and the City of Fremantle and accompanied by a Heritage Impact Statement outlining how the proposed works comply or diverges from the recommendations.

Recommendation 86.

Consideration should be given to nominating the place as a site of historic significance for Aboriginal people.

Recommendation 87.

Any future use should consider the how the use will impact on the significance of the place of historic significance for Aboriginal people.

Recommendation 88.

All works, unless exempt, must be referred to DPLH for advice. All applications must be accompanied by a heritage impact statement clearing assessing the potential impact/s of development on the documented significance of the place.

Recommendation 89.

If any major changes are proposed for the Round House and/or its immediate environs, pre-application advice from DPLH should be sought to ensure the best heritage outcomes.

Recommendation 90.

If City of Fremantle disposes of the Round House either by way of long lease or legal transfer of ownership, new owners will need to enter into a Heritage Agreement under the Heritage Act 2018.

Recommendation 91.

The Statement of Significance in the State Register Entry for this place should be revised to be consistent with the proposed Statement of Significance in this CMP.

Recommendation 92.

The City of Fremantle should prepare documentation to nominate the Round House for inclusion on the National Heritage List and forward it to the Australian Heritage Council for assessment.

Recommendation 93.



Where compliance with statutory requirements have the potential to have an adverse impact on the significance of the place the works should be assessed against the statement of significance and conservation recommendation established in the Conservation Management Plan. Advice from heritage architects is required.

Recommendation 94.

In any future use of the place, all aspects of its history as a place of incarceration, place of residence and as a museum must be considered and reflected in its use and presentation. The introduction of new uses should not obscure the significance of the place.

Recommendation 95.

Where an alternative use is being considered the degree of change to accommodate this use must be taken into account.

Changes that damage significance should not be undertaken.

New uses should be compatible with the structural capabilities of the Round House.

Uses that result in harmful changes would not be considered as compatible uses and should not be adopted.

Recommendation 96.

Any minimal change to accommodate a new use should be reversible and the original intent of the place should not become obscured by such changes.

Installation of new services should be minimal and limited to fixings on non-original fabric and re-using existing penetrations and fixings within the structure.

Recommendation 97.

A photographic archival record of the place, including any existing interpretation, should be prepared prior to any changes occurring.

Recommendation 98.

Alternative use of the Round House should not exclude public access.

Recommendation 99.

No new permanent development should occur that will impinge on significant views or distort the understanding of the place, see Section 7.3 Recommendations relating to the setting of the place, above and Section 10.4.5 of the Arthur Head Reserve Conservation Plan 2011.

Recommendation 100.

Where development is being considered, it should be limited to temporary structures that complement the primary function of the Round House as a tourist destination.

Recommendation 101.

New development should be contemporary in design and can be easily removed. The structure/s should be completely detached from the Round House.

Recommendation 102.

Any temporary development of the open space to the south of the Round House must take the archaeological potential of the wider reserve into consideration and follow the advice of professional archaeologists prior to any ground disturbance works being implemented. See section 7.5 above and section 10.6.1 Land Based Archaeology in the Arthur Head Reserve Conservation Plan 2011.

Recommendation 103.

A record of all actions affecting the place should be maintained and all stakeholders should be made aware of it. The record should be carefully managed, and public access should be supervised.

Recommendation 104.

The conservation, interpretation and management of the place should provide for the participation of people/groups of people for whom the place has significant



Round House, Fremantle - Conservation Management Plan

2020

associations and meanings or who have social, spiritual or other cultural ties to the place. This should be an ongoing process for the future management of the place.

Recommendation 105.

Owners/managers of the Round House should consult the community and stakeholders on major developments affecting the place.

Recommendation 106.

Conservation, interpretation and management of the place should make use of all knowledge, skills and disciplines that can contribute to the conservation and understanding of the place including subject experts and community members. The social significance of the Round House to the community is an important consideration.

Recommendation 107.

The conservation, interpretation and management of the place is an opportunity to build relationships between the stakeholder groups for the benefit of this place and others in the City of Fremantle.

Recommendation 108.

Aboriginal Engagement should apply the processes adopted by the City of Fremantle and refer to the Walyalyup Reconciliation Action Plan (WRAP).



Page | 15

1.0 INTRODUCTION

1.1 BACKGROUND

The City of Fremantle engaged Hocking Heritage + Architecture and their specialist sub consultants to prepare a Conservation Management Plan for the Round House to guide the management and development of the place. Although included on the State Register of Heritage Places in 1993 and the subject of many reports and studies, the nature and sequence of works undertaken at the Round House has not been clearly determined.

It is the purpose of this Conservation Management Plan to identify, where possible, the nature and extent of all works to the building, where this cannot be determined it will be noted for further research. The overriding purpose of these physical and documentary investigations is to determine why some programs of work have been successful and why others have failed. It is widely accepted in heritage practice that cement mortars and renders are ultimately damaging to masonry and at the Round House past practices demonstrate this relationship. However, there is inconsistency in the condition of the stone and mortar at the Round House. To gain a greater understanding of the physical factors influencing failure of the mortar, sampling of selected mortars has been undertaken.

The City of Fremantle are committed to best practice in conservation works and best practice begins with the best information available to inform the conservation policy.

1.2 METHODOLOGY

The methodology adopted for this report is based on that set out in James Semple Kerr's *The Conservation Plan* (Australia ICOMOS, 7th edition, 2013), the Australia ICOMOS Burra Charter (2013) and the State Heritage Office (fmr.) publication 'An Information Guide to Conservation Management Plans' (January 2013).

Since the preparation of the State Heritage Office Guidelines for the preparation of Conservation Management Plans the *Heritage Act 2018* has been passed. The new Act includes the adoption of the HERCON Criteria for the assessment of the significance of heritage places. These criteria have been used in this Conservation Management Plan in accordance with current standards.

Site visits were made to the Round House in late 2019 and early 2020 by members of the study team.

1.3 STRATEGIC OBJECTIVES OF THE CONSERVATION MANAGEMENT PLAN

This Conservation Management Plan has been developed in accordance with current best practice heritage management. Conservation of a site requires:

- Conservation of building fabric
- Interpretation of the cultural heritage significance of the place
- Consultation with stakeholders and the local community
- Compliance with statutory requirements

Effective management of the place is a combination of all the above requirements. The strategic objectives of the Conservation Management Plan and the resultant management of the Round House should:

- Conserve the fabric and significance of the Round House for current and future generations;
- Interpret the cultural significance of the Round House in thought provoking and engaging ways that do not harm the fabric of the place;



- Manage the place in accordance with sound governance principles; and
- Ensure the local community and key stakeholders are part of the conservation and management process.
- To identify, summarise and analyse relevant conservation reports, conservation drawings etc. to collect all information relevant to the conservation of the place in one document.

1.4 RECOMMENDATIONS

The Conservation Management Plan seeks to establish a range of recommendations to help guide on-going management of the place.

The recommendations have been derived from the assessed cultural significance of the place and seek to reinforce the strategic objectives set out above. All proposed and actual works should be consistent with the recommendations set out in this report and not damage the significance of the Round House. It is not feasible that all proposed works will be consistent with all recommendations however all actions must still result in a good heritage outcome.

The recommendations seek to conserve significance and reduce the occurrence of adverse impacts. They are designed to help inform decision-making and create a transparent decision making process.

1.5 STUDY TEAM

- Gemma Dewar, Hocking Heritage + Architecture
- Prue Griffin, Hocking Heritage + Architecture
- Fiona Hook, Archae-aus
- Kate Evans, Archae-aus
- Simon Jewell, Atelier JV
- Liam Holloway, MeND
- Geron Deutsch, MeND
- Andrew Baranowski, planE

1.6 ACKNOWLEDGEMENTS

- Keith Fragomeli, City of Fremantle
- Gena Binet, City of Fremantle
- Mark Welsh, Fabrik
- Gina Pickering, Latitude Creative Services
- Steve Errington, Fremantle Volunteer Guides
- Stewart Alger, City of Fremantle
- Fremantle Volunteer Heritage Guides

1.7 STUDY AREA

The Round House is one of 11 buildings located at Arthur Head Reserve, which is located at the western end of High Street between the South Mole of Fremantle and the Fishing Boat Harbour as depicted at Figure 1.



Figure 1: Arthur Head Reserve, 2019
Courtesy Landgate 2019

The extent of the study area shown below has been determined by the City of Fremantle and includes the Round House, 1830s steps to High Street, time gun, platform and the immediate surrounds. This study area has been chosen to focus resources. The Round House is one element of the larger reserve and the social, historic and physical context, and the wider context of the townscape of Fremantle.¹

¹ Arthur Head Reserve was the subject of a conservation management plan prepared in 1999, which discussed the context of the site. See Naomi Lawrence Architecture + Heritage. (1999). *Arthur Head Reserve, Fremantle - Conservation Plan DRAFT*. City of Fremantle



Round House, Fremantle - Conservation Management Plan

2020



Figure 2: Extent of Study Area

1.8 HERITAGE LISTINGS

Place Number 00896 Round House and Arthur Head Reserve

Listing	Level	Date
State Register of Heritage Places	Interim	-----
	Permanent	19 Nov 1993
Classified by the National Trust	Classified	2 Nov 1967
Register of the National Estate	Permanent	21 March 1978
City of Fremantle Municipal Heritage Inventory, Category 1A	Adopted	18 Sep 2000
City of Fremantle Heritage List LPS No. 4	Adopted	8 March 2007

The Round House and Arthur Head is not a registered Aboriginal Heritage Site and is open for access under the *Aboriginal Heritage Act 1972*.

Arthur Head is recorded in the Department of Planning Lands and Heritage as an 'Other Heritage Place' in the Aboriginal Heritage Inquiry System ID3774.



1.9 DEFINITIONS AND ACRONYMS

The terms used in this Conservation Management Plan are those employed in the ICOMOS Burra Charter and other terms relevant to heritage practice in Western Australia.

Adaptation means modifying a place to suit the existing use, or a proposed use

Association means the special connections that exist between people and a place

Burra Charter The Australia ICOMOS charter for places of cultural significance

Compatible Use means a use which respects the cultural significance of a place. Such a use involves no, or minimal, impact on cultural significance

Conservation means all the processes of looking after a place, so as to retain its cultural significance

Cultural significance means aesthetic, historic, scientific/research, social or spiritual values, for past, present and future generations. Cultural significance is embodied in the place itself, its fabric, setting, use, associations, meanings, records, related places and related objects

DPLH means Department of Planning, Lands and Heritage, it undertakes the service delivery and day to day operations of the Heritage Council of WA.

Fabric means all the physical material of the place including components, fixtures, contents and objects

HCWA means the Heritage Council of WA which is the State Government's advisory body on heritage

HERCON means the Heritage Convention model criteria developed at the National Heritage Convention (HERCON) in Canberra, 1998.

ICOMOS International Charter for the Conservation and Restoration of Monuments and Sites

Interpretation means all the ways of presenting the cultural significance of a place

Maintenance means the continuous protective care of the fabric and setting of a place and should be distinguished from repair.

Meanings denotes what a place signifies, indicates, evokes or expresses.

Place means the site, area, land, landscape, building or other work, group of buildings or other works, and may include components, contents, spaces and views

Preservation means maintaining the fabric of a place, in its existing state, and retarding deterioration

Reconstruction means returning a place to a known earlier state and is distinguished from *restoration* by the introduction of new materials into the fabric

Repair involves the restoration or reconstruction of a place

RHP Register of Heritage Places administered by Heritage Council

Related Object means an object that contributes to the cultural significance of a place but is not actually at that place

Related Place means a place that contributes to the cultural significance of another place

Restoration means returning the existing fabric of a place to a known earlier state by removing accretions, or by reassembling existing components, without the introduction of new material

Setting means the area around a place which may include the visual catchments

Use means the function of a place, as well as the activities and practices that may occur at such a place



2.0 DOCUMENTARY EVIDENCE

The following historical overview of the Round House is not a comprehensive history of the Fremantle Round House or the history of settlement of Fremantle. These topics can be found in detail elsewhere.² The purpose of this history is to describe the changes to the physical fabric of the place and the reasons for change if known and place these changes within a historical context. Additional primary research has been undertaken where necessary to supplement the current available information. Acknowledgement is extended to the many individuals and organisations who have previously undertaken considerable research into the history of the Round House.

Particular thanks are extended to Steve Errington of the Fremantle Volunteer Guides who generously shared the outcomes of his extensive research into the history of the Round House.

Thanks also to all members of the Fremantle Volunteer Guides who oversee the Round House every day and have a wealth of stories about the Round House which they are keen to share with visitors.³

Note: Many of the early documents use the spelling 'gaol' for 'jail'. While perfectly acceptable the spelling 'jail' has been used in this document, except when a direct quote or proper noun is included.

2.1 GEOLOGICAL BACKGROUND

Fremantle is located within a coastal limestone belt that runs parallel to the seashore and extends inland approximately 5 kilometres. The outcrop of limestone forming the Arthur Head Reserve and on which the Round House now stands was, in 1829, a prominent headland which together with a separate smaller limestone headland on the north bank of the Swan River (Rous Head) formed low cliffs either side of the entrance to the river.⁴ A rock bar present across the entrance was a continuation of this cliff formation.

The following technical description of the geology of the headland describes three main geological units.

The limestone from which Arthur Head Reserve is formed is part of the Tamala Limestone Formation. It is primarily a calcarenite formed from calcium carbonate rich wind-blown dune sands that have transformed into stone. The exposed limestone of the Arthur Head Reserve has been modified through post-depositional processes and now presents as three distinct lithologies. Indeed, three distinct geotechnical units (units defined by their engineering characteristics and mechanical behaviour) are caprock, zone of roots and cross-bedded aeolianite. The characteristics of these three units are evident to the observer on the lower levels.

Caprock - The uppermost lithological unit is typically about 1.5 m thick and can be seen in the cliff faces. Caprock is very much stronger and less permeable than some of the other Tamala Limestone lithologies and typically has a rock strength of High to Very High.

² Several volumes have been written on the history of Fremantle. See *A Place of Consequence: A Pictorial History of Fremantle*, R. Reece and R. Pascoe, 1985, for a good summary.

³ Fremantle Volunteer Guides are on site at the Fremantle Round House every day except Christmas Day and Good Friday.

⁴ Information provided by CMW Geosciences, 2018.



Zone of Roots - In forming a caprock the limestone immediately beneath it is depleted of calcite and as a result is highly prone to weathering and erosion. Where this material is exposed in cliff faces, wind and rain have resulted in large undercuts, cavities and has created an overall vuggy⁵ texture to the limestone. Much of this erosion has taken place since quarrying ceased and as such the larger cavities have occurred in the last 100-150 years. The situation at Arthur Head is therefore dynamic and conditions will continue to change in even a short time frame.

The calcite depleted zone is further complicated by thin tubular cementation that has resulted through the action of tree roots. Occasionally a large root, likely the tap root of a Jarrah or Tuart tree, forms a calcite lined tube and when exposed this becomes a calcrete lithified column. The lithified roots are referred to as Rhizocretions and the zone beneath the caprock through which roots penetrate below the original ground surface is referred to as the 'zone of roots'.

Cross Bedded Aeolianite - The lower part of the cliffs around the western tunnel portal are aeolianites that have been unaffected by caprock formation or the variable lithification associated with the 'zone of roots' and calcite depletion. The aeolianite displays distinct cross-bedding. The cross-bedding, reflects the original dune system.⁶

The extent of the original headland can be seen below at Figure 3, which shows the cliffs abutting the waterline.

From the earliest days of European settlement, the quarrying of the headland for building material changed the geography of the headland. The development sequences at Figure 4 and Figure 5 demonstrate how the headland has reduced in size through quarrying. The last program of quarrying was undertaken in the mid-1960s.

Quarrying of rock from the headland not only diminished the size of the headland but also exposed the weaker limestone beneath the capstone to erosion and weathering.

⁵ 'Vuggy' is a term used to describe rock that contains cavities, voids or large pores which are often lined with crystals.

⁶ Information provided by CMW Geosciences, 2018



Round House, Fremantle - Conservation Management Plan

2020



Figure 3: Plan showing Arthurs Head, 1846.
Courtesy SROWA, Cons 3850_Item_18a_b 1846

Round House, Fremantle - Conservation Management Plan

2020

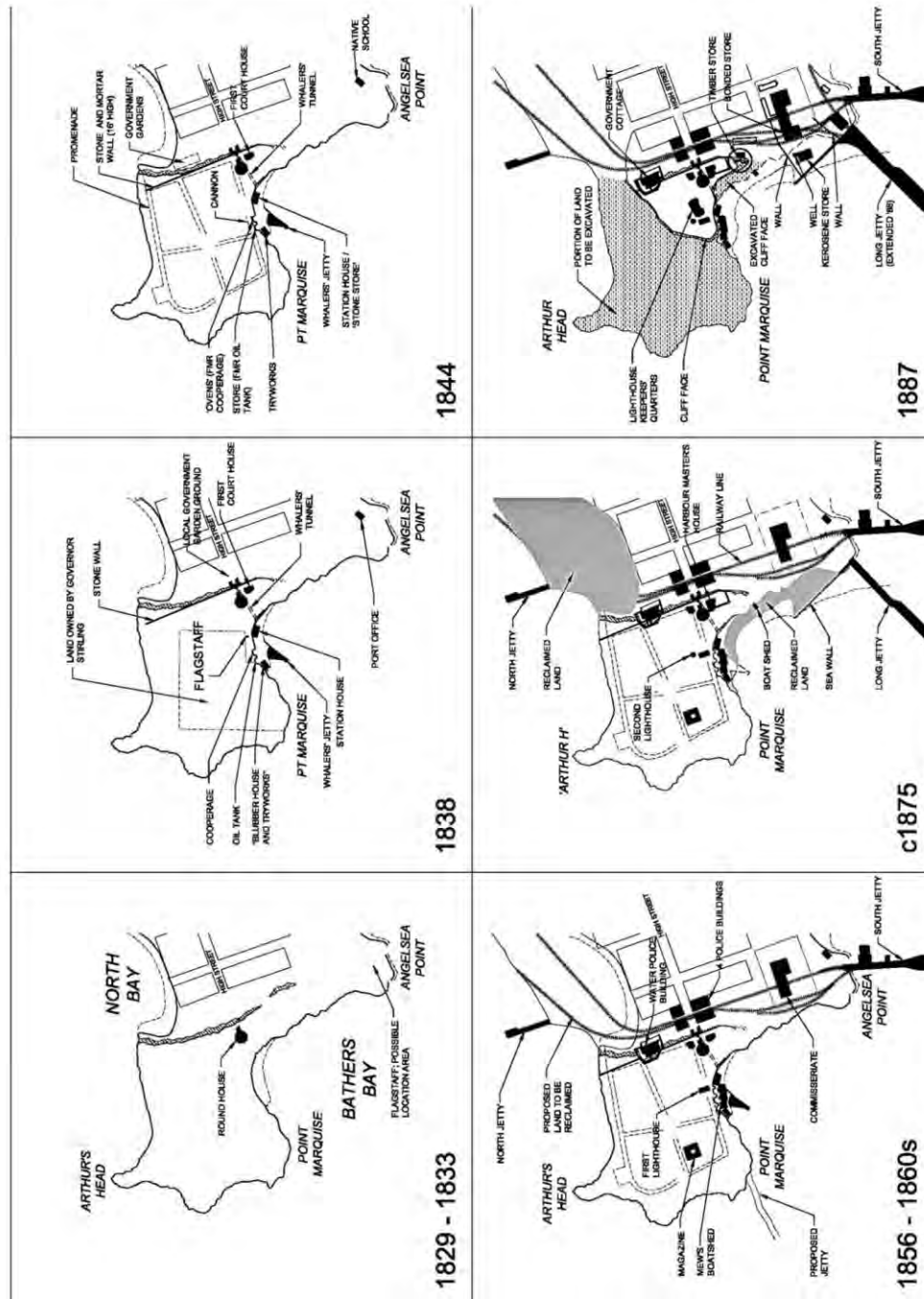


Figure 4: Development Sequence, Arthur Head Reserve, 1829-1887
Courtesy Philip Griffiths Architects Arthur Head Conservation Plan, June 2011

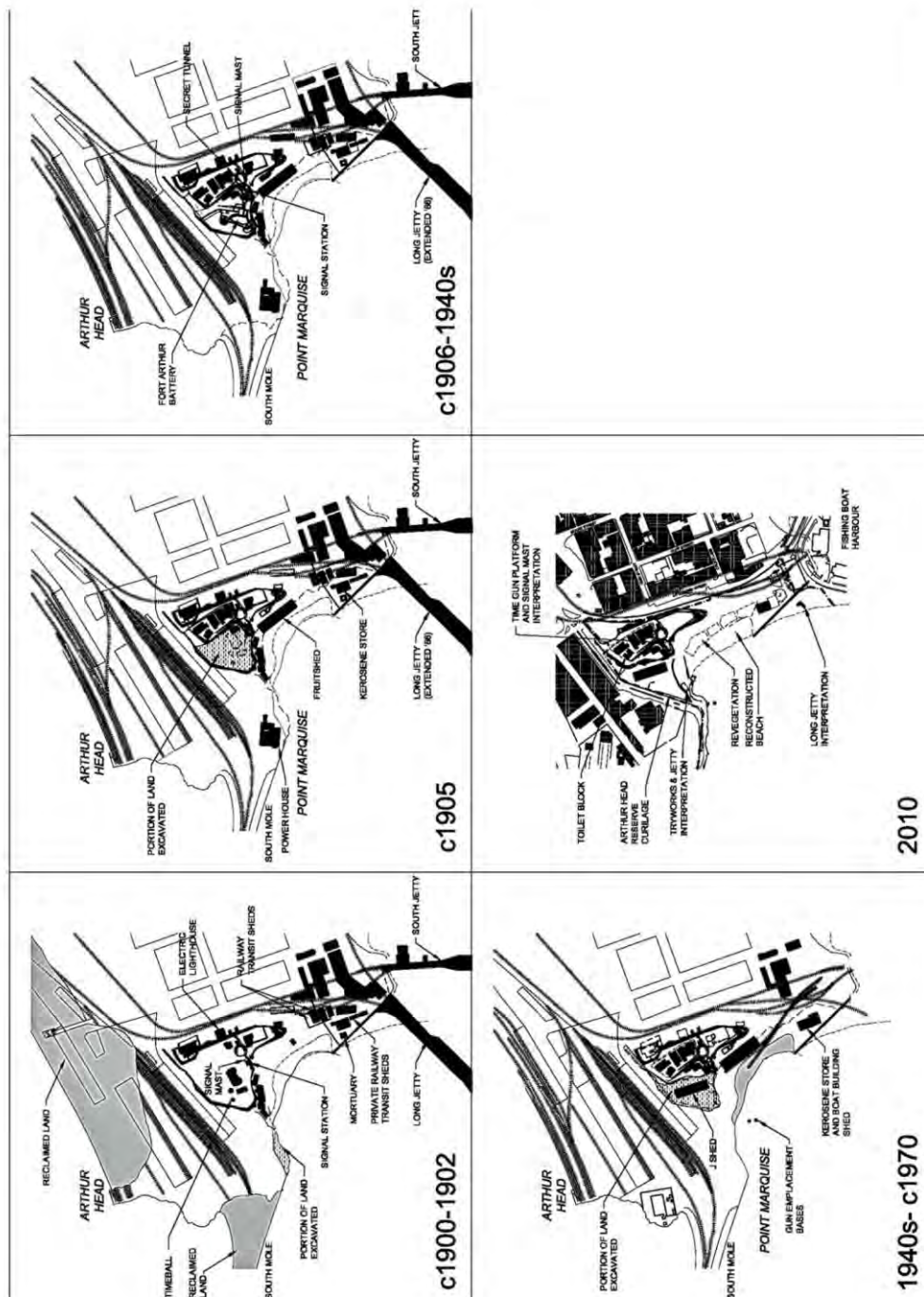


Figure 5: Development Sequence, Arthur Head Reserve, 1900-2010
Courtesy Philip Griffiths Architects Arthur Head Conservation Plan, June 2011

2.2 PRE 1829⁷

The south west of Western Australia is the 'boodja' (country) of the Noongar people and Whadjuk is the name of the dialectal group of the greater Perth metropolitan area.



Figure 6: Map showing extent of the Whadjuk Noongar Region.
Courtesy Kaartdijin Noongar website, <https://www.noonaarculture.org.au/whadjuk/> accessed Jan 2020

Within the Whadjuk language group were areas associated with particular leaders. Fremantle is located within Beeljar, the country of Midjegooroo, the boundaries of which are described by Lyon (1833) as follows.

*'Beeljar, the district of Midjegoorong, [also spelt Midgegooroo] is bounded by Melville water and the Canning, on the north; by the mountains on the east; by the sea on the west; and by a line, due east, from Mangles Bay, on the south. His headquarters are Mendyarrup, situated somewhere in Gaudoo [Candoo].'*⁸

The coastal limestone belt in which Fremantle is located is known as Boyeembara or the 'division along the coast, consisting principally of lime-stone rock; and generally bearing the xanthorea [sic], and a few of that species of the eucalyptus, called white gum.'⁹ The word 'boyee' or 'Bo-ye' refers to stone or rock.¹⁰

⁷ The information in this section has been largely taken from an article prepared by archaeologists Ken Macintyre and Dr Barb Dobson for Fremantle Ports in 2009 and reproduced in website 'Anthropology from the Shed'. Acknowledgment is extended to those authors. <https://anthropologyfromtheshed.com/project/map-pre-contact-indigenous-fremantle/> It is understood that other sources show variations of spellings or slight differences in interpretation. Every effort has been made to achieve consistency where possible.

⁸ Lyon 1833 in Green, N. *Broken Spears: Aboriginals and Europeans in the southwest of Australia*, Cottesloe, Focus Education Services, 1979, p. 177.

⁹ Lyon 1833 in Green, N. *Broken Spears: Aboriginals and Europeans in the southwest of Australia*, Cottesloe, Focus Education Services, 1979, p. 176.

¹⁰ Ibid.

The area to the north and south of the mouth of *Derbal Yaragan* (Swan River) is known as *Walyalup*, or place of the walyo or woylie and aligns with current day Fremantle.¹¹ The crossing point *Matta Gerup* between the north and south banks of the river was at the end of a sandy promontory extending into the estuary leaving a shallow channel which could be crossed at certain times of the day.



Figure 7: Portion of 1841 survey by Stokes
Courtesy SROWA Cons 3844 Item 311
Note the sandy promontory east of Fremantle making a river crossing point

Prior to the arrival of the European settlers in 1829, *Walyalup* was a place for camping, food gathering, hunting, and fishing in the abundant shallow waters. Some sources suggest that it was most frequently occupied in the summer months.¹²

As the location of an important crossing point, *Walyalup* was at the junction of three major *bidi* or pathways, for groups from the north, south and east. It is not surprising that the sheltered area east of Arthur Head and west of Cantonment Hill was known as *Manjarup*, or meeting place.

Sites associated with aboriginal occupation within *Walyalup* can be assumed to be numerous although not all are recorded. The Department of Aboriginal Affairs maintains a register of sites on their online database, the Aboriginal Heritage Inquiry System (AHIS). This database records Registered Sites and Other Heritage Places. Under the *Aboriginal Heritage Act 1972* (AHA) a 'Registered Site' is defined as a place or an object which has been assessed as a site under Sections 5 and 39 of the AHA and 'Other Heritage Places' are those place or objects which have been recorded but not assessed. Arthur Head has been recorded as an "Other Heritage Place" ID3774.

¹¹ This origin is from the City of Fremantle, *Walyalup Reconciliation Action Plan, 2019-22*, p. 7. Other origins refer to 'place of the lungs' by Macintyre and Dobson; or 'place of the eagle' in, Hughes-Hallett, D. *Indigenous history of the Swan and Canning Rivers*, A project with the Swan River Trust, 2010, p. 20.

¹² O'Connor and Thomson, 'Report on an Investigation into the Aboriginal Heritage of the Arthur Head Area, Fremantle', June 1984, p. 6.

In her writings, Daisy Bates recorded Arthur Head as being a camping place for the Whadjuk Noongar. It was a logical site for camping with a fresh water spring and the high ground of the headland providing excellent views of travellers and game.¹³

The spiritual connection between Arthur Head and the Whadjuk Noongar continues. The City of Fremantle Walyalup Reconciliation Action Plan notes that:

*Fremantle is a place of ceremonies, significant cultural practise and trading. Walyalup has several significant sites and features in many traditional stories. It is a place that has strong, social, spiritual, cultural and historic significance.*¹⁴

With the arrival of settlers in 1829, the life of the Noongar people was irrevocably and harmfully impacted. Numerous deaths occurred because of conflict, lack of access to traditional food sources and the devastating effect of diseases to which the Aboriginals had no natural immunity. Relationships with the land were all but destroyed through expansion of European settlement.¹⁵ The role of the Round House in the breakdown of the social and spiritual existence of aboriginal people in Western Australia is profound.

As described previously, Midgegooroo was the leader of the Whadjuk Noongar in the Beeliar region and his family in 1830 are believed to have consisted of at least two wives and at least four sons, Yagan, Narral, Billy and William. Midgegooroo and Yagan played significant roles in the early years of colonisation as they have been described as consistently in opposition to colonisation.¹⁶

2.3 1829 SETTLEMENT OF THE SWAN RIVER COLONY

On behalf of the British Government, Captain James Stirling surveyed and explored the region in 1827, naming physical features and sending positive reports back to his superiors. *Derbal Yaragan* was named the 'Swan River' and the southern promontory at the entrance to the river named 'Arthur's Head' in honour of George Arthur, Governor of Van Diemen's Land. When Stirling returned with his party of settlers in 1829, Arthur Head was the site at which Captain Fremantle first raised the Union Jack.¹⁷

The first twelve months of the colony was challenging for the settlers with limited supplies and delays in the allocation of grants. By the end of 1829, many settlers were weary of the delays and discomfort. Most were still in tents in Fremantle and 'some drowning their disappointment in the grog tents'.¹⁸ As the administrative and military head of the new colony, Governor James Stirling needed to maintain order in the settlement.

¹³ Macintyre, Ken; Dobson, Dr Barb 'Pre-contact indigenous Fremantle', in Anthropology from the Shed, February 2018 <https://anthropologyfromtheshed.com/project/map-pre-contact-indigenous-fremantle/> accessed December 2019.

¹⁴ Walyalup Reconciliation Action Plan 2019-2022, City of Fremantle, p. 7.

¹⁵ Green, *Broken Spears*, pp. 186-188.

¹⁶ South West Aboriginal Land & Sea Council, 'Yagan', in Kaartdijin Noongar – Noongar Knowledge, 2020, <https://www.noongarculture.org.au/yagan/?searched=yes>

¹⁷ The reasons for the settlement at the Swan River have been the subject of considerable scholarly research by others. It is not the intention of this document to present this history. The biography of James Stirling by Pamela Statham-Drew has been a valuable reference for the context around the building of the Round House. Statham-Drew, P. *James Stirling Admiral and Founding Governor of Western Australia* UWA Press, 2003, p. 131. See also quote of official correspondence from Captain Fremantle 2 May 1829 in Round House Report Long, Document 51 compiled by Debby Cramer, Arthur Head Compendium, City of Fremantle Local History Collection, p. 17.

¹⁸ Statham-Drew, P. *James Stirling Admiral and Founding Governor of Western Australia* UWA Press, 2003, p. 156.



Stirling's management was in line with his experience as a naval commander and knowledge gained in the colony of New South Wales. He was keen to separate civilian affairs from military intervention and to this end, on 4 December 1829, he appointed 'a body of constables to' to assist 'Justices of the Peace' or magistrates whom he had chosen from among the 'most reputable' of the settlers.¹⁹ This was the foundation of Western Australia's Police Force. The Chief Constable of this group was local businessman Richard Lewis who operated a retail and wholesale store in Fremantle.²⁰

Whilst Perth was the capital of the new colony, the port of Fremantle continued to be the administrative hub where most people were located.

In May 1830, Stirling arranged to rent the wreck of the *Marquis of Anglesea*, wedged on the shore south of Arthur Head, for use as a Fremantle office for the Governor and his officials and as a jail for the many drunk and disorderly cases tried by the magistrates.²¹ On occasion, the most challenging prisoners were sent to New South Wales or Tasmania, as the facilities at the Swan River Colony were basic.²² While not a Penal Colony before 1850, the Swan River Colony was part of the wider convict transportation system overseen by the Colonial administration.

The limitations of the *Marquis of Anglesea* as a viable prison lead to a call for tenders for the construction of a jail at Arthur Head to a design by the colonial engineer Henry Reveley.

In August 1830, the contract was awarded to local businessman and Chief Constable, Richard Lewis (1804/5-1841) who submitted a price of £1840 to build 'a prison or building according to certain plans drawn by Mr Reveley, to finish the same in a masterlike manner on Arthur Head.²³ Lewis gave a second price of £1890.10.6 to build the structure 'on the plain', presumably the flat land at the base of the cliff.²⁴ The additional cost to build the structure on the plain was most probably a consequence of the costs associated with relocating the stone from Arthur Head. Lewis had a partner in this venture, designated as 'Ferres'.²⁵ Previous sources have stated this was John Ferres 'a solicitor by calling and a contractor for lack of briefs'.²⁶ It is probable that he was assisted by his brother Robert Ferres (1809-1860s) who had more applicable skills as a mason, builder and limeburner.²⁷

2.4 1830 - 1831 CONSTRUCTION OF THE ROUND HOUSE

Henry Willey Reveley (1788-1875) was the son of Willey Reveley an English architect who assisted prison reformer Jeremy Bentham in the design of his Panopticon prison. Henry Reveley was

- ¹⁹ Statham-Drew, P. *James Stirling Admiral and Founding Governor of Western Australia* UWA Press, 2003, p. 156.
- ²⁰ Errington, Steve 'Fremantle 1829-1832: an illustrated history' in *Fremantle Stuff* website <https://fremantlestuff.info/index.html> accessed November 2019.
- ²¹ Statham-Drew, P. *James Stirling Admiral and Founding Governor of Western Australia* UWA Press, 2003, p. 177.
- ²² Letter from Stirling to General Darling, Lieutenant-Governor of NSW as quoted in Round House Report Long, Document 51 compiled by Debby Cramer, Arthur Head Compendium, City of Fremantle Local History Collection, p. 21.
- ²³ Letter from Richard Lewis to Peter Brown Colonial Secretary 11 August 1830, included as Extract from CSO Records July 20 to Sept 30 1830, in File 1922/2898, Arthur's Head Old Round House Fremantle - Preservation Of, Cons 689, Folio 42, SROWA.
- ²⁴ Ibid.
- ²⁵ Public Works Department File 2898/22. Battye Library. Acc. 689, as quoted in Round House Report Long, Document 51 compiled by Debby Cramer, Arthur Head Compendium, City of Fremantle Local History Collection, p. 22.
- ²⁶ Early Days, October 1938, p. 38, as quoted in Round House Report Long, Document 51 compiled by Debby Cramer, Arthur Head Compendium, City of Fremantle Local History Collection, p. 22.
- ²⁷ Letter from Henry Reveley to Colonial Secretary 23 August 1830, copy Extract from CSO Records July 20 to Sept 30 1830, in File 1922/2898, Arthur's Head Old Round House Fremantle - Preservation Of, Cons 689, Folio 48, SROWA. See also Erickson, Rica *Dictionary of Western Australians*, Vol II, p. 1040.



Round House, Fremantle - Conservation Management Plan

2020

educated in Italy as an engineer and moved in an elite and educated circle. He joined the *Parmelia* on its voyage to the Swan River at the Cape Colony [South Africa] where he had been employed as chief engineer and superintendent of buildings. Stirling invited Reveley to join his party and appointed him Chief Engineer, an office he held from 1829 to 1838.²⁸

Reveley oversaw the design and construction of all public works in the colony, including buildings, jetties, roads, bridges and footpaths. The design of the Fremantle Jail with twelve sides is the most striking of his designs and observers have commented on the discernible influence in the form of the Fremantle Jail with the Bentham's panopticon principles. A key element of these principles is that a warder near the centre of the building would be able to see into any open cell from that point.²⁹ The Fremantle Jail does not achieve this ambition but the influence of the panopticon principals on the unusual design can be seen.

No plans of the current design of the Fremantle Jail remain however an earlier, grander plan has survived. It features central rooms and separated exercise areas. (See Figure 8)

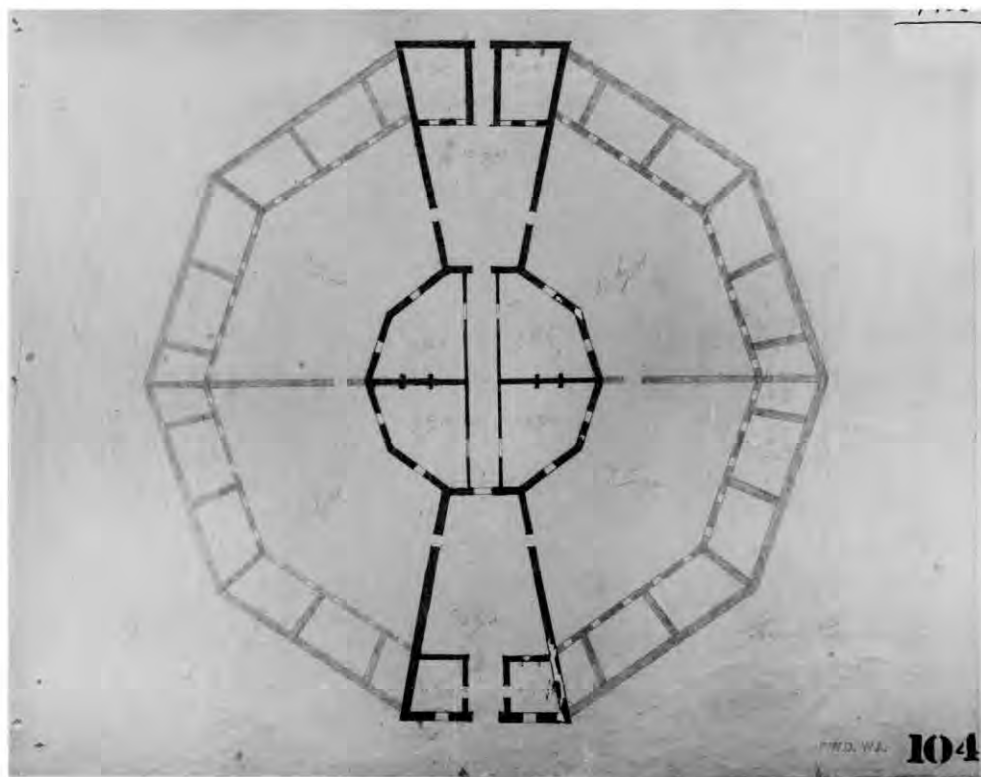


Figure 8: Plan of Fremantle Jail, undated.
 Courtesy SROWA Plan PWD 104.

²⁸ Ray Oldham, 'Reveley, Henry Willey (1788–1875)', *Australian Dictionary of Biography*, National Centre of Biography, Australian National University, <http://adb.anu.edu.au/biography/reveley-henry-willey-2587/text3547>, published first in hardcopy 1967, accessed online 10 March 2020.

²⁹ Wood, David, 'Round House' Arthur Head Reserve Brochure, City of Fremantle, February 1990; 'Henry Willey Reveley b. c.1788', Design and Art Australia Online, 1992, 2012, <https://www.daaa.org.au/bio/henry-willey-reveley/biography/>, accessed December 2019.

A sketch for proposed later additions show the original twelve sides and main elevation. (See Figure 13)

The Fremantle Jail, which soon became known as the 'Round Jail' or 'Round House' because of its shape; had eight cells, two privies (within one of the sections), kitchen, entry and jailer's quarters (or wardroom). A bakehouse was located under the landing of the front entrance steps as part of the initial construction.³⁰

On September 1st 1830, Reveley reported that;

*The contractors for the erection of the Jail at Fremantle have cleared the foundation and laid the first stone. They have also a large quantity of materials, and have hitherto carried on the work in every respect with vigour and energy.*³¹

Construction progressed rapidly and the prevailing view from later geological studies is that the hard, darker coloured capstone from the surface was supplemented with less robust stone from the site or nearby. Gordon Geological Consultants also note in their 1999 report that the external walls used the capstone and the inner walls were constructed from the softer stone.³²

On 13 October 1830, Reveley submitted an estimate for the roof of the jail. The most expensive item was the 'Weather Board 8 Inch' which accounted for £35.15.0 of the total estimate of £56.³³ Originally, the entire roof was flat and Le Page writes that this was a penchant of Reveley's repeated in other examples in the colony. The method of roof cladding was to lay wooden boards over the space then cover them with lime mortar and apply successive coats of oil to waterproof the covering.³⁴ This method of cladding Campbell states has some similarities with South African techniques Reveley would have seen during his tenure at the Cape.³⁵

The Yorkshire flagstones in the entry were brought to the colony in a ship's ballast.³⁶ The floors of the cells were natural stone levelled with limestone concrete while the kitchen and the room to the left of the entry were suspended timber floors.³⁷ No details have been found in current research as to the form and detail of the original doors and windows.

A letter from Richard Lewis on 30 December 1830 refers to the delay in procuring timber, which was holding up the project 'had we the timber down it would be finished in 3 days'.³⁸ This is likely to refer to the large quantity of timber needed for the roof cladding.

³⁰ The bake house has been concluded to have been built as part of the original construction because the chimney is located within one of the pillars of the Round House walls. See Lawrence and Kent discussion on this topic.

³¹ As quoted in Le Page, *Building a State*, p. 10.

³² Gordon Geological Consultants 'Formation, Usage, and Conservation of Arthur Head', 1999, p. 18.

³³ CSO, CSR Vol, 9/65 designated AH 1017, as quoted in Round House Report Long, Document 51 compiled by Debby Cramer, Arthur Head Compendium, City of Fremantle Local History Collection, p. 23.

³⁴ Le Page *Building a State*, p. 10.

³⁵ Campbell, *The Round House*, Report No. 2, 1973, p. 4.

³⁶ Le Page, *Building a State*, p. 10.

³⁷ Campbell, R. McK 'A First Draft Conservation Management plan: The Roundhouse and Arthur Head Fremantle', 1984.

³⁸ Letter from Richard Lewis to Peter Brown Colonial Secretary, 30 December 1830, Extract from CSO Records July 20 to Sept 30 1830, in File 1922/2898, Arthur's Head Old Round House Fremantle – Preservation Of, Cons 689, Folio 45, SROWA.



Construction of the Round House was completed by 18 January 1831 and Henry Reveley recorded the completed contract price was £1603.10.0, less than the tendered amount.³⁹ Interestingly in a letter to the Colonial Secretary, Lewis stated that 'the cask of rum' owed to him as part of the contract could be delayed.⁴⁰

Almost immediately, there were problems with the roof leaking. On 27 March 1831, some ten weeks after its completion, the Deputy Harbour Master, Daniel Scott, complained to the Colonial Secretary that the 'the rain is coming through the roof of the Jail so much and there isn't a dry cell in the place'.⁴¹

Reveley was reluctant to admit that the roof design was at fault, blaming poor workmanship and the extremes of the weather. His recommendation was that the roof be covered with shingles, it is not clear if this refers to timber or stone shingles. Lawrence states that the initial repair of the roof consisted of laying limestone slabs over the boards and finishing with more coats of lime mortar.⁴² Issues with leaks continued until at least 1836 when Reveley stated the problems were resolved.⁴³

Another change to the building shortly after its completion was the lining of one cell. In May 1831, Reveley received a request from the Colonial Secretary to prepare a strong cell in the jail, as a lunatic needed to be housed. He replied on 11 May that it would be 'a few days still' before the cell was ready for the 'unfortunate lunatic'.⁴⁴ In the same letter to the Colonial Secretary, Reveley recommended that the insides of the cells be plastered as 'the walls are built of rough quarry stones, according to the terms of the original contract ... and are not therefore fit for daily use unless they are plastered'.⁴⁵ It is not known which cell had the timber lining.

A reference, in April 1832 to the shrinkage of the timber in the strong cell indicates the lining of one cell had occurred.⁴⁶

2.5 PRISONERS AND PRISON LIFE

In early 1831, the first prisoners were moved into the Round House under the control of jailer Henry Vincent (1796-1869). The jailer's quarters were within the Round House, either the room to the left on entry, or as Errington proposes, one of the cells.⁴⁷

Henry Vincent lived in the Round House with his wife Louisa, nee Hume who he married in October 1831. The Round House was their first home, they had the first of their six children after they moved from the Round House.⁴⁸

³⁹ Le Page, J. S. H *Building a State The Story of the Public Works Department of Western Australian 1829-1985*, Water Authority of Western Australia, p. 8.

⁴⁰ Ibid.

⁴¹ Letter from Deputy Harbour Master, Daniel Scott to Peter Brown Colonial Secretary, 27 March 1831, CSO, CSR Vol. 13/219, designated AH 1159, as quoted in Round House Report Long, Document 51 compiled by Debby Cramer, Arthur Head Compendium, City of Fremantle Local History Collection, p. 23.

⁴² Lawrence, Naomi 'Arthur Head Conservation Plan DRAFT', p. 65.

⁴³ Kent, Round House, p. 21.

⁴⁴ CSO CSR Vol 15/73 10 May 1831. As quoted in Round House Report Long, Document 51 compiled by Debby Cramer, Arthur Head Compendium, City of Fremantle Local History Collection, p. 31.

⁴⁵ CSO CSR Vol 15/73 10 May 1831. As quoted in Round House Report Long, Document 51 compiled by Debby Cramer, Arthur Head Compendium, City of Fremantle Local History Collection, p. 31.

⁴⁶ Kent, 'Round House', 1988, p. 4.

⁴⁷ Steve Errington of the Fremantle Volunteers has undertaken considerable research into the layout of the Round House and found reference to only 7 cells being used for prisoners which suggests one was allocated for the jailer's accommodation. The room to the left of entry being used for a wardroom or similar.

⁴⁸ Erickson, Rica [comp], *The Bicentennial Dictionary of Western Australians pre 1829-1888*, Vol 4, UWA Press, 1988, p. 3151.



Richard Lewis, the contractor who built the jail, was appointed as the superintendent of the jail.⁴⁹ The Superintendent's role was to oversee the jailer, inspect the jail daily, report on building failures, and any cases of infectious or contagious diseases.⁵⁰ These duties were detailed in the Rules and Regulations for Fremantle Jail issued by the Colonial Secretary's Office in April 1831. This document also set out the regulations for prisoners.

Prisoners sentenced to hard labour were to be kept at work for 10 hours during the day. The daily food allowance was either 1 -1/2 pounds of bread and a pint of gruel for breakfast, or 2 pounds of bread. Those at work also received 1/2 pound of salt meat each day and this encouraged most to volunteer for hard labour. These allowances were the same for males and females. A good behaviour bonus was worth an extra 1/2 pound of meat on Sundays. The prisoners were expected to air their bedclothes and sweep out their cells each day. Soap and towels were provided for their personal cleanliness and 1/4 pound of soap was allocated each week for washing 'body linen'.⁵¹

The prisoners held at the Round House were those who had committed offences in the colony, and until 1856 when the Perth Jail was built, it was the most important jail in the colony. A detailed breakdown of the prisoners held at the Round House during this periods demonstrates trends in offences and offenders.⁵²

Approximately 3500 incarcerations occurred between 1831 and 1856; about half of these were European male colonists, very few European women or girls. The next largest group were sailors, approximately 600, most of whom were visiting for a few days. About 500 Aboriginals from all parts of the colony were the next largest group, most on their way to Rottnest for long-term imprisonment. About 40 of these were women or girls.⁵³

One significant prisoner held in 1832 was Yagan, son of Midgegooroo, leader of the Beeliar. In June 1832, Yagan led a party of men in attacking two labourers working on the Canning River, one man died of his wounds and Yagan was declared an outlaw and a reward of £20 was offered for his capture. He avoided capture until October 1832 when enticed aboard a fishing boat, Yagan and his two companions were taken to the Perth Guardhouse and then to the Fremantle Round House.⁵⁴ Yagan was saved from execution by the intervention of outspoken settler Robert Lyon who argued that the men were prisoners of war. Yagan and his compatriots were instead exiled to Carnac Island from which they escaped after six weeks.

Other smaller groups of prisoners were, lunatics in the lack of any other accommodation, court-martialled soldiers and, after 1850 with the commencement of convict transportation, there were significant numbers of ticket-of-leave convicts, pensioner guards and guard wives.⁵⁵

The most common offence was drunkenness accounting for about one quarter of all incarcerations. They were usually in one day and out the next. The longest term served at the Round House was two years; prisoner's serving longer sentences were transported to Van Diemen's Land.⁵⁶

⁴⁹ C.S.O. C.S.F. Vol. 4. No. 1803, p. 23, 29 March 1831. Designated document AH1050, as quoted in Round House Report Long, Document 51 compiled by Debby Cramer, Arthur Head Compendium, City of Fremantle Local History Collection, p. 23.

⁵⁰ Ibid.

⁵¹ C.S.O. C.S.F. Acc 49 Vol. 4. No. 1803, p. 23, 29 March 1831. Designated document AH1050, as quoted in Round House Report Long, Document 51 compiled by Debby Cramer, Arthur Head Compendium, City of Fremantle Local History Collection, p. 30.

⁵² Steve Errington of the Fremantle Volunteer Guides has undertaken considerable research of the Colonial Secretary Office records to identify as much information about each prisoner until 1856 when the prison closed.

⁵³ Steve Errington, op. cit.

⁵⁴ South West Aboriginal Land & Sea Council, 'Yagan', in Kaartdijin Noongar – Noongar Knowledge, 2020, <https://www.noongarculture.org.au/yagan/?searched=yes>

⁵⁵ Steve Errington, op. cit.

⁵⁶ Steve Errington, op. cit.



Initially it appears the prisoners wore their own clothes. In January 1833, two prisoners escaped from the Round House and the description in the local press provides a snapshot of typical clothing of the period. 'William Booker wore a straw hat, covered with oilskin, fustian shooting jacket, white trousers and shoes. His fellow escapee Benjamin Hinks, wore a white [sp] brown hat, brown cloth jacket, corderoy [sp] breeches, and white cotton stockings.⁵⁷

Later in that year tenders for jail supplies⁵⁸ included clothing for the prisoners and, until at least the 1850s, the clothing issue to prisoners generally consisted of two shirts, two pairs of trousers, one jacket, one pair of shoes, one palliasse (straw mattress), one blanket and one coverlet.⁵⁹

Later in the same year, tenders were called for tools for use in the prison. The tools used for hard labour included pick axes, shovels, spades, wheelbarrows and hammers.⁶⁰

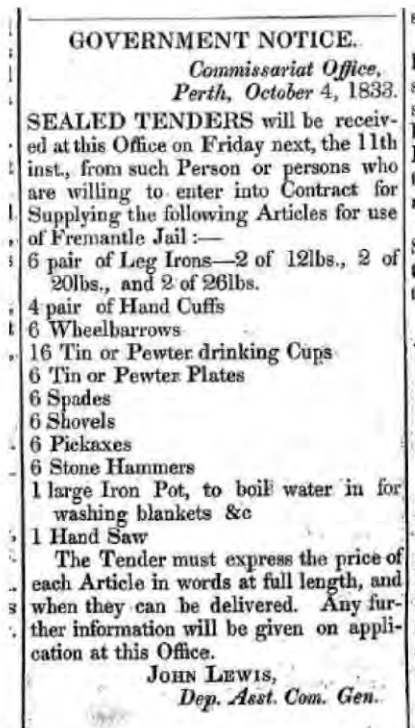


Figure 9: Tender to supply articles for the Fremantle Jail.
Courtesy *Perth Gazette*, 5 October 1833, p. 1.

⁵⁷ *The Perth Gazette and Western Australian Journal* 5 January 1833, p. 2.

⁵⁸ *The Perth Gazette and Western Australian Journal* 17 August 1833, p. 1.

⁵⁹ Tyler, W.H. (Major), 'The Round House, January 1831-1856' Historical Notes, 17 October 1979, Fremantle Library, Local History Collection, 725.6, p.1-2, as quoted in Round House Report Long, Document 51 compiled by Debby Cramer, Arthur Head Compendium, City of Fremantle Local History Collection, p. 31.

⁶⁰ *The Perth Gazette*, 5 October 1833, p. 1.

Not long after the completion of the Round House, a 174ft deep well was dug in the centre of the exercise yard.⁶¹ Most likely to have been dug by the prisoners as part of their hard labour.

The cells at the Round House could reasonably accommodate three prisoners and most prisoners were held for short periods. Unoccupied cells were useful for storage although the ongoing problems of the leaking roofs did damage stored goods.⁶² In March 1831, the Deputy Harbour Master, Daniel Scott, complained that the wheat in the cells got wet.⁶³

Problems with the softness of the stone used in the construction of the Round House soon became apparent.⁶⁴ In January 1833, prisoners Booker (alias Long Bill) and Hinks escaped by digging or 'scratching' their way through the wall with a large spike nail.⁶⁵ The following year, a prisoner named Willey, a deserter from the *Alligator* attempted to dig his way out of the prison under the cover of the noise and singing of his accomplices.⁶⁶ After this episode, a call was made to line all the cells.⁶⁷ Although costed by Reveley it seems that this did not eventuate for all cells, although it is known that one cell was lined with timber to accommodate a lunatic.⁶⁸

The gaps in the walls may have been the site where prisoners spoke to their supporters under cover of night. In June 1834, an article in the local press recorded that members of aboriginal leader Galute's tribe were visiting the jail at night and communicating with him.⁶⁹ This report angered Henry Vincent who demanded that the report be denied as 'it was entirely false' and the paper should 'contradict that report in your next paper'.⁷⁰ Galute was one of approximately 30 Binjareb Noongar, or Murray River aborigines, who made an attack on Shenton's Flour Mill in April 1834. As one of the leaders of this raid, Galute was given sixty lashes with a knotted rope and imprisoned for two months at the Round House.⁷¹ He was released from the Round House on 10 June 1834.⁷²

In 1835, an appointed committee of inhabitants undertook an investigation into the State of the Settlement. W.H. Mackie assessed the state of crime in Western Australian and his findings were published in June 1836. The description gives a good summary of the life of a prisoner in the 1830s.

The Jail at Fremantle, the only effectual place of confinement in the Colony, contains (besides a ward-room, jailors' sleeping room, and two privies) eight cells, in each of which there is ample room for two, and without any objectionable inconvenience for three, prisoners of the same sex. There are, however, no means of making confinement strictly solitary; nor of classification, except that of shutting up prisoners of the same legal grade in the same cell, and boys apart from adults: at work, or at exercise in the inner yard or area of the Prison, it is impossible to prevent, altogether, promiscuous intercourse. The sexes are kept strictly apart, the female prisoners having, of course, separate

⁶¹ The date of construction of the well has not been definitively determined but previous research has concluded it was in the early 1830s not long after completion of the building. See Le Page, Lawrence and Campbell.

⁶² Campbell, p. 4.

⁶³ CSO CSR Vol. 13/195, 14 March 1831 and CSO CSF Ac 49 Vol 4 No 2977 P 105, 8 June 1831. As quoted in Round House Report Long, Document 51 compiled by Debby Cramer, Arthur Head Compendium, City of Fremantle Local History Collection, p. 31.

⁶⁴ Gordon Geological Consultants, 'Formation, Usage, and Conservation of Arthur Head', 1999, p. 18.

⁶⁵ *The Perth Gazette and Western Australian Journal*, 12 January 1833, p. 6; *The Sydney Herald* 25 February 1833, p. 2.

⁶⁶ *The Perth Gazette and Western Australian Journal*, 18 January 1834, p. 218.

⁶⁷ Kent J.L. Round House, p. 4.

⁶⁸ Kent J.L. Round House, p. 4.

⁶⁹ *The Perth Gazette and Western Australian Journal*, 7 June 1834, p. 2.

⁷⁰ *The Perth Gazette and Western Australian Journal*, 21 June 1834, p. 306.

⁷¹ Tilbrook, Lois *Nyungar Tradition Glimpses of Aborigines of South-Western Australia 1829-1914*, University of Western Australia Press, p. 7. There are various spellings of this name and the one chosen was the one used in the newspaper report.

⁷² *The Perth Gazette and Western Australian Journal*, 14 June 1834, p. 302.



cells at night, and being kept, during the day, at work in the kitchen, under the superintendence of the Jailor's wife. ... Offenders sentenced to imprisonment have been, in all cases permitted by law, kept to labour; the males on works of public utility, viz., carrying wood and water to the Jail, building jetties, macadamizing the streets of Fremantle, building stone fences and step approaches to the Jail, grinding wheat, by means of a powerful hand-mill, for the supply of the prisoners, &c, under superintendence of a constable, or assistant jailor; the females in washing and cooking for the rest of the prisoners; - juvenile convicts in scrubbing and sweeping the yard. Violent or refractory conduct on the part of a prisoner is punished by reduction of diet, solitary confinement, or, in aggravated or dangerous cases, by placing the offender in irons, more or less heavy. Medical attendance, when necessary, is supplied by the Colonial Surgeon, if at hand; otherwise, by some practitioner of the neighbourhood, at the expense of the Government, on the order of a resident magistrate. A sufficient number of Bibles and prayer books is left in the hands of the Jailor for the use of any prisoner who applies for the same.⁷³

2.6 THE ROUND HOUSE IN THE TOWNSCAPE

The entrance to the jail was via a single flight of stairs from High Street up the cliff face. Soon after its completion, the Round House was whitewashed, as were the few masonry buildings in the small settlement.⁷⁴ The position of the Round House, its construction of stone, and its large and unusual form made it a dominant element in Fremantle and it featured prominently in many early artworks of Fremantle.



Figure 10: View of Fremantle, Western Australia. From Church Hill, East of the Town' by Richard Morrell, August 1832.

Courtesy National Library of Australia

⁷³ The Perth Gazette and Western Australian Journal, 18 June 1836, p. 713.
⁷⁴ Lawrence, op.cit. p. 65.





Figure 11: Portion of a watercolour 'Panorama of the Swan River Settlement', 1832 by Jane Currie.
Note: the flight of steps to the entrance to the Round House and chimney at the right.

Courtesy Mitchell Library of NSW

2.7 1830S - ADJACENT WORKS AND PLANS

In 1834, Reveley prepared plans to extend the jail on the main elevation to incorporate larger rooms for the Superintendent and a Court House.⁷⁵ A description of the proposal includes the commentary that 'the building consists of an entrance hall with superintendents apartments, and passage through the armoury and chain room, (at present the apartments of the keeper of the jail,) to a staircase leading to the justice hall, the front windows overlooking the town of Fremantle, at a considerable elevation'.⁷⁶ This description indicates that the jailer's quarters were the rooms on either side of the entry, not one of the cells.

This proposal did not proceed but was the likely precursor of the courthouse built on the south side of the Round House in 1835. This courthouse was a two-storey structure built of stone taken from the 'water's edge' with a shingle roof.

In 1851, the first courthouse was converted to accommodation for the harbour staff, and a new courthouse was built north of the Round House. The first courthouse continued to provide accommodation for Harbour staff until its demolition in 1928. Archaeologists found the remains of the foundations under the lawn in 1987.⁷⁷

The location of the prison and courthouse made Arthur's Head a prominent law and order precinct throughout the 1830s and 1840s.

⁷⁵ *The Perth Gazette and Western Australian Journal*, 14 June 1834, p. 302.

⁷⁶ *The Perth Gazette and Western Australian Journal*, 14 June 1834, p. 302. No plans have been found for this proposal.

⁷⁷ Information Sheet, Arthur Head Reserve - Courthouses, City of Fremantle, February 1990.



In June 1837, the Fremantle Whaling Company put forward a proposal to the colonial government to dig a tunnel under the Round House to allow access between High Street and the company's premises in Bathers Bay. The government approved the proposal and agreed to allow the prisoners of the Round House to assist with the work.⁷⁸ The softness of the rock enabled the digging to be accomplished with pick axes.⁷⁹

The tunnel was 'laid out' and overseen by Reveley.⁸⁰ Jailer of the Round House, Henry Vincent was known to be interested in construction and he probably managed the prison labour during the tunnel construction.⁸¹ The tunnel was advantageous to the whaling companies operating from Bathers Bay as it enabled the transport of goods from the jetty to the settlement by a direct route.

Construction of the tunnel required a change of the alignment of the stairs accessing the Round House from High Street. Two flights of stairs were constructed on either side of the tunnel which came together in a landing above the tunnel before ascending in a single flight of stairs to the Round House entrance. No detail of the construction of the stairs has been found in the current research but an 1844 plan (Figure 12) of the site shows the location of the stairs is consistent with the form up to 1967 when the lower flights were demolished.

A sketch of the stairs to the top of Arthur Head in 1870 shows the form of the stairs which show the masonry stairs and balustrade. (Figure 15)



Figure 12: Portion of a Fremantle Plan, 1844 showing alignment of steps from High Street, tunnel, Court House and Harbour Master's House, Courtesy SROWA, Cons 3868 item 126, Fremantle 19R

⁷⁸ *The Swan River Guardian* 27 July 1837 p 1.

⁷⁹ Gordon Geological Consultants, 'Formation, Usage, and Conservation of Arthur Head', 1999, p. 18.

⁸⁰ *The Perth Gazette and Western Australian Journal*, 12 August 1837, p. 2.

⁸¹ Information Sheet, Arthur Head Reserve – Whalers Tunnel', City of Fremantle, February 1990.



In 1838, Henry Vincent was appointed Superintendent of the 'Native Establishment' at Rottnest. He held that position until forced to retire in 1867 because of his cruel treatment of the men and boys held at the prison. During his time at Rottnest, Vincent oversaw many building projects using Aboriginal labour some of which have comparison to Reveley's building techniques.

After Vincent's departure in 1838, it is not clear who took on the role as the jailer. In 1844 Nicholas Smith was appointed to the role and he took up residence with his wife Rhoda and three children. He held the position until 1846 and by then the family had grown to include six children.⁸²

2.8 1844 -SECOND FLOOR ADDITION

The growing family of Nicholas Smith required an increase in accommodation at the Round House and in December 1843, stonemason Thomas Harwood agreed to undertake the following works at the Fremantle Jail.

I the undersigned agree to undertake the following works viz,

To raise the walls of 3 rooms about 1 foot to lay the floor to put the roof on again make two partition doors and three windows also a staircase on the left hand going in the above all in a workmanlike manner for the sum of thirty five pounds (£35.0.0). Signed Thomas Harwood Stonemason⁸³

The money for these works was marked as approved by the Colonial Secretary.

I hereby enclose an estimate of the expense of certain additions proposed to be made in the jail for the accommodation of the jailer. I am Sir your most obedient servant⁸⁴

These additions are clearly the three rooms above the kitchen, entry and jailers quarters. This would have enabled the family to live more comfortably in the Round House. The three upper level windows, staircase and doors for the upper rooms all conform to the current layout. There is no detail of the roof structure of this addition.

When the Smith family were living at the Round House the first execution of a prisoner in the colony was held just outside the Round House walls. 15-year-old John Gavin was executed 'about ten yards on the left of the gaol, looking towards the Church ...and his body was buried in the sand hills a little to the southwest of the Court house'.⁸⁵

Also during Smith's tenure as jailor, 18-year-old Susannah Hitchcock (1827-1885) was serving twelve months for stealing. During her imprisonment, on 8th April 1845, Susannah gave birth to a stillborn child.⁸⁶ In this same year, Rhoda Smith gave birth to her youngest child Samuel whilst living at the Round House.⁸⁷

⁸² Erickson, Rica [comp], *The Bicentennial Dictionary of Western Australians pre 1829-1888*, Vol 4, UWA Press, 1988, p. 2873.

⁸³ Letter to Colonial Secretary from Thomas Harwood, 23 December 1843, CSR Vol 131/94, SROWA

⁸⁴ Letter to Colonial Secretary Governor Hutt marked as approved, undated, CSR Vol 131/95, SROWA.

⁸⁵ *The Perth Gazette and Western Australian Journal* 6 April 1844, p. 3.

⁸⁶ Information from Jan Newman to the City of Fremantle, 'My Say' Responses. February 2020.

⁸⁷ Erickson, op.cit. Vol IV, p. 2873.



Round House, Fremantle - Conservation Management Plan

2020

In January 1845, tenders for further works to be undertaken at the jail were requested from the Colonial Secretary. The works included the following:

*Repairing eight doors, including iron work.
Repairing all the cells.
Re-hanging the doors of each of the cells with 24 inch X garnets, three to each door, all to be riveted.⁸⁸*

The Smith family did not stay long in the Round House as it was announced in the Government Gazette of 12 February 1846 that Mr Laurence Welch had been appointed as Gaoler at Fremantle following the resignation of Mr N. Smith.⁸⁹

In March 1847, tenders were called to oil the roof and ease the doors and repair fastenings showing that the roof still required ongoing maintenance.

2.9 1850-1886 ROUND HOUSE AND CONVICT TRANSPORTATION

Convicts were transported to the Swan River Colony between 1850 and 1868, and some of these men remained in the prison system until the early 20th century. The arrival of the convicts required the construction of a larger prison and associated infrastructure.

Initially, consideration was given to extending the Round House to accommodate the convicts, as seen in a plan prepared c1850 by Henry Wray of the Royal Engineers.⁹⁰ (See Figure 13)

However, this proposal did not proceed and in 1852 construction began on the new prison, the 'Establishment' or the Fremantle Prison, completed in 1859.

Improvements to the Round House must have still be considered in August 1850 when tenders were called to raise the internal walls of the Fremantle Jail by 5 feet above the present height, and to cap the same with bricks.⁹¹ It is presumed that these additions were not undertaken.

⁸⁸ Government Gazette, 31 January 1845, p. 2.

⁸⁹ Government Gazette, 13 February 1846, p. 8.

⁹⁰ PWD 104, Proposed addition to Fremantle Jail, SROWA.

⁹¹ Government Gazette, 13, p. 8



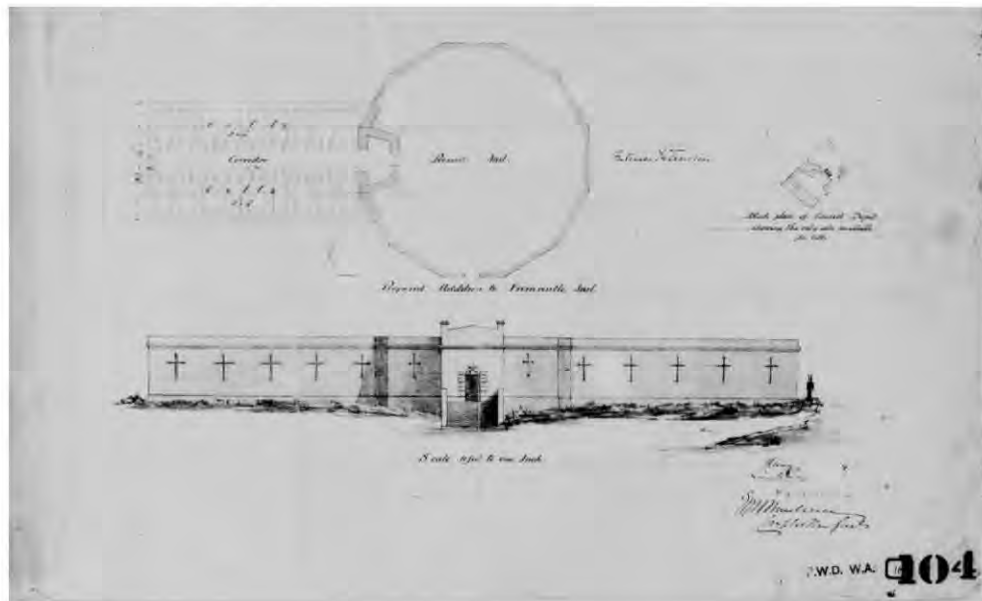


Figure 13: Plan of proposed additions to the Fremantle Jail, c1850
Courtesy SROWA, Cons 1647, PWD104

Although the Round House was not enlarged the first Courthouse was adapted to provide accommodation and a second Courthouse was built on Arthur Head, north of the Round House in 1851. In the same year, a Police Station was constructed on High Street at the base of the cliff near the tunnel entrance. These two new buildings demonstrated how this area of Fremantle continued to be the primary law and order precinct in the early years of convict transportation.

In 1856, a larger jail was constructed in Perth to accommodate those who offended in the colony although some local offenders with long sentences were held at the Fremantle Establishment from 1858. With the opening of the Perth Jail, the Round House closed as a prison for local offenders although it continued to be used as a transition, or holding place, for aboriginal prisoners heading to the Prison at Rottnest.⁹²

⁹² 'Aboriginals on Rottnest Island A long connection with Wadjemup' Rottnest Island website, <https://www.rottnestisland.com/the-island/about-the-island/our-history/aboriginal> accessed December 2019.





Figure 14: View of Arthur Head showing complex of buildings, c1863.
Courtesy State Library of WA image 5570B/38

In 1866, the Round House was reopened as a prison because of the demands on the penal system. The Round House was predominantly used as a lock-up for ticket-of-leave men found outside their lodgings after the 10pm curfew, for short term offenders and, continued to be used for the aboriginal men transferring to or from Rottnest.

By 1870, the collection of buildings on Arthur Head were no longer as important in the colonial judicial system but still formed a prominent grouping and the headland was more closely associated with shipping and the functions of the harbour than the judiciary. A description and sketch (Figure 15) of Arthur Head in 1870 provide an indication of its status in the settlement.

High street, the busiest thoroughfare, is only about a quarter of a mile long. At one end stands the Church of England, a low stone building, with a truly pepper-box tower; at the other extremity the street runs straight against Arthur's Head, and ends in a tunnel through that promontory. Flights of stairs cut in the rock, lead up to an elevated terrace overlooking the town, crowned by a low round building, something like a stone gasometer, but which turns out on inspection to be the "lock-up". A little group of houses perched at the head of the cliff, with their irregular forms and outside staircases, remind one of an Italian picture. For the rest, I should find it difficult to like Fremantle to any other place; it claims a marked, but I fear not a felicitous, individuality of its own.⁹³

⁹³ The Herald 19 March 1870, p. 4.





Figure 15: Sketch by Harbour Master George Andrew Forsyth, 1870 showing steps up the cliff face to the Court House at right, Harbour Master's House at the left, and portion of the Round House at far right.

Courtesy Fremantle Local History Collection, image 746D.

The inmates of the Round House after 1856 have not been researched in detail,⁹⁴ but some clues can be found in newspaper accounts and government records. In 1873, the long jetty at Fremantle was under construction with stone from Arthur Head and in July 1873, the stone was undermined and 'several thousand tons of stone the other day detached themselves in masses from the side of the cliff'. The force of the movement caused a crack in the yard of the Round House and 'the custodians of seven female prisoners incarcerated there, would not be responsible for their safety, and had them removed to Perth.'⁹⁵

A few years later in 1876, Governor Robinson described the Round House as a 'mere seaport lockup for drunken sailors and prostitutes'⁹⁶ and in 1882, a memo in the Colonial Secretary's Office notes that there were 17 'native prisoners' and 'four white prisoners'.⁹⁷ While in May 1882 two teenage sisters were sentenced to fourteen days at the Round House for prostitution.⁹⁸ The Round House clearly had male and female inmates of a range of ages.

The management of different groups within the jail; men and women, or aboriginal or white, bond or free, was potentially why there was a dividing wall between two halves of the yard in a photograph of the Round House in 1879.⁹⁹ It has not been established when this wall was constructed.

⁹⁴ At present, the detailed research by Steve Errington into the Round House inmates has been completed up to 1856.

⁹⁵ *The Herald* 19 July 1873, p. 2.

⁹⁶ CSO File 1493/82 as quoted in Document 58, Round House Long Report compiled by Debby Cramer, Arthur Head Compendium, City of Fremantle Local History Collection.

⁹⁷ Ibid.

⁹⁸ *The Herald* 20 May 1882, p. 2.

⁹⁹ A timber wall is evident in photographs of the yard in the 1890s but is likely to have been there earlier when the place functioned as a prison.



Round House, Fremantle - Conservation Management Plan

2020



Figure 16: View of the Round House from the Lighthouse, 1879 showing the timber dividing wall and casement windows and flat roof over the cells.
Courtesy Curtin University Historical Panoramas.

The Round House was the subject of scrutiny in 1882 when Governor Robinson visited the Round House and 'found 17 Natives chained by the neck the one to the other, and consequently obliged to sit in cramped and irksome positions'.¹⁰⁰ The outcome of the inquiry was to leave the decision to the discretion of the jailer, however the authorities urged such chaining only in special circumstances, such as transporting prisoners, and chaining by the neck in jails was to be discontinued.¹⁰¹

In March 1885, Harbour Master, George Forsythe, wrote to the Colonial Secretary in reference to the state of the steps leading up to 'Goal Hill'. The worn steps had no handrail and on one occasion, the jail keeper Mr Parks fell and broke his collarbone. This description indicates that the Round House was clearly still used as a prison at that time.¹⁰²

His request was soon acted on and £10.4.0 was allocated for works to the steps although the handrail was considered unnecessary.¹⁰³

¹⁰⁰ Votes and Proceedings, 'Employment of Native Prisoners from Rottnest Island, at Fremantle Bar and on the Mainland', 1890-1891, pp 135-139, as quoted in Document 58, Round House Long Report compiled by Debby Cramer, Arthur Head Compendium, City of Fremantle Local History Collection.

¹⁰¹ CSO File 1493/82 as quoted in Document 58, Round House Long Report compiled by Debby Cramer, Arthur Head Compendium, City of Fremantle Local History Collection.

¹⁰² Letter to the Colonial Secretary 17 March 1885 from George Forsyth Harbour Master. CSO correspondence Cons 1096, Acc 527. SROWA. As quoted in Document 58, Round House Long Report compiled by Debby Cramer, Arthur Head Compendium, City of Fremantle Local History Collection.

¹⁰³ Minute Paper Number 1096/85, Departmental No 25/85, letter to the Colonial Secretary from the Director of Public Works, 17 March 1885, As quoted in Document 58, Round House Long Report compiled by Debby Cramer, Arthur Head Compendium, City of Fremantle Local History Collection.



2.10 1880S – 1910S POLICE LOCK UP AND STAFF QUARTERS

On 31 March 1886, the Fremantle Prison was handed over to the Colonial Government as only 50 men were imprisoned in Western Australia under the convict system. Henceforth Fremantle Prison was used for locally sentenced prisoners, although it had been the practice for long term prisoners sentenced in the colony to be imprisoned there.

An incident in March 1886 prompted the decision to change the function of the Round House from a jail to a short-term lock-up. Three sailors were being temporarily held there awaiting release to the Captain of their ship. Overnight the jailer let them sleep in the yard because of the heat and the three men tied their sheets together and escaped over the walls. This escape lead to the decision to hand the building over to the Police and the jailer to be relocated to Perth Gaol.¹⁰⁴

The Round House served as a lock-up for only a short time as an 1888 reference was found to a member of the police service living in the Round House with his family prior to relocating to new quarters.

The Police are removing into their new quarters, which will be most inconvenient to the general public, necessitating the parading of prisoners through the town for fully half a mile from the lock-up to the Police –court. The occupants of the Round House, a constable and his family, are the first to vacate their old quarters, which the Government, it is reported, intend to pull down, to be replaced (it is supposed) by additional dwelling-houses for the Harbour crew...¹⁰⁵

Although there was discussion about demolishing the building, it was retained as a useful source of accommodation. With the colony experiencing a significant population increase in the 1890s due to the gold discoveries, every option for accommodation was required.

¹⁰⁴ Sheriff and Inspector of Prisons, Letterbook Vol F15, letter no 32 of 12 March 1886, as quoted in Document 58, Round House Long Report compiled by Debby Cramer, Arthur Head Compendium, City of Fremantle Local History Collection.

¹⁰⁵ The Inquirer and Commercial News 22 August 1888, p. 5.



Round House, Fremantle - Conservation Management Plan

2020



Figure 17: View of Round House from High Street, 1890s.
Courtesy City of Fremantle Local History Collection, image 650.



Figure 18: View of Round House from Town Hall 1891.
Courtesy Curtin University Historical Panorama, Keep Sake Media for colourising.

Between 1897 and 1898, the Round House was occupied by Water Policeman, Alex McGregor and his family.¹⁰⁶ In 1899, Water Policeman Thomas Powers with his wife and 10 children moved

¹⁰⁶ Wise' *Post Office Directories, 1897-1903*, State Library of WA,
<https://www.slsa.wa.gov.au/explore-discover/wa-heritage/post-office-directories>



into the place. One of these children, Henrietta Stella Bean, nee Powers (1889-1976), recorded her memories of living in the Round House.¹⁰⁷ She recalled that the front door to the building was painted red and the floors of the three rooms at the entry were covered in lino. The family used the cells for a range of uses; one for storing their father's carpentry tools, one for the completed carpentry projects, one for their toys, one a smoke house, another was their grandfather's bedroom, and one for the ducks owned by the family; two others were full of rubbish in which the cats delighted in catching rats. The children all slept in the upper floor rooms and her parents slept on the ground floor. Henrietta Bean stated the family lived at the Round House for eleven and a half years but Post Office Directories record the Powers family occupying the place between 1899 and 1900.¹⁰⁸ From 1901 to 1903, the occupant was recorded as J. Johnson. It is possible that the Powers continued to live at the Round House until 1911 with other members of the Police Force but further research is needed to resolve this question.

It is probably during this period of occupation by families that the roof over the cells were changed to a pitched roof design as shown in a 1902 photograph which appears to show curtains in the upper floor windows.



Figure 19: View of the Round House from the Lighthouse, 1902 showing the remnant of the timber-dividing wall.

Courtesy Curtin University Historical Panoramas.

With the construction of the new Police Quarters in Henderson Street, Fremantle in 1897 and 1903, the Round House was surplus to needs for accommodation and was likely to have been used as a store or simply left vacant, or short term accommodation.

2.11 1904 – 1919 FORT ARTHUR BATTERY

In 1904, all of Arthur Head was acquired by the Commonwealth Government as a strategic location for defence. This coincided with the decision to close the Rottnest Pilot Station and

¹⁰⁷ OH73 Interview with Henrietta Stella Bean by Jean Teasdale for the Battye Library, 1975.
¹⁰⁸ *Wise' Post Office Directories, 1897-1903*, State Library of WA,
<https://www.slnwa.wa.gov.au/explore-discover/wa-heritage/post-office-directories>



Round House, Fremantle - Conservation Management Plan

2020

transfer all Pilots to Fremantle. The Fremantle Harbour Trust therefore built two new Pilots cottages and relocated two cottages on the headland in 1904, to enable the construction of the battery.¹⁰⁹

The battery was completed in 1905 and consisted of a walled compound with quarters, two cottages, a flag room, signal mast, and a lighthouse tower with a time ball on top. Two gun emplacements were completed in 1906.¹¹⁰

At the same time as the construction of the Fort Arthur Battery, a powerhouse was built in 1905 on South Mole for the Fremantle Municipal Tramways and Electric Lighting Board. The Power Station provided power for a tramways in Fremantle. The power cables were laid through the tunnel into the Car Barn located at the western end of High Street. The scheme was completed and operating by April 1906.¹¹¹



Figure 20: Laying cable through the tunnel from the Powerhouse to the Car Barn in High Street. Courtesy City of Fremantle Local History Collection, image 650

¹⁰⁹ Pilot's Cottages, Arthur Head Reserve Project, 1990, City of Fremantle.

¹¹⁰ Fort Arthur Battery, Arthur Head Collection, City of Fremantle 1990.

¹¹¹ Power House, Arthur Head Collection, City of Fremantle 1990.





Figure 21: Laying tram tracks in High Street in 1905, Round House in Background.
Courtesy City of Fremantle Local History Collection, image LH1892

Until 1914, it is not clear that the Round House had continual use or occupancy. However, in 1914, plans were made to convert the Round House as a caretaker's residence. The caretaker may have had an association with the Powerhouse or had a relationship with the Arthur Head Battery.

A plan of the modifications completed by the Public Works Department shows that one of the privies was removed, sewerage was disconnected and a door installed in the western wall. This plan (Figure 22 and Figure 24) shows that four of the cells had already been dismantled or had collapsed by this time.

The triangular space at the entrance to the courtyard serves as a wind lock or porch with a roof over. The windows on the ground floor and upper level are clearly shown in this plan.

Throughout World War One, there was limited access to Arthur Head apart from the Pilots and military personnel.

Round House, Fremantle - Conservation Management Plan

2020

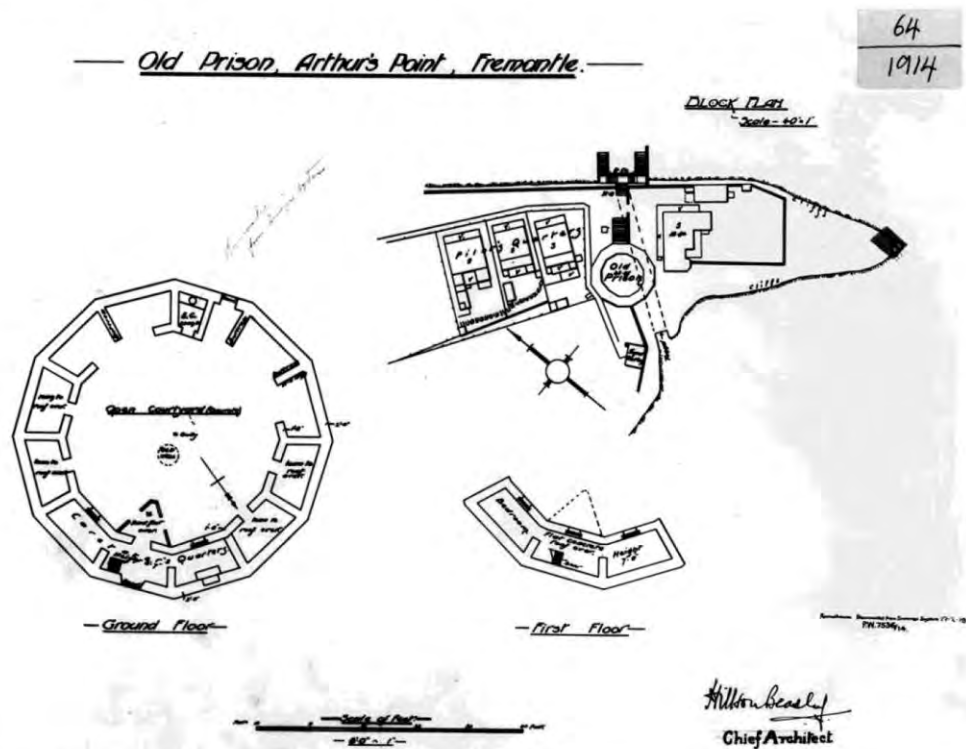


Figure 22: Plan of the Old Prison, conversion to Caretaker's Quarters. PWD104. 1914. Courtesy City of Fremantle Arthur Head Collection.

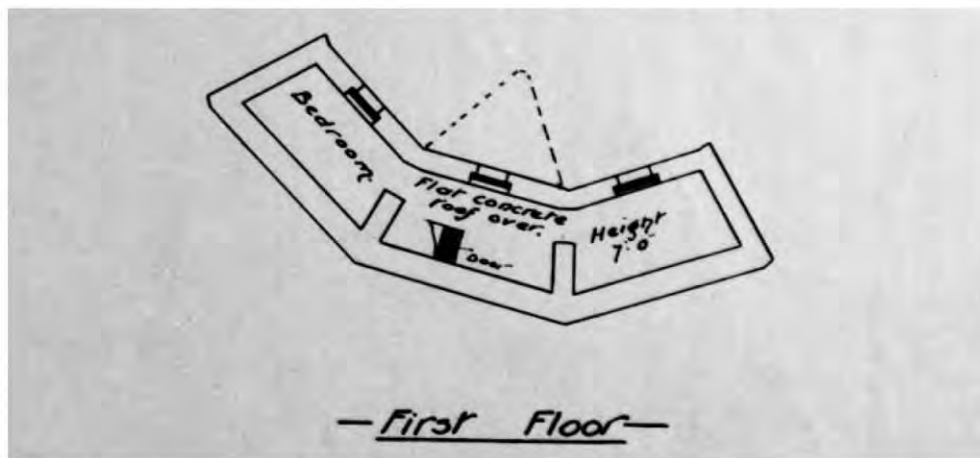


Figure 23: Detail showing upper floor of the Old Prison, 1914. Courtesy City of Fremantle Arthur Head Collection.

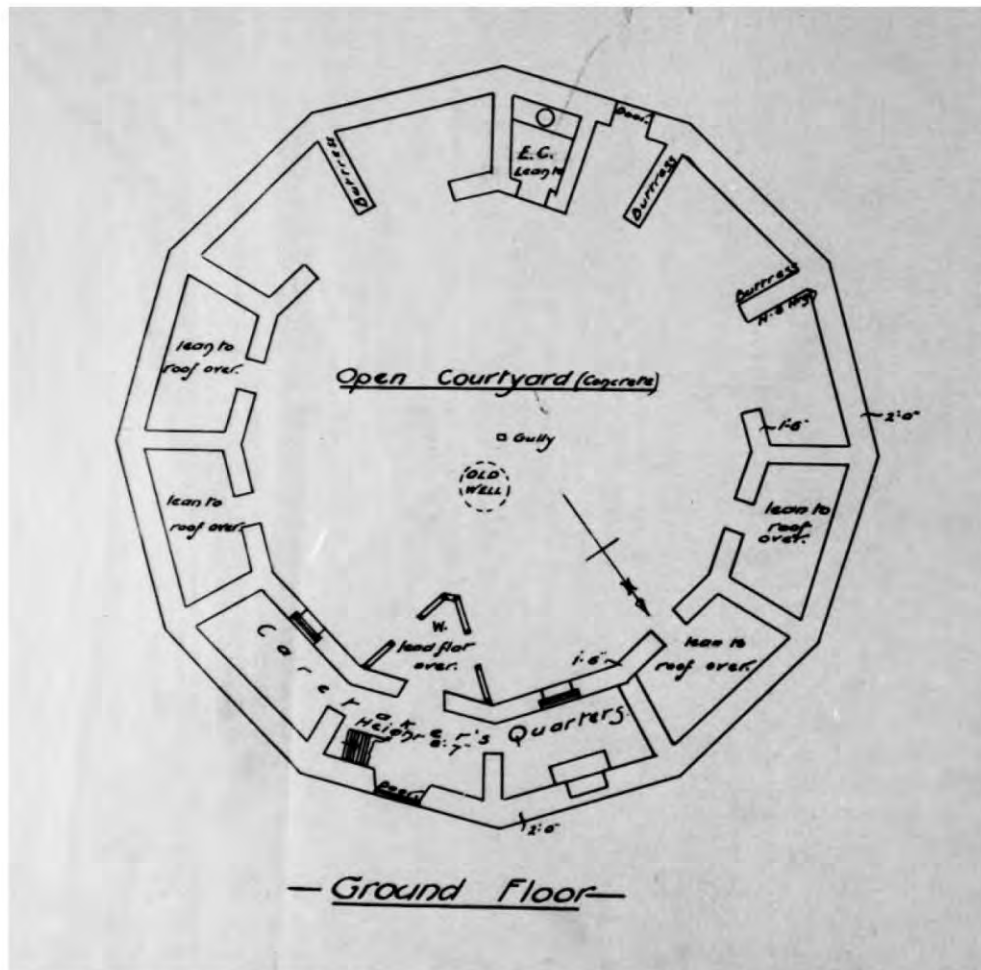


Figure 24: Detail showing Ground Floor of the Old Prison, 1914.
Courtesy City of Fremantle Arthur Head Collection.

2.12 1919-1959 DECLINE AND RECOGNITION

In the period following World War One the Round House fell into decline. Arthur Head reverted to the authority of the Harbours and Rivers section of the Public Works Department. The Fremantle Harbour Trust still maintained the Pilot's cottages and Harbour Masters House for their staff.

Round House, Fremantle - Conservation Management Plan

2020



Figure 25: View of Round House from High Street, 1920s
Courtesy City of Fremantle Arthur Head Collection.

In September 1922, the Engineer in Chief of Harbours and Rivers, E. M. Carlin inspected the structure at the request of Captain Saunders who lived in one of the pilot's houses north of the Round House. Carlin made the following report to his superior, the Engineer in Chief, James Thompson.

Engineer in Chief

When at Fremantle last Friday I inspected this old building and found that the outer wall on the north western side for a length of 6' has, through senile decay, become more or less dangerous more particularly, as the cells which were built around the inside of the wall have at this place fallen into ruins and the outside wall has therefore, lost their support. This wall was originally about 2'3" in thickness, the outside ring being built of squared sandstone of large size and the inside made up of small rubble.

At the weak place complained of, this latter has fallen away to the ground, leaving only the outside stone which in places is not more than 9" to 12" in thickness, and as the wall is 18' high and the weak place is 15' from the top there is some danger of the weight of the upper part causing the wall to bulge and collapse.

As the Fremantle Pilots' live in the immediate vicinity, and their children are constantly playing around the building, there is some danger of a serious accident should this wall collapse while they are in its neighbourhood and, I am of the opinion, either that the wall should be repaired, or the building demolished.



Page | 52

Round House, Fremantle - Conservation Management Plan

2020

The building has been out of use for many years and is more or less a ruin and the only objection to its being demolished is, that it is one of the old land marks, but one with a history which might well be forgotten.

In view of the above I recommend that the building be demolished and the stone used for other public buildings.

E. H. Carlin, Engineer for Harbors & Rivers¹¹²

A response was swift from senior management, and tenders for the demolition of the building were called in October 1922.¹¹³

However, as the administrative process was underway the Chief Harbour Master, Captain Winzer approached the Under Secretary for Works, to request that portion of the walls remain to protect his adjacent quarters from the full force of the wind during storms. This request was forwarded to E. H. Carlin who decided that the entire building should be retained as the cost of retaining and strengthening only a portion would be greater than repairing the whole structure. Consequently, £15 was allocated to the repairs of the north-westerly wall. The works were completed by December 1922¹¹⁴

A photograph of Captain Harold Rivers who lived in one of the Pilot's cottages, a friend and Peggy Rivers inside the Round House in 1922 shows the extent of the decay of the building. The door in the western face can be clearly seen as can the layers in the construction of the walls, and the location of the roof timbers.



¹¹² Folios 6, Memo from E H Carlin to Engineer in Chief 15 Sept 1922, File 2898/22 Arthur's Head Old Round House – Preservation of, Cons 689 item 1922/2898, SROWA.

¹¹³ Folios 1-6, File 2898/22 Arthur's Head Old Round House – Preservation of, Cons 689 item 1922/2898, SROWA.

¹¹⁴ Folios 7-13, File 2898/22 Arthur's Head Old Round House – Preservation of, Cons 689 item 1922/2898, SROWA.



Round House, Fremantle - Conservation Management Plan

2020

Figure 26: Captain Rivers, a friend and Peggy Rivers, inside the Round House, 1922
Courtesy Fremantle Local History Collection, image 4701.



Figure 27: View of Front Steps and Front Door, 1926.
Courtesy Freo Stuff.

In August 1928, the Round House again came to the attention of the Under Secretary for Works and Labour as the Principal Architect of the Public Works Department, J. M. Tait, noted its unstable condition. He acknowledged that 'restoration would be a very expensive job and would cost about twice as much as it would to demolish it entirely and re-erect'.¹¹⁵ He continued:

*as its present condition is so unstable, if a decision could be arrived at as to what should be done with regard to it at an early date, as should an accident occur it would be difficult for the Government to avoid a certain amount of responsibility.*¹¹⁶

Despite the failings of the building and the lack of any appropriate use, Tait stated that:

*The structure is picturesque and makes quite a fine termination to High Street.*¹¹⁷

¹¹⁵ Folio 14, File 2898/22 Arthur's Head Old Round House – Preservation of, Cons 689 item 1922/2898, SROWA.

¹¹⁶ Ibid.

¹¹⁷ Ibid.



The Under Secretary for Works and the Chief Secretary's Department resolved that there was no opposition to demolition. Conveniently, tenders were out for the demolition of the adjacent Harbour Master's House so the request to demolish the Round House was an addendum to that specification.¹¹⁸

It was the intervention of Chief Librarian Dr James Battye, on behalf of the Centenary Executive Committee, that led to the halting of demolition. In October 1928, he phoned and wrote to Premier Philip Collier requesting that the Round House be retained even though demolition had commenced. His request highlighted four key points;

1. *That building is not only the oldest of the existing buildings in the State, but it is actually the first permanent building that was erected by the pioneers, being built in 1830/31, and it shows prominently on water colour drawings and lithograph sketches of Fremantle made in 1832.*
2. *Its conspicuous position on Arthur's Head makes it a prominent land mark and one that would be of very great interest to all visitors who are concerned with the history of the State.*
3. *Being situated as it is at the end of High Street, its restoration to its original condition and especially the conversion of the enclosure into a small park, would be of considerable value to the town of Fremantle.*
4. *It is one of the best points of vantage from which not only Fremantle, but also all the surrounding country and out-lying islands can be seen by visitors.*¹¹⁹

The Premier supported the proposal and wrote to the Minister for Works asking his department to 'stay its hand pending consideration'.¹²⁰ Demolition ceased immediately but no decision was made quickly. In February 1929, district architect, Clarence Wilkinson visited the Round House to assess the structure and determine what would be needed to repair it.

*a considerable quantity of stonework has been taken down off the wall on the western face, approx. 25 cubic yards would have to be replaced.
The two doorways would also need to be secured, and the holes in the other portions of the walls patched up, and fallen stone removed from both inside and outside of the walls.
The total cost of this work I estimate to cost £85/-/-.*¹²¹

In March 1929, with reassurance from the Principal Architect that these works did not constitute any alterations or improvements the Premier's Department approved funding of £85 for the works. By April, the Fremantle Harbour Trust requested urgent action on the half-demolished walls, as the pilot and his family in the adjacent house were nervous about the instability of the walls. The Principal Architect was able to reassure the Secretary of the Harbour Trust that works

¹¹⁸ Folio 19, File note 18 August 1928 Addendum to Demolition, File 2898/22 Arthur's Head Old Round House – Preservation of, Cons 689 item 1922/2898, SROWA.

¹¹⁹ Folio 20-21, letter from James Battye Public Librarian and Deputy Chairman of the Centenary Executive Committee to Premier's Department, 12 October 1928, File 2898/22 Arthur's Head Old Round House – Preservation of, Cons 689 item 1922/2898, SROWA.

¹²⁰ Folio 22, File Note from Premier Collier to Hon Minister for Works Alick McCallum, 13 October 1928, File 2898/22 Arthur's Head Old Round House – Preservation of, Cons 689 item 1922/2898, SROWA.

¹²¹ Folio 27, File Note from C.E. Wilkinson 11 February 1929, File 2898/22 Arthur's Head Old Round House – Preservation of, Cons 689 item 1922/2898, SROWA.



Round House, Fremantle - Conservation Management Plan

2020

had begun in mid-April. Documentation from the Public Works Department stated that the works to 'make the building substantial' were complete by 14 May 1929.¹²²

The nature and extent of the repair works was not stated. A photograph of the works in progress (Figure 29) in May 1929 shows that scaffolding was in place to reinstate the external walls. It is probable that the stone used in the repair was from the dismantled walls and probably from Arthur Head which continued to be quarried.



Figure 28: Prior to the repairs April 1929 showing the collapsed wall and loose stones. Courtesy *The West Australian*, 18 April 1929, p. 22.



Figure 29: During repairs May 1929.

¹²² Folio 37-40, correspondence regarding works contract at the Round House April to May 1929, File 2898/22 Arthur's Head Old Round House – Preservation of, Cons 689 item 1922/2898, SROWA



Round House, Fremantle - Conservation Management Plan

2020

Courtesy *The Western Mail*, 2 May 1929, p. 52.

The decision to retain and restore the Round House was ultimately supported by the City of Fremantle despite the differences in opinions expressed in the local press about the merits of keeping the Round House with its poor condition and grim associations.

FREMANTLE ROUND HOUSE.

Sentiment Wins Against Business.

Discussion on the proposed removal of the historic Round House at the foot of High-street, Fremantle, and the beautification of Arthur's Head, took place at a meeting of the Fremantle City Council last night. The matter was referred to the council by the half-yearly meeting of ratepayers with the suggestion that the council recommend the Government to remove the building and beautify the surrounding area.

Cr. Grigg said that the beautification scheme was unworkable as the area was too small and that any improvements which might be effected would not promote business at that end of the town.

Cr. Kerr, in moving that no action be taken, said that Fremantle could not boast of many links with the early days of the State and consequently it would be a deplorable step to destroy the Round House.

In seconding the motion, Cr. Hollia explained that the approach to Arthur's Head could not be improved on account of the Fremantle-Armadale railway line.

Cr. Stevens said that the sentimental interest in the Round House must soon be displaced by business interests. The building was in a state of disrepair and he considered it should be demolished. As an amendment he moved that the Government be recommended to improve the locality in order that it may be used for business purposes.

The amendment was lost and the motion carried.

FREMANTLE ROUNDHOUSE RATEPAYERS DESIRE REMOVAL

Ratepayers of Fremantle expressed their disapproval of the old historic Roundhouse at their half-yearly meeting on Wednesday night, by passing a motion recommending the Council to take steps to have the building removed, and the site of Arthur Head beautified.

Speaking to the motion, Mr. W. H. Carpenter said that he could not see the necessity for preserving the Roundhouse, as it was not symbolical of a period of which we could be proud. If the surroundings were beautified, the lower end of the town would perhaps, be saved from its present apparent stagnation.

Figure 30: Different views on retention of the Round House 1929
Left *The West Australian*, 18 June 1929, p. 14; Right *The Advertiser* 31 May 1929, p. 1.

In the mid-1930s, the Round House was again a subject of debate between the various stakeholders who had an interest in the place. The Fremantle Harbour Trust undertook works to beautify the grounds in 1937. It is probable that the men who did the work were 'sustenance workers', unemployed men who received minimal rations for government projects. Sustenance work was a government response to the crippling Economic Depression which extended into the late 1930s in Australia.

*The work to be done includes clearing the ground, forming a park on the top of Arthur's Head alongside the Round House, planting lawns, planting pigface on slopes, terracing, building a rubble wall along the cliff edge, repairing steps, gravelling and forming paths. When completed this will give a park area on the top of Arthur's Head on the southern side of the Round House, with cliffs terraced or otherwise protected, a pleasant approach up the Round House steps, and lawns or garden plots on the eastern side of the Round House with a path leading across the railway track to the end of High Street.*¹²³

¹²³ *The West Australian*, 4 December 1937, p. 18.



Round House, Fremantle - Conservation Management Plan

2020



Figure 31: Creation of the grassed area alongside the Round House, 1937
Courtesy Fremantle Port Authority



Figure 32: Creation of the grassed area alongside the Round House, 1938
Courtesy Fremantle Port Authority

As part of these works, gates were installed at either end of the tunnel to prevent access to the tunnel at night.



Round House, Fremantle - Conservation Management Plan

2020

In addition to these works to the grounds works, the Round House walls and steps were repaired. All of these works were jointly funded by the Fremantle City Council, the Fremantle Harbour Trust and the State Government.¹²⁴ Photographs taken at this time show the decision makers on site viewing the works underway. (See Figure 33 and Figure 34)



Figure 33: Site Visit, 1938 showing casement windows at Ground Level
Courtesy Fremantle Library, Arthur Head Collection, AH 1307.

¹²⁴ *The Western Mail*, 28 April 1938, p. 25.





Figure 34: Site Visit, 1938 showing repairs to the steps.
Courtesy Fremantle Library, Arthur Head Collection, AH 1306.

2.13 1939-1945 WORLD WAR TWO – FORT ARTHUR'S HEAD

With the onset of World War Two, the Arthur Head defences were again brought into play and were a key element of the Fremantle Fortress defences which guarded the coastline. A Navy signal station and observation post were constructed on Arthur Head to enhance the facilities. The Round House was incorporated into the defence requirements. There is no information currently available to indicate what specific changes were made to the structure but photographs from the Australian War Memorial show the headland, and the Round House, shrouded in camouflage.



Figure 35: View of Arthur Head, 3 Nov 1942
Courtesy Australian War Memorial, image 28712

2.14 1950S A GROWING APPRECIATION OF THE ROUND HOUSE

After World War Two, the Fort Arthur Battery discontinued as a defence site although some buildings continued to have associations with the defence forces. The Round House site and portions of Arthur Head were transferred to the Fremantle Harbour Trust in 1959. A photograph of the interior in 1949 (See Figure 36) indicates the windows have been removed since the 1938 photographs.



Figure 36: Internal view of the Round House, 1949
Courtesy Westpix, image 35530

In 1951, the Fremantle Harbour Trust put forward a proposal to the City of Fremantle that they use the Round House ground floor cells for cool storage. Fremantle council agreed to the proposal and in the reporting of the agreement in the local press it was noted that the place was unused and had become a plaything for the weather – and for vandals.¹²⁵

¹²⁵ *The West Australian*, 17 July 1951, cutting in Fremantle Harbour Trust in File 279a Round House, Cons 3467, SROWA.





Figure 37: View of the south side of the Round House. 1951.
Courtesy Westpix image 35529.

The Round House again came to the attention of the local media when in June 1958, a visit was made to the site by Mr J. W. Sewell, from the Western Australian Historical Society, Mr Wales builder and stonemason and two journalists: Athol Thomas and Phil Matthews from the *Weekend Mail*. Their visit described the outer walls of the building being in reasonable condition but the inner wall opposite the entrance in 'bad shape', the cells in reasonable condition, the roof of the 'upper cells' in poor condition and the woodwork in need of attention. Mr Sewell noted that the bars in the windows needed replacing to 'put the place back as it was originally'.¹²⁶



Figure 38: Journalist Athol Thomas within the Round House, May 1958.
Courtesy Westpix image 0035524 and 0035525.

¹²⁶ Report of inspection by the Western Australian Historical Society, provided to the Fremantle Harbour Trust, June 1958, in File 279a Round House, Cons 3467, SROWA.

Round House, Fremantle - Conservation Management Plan

2020

An article followed in the *Western Mail* in May 1958 which identified the history and value of the place to Western Australia and urged its retention. The focus on the building led to conservation works being undertaken with contributions from several of the agencies with an interest in Arthur Head.



Figure 39: Repairs to the Round House, May 1959, note the render on the walls
Courtesy Westpix images 35483, 35484, 35485, 35486

The Round House opened for visitors on 7 September 1959 with volunteers from the WA Historical Society in attendance. Not long after the works were completed a school group was shown through the Round House. A photograph of this visit shows the extent of the render applied to the lower levels of the internal courtyard walls.





Figure 40: School group visiting the Round House, August 1959, showing the rendered internal walls and boarded up window openings.
Courtesy Westpix image 0035484.

2.15 1960-1982 DEVELOPMENT OF CONSERVATION PRACTICE

In the early 1960s it became apparent that the stairs to the Round House were going to be a problem with the installation of the standard gauge railway. One option considered at the time was the relocation of the Round House to another location, one suggestion being the Old Asylum, now the Fremantle Arts Centre.

It was however resolved to realign the steps and preparing for these alterations required consultation with the various stakeholders including the Royal Australian Institute of Architects, National Trust (WA), Fremantle Harbour Trust, City of Fremantle and WA Government Railways.

It was resolved to remove the stairs projecting toward the railway line and replace them with a flight of stairs alongside the cliff face as shown in a sequence of images shown in Figure 42. Demolition of the stairways occurred in March 1966. A plaque was erected to acknowledge and describe the alterations.

Round House, Fremantle - Conservation Management Plan

2020

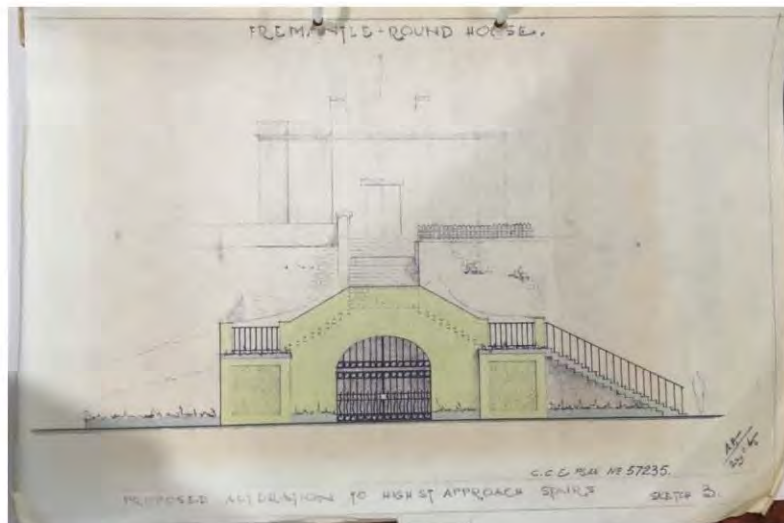


Figure 41: CCE Plan 57235
Courtesy National Trust WA

Sequence of images showing before and after the demolition of the steps in March 1966.
Images from the City of Fremantle local history collection.



Page | 66



Figure 42: Sequence of images showing Round House access stairs before and after demolition in March 1966

Courtesy City of Fremantle Local History Collection

These works included stabilisation of the eastern cliff face by encasing the cliff in new blockwork.



Figure 43: Stabilisation of the cliff face, March 1966
Courtesy Westpix, images 107771 and 107772

With the construction of the railway line, Arthur Head was more clearly separated from the city centre. Although open for visitors the Round House was not readily accessible. Arthur Head and Bathers Beach were predominantly extensions of the working port of Fremantle with little interaction with the general public.

In 1972, the City of Fremantle engaged architect Robin Campbell to prepare a preliminary report on the feasibility of restoring or preserving the Round House. Campbell had overseen



the restoration work of the former Fremantle Female Asylum in the late 1960s. Its successful conversion to a branch of the WA Museum and the new Fremantle Arts Centre was a flagship project for conservation in Western Australia.

Campbell was one of the few architects with experience in conservation work. Even so, the preparation of a Conservation Plan was a new part of the process. The Fremantle Arts Centre project was completed with minimal documentary or physical research and the pitfalls of that process were hoped to be avoided by the preparation of a Conservation Plan to guide the works at the Round House.¹²⁷

Campbell prepared the document in 1972 and 1973 and apart from the obvious physical decay of the building, the conflicting interests of many different stakeholders, predominantly government authorities delayed works on the structure.¹²⁸ A plan of the site prepared in 1974 shows the different land ownership and responsibilities across the whole site.



Figure 44: Land allocation and ownership 1974.
Courtesy City of Fremantle

In the early 1970s, the building was in very poor condition. As Campbell recalled:

... the walls were in danger of falling down, sections of them had fallen down before and there was a lot of reportage of that very early in the piece. They are extremely exposed and buffeted by the winter winds and squalls, sections of the walls had been undermined before and were undermined again. Sections of the walls had eroded so that there were holes right through that you could poke your head through in places and the wind would whistle through and keep the erosion going.

The walls were hollow and as the old mortar was perished or became perished, the sand residue would just rill down in the hollow and so you would have solid

¹²⁷ Campbell, R. McK 'The Round House Report No. 2', October 1973.

¹²⁸ Robin McKellar Campbell Oral History, 1993, interviewer Lorraine Stevens. City of Fremantle Library. Transcript p. 38.



wall for the first few feet and then hollow from there up. It was very seedy and sick indeed and had every imaginable kind of creeper and weed and grass growing in it and on it and out of it. It was inhabited by rats and birds and everything else you could think of.

At that time it wasn't being used at all but it had been recently used as simply storage space and so there were bits and pieces of wood and lumber and flag poles and Port Authority bric-a-brac - drums of oil and things littered about. So it really was just first of all tidy up the mess, check the walls, start to stabilise the walls and try to make sure they would not blow away.¹²⁹



Figure 45: Round House prior to conservation works, 1975.
Courtesy Fremantle Local History Collection, image 854.

The completion of the Conservation Plan provided the impetus for the City of Fremantle to apply for grants from the Commonwealth and State Governments. In the early 1970s, the City received grants from several agencies, the most significant from the Commonwealth Government under the National Estate Grant program overseen by the Australian Heritage Commission.

Campbell and his team, most of whom had worked at the Fremantle Asylum, were learning on the job with this challenging project. The conservation decisions were made with the best

¹²⁹ Robin McKellar Campbell Oral History, 1993, interviewer Lorraine Stevens. City of Fremantle Library. Transcript p. 38-39.

Round House, Fremantle - Conservation Management Plan

2020

knowledge available and the best of intentions. Although Campbell himself recalled in later years that, his work in the Conservation Plan was 'naïve'.¹³⁰

Nevertheless, the team embraced the challenge of the new techniques such as shingling which Campbell believed was the first re-shingling job done in Western Australia. The shingles were imported from North American and Campbell recalled:

... we sat on the roof for a week, me with an old trade manual in my hand reading instructions to Guy who had to practice his skill with hammer and nails. It was that sort of a process. Learn as you go. ¹³¹

These works included major work to the doors and windows, replacement of flat roof over the entry rooms with corrugated iron and considerable stone repairs and replacement. The window on the upper level facing north was filled and roof plumbing replaced. The chimney was removed.

Works included

- demolition of the chimney stack and lime mortar roofs on the upper rooms which were replaced with iron sheeting;
- Removal of lime mortar roofs above the cells and replaced with shingles;
- infill of the window opening in the north wall of the first floor northern room;
- underpinning and buttressing sections of the external walls;
- grouting and pointing of limestone; joinery repairs;
- new copper roof plumbing and drainage to courtyard;
- 'blue metal' concrete patching to courtyard and cells;
- re-wiring and lighting; and: painting.



Figure 46: Detail of Roof works, 1975.

¹³⁰ Robin McKellar Campbell Oral History, 1993, interviewer Lorraine Stevens. City of Fremantle Library. Transcript p. 37.

¹³¹ Robin McKellar Campbell Oral History, 1993, interviewer Lorraine Stevens. City of Fremantle Library. Transcript p. 39.



Round House, Fremantle - Conservation Management Plan

2020

Courtesy City of Fremantle



Figure 47: Flat roof on upper level prior to works, 1975.
Courtesy City of Fremantle



Figure 48: Well conservation works, 1975.
Courtesy City of Fremantle

Following completion of the conservation works the Round House was opened for visitors and overseen by the Fremantle Port Authority. In 1978, the Fremantle Port Authority closed the Round House because of the maintenance and staffing costs. Volunteers from the Royal WA Historical Society kept the place open for visitors for some years.



Page | 71

2.16 1982-2020 CITY OF FREMANTLE

In 1982, after prolonged negotiations the site was transferred to the City of Fremantle, which enabled a more streamlined approach to the conservation and management of the place. The City of Fremantle instigated the installation of a level crossing over the railway line to enable easier access by visitors. The Round House was opened to the public with the assistance of volunteers who continued to research and gather information about the place.

In 1985, the City of Fremantle received a significant grant from the Commonwealth government to draw together resources and information about Arthur Head to inform future works. This repository of information is a valuable source for future interpretation. Archaeological investigations of the well were undertaken and documented. This research and investigation phase included some additional stonework repairs overseen by Rob McK Campbell.

In 1997, interpretive elements were constructed adjacent to the Round House to demonstrate its past uses and associations. These were the signal mast, time ball, cannon and the timber deck to the west of the Round House.

In 2001, conservation and interpretation works undertaken to the Baker's Oven beneath the round house steps.

In 2004, stone repairs were undertaken to the external surfaces of the Round House overseen by architect Philip Griffiths. These works included large areas of repointing with a lime mortar. Subsequently, the corrugated iron roof over the two storey section of the building was replaced with copper sheeting and the downpipes and rain heads installed to match the roof plumbing installed in the 1970s.

In 2010, the shingles laid in the 1970s over the cells were replaced with sheoak shingles.

Griffiths Architects subsequently prepared a conservation plan for the Arthur Head precinct in 2011.

In 2010-2011, the City of Fremantle undertook major landscape and interpretation works in the Arthur Head and Bathers Beach vicinity to promote use and understanding of the Old Port Precinct.

In 2013, a new bell on a stand was introduced as an interpretive element at the Round House. The bell came from a parish church in the West Midlands so England through a Trust set up to help churches find new homes for redundant bells.¹³² The bell assisted guides in their presentations to visitors about how ticket-of-leave men would hear the bell from the Round House at 9.50pm and then hasten to be back to their homes by 10pm.¹³³

Since the last major program of works, the City of Fremantle have undertaken ongoing maintenance and repairs to the Round House and the Fremantle Volunteer Guides regularly open the building to visitors.

In 2019, the Fremantle Volunteer Guides received a grant from Lotterywest to develop new interpretation for the Round House. The Interpretation project will develop and install a range of media to tell the stories associated with the place. A particular area of focus is to acknowledge the importance of the place to the Aboriginal community as this story has not been given sufficient weight in past interpretation. Any interpretation installation has to consider and be sensitive to the heritage values of the Round House.

¹³² *Fremantle Gazette*, 12 March 2013, <https://www.perthnow.com.au/community-news/fremantle-gazette/bell-adds-to-history-of-round-house-c-792125>, accessed August 2020.

¹³³ Ibid.



2.17 CHRONOLOGY OF DEVELOPMENT

TIME	EVENT
60000BC – present	Land occupied by the Whadjuk Noongar people. The name of the area including Arthur Head and Bather's Bay is 'Manjaree'
1827	James Stirling named the promontory on the south of the Swan River, 'Arthur Head' in honour of George Arthur, Governor of Van Diemens's Land (Tasmania)
1829	2 May, Captain Fremantle took possession of the West Coast of 'New Holland' by raising the Union Jack on Arthur Head 4 December, Formation of police force in the colony to assist magistrates
1830	Wreck of the <i>Marquis of Anglesea</i> on Arthur Head used as a jail and administration offices
1830-1831	Round House constructed to hold offenders generally for short periods Immediate problems with the leaking weatherboard roof. Access steps directly from High Street
1833	Government formally granted permission for "persons requiring stone for building or any other purpose to take it from Arthur Head.
c1833	Well dug within the confines of the Round House
1834-35	First Courthouse was constructed on Arthur Head alongside the Round House
1837	Fremantle Whaling Company began operations in Bathers Bay with the construction of a whaling station and tunnel under the Round House Construction of the tunnel required realignment of the steps from High Street creating two flights of stairs around the tunnel.
1840	Rottneest Native Penal Establishment founded
1843	Three rooms built above the entry kitchen and jailor's quarters accessed by a timber staircase. The new rooms include windows looking over the yard.
1849	Stocks in use outside the Round House from 1830-1849
1850	The Fremantle Whaling Company disbanded in 1850 and Bathers Bay became a boat building centre. The First Lighthouse was built on Arthur Head.
1850-1868	Convicts transported to the Swan River Colony
1852-1859	Fremantle Prison built for the transported convicts
1850s-1886	Round House used as jail for short term prisoners and as a lock up for ticket-of-leave men who broke curfew
1851-52	Courthouse and lighthouse keepers house built on Arthur Head
1852	Police Station built on High Street, adjacent to Arthur Head
c1856	Government cottage was constructed alongside the Round House (demolished c1965)
1873	Long Jetty construction commenced and extended in 1881-83. Crack formed in floor of the yard at the Round House.
C1880s	Harbour Master's House (demolished 1928) was built on the site of the First Courthouse
1886-1900	Round House transferred to the Police and used as a Lock up for short term prisoners



Round House, Fremantle - Conservation Management Plan

2020

TIME	EVENT
c1890s	First Signal Mast constructed at Arthur Head
1892-97	Construction of Inner Harbour. Shift in focus of harbour activities from Bathers Bay to the north of Point Marquis. South Mole with stone obtained from the levelling down of Arthur Head
1897	Completion of inner harbour scheme.
c1899	Time ball constructed near the Second lighthouse then relocated to the top of the Second Lighthouse
1888- c1902	Round House used as the living quarters for members of the police force.
c1902	Signal Station constructed, possibly to replace the Second Lighthouse lantern
1904	Demolition of Second courthouse and construction of four Pilot's Cottages
1904-06	State acquired Arthur Head as a strategic location for defence of the coastline. Construction of Fort Arthur Battery began in 1905-06
1905	Second signal mast constructed immediately west of the Round House, abutting the defence battery. Power house built on Point Marquis and cables run through the tunnel.
1914	Alterations to the Round House for Caretakers Cottage
1922	Tenders called to demolish the Round House. Demolition did not proceed and £15 spent on stabilising the whole structure
1928	Demolition proposed at the same time as the Chief Harbour Master's House. Halted through intervention of Chief Librarian James Battye supported by Premier Collier
1934	Request from WA Historical Society to restore the Round House and propose that the Round House be used as a museum expressed by WA Historical Society
1935	Repair works completed by Public Works Department costing £118
1936	Round House, Reserve 21563 vested in the Fremantle Harbour Trust
1938-39	Restoration of the Round House to make the structure safe
1937	Works at the Round House by Sustenance Labour to 'make it good'. Gates installed at both ends of the tunnel.
1939-45	World War 2 Arthur Head battery incorporates the Round House
1959	Commonwealth Government sells the Fort Arthur Battery Defence Reserve to the Fremantle Harbour Trust
1959	7 September, Round House opened to the public following restoration works. Volunteers from the WA Historical Society Trust in attendance
1965/66	Fremantle Harbour Trust quarried the western portion of the headland and pushed rubble into the sea.
1966	Steps to the Round House from High Street demolished and rebuilt parallel to the railway line
1972-73	Preparation of 'Round House Report No.2' by R McK Campbell
1975	Conservation works overseen by Robin McK Campbell and funded by a National Estate grant
1982	Reserve 21563 vested in the City of Fremantle with the purpose of preservation and protection of the Round House and other buildings.



Page | 74

Round House, Fremantle - Conservation Management Plan

2020

TIME	EVENT
1984	Reserve 21563 classified as an 'A Class Reserve
1985	Commonwealth/State Bicentennial Program granted of \$1.5 million to the Arthur Head Project. Included restoration of the Round House overseen by Robin McK Campbell.
1987	Reserve 21563 increased in size and its purpose altered to 'Historical Buildings and Community Services'. America's Cup held in Fremantle
1990s	Conservation and adaptation works undertaken to the Fort Arthur buildings and J-Shed
1997	Construction of signal mast and timeball, introduction of the canon and the timber deck to the west of the Round House
1999	Arthur Head Reserve Conservation Plan prepared by Naomi Lawrence
2001	Conservation and interpretation works undertaken to the Baker's Oven beneath the round house steps. Conservation and stabilisation works were undertaken to the Whaler's Tunnel and cliff faces. Tunnel reopened to the public
2004	Conservation and interpretation works at the Round House. Conservation work concentrated on stonework overseen by Griffiths Architects
2008	Interpretive works at Whaling Station site
2010-11	Conservation, interpretation and public amenities works to the Old Port Precinct
2010	Sheoak shingles replaced the existing shingles over cells.
2011	Conservation Management Plan for Arthur Head Reserve by Griffiths Architects
2018	Investigation of Arthur Head cliffs and tunnel interpretation
2019-20	Preparation of Conservation Management Plan for the Round House



2.18 ASSOCIATIONS

Henry Willey Reveley (1788-1875)

Reveley's father, Willey Reveley an English architect, assisted prison reformer Jeremy Bentham in the design and drafting of models the Panopticon prison, a new approach to incarceration. After Willey Reveley died when Henry was 10, his mother Maria, her new husband James Gisbourne and Henry settled in Italy where the family associated with a creative and educated circle. Henry trained as an engineer and returned to England in 1821 where he undertook a variety of work, demonstrating a range of interests in the arts and sciences.¹³⁴

As the first chief engineer of the Swan River Colony he played a significant role in the establishment of the settlement. The Round House is the earliest remaining example of Reveley's work and is of interest for its modest expression of the theories of the Panopticon Prison

Henry Francis Vincent (1796-1869)

The first jailer was Henry Vincent who held this position until 1838 when he took up the role of the first Superintendent of Rottnest Island. Vincent was Superintendent at Rottnest from 1838-1849 and 1855-1867 he had a talent for construction and oversaw the construction of buildings and roads on Rottnest. The buildings constructed by Vincent used techniques similar to those observed at the Round House, particularly the flat roofs clad with limestone. He was well known for his harsh and cruel treatment of the Aboriginal prisoners.¹³⁵

Yagan (c1795-1833)

Yagan was a leader of the Whadjuk Noongar people particularly following the brutal execution of his father, Midgegooroo, in May 1833. He played a key part in early resistance to British colonial settlement and rule in the Perth metropolitan area. Walyalup (Fremantle) was part of his tribal area. Yagan was imprisoned at the Round House in October 1832 for an attack on two labourers in Kelmscott. Although sentenced to death he and others were released to Carnac Island under the supervision of prominent settler Robert Menli Lyon. After six weeks the men escaped the island.

Yagan continued his resistance and was pursued by the local authorities after he killed Erin Entwistle, a servant of farmer Archibald Butler. It was an act of retaliation after Thomas Smedley, another of Butler's servants, shot at a group of Noongar people stealing potatoes and fowls, killing one of them. The government offered a bounty for Yagan's capture, dead or alive, and a young settler, William Keats, shot and killed him in July 1833.

Yagan's execution figures in Australian history as a symbol of the unjust and sometimes brutal treatment of the indigenous peoples of Australia by colonial settlers. He is considered a hero by the Noongar.¹³⁶

Galute (Calyute, Kalyute, Wongir) (flourished 1833-1840)

Galute was a leader of the Pinjareb group, known as the Murray River Natives who actively resisted the settlement of his country by the Europeans. He was involved in several skirmishes and attacks on settlers, most well-known an attack on the mill near Perth owned by George

¹³⁴ 'Henry Willey Reveley b. c.1788', Design and Art Australia Online, 1992, 2012, <https://www.daa0.org.au/bio/henry-willey-reveley/biography/>, accessed December 2019.

¹³⁵ Henry Vincent (1796-1869), gaoler and builder, Metropolitan Cemeteries Board website. Heritage Walk Trail One <http://www.mcb.wa.gov.au/our-cemeteries/fremantle-cemetery/heritage-walk-trail/6-henry-vincent> accessed December 2019.

¹³⁶ South West Aboriginal Land & Sea Council, 'Yagan', in Kaartdijin Noongar – Noongar Knowledge, 2020, <https://www.noongarculture.org.au/yagan/?searched=yes>



Shenton from which flour was stolen. For this offence Galute and others were captured in a violent affray. Galute was bayoneted and others were wounded by gunfire. Despite their injuries all the captives were flogged in the street in Perth, Galute received 60 lashes and was confined to the Round House for two months. It is believed he continued to oversee resistance and receive support from his group through whispered messages through the walls of the Round House at night. Soon after his release in June 1834, he led an attack on Thomas Peels property and killed one and wounded one other soldier. It was this attack which prompted Governor Stirling to gather an armed party to travel to Pinjarra to send a message to the Murray River natives. The ensuing Pinjarra Massacre profoundly shaped the relations between settlers and aboriginal people.

No further information is known about Galute after 1840 but he reputedly lived into old age.¹³⁷

James Sykes Battye (1871-1954)

James Battye was the Chief Librarian in Western Australian and held that position from 1894 until his death in 1954. He was a leading historian and public figure and held prominent roles in community groups and was outspoken in his fields of interest and expertise. It was his prominent position in the community and as a public servant that was influential in stopping the proposed demolition of the Round House in 1928.

He was active in the WA Historical Society that provided expertise and voluntary assistance to the creation of displays at the Round House.

Robin McKellar Campbell (1934-2017)

Rob Campbell was an influential architect in heritage practice in Fremantle and Western Australia. Born in South Africa in 1934 and graduating in architecture from the University of Cape Town in 1957, Robin McKellar Campbell was employed in general practice in South Africa, Rhodesia and the United Kingdom (RIBA 1959). He moved to Australia and completed a Master of Architecture degree at the University of Melbourne and on arrival in WA in 1964 joined the firm of Oldham Boas & Ednie Brown.

He established his architectural practice in Fremantle in 1966 and his projects in conservation works at the Fremantle Arts Centre, Round House and the Fremantle Markets lead conservation approach and practice in the state. He continued to work and teach in heritage practice and philosophy throughout his career and advocate for the heritage of Fremantle.¹³⁸

Fremantle Guides and Volunteer Groups

The Round House is in existence today largely through the passion and lobbying of several volunteer groups. Through the 1920s until the 1960s it was the influence of the National Trust and the Royal Western Australian Historical Society, as well as some interested individuals that brought forward the significance of the Round House and ultimately lead to its conservation.

The Round House is now open to the public through the work of the Fremantle Volunteer Heritage Guides who provide a valuable service and continue to undertake research into the history of the Round House.

¹³⁷ Calyute, Neville Green, Australian Dictionary of Biography, 2005,
<http://adb.anu.edu.au/biography/calyute-12832>

¹³⁸ Robin McKellar Campbell, in Fremantle Stuff, 30 October 2017,
<https://fremantlestuff.info/people/campbellrobin.html>



3.0 PHYSICAL EVIDENCE

3.1 SITE, SETTING AND LANDSCAPE

The Round House forms part of the larger Arthur Head Reserve, which is an A Class Reserve, totalling approximately 97 hectares along the Fremantle coast between Point Marquis, South Mole to the north west and Bathers Beach House at Mews Road to the South, and boarded by the railway line to the east. The Reserve forms part of the Tamala Limestone Formation seen along the West Australian coastline. The limestone outcrop upon which the Round House is located was originally part of a prominent headland which together with Rous Head formed a low cliffed entrance to the Swan River. Both of these headlands were subjected to quarrying and the Arthur Head Reserve is now a remnant of a much larger headland. The limestone cliff face of the Reserve forms a striking aesthetic, though is in a precarious condition. The caprock (the upper level of the limestone formation) can be seen in a number of pathways through the Reserve, particularly around the Round House itself.



Figure 49: Reserve 21563 within City of Fremantle
Courtesy National Map 2019



Figure 50: Aerial photograph showing Reserve 21563
 Courtesy Landgate 2019

The Round House is located towards the northern end of the Reserve, forming the higher-level western termination of High Street. The upper level of the reserve is accessed via a dogleg set of stone steps opening out to the grassed area to the south of the Round House and Captains Lane to the north. A further set of stone steps provides access into the Round House.

Captains Lane is developed along its western edge with a number of cottages known as the 'Pilots Cottages', a group of four cottages constructed for the pilots working in the Fremantle Port. Captains Lane is a paved, predominantly pedestrian access to the Reserve from Mrs Trivett's Place and car park. A small area of grass runs along the eastern extent of the lane before the land drops away to the parking area below.

The grassed area to the south of the Round House is bounded by limestone walls and is an open expanse of lawn. A pathway at the southern end of the grassed area leads down to Bathers Beach.

Immediately around the Round House are areas of capstone, providing an uneven ground covering and a number of concrete paths. The Signal Station is located to the west of the Round House which provides views out over Bathers Bay.

A further walkway is located to the north of the Round House extending between the rear boundaries of the Pilot's Cottages to the east and the lower level J Shed to the west. Public toilets are located at the northern end of this pathway.

Although it cannot be seen from the Round House, the Whaling Tunnel extending underneath the Round House also forms part of the context for the Round House. The tunnel extends through Arthur's Head from the foreshore and exiting the cliff under the steps on the eastern side.





Figure 51: Aerial photograph showing access to the Round House
Courtesy Nearmap

The setting for the Round House is varied, with city development to the east and ocean to the west. The north and south are characterised by port and marina uses. The immediate landscape around the Round House is simple and unobtrusive. It does not compete with the Round House, nor does it overly emphasise the harsh conditions that would have been experienced within the jail. A "beautification" scheme was instigated in 1937 to the south of the Round House.

The work to be done includes clearing the ground, forming a park on the top of Arthur's Head alongside the Round House, planting lawns, planting pigface on slopes, terracing, building a rubble wall along the cliff edge, repairing steps, gravelling and forming paths. When completed this will give a park area on the top of Arthur's Head on the southern side of the Round House, with cliffs terraced or otherwise protected, a pleasant approach up the Round House steps, and lawns or garden plots on the eastern side of the Round House with a path leading across the railway track to the end of High Street.¹³⁹

¹³⁹ *The West Australian*, 4 December 1937, p. 18.



Much of the above remains extant with the grassed area forming a small area of parkland creating a contrast with the Round House.

At the time of construction, the Round House stood in isolation at the top of the cliff, creating a stark and imposing image. This aesthetic changed following the construction of buildings to the north and south; the Court House, Government Cottage, Harbour Master's House and Pilots' Cottages which then created a more enclosed precinct. Much of the subsequent development to the south of the Round House has been demolished creating the open lawned area that exists today however the Pilots' Cottages remain extant which serve to soften the appearance of the Round House slightly on its northern approaches. The remnant plantings about the northern walls of the Round House and the adjacent cottage adds an air of softer domesticity to the character of the Round House.

The setting for the Round House for the purpose of this conservation plan is drawn tightly around the structure itself, extending from the western tip of the lookout and Signal Station to the top of the main steps leading down to High Street. The north and south boundaries of the study are drawn along the north and south sides of the Round House, including the pathway. The areas mentioned in the above paragraphs provide a context for the Round House and its relationship with the rest of the Arthur Head Reserve.

Figure 52: Round House viewed from High Street



Figure 53: Steps leading up to the top of Arthur Head Reserve



Round House, Fremantle - Conservation Management Plan

2020

Figure 54: Steps leading up to the top of Arthur Head Reserve



Figure 55: The Round House viewed from the top of the steps



Figure 56: Paving in front of the Round House



Round House, Fremantle - Conservation Management Plan

2020

Figure 57: High Street looking from the Round House



Figure 58: Pilot Cottage adjacent to the Round House



Figure 59: Captain Lane to the north of the Round House



Round House, Fremantle - Conservation Management Plan

2020

Figure 60: Pilot Cottage



Figure 61: Grassed area to south of the Round House



Figure 62: Grassed area to south of the Round House



Figure 63: Grassed area to south of the Round House



Round House, Fremantle - Conservation Management Plan

2020

Figure 64: View from the grassed area north towards Fleet Street



Figure 65: View from the top of the Reserve over Bathers Bay



Figure 66: View from the top of the reserve towards Fremantle marina



Figure 67: View from Bathers Beach to the Signal Station



Round House, Fremantle - Conservation Management Plan

2020

Figure 68: View from Bathers Beach to the Signal Station. Tunnel entrance canopy in the foreground.



Figure 69: View to west entrance of Whaling Tunnel



Round House, Fremantle - Conservation Management Plan

2020

Figure 70: View through Whaling Tunnel under the Round House



Figure 71: View towards the Round House from Mrs Trivett Place



Figure 72: Public amenities along Mrs Trivett Place



3.2 DESCRIPTION OF FABRIC

The Round House is a 12-sided dodecagon stone building with a simple parapet above the entrance and a corbelled string course approximately three stone courses below the top of the walls. As a prison, the building is of stark design with no ornamentation and no openings, apart from the main door, to the external face of the structure. Stone steps lead up to the double timber entrance doors and with the exception of a collection of plaques, there is nothing else on the façade that breaks up the stone.

The designer, engineer William Reveley, was heavily influenced by the Jeremy Bentham school of panopticon prisons. The principle behind these jails was a centrally located round building that acted as a look-out along the wings of the prison – the ideology of the all seeing eye meaning that the prisoners were always being watched but they could not see the guards. It is known that Reveley designed additions to this structure with wings extending to the north and south following the panopticon principles. A plan dating from the 1850s depicts this enlarged design of the Round House with the wings purposely being designed to accommodate convicts but the plan never came to fruition with the Fremantle Prison site being a preferred location for a larger prison.

However, the Round House was built as it presents today: a compact 12-sided building which originally contained eight cells, privies within one cell space, entry foyer, two warder's rooms and three rooms above these. During its long history, the place has been subjected to neglect and only four of the cells remain extant together with the double storey warder's section.

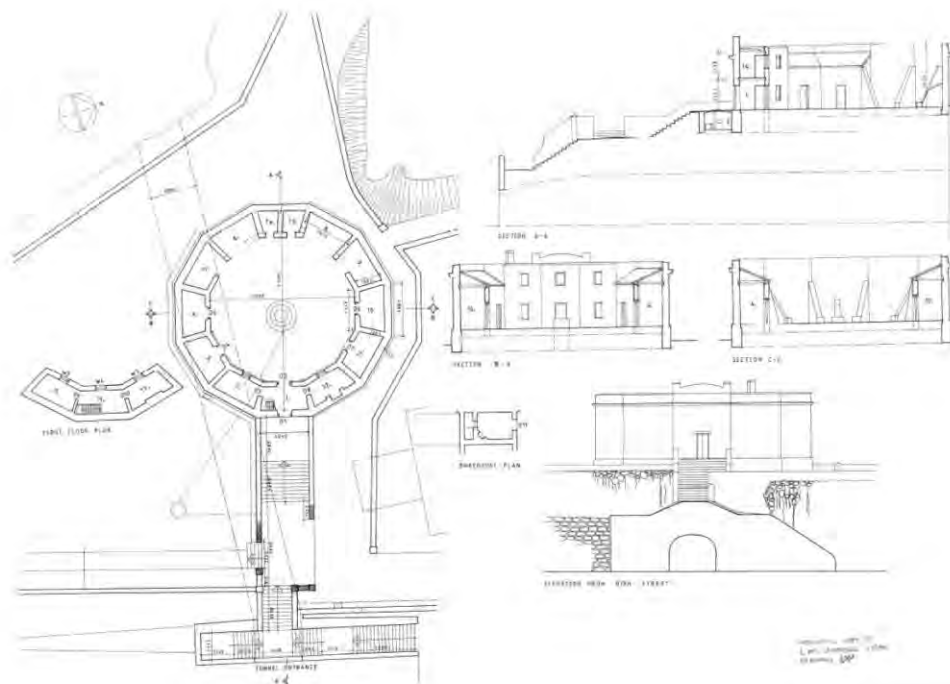


Figure 73: Metricized plan of R McK Campbell's 1980 Drawing of the Fremantle Round House
 Courtesy City of Fremantle

3.3 EXTERIOR

The Round House illustrates a stark form of the Old Colonial Georgian style of architecture¹⁴⁰. The style has been ascribed to many early Australian buildings that had status and used a simplified version of the classical form of British architecture. Classical architecture is governed by the principles of order meaning "*all parts of a building have to harmonise visually with one another as well as with the whole*", which in turn is influenced by proportion. Some of the characteristics that define this style of architecture include: gentleness of scale, symmetrical facades, pediments, shingle roofs and brick or stone construction. The Round House clearly demonstrates most of these qualities.

The formality of the architecture together with the starkness of the blank façades necessitated by the intended function of the place is clearly expressed in the façade (Face 1) of the Round House. The pediment marks the entrance. The sense of arrival is emphasised by the steps. The sense of future enclosure and incarceration is stressed by the blank timber doors and lack of windows.

The limestone structure is built on a plinth of cut limestone blocks to create a level floor to the jail, the void of the plinth has not been inspected but from previous drawings is said to be infilled with a soft backfill. The plinth varies in height to accommodate the change in levels of the site. The limestone of the jail is predominantly the capstone quarried from the Arthur Head cliff. Evidence of remnant timber and slate packers can be seen in a number of the more exposed joints.

At the time the Round House was constructed, the finish was thought to have been natural limestone. Over the years, both the interior and exterior were lime washed (faint traces remain extant on the upper level external stone work) and later cement rendered. The cement render has been removed however areas of cement mortar to the pointing still remains evident in places. Generally the presentation of the Round House in 2020 is a natural limestone finish with flush limestone joints.

The roof treatment to the two storey section cannot be seen from any ground level external view, being obscured by the decorative pediment built above the entrance. The cell roofs are tucked well below the top of the perimeter wall internally and no sense of the interior can be gained from the blank exterior.

The jail is accessed via a flight of ten stone steps with low balustrade stone walls rendered with cement rich mortar. A plaque on one of the treads commemorates the date the jarrah treads were replaced in 1983, the earlier treads having weathered away. The steps terminate at a small landing area which extends to the timber double doors. Hidden underneath the steps is the prison bakehouse. The laundry was also stated to be under the steps however no evidence remains of this use.

Whilst symmetry of façade in traditional Georgian buildings was illustrated through the placement of door and window openings, placement of pilasters etc the Round House demonstrates a different form of symmetry illustrated by the centrally placed double timber entrance doors in face 1, directly under the pediment. The lack of detail in this instance creates the symmetry of the façade.

The remainder of the Round House presents as a series of unadorned façades. The remaining eleven elevations of the building are blank stone faces enlivened only by the deep string course. There is no evidence of any earlier openings in the west wall that are believed to have contributed to the initial collapse of the wall in the 1920s. Early photographs show access hatches to the privies and a door in the west wall (Elevation no. 7) but when the rear elevations were rebuilt in the late 1920s all evidence of the former door and hatches were removed.

¹⁴⁰ Apperley, R., Irving, R., Reynolds, P., A Pictorial Guide to Identifying Australian Architecture: Styles and Terms from 1788 to the Present, Angus & Robertson, Sydney, 1994



Round House, Fremantle - Conservation Management Plan

2020

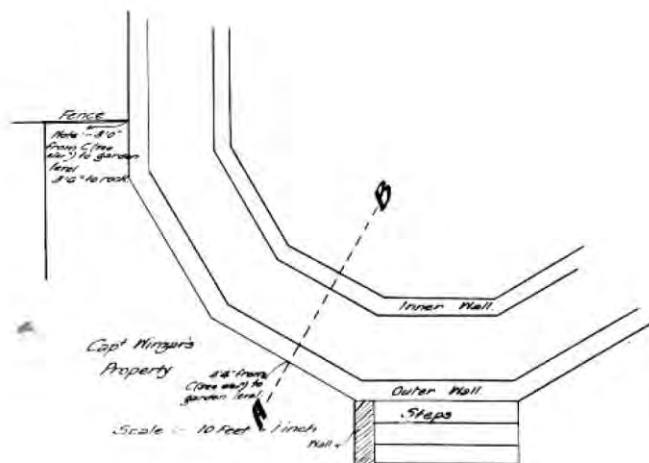
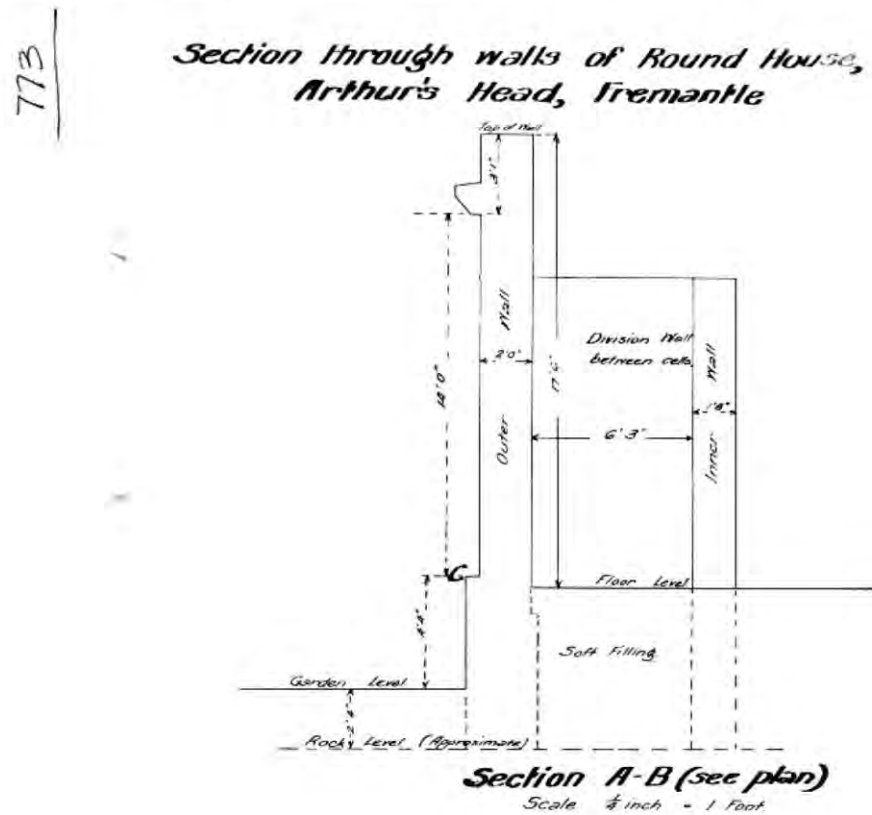


Figure 74: Section through the walls of the Round House, c1920s
Courtesy City of Fremantle

At the rear, western side of the Round House, are the Signal Mast, Time Ball, Cannon and look out. The Signal Mast and Time Ball are not the original but is an interpretation of the earlier 1905 Signal Mast and were installed in 1997. The tall mast consists of a simple steel pole with yard



arms and a Time Ball on the south arm, secured by steel rope stays fixed to the west wall of the Round House, the caprock and boundary walls. Flags and the Time Ball are raised by a pulley system with ropes secured to the timber pegs, an interpretation of the belaying pins, at the base of the mast.

This area is triangular in shape, with stepped access closest to the Round House leading up to a natural caprock ground coverage before advancing up further steps to a timber deck area which is laid on top of the caprock. A timber picket fence/gate separates the two areas. Steel rail fencing has been erected at the eastern end of this element to prevent falls due to the change in ground levels. Additional timber balustrading has been installed on top of the stone boundary walls for safety reasons.

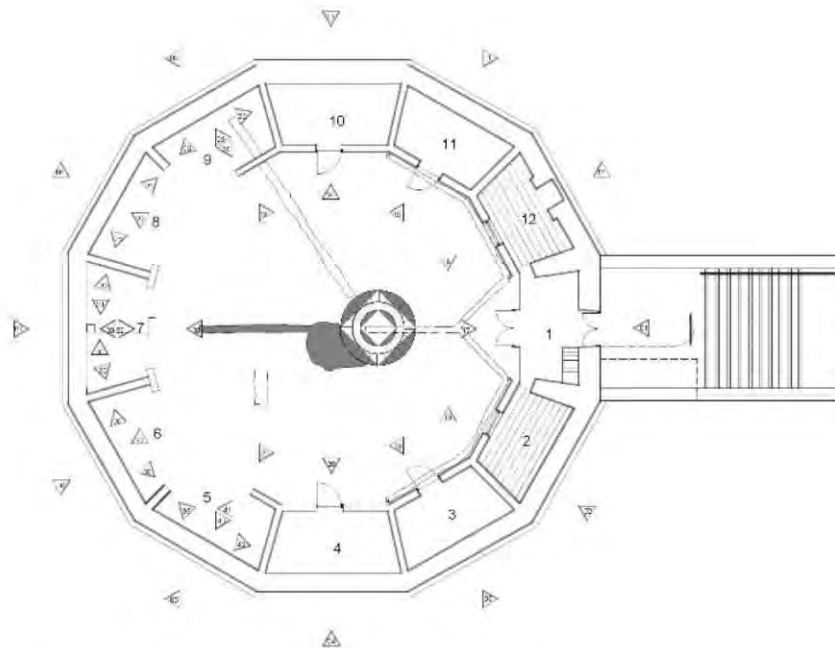


Figure 75: Plan showing the numbering of cells and faces in this document

Figure 76: Timber and stone steps leading to the entrance



Round House, Fremantle - Conservation Management Plan

2020

Figure 77: Plaque on steps commemorating the replacement of the timber stapes in 1983



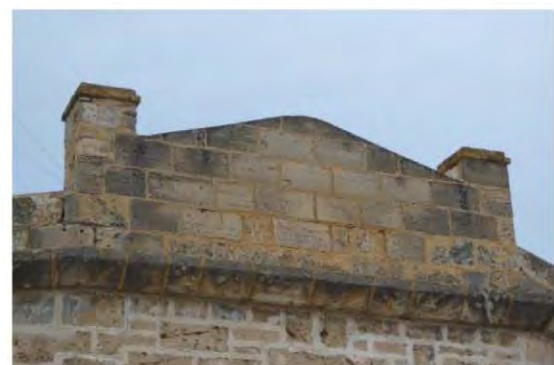
Figure 78: Plaque on façade of Round House



Figure 79: Plaque on façade of Round House



Figure 80: Pediment



Round House, Fremantle - Conservation Management Plan

2020

Figure 81: Stone string course below parapet



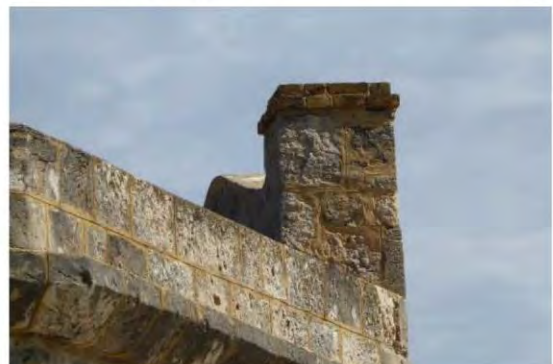
Figure 82: Parapet detail



Figure 83: Underside of string course with angled stones



Figure 84: Southern face of the parapet



Round House, Fremantle - Conservation Management Plan

2020

Figure 85: Entrance doors



Figure 86: Timber steps leading up to entrance doors



Figure 87: Face 1 and 12, main entrance steps and Bakehouse



Round House, Fremantle - Conservation Management Plan

2020

Figure 88: Rendered limestone balustrade and wall to Round House steps, incorporating former Bakehouse



Figure 89: Entrance of Bakehouse



Figure 90: Faces 1, 2, 2 and 12 and pathway along southern side of Round House



Round House, Fremantle - Conservation Management Plan

2020

Figure 91: Typical stonework with pointing form 2004



Figure 92: Face 3 – typical of Face 2-12



Figure 93: South view of Round House with Signal mast to the west



Round House, Fremantle - Conservation Management Plan

2020

Figure 94: Capstone to the south west of the Round House and mast ties



Figure 95: Mast ties connected into the cap stone



Figure 96: Evidence of previous repairs to external walls



Figure 97: Timber packers in joints



Round House, Fremantle - Conservation Management Plan

2020

Figure 98: Remnant rope fixings from earlier Signal Mast



Figure 99: West wall (Face 7) with signal mast ropes attached



Figure 100: Vegetation at rear of Round House



Round House, Fremantle - Conservation Management Plan

2020

Figure 101: Part of face 12 looking towards face 11



Figure 102: Face 11



Figure 103: Rendered and un-rendered sections of plinths to faces 12 and 11



Round House, Fremantle - Conservation Management Plan

2020

Figure 104: Timber deck with canon



Figure 105: Lookout with canon



Figure 106: View from canon back towards the Round House



Figure 107: The signal mast



Round House, Fremantle - Conservation Management Plan

2020

Figure 108: Signal mast yard arms and ropes



Figure 109: Change in levels between the look out and the rear of the Round House



Figure 110: Timber belaying at base of signal mast



Round House, Fremantle - Conservation Management Plan

2020

Figure 111: Timber belaying pins at base of signal mast



Figure 112: Inside the Bakehouse with interpretation showing where the oven originally was located



Figure 113: Inside the Bakehouse



Round House, Fremantle - Conservation Management Plan

2020

Figure 114: Vaulted brick ceiling to the Bakehouse



Figure 115: Inside the Bakehouse



3.4 INTERNAL COURTYARD

The interior of the structure presents in a slightly more enlivened and activated manner. Although only four of the original eight cells remain extant in their entirety, the non-original buttress walls between the remaining cells and latrines provide an interpretation and understanding of the original plan form of the Round House.

The elevation of the two-storey section of the structure has a more domestic aesthetic incorporating timber framed casement windows and double timber doors.

Each of the extant cells have timber doors and vents at eaves height. The roofs to the cells are pitched and clad with timber shingles. The flat roof to the two storey section cannot be seen from ground level. The flat roof is concrete clad in copper sheeting.



Page | 103

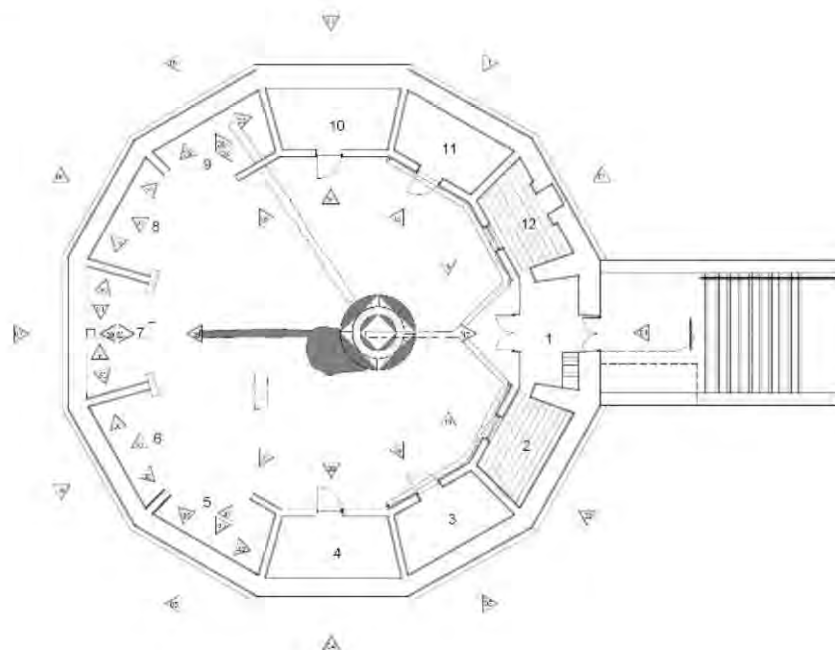


Figure 116: Internal Plan of the Round House

The well is located in an off-centre position within the courtyard. It is of rubble limestone construction with squared limestone coping stones. For safety reasons a metal grille has been installed approximately 1.5m from the top.

The concrete floor has three highly visible drainage channels draining away from the cells, one from the main entrance and two from the northern cells and the rear wall terminating at the well.

Freestanding benches and a timber framed bell are the only other features of the courtyard.

As with the exterior of the Round House, there is a uniformity and rhythm to the presentation of the internal arrangement of the Round House. Each of the cells were of equal size, with doors and vents located in the same place to each of the cell façades. Although half the cells have been demolished, the uniformity and rhythm has not been disrupted.

Whilst the cells have an austere appearance the two storey entrance has a contrasting, more domestic appearance. The two storey entrance section presents with a Georgian rhythm and form. The three upper windows are identical in dimension, placement and form. The windows to Rooms 13 and 15 and situated directly above those to Rooms 2 and 12. The window to Room 14 is similarly located directly above the double timber entrance doors. This regularity of window placement is a quintessential feature of Georgian architectural design.

The windows all have replacement jarrah lintels, and replacement 6-pane timber side hung casement frames and stone sills. The double timber doors have a similar timber lintel that extends out beyond the width of the door opening. The doors are ledged and braced timber plank doors with non-original hardware. The doors open out into the courtyard and there is no threshold.

The façade to the two storey section is constructed from random rubble limestone with areas of squared limestone around the lower level openings. This placement of squared stone emulates quoining but does not have the formality of proper quoining. The window openings to the upper level have sections of brick flanking the openings, again emulating quoining but



is not complete. The squared stone and bricks were introduced in earlier repairs to the Round House and provide strength to the window openings.

Copper downpipes with large rainwater heads extend down the junction of three faces to the two storey section, the gutter extends behind the parapet to the courtyard elevation and discharge into the two downpipes. Additional copper down pipes extend down the central junction between the two groups of cells, being fed by copper gutters along the edge of the roof. All downpipes discharge into drains feeding into soakwells and do not discharge freely onto the ground surface. The copper downpipes and guttering were introduced in the 1970s when the first major conservation works program was undertaken by the City under the guidance of Mr Robin McKellar Campbell.

The four cells are single storey with pitched roofs clad with sheoak shingles and predominantly blank façades. The pitch of these roofs and the cladding are not the original fabric or design. The original roofs were flat clad with weatherboard, lime mortar and coated with oil but due to constant leaks were quickly replaced and have been rebuilt at various pitches and clad variously with corrugated iron and shingles. The current pitch is at a lower angle than the pitch depicted in photographs from the early 1900s with the scarring of the earlier roof form visible in the limestone walls of the two storey section.

The doors and the small vents are the only elements of activation. Natural light into the cells was by way of doors being open or through the vents. No clear images or information of the original doors has been found but it is known that the current ledge and braced doors are not original. It is likely the cells doors would have been much thicker, possibly made from jarrah vertical slabs with heavy bolts and hinges and possibly with an observation hatch or barred opening.

The replacement of structural stone around the openings create a semblance of quoining but does not present with the usual regularity of traditional quoining.

The latrines were incorporated into the cell directly opposite the main entrance (Room 7). The cell was divided by a central stone wall to provide two latrines for the prisoners. Low level latrine hatches were incorporated into the perimeter wall but all traces have long been removed following the rebuilding of the wall in the 1920s. The formerly full height dividing wall of the latrines now forms one the supporting buttresses located around the courtyard that mark the location of the former cells.

The location of the other four cells is interpreted by the buttress walls. Remnant scarring on the walls from wall plates and roof lines provide an indication that cells previously existed all around the courtyard.

The internal faces of the perimeter walls are of rubble limestone construction with sections of cement render at high level.

Interpretation in the form of stocks and the night bell are located towards the western side of the courtyard as freestanding elements.

Round House, Fremantle - Conservation Management Plan

2020

Figure 117: View east across courtyard to main entrance



Figure 118: View east across the front of Cells 1 and 2



Figure 119: View east across the front of Cells 3 and 4



Round House, Fremantle - Conservation Management Plan

2020

Figure 120: Rendered north wall of Room 13



Figure 121: Rendered south wall of Room 15



Figure 122: Internal doors looking towards external doors



Round House, Fremantle - Conservation Management Plan

2020

Figure 123: Internal doors



Figure 124: Shingle roof over Cell 4



Figure 125: Aerial view of the Round House
Courtesy hiveminer.com



Round House, Fremantle - Conservation Management Plan

2020

Figure 126: Aerial view of the Round House
Courtesy hiveminer.com



Figure 127: Aerial view of the Round House
Courtesy hiveminer.com

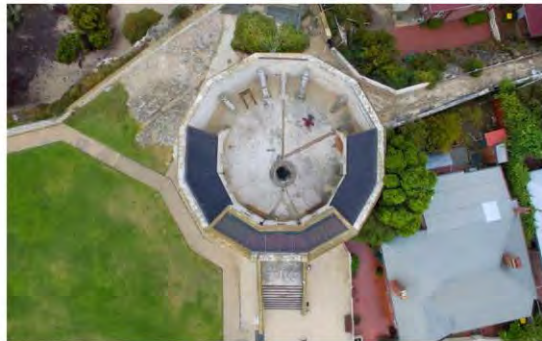


Figure 128: Shingle roof to Cell 4
abutting remnants of former cell

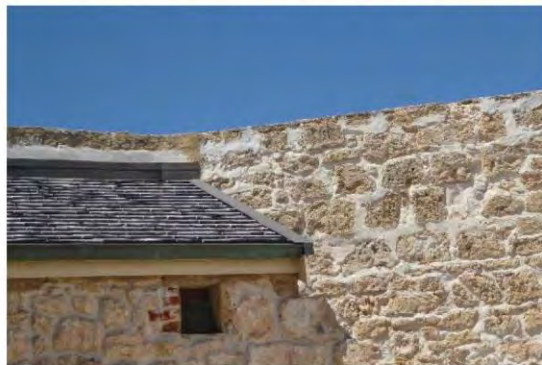


Figure 129: Shingle roof over cells 1 and 2



Round House, Fremantle - Conservation Management Plan

2020

Figure 130: Vent to Cell 2



Figure 131: View west across court yard

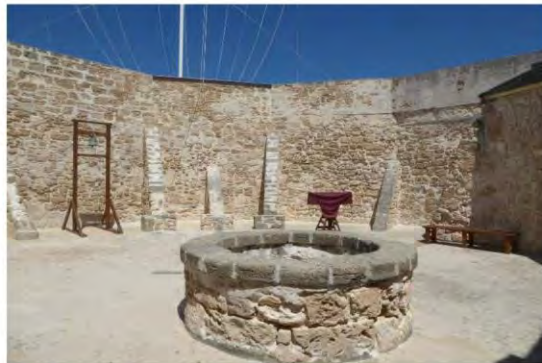


Figure 132: Relationship of signal mast and the rigging to the Round House



Round House, Fremantle - Conservation Management Plan

2020

Figure 133: Non-original buttress walls constructed to stabilise the Round House following the collapse of the cells



Figure 134: Termination of buttress wall and interpretation of where the original cell wall terminated



Figure 135: View north across rear (west) wall towards Cell 3



Round House, Fremantle - Conservation Management Plan

2020

Figure 136: Buttress wall containing remnant fabric from demolished cells



Figure 137: Typical cell door



Round House, Fremantle - Conservation Management Plan

2020

Figure 138: Typical replacement timber framed casement window



Figure 139: Copper rainwater head



Figure 140: Well



Figure 141: Bell



Figure 142: Bell



INTERIOR OF ROOMS AND CELLS

There are two distinct characters to the internal spaces within the Round House. The upper level warder's quarters were within the two storey section of the jail whilst the prisoners were all kept in the single storey cells. Whilst none of the accommodation was considered to be luxurious, the provision of windows to the rooms in the two storey section made a huge difference to the ambience of the spaces.

The ground floor of the two storey section contained a kitchen (Room 12), dining/living area (Room 2) and entry (room 1) which also incorporated a steep timber ladder/stair to the upper three rooms. The upper rooms have variously been described as being used for storage, and bedrooms for the warders family.

Generally the rooms to this section are all presented in a similar manner with stone walls, partially rendered and painted; timber floors to all rooms except the entrance which has a Yorkshire flagstone floor; and timber ceilings which are the underside to the first floor structure and underside to the roof structure. The rooms are small and narrow, illuminated by one window each in the west walls.

The upper level is accessed by a very steep timber step with vertical grabrails to the western open side of the stair, opening out to a landing/room directly above the main entrance. The three upper rooms have been treated in the same manner with cement render to the walls and linoleum over the floor boards. Intrusive electrical conduit extends around the floors of these three spaces.



During the earlier years of its history, Room 13 had a window in the north wall which is said to have been used by the wardens to access the flat roofs when undertaking surveillance of the prisoners. The window became partially obscured with the addition of the pitched roofs to the cells and during the 1975 conservation works was blocked up completely. No evidence of this window remains extant.

The bars to the windows which were clearly evident in early photographs are no longer extant.

On the ground floor, Room 1 the entry foyer is a small constrained room with four door openings and the stairs to the upper level. The space is so tight it is nothing more than a passageway providing access to other spaces within the Round House. The two sets of double doors are non-original ledged timber doors with heavy bolts preventing access and escapes.

The Kitchen has a dominant fireplace to the eastern wall with stone hearth and projecting chimney breast which makes an already small room even smaller. Apart from the addition of the fireplace, the presentation of the room is the same as the others within this section of the Round House incorporating timber floors and plastered and whitewashed walls, single window to the west wall, door in the south wall, and timber ceiling with aging paint.

The dining/living space at the southern end of this level presents in the same manner albeit without a fireplace. An interpretative installation at the far end of the room depicting life in the quarters has altered the finish to the room by way of hessian draped down the walls. This is a reversible installation.

The four cells are approximately all the same size and although designed for three inmates reportedly held up to 15 prisoners on occasion. Each cell has a door and a high level vent with no other means of openings to permit natural light. The walls are of rubble limestone construction, partially cement rendered and painted. The ceilings are the underside of the roof structure and with the exception of the ceiling to Cell 1 are not painted. The floors to three cells are an aggregate concrete with blue metal stone whilst the floor to cell 1 is limestone cement.

Figure 143: View north through Room 13



Round House, Fremantle - Conservation Management Plan

2020

Figure 144: East wall of Room 13



Figure 145: Ceiling of Room 13



Figure 146: View north through Room 14
looking into Room 13



Round House, Fremantle - Conservation Management Plan

2020

Figure 147: View south through Room 14
looking into Room 15



Figure 148: Ceiling of Room 14



Figure 149: East and south walls of Room 14



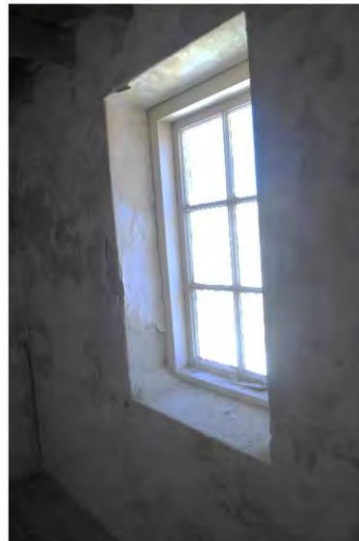
Round House, Fremantle - Conservation Management Plan

2020

Figure 150: Floor to Room 14



Figure 151: Window in Room 15



Round House, Fremantle - Conservation Management Plan

2020

Figure 152: View south through Room 15



Figure 153: East wall of Room 15



Round House, Fremantle - Conservation Management Plan

2020

Figure 154: Floor of Room 15



Figure 155: Room 1 – Main Entrance



Round House, Fremantle - Conservation Management Plan

2020

Figure 156: Steep timber stair (ladder stair)
from Room 1 to Room 14



Figure 157: Timber treads



Round House, Fremantle - Conservation Management Plan

2020

Figure 158: Tight bottom step of timber stair



Figure 159: Ceiling to Room 1, underside of floor to Room 14



Round House, Fremantle - Conservation Management Plan

2020

Figure 160: Yorkshire flag stone flooring to Room 1

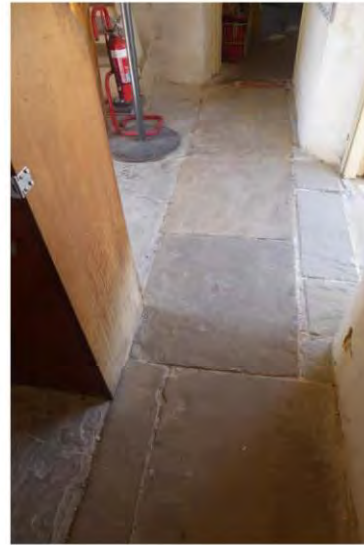


Figure 161: Main exit doors in east wall of Room 1



Round House, Fremantle - Conservation Management Plan

2020

Figure 162: Room 3 looking south from Room 1



Figure 163: Timber floor of Room 2



Figure 164: Timber ceiling in Room 2



Round House, Fremantle - Conservation Management Plan

2020

Figure 165: View north through Room 2



Figure 166: Room 12 looking north from Room 1



Figure 167: Fireplace in Room 12



Round House, Fremantle - Conservation Management Plan

2020

Figure 168: View south through Room 12



Figure 169: Timber ceiling in Room 12, underside of floor to Room 13 above



Figure 170: Cell 4



Round House, Fremantle - Conservation Management Plan

2020

Figure 171: Timber raked ceiling to Cell 4



Figure 172: White washed walls in Cell 4



Figure 173: Partially rendered wall in Cell 4



Round House, Fremantle - Conservation Management Plan

2020

Figure 174: Displays in Cell 3



Figure 175: Timber ceiling in Cell 3



Round House, Fremantle - Conservation Management Plan

2020

Figure 176: North wall of Cell 3



Figure 177: Connection of existing interpretation into concrete floor, Cell 3



Figure 178: Concrete floor, Cell 3



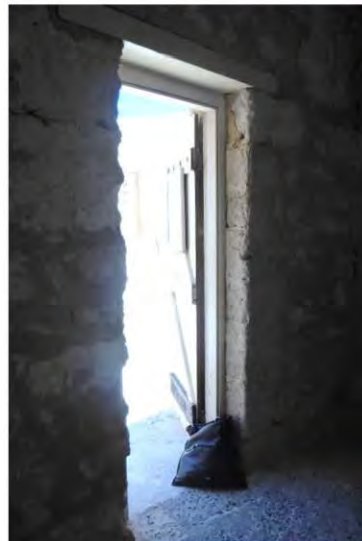
Round House, Fremantle - Conservation Management Plan

2020

Figure 179: Illustrative thickness of cell walls



Figure 180: Cell door, Cell 3



Round House, Fremantle - Conservation Management Plan

2020

Figure 181: Cell 1



Figure 182: Painted timber ceiling in Cell 1



Figure 183: Vent in Cell 1



Round House, Fremantle - Conservation Management Plan

2020

Figure 184: East wall of Cell 1



Figure 185: Cell 2



Figure 186: Timber ceiling in Cell 2



Round House, Fremantle - Conservation Management Plan

2020

Figure 187: South wall in Cell 2



Figure 188: Vent in Cell 2



3.5 CONDITION

The last major phase of conservation works was undertaken in 2004. Although continual maintenance has occurred since, further conservation works are now required. The overall condition of the place is considered to be fair.

The Round House walls are constructed from cut limestone blocks of varying sizes together with areas of rubble limestone. The better quality cut stone was used on the external elevations whilst a softer rubble was used on the internal walls and to the cells. The limestone seen in the structure today comes from a variety of sources.

- The original limestone was quarried from the cap stone of Arthur Head which had a distinctive creamy colour and texture. Although capstone has a lower level of porosity than other types of limestone, some of the blocks contained 'solution tubes' allowing for a greater degree of weathering which over time has required replacement of the most eroded stones.
- The 1920s rebuilding works used a stone that had a more uniform texture and appearance, sourced from Fremantle area.
- The 1920s, 1950s and 1970s conservation works saw the introduction of the grey strata stone. This is characterised not only by the colour but also by the striations on the blocks. Strata stone is more porous and the horizontal striations of the stone allow for increased weathering.
- The works undertaken in 2004 utilised limestone from Moore River. The stone is similar in colour to the original capstone but has a more uniform grain which creates a more distinctive appearance from the original stone.



Round House, Fremantle - Conservation Management Plan

2020



Figure 189: Stone replacements

Courtesy Atelier JV report 2020 commissioned by City of Fremantle as part of the Conservation Management Plan study

The Round House has suffered from issues relating to damp which has been mentioned in a number of past reports. The salt associated with damp has contributed to the accelerated deterioration of the limestone and mortars. Previous recommendations relating to poulticing of the stonework to draw the salts out have not been implemented. Removing hard renders and mortars will aid the stonework but if damp and salt continue to present in the fabric, poulticing may be appropriate.

During the various phases of conservation works the mortars have also differed due to different sands and compositions of the mortars creating a patched appearance to the Round House. Mortars remaining evident on the Round House are lime mortar, cement lime mortar and cement mortar which creates a varied aesthetic across the building. Lime mortars range in colour from bright white to strong yellow, composite lime/cement mortars are light grey and dark grey for the cement mortar.

A specification for the original mortar mix has not been found however it is known that the sand used in the mix came from the site and the lime mortar was made locally. The early mortars are evident by the flecks of unburnt lime and charcoal that can be seen in the mix. Subsequent repairs used sand from different locations giving it a different aesthetic. The orange/pink mortar that dates from the early repairs of the 1920s used Terra Rosa or Spearwood Red sand that was found in root pockets on site. This sand has been used in the mortars of many early buildings in Fremantle and has become a characteristic of the area. The repairs undertaken in the 1970s used a yellow brickie sand which created the creamy yellow mortar used in these works.

The mortar used in the last conservation works has used white sand in the mix which has not dulled down in the intervening 16 years.

The last mortar mix was specified as 7 parts white sand: 2 parts lime putty. Mortar analysis of various samples taken from around the Round House has been undertaken (see Section 3.6 Materials Analysis below) which concluded that there was no fired lime present (ie no natural hydraulic lime, lime putty or hydrated lime) in the samples provided from the 2004 works. Without further investigation it is unknown as to why there is a lack of lime present in the last mortars used.

The specifications for the repointing also recommended raking out the cement mortar to a depth of 25mm which did not remove all the cement mortar. The continued presence of cement may also be contributing to the failure of the current lime mortar. The mortar used in the 2004 repairs started to wash out soon after the works were complete, and has continued to do so throughout the intervening years revealing the earlier cement repointing and the early timber packers which are now susceptible to decay.



Page | 134

Lime mortar generally has a much shorter life span than cement mortar, generally 15-20 years and its regular replacement is expected. The use of cement mortars to create longevity of repair works is not recommended due to the damage this will cause to the limestone as can be evidenced at the Round House both in its present condition and in earlier documentary evidence.

Much of the cement render and mortar has been removed encouraging the limestone and lime mortars to act in a more natural manner allowing moisture to escape through the mortar and dry the walls out. Where cement mortars still remain moisture is still getting trapped causing on-going deterioration of the limestone. The structural inspection of the limestone has concluded that none of the stones need replacing or refacing at this time. The condition of the stone will however need monitoring and replacements will be required in the future.

In addition to the limestone older red bricks are visible around the window openings in a random manner and bricks from the 1970s have been used in the structural works to the parapet. Yellow London Stock bricks can be seen to the top of the piers of the parapet. These bricks, as with the Yorkshire flagstone used in the entry, were often used as ballast in the ships from England and used in subsequent early building projects. A closer inspection of the bricks to the parapet is required however from a ground level inspection there appears to be slight evidence of mortar loss to the joints and discrete areas of erosion to the bricks themselves but generally the parapet fabric appears to be in sound condition.

The softer red bricks around the window openings are not original to the construction of the Round House but are likely to have been made locally. These bricks are showing signs of fretting and deterioration and will require replacement.

The floor to the courtyard and incomplete cells is stone levelled with limestone concrete. Whilst most of the surface is in a fair to good condition, there are sections where the top surface is eroding creating an uneven surface which could become a potential trip hazard. Areas have already been patched with darker cement mixes. The drainage channels have been lined with a contrasting concrete mix to the main floor.

The floors to the cells are in a sound condition.

The timber floor boards in the two lower rooms of the two storey section are replacements and appear in a sound condition. No inspection of the joists was undertaken.

There is concern that the floor structure to the upper levels is structurally unsound and access to these areas requires the floor to be propped and no public access is allowed to these rooms. The timber boards are covered with dry and cracking linoleum which was not removed to inspect the condition of the boards. From the underside of the floor ie the ceiling to the lower rooms, the jarrah boards and joists look to be in a fair condition. Inspection by the structural engineer found that the joists were in fair condition, being well bedded into the walls with adequate bearing. There was no sign of rot or decay to the timbers. No structural remediation works have been specified by the engineer.

Atelier JV, structural engineer, has calculated the load capacity of the first floor, attached in the structural report appended to this document, and found it to meet the required standards. The load capacity of the first floor has been calculated as being 300kg/m² which is acceptable for most first floor uses. Due to the non-compliance of the timber stair accessing the first floor it is not recommended that access be granted to the general public.

The roofs have undergone various works and forms over the years. The two storey section has always had a flat or minimal pitch though the form has changed from limestone concrete to timber frame with copper sheeting. The cell roofs have been flat and pitched with various claddings including weatherboards, corrugated iron and timber shingles. No high level access was provided as part of the condition assessment. From ground level, the shingle roofs appear to be in sound condition but require closer inspection. Shingles may need replacing or re-oiling.

The flat copper roof was not inspected as part of this study. At the time of the 2004 conservation works an inspection was undertaken and was found to be in good condition and works were not required at the time. There do not appear to be any obvious leaks or failures in any of the roofs but due to the time elapsed since the last inspections and works undertaken, it is recommended that an inspection be carried out in the near future.



The lower levels of the main entrance doors are showing signs of damage through a combination of age, wear and tear and weather. The cells doors are also showing signs of damage where the hinge fixings have penetrated the timbers which are splitting. Remnant fixings are rusting and causing additional damage.

Paint finish to the joinery is failing.

The Bakehouse underwent conservation works and interpretation in 2001. Despite the works, the space is suffering from serious damp issues resulting in lichen growth on the brick and stone surfaces. The space is dark being contained under the steps and has limited access to natural light and ventilation. The glass door preventing access is condensating and contributing to the overall issue in the Bakehouse. Unless ventilation is improved, the space will remain in a perpetual state of dampness exacerbating the rate of deterioration of the fabric.

The steps leading to the Round House entrance are in a variable condition. The timber treads were replaced in 1983 and further localised repairs have been undertaken subsequently. The treads now are in need of replacement. The pointing to stonework of the step rise is failing in places. The hard cement mortars should be removed. The render to the balustrade is patchy and cracking. The render should be removed and the substrate repaired. It is not recommended to re-render the balustrade. The structural engineer's inspection of the steps found there were no structural issues and no structural remediation works are required.

The landing platform at the top of the steps is uneven with the limestone concrete surface breaking up. A drainage channel extends northwards from the entrance door discharging through a hole in the balustrade and allowed to freely discharge to the ground. There is no fall or a minimal fall to the landing area allowing rain to pool at the base of the door contributing to the deterioration of the timber.

The balustrade to the lower steps is showing significant failure which is causing destabilisation of the wall. All the render should be removed and the wall repaired which may require localised areas of rebuilding. Mortars and renders should be lime based to allow moisture to escape. The steps themselves are in fair condition but build-up of sand and other debris can cause issues for users.

The paths around the Round House are in poor condition. Areas of ground cover to the south of the Round House are natural capstone which due to its uneven surface is a trip hazard. Pavements immediately abutting the Round House are concrete which will be contributing to ongoing damp issues within the Round House. The concrete is breaking up in places. Access for wheelchairs, prams etc in this area is almost impossible. The uneven paths should be removed and replaced with wider walkways to allow for universal access.

Although beyond the study area, the access lane to the rear of the Pilots' Cottages providing access to the rear of the Round House is in a failed condition. As this provides access to the public toilets it is recommended that the surface be repaired.

The timber deck to the look out is in sound condition but needs re-oiling. The timber safety rail to the boundary walls also needs re-oiling. The ground cover between the timber deck and the Round House is in poor condition again resulting in potential trip hazards. Part of the surface is the natural capstone which is naturally uneven – this should be retained as it is an important element of the overall significance of the site however safer access should be provided.

The vegetation is close to the structure of the Round House, whilst it does not appear to be causing any issues they should be kept well away from the walls and any reticulation systems should be directed away from the structure.

A detailed Building Condition Assessment of the place can be found at Appendix 13.4.

The study area of this conservation management plan is drawn tightly around the Round House. Whilst works to the Round House itself can be considered in isolation works to the steps, boundary walls and access routes need to be considered on a site wide basis.

There is currently no universal access into the Round House which needs to be addressed. Providing access into the court yard of the Round House is likely to result in a loss of significant fabric and may also impact on the aesthetics of the place. Through considered design adverse impacts can be minimised.



3.6 MATERIALS ANALYSIS

As part of the investigations of the Round House, samples of mortars were taken from various sites around the building. The differing response of the mortars around the building and the lack of documentary evidence in relation to the composition of the mortars was the motivation for seeking greater understanding of the mortar components.

Mortar Composition Analysis Summary and Recommendation:

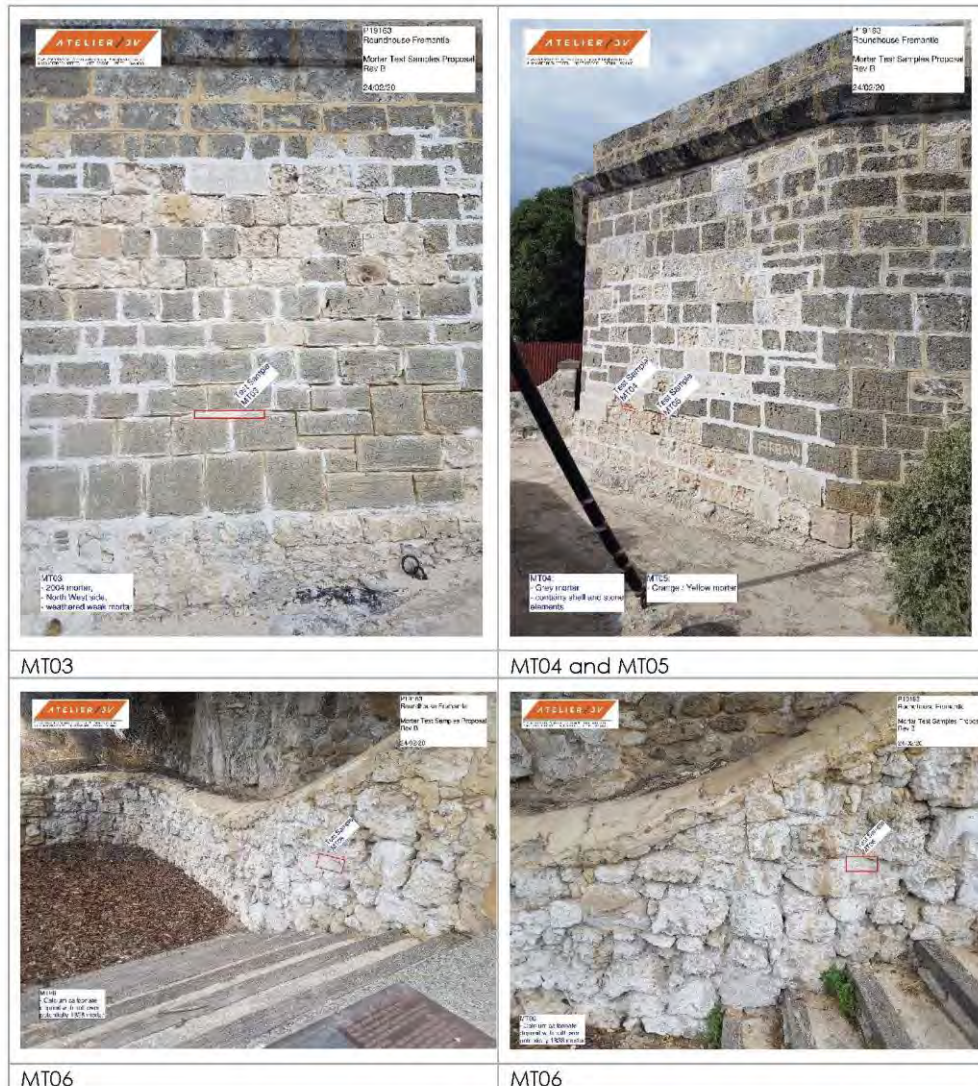
Based on advice from Atelier JV mortar samples were collected from several representative locations around the structure for compositional analysis as summarised below:

- 2004 Top of Buttress Wall Inner Courtyard Mortar Location: MT01 (C1198)
- 2004 Backing Mortar Inner Courtyard Location: MT02 (C1199)
- 2004 Mortar External North-West Side Location: MT03 (C1200)
- (Potential Early Mortar) Grey Mortar External North-West Side Location: MT04 (C1201)
- (Potential Early Mortar) Orange Mortar External North-West Side Location: MT05 (C1202)
- c. Original Mortar From Retaining Wall of Eastern Stairs Location: MT06A (C1203)
- c. Original Mortar From Retaining Wall of Eastern Stairs Location: MT06B (C1204)



Round House, Fremantle - Conservation Management Plan

2020



The full analysis report from Stone Initiatives is provided in (Appendix 13.6). The following points summarise the key findings:

The samples from the 2004 works at locations MT01-03 and MT04 all showed similar properties with large amounts of Magnesium-substituted Calcite and accessory amount of Aragonite. This strongly suggests the presence of Dolomitic limestone dust and shell grit of a marine origin. These samples did not contain detectable carbonated lime (Calcite) which indicates that there was no fired lime used in the mix. i.e. no form of Natural Hydraulic Limes, Lime Putty or Hydrated Lime.

The report indicates that these were unusual samples and that an atypical method may have been used such as mixing ground Dolomitic limestone and local sands to produce a paste like mortar and there were no chemical reactions that took place, only curing. Another hypothesis is that a polymer modifier was added to the mix to help bond the material and form a workable paste. Ultimately, based on the testing completed it is not possible to confirm if either was the case and a more specific study would be required to determine the actual circumstances of these mortars.



Round House, Fremantle - Conservation Management Plan

2020

Conversely samples from earlier works MT05, MT06A and MT06B showed high proportions of Quartz sand and reduced amounts of dolomitic limestone and Aragonite. There was also the presence of pure Calcite from limestone kiln to approximately 33%. To this end, the mixes were more typical with Quartz, pulverized dolomitic limestone and shell grit bound together with fired limestone-lime.

The report provides recommended replacement mortars based on the compositions identified, with some modification to match what is expected to be the likely original strength and vapour permeability.

Considering the findings from the compositional analysis and the relative ages of the samples it is recommended that future replacement mortars are based on the recommended compositions for the samples MT06A and MT06B as follows:

Replacement Mortar:

1.0 part lime putty: 2.5 parts aggregate made up of 60-5% 'moderately soft' medium-fine grained, washed light yellow brown sand and 35-40% crushed shell grit to matching particle size.

Sizing of aggregate:

Predominantly within the range of -600 microns to +75 microns (~97% in this range) The dominant fraction was 300 microns – 150 micron fraction, making up 49% (weight %) of the whole aggregate sample



Round House, Fremantle - Conservation Management Plan

2020

Sample ID	Description	Mineralogy Mineral (estimated wt%)						Cement/Lime/Sand Content Component (Weight %) ^[1]			Grain Size Distribution Size Fraction (wt% passing through sieve)							Possible Composition (parts by volume %)	
		Quartz	Calcite/Mg-substit. Calcite	Calcite	Aragonite	Albite	K-feldspar	Soluble SiO ₂	CaO	Sand	475 0 µm	236 0 µm	118 0 µm	600 µm	300 µm	150 µm	75 µm	Shell y quartz	Crushed fossil ised limestone
Inner Courtyard 2004 Mortar – MT01	Light-grey colour. Predominantly sub-rounded (moderately soft) quartz sand grains. Medium-fine grain size with relatively clean grains showing mild oxide staining. Specks of darker colour grains originated from K-feldspar	A (17)	D (65)	-	A (15)	-	Tr (3)	0.3	42.0	19.3	100 .0	100 .0	99. 5	91. 2	42. 5	8.2	1.2	35	65
Backing Mortar Inner Courtyard – MT02	White colour. Predominantly sub-rounded (moderately soft) quartz and sand grains. Medium-fine grain size with grains showing minimal iron oxide staining. Occasional pink-colour grains originated from Calcite polymorph, Aragonite	SD (27)	D (57)	-	A (16)	-	-	0.4	41.5	19.4	100 .0	100 .0	99. 5	90. 1	42. 7	9.7	1.5	35	65



Page | 140

Round House, Fremantle - Conservation Management Plan

2020

2004 Mortar – North- West Side – MT03	Pale-yellow colour. Predominantly sub-rounded (moderately soft) quartz and sand grains. Medium-fine grain size with grains showing moderate iron oxide staining. Slightly darker colour grains likely to be K-feldspar and Calcite polymorph of Aragonite	A (18)	D (67)	-	A (10)	Tr (2)	Tr (3)	1.4	36.0	30.3	100 .0	100 .0	99. 5	90. 0	57. 9	11. 3	2.4	35	65
Grey Mortar – MT04	Light-grey colour. Predominantly sub-rounded (moderately soft) quartz sand grains. Medium-fine grain size showing mild iron oxide staining. Darker grains may have originated from rock-forming minerals (<1%) or amorphous pozzolanic or organic materials used as pigment additives.	A (18)	D (65)	-	A (12)	Tr (2)	Tr (3)	0.8	38.1	27.5	100 .0	97. 7	96. 5	93. 2	67. 0	17. 2	0.8	35	65
Orange Mortar – MT05	Light yellow-brown colour. Predominantly sub-rounded (moderately soft) quartz and sand grains. Medium-fine grain size with grains showing moderate iron oxide staining.	D (46)	A (16)	SD (32)	Tr (3)	-	Tr (3)	1.5	20.8	52.1	100 .0	100 .0	99. 8	89. 6	44. 0	7.5	1.4	65	35



Page | 141

Round House, Fremantle - Conservation Management Plan

3020

Original Mortar – MT06 A	Light brownish-grey colour. Predominantly clean, sub-rounded (moderately soft) quartz and sand grains. Medium-fine grain size with grains showing minimal iron oxide staining.	D (42)	A (17)	SD (33)	Tr (3)	Tr (2)	Tr (3)	0.9	22.5	49.7	100.0	100.0	100.0	99.6	62.0	13.1	1.7	65	35
Original Mortar – MT06 B	Light brownish-grey colour. Predominantly clean, sub-rounded (moderately soft) quartz and sand grains. Medium-fine grain size with grains showing minimal iron oxide staining typical of 'beach sand'.	D (40)	A (20)	SD (33)	Tr (4)	-	Tr (3)	1.1	28.0	43.1	100.0	100.0	100.0	99.6	64.0	15.0	2.8	60	40

Semi-quantitative Abbreviations

- D = Dominant. Used for the component apparently most abundant, regardless of its probable percentage level.
SD = Sub-dominant. The next most abundant component providing its abundance is judged above 20%/
A = Accessory. Components judged to be present between the levels of roughly 5 and 20%.
Tr = Trace. Components judged to be below about 5%.

Notes

- (ii) The results from the chemical analysis do not reflect the actual amounts of carbonate minerals in the same as Magnesium-substituted carbonate would not be detected by this method. An alternative method is needed to evaluate compatible lime/sand ratios to formulate the replacement mortars.



Page | 194

3.7 ANALYSIS OF DEVELOPMENT

The analysis of development set out below has been established from historical photographs, newspaper articles and other documentation outlining works that have occurred. The purpose of the analysis is to assist with understanding the changes that have occurred to the Round House to determine how intact the structure is and to assist in determining whether missing or incorrect elements are to be rectified based on this information.

Date	Description
1830/1831	Single storey Round House constructed incorporating eight cells, latrines, and warders quarters. The bakehouse and laundry were accommodated under the steps leading to the Round House. The place was constructed of white capstone and floors were capstone and rubble slab. The roof was timber overlaid with lime mortar, which was soon overlaid with a layer of limestone slabs. The well in the courtyard was dug. Straight set of steps leading from the Round House directly to High Street. Stocks were placed at the foot of the Round House steps at the top of the Arthur Head Reserve.
1837	Steps modified to High Street to create flanking flights of steps either side of the new Whalers tunnel cut through the base of Arthur Head.
1844	Second storey constructed above the entry and warders' quarters. Consisting of three rooms with windows, the rooms were used as accommodation for the warder's family.
1873	Large crack in courtyard reported, as a consequence of the on-going quarrying from Arthur Head
1879	Central timber division dividing the courtyard and 'V' shaped section in front of entry as a wind lock or for maintaining security between the yards. Latrine hatches in west wall appear to be top hung timber hatches with iron hinges/straps. Brick chimney is visible above north upper room. Flat roofs on all structures, over the cells the surface is a dark substance possibly a bituminous or tar product. Windows on the upper level rooms may have bars Access to the flat roof through upper level hatch, although unclear image



Round House, Fremantle - Conservation Management Plan

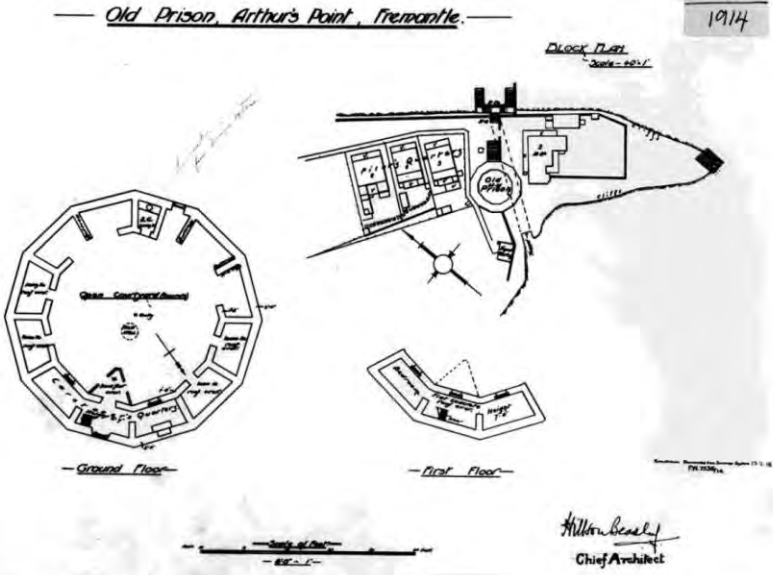
2020

Date	Description
1885	Repairs carried out to Round House/High Street steps.
1886	Two timber doors were installed in the west wall of the Round House where the latrine hatches had previously been constructed.
1890	View of Round House taken from the Arthur Head lighthouse shows a timber division fence extending from the central upper window in a 'V' shape before continuing as a straight fence across the courtyard. Windows were timber framed casements, side hung, two to each opening; 10 panes to each sash and possibly security bars extending up the internal faces of the windows. Roofs to the cells were flat. Edge of walls and top of central fence lined with broken glass Two rainheads with downpipes either side of the central windows in the 'private' area. Drainage vents above the other two upper windows but no downpipes attached. Latrine hatches in west wall were double timber doors. Natural finish to stonework to external walls. Evidence of structural wall ties. 
1890s	First signal mast constructed
1899	Roofing to the cells is corrugated iron sheeting.
1902	Central timber divider removed but 'V' shaped portion remained Pitched roof to former cells, clad with shingles. Broken glass to edge of roofs. Timber framed side hung 10-pane windows remain extant. Brick chimney remained extant. Latrine hatches remain in situ. End wall of cell visible suggesting that walls or roof of the western cells may not be present through collapse / demolition.



Round House, Fremantle - Conservation Management Plan

2020

Date	Description
	
1904	Natural stone finish to exterior
1905	Second signal mast constructed
1914	Converted for use as caretaker's quarters Appearance at the time included rendered stonework externally Chimney remains extant Timber panelled doors to main entrance A door opening is shown in the west wall, adjacent to the earth closet. At this time the partly demolished cells to the west are noted simply as 'buttressed' walls, and the roof over the two storey section is noted as being a 'flat concrete roof'. A lean-to over the entry door into the courtyard is also constructed. 64 1914 
1920	Brick chimney remains extant



Round House, Fremantle - Conservation Management Plan

2020

Date	Description
1922	A number of the internal cells had collapsed, and the external west wall had lost support – repairs undertaken to repair the external wall 
1929	Building partially demolished, west parapet removed and timber roof removed. Doors and windows no longer evident.  Western wall and parapet rebuilt. Windows and doors replaced.
1937 /1938	Ground works undertaken including building of new wall on cliff edge and creation of grassed area on southern side of Round House. Works identified as: Stone repairs, window repairs, works to concrete floors (unknown whether these were repairs or new concrete floors), white wash to walls, and repair/replace gutters.
1940	Front doors appear to have been changed to present style Chimney remains extant



Page | 146

Round House, Fremantle - Conservation Management Plan

2020

Date	Description
	Rendered or lime washed finish to exterior
1949	Minimal repairs undertaken due to damage caused by military occupation. Some doors and windows seem to have been removed during World War II military occupation. 
1959	Further conservation works including rendering to internal face of jail, window repairs, roof repairs possibly including covering the roof with bitumen or cement 
1966	The High Street steps were reconfigured to allow for the construction of the railway. The southern flight of steps were removed and the northern flight reconfigured to run parallel with the retaining wall
1973	Concrete screed applied to floor of the Round House
1975	First major conservation works undertaken including: Demolition of brick chimney Demolition of limestone roofs to cells and upper level but retention of lining boards.



Page | 147

Round House, Fremantle - Conservation Management Plan

2020

Date	Description
	Underpinning of the jail and creating buttresses from the demolished sections of cell walls to add support to the external wall. Stone replacement using strata stone rather than capstone for greater longevity. Repointing limestone walls Re-roofing to the cells to new pitched roof clad with timber shingles and the two storey section to incorporate a timber framed structure clad with copper sheeting following the removal of the original cement roof, New floors to the cells Replacement joinery including doors and windows, introduction of new hardware New lintels to all openings Introduction of drainage channels New wiring and lighting General repaint of all painted surfaces – walls to cells and rooms painted cream, joinery painted dark brown
1997	Construction of signal mast and timeball, introduction of the canon and the timber deck to the west of the Round House
2001	Conservation and interpretation works to the Bakehouse under the steps
2004	Last phase of conservation works, concentrating on limestone remediation internally and externally including piecing in new pieces of limestone and repointing the entire external and internal facades.
2010	Replacement of cedar shingles with Sheoak shingles.



4.0 COMPARATIVE ANALYSIS

The Round House is the first purpose-built jail in the colony which operated as a prison on and off until the 1880s. The design by engineer Henry Reveley is understood to be influenced by principles of 18th century English philosopher and social theorist Jeremy Bentham. Known as a panopticon, one of the objectives of the design was for all prisoners to be observed, without being able to tell whether they are being watched.

Reveley had some exposure to these theories through his father Willey Reveley, who assisted Bentham with his designs. Although the Round House does not demonstrate the full extent of the panopticon, the plan form is reminiscent of the theory.

The only other example of these design principles applied in Western Australia is at the 'Quod' on Rottnest Island / Wadjemup. From minimal research there appear to be no other examples in Australia although further research needs to be undertaken.

The flat roof construction originally used over the cells at the Round House is an unusual technique applied by Reveley at the Round House and later used by jailer and works supervisor Henry Vincent for buildings at Rottnest Island / Wadjemup. The use of limestone slabs on timber boards was probably influenced by the limited access to timber and the ready supplies of stone. On Rottnest Island / Wadjemup this was a key element in the choice of this technique.

After the introduction of convicts in 1850, the monumental Fremantle Prison was constructed, which operated as Western Australia's primary place of incarceration until its closure in 1991. Many smaller lockups were constructed at this time in association with convict sites such as hiring depots. The Round House served as a Lock up for locally charged prisoners or for ticket of leave men who had exceeded their curfew.

In the 1880s, jails were built at regional centres reflecting the spread of population north during this period. Aboriginal prisoners were the largest proportion of prisoners in the jails of the North West, imprisoned for a short period and put to work as manual labour on public works projects, or sent south to Rottnest Island, through the Round House, for longer periods of incarceration.

The following sites are places associated with the incarceration of Aboriginal and non-Aboriginal people in Western Australia. Comparison has also been made with other early designs by engineer Reveley or for their period and style of construction.

4.1 THE QUOD (WADJEMUP/ROTTNEST ISLAND)



Figure 190: Rottnest Prison, 1900-1910.^[4]

^[4] Rottnest Island Prison, 1900-1910, Boerkamp collection, image 230386PD, Sourced from the collections of the State Library of Western Australia and reproduced with the permissions of the Library Board of Western Australia.



The Quod is a part of the Thompson Bay Settlement, listed in the State Register of Heritage Places (RHP 516 *Thomson Bay Settlement*). Over almost a century from 1838-1931, around 4,000 Aboriginal men and boys were incarcerated on Rottnest Island from all over the former colony and, after Federation, the State of Western Australia.

Built in 1864 from the labour of Aboriginal prisoners, the Quod was the second prison to be built on Rottnest Island. The first prison, sited in the vicinity of eastern side of the Settlement Mall, was destroyed by fire in 1856. The Quod served as prison accommodation until the prison's formal closure in 1904.

The design of the Quod resembles that of the Round House in Fremantle. The building is octagonal in plan and originally had a well in the centre of the yard. All cells faced a central yard, and were together capable of housing up to 200 prisoners at one time. Each cell was just 2.5x1.6 metres and was occupied by up to seven prisoners at maximum capacity. The building's original roofs were flat and covered in lime plaster, but were replaced with pitched shingle roofs in the 1870s. The only entrance to the Quod during the prison years was located on the eastern side. The rooms on either side of the gateway, housed the Superintendent's office and accommodation for the wardens.¹⁴²

4.2 OLD COURT HOUSE, PERTH



Figure 191: Old Court House.¹⁴³

The Old Court House is part of the Supreme Court buildings included in the State Register of Heritage Places (RHP 1947 *Supreme Court Buildings and Gardens, Old Court House, Stirling Gardens*). The Old Court House opened in 1837, was designed by Henry Reveley in the classic Greek Revival Style of rendered stone with a shingle roof. This building and the Round House represent the first phase of public buildings in the Swan River Colony.

¹⁴² 'Quod Project', Rottnest Island Authority website. Sourced from <http://ria.wa.gov.au/sustainability/Social-sustainability/Quod>

¹⁴³ Old Court House. Heritage Perth website. Sourced <https://heritageperth.com.au/properties/old-court-house/>



Round House, Fremantle - Conservation Management Plan

2020

Apart from its association with the legal system in the state the building has been used as a church, school, immigration depot and store and from 1987 has been the home of the Law Museum under the management of the WA Law Society.

The relationship to Reveley makes this building a valuable study of comparison. There are similarities in the simple styling and methods of construction. The specification for the construction of the Old Court House is in existence and provides valuable insights into methods of construction in the 1830s.

4.3 THE TANNERY (fmr), FREMANTLE



Figure 192: The Tannery (fmr) 144

Research undertaken for the State Registration of this place constructed c1854 shows evidence of the building design reflecting the work of Henry Reveley and construction methods used by Henry Vincent.¹⁴⁵

This property was redeveloped as residential premises in c2008 but retains portions of the original structures.

¹⁴⁴ The Tannery (fmr), Caporn Young Real Estate, Sourced from <http://www.capornyoung.com.au/?/property/2661405/9/22a%20Russell%20Street>

¹⁴⁵ Place 04588 The Tannery (fmr) Assessment Documentation for inclusion on the State Register of Heritage Places, 18 May 2004.



4.4 ROTTNEST BUILDINGS



Figure 193: Vincent Way, Rottnest

As the overseer at Rottnest Penal Settlement, Henry Vincent was responsible for the construction of many of the buildings which were the infrastructure at Rottnest in the 1840s. The techniques he used for construction were influenced by Henry Reveley, particularly the flat roof methodology.

4.5 FREMANTLE PRISON



Figure 194: Fremantle Prison, 2019.¹⁴⁶

¹⁴⁶ Fremantle Prison. Sourced from Media statement 4 October 2019. Courtesy Department of Planning Lands and Heritage.



Fremantle Prison was constructed by convicts between 1851 and 1859, from local limestone. The place is listed in the State Register of Heritage Places, the National Heritage Register, and on the UNESCO World Heritage List as part of the Australian Convict Sites. Fremantle Prison has exceptional cultural significance as a site of convict incarceration, however it was also the site of incarceration for many other prisoner groups until its closure in 1991, including Aboriginal people, women, juveniles, military prisoners and enemy aliens.

From 1886 to 1991, Fremantle Prison served as the central administrative office for regional prisons throughout the state, including Roebourne Gaol. After the closure of the Aboriginal prison on Rottnest Island, Fremantle Prison hosted large numbers of Aboriginal prisoners, making up 30-40% of the prisoner population throughout most of the twentieth century.

4.6 OLD PERTH GOAL



Figure 195: Old Perth Gaol

The Perth Gaol¹⁴⁷ was constructed between 1854 and 1856 to house convicts and prisoners who had transgressed in the colony. It was designed by architect Richard Roach Jewell architect.

The building was constructed from limestone quarried from cliffs at Rocky Bay, Mosman Park. Overall, the building is a much more complex design and construction than the Round House.

The building is now incorporated within the WA Museum complex of buildings and is currently being refurbished as part of the New Museum development.

¹⁴⁷ The spelling for Perth Gaol has been adopted from the State Register Entry for Place 1965 Old Court House & Gaol.



5.0 SIGNIFICANCE ASSESSMENT

5.1 INTRODUCTION

The following assessment has been compiled with reference to the HERCON criteria as defined in the *Heritage Act 2018*.¹⁴⁸

5.2 NATURE OF SIGNIFICANCE

5.2.1 Importance in demonstrating the evolution or pattern of Western Australia's history

Importance for the density or diversity of cultural features illustrating the human occupation and evolution of the locality, region or the State.

Importance in relation to an event, phase or activity of historic importance in the locality, the region or the State.

The form of the Round House has not changed significantly since its construction but the changes of its use reflect the history and development of Fremantle.

The Round House is associated with the earliest settlement of the Swan River Colony as an example of the institutions brought with the settlers and enforced by the colonial administrators, led by Governor James Stirling.

Building the Round House at this prominent location was also a strong message to the Whadjuk Noongar people of the systems of law and punishment, which they became enmeshed in. The Round House was the location of transition for the Aboriginal people to the Penal Settlement at Rottnest which was a place of punishment and separation from their land. The Round House represents key themes of control and power in the nature of relationships between the Aboriginal people and the settlers.

In the late 19th century with the construction of the Fremantle Harbour until the mid 20th century, the Round House became part of the wider Fremantle Port with Arthur Head and adjacent areas largely used for port and industrial activities.

The changing use of the Round House from a prison, to accommodation, store, vacant ruin and then museum is reflection of community attitudes to older buildings.

5.2.2 IMPORTANCE IN DEMONSTRATING RARE, UNCOMMON OR ENDANGERED ASPECTS OF WESTERN AUSTRALIA'S HERITAGE

Importance for rare, endangered or uncommon structures, landscapes, archaeological material/features or phenomena.

Importance in demonstrating a distinctive way of life, custom, process, land-use, function or design no longer practised in, or in danger of being lost from, or of exceptional interest to, the locality, region or the State.

¹⁴⁸ Assessment Criteria for Cultural Heritage Significance, Heritage Council of WA, November 2019. <https://www.dplh.wa.gov.au/getmedia/0bd29032-88d4-40fd-b7b6-a4ee9bc5130/HER-Information-Sheet-Assessment-Criteria> accessed December 2019.



The Round House is rare as an example of a stone building constructed in the 1830s in Western Australia. Few buildings from this period remain and it is the oldest public building in Western Australia.

The design of the Round House is a rare example of elements of the theory of the Panopticon design applied in Western Australia. Henry Reveley who designed the Round House had an association with Jeremy Bentham through his father, Willey Reveley.

The Round House features interpretations of items that reflect past practices at the Round House. The signal mast, time ball and cannon all demonstrate activities that were valued by the community. The signal mast provided vital communication to shipping and the time ball and cannon provided a time keeping service to the community.

5.2.3 POTENTIAL TO YIELD INFORMATION THAT WILL CONTRIBUTE TO AN UNDERSTANDING OF WESTERN AUSTRALIA'S HISTORY

Importance for information/archaeological material contributing to a wider understanding of natural or cultural history by virtue of its use as a research site, teaching site, type locality, reference or benchmark site.

Importance for its ability through archaeological investigation to reveal obscured fabric due to subsequent alterations or additions and in so doing, reveal aesthetic characteristics of an earlier structure, either through design or setting.

Importance for its potential to yield information contributing to a wider understanding of the history of human occupation of the locality, region or the State.

The Round House was the first building constructed on Arthur Head and was soon the centre of an administrative precinct including a courthouse, police station and harbour master's quarters. The cluster of buildings represented the civic hub in Fremantle and the colony in the first decade of settlement.

The Round House has the potential through further research, consultation and interpretation to provide further information about the impact of the incarceration of Aboriginal people in Fremantle, and the State more widely. Particularly in relation to its effect on the traditional Aboriginal way-of life and culture, their relationship with the non-Aboriginal community (both in the short and long term), and distribution of Aboriginal people across the State.

5.2.4 IMPORTANCE IN DEMONSTRATING THE CHARACTERISTICS OF A BROADER CLASS OF PLACES

Importance in demonstrating the principal characteristics of a range of landscapes or environments, the attributes of which identify it as being characteristic of its class; for e.g. modernist architecture or, in the case of archaeological sites, being characteristic of a particular type of place/use.

Importance in demonstrating the principal characteristic of the range of human activities (including way of life, philosophy, custom, process, land-use, function, design or technique) in the environment of the locality, region or the State.

The place has significance for its association with the late 18th and early 19th century ideas of prison reform developed by Jeremy Bentham as the panopticon prison design, and simply expressed in the design by Henry Reveley.

The Round House is representative of a class of building constructed for incarceration. The scale of the building reflects the scale of the settlement at the Swan River in the 1830s, which required only a modest sized jail for the population.



The Round House was the first public building constructed in the Swan River Colony and the choice to build a prison before any other public structure demonstrates the nature of this settlement established by naval officers for the British government.

5.2.5 ANY STRONG OR SPECIAL MEANING IT MAY HAVE FOR ANY GROUP OR COMMUNITY BECAUSE OF SOCIAL, CULTURAL OR SPIRITUAL ASSOCIATIONS

Importance as a place highly valued by a community or cultural group for reasons of social, cultural, religious, spiritual, aesthetic or educational associations. Importance in contributing to a community's sense of place.

The Round House is significant to the Aboriginal community from all over the state as a place of transition to incarceration on Rottnest Island. Although the history of the place is challenging and traumatic for Aboriginal people, it is recognised by the local people as a historic place that should be preserved as a site of cultural awareness, healing and reconciliation.

The descendants of those who were incarcerated or worked at the Round House are likely to have strong associations with the place.

Since the 1950s there have been many volunteers who have given their time to open the Round House to visitors and this group welcomed visitors from all parts of Western Australia and across the globe. The Round House has provided an educative function through the work of the volunteer guides and the interpretation within the building.

The place is valued by the community as its potential demolition in the 1920s and dilapidated condition in the 1950 lead to community action to retain the building. Its prominent position in the streetscape, terminating High Street contributes to the community sense of place.

5.2.6 ITS IMPORTANCE IN EXHIBITING PARTICULAR AESTHETIC CHARACTERISTICS VALUED BY ANY GROUP OR COMMUNITY

Importance to a community for aesthetic characteristics.

Importance for its creative, design or artistic excellence, innovation or achievement.

Importance for its contribution to the aesthetic values of the setting demonstrated by a landmark quality or having impact on important vistas.

Importance for its contribution to the aesthetic qualities of the cultural environs or the natural landscape within which it is located or importance for its contribution to the natural landscape as part of a cultural environment.

Importance for the aesthetic character created by the individual components that collectively form a significant precinct; that is, streetscape, townscape or cultural environment.

The place has significant aesthetic value for its robust and simple form using materials from its location as a dominant feature in the streetscape of the West End of Fremantle. Its termination of High Street is a significant feature of the streetscape.

The Round House was the first building constructed on Arthur Head and was soon the centre of an administrative precinct including a courthouse, police station and harbour masters quarters. The cluster of buildings represented the civic hub in Fremantle, and the colony in the first decade of settlement.



The location of the Round House at the highest site on Arthur Head provides expansive views to the ocean, city and harbour and provides an indication of the original form of Arthur Head and its importance as a landform to the traditional owners and settlers.

In the 19th century the Round House and the other buildings on the headland were originally part of a busy administrative centre which transitioned to an extension of the port facilities. The group of buildings remaining on the headland form a precinct, although of different forms and materials, through their unusual location on the raised headland and because of the their past uses.

5.2.7 ANY SPECIAL ASSOCIATION IT MAY HAVE WITH THE LIFE OR WORK OF A PERSON, GROUP OR ORGANISATION OF IMPORTANCE IN WESTERN AUSTRALIA'S HISTORY

Importance for close association with an individual or individuals whose life, works or activities have been significant within the history of the nation, State or region.

The Round House is associated with engineer Henry William Reveley who oversaw the design and construction of the first public buildings and structures in the Swan River Colony. As Civil Engineer from 1829 to 1838, Reveley played an important role in establishing the small community in a remote and unfamiliar environment. The Round House and the Old Court House are the most prominent structures which remain from his time in Western Australia.

The preceding organisations of the Royal Western Australian Historical Society were very active in bringing discussion into the public arena about the heritage value of the Round House to the community. In the 1920s when demolition of the Round House was threatened, the WA Historical Society lead by James Battye was proactive in saving the building through direct appeal to the Premier. This group also organised volunteers to keep the place open as a tourist destination when there were insufficient funds to pay for attendants.

In recent decades, the Fremantle Volunteer Guides have maintained the Round House as a successful tourist destination by organising year-round volunteers to keep the Round House open. The volunteer guides provide information to visitors about the Round House and other sites in Western Australia.

The Round House is closely associated with architect Robin McKellar Campbell who was at the forefront of the development heritage theory and practice in Western Australia. The Round House was a key project for Campbell and Western Australia in providing a positive example of restoring a fragile structure whilst respecting the original fabric. The restoration of the Round House and the Fremantle Arts Centre are prominent examples of Campbell's work in the conservation practice and have guided subsequent practitioners.

5.2.8 ITS IMPORTANCE IN DEMONSTRATING A HIGH DEGREE OF CREATIVE OR TECHNICAL ACHIEVEMENT

Importance as an example of technical, creative, design or artistic excellence, innovation or achievement in a particular period.

Important in demonstrating technical innovation or achievement.

The Round House has an association with the principals of the panopticon prison design developed by Jeremy Bentham and drawn by Willey Reveley, father of Henry Reveley.

The construction of the dodecagon design in 1830 to 1831 was a significant achievement in this period. The tradesman applied skill to hew the stone from the site or nearby and build the structure to Reveley's design within a relatively short period, from August 1830 to January 1831.



Round House, Fremantle - Conservation Management Plan

2020

The Round House contributes to an understanding of the characteristics of the local limestone in construction, and the stone-masonry skills available in the first years of the settlement as exhibited by builder, Richard Lewis and lime burner Robert Ferres.

The Round House has significance as one of the first buildings to be restored and conserved in the 1970s when the understanding of heritage practice and processes were in its infancy. The Round House demonstrates past techniques of restoration and conservation that are instructive for students and contemporary practitioners.

5.2.9 ANY OTHER CHARACTERISTIC IT MAY HAVE THAT IN THE OPINION OF THE COUNCIL IS RELEVANT TO THE ASSESSMENT OF CULTURAL HERITAGE SIGNIFICANCE

Not applicable

5.3 DEGREE OF SIGNIFICANCE

5.3.1 INTEGRITY

According to the UNESCO Operational Guidelines for the Implementation of the World Heritage Convention 2012, Integrity is defined as the 'measure of the wholeness and intactness of the natural and/or cultural heritage and its attributes'. For a place to demonstrate high Integrity, its 'physical fabric ... and/or its significant features should be in good condition, and the impact of deterioration processes controlled. A significant proportion of the elements necessary to convey the totality of the value conveyed by the property should be included.'

The hierarchy of Integrity used in this Conservation Management Plan is Excellent, Good, Fair, Poor, and Very Poor. These descriptors refer to the 'state' of the place's Integrity.

The Round House demonstrates Good integrity.

The remaining fabric of the Round House is in good condition and well maintained. While the full extent of the original structure with the eight cells has not been maintained there is sufficient of the original design intent and fabric remaining.

There have been changes in the material used on the roof cladding and the doors and windows but the openings are consistent with the original design intent, and all later insertions or materials can be reversed.

The Round House stairs demonstrate Fair integrity

The stairs from the base of the cliff to the Round House are largely consistent with the location of the stairs from the original construction. Alterations in their position in 1837, to accommodate the tunnel excavation, and in 1965 to accommodate the building of the Standard Gauge Rail line are representative of the development of the place. The materials used in the construction of the stairs are consistent with the original design however it is not likely there is significant fabric remaining from original construction. Overlays of concrete have been undertaken and original fabric may lie beneath.

5.3.2 AUTHENTICITY

According to the Burra Charter 2013, 'Cultural significance is embodied in the place itself, its fabric, setting, use, associations, meanings, records, related places and related objects'.



Page | 153

According to the definition provided by the UNESCO Operational Guidelines for the Implementation of the World Heritage Convention 2012, the concept of Authenticity can be defined as the 'capability of the property to transmit the cultural significance of a place'.⁸⁹ In this sense, authenticity is a measure of the place's readability, its quality of being legible. The amount of change or adaptive re-use to a place over time can reduce its authenticity. Effective interpretation can enhance a place's authenticity by revealing its cultural significance.

The hierarchy of Authenticity used in this Conservation Management Plan is Very High, High, Moderate, Low, and Very Low. These descriptors refer to the 'level' of the place's Authenticity.

The Round House demonstrates High Authenticity.

The Round House can be understood as a place of incarceration despite the removal of some of the internal walls. The sense of the enclosure and solidity of the place as a whole can still be determined. The scale and form of the remaining cells has not been altered as such they retain a high degree of authenticity.

The Round House stairs demonstrates High authenticity

The stairs to the round house from the base of the cliff are still largely consistent with their original form and location despite modifications throughout its history. The stairs have a high level of authenticity

The Setting of the Round House demonstrates High authenticity.

The Round House location on the axis of High Street and the highest position in the surrounding West End of Fremantle is consistent with its original relationship with adjacent settlement. Although the Round House had been part of a larger group of administrative buildings, it was always a separated structure due to its function and physical impenetrability to the outside. The setting of the Round House therefore contributes to the authenticity of the place.

5.4 GRADED ZONES AND ELEMENTS OF SIGNIFICANCE

5.4.1 GENERALLY

An understanding of the zones and elements of significance compliments the Statement of Significance and contributes to the management and conservation of the place. The higher the level of significance the greater the care that needs to be taken when making decisions about conservation and management.

The levels of significance used in this Conservation Management Plan are taken from JS Kerr's *The Conservation Plan* (7th Edition, 2013)

Exceptional Significance

Items that would warrant inclusion on any register of heritage places when assessed at a national level. Conservation of items of exceptional significance is essential.

Considerable Significance

Items that when assessed in a state context would warrant inclusion on any heritage register. Conservation of these elements is highly recommended.

Some Significance

Items that are at the threshold for entry into heritage registers at a State or local level. Conservation of these items is recommended.



Round House, Fremantle - Conservation Management Plan

2020

Little Significance

Items which neither contribute to nor detract from the cultural significance of the place and may be retained or removed as required.

Intrusive Elements

Elements that are regarded as intrusive and negatively impact on the cultural significance of the place may be removed when the opportunity arises.

5.4.2 SIGNIFICANCE OF THE PLACE

Due to its nature and degrees of significance considered above, the Round House is regarded as being of exceptional significance.

5.4.3 ZONES OF SIGNIFICANCE

The zones of significance are drawn tightly within the study area:

Zones of Exceptional Significance

- The Round House as an entire structure
- Approaches to the Round House from High Street including the steps from High Street and the steps up to the Round House entry

Zones of Considerable Significance

- Remnant capstone

Zones of Some Significance

- Space immediately around the Round House that have undergone alteration but still provide an appropriate setting for the place
- Look out/Signal mast area

Zones of Little Significance

- Not applicable

Intrusive Areas

- Not applicable



Page | 160

Round House, Fremantle - Conservation Management Plan

2020



Figure 196: Zones of Significance within Study Area



Round House, Fremantle - Conservation Management Plan

2020

5.4.4 ELEMENTS OF SIGNIFICANCE

Elements of Exceptional Significance

- Limestone walls of the Round House
- Well
- Yorkshire flagstones to Room 1
- The Bakehouse
- Remnant capstone within the study area

Elements of Considerable Significance

- Fabric of the steps to the entrance of the Round House
- Fabric of the steps up from High Street
- Timber floors to upper level rooms
- Boundary walls along eastern boundary
- Flooring to the courtyard of the Round House

Elements of Some Significance

- Shingles
- Copper roof
- Windows
- Doors
- Replacement joinery
- Limestone floors to cells
- Timber floors to Rooms 2 and 12
- Signal Mast and belays
- Time Ball
- Canon
- Boundary walls around the look out area

Elements of Little Significance

- Stairs from High Street to landing
- Pathways
- Timber deck to look out

Intrusive Elements

- Plantings
- Steps to look out
- Timber balustrade to boundary wall around look out area
- Cement patching to ground surface of look out area
- Steel railing to northern and eastern edges of look out area
- Concrete steps to look out area
- Picket fence to timber deck area of look out



Page | 100

Round House, Fremantle - Conservation Management Plan

2020

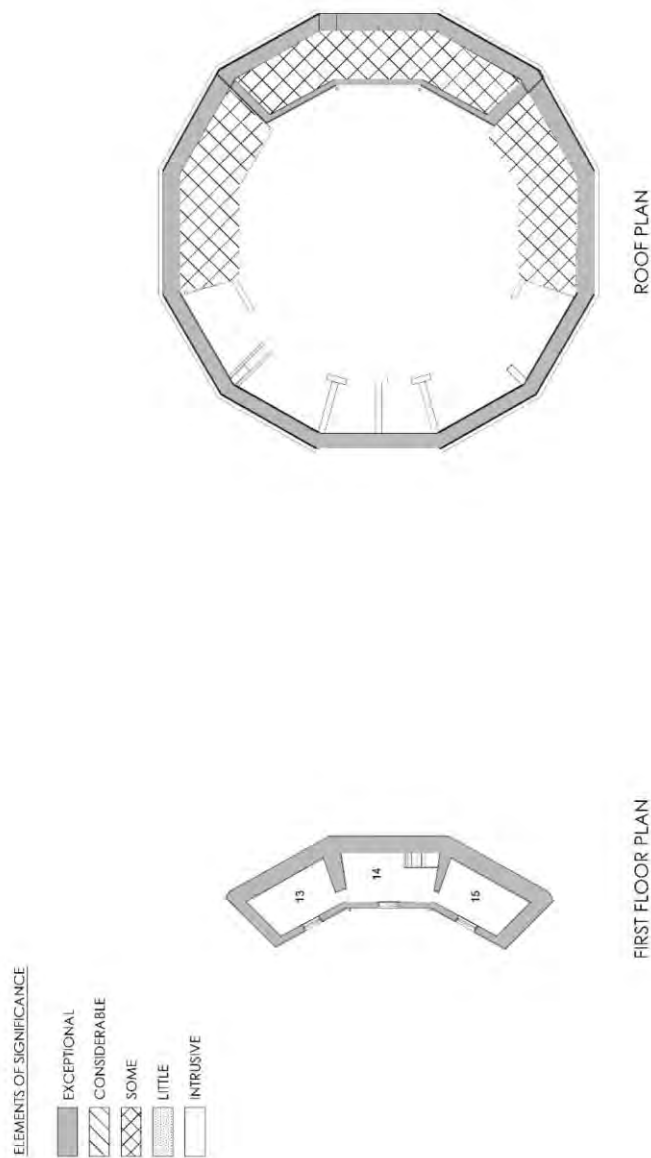


Figure 197: Elements of Significance



Round House, Fremantle - Conservation Management Plan

2020



2020

2020

2020

2020

2020

2019-20
ROUND HOUSE, FREMANTLE
15 CRAFTING LANE, FREMANTLE

Figure 198: Zones of Significance – upper level



5.4.5 ARCHAEOLOGICAL SIGNIFICANCE

Areas of potential significance include:

- Under timber floors in Rooms 2 and 12
- Possible deposits within internal concrete floors
- Evidence of past structures/features within the external concrete floors
- Below gun platform

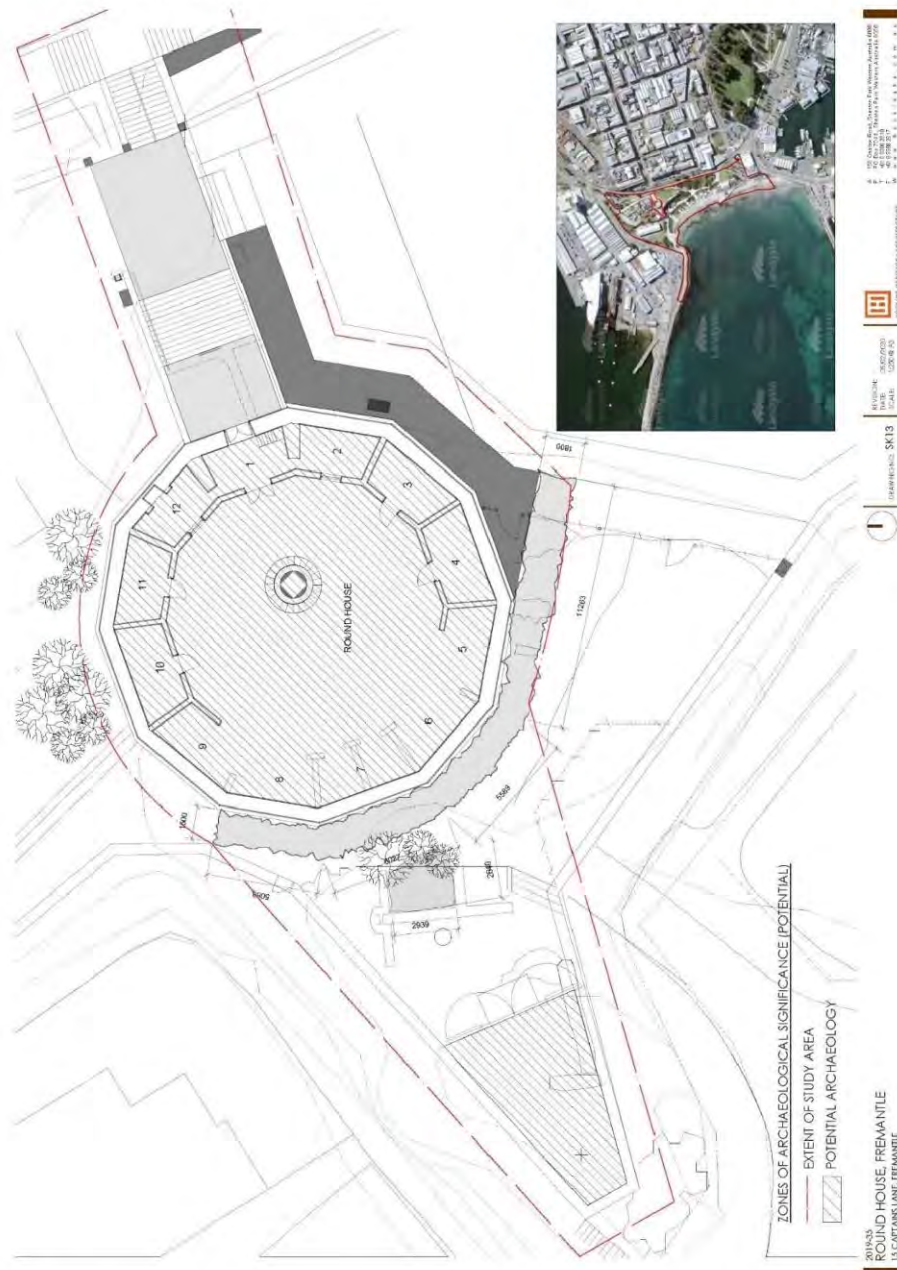


Figure 199: Areas of potential archaeological significance

6.0 STATEMENT OF SIGNIFICANCE

6.1 NATIONAL SIGNIFICANCE ASSESSMENT

The Round House, Fremantle has potential to be included in the Australian National Heritage List. Should the City of Fremantle nominate the place for assessment by the Australian Government, the following criteria are proposed to demonstrate its outstanding heritage value to the nation.

- The place is the first public building in the first free settler colony in Australia, the Swan River Colony, and a key part of the first administrative precinct that established British Control of the Western third of Australia. The establishment of this colony was valuable as an outpost of the British government in the Indian Ocean.
- Although the free settlement was short lived the decision to build a jail, as the first public building in the colony is indicative of colonial methods of control demonstrated by administrators of that period, in this instance naval officer, Governor James Stirling.
- The design of the Round House, influenced by panoptican principals is rare in Australia and is part of a wider international benevolent interest in reformatory prison design.
- The place had a significant role in the early contact and conflict between settlers and Traditional owners and leaders. Whadjuk Noongar leaders Yagan and Calyute were both imprisoned at the Round House in the 1830s and in later decades leaders from language groups across the state were held here.
- The place had an ongoing role in the incarceration of Aboriginal men and boys from 1841 to 1901 as a place of transition before transportation to the Aboriginal prison at Rottnest.

6.1 STATE SIGNIFICANCE

The Round House was included in the State Register of Heritage Places in 1993. At that time Statements of Significance were less complex as the understanding of heritage was in development since the passing of the *Heritage Act 1990*. The existing Statement of Significance included in the Register Documentation does not address the broader cultural heritage values of the place to the Western Australian community. This document proposes a revised Statement of Significance, which is a synthesis of the evidence, and analysis gathered in this Conservation Management Plan.

It is recommended that the Statement of Significance in the State Register Entry is updated to reflect the current standards of documentation and understanding of heritage values.

Statement of Significance from the State Register Entry of Place 0896 Round House and Arthur Head Reserve, 19 November 1993,

The Round House is of exceptional cultural significance for the following:

- it is the first permanent public building, and the oldest extant (European) building, in Western Australia;
- it has a close association with, and is a demonstration of, the colonial system of law and order; and
- it is one of only two extant buildings by H.W. Reveley, the first colonial engineer in the Swan River Colony (Western Australia).



Proposed Statement of Significance

The Round House is a stone, dodecagon structure comprised of a two-storey section with a timber framed copper roof, and single storey portions with timber shingle roof claddings. The building was constructed in 1830-31, to a design by engineer Henry Reveley to serve as a prison for the Swan River Colony. The place has cultural heritage significance for the following reasons.

- The place is associated with the earliest days of the settlement of the Swan River Colony as an example of the institutions brought with the settlers and enforced by the colonial administrators, led by Governor James Stirling;
- The location of the Round House at the highest site on Arthur Head provides expansive views to the ocean, city and harbour and provides an indication of the original form of Arthur Head and its importance as a landform to the traditional owners and settlers;
- The place has significance for its association with the late 18th and early 19th century ideas of prison reform developed by Jeremy Bentham as the panopticon prison design, influencing the design by the first architect in Western Australia, Henry Reveley;
- The place is significant for all Aboriginal communities as it was a place of transition and incarceration to the Aboriginal prison at Rottnest for men from all regions of Western Australia;
- The place has significant aesthetic value for its robust and simple form using materials from its location and as a dominant feature in the streetscape. Its termination of High Street is a significant landmark and is emblematic of the West End, regularly reproduced in artistic representations of Fremantle since its construction in 1831;
- The place is highly valued by several community groups who have lobbied for the protection, use and display of the building to the wider community since the 1920s;
- The conservation of the Round House in the 1970s was a significant example of the conservation in Western Australia. The role of prominent heritage architect Robin McK Campbell in the restoration of the project was influential in the evolution of heritage practice in Western Australia; and,
- Since 1959, the Round House has been a museum and tourist destination and is valued for its contribution to the City of Fremantle and wider community.

7.0 CONSERVATION RECOMMENDATIONS

7.1 INTRODUCTION

The format for this section has been revised to reflect the requirements of the City of Fremantle.

The usual format as guided by James Semple Kerr's *The Conservation Plan* (Australia ICOMOS, 7th edition, 2013), the Australia ICOMOS Burra Charter (2013) and the State Heritage Office (fmr.) publication 'An Information Guide to Conservation Management Plans' (January 2013) is to develop Conservation Policy.

As requested by the City of Fremantle, this document has adopted the terminology 'Conservation Recommendations' rather than the term 'Conservation Policy' which in this circumstance has the same weight of obligation for owners, occupiers and users of the place.

Conservation recommendations for Fremantle Round House have been developed from the assessed significance of the place and its physical condition at the time this report was prepared. The recommendations seek to conserve and maintain significant fabric and retain and conserve significance and reveal further potential significant elements through investigation and appropriate conservation actions.

The intentions of the recommendations outlined in this document are to:



Round House, Fremantle - Conservation Management Plan

2020

- Provide guidance to the owners and managers of the Round House, regarding the significance of the place;
- Conserve the documented heritage values of Round House;
- To understand and prioritise conservation actions in a practical manner;
- To establish a monitoring and maintenance program to address and retard further conservation issues and deterioration of significant fabric; and
- To preserve the heritage values of Round House in accordance with best heritage practice.

Round House is impacted by the following factors:

- Prominent position on top of Arthur Head Reserve means the structure is subject to harsh environmental conditions including heat, wind and salt;
- Complex management responsibilities: owned by City of Fremantle but operated by Fremantle Volunteer Heritage Guides;
- Subjected to numerous phases of conservation works but as conservation standards and knowledge has developed, not all past actions are deemed to be appropriate in 2020. A number of these works have been reversed however there are still actions that need to be undertaken to ensure the on-going stability and viability of the place.
- Lack of on-going maintenance between conservation works resulting in further deterioration of significant fabric.

The Arthur Head Reserve Conservation Plan prepared in June 2011 by Griffiths Architects contains recommendations for management for the entire Arthur Head Reserve. The recommendations for the Round House set out below should be read in conjunction with the recommendations made in the Arthur Head Reserve Conservation Plan. The Round House is a single element of the Arthur Head Reserve and whilst there are specific recommendations made for the conservation and future management of the Round House in this document, the management and conservation should be treated in a holistic manner. Management and conservation of the Arthur Head Reserve should not be at the expense of the significance of the Round House and vice versa. Where relevant, reference to the Arthur Head Reserve conservation recommendations has been made in the following section.

7.1.1 GUIDE TO CONSERVATION RECOMMENDATIONS

These recommendations are based on the need to conserve the heritage values of the Round House in so far as they are reflected in the fabric and in recognition of its significance as the first permanent public building and oldest extant building in Western Australia, its connections with the colonial system of law and order and as an example of the work from H W Reveley, the first colonial engineer in the Swan River Colony. The conservation of extant fabric and site features assessed of being of significance should take account of the physical changes to the place that have occurred over time which reflect the historical and subsequent abandonment of the place.

The archaeological potential of the place has not been fully revealed or investigated. Future works to the place should take this into account and allow for appropriate investigations to be made.

Conservation of elements of exceptional and considerable significance should be considered as a higher priority than the conservation of elements of some or little significance.



7.1.2 KEY STATEMENTS

The Round House should be conserved with minimal change to its external and internal appearance and planning. The original use through retained fabric and interpretation and, as far as practicable, the original presentation of the place should remain as the key objective for the conservation of the place. Works and use should be guided by the recommendations within the Conservation Management Plan and should not confuse or obscure the significance of the place.

The on-going management and conservation of Round House should take account of the fact that the place forms parts of a larger precinct at Arthur Head Reserve and should not be seen in isolation. Conservation of the fabric of Round House is a separate issue however the wider management of the place should be considered in a holistic manner for the entire Reserve.

The setting of the Round House should be maintained and conserved in a manner that retains and enhances the significance of the place, respecting the landmark qualities of the Round House and also respectful of the previous use and additional development that occurred at the Arthur Head Reserve including the Court House and Cottages.

The Round House is a place of recognised cultural significance that is open to the public on a daily basis. Whilst there is scope to introduce additional events within the Round House and its surroundings, these must be respectful of the original use and the emotions associated with the place. In considering additional uses of the place and managing the changes required for additional uses, if any, are to be guided by this Conservation Management Plan.

Recommendation 1.

The assessment of cultural heritage significance for Round House as described in section 5 of this Conservation Management Plan should be accepted as the basis for decision making about conservation, interpretation and future use of the place.

Recommendation 2.

The conservation recommendations established in this report should guide the future conservation and management of the place by owners and relevant authorities.

Recommendation 3.

This Conservation Management Plan should be reviewed by the owners of the Round House periodically to consider the continued applicability of the recommendations and to assess the manner in which they have been implemented.

Recommendation 4.

All works undertaken to conserve the place should be appropriate to the assessed significance of the place and should be guided and supervised by experienced conservation practitioners.

Recommendation 5.

Research into the place should continue and any new information should be made available to the owners and managers of the place for incorporation into updated conservation management plans and other relevant documentation.



7.1.3 BURRA CHARTER

Recommendations for the conservation and interpretation of the place is in accordance with the principles of the Australia ICOMOS Charter for Places of Cultural Significance, The Burra Charter, 2013 (Burra Charter).

The Burra Charter is the accepted guiding document for managing heritage places and establishing best heritage practices. The conservation recommendations in this Conservation Management Plan have been guided by the Burra Charter.

The Burra Charter adopts a cautious approach of "do as much as necessary but change as little as possible".

Recommendation 6.

The policies, principles and processes of the Burra Charter should be followed to guide the on-going conservation and management of the Round House.

Burra Charter Articles of particular relevance to the conservation of Round House:

Article 2 Conservation and Management

- Article 2.1 Places of cultural significance should be conserved
- Article 2.2 The aim of conservation is to retain the cultural significance of a place
- Article 2.3 Conservation is an integral part of good management of places of cultural significance
- Article 2.4 places of cultural significance should be safeguarded and not put at risk or left in a vulnerable state

Article 3 Cautious Approach

- Article 3.1 Conservation is based on respect for the existing fabric, use, associations and meanings. It requires a cautious approach of changing as much as necessary but as little as possible.
- Article 3.2 Changes to a place should not distort the physical or other evidence it provides, nor be based on conjecture.

Article 4 Knowledge, Skills and Techniques

- Article 4.1 Conservation should make use of all the knowledge, skills and disciplines which can contribute to the study and care of a place.
- Article 4.2 Traditional techniques and materials are preferred for the conservation of significant fabric. In some circumstances modern techniques and materials which offer substantial conservation benefits may be appropriate.

Article 5 Values

- Article 5.1 Conservation of a place should identify and take into consideration all aspects of cultural and natural significance without unwarranted emphasis on any one value at the expense of the others.



Round House, Fremantle - Conservation Management Plan

2020

Article 7 Use

Article 7.2 A place should have a compatible use.

Article 8 Setting

Article 8.1 Conservation requires the retention of an appropriate setting and other relationships that contribute to the cultural significance of the place.

New construction, demolition, intrusions or other changes which would adversely affect the setting or relationships are not appropriate.

Article 12 Participation

Article 12.1 Conservation, interpretation and management of the place should provide for the participation of people for whom the place has special associations and meanings, or who have social, spiritual or other cultural responsibilities for the places.

Article 13 Co-existence of Cultural Values

Article 13.1 Co-existence of cultural values should be recognised, respected and encouraged, especially in cases where they conflict.

Article 15 Change

Article 15.1 Change may be necessary to retain cultural significance but is undesirable where it reduces cultural significance. The amount of change to a place should be guided by the cultural significance of the place and its appropriate interpretation.

Article 15.2 Changes which reduce cultural significance should be reversible, and be reversed when circumstances permit.

Article 16 Maintenance

Article 16.1 Maintenance is fundamental to conservation and should be undertaken where fabric is of cultural significance and its maintenance is necessary to retain that cultural significance.

Article 24 Retaining Associations and Meanings

Article 24.1 Significant associations between people and a place should be respected, retained and not obscured. Opportunities for the interpretation, commemoration and celebration of these associations should be investigated and implemented.

Article 24.2 Significant meanings, including spiritual values, of a place should be respected. Opportunities for the continuation or revival of these meanings should be investigated and implemented.



7.2 RECOMMENDATIONS ARISING OUT OF THE GRADED ZONES OF SIGNIFICANCE

The graded zones and elements of significance of the Round House have been outlined in Section 5.4 above.

The grading of the zones and elements has been considered in relation to the evidence, assessment of significance and levels of authenticity established in the above sections of the Conservation Management Plan.

It is accepted that the assessed levels of significance provide a guide to the conservation and management of a place with the greater level of care being taken for fabric and elements of higher significance. Elements of lesser significance have a greater degree of flexibility in terms of approach and any elements identified as intrusive should be removed when no longer required or if they are impacting negatively on zones and elements of higher significance.

Recommendation 7.

The higher the level of significance of a zone or elements of the place, the greater the level of care required to ensure actions do not irreversibly harm it.

Recommendation 8.

Zones and elements identified as having exceptional significance must be retained and conserved.

Recommendation 9.

Zones and elements identified as having considerable significance should be retained and conserved. These elements may be modified in keeping with the overall aims of the conservation recommendations.

Recommendation 10.

Zones and elements identified as being of some significance should be retained and conserved where possible.

If change occurs to these elements, it should be in keeping with the objectives of the conservation recommendations and seek to conserve the significance of the place and fabric.

Recommendation 11.

Zones and elements identified as being of little significance may be retained, removed or altered depending on user requirements. If altered, change should occur in accordance with the conservation recommendations.

Recommendation 12.

Zones and elements identified as intrusive should be removed when no longer required or if impacting negatively on zones and elements of higher significance.



7.3 RECOMMENDATIONS RELATING TO THE SETTING OF THE PLACE

7.3.1 SETTING, LANDSCAPING AND VIEWS

The Round House is located at the western end of High Street and forms one of Fremantle's most iconic landmarks, featuring in long framed views along the street. Glimpsed views of the Round House are possible from Bathers Beach and Fleet Street although the Signal Mast stands proud and highly visible in these views. In longer views along Mews Road, the Round House becomes highly visible again. The ensuing development in Fremantle since the time the Round House was constructed has impacted on views of the place and therefore the remaining views are of increased significance.

From the Round House, views look down and across certain aspects of Fremantle and the port. The increased height and the perceived dominance or isolation of the Round House to adjacent development to the east is part of the significance of the place.

The grass to the south of the Round House is outside the scope of this Conservation Management Plan however it formed part of the Beautification Scheme undertaken in 1937 and has formed part of its southern open setting for a long time. This open space allows for uninterrupted views to the southern walls of the Round House and emphasises its stark design and isolated position which is reflective of the situation at the time of construction.

The Pilots' Cottages to the north of the Round House were constructed approximately 70 years after the jail and have now been neighbours for over a century. These cottages did not contribute to the use of the Round House as a jail but were connected to it in subsequent uses and have become part of the larger Arthur Head Reserve. Again, these cottages are outside the scope of this Conservation Management Plan but contribute to the historic context of the place and its setting.

The pathways to the north of the Round House are significant in that they provide access to the place but are not significant in terms of fabric. Pathways around the Round House are inaccessible to all but the able bodied. The remnant capstone creates a hazard but is significant as a visible reminder of what the Round House is constructed from and the tough conditions those who built the place faced. Any new pathways around the Round House should seek to retain the capstone whilst creating an equitable trafficable surface around the place.

The path that extends along Mrs Trivett Place terminating at the northern faces of the Round House is outside the subject area but as an alternative means of access to the place its condition should be taken into account. The path is a long incline extending along the rear of the Pilots' Cottages and provides direct access to the Round House at its southern point and public amenities at its northern extent. The rough surface of the pathway is trip hazard and cannot be used as an equal access pathway.

Universal access into and around the Round House needs to be incorporated into the future planning of the place. The trees planted around the steps from High Street to the Round House and the tree adjacent to the structure partially obscure the view of the place. The plantings prevent the place from being seen in its entirety as well as being a potential cause of damage to the significant fabric of the steps and the Round House. If the plantings are to be retained they should be managed appropriately or removed entirely.

Recommendation 13.

The views of the Round House should be retained and not obstructed by development outside the Reserve or within the Reserve.

The principal view along High Street should be preserved. As this has been a key view from the day the Round House was constructed it is essential that this view is maintained. The development along High Street frames the view to the Round House with the building itself being the terminating aspect of the view. There should be no further development to the western end of High Street that would obscure or interfere



with this view. See also section 10.4.2 Views and Vistas of the Arthur Head Reserve Conservation Plan 2011.

The open view across the grassed area to the south of the Round House should be preserved. Although the Round House has not always stood in isolation on the Reserve, this current view enforces the stark nature and original function of the Round House. Temporary structures may be erected in this space for events.

Views from Bathers Beach should be retained. The Round House cannot be seen in its entirety from this vantage point however it shows the building in the context of the natural environment of the Arthur Head Reserve. No development should occur in the Reserve that would obstruct this view.

Glimpsed views from the foot of Arthur Head Reserve and the J Shed both emphasise the sheer drop of the cliff and the elevated position of the Round House. The glimpsed views should be retained.



Key:

- Principle views
- - - - - Glimpsed views

Recommendation 14.

The paths around the Round House should be upgraded to allow for universal access around the place. Without further intervention, access to the look out and into the Round House will still not be possible for some visitors however trafficable surfaces will allow for greater access around the exterior of the Round House. The surfaces of the paths should allow for ease of use and be in keeping with the character and aesthetics



Round House, Fremantle - Conservation Management Plan

2020

of the place e.g. compacted limestone gravel. Significant areas of capstone should be retained as a visual element of the site.

Recommendation 15.

The archaeological potential around the exterior of the Round House must be taken into account when considering any changes to the landscape or paving around the place. Refer to section 7.5 Recommendations Arising from Archaeological Significance.

Also refer to section 10.6 Archaeology of the Arthur Head Conservation Plan June 2011.

Recommendation 16.

The green open space to the south of the Round House should be retained. Planting schemes that may obscure views and appreciation of the Round House should not be implemented in this area. Temporary structures may be erected in connection with events. No permanent structures should be erected in this space.

Also refer to section 10.4.5 New Works and Development of the Arthur Head Conservation Plan 2011.

Recommendation 17.

Any landscaping and hardscaping schemes for the Arthur Head Reserve should take account of the significance of the place as a whole and the significance of the Round House. Existing landscape elements, including the trees around the steps from High Street, should be managed appropriately in order that the views of the Round House are not obscured. Care should also be taken to ensure that any planting, new or existing, should not harm the significant fabric of the place. Where existing planting is harming the fabric these items should be removed.

Refer also to section 10.4.6 Landscape in the Arthur Head Reserve Conservation Plan 2011.

7.3.2 PARKING

There are no parking facilities within the boundary of the study area of the Round House.

In the wider Arthur Head Reserve site, vehicle access is possible along Captain's Lane in front of the Pilots' Cottages for service vehicles. Parking is available at Little High Street at the foot of the steps and at Mrs Trivett Place. Disabled parking bays are located at the foot of Captain's Lane.

Recommendation 18.

General parking should not be introduced into the Round House study site as this has the potential to damage significant fabric and distort the understanding of the place. Disabled access may be possible and further investigation into this should be undertaken. See also section 10.5.1 Access and Egress in the Arthur Head Reserve Conservation Plan 2011.



Page | 173

7.4 RECOMMENDATIONS ARISING FROM THE PHYSICAL CONDITION OF THE PLACE

7.4.1 FORM

The distinctive 12-sided design of the Round House is an essential aspect of the place's significance and remains in a highly authentic condition displaying a high level of intactness.

Recommendation 19.

The original form of the Round House must be retained and conserved. No additions should be made that will interrupt the distinctive design of the place.

7.4.2 FABRIC

The following policies relate to the conservation of the fabric of the Round House. A detailed Building Condition Assessment can be found in Appendix 13.4 of this document. The recommendations below are general in nature and aim to provide guidance as to how to retain and conserve elements and do not contain information as to the detail of conservation works.

Recommendation 20.

All works to the Round House should be undertaken following the advice of an experienced heritage architect.

LIMESTONE WALLS

The walls to the Round House are of exceptional significance. The limestone is believed to have been quarried from the Arthur Head Reserve though stones for past conservation works have come from other local locations.

The fabric and form of the walls together with their stark appearance provides the key aesthetic value of the Round House.

It is known that there were openings in the west wall of the Round House in the form of earth closet hatches and door. Following the collapse of the west wall and the subsequent rebuilding in the 1920s, the rebuilt west wall did not incorporate these openings. These openings were associated with essential facilities of the Round House and are a demonstration of life within the jail. Whilst the current presentation of the Round House is technically incorrect, a decision was taken almost a century ago not to reinstate these openings and the adjoining lost cells. The openings contributed to the structural failings of the wall and rebuilding the wall as a solid entity provided enhanced structural integrity for the place.

The reconstruction of the outer wall without the openings does not confuse the understanding of the place and was constructed following the blank pattern seen in the other ten outer faces of the Round House. Heritage process states that one era of development of a place should not override another unless those works were harmful to the significance of the place and distorted understanding of it. In this instance the reconstruction of the west wall without reinstating the earlier openings is not considered to be harmful to the significance of the Round House and does not harm the understanding or reading of the place. Reinstatement of the hatches or the door is not considered to be essential to the conservation of the Round House.

Previous repairs have been undertaken over the life of the Round House using methods and materials that would no longer be considered to be appropriate and may cause damage to the underlying original fabric. The majority of these works have since been reversed with the removal of cement render and mortar however there are still areas affected by this treatment



which will ultimately cause damage to the substrate. All elements of cement render/mortar should be removed.

Recommendation 21.

The form of the Round House is of exceptional significance and must be retained and conserved. No additions to the Round House should be constructed.

Recommendation 22.

Any reinstatement of the earth closet hatches in the west wall must be based on documentary evidence. If sufficient detail cannot be obtained from historic photographs, the hatches should not be reinstated. Any reinstatement of these openings should not undermine the structural integrity of the place. Engineering advice must be obtained from a heritage structural engineer prior to any works being finalised.

Recommendation 23.

Repairs to the limestone walls should match the original fabric in terms of form, profile and material. Lime mortar should be used for pointing of a mix recommended from the materials analysis (May 2020) consistent with early mortars used in the structure. See the recommended mix from Appendix 13.6 Materials Analysis.

Recommendation 24.

All traces of cement mortar should be carefully removed under the guidance of an experienced heritage architect, particularly where the cement is causing damage to the significant fabric.

Recommendation 25.

No signage or other item are to be fixed to the external walls. Existing signage/plaques should be carefully removed under the guidance of a heritage professional without causing harm to the limestone.

Recommendation 26.

Trace elements of lime wash at the upper levels of the elevations should be retained. If the building is to be cleaned this must be undertaken in a controlled manner under the guidance of the heritage architect.

Recommendation 27.

The parapet to the façade must be retained and conserved. The dark yellow pointing should be carefully removed and replaced with lime mortar. Yellow stock bricks to the capping of the parapet should be retained. Repairs to be undertaken to match.

STEPS

There are two sets of significant steps connected to the Round House: the first providing access from High Street and the second being the set of ten steps leading up to the front door of the Round House. Each set of steps are of limestone construction with cement rendered balustrade walls. The steps leading to the Round House have jarrah nosings.



The steps from High Street to the first landing are not in their original configuration, being altered in the 1960s to make way for the construction of the railway however they still demonstrate a high degree of significance. The steps from the landing to Captain's Lane remain in the original configuration. Unless the railway is removed, the original configuration of the steps cannot be reinstated. Although the steps are of differing ages they are still representative of the original steps and should be treated in the same manner.

The render to the balustrade is in a failing condition and vegetation growing in crevices in the rock face and cracked render is adding to the pressure on the balustrade.

Recommendation 28.

All steps to the Round House demonstrate significance and should be retained and conserved.

Recommendation 29.

Cement render should be carefully removed with repairs being undertaken to the substrate. The walls should either be left as natural limestone wall or rendered in a lime render.

Recommendation 30.

The jarrah nosings to the steps up to the Round House entry should be retained or replaced to match. The plaque commemorating the 1983 replacement of the timber nosings should be removed and retained in appropriate storage.

Recommendation 31.

The cement steps from High Street to Captains Lane are in fair condition but should be kept clean from sand build up. Any repairs to the treads should match existing.

Recommendation 32.

The opportunity to install a wheelchair lift to the Round House should be investigated to enable disabled access if possible. The location of the lift/hoist needs to be carefully considered to minimise any impact on the significance of the Round House.

ROOFS

The roofs to the cells are single pitched roofs clad with timber shingles. The roof to the two storey section is a flat timber framed structure clad with copper sheeting. Neither roof presents in its original form. The current form of the roofs date from the 1970s conservation works which reinstated the pitched roof form.

The original roofing to the cells is said to have been flat with weatherboards and lime mortar overlaid with limestone. The roof to the two storey section was raised in 1844 but is believed to have been of a similar construction. Almost from the date of completion, the roofs leaked and required much attention.

The cells roofs have been flat and pitched on numerous occasions with the guards reportedly undertaking their duties on the roofs wearing the fabric away. The roofs to the cells are shown as being flat in 1879 (figure 16) but pitched by 1902 (figure 19). A photograph from 1929 shows



these roofs being flat again. The current form of the roofs over the cells is a shallower pitch than it existed in the early 20th century with the scarring of the former pitch remaining visible on the side walls of the two storey section.

The roof to the two storey section has always been flat.

The original form of the roofs does not need to be reinstated. Historic record shows that the flat roofs were an issue from the day they were constructed and required regular attention until they were changed completely. Whilst the materials are known, the exact detail of the flat roofs is not known and reinstating them would be based on an element of supposition. As the original roofs leaked, there would also need to be an alteration in detail to ensure any the roofs were watertight.

Whilst not original, the current roof forms are considered to be appropriate for the Round House and are based on an earlier form of roof seen at the place.

Recommendation 33.

The current roof form and cladding materials should be retained to both the cells and two storey section of the Round House.

Although there is a history of the roof forms to the cells interchanging between being flat and pitched the current form is appropriate and based on historic precedent.

If the shingles need to be replaced, the same timber and profile of the shingle should be used. The shingles are currently Sheoak.

Recommendation 34.

A detailed inspection of the flat roof to the two storey section should be undertaken at the earliest opportunity. The roof should remain in a flat form.

There is no precedence in the history of the Round House stating that this roof was clad in copper and therefore alternative cladding materials may be considered on the advice of the heritage architect.

RAINWATER GOODS

The copper rainwater heads, downpipes and gutters along the internal face of the two-storey section are appropriate for the age and style of building, though not original. There are no other downpipes or gutters on the structure and none on the external face of the building. Early photographs of the Round House show that the place was constructed without downpipes however it is not recommended that the downpipes be removed.

Although the copper gutters and downpipes are not original the use of copper is considered to be appropriate and in keeping with the age of the building. Copper is regarded as being a durable material and especially suitable for harsh marine environments.

Galvanic corrosion can occur between different metals, especially when copper is above galvanised steel. It is recommended conservation practice to minimise the number of metals used and therefore as the roof to the two storey section is copper, the gutters and downpipes need to remain as copper. If the cladding to the roof is changed from copper to another cladding, the gutters and downpipes may be changed.

Recommendation 35.

Where rainwater goods need repairing or replacing, match the existing materials and profiles.



Recommendation 36.

No additional rainwater goods should be installed within the internal space of the Round House nor on the external elevations.

Recommendation 37.

Rainwater goods should be connected to soakwells and not be permitted to discharge onto the concrete floor of the exercise yard.

Recommendation 38.

The soakwells and drainage system should be monitored and inspected as part of the general maintenance of the place to ensure that they work effectively. Ensure all drains are clear of sand and other debris that may prevent discharge into the soakwells.

WALLS

The walls are constructed of local limestone quarried from Arthur Head and other quarries with similar limestone. Sections of limestone have been replaced over time due to erosion and all replacements have come from limestone quarries within Western Australia. The variances in colour are representative of the various quarries the stone has come from and whether the stone is capstone or strata stone. Strata stone tends to be a darker colour than the capstone.

Material testing has been undertaken on the Round House to try and determine the original mix of the lime mortar used. A replacement mortar has been specified by the materials analysts as 1.0 part lime putty: 2.5 parts aggregate made up of 60-65% moderately soft medium-fine grained, washed lightly yellow-brown sand and 35-40% crushed shell grit to matching particle size.

Recommendation 39.

Repairs to the limestone walls should match the original fabric in terms of form, profile and material. As far as practicable, local limestone should be used to ensure a closer match to the original stone. Any replacement limestone is to be approved by the heritage architect prior to being used.

Recommendation 40.

Lime mortar should be used for all re-pointing. Test samples of the mortar are to be approved by the heritage architect prior to being used.

Recommendation 41.

All remnant traces of cement mortar should be carefully removed under the guidance of an experienced heritage architect.

Recommendation 42.

No signage or other items are to be fixed to any wall.

WINDOWS



The windows to the two storey section are not original. The original windows appeared to contain smaller panes, 10-12 to each window and comprised of two side hung casement sashes rather than one. The frames were jarrah. The windows and lintels have been replaced but the openings remain the same size. The security bars have been removed.

Photographs of the Round House up to 1975 show a window in the north wall of the two storey section. This opening was blocked up in the conservation works of the 1970s. The window was an important element as it is believed this was a form of exit onto the roofs of the cells to enable the guards to undertake their surveillance on the prisoners. Once the roofs to the cells were pitched the window became redundant with photographs showing it partially blocked up from within the upstairs room (see figure 34) above.

Recommendation 43.

The original opening that has been blocked on the north wall of the second storey may be reinstated based on documentary evidence.

Recommendation 44.

The current windows in the two storey section of the Round House are of little significance and can be retained or replaced.

Replacement windows should more closely match the original style with frames and sashes based on documentary evidence.

Replacement hardware should be appropriate to the style of the openings.

Recommendation 45.

No window openings shall be inserted into the external walls.

Recommendation 46.

All joinery to be painted to an agreed colour scheme under the advice of the heritage architect.

As the windows are not original paint scrapes are not possible and colours should therefore be based on documentary evidence as far as possible ie photographs or based on schemes appropriate for the age and style of building and following advice of the heritage architect. Early photographs indicate that joinery was dark in colour.

Recommendation 47.

The windows originally had bars extending up the internal side of the windows. Reinstatement of bars is not necessary but may be considered for interpretation purposes if the installation does not harm significant fabric.

DOORS

The four cell doors are similar in form, being timber ledge and braced doors with replacement architraves and hardware. Each of the cells doors have substantial iron hinges and two bolts. The doors and hardware are not original. The details of the original cell doors are unknown. Early photographs do not clearly show the doors and no other information regarding the doors has been discovered during the research for this conservation management plan.

It is likely that the cell doors would have been more substantial in construction to prevent the prisoners escaping. Prison doors from similarly aged prisons in Western Australia show heavy



Round House, Fremantle - Conservation Management Plan

2020

jarrah plank doors, with substantial hinges and bolts and with an observation hatch of some form.

The double doors to the two storey section are of ledge and braced and are not original.

Recommendation 48.

The current entry doors are of some significance being replacements and may be retained or replaced at the discretion of the owner.

Photographs show that the original double doors were timber panelled and any future replacement entrance doors should be based on the original style using available documentary evidence.

Recommendation 49.

The cell doors are not original and may be retained or replaced.

Where replacement doors are required research into similar aged jails in Western Australia should be undertaken to determine what the doors may have looked like including Fremantle Prison, The Quod - Rottnest Island, Busselton Court House.

Recommendation 50.

Door hardware should be appropriate to the age and function of the place. Heavy bolts/latches would have been appropriate to prevent prisoners escaping. Recommendations should be made from research into other jails of similar age.

Recommendation 51.

No new door openings should be introduced to the two-storey section or the cells.

Recommendation 52.

Replacement lintels should match the originals in material and profile.

JOINERY

Joinery is limited to the external double doors, internal double doors, windows, cells doors and roof/ceiling structures. Much of the joinery is replacement but still demonstrates a degree of significance.

Recommendation 53.

Extant original joinery should be retained and conserved where possible.

Where replacement is required, materials should be replaced to match in terms of timber type and profiles.

Recommendation 54.

Where joinery has already been replaced, this may be retained or replaced depending on owner requirements and condition.



Round House, Fremantle - Conservation Management Plan

2020

Further replacements of joinery elements should be based on existing joinery styles if only part replacement is required or documentary evidence where all elements are to be replaced.

PAINT

The original timbers have been replaced and evidence as to original paint schemes has been lost. Existing paint colours are appropriate and can be retained.

Traces of limewash can be found on the external and internal walls. It is unknown when the building was limewashed as early photographs appear to show the Round House in a natural stone aesthetic. Limewash was often applied to internal walls as a disinfectant, so is likely to have been used in the cells.

Recommendation 55.

Any previously unpainted surface should not be painted.

Recommendation 56.

The interior of the cells may be limewashed.

Recommendation 57.

Any new painting scheme should be based on documentary evidence. There is no opportunity to discover the original colours on the timbers however early photographs provide an indication of a dark colour being used for doors and windows. Recommendations should be approved by the heritage architect.

Recommendation 58.

Repainting on a regular basis should form part of the on-going maintenance of the place.

PLANNING

The internal planform of the Round House is of exceptional significance. Though not intact due to the partial collapse in the 1920s the planform clearly demonstrates the original design and function of the place. The missing cells and latrines may be reinstated based on documentary evidence as this is part of the original design and function of the place.

Recommendation 59.

The existing planform of the Round House must be retained. Changes that confuses the original design intent of the place should not be implemented.

The original cells and latrines may be reconstructed following documentary evidence but this is not essential to the understanding of the planning and function of the Round House.



CEILINGS

Ceilings to the cells are timber lining boards. The boards to some of the cells are not original but are of significance in terms of being a replacement of the originals. Where original lining boards remain extant these should be retained.

The ceilings to the ground floor rooms in the two storey section are the underside of the floorboards to the rooms above. These ceilings have been painted from an early time.

Recommendation 60.

The original ceilings boards should be retained and conserved with no additional fixings.

Recommendation 61.

Replacement ceilings should be retained.

Recommendation 62.

The ceiling lining boards should be left as natural timber or limewashed.

Recommendation 63.

The underside of the floors in the two storey section that form the ceilings to the ground floor rooms should be painted. The colours should be approved by the heritage architect.

WALLS

The walls to the cells are rubble limestone which have been variously rendered and limewashed. At least one cells is reputedly to have been lined with timber boards to accommodate the most dangerous of prisoners or to prevent prisoners escaping by carving through the soft limestone. The fabric is of exceptional significance.

Recommendation 64.

All traces of cement render should be carefully removed under the guidance of a heritage architect. The walls are to be repaired using lime mortar. The walls should not be painted or rendered. Walls may be limewashed.

Recommendation 65.

Consideration may be given to lining one cell with jarrah lining boards as an interpretation of the lined cell.

FLOORS

The floors to the cells are cement whilst those to the former Kitchen and Warder's Quarters are suspended timber and Yorkshire flagstones. The cells are natural stone levelled with limestone cement.

Recommendation 66.

Remove the concrete floors from rooms 4 (cell 2), 10 and 11 (cells 3 and 4) and return to limestone cement floor to match original as seen in room 2 (cell 1).



Recommendation 67.

The courtyard floor is limestone cement and should be retained as far as practical. Patch repairs where necessary are to match existing.

Recommendation 68.

The concrete patching to the drains should be carefully removed and lined with limestone cement to match the remainder of the courtyard floor.

LIGHTING

There is no lighting in the cells or warder's quarters apart from emergency lighting in a few rooms. The lack of light in the cells emphasises the basic conditions the prisoners were kept in at the time and also the fact that electric lighting was not used at the time of construction of the Round House. All spaces were lit naturally.

There is limited external lighting around the site.

Recommendation 69.

Permanent lighting should not be introduced into the internal spaces of the Round House. Temporary lighting can be brought in for special night-time events. Discrete exhibition lighting may be introduced to the cells, ensuring that the installation does not impact on original fabric. Where lighting has already been installed the wiring and light fixture may be upgraded.

Recommendation 70.

External lighting may be improved to highlight the Round House during the hours of darkness. External lighting should not be mounted onto the Round House itself but should be directed onto the structure.

STOCKS

The stocks are part of the story of the Round House being used as a lock up and were located outside the Round House. The stocks are replicas but are significant in terms of the story they tell.

Recommendation 71.

The stocks should be relocated outside the Round House in accordance with their original location if possible. Opportunities for photographs in the stocks and interpreting their use should remain.

SIGNAGE

Signage is limited to the building name and commemorative plaques. Signage on the building is not in keeping with the place and should be removed. (See Recommendation 25)

Recommendation 72.

Any signage that is required should be freestanding and not fixed to the building.

Recommendation 73.



Round House, Fremantle - Conservation Management Plan

2020

If signage is deemed to be appropriate it should be of simple modern design and should not impact on the significance of the place.

The above comments are separate to interpretation signage and other installations which are discussed in Section 10 below.

SECURITY

If additional security measures are required, the type and location of devices needs to be considered so as to reduce adverse impacts on the aesthetic values of the Round House.

Recommendation 74.

Cameras should not be fixed to the Round House fabric. External cameras, if required, should be fixed to existing infrastructure in the grounds.

PEST CONTROL

Recommendation 75.

An on-going monitoring of pest activity and control should be implemented.

7.5 RECOMMENDATIONS RELATING TO THE ARCHAEOLOGICAL SIGNIFICANCE OF THE PLACE

Previous archaeological studies have been undertaken on the Bakehouse (2001) and Well (1994) as well as the wider area of the Old Port Arthur Head in 2007. The full extent of archaeological potential within the Round House and in the immediate surrounds has not been fully examined. Despite ground disturbances that have occurred as a result of conservation works and demolition of surrounding structures, there is still a possibility that archaeological artefacts may exist.

Recommendation 76.

In the event that there is to be disturbance to the concrete floors within the Round House, an assessment of archaeological potential should be undertaken.

Recommendation 77.

Evidence of past structures/features within the internal floors should be assessed for archaeological potential. The existing fabric of the concrete floors and walls should be inspected for signatures of past structures. Anything identified should be documented and investigated within historical plans and records. No archaeological works are required.

Recommendation 78.

Evidence of past structures/features within the external concrete floors should be examined. Remnant footings, fastenings and features associated with the old signal



Page | 135

masts and with previous uses of the area during WWII are possible. The existing fabric of the concrete floors should be inspected for evidence of past structures. No archaeological excavations are required.

Recommendation 79.

The void below the suspended timber floors in Rooms 2 and 12 should be examined. The examination of these voids should occur whether conservation works are being undertaken in this space or not. If the floors are to be disturbed as a result of conservation works, the archaeological potential of these voids must be examined prior to any works being implemented.

Recommendation 80.

The void below the gun platform should be assessed. It is likely that footings and features associated with the old signal station lie below the gun platform. These are likely to be in the form of holes, concrete features and metal fastenings. Should future conservation works include the disturbance of the gun platform the area should be assessed.

7.6 RECOMMENDATIONS RELATING TO RENEWABLE ENERGY

At present there are no elements of renewal energy installed at the Round House. Electricity is installed and consideration may be given to installing solar panels in a move towards sustainability. State registered places are no exception to sustainability though care must be taken to ensure installation does not impact on the significance of these places.

Recommendation 81.

Installation of any methods of renewal energy should not impact on significant fabric or the aesthetics of the Round House.

Solar panels may be installed on the roof of the two storey section of the Round House so long as they cannot be seen from within the courtyard.

Significant views of the place should not be harmed by the installation of solar panels.

Recommendation 82.

The flat roof of the two storey section may be considered for installation of solar panels, ensuring that fixings are into fabric of lesser significance or be located so as to minimise damage to significant fabric. Installations must be capable of being reversed without causing damage.

8.0 GOVERNANCE RECOMMENDATIONS

8.1 INTRODUCTION

Governance includes recommendations concerning compliance with statutory requirements including the Heritage Act 2018, future use and development of the site and general site management arrangements.

The objectives of Governance Recommendations are:

- To guide management decisions for the Round House that support the development of a sustainable site that can generate income for ongoing conservation and maintenance of the place;
- To support decision making that is based on expert advice;
- To ensure on-going use of the place is consistent with its heritage values; and
- Anticipate threats and opportunities.

8.2 KEY STATEMENTS

The Round House should be managed in a manner that is consistent with its heritage values and on-going conservation of the place, taking into account the views of all stakeholders and which encourages community participation and visitor engagement with the place.

Recommendation 83.

The assessed significance of the place as defined within this Conservation Management Plan should be accepted as the basis for decision making about the conservation, interpretation and use of the place.

Recommendation 84.

Ownership of the place should remain with City of Fremantle and not transferred to private ownership.

8.3 RECOMMENDATIONS ARISING FROM EXTERNAL REQUIREMENTS

8.3.1 CURRENT HERITAGE LISTINGS

Inclusion on a heritage list is recognition of the cultural significance of the place to the community. Not all heritage listings result in statutory implications. The Round House is entered on local and state listings.

City of Fremantle Local Heritage Survey and Heritage List

The Local Heritage Survey is a non-statutory record of places that are of significance to the locality. They have no statutory implications but are used to inform the Heritage List under the Town Planning Scheme which does have statutory implications and heritage policy adopted by the City. The Round House is entered on the City's Local Heritage Survey and Heritage List as a Category 1A place.

Western Australian Planning Authority (WAPC)

As a property owned by the state of WA, the Fremantle Round House is subject to the authority of the WAPC who have state-wide responsibility for urban, rural and regional integrated strategic and statutory land use planning and land development under the *Planning and Development Act 2005*.



Recommendation 85.

Any works requiring a development application must be submitted to the Western Australian Planning Commission (WAPC) and the City of Fremantle and accompanied by a Heritage Impact Statement outlining how the proposed works comply or diverges from the recommendations.

National Trust of Western Australia

The Round House has been classified by the National Trust of Western Australia. Classification does not attract any statutory implications.

Aboriginal Register of Places and Objects

The Register of Places and Objects, maintained by the Department of Planning, Lands and Heritage, on behalf of the Minister for Aboriginal Affairs records places and objects that are of significance to Aboriginal people as defined in Sections 5 and 6 of the Aboriginal Heritage Act 1972 (AHA). There are currently no known Aboriginal sites as defined by Section 5 of the AHA within the registered curtilage of the Round House and Arthur Head Reserve.

However, due to the significance of the site as a place of Aboriginal incarceration and historic hardship, it is recommended that the place be considered and assessed for listing as per Section 5 (c) of the AHA as a place of historic interest that is of significance to the cultural heritage of the State.

Recommendation 86.

Consideration should be given to nominating the place as a site of historic significance for Aboriginal people.

Recommendation 87.

Any future use should consider the how the use will impact on the significance of the place of historic significance for Aboriginal people.

State Register of Heritage Places

Round House as part of the Arthur Head Reserve (Reserve 21563) is permanently entered on the State Register of Heritage Places.

The provisions of the Heritage Act 2018 require all proposed developments that may affect the cultural significance of that place to be referred to Department of Planning Lands and Heritage for comment. City of Fremantle is to refer all development applications to DPLH and ensure that any approvals they grant are in accordance with the advice received from DPLH.

Works that should be referred to DPLH include alterations, additions, new buildings, conservation works, demolition, excavation, changes to external colour schemes, signage, internal works and change of use.

Maintenance that replaces elements on a like for like basis and other works that do not need to be referred are defined in the Heritage Regulations 2019. If unsure about the nature of the works and whether referral is required, contact with DPLH is recommended.

Recommendation 88.

All works, unless exempt, must be referred to DPLH for advice. All applications must be accompanied by a heritage impact statement clearing assessing the potential impact/s of development on the documented significance of the place.



Recommendation 89.

If any major changes are proposed for the Round House and/or its immediate environs, pre-application advice from DPLH should be sought to ensure the best heritage outcomes.

Recommendation 90.

If City of Fremantle disposes of the Round House either by way of long lease or legal transfer of ownership, new owners will need to enter into a Heritage Agreement under the Heritage Act 2018.

Recommendation 91.

The Statement of Significance in the State Register Entry for this place should be revised to be consistent with the proposed Statement of Significance in this CMP.

Register of National Estate

The Round House was entered as a permanent entry onto the Register in 1978. The Register was closed in 2007 and entry onto the list is limited to an archival record and has no statutory implications.

National Heritage List

The National Heritage List is a list of natural, historic and indigenous places that are of outstanding national heritage value to the Australian nation. The list is overseen by the Australian Heritage Council, an independent body of Heritage Experts established in 2003. The Council's functions include the identification, assessment and promotion of heritage, as well as to advise the Minister on a range of matters relating to heritage. It also engages in research and monitoring activities. The protection of heritage places for which the Australian Government is responsible is under the *Environment Protection and Biodiversity Conservation Act 1999 Act*.

At present, there are 15 places in Western Australia included on the National Heritage List. The Fremantle Prison is the only place included in the Perth metropolitan area.

Recommendation 92.

The City of Fremantle should prepare documentation to nominate the Round House for inclusion on the National Heritage List and forward it to the Australian Heritage Council for assessment.

State Government Policy – Government Heritage Property Disposal Process (GHPDP)

For places owned by the State Government, the disposal by means of sale, long lease, demolition and sub-division triggers the requirement of an assessment under the GHPDP. This process will determine if a place demonstrates cultural significance if not already a heritage listed place or if already heritage listed will assist the DPLH in determining whether any additional controls or actions need to be taken to ensure the on-going conservation of the place. Additional provisions may include entering into a Heritage Agreement that will guide the future conservation and management of the place in perpetuity.

Other Statutory Requirements

Works/development to the Round House are governed by the provisions of the local Town Planning Scheme, Building Code of Australia, Health Act and Fire Safety Regulations.



Round House, Fremantle - Conservation Management Plan

2020

Compliance with these regulations may have an adverse impact on the significant fabric of the place and advice from heritage architects and DPLH is required.

Recommendation 93.

Where compliance with statutory requirements have the potential to have an adverse impact on the significance of the place the works should be assessed against the statement of significance and conservation recommendation established in the Conservation Management Plan. Advice from heritage architects is required.

8.4 RECOMMENDATIONS RELATING TO FUTURE USE AND DEVELOPMENT

8.4.1 FUTURE USE

The original function of the Round House as a jail is not a viable use for the place today. The original function of the place was relatively short-lived in terms of the building's existence however the physical form of the place still clearly reflects the original use. Continued use of a heritage place is an essential part of the conservation process. Where original uses are no longer viable alternative compatible uses should be found.

In the case of the Round House, there are limited opportunities for alternative uses that would adequately reflect the significance of the place. It has been open to the public as a historic place and exhibit of an early jail in the state since 1959 and there has been strong local community support throughout the years to see it continue in this function. The aboriginal connections to the place have been minimal in the past and greater integration of Aboriginal values and stories must be woven into the use and significance of the place.

Any alternative uses consider for the place should not harm the significant fabric of the Round House. Structural adaptations are generally not acceptable, especially where structural alterations impact on the significance of the place.

Changes of uses that require the installation of new services that may impact negatively on the significance of the place are generally regarded as inappropriate uses. Installation of services should not harm significant fabric and should have minimal impact on the presentation of significant spaces.

Recommendation 94.

In any future use of the place, all aspects of its history as a place of incarceration, place of residence and as a museum must be considered and reflected in its use and presentation. The introduction of new uses should not obscure the significance of the place.

Recommendation 95.

Where an alternative use is being considered the degree of change to accommodate this use must be taken into account.

Changes that damage significance should not be undertaken.

New uses should be compatible with the structural capabilities of the Round House.

Uses that result in harmful changes would not be considered as compatible uses and should not be adopted.

Recommendation 96.



Any minimal change to accommodate a new use should be reversible and the original intent of the place should not become obscured by such changes.

Installation of new services should be minimal and limited to fixings on non-original fabric and re-using existing penetrations and fixings within the structure.

Recommendation 97.

A photographic archival record of the place, including any existing interpretation, should be prepared prior to any changes occurring.

Recommendation 98.

Alternative use of the Round House should not exclude public access.

8.4.2 FUTURE DEVELOPMENT

There is limited opportunity for additional development at the Round House. The building was designed to stand in isolation and be seen in the round. Additional development may obscure this value. The study site of the Round House is tightly drawn around the structure without room for additional development in this boundary.

As the documentary evidence shows, further development did occur on the wider Arthur Head Reserve immediately to the north and south of the Round House and potentially discrete development may occur on this site but any development must not confuse the understanding of the place or harm significant views.

As stated above, the Round House is an element of the wider Arthur Head Reserve and this wider context must be taken into consideration when considering future development of the Round House. Refer to section 10.4.5 of the Arthur Head Reserve Conservation Plan 2011 for recommendation on future development of the wider reserve site.

Recommendation 99.

No new permanent development should occur that will impinge on significant views or distort the understanding of the place, see Section 7.3 Recommendations relating to the setting of the place, above and Section 10.4.5 of the Arthur Head Reserve Conservation Plan 2011.

Recommendation 100.

Where development is being considered, it should be limited to temporary structures that complement the primary function of the Round House as a tourist destination.

Recommendation 101.

New development should be contemporary in design and can be easily removed. The structure/s should be completely detached from the Round House.

Recommendation 102.

Any temporary development of the open space to the south of the Round House must take the archaeological potential of the wider reserve into consideration and follow the advice of professional archaeologists prior to any ground disturbance works being implemented. See section 7.5 above and section 10.6.1 Land Based Archaeology in the Arthur Head Reserve Conservation Plan 2011.



Round House, Fremantle - Conservation Management Plan

2020

8.5 RECOMMENDATIONS RELATING TO RECORDS AND ONGOING MANAGEMENT

The requirement to maintain records about places of cultural significance is guided by the Burra Charter. Building files for the place already exist at the City of Fremantle, Fremantle Library, State Records Office, State Library of Western Australia plus other locations. It is recommended that a record of all actions affecting the Round House be kept, supplementing these files and develop a complete archive of the place.

Recommendation 103.

A record of all actions affecting the place should be maintained and all stakeholders should be made aware of it. The record should be carefully managed, and public access should be supervised.



9.0 COMMUNITY AND STAKEHOLDER ENGAGEMENT

The intentions of community and stakeholder engagement are:

- Raise awareness of the heritage values of the Round House within the local community and within the state generally;
- To involve knowledgeable and engaged community members in the management of the place;
- To manage the place in an open and inclusive manner without compromising efficiencies and clear decision making; and
- To bring community voices into decisions that affect or interest them and combine this with the knowledge of subject experts.

City of Fremantle has an adopted community and stakeholder engagement processes.

Key stakeholder groups associated with the Round House are:

- Fremantle Volunteer Heritage Guides
- Aboriginal Groups – from within the City of Fremantle and those involved with the preparation of the City of Fremantle Walyalup Reconciliation Action Plan
- City of Fremantle
- Fremantle Society
- Fremantle History Society
- University of Western Australia

Recommendation 104.

The conservation, interpretation and management of the place should provide for the participation of people/groups of people for whom the place has significant associations and meanings or who have social, spiritual or other cultural ties to the place. This should be an ongoing process for the future management of the place.

Recommendation 105.

Owners/managers of the Round House should consult the community and stakeholders on major developments affecting the place.

Recommendation 106.

Conservation, interpretation and management of the place should make use of all knowledge, skills and disciplines that can contribute to the conservation and understanding of the place including subject experts and community members. The social significance of the Round House to the community is an important consideration.

Recommendation 107.

The conservation, interpretation and management of the place is an opportunity to build relationships between the stakeholder groups for the benefit of this place and others in the City of Fremantle.

Recommendation 108.

Aboriginal Engagement should apply the processes adopted by the City of Fremantle and refer to the Walyalup Reconciliation Action Plan (WRAP).



10.0 INTERPRETATION

Interpretation is a fundamental aspect of heritage management that helps communicate the values of the place to a range of audiences.

Interpretation is an aspect of conservation and seeks to protect heritage values. Interpretation can be an explanation of significance or associated stories displayed in a variety of methods including signage, digital displays, exhibits but can also include the built form.

Interpretation of the built form may include reinstatement of missing elements of the structure where this can be backed up by documentary evidence or conversely the loss of built elements ie. the loss of the other cells can also be regarded as interpretation of evolution of the building. Reinstatement of missing elements such as the cells as a form of interpretation may aid visitor's understanding of the place but it is not essential, it is just one of the many methods of interpretation that can be considered.

The interpretation recommendations set out in this Conservation Management Plan seek to:

- Reveal the heritage significance of the place;
- Interpret the story of the Round House and its place within the Arthur Head Reserve in an engaging manner;
- Communicate the stories in a way that enhances the understanding and significance of the place to both Aboriginal and non-Aboriginal communities;
- Connect the place to other places of Aboriginal incarceration within Western Australia including Fremantle Prison, Rottnest Island and Roebourne Gaol amongst others;
- Tell the story of the Round House in the context of European settlement in Western Australia generally and Fremantle in particular;
- Acknowledge the concept of racial segregation in early jails; and
- Contribute to the continuing economic development of Fremantle by attracting visitors to the place.

Recommendation 109.

Interpretation should communicate all aspects of the cultural heritage significance of the place. It should cover key aspects of the place's history, connections and associations. The Aboriginal stories should be told alongside the European stories to create a comprehensive awareness of the place.

Recommendation 110.

Reinstatement of missing elements of the built fabric as a method of interpretation must be based on documentary evidence.

Recommendation 111.

Interpretation should be visitor orientated and respond to a wide range of local, national and international audiences. It should be creative, engaging, provoking and challenging.

Recommendation 112.

Interpretation of the Round House should be integrated with a wider interpretation program of the entire Arthur Head Reserve. Whilst the Round House has a specific and unique history, it is also deeply intertwined with the development of Arthur Head Reserve and should not be treated in isolation.



Round House, Fremantle - Conservation Management Plan

2020

Recommendation 113.

On-going research into the place will foster deeper understanding and knowledge of the Round House which should be communicated to the owners, managers and users of the place.

Recommendation 114.

Interpretation can take many forms but the majority of interpretive media requires installation. The installation should not impact on significant fabric and should be reversible. Installation/fastenings should be limited to fabric of lesser significance and should be kept to a minimum.



Page | 174

11.0 IMPLEMENTATION AND RECOMMENDATIONS

The following actions are to be regarded as recommendations to guide the on-going management of the Round House based on best heritage practice.

- Action 1:** Review the Round House Conservation Management Plan every 5-10 years.
- Action 2:** Establish a monitoring program of the Round House to ensure all conservation and general maintenance works are undertaken and additional works are identified and scheduled for remediation within an appropriate timeframe.
- Action 3:** Undertake the conservation works identified in the Conservation Management Plan and ensure the works are consistent with the policies in this report. The advice of heritage architect is essential in overseeing the works.
- Action 4:** Review the Maintenance Schedule on a regular basis to ensure it remains relevant and allows for the introduction of programmed maintenance.
- Action 5:** Maintain communication with stakeholders and community to ensure that the activities and management of the Round House reflects the aspirations of all.

12.0 CONSERVATION AND MAINTENANCE WORK SCHEDULES

12.1 CONSERVATION WORK SCHEDULE

Recommended works include:

- Undertake more detailed inspection of the roofs to determine condition. Retain current roof forms and where required replace roof cladding on a like-for-like basis. Inspection of the roof structures may occur at the time other conservation works are being undertaken and can utilise scaffolding that may be on site.
- Remove all remnant traces of cement mortar from the walls. Repoint using lime based mortar that matches, as close as possible, to the original. All mortars are recommended for testing and 11 locations have been identified around the Round House.
- Replace areas of stonework that are demonstrating severe erosion. The worst areas were replaced in 2004 but subsequent areas have been further identified for possible replacement. All limestone is to come from locally sourced quarried for continuity.
- Conservation works were not undertaken to the stonework to the string course or above. Closer inspection of these areas is required. From a ground level inspection only missing mortar was noticed in places especially to the parapet.
- The rear of the parapet required closer inspection. In the works in 1975 it was discovered that the parapet was not tied into the rest of the wall and underwent significant rebuilding works to ensure structural stabilisation.
- Replace any severely eroded red bricks around the window. Replacements to match existing. Repoint with lime mortar.
- Remove all traces of render to external and internal faces of the stonework and leave in natural condition to allow for drying out through the more sacrificial lime mortars. Internal walls to cells and rooms may be limewashed.



Round House, Fremantle - Conservation Management Plan

2020

- Remove aggregate concrete floors to three of the cells and reinstate limestone cement floor as per Cell 2 and the rest of the Courtyard and demolished cells.
- Check structural condition of floor joists and flooring to upper rooms (Rooms 13-15).
- Sand back and re-oil all timber floors. Do not use polyurethane coatings.
- Remove paint from timber ceilings, sand back and repaint or re-oil.
- Replace front double doors with style to match original timber panelled doors based on documentary evidence eg early photographs.
- Undertake localised timber repairs to cells doors. Replace bolts and latches with heavier versions more in keeping with the jail function of the place.
- Consideration to be given to replacing upper level windows to ones that more closely match those shown in the early photographs.
- Repaint all joinery to an approved colour scheme.
- Carefully remove floor coverings from upper floors, preserve sample as interpretation if found to be older than 1920. Repair floor boards and joists where necessary.
- Repair copper downpipes. Any replacements to match existing.
- Ensure all drains are free of debris and the drainage system works effectively.
- Remove cement render from balustrade to the steps, repair substrate where necessary and re-render with lime render.
- Remove all vegetation from the walls.
- Replace deteriorated jarrah nosings to steps to Round House.
- Resurface the top step to the Round House steps to remove trip hazards. Due to doorway having a level threshold, the base of the timber door and timber threshold suffer from rain and pooling water. Slightly grade the step away from the building and allow to drain through discharge holes in balustrade.
- Remove handrail fixings from wall, support only from ground, installing additional supports if required. Repaint handrails.
- Remove the uneven concrete paths around the Round House and replaced with compacted stabilised limestone for more equitable access.
- Remove plantings that are compromising the stability of the cliff and boundary walls and plantings that may compromise the stability of the Round House on its northern and western elevations.

12.2 RECOMMENDED MAINTENANCE SCHEDULE

As needed:

- Ensure all weeds/vegetation are removed from within the Round House and externally where they have potential to cause damage to the stonework.
- Grass should be kept at least 1m away from the walls of the Round House.



Page | 198

Round House, Fremantle - Conservation Management Plan

2020

- Ensure any reticulation systems do no spray onto the significant fabric of the Round House
- Check drains to ensure free of debris
- All graffiti should be removed as soon as it is seen
- Remove debris from all steps to prevent trip/slip hazards
- Ensure all handrails to steps are firmly attached
- Ensure building is secure
- Check installation of interpretative element to ensure they are secure and not a risk to visitors

Annually:

- Inspect the place for termites or any other signs of infestation and treat accordingly
- Clean gutters and downpipes prior to winter
- Monitor further deterioration caused by damp – if mortar is failing at an excessive rate consult a heritage professional for additional advice
- Inspect roof cladding, flashings and rainwater goods, particularly before winter and after any severe weather event and repair where necessary
- Inspect building for cracking or any other signs of failure
- Re-oil the look out deck before summer and any other natural timber within the Round House

Painting:

- Due to the harsh marine environment paint will fail more rapidly – repaint all joinery every 5-7 years or sooner depending on condition.



Round House, Fremantle - Conservation Management Plan

2020

13.0 APPENDICES



Page | 200

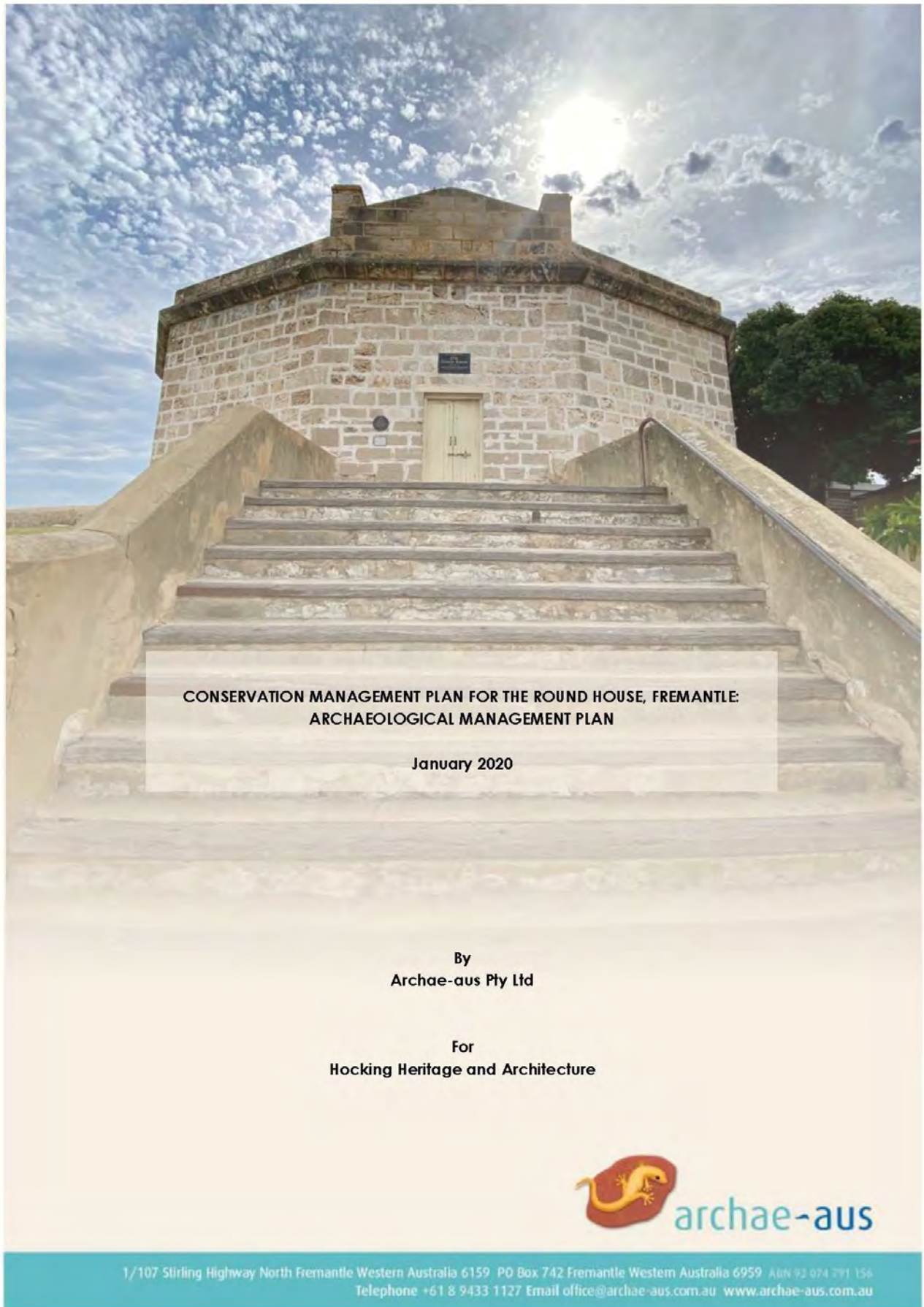
Round House, Fremantle - Conservation Management Plan

2020

13.1 ARCHAEOLOGICAL MANAGEMENT PLAN – ROUND HOUSE,
FREMANTLE



Page | 201



DOCUMENT CONTROL

16 January 2020

Version: 1.0

Prepared by Archae-aus Pty Ltd for Hocking Heritage.

Table 1. Archae-aus Document Control				
Version	Effective Date	Prepared By	Reviewed By	Approved Date
1.0	12/12/2019	Kate Edwards	Fiona Hook	16/01/2020

Table 2. Distribution of Copies			
Version	Date Issued	Media	Issued to
1.0	16/01/2020	PDF	Gemma Dewar

Archae-aus Project Code: H019RDa

CITATION: Archae-aus (2019) Conservation Management Plan for the Round House, Fremantle: Archaeological Management Plan. Prepared for Hocking Heritage and Architecture by Archae-aus Pty Ltd, North Fremantle, January 2020.

Archae-aus Pty Ltd

1/107 Stirling Highway
North Fremantle WA 6159
PO Box 742
Fremantle WA 6959

T: 08 9433 1127
E: office@archae-aus.com.au
<http://www.archae-aus.com.au>

Project Manager: Fiona Hook
Email: fiona@archae-aus.com.au

COPYRIGHT

This report and the information contained herein is subject to copyright and may not be copied in whole or part without the written consent of the copyright holders being Archae-aus Pty. Ltd. and Hocking Heritage and Architecture.

WARNING

Please be aware that this report may contain images of deceased persons and/or the use of their names which in some Aboriginal communities may cause sadness, distress or offence.

DISCLAIMER

The authors are not accountable for omissions and inconsistencies that may result from information which may come to light in the future but was not forthcoming at the time of this research.

The information contained in this archaeological management plan relates only to the works detailed in the Scope of Works, which is provided in Section One.

REPORT FORMAT

The format and contents of this report adhere to the Outline of sections as provided in the City of Fremantle's 'Request for professional services for the preparation of a Conservation Management Plan for the Round House, Fremantle'.

AUTHORS

This document was written by Kate Edwards (BA Archaeology (Hons) *University of Manchester*, MA Osteoarchaeology *University of Southampton*), with editorial assistance from Fiona Hook (BA Prehistoric and Historical Archaeology (Hons) *University of Sydney*).

TERMS AND ABBREVIATIONS

Term / Abbreviation	Meaning / Interpretation
AHA	Aboriginal Heritage Act 1972 (WA)
Archaeologist	See Project Archaeologist
Archaeological site	Is a place (or group of physical sites) in which evidence of human past activity is preserved (either prehistoric or historic or contemporary), and which has been, or may be, investigated using the discipline of archaeology and represents a part of the archaeological record.
Artefact	Any object (article, building, container, device, dwelling, ornament, pottery, tool, weapon, work of art etc.) made, affected, used, or modified in some way by humans.
Assessment	Professional opinion based on information that was forthcoming at the time of consideration
CHMP	Cultural Heritage Management Plan
Cultural material / archaeological material	Any object (article, building, container, device, dwelling, ornament, pottery, tool, weapon, work of art etc.) made, affected, used, or modified in some way by humans.
DPLH	Department of Planning, Lands and Heritage. Comprises the former WA State government bodies of the State Heritage Office and the Department of Aboriginal Affairs.
Ethnographic site	A place that is significant to an Aboriginal group because of its stories and connections. These places have intangible heritage values and are linked to traditional custom and law.
Excavation	The systematic and scientific recovery of cultural, material remains of people as a means of obtaining data about past human activity. Excavation is digging or related types of salvage work, scientifically controlled, so as to yield the maximum amount of data.
Feature	A non-moveable/non-portable element of an archaeological site. It is any separate archaeological unit that is not recorded as a structure, a layer, or an isolated artefact; a wall, hearth, are examples of features. A feature carries evidence of human activity and it is any constituent of an archaeological site which is not classed as a find, layer, or structure
Find	Individual movable artefacts that are in original depositional context with each other. Also known as 'loose find'
Ground Disturbing Works	These are defined as any activity that disturbs the ground below 100 mm. It can include activities such as floorboard removal, paving removal, topsoil clearing, grubbing, geotechnical testing, grading, cutting, trenching, potholing pits (excluding vacuum potholing), deep excavation and directional drilling (launch and retrieval pits)
HA	Heritage Act 2018 (HA)
Heritage site	See 'Archaeological site' and 'Ethnographic site'
Hocking Heritage	Hocking Heritage and Architecture (the Client)
Loose Find	See 'Find'.
Monitoring	Monitoring, more often known as a watching brief, is where an archaeologist watches ground disturbance activity in areas where prior evaluation has shown there to be low potential, or the impact of the development has been assessed and cultural material is expected to occur.
Project Archaeologist	The archaeological consultants appointed by the developer to manage the archaeological and heritage concerns of the project.
Project Area	The Round House, Fremantle
s18	Section 18 of the Aboriginal Heritage Act 1972 (AHA); consent to impact a site is sought from the Minister under s18 of the AHA.
Salvage	Process of the retrieval of as much information as possible about the archaeological sites before it is damaged or destroyed by development.
SHO	State Heritage Office, now amalgamated into the DPLH
Scope	The nature of the work undertaken as requested by the client/developer.
SWALSC	South West Aboriginal Land and Sea Council

EXECUTIVE SUMMARY

- ◆ As a place of exceptional significance, the Round House is of great importance to cultural heritage values of the state.
- ◆ A number of Management and Conservation Plans have previously be devised for the Arthur Head and Port area, however, the City of Fremantle have recognised the need for a more targeted conservation approach.
- ◆ This document provides an assessment of archaeological potential that will inform a formal Conservation Management Plan.
- ◆ A desktop review of past archaeological works in and around the Round House have highlighted several zones of unexplored archaeological potential:
 - ◆ underfloor archaeology inside the Round House; and
 - ◆ remnant features of past structures external to the Round House.
- ◆ The area of highest potential beneath the suspended timber floors in the entrance and warders' quarters of the Round House itself.

TABLE OF CONTENTS

DOCUMENT CONTROL	2
COPYRIGHT	3
WARNING	3
DISCLAIMER	3
REPORT FORMAT	3
AUTHORS	3
TERMS AND ABBREVIATIONS	4
EXECUTIVE SUMMARY	5
TABLE OF CONTENTS	6
LIST OF FIGURES	7
LIST OF PLATES	7
LIST OF TABLES	7
INTRODUCTION	8
REPORT FORMAT	8
EVIDENCE	9
2.1 DOCUMENTARY EVIDENCE	9
Construction	9
Conservation and Alterations	14
Archaeological excavations	14
2.2 PHYSICAL EVIDENCE	18
ANALYSIS OF THE DOCUMENTARY AND PHYSICAL EVIDENCE	26
AREAS BENEATH CONCRETE / PAVING	26
Internal	26
External	26
AREAS BENEATH TIMBER FLOORING/PLATFORMS	27
Internal	27
External	28
ASSESSMENT OF SIGNIFICANCE	29
Location	29
Assessment	29
Recommendation	29
ARCHAEOLOGICAL HERITAGE IMPACT MANAGEMENT	30
REFERENCES	31

LIST OF FIGURES

FIGURE 1. PROJECT AREA, AS OUTLINED IN FIGURE 2 OF THE REQUEST FOR QUOTE.....	8
FIGURE 2. 1914 PLAN OF THE ROUND HOUSE (PLAN EXTRACTED FROM BAVIN 1994, FIGURE 3.2).....	11
FIGURE 3. 2002 PLAN OF THE ROUND HOUSE (PLAN EXTRACTED FROM CONSIDINE & GRIFFITHS ARCHITECTS PTY LTD 2002, SOW ATTACHMENT 2).....	12

LIST OF PLATES

PLATE 1. 1832 PAINTING OF FREMANTLE FROM THE CANNING ROAD BY W. BICKLEY, CROPPED TO FOCUS ON THE ROUND HOUSE (NATIONAL LIBRARIES OF AUSTRALIA OBJECT: 135289472).....	9
PLATE 2. c.1870-90 PHOTOGRAPH LOOKING WEST ALONG HIGH STREET (STATE LIBRARY WA, SLWA_007124b).....	10
PLATE 3. 1890s PHOTOGRAPH LOOKING WEST ALONG HIGH STREET (STATE LIBRARY WA, SLWA_090714PD).....	10
PLATE 4. 2019 AERIAL IMAGERY (IMAGE COURTESY OF GOOGLE EARTH).....	13
PLATE 5. c.1880-90 PHOTOGRAPH LOOKING SOUTH-EAST OVER ROUND HOUSE (STATE LIBRARY WA, SLWA_011246D).....	13
PLATE 6. 2019 PHOTOGRAPH LOOKING WEST FROM HIGH STREET, SHOWING MODERN STAIRCASE ARRANGEMENT (TAKEN 2019).....	14
PLATE 7. VIEW INTO THE BAKERY SHOWING CURRENT INTERPRETATIVE GLASS INSTALLATIONS (2019).....	16
PLATE 8. VIEW WEST FROM HIGH STREET.....	18
PLATE 9. VIEW OF NORTHERN STAIRCASE FROM STREET LEVEL, GAUGE RAILWAY TO LEFT (NOTE MODERN CONCRETE STEPS).....	19
PLATE 10. VIEW OF TRUNCATED NORTHERN STAIRCASE (NOTE JARRAH LINED STEPS).....	20
PLATE 11. VIEW WEST OF FINAL FLIGHT OF STAIRS AND ROUND HOUSE (NOTE JARRAH LINED STEPS).....	21
PLATE 12. VIEW OF SOUTHERN SIDE OF ROUND HOUSE.....	22
PLATE 13. VIEW WEST ALONG SOUTHERN SIDE OF ROUND HOUSE TOWARDS GUN AND FLAG PLATFORM.....	23
PLATE 14. VIEW OF GUN PLATFORM.....	24
PLATE 15. VIEW SOUTH OF LIMESTONE CLIFF FROM GUN PLATFORM.....	25
PLATE 16. PHOTOGRAPH OF NATURAL LIMESTONE SURFACE AND CONCRETE PATHWAY TO THE SOUTH OF ROUND HOUSE.....	27
PLATE 17. TIMBER FLOORING AT ENTRANCE OF THE ROUND HOUSE (NOTE GAPS BETWEEN BOARDS).....	28

LIST OF TABLES

TABLE 1. ARCHAEO-AUS DOCUMENT CONTROL.....	2
TABLE 2. DISTRIBUTION OF COPIES.....	2
TABLE 3. ASSESSMENT OF SIGNIFICANCE.....	29

INTRODUCTION

The Round House was the first public building to be constructed in Fremantle. It was in use as a prison by 1831 until the completion of Fremantle Prison in 1857, after which it was used as lock-up. By the 1930s the building itself had fallen into disrepair but it was not stabilised for public visitation until the 1960s at which point it became a tourist attraction and museum.

The Round House structure itself was built onto the natural limestone headland that was quarried away on the sea front creating a sheer cliff face to the west of the Round House. The footprint of the Round House itself is a dodecahedron with one entrance facing east. Stairs from the east provide the main access to the Round House from High Street. Underneath the final flight of stairs leading up into the Round House is a small Bakery, accessible from the northern side. To the west of the Round House is a gun and flag platform, facing the sea, which has no direct access into the Round House. Inside the Round House, small rooms line the inside of the walls, facing into a central courtyard which contains a well. The rooms are double storey on the eastern side (the entrance side) but single storey to the west.

The Round House precinct has been assessed as of exceptional cultural heritage significance. As such, it is a highly valuable resource for the community and for the City of Fremantle. Archae-aus was commissioned by Hocking Heritage to provide archaeological advice and assessment of the Round House which will be incorporated into the broader Conservation Management Plan that they are devising on behalf of the City of Fremantle. The Project Area was defined in the City of Fremantle's Request for Quote, dated 16th September 2019. It includes the terraced gun platform to the west of the Round House and the upper flights of stairs (Figure 1).

Figure 1. Project Area, as outlined in Figure 2 of the Request for Quote



REPORT FORMAT

This document will focus on archaeological management advice relating to potential archaeological deposits in and around the Round House. The nature of past archaeological investigations and conservation plans will be discussed in the following sections and the primary zones of archaeological potential will be addressed through management strategies.

The format and contents of this report conform to the Outline of sections as provided in the City of Fremantle's 'Request for professional services for the preparation of a Conservation Management Plan for the Round House, Fremantle'. Recommendations at the end of this document provide specific actions relating to the underfloor archaeology as well as general best practice guidelines.

EVIDENCE

2.1 DOCUMENTARY EVIDENCE

Construction

The Round House

The construction of the Round House was completed by 1831, using local labourers and local materials, including quarried limestone from the headland around the Round House itself. Stairs from High Street in the east lead up the steep headland and provide the main access. The final flight of jarrah lined concrete steps cover a small bakehouse beneath (see Plate 1 to Plate 5 below for historical imagery).

The Round House was a functioning prison for 26 years until the permanent Fremantle Prison was commissioned in 1857, after which it became a lock-up for the Courthouse and for Aboriginal prisoners who were held for transfer to Rottnest Island. By 1900 it was no longer used as a lock-up, instead the Round House became police accommodation but fell into disrepair by WWII when the use of the area was focussed primarily on the signalling and observation posts to the west of the building.

Plate 1. 1832 Painting of Fremantle from the Canning Road by W. Bickley, cropped to focus on the Round House (National Libraries of Australia object: 135289472)



Plate 2. c.1870-90 photograph looking west along High Street (State Library WA, SLWA_007124d)



Plate 3. 1890s photograph looking west along High Street (State Library WA, SLWA_090714PD)



State Library of Western Australia

The Round House itself has a windowless dodecahedron outer wall, built to a height to accommodate two storeys, lined on the inside with small rooms that face into the open courtyard. A well was added to this central courtyard by 1834 (Campbell, 1973; Kent, 1988; Nayton, 2007). Engineers at the time reportedly estimated that a depth of 45 feet was required to reach the water table below (Nayton, 2007). Excavations undertaken by Bavin in 1994 indicate that this estimate was accurate with the fresh water lens at 12–13.5 m below floor level (Bavin, 1994).

The current internal layout of the Round House is thought to differ from the historical layout. A plan drawn in 1914 (see Figure 2) indicates that, originally, there were eight single storey cells and a latrine ringing the open central courtyard in the western part of the building, with the remaining three eastern segments of the dodecahedron thought to be two storeys high to accommodate the entrance and the warder's quarters. Owing to the ruinous state of the internal walls, the internal configuration was reconstructed in the 1960s and 70s as part of conservation initiatives, resulting in slight changes to the delineation of the cells and latrine in the west of the building (marked with a star in Figure 2). The reconstructed western cells and latrine are configured differently and the walls separating them are not built to full height (Figure 3).

Figure 2. 1914 plan of the Round House (plan extracted from Bavin 1994, Figure 3.2)

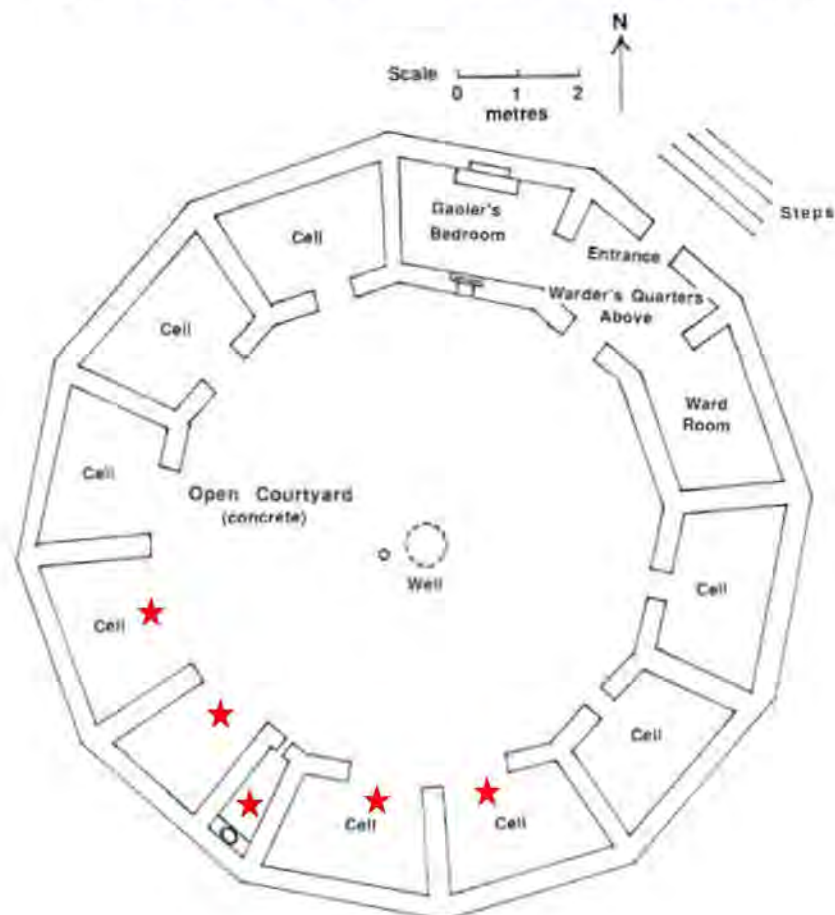
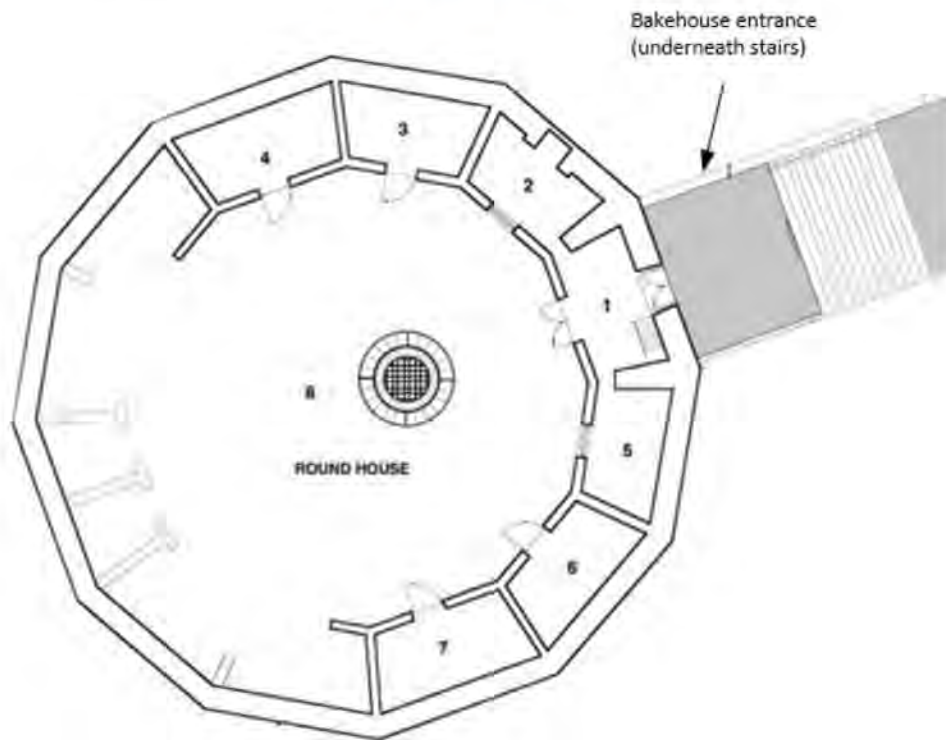


Figure 3. 2002 plan of the Round House (plan extracted from Considine & Griffiths Architects Pty Ltd 2002, SOW Attachment 2)



The cell roofing (as labelled in Figure 2) was originally weatherboard, quickly replaced with shingles owing to leaking, and the floors were natural stone levelled with limestone concrete (Bavin, 1994; Nayton, 2007). The warder's quarters by the entrance originally had limestone concrete roofing with suspended timber floors. Later alternations include a replacement corrugated iron roof, then a new asphalt roof in 1937 (Nayton, 2007). The roofs were originally flat, but by 1902 they were replaced with a sloped roofline.

Signal Mast, Time Gun and Platform

To the west of the Round House is a walled area that starts from the western wall (rear) of the Round House and ends at the cliff edge, narrowing as it nears the seafront to form a roughly triangular viewing platform (see Plate 4). This area contains a signal mast and a raised timber platform, upon which sits the current six-inch time gun. The first signal mast was constructed in the 1890s (see Plate 5, prior to erection of a signal mast), only to be replaced between by 1905 with a second signal post and a signal station which were in use until c. 1929. With the outbreak of WWII, an Observation Post was built adjacent to the signal station. These features have since been replaced with the extant floating timber platform, time gun and modern signal mast. Evidence indicates that they are constructed on the site of the second Signal Mast and Signal Station (c.1905-1929): the footings of the Signal Station are evident in the ground surface under the existing timber viewing platform, under the current time gun (Philip Griffiths Architects, 2011).

Plate 4. 2019 aerial imagery (image courtesy of Google Earth)



Plate 5. c.1880-90 photograph looking south-east over Round House (State Library WA, SLWA_011246D)



© 2003 State Library of Western Australia Batty Library All Rights Reserved

Conservation and Alterations

Nayton (2007) reports that the Round House was saved from demolition several times in the early part of the 20th century and subject to targeted conservation and modification. Some changes have been made to the Round House building itself as part of repair works since its original construction, including roofline changes and replacement of roofing material. There is evidence that a high timber dividing wall once cut through the courtyard (Kent, 1988) however, the nature of its construction and how it intersected with the walls and the well are not known. Wooden divisions built on 'plates' are documented at the Fremantle Prison so it may be that no footings were dug for the Round House structure (Bavin, 1990). Plate 5 above shows the structure *in situ* in the 1880-1890s; however, it is not depicted on the 1914 plan so it is possible that it was demolished sometime between 1880 and 1914.

Substantial conservation and consolidation efforts were made in 1960s and 1970s, including the rebuilding of the damaged internal layout (see preceding discussion, Figure 2 and Figure 3), replacement of signal mast and time gun on the platform to the west, as well as underpinning, grouting and re-pointing the main structure itself. Section 2.2 Physical evidence below includes recent photographic documentation of the Round House environment, taken in 2019.

Major structural changes to the Round House precinct also include the modification of the High Street stairs to allow for the construction of the gauge railway. Originally, access between High Street and Arthur Head was via a forked staircase that symmetrically flanked either side of the Whalers Tunnel and led onto street level in alignment with High Street. In 1966, the southern of these staircases was truncated and blocked, leaving only a single staircase on the northern side of the tunnel that was a realigned end facing north instead of east (see Plate 6). It is likely that the truncated southern section and the final flight of stairs leading to the Round House mostly still contain the fabric of the original 19th century stairs (Kent, 1988).

Plate 6. 2019 photograph looking west from High Street, showing modern staircase arrangement (taken 2019)



Archaeological excavations

Aboriginal occupation of the area prior to European arrival is well documented in historical and ethnographic accounts and the Round House itself has significant Aboriginal cultural heritage values associated with Aboriginal imprisonment. However, very little Aboriginal archaeological material has been uncovered during survey and excavations in the Arthur Head area (O'Connor and Thomson, 1984; Bavin, 1994; Nayton, 2007). This conspicuous paucity of Aboriginal cultural material has been attributed

to the extreme topographical sculpting and ground disturbance that has taken place in associated with the port and industrial use of the area since 1829 (O'Connor and Thomson, 1984; Bavin and Gibbs, 1988). Therefore, much of the archaeological potential for the Round House and its immediate surrounds is for post-contact occupation and mostly likely to be material culture associated with European communities.

In 1991, Louise Bavin excavated the Round House well to its full depth: by hand to 11 m and mechanically for the final 2 m (Bavin, 1994). Bavin targeted the well having assessed that it was the only floor area within the Round House with substantial deposits; however, Bavin notes that she was unable to test this hypothesis due to the presence of concrete paving elsewhere within the Round House. Bavin hypothesised that directly below this concrete was natural limestone, with only small pockets of deposit (1994). The excavations indicate that the deposits within the top 2 m of the well shaft were mostly post-1973 and the rest of the well shaft, above where it bells out at the water table, contained mostly construction debris that would suggest association with 20th century demolition fill. Common construction materials constituted the majority of the assemblage, followed by domestic and consumer items, with a complete lack of aboriginal artefacts. The types of materials and artefacts recovered were similar to elsewhere in the Arthur Head area.

The lower deposits, which capture what would have been the 'bottom' of the well, were more unique to the Round House: roofing shingles, gutters, earthenware drainage pipes, domestic refuse, corkscrew handle and tin cans. Whilst the lower deposits were thought to more likely reflect early stages of occupation and use in the Round House, there were still 20th century items such as the gutters and downpipes which Bavin suggested were from demolition activities that took place either in the Round House or from the surrounds between 1920 – 1937 (Bavin, 1994). Some of the lower artefacts were, however, possibly associated with the early Round House prison period. This included ballast bricks (which were imported during early years of colony), timber roof shingles (popular in 1829), buttons, a hand forged iron spike. Most of these artefacts would have been deposited after abandonment of the well (c. 1850-1890). After comparative analysis, Bavin concluded that the assemblage was similar to other sites in Australia, reflecting 'similar early 19th century occupation periods, military official circumstance and their mutual combination of Aboriginal and European occupants' (Bavin 1994: 332). Similarities to non-prison sites, especially through the presence of ceramic and consumer items such as bottles, suggests that the deposits were not laid during the time of prison use, but later by the general community (local residents, not prison occupants) and during demolition phases (Bavin, 1994).

In 2001, conservation works in the Round House Bakery included archaeological excavations by Gaye Naylor and monitoring for the removal of rubble and debris (Naylor, 2001). The investigations recovered a miscellany of late 19th and 20th century artefacts including domestic items (such as ceramic, glass, clay pipe fragments and plastic objects) and building materials (such as nails, hinges and electrical insulators). The brick floor of the bakehouse was re-exposed, but none of the recovered materials were thought to relate to the use of the bakehouse itself. Therefore, Naylor concluded that much of the material was dumped there from nearby renovations and demolitions.

Plate 7. View into the Bakery showing current interpretative glass installations (2019)



In the wider area, Gaye Nayton prepared a Conservation Plan for the wider Old Port Arthur Head area that included excavations in Bathers Bay, targeting areas of old port infrastructure to the south of the Round House (Nayton, 2007). Using historical plan overlays and metal detector surveys, Nayton positioned trenches across what would have been external walls of port related sheds, warehouses and buildings. Where stratigraphy could be identified, the upper deposits were similar to that which Bavin recovered from the well, i.e. construction materials, bottles etc. Whilst Nayton confirmed the removal of many features due to later activities and repurposing of the area, the excavations did identify floors, associated artefacts and features indicative of the targeted buildings and infrastructure. Nayton observed that, in some cases, modern layers had actually acted to protect the port industrial layers from later disturbance.

Previous Archaeological Recommendations

The Round House is considered to be of exceptional significance and has therefore been the subject of numerous conservation and management assessments. Whilst much of the focus has been on the fabric of the standing structures, many of the recommendations are relevant to the ongoing management of the archaeological values of the Round House. These include:

- ◆ Arthur Head Reserve Conservation Plan, 2011, Philip Griffiths Architects:
 - ◆ 'excavation work may be executed in precincts, materials retained and revealed and interpreted as appropriate'.
 - ◆ 'Archaeological monitoring, excavation or research should only be undertaken by a suitably qualified historical archaeologist. An archaeologist should have a level of qualifications and experience that would allow listing on the Heritage Council of

Western Australia's Directory of Consultants and membership of the Australian Association of Consulting Archaeologists.'

- ◆ 'No future development to the Round House or the grassed area to its South should be permitted, other than archaeological interpretation and landscape works.' And 'Should future development be undertaken, due care must be taken to retain archaeological remnants within the reserve'.
- ◆ Arthur Head Reserve, Fremantle. Conservation Plan. 1999. Naomi Lawrance Architecture and Heritage:
 - ◆ 'Conserve and make good all cell and courtyard floors; remove areas of intrusive cement and restore /reconstruct original limestone cap rock and rubble slab.'
 - ◆ 'Detailed research designs should be prepared for all proposed archaeological projects at the site. These must be assessed on the basis of relevance of the questions asked, the appropriateness of the attempts to answer them and the relevance of new questions'.
 - ◆ 'Research should be carried out by qualified archaeologists, such that it meets both academic and conservation requirements'.
 - ◆ 'Excavations to locate prehistoric and post contact Aboriginal material to better understand this transition period during the settlement period should be given priority if further investigations are proposed'.
- ◆ Old Port Arthur Head, Fremantle. Archaeological Conservation Plan. May 2007. Gaye Nayton:
 - ◆ 'Actively interpret the area as an archaeological landscape of exceptional importance by commissioning a research and interpretation plan to guide future excavation and interpretation.'
 - ◆ 'The conservation of the place should be carried out in accordance with the principles of the Burra Charter.'
 - ◆ 'The skills of an accredited historical archaeologist should be utilized when developing works proposals that will impact on the archaeological heritage of the area.'
 - ◆ 'Investigation of a place which requires disturbance of the fabric, apart from that necessary to make decisions, may be appropriate provided that it is consistent with the policy for the place. Such investigation should be based on important research questions which have the potential to substantially add to knowledge, which cannot be answered in other ways and which minimizes disturbance of significant fabric.'

More specific recommendations regarding the archaeological potential of the well and the Bakery have been addressed through the excavations (Bavin, 1994; Nayton, 2007). However, the review of the documentary evidence presented in the preceding pages highlights further areas of archaeological potential that require management. These will be discussed in the ANALYSIS OF THE DOCUMENTARY AND PHYSICAL EVIDENCE section that follows.

2.2 PHYSICAL EVIDENCE

The following photographs were taken during site visits in late 2019.

Plate 8. View west from High Street



Plate 9. View of northern staircase from street level, gauge railway to left (note modern concrete steps)



Plate 10. View of truncated northern staircase (note jarrah lined steps)



Plate 11. View west of final flight of stairs and Round House (note jarrah lined steps)



Plate 12. View of southern side of Round House



Plate 13. View west along southern side of Round House towards Gun and flag platform.



Plate 14. View of gun platform



Plate 15. View south of limestone cliff from gun platform



ANALYSIS OF THE DOCUMENTARY AND PHYSICAL EVIDENCE

Past archaeological works have explored the archaeological potential of the Bakery and of the Well (Bavin, 1994; Nayton, 2001). A review of the documentary and physical evidence highlights that several areas of archaeological potential still remain at the Round House Project Area (as defined in Figure 1). Whilst some may be protected at present by existing structures and features, future conservation works may alter the current fabric of the building and its surrounds, thus posing a risk to the otherwise protected archaeological deposits. Nayton noted this phenomenon during excavation works elsewhere in the Old Port area (Nayton, 2007). Specific areas of archaeological potential will now be discussed.

AREAS BENEATH CONCRETE / PAVING

Internal

The majority of the Round House internal floors are compacted limestone rubble and concrete built directly on top of the natural limestone headland. In 1994, Bavin undertook archaeological excavation of the well shaft, having assessed that the well presented the most likely area for stratified deposits. However, she hypothesised that the concrete floor elsewhere in the Round House may be protecting small pockets of deposit nestled within the natural cavities of the limestone below (see Plate 16 for example of concrete laid onto irregular limestone). At the time, Bavin was advised against investigating this possibility due to the expense of relaying the concrete floor post-excavation. Therefore, this potential is unproven and remains to be assessed.

In addition to these underfloor deposits, the layer of concrete itself may contain evidence of past internal structures and features, such as post holes or metal fastenings. For example, Plate 5 shows the presence of a timber dividing wall in the late 19th century (also mentioned by Kent 1988); whilst unlikely, there is the possibility that the existing fabric of the building (such as the floors and original parts of the internal walling) may help to understand what this timber structure was and how it intersected with the courtyard. Whilst not a stratified deposit recommended for excavation itself, the potential for visible signatures of past structures on the surface of the concrete should be borne in mind if any major disturbance of the flooring is planned.

External

According to the management plan written by Philip Griffiths Architects in 2011, there are features outside of the Round House that could be at risk. Specific mention is made that cast-iron eye bolts relating to the 1905 Signal Mast are located in the terraced area to the west of the Round House building. The location of any external fittings / features should be confirmed.

Like the internal concrete floors, the external concrete is probably laid directly onto the natural limestone. As such, pockets of deposit may remain that hold archaeological materials (Plate 16).

Plate 16. Photograph of natural limestone surface and concrete pathway to the south of Round House



AREAS BENEATH TIMBER FLOORING/PLATFORMS

Internal

The entrance and warder's quarters of the Round House have suspended timber flooring over where the natural ground level falls away steeply away to the east. Gaps between historically-laid timber floorboards were often large enough to allow small objects to fall through and lie undisturbed below. This kind of underfloor archaeology is common in historical buildings such as the Round House. Therefore, the suspended timber section presents with an opportunity for protected archaeological deposits below. Documentary evidence of the Round House also suggests that the space below these floors may have been purposefully used for storage (Campbell, 1973). In a structural analysis of the building in 1988, Kent noted that these timbers appeared to have been relaid since original construction, as indicated by the fact that nail holes did not line up with those of the joists (Kent, 1988). Whilst this could forewarn of past disturbance to the potential deposits below, it also means that there is even greater chance that archaeological investigation could find historical objects that have fallen or been placed below.

Plate 17. Timber flooring at entrance of the Round House (note gaps between boards)



External

As per Philip Griffiths Architects (2011), the footings of old features are still present in the western terrace. The footings of the old Signal Station are apparently still evident in the ground surface under the existing timber viewing platform below the gun emplacement. The gun platform is raised above the limestone concrete floor. A site visit in 2019 was not able to confirm the presence of these footings due to debris that has gathered underneath the platform itself, which is open ended to the east.

ASSESSMENT OF SIGNIFICANCE

Table 3. Assessment of Significance

Location	Assessment	Recommendation
Deposit below concrete floors	The pockets of deposit (if they exist) are likely to be very localised and possibly filled with concreted materials rather than excavatable deposit.	Should disturbance to the original concrete floors (internal or external) be planned, an assessment of archaeological potential should be incorporated in the project plan.
Evidence of past structures / features within <u>internal</u> concrete floors	The likelihood of identifying diagnostic features in the existing internal fabric of the building is low, given the degree of reconstruction / stabilisation that has taken place during past conservation efforts.	The existing fabric of the concrete floors and of the walls should be inspected for signatures of past structures. Anything identified should be documented and investigated within historical plans and records. No archaeological works are required.
Evidence of past structures / features within <u>external</u> concrete floors	Remnant footing, fastenings and features associated with the old signal masts and with previous uses of the area during WWII are possible. Given that the area is entirely concreted, this will be in the form of surface evidence only.	The existing fabric of the concrete floors should be inspected for evidence of past structures. No archaeological works are required.
Below internal suspended timber flooring	There is a high possibility that there are archaeological deposits below the suspended timber floors at the entrance and warders' quarters of the Round House.	After detailed documentation of flooring, the archaeological deposits should be investigated. This should occur regardless of any future conservation works, but especially if any works risk disturbing these timber floors.
Below gun platform	It is likely that footings and features associated with the old signal station lie below the gun platform. These will likely be in the form of holes, concrete features and metal fastenings. Stratified, excavatable deposits are unlikely to have been preserved given that the platform is open ended to the east.	Should future conservation works include disturbance to the gun platform, the location and nature of any remnant footings associated with historical structures should be recorded and documented.

ARCHAEOLOGICAL HERITAGE IMPACT MANAGEMENT

The following actions are recommended to manage potential impact to archaeological features of the Round House:

- 1) During any proposed works programme at the Round House that includes ground disturbance, archaeological advice is sought from a suitably qualified and experienced historical archaeologist.
- 2) Should ground disturbance be planned, an archaeological heritage management strategy is prepared in consultation with the City of Fremantle and the Department of Planning Lands and Heritage to help guide the proposed ground disturbance. Strategies should be tailored to the specific work activities.
- 3) Any ground disturbing work beneath the current concrete/limestone paving and timber flooring/platforms will require archaeological assessment prior to the work commencing to determine the scale and significance of any archaeological deposits. This includes removal or conservation of the internal suspended timber flooring as this would expose potential archaeological deposit below to disturbance.

REFERENCES

Bavin, L. (1990) *Fremantle Prison Conservation and Future use. Archaeological Excavations in the Prison Compound.*

Bavin, L. and Gibbs, M. (1988) *Report on the historical archaeological potential of Arthur Head and directions for future management and research.*

Bavin, L. J. (1994) *The punishment administered: archaeology and penal institutions in the Swan River Colony, Western Australia.* University of Western Australia.

Campbell, R. M. (1973) *The Round House. Report No. 2.*

Kent, J. (1988) *Round House.*

Nayton, G. (2001) *Fremantle Roundhouse – The Bakehouse. Archaeological monitoring of site works. For Considine & Griffiths.*

Nayton, G. (2007) *Old Port Arthur Head, Fremantle: Archaeological Conservation Plan prepared for City of Fremantle.*

O'Connor, S. and Thomson, R. (1984) *Report on an investigation into the Aboriginal Heritage of the Arthur Head Area, Fremantle.* Fremantle: Centre for Prehistory University of Western Australia.

Philip Griffiths Architects (2011) *Arthur Head Reserve Conservation Plan. June 2011.*

Round House, Fremantle - Conservation Management Plan

2020

13.2 LANDSCAPE ASSESSMENT – ROUND HOUSE, FREMANTLE



Page | 202



THE ROUNDHOUSE, FREMANTLE

EXISTING LANDSCAPE ASSESSMENT
JANUARY 2020

JOB NO. 1909801 C1.101 REVA
N/S

DATE: 14 JULY 2020
BY: J. BROWN



LANDSCAPE ARCHITECTS
414 BROADWAY RD. SUITE 200, FREMANTLE WA 6150
T: (08) 9437 8000 E: info@landscapearchitects.com.au



EXISTING LANDSCAPE ASSESSMENT

THE CURRENT LANDSCAPE CONSISTS OF TURF GRASS, A MIXTURE OF EXOTIC AND AUSTRALIAN NATIVE SHRUBS SPECIES AND ONE TREE BEING METROSIDEROS EXCELSA (NEW ZEALAND CHRISTMAS TREE) DIRECTLY ADJACENT AND NORTH OF THE ROUND HOUSE.

INCLUDED IN THE SPECIES ON SITE ARE:

- AGAVE;
- CALLISTEMON;
- CITHAREXYLUM;
- FICUS;
- FRANGIPANI;
- HIBISCUS;
- MELALEUCA;
- METROSIDEROS;
- MYOPORIUM;
- OLEANDER;
- OLEA;
- PLUMBAGO; AND
- RHODODENDRON.

PLANTING TO THE EAST OF THE ROUND HOUSE ADJACENT THE EASTERN ACCESS STAIRS (1) IS SENESCENT AND LIKELY TO BE COMPROMISING THE STABILITY OF THE LIMESTONE CLIFF AND WALL. REMOVAL IS RECOMMENDED.

PLANTING TO THE BATTER TO THE NORTH OF THE ROUND HOUSE (2) IS A DIVERSE MIX OF AUSTRALIAN NATIVE AND EXOTIC SPECIES. THE PLANTING IS NOT SIGNIFICANT AND REMOVAL OF ANY PLANTING THAT COMPROMISES ARCHAEOLOGICAL REMNANTS OR THE STABILITY OF THE CLIFF IS RECOMMENDED.

PLANTINGS TO THE CLIFF AND WESTERN BASE OF THE CLIFF (3) ARE NOT SIGNIFICANT BUT SUITABLE FOR RETENTION SUBJECT TO CLIFF STABILITY.

THE MATURE METROSIDEROS EXCELSA (4) IS NOT SIGNIFICANT BUT SUITABLE FOR RETENTION SUBJECT TO THE TREE NOT COMPROMISING ARCHAEOLOGICAL REMNANTS OR THE INTEGRITY OF THE ROUND HOUSE.

ALL OTHER PLANTING IS NOT CONSIDERED SIGNIFICANT AND IS SUITABLE FOR EITHER RETENTION OR REMOVAL FOR PRACTICAL REASONS OR WHERE ARCHAEOLOGICAL REMNANTS, OR THE STABILITY OF THE ROUND HOUSE AND CLIFF FACE IS COMPROMISED.

REMOVAL OF ALL PLANTING AND UNSYMPATHETIC DOMESTIC LANDSCAPES DIRECTLY ADJACENT THE ROUND HOUSE (5), AND INCLUDING THE METROSIDEROS (4), COULD BE CONSIDERED FOR REMOVAL IN KEEPING WITH THE HERITAGE VALUES OF THE PRECINCT, LEAVING THE PRECINCT MORE OPEN AND BETTER EXPRESSING THE MAJOR BUILT ELEMENTS.

GENERALLY, ALL ENDEMIC VEGETATION SHOULD BE RETAINED WHERE PRACTICABLE.

THE ROUNDHOUSE, FREMANTLE

EXISTING LANDSCAPE ASSESSMENT
JANUARY 2020

JOB NO. 1909801 C3.101 REVA
N/S

DATE: 14 JULY 2020
BY: J. BROWN



LANDSCAPE ARCHITECTS
414 BROADWAY RD. SUITE 200, FREMANTLE WA 6150
T: (08) 9437 8000 E: info@landscapearchitects.com.au

Round House, Fremantle - Conservation Management Plan

2020

13.3 STRUCTURAL ASSESSMENT – ROUND HOUSE, FREMANTLE



Page | 203



Roundhouse Fremantle

Structural Heritage Condition Report



ATELIER / JV

Date: 4th September 2020
Revision: E
Report Number: P19163 ST-RPT-01

Table of Contents:

1. Introduction	1
2. Scope of Report and Intended Use	1
3. Available Information	1
4. Building Structure and History of Structural Remediation Conservation Works	2
5. Structural Condition and Proposed Conservation Works	12
5.1 Roundhouse walls	12
5.2 Roundhouse 1st Floor	34
5.3 Roundhouse Roof	35
5.4 Steps to Roundhouse	38
5.5 Bake House Beneath Steps to Roundhouse	39
5.6 Roundhouse Mast	44
5.7 Parapet walls to Arthur Head Cliffs	48
5.8 Steps to the High Street	49
6. Conclusions and Recommendations	52
Appendix A – Structural As-Built Survey of 2004 Limestone works	54
Appendix B – Calculations	60
Appendix C – A/JV Proposed Roundhouse Mortar Sample Test Locations	70
Appendix D – Photographic Record (Thumbnails)	87

List of Figures:

Figure 1: Extent of Study area	1
Figure 2: 1902 View over Round House to Fremantle LH4829	2
Figure 3: 1873c sketch of high street LH1044	2
Figure 4: 1902	3
Figure 5: 1905c Signal Station and Light House LH712A	3
Figure 6: 1929 prior to repair	3
Figure 7: Secret tunnel section (Gordon 2003)	4
Figure 8: Secret tunnel photo from Arup report Dec 2000	4
Figure 9: 1945 Military use	4
Figure 10: 1949 post war	4
Figure 11: 1959 conservation works	5
Figure 12: 1966 demolition of steps 2 March 1966 LH4199	5
Figure 13: 1975 works in progress	5
Figure 14: 1976 conservation work complete	5
Figure 15: 1982 call for volunteers	6
Figure 16: 1988 ES00061 Brent Sumner	6
Figure 17: Timber steps	6
Figure 18: Time ball on flag mast as it stands today	7
Figure 19: Bakehouse interpretive works 2001	7
Figure 20: 2004 conservation works	8
Figure 21: Mast guide wire anchor move and testing 2016	8
Figure 22: 1926 condition	11
Figure 23: 1929 condition	11
Figure 24: 1959 works	11
Figure 25: 1969 condition	12

Figure 26: 1974 condition.....	12	
Figure 27: 1975 after conservation works.....	12	
Figure 28: Limestone block weathering NE external wall.....	13	
Figure 29: Natural strata of limestone block causing cavity in face.....	14	
Figure 30: Weathered original limestone block faces.....	15	
Figure 31: Global CO2 Levels over time https://www.co2levels.org/	16	
Figure 32: Trends in sulphur dioxide emissions in the atmosphere over time.....	16	
Figure 33: 1975 limestone blocks being out by hand on site.....	25	
Figure 34: Collapsed wall sections 1929.....	28	
Figure 35: Approx area of Roundhouse walls rebuilt in 1929 / 1959 conservation and restoration works.....	28	
Figure 36: 2004 stone face replacement.....	29	
Figure 37: 2004 re-pointing now weathering from joints.....	29	
Figure 38: Slate setting blocks for stones.....	30	
Figure 39: brick setting block.....	30	
Figure 40: Steel embedment for removal – NW side	Figure 41: Pins from old sign (removed).....	31
Figure 42: Steel embedments West side.....	31	
Figure 43: Captive head washing.....	33	
Figure 44: Roundhouse 1st Floor Plan - Considine Griffiths 2004.....	34	
Figure 45: 1st floor joists.....	34	
Figure 46: Roundhouse roof from NE.....	36	
Figure 47: Roundhouse roof from SW.....	36	
Figure 48: 1st floor space and ceiling joists.....	37	
Figure 49: 1975 roof works.....	38	
Figure 50: 2004 proposed roof works omitted from final scope.....	38	
Figure 51: Plaque on steps.....	39	
Figure 52: Steps.....	39	
Figure 53: Roundhouse Bake House plan and section by R. McK. Campbell 1984.....	40	
Figure 54: Roundhouse Conservation Drawings, 2002 by Considine Griffiths indicating chimney route.....	41	
Figure 55: Biological growth on bakehouse walls.....	42	
Figure 56: Fretting brickwork.....	42	
Figure 57: Evidence of recent fretting of bricks in oven roof.....	43	
Figure 58: Current sealed door.....	43	
Figure 59: 1998 gate.....	43	
Figure 60: Bakehouse interpretive perspex screens.....	44	
Figure 61: Access hatch and rope stored in the mast.....	46	
Figure 62: Existing Construction of base of mast.....	46	
Figure 63: Corroded Pulley plates.....	47	
Figure 64: Proposed works to base on mast.....	48	
Figure 65: Arthur Head parapet walls.....	49	
Figure 66: Weathered limestone walls.....	49	
Figure 67: Longstanding, severe, but stable crack to walls of steps.....	51	

ATELIER JV

Document Prepared by:

Atelier JV (Aust.)
XX Engineering Pty Ltd Trading as Atelier JV (Aust.)
ACN 160 666 160
ABN: 18 160 666 160
GST Registered.

123 Aberdeen Street
Northbridge
WA 6003

T: (08) 9228 9120
E: info@atelierjv.com.au
W: www.atelierjv.com.au

DOCUMENT CONTROL					
Revision	Date	Description	Prepared by	Reviewed by	Approved by
0	31/01/20	First Draft	SAJ	SAJ	SAJewell 31/01/20
A	04/02/20	Second Draft	SAJ	SAJ	SAJewell 04/02/20
B	05/02/20	Third Draft	SAJ	SAJ	SAJewell 05/02/20
C	06/02/20	Issued for information and file	SAJ	SAJ	SAJewell 06/02/20
D	27/02/20	Updated with new information	SAJ	SAJ	SAJewell 25/02/20
E	04/09/20	Page 13, para 2 commentary on original mortar materials changed	SAJ	SAJ	SAJewell 04/09/20

A person or entity using Atelier JV (Aust.) documents or data accepts the risk of:

- Using the documents or data in electronic form without requesting and checking them for accuracy against the original hard copy version; and
- Using the documents or data for any purpose not agreed to in writing by Atelier JV (Aust.).

COPYRIGHT: The concepts and information contained in this document are the property of Atelier JV (Aust.). Use or copying of this document in whole or in part without the written permission of Atelier JV (Aust.) constitutes an infringement of copyright.

LIMITATIONS: This report has been prepared on behalf of and for the exclusive use of Atelier JV (Aust.)'s Client and is subject to and issued in connection with the provisions of the agreement between Atelier JV (Aust.) and its Client. Atelier JV (Aust.) accepts no liability or responsibility whatsoever for or in respect of any use or reliance upon this document by any third party.

Atelier JV (Aust.) has prepared this document in accordance with the usual care and thoroughness of the Engineering consulting profession discipline(s) that we represent. This document has been compiled only for the scope described within the document. No other scope should be inferred through the interpretation of this document beyond its intended scope or the Engineering consulting profession discipline(s) represented by Atelier JV (Aust.). Where commentary is made that relates to profession discipline(s) outside of Atelier JV (Aust.)'s areas of specific expertise, these elements of this document should be read as anecdotal only and the services of a suitably qualified consulting professional engaged, should the Client or other party reading this document require advice on the matter. This document is based on generally accepted practices and standards at the time it was prepared. No other warranty, express or implied, is made as to the professional advice included in this document.

Recommendations contained within this document are to the level of the scope referred to in the document. Atelier JV (Aust.) accepts no responsibility for any entity or person carrying out works based on the recommendations contained within this document without completing a full design and documentation of these recommendations. It is the responsibility of third parties to independently make inquiries or seek advice in relation to their particular requirements and proposed use of the recommendations specific to the site.

XX Engineering Pty Ltd T/A Atelier JV (Aust.)
123 Aberdeen St, Northbridge, WA 6003
T: 08 9228 9120
info@atelierjv.com.au
www.atelierjv.com.au

ABN: 18 160 666 160
STRUCTURAL ENGINEER

ATELIER JV

DISCLAIMER: This document has been prepared and issued to the Client solely for the purpose(s) specified. The document is for the exclusive use of the Client and may not be provided to or relied upon by any third party without the agreement in writing of Atelier JV (Aust.). The document is supplied on the basis that the Client agrees not to divulge or communicate the contents of this document to any third person who might act to the detriment of Atelier JV (Aust.) on the basis of this document. The Client agrees to indemnify Atelier JV (Aust.) in relation to all claims, loss or damages arising from any third party's reliance on the document. Any estimates of potential costs which have been provided are presented as estimates only as made at the date of this document. Any cost estimates that have been provided may therefore vary from actual costs at the time of expenditure. This document should be read in full.

XX Engineering Pty Ltd T/A Atelier JV (Aust.)
123 Aberdeen St, Northbridge, WA 6003
T: 08 9228 9120
info@atelierjv.com.au
www.atelierjv.com.au

ABN: 18 160 666 160
STRUCTURAL ENGINEERING & DESIGN

1. Introduction

Atelier JV were engaged by The City of Fremantle to carry out a structural heritage condition survey and report on the Roundhouse Fremantle as identified on the extent of study area site plan below:



Figure 1: Extent of Study area

Simon Jewell of Atelier JV visited site for a formal inspection on 13 November 2019 with other members of the reporting team and Gena Binet and Keith Fragomeli of the City of Fremantle in attendance. Additional site visits were made on 11 February 2020 and 24 February 2020 to confirm the findings from the initial reporting stage completed in January and to determine appropriate mortar testing locations.

2. Scope of Report and Intended Use

This report is intended to be an extensive and thorough non-intrusive, visual survey of the building's structural heritage condition together with a desktop review of previous reports on the Roundhouse.

It is intended that the report be used to assist in the decision-making process for the order of importance of any repairs, maintenance or refurbishment that may be required for the building or structures and that, from the recommendations, detailed designs are drawn up to cover each element as a separate design package.

This report has been compiled for the use of The City of Fremantle. The report should not be relied upon by third parties without prior written permission from Atelier JV.

3. Available Information

This report includes photographs, drawings, specifications, etc. from previous reports, studies and documentation produced by other consultants. These documents have been provided from a number of sources including the City of Fremantle and Hocking Heritage Studio.

In particular the most recent comprehensive conservation works and conservation management plan documents have been used to form the basis of comparison on the condition with time for this report, documents as follows:

- Arthur Head Reserve Conservation Plan June 2011 by Philip Griffiths Architects
- Roundhouse Conservation Drawings, 2002 by Considine Griffiths
- Arthur Head Reserve OP 1999 Naomi Laurence
- Review of Conservation Plan by Gerard McCann 1996
- Limestone Conservation Study 1993 by Palassis
- Round House CMP Jack Kent 1988

ATELIER JV

- Round House and Arthur Head CMP draft 1984 by R. McK. Campbell
- The Round House 2 R. McK. Campbell 1973

It is not Atelier JV's intention to present any of these included extracts from documents obtained as our own work.

We have not received reference to the author of all documents for referencing due to the complexity of sourcing some of the information. Photographs contained in this report included photos from the late 1800s to the present day. The information received has been used to provide an important insight into the condition over time of the Roundhouse and has therefore been deemed as important to include in this report for the benefit of all Western Australians.

The remaining information has come from Atelier JV's own site inspections and observations.

4. Building Structure and History of Structural Remediation Conservation Works

The Roundhouse was constructed in 1831 on Arthur Head using the limestone from the cliff faces themselves. The limestone walls are constructed in cut limestone blocks of varying sizes with some random rubble limestone infill areas. The original limestone blocks are from the cap rock of the surrounding cliff faces. A first floor was constructed in timber joists and the roof to the enclosed courters are a timber rafter with various roof coverings over it's life.

The Roundhouse is a regular dodecagon (12 sided polygon) on plan

A brief chronology of the structures found at Arthur head within the study area is as follows:

1831	The Roundhouse was constructed **	 4829 Figure 2: 1902 View over Round House to Fremantle LH4829
1831 - 1837	Roof leaks in first rain with ongoing problems and various remedies attempted including shingles and lime cement ^	
1837 / 1838	The Whalers tunnel was constructed beneath the Roundhouse. The whalers tunnel led to the demolition of the first steps that ran up to Arthurs Head from the High Street. The tunnel required the new steps to split above the crown of the tunnel entrance into two flights that ran down either side of the entrance. **	 1044 Figure 3: 1873o sketch of high street LH1044

ATELIER JV

1873	Large crack reported in the floor of the roundhouse at the time of quarrying rock from the Southern face of Arthur Head for the construction of the jetty. ^	
1890s	The first signal mast constructed * Roundhouse ceases use as jail ^	
1900 - 1912	Roundhouse converted to a dwelling for a police constable and family ^	 Figure 4: 1902
1905	Second signal mast (removed in 1929) was constructed immediately West of the Roundhouse *	 Figure 5: 1905c Signal Station and Light House LH712A
1914	Alterations to the Round House for Caretakers Quarters *	
1922	Rebuilding of damaged sections of the NW wall ^	
1929	Further repairs (extent unknown) ^	 Figure 6: 1929 prior to repair

ATELIER JV

1959	Roundhouse conservation works	
		Figure 11: 1959 conservation works
1966	The 1838 East steps facing the High Street were demolished and reconfigured to a single flight running North in order to make way for the railway line.	
		Figure 12: 1966 demolition of steps 2 March 1966 LH4199
1975	Stage I of the major 1970s conservation works ** Works included: ^ • Roundhouse structure consolidated including underpinning and buttressing sections of the external walls • Grouting and pointing of the limestone • Re-roofing • Joinery repairs • New drainage • Wiring and lighting • painting	
		Figure 13: 1975 works in progress
1976	Stage II of the major 1970s conservation works and opening of the Roundhouse to the public **	
		Figure 14: 1976 conservation work complete
1978	Roundhouse closed to the public due to high maintenance costs **	

Page 5

ATELIER JV

1981	Roundhouse reopened to the public	 Figure 15: 1982 call for volunteers
1985 to 1988	Construction of the new South and West stairs to the Arthur Head Cliffs ** The reconstruction of the flag mast **	 Figure 16: 1988 ES00061 Brent Sumner
1983	Timber steps to Roundhouse replaced	 Figure 17: Timber steps
1988	Repairs to parapet wall at top of North/South cliff (lime and white sand mortar) ^	

ATELIER JV

Mid 1990s	Addition of the time ball to the flag mast **	 Figure 18: Time ball on flag mast as it stands today
2001	Conservation works were undertaken to the Baker's Oven beneath the Roundhouse steps. * Conservation and stabilisation works were undertaken to the Whalers' Tunnel and cliff faces. The tunnel was then re-opened to the public. *	 Figure 19: Bakehouse interpretive works 2001

ATELIER / JV

2004	Conservation works were undertaken at the Roundhouse. The conservation work concentrated on the stonework.*	 Photograph 4 Photograph taken prior to the commencement of conservation work to the Roundhouse. Courtesy and Griffiths Architects (2002)  Figure 20: 2004 conservation works
2016	Roundhouse Mast guide wires refurbished by Raim Services Anchor points were moved in the rock and tested prior to engagement	 Figure 21: Mast guide wire anchor move and testing 2016

* References taken from: Arthur Head Reserve Conservation Plan June 2011 by Philip Griffiths Architects

** References taken from: Naomi Lawrence, 1999 conservation plan

^ References taken from: Limestone Conservation Study 1993 by Palassis Architects

Based on the above chronology the following repair, maintenance and restoration works have been carried out on the Roundhouse:

1	1831 - 1837	Roof leaks repairs: various remedies attempted including shingles and lime cement.
2	1837 / 1838	Demolition of the first steps that ran up to Arthurs Head from the High Street. New steps split above the crown of the tunnel entrance into two flights that ran down either side of the entrance.
3	1890s	The first signal mast constructed.
4	1905	Second signal mast was constructed.
5	1914	Alterations to the Round House for Caretakers Quarters.
6	1922	Rebuilding of damaged sections of the NW wall.
7	1929	Further repairs (extent unknown).
8	1947	Further repairs (extent unknown).
9	1959	Roundhouse conservation works.
10	1966	The 1838 East steps facing the High Street were demolished and reconfigured to a single flight running North in order to make way for the railway line.
11	1983	Timber steps to Roundhouse replaced
12	1975 - 1976	Stage I and II of the major 1970s conservation works. Works included: • Roundhouse structure consolidated including underpinning and buttressing sections of the external walls • Grouting and pointing of the limestone • Re-roofing • Joinery repairs • New drainage • Wiring and lighting • painting
13	1985 to 1988	Construction of the new South and West stairs to the Arthur Head Cliffs. The reconstruction of the flag mast.
14	1988	Repairs to parapet wall at top of North/South cliff (lime and white sand mortar).
15	Mid 1990s	Addition of the time ball to the flag mast.
16	2001	Conservation works were undertaken to the Baker's Oven beneath the Roundhouse steps.
17	2004	Conservation works were undertaken at the Roundhouse. The conservation work concentrated on the stonework.
18	2016	Roundhouse Mast guide wires refurbished by Raim Services Anchor points were moved in the rock and tested prior to engagement

ATELIER/JV

The major conservation works were carried out in 1922/29, 1959, 1975 and 2004 which represents the following points of time within the Roundhouse' life:

Date of Conservation works	Age of Roundhouse building at time of works	Years between major works on the Roundhouse	Years since these conservation works
1922	91	91	98
1929	98	7	91
1959	128	37	61
1975	144	16	45
2004	173	29	16
2021 (tbc)	190	17 (tbc)	

The roundhouse is currently 189 years old, has had four or five major refurbishments and 18 dates of work conducted to its structure that we can find records of.

The periods of extended relative disuse 1920s to 1939, early 1950s to 1959, and 1960s to 1975 have seen the most dramatic deterioration of the Roundhouse structure requiring the major conservation interventions as a result of the neglect at those times. A comparison of the condition before and after major conservation works gives a stark image of the works that were required:

ATELIER JV

Condition Before	After conservation works
1929 and 1959 works	
 Figure 22: 1926 condition  Figure 23: 1929 condition	  Figure 24: 1959 works

Condition Before	After conservation works
1975 works	
	
	
Figure 25: 1969 condition	Figure 27: 1975 after conservation works
State Library of Western Australia Figure 26: 1974 condition	

5. Structural Condition and Proposed Conservation Works

5.1 Roundhouse walls

The Roundhouse walls are constructed in cut limestone blocks of varying sizes with some random rubble limestone infill areas. The original limestone blocks are from the Tamala limestone cap rock of the surrounding cliff faces. Timber packers were used to maintain mortar joint widths when laying the stones and lime mortar would have been used commensurate with the time and the materials available.

ATELIER JV

There has been seven conservation works, refurbishment, alterations or repair works projects on the Roundhouse in the time since it was built that effected the structure of the Roundhouse walls.

The conservation works to the walls during the different periods of the building's existence have used different limestone to the Arthur Head cap rock that was used in the original construction. This is because the cap rock is no longer available. Arthur Head became an important part of Fremantle as well as the Roundhouse itself, so it was no longer acceptable to quarry the mound. For the conservation works it is evident that limestone has been sourced from alternative quarries and a mix of limestone blocks has resulted. This is also true of the mortar, the original mortar most likely having been produced from the nearby sand and lime putty locally made. Later mortars have included all compositions from cement mortar to mixes of lime cement mortars and fully lime mortars.

Limestone is susceptible to weathering because it is a porous stone. The cap rock is much less porous than strata stone (found lower down in the rock layers), which is why it was used for the original building, but later works included more porous limestones that are more susceptible to weathering. The porous nature of the stone allows water and salts to get into the stones themselves, increasing expansion and contraction forces and resulting in a breakdown of the stone matrix making the stone more vulnerable to erosion. Wind erosion, water erosion and even damage by people is then more readily developed on the stone surface and the limestone block starts to show signs of pitting, delamination and fretting eventually leading to hollows in the stone. When cement mortars are used with the weaker and more porous stone of limestone this process tends to get accelerated because the mortar holds the water in the stone and creates worse weathering effects as a result.



Figure 28: Limestone block weathering NE external wall

ATELIER JV

In some cases the natural composition of the limestone formation that makes up the block that was used for construction creates veins and faults through the block that make the masonry more susceptible to spalling. This can be seen in a few locations over the Roundhouse walls where the face of the block has a large cavity created as a result of its natural strata:



Figure 29: Natural strata of limestone block causing cavity in face

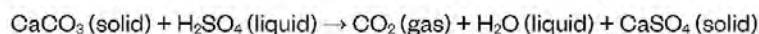
Manmade Climate Change effects such as rain carrying pollutants with a low PH (acid rain) and CO₂ dissolved in rain will also have the effect of accelerating erosion of the limestone and lime mortars, particularly when combined with cement mortar pointing holding the water in the limestone blocks for longer.

Higher atmospheric CO₂ levels have the effect of changing the chemical composition of the limestone from calcium carbonate to calcium bicarbonate, which is then able to leach out of the wall. Calcium carbonate (one of the main components of limestone) has a very low solubility in pure water. But in rainwater saturated with carbon dioxide, its solubility increases due to the formation of more soluble calcium bicarbonate. Calcium carbonate is unusual in that its solubility increases as the temperature of the water decreases. The increased solubility of calcium carbonate in rainwater saturated with carbon dioxide is the driving force behind the erosion of limestone, leading to the formation over long periods of time of pitting hollows and caves in the face of the blocks.



Calcium carbonate + carbon dioxide + rainwater → calcium bicarbonate

Due to airborne pollutants caused by emissions of sulphur dioxide and nitrogen oxide, rainwater is often weakly acidic (with sulphuric acid and nitric acid). When it meets with limestone, some of the calcium carbonate in the limestone reacts with the sulfuric acid to produce carbon dioxide, water and calcium sulphate (or in the case of nitric acid a similar chemical reaction occurs producing calcium nitrate)



Calcium carbonate + sulphuric acid → carbon dioxide + water + calcium sulphate

ATELIER JV



Figure 30: Weathered original limestone block faces

What we are trying to look for in this study is evidence of where this weathering could be getting worse (relative to time) and areas that are particularly bad currently. We are also interested in finding any remaining cement mortar on the building that could be making the situation worse.

In order to assess the condition of the limestone we needed to better understand the ages of the different limestone pieces seen and how they have weathered over time. To do that we carried out a comprehensive review of previous reports that were discovered by Hocking Heritage Architecture and The City of Fremantle; a comparison of photographs from different dates; and a review of this information against the current conditions on site. The reports reviewed included the following amongst others:

- / The Round House 2 R.McK Campbell 1973
- / Round House and Arthur Head CMP draft 1984 by R. McK. Campbell
- / Round House CMP Jack Kent 1988
- / Limestone Conservation Study 1993 by Palassis
- / Review of Conservation Plan by Gerard McCann 1996
- / Arthur Head Reserve OP 1999 Naomi Lawrence
- / Roundhouse Conservation Drawings, 2002 by Considine Griffiths
- / Arthur Head Reserve Conservation Plan June 2011 by Philip Griffiths Architects

Whilst the limestone blocks definitely show reasonably significant signs of weathering our study found no evidence of any major acceleration of that weathering. A lot of the cement mortar was removed in the 2004 works, which has definitely helped.

What could be concerning is the acceleration over time of pollutants, particularly CO₂ being released into the atmosphere. In the first 100 years of its life the Roundhouse saw CO₂ increase from 284 parts per million to 307 (an 8% increase) since then in the Roundhouse' second century it saw CO₂ increase from 307 parts per million to 414 a further 35% increase. Over half of the increase in CO₂ emissions has occurred since the major conservation work on the building in 1975 (in the last 45 years). This means that the effects of climate change will impact on the speed of erosion of the limestone of the Roundhouse walls and more conservation works including limestone replacement may be needed in the future because of this.

ATELIER JV

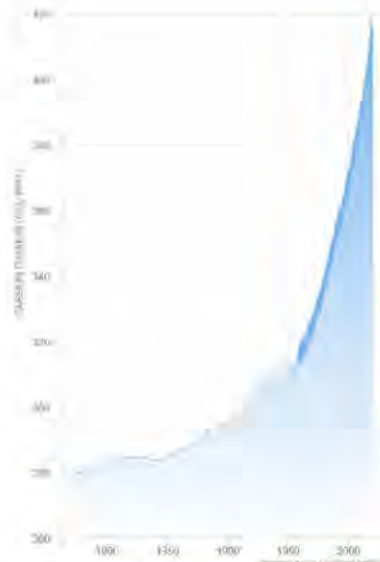


Figure 31: Global CO2 Levels over time <https://www.co2levels.org/>

Perhaps more in our favour is that the emissions of sulphur dioxide and nitrogen oxide causing acid rain are generally trending to be dropping off with time, whilst this is more the case for Europe and North America, and whilst Asia is still on the climb, Australia appears to be following suit with Europe and North America in recent years. This means that the effects of acid rain dissolving the limestone of the Roundhouse walls could decrease with time in the future.

Global Anthropogenic SO₂ Emissions

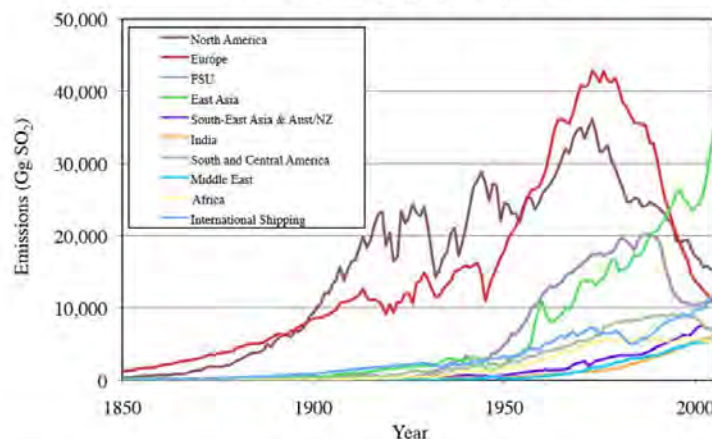
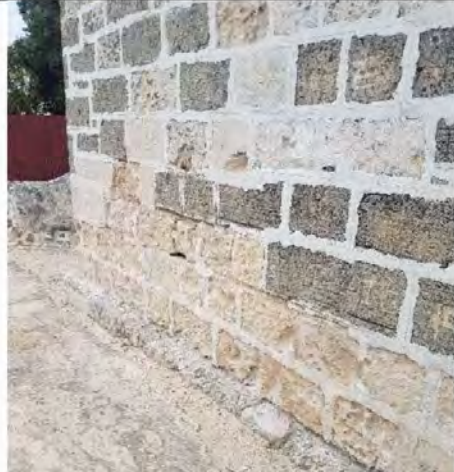


Figure 32: Trends in sulphur dioxide emissions in the atmosphere over time

We've compiled a few of the comparison photos below to indicate the condition of the limestone over time. Generally we have only found photos of sufficient quality to make this assessment from the 1960s onwards, but it still gives us a good view of how the walls are performing:

ATELIER JV

1. West Wall (Ocean Side)		
 1929		
1988 	1993 	1996 
2001 	2020 	

ATELIER / JV

2. East Wall (High Street, Entrance Side)

1926



1974



1988



1996



2019



2020



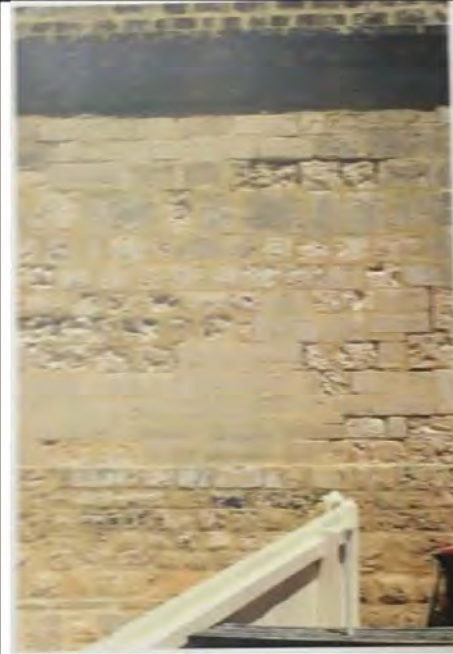
ATELIER / JV

3. North East Wall (Towards Gallery)

1988



1996



2020



Page 19

ATELIER / JV

4. North West Wall (to Pathway)	
1988	1996
	
2020	
	

Page 20

ATELIER / JV

5. Inner Courtyard



1929



1959



ATELIER JV

5. Inner Courtyard	
1969	1974
	
1975 During Works	
 	

Page 22

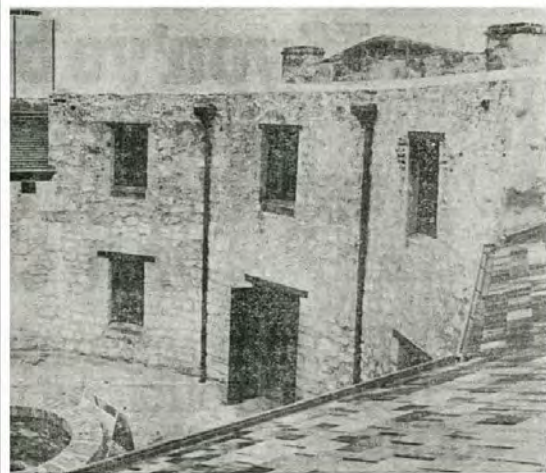
ATELIER JV

5. Inner Courtyard

1975 After works



1978



1988



ATELIER / JV

5. Inner Courtyard



1996



2019

ATELIER / JV



Figure 33: 1975 limestone blocks being cut by hand on site

There have been a mixture of mortars used on the Roundhouse over time. This is not surprising given its age currently 189 years old and the seven conservation works, refurbishment, alterations or repair works projects that occurred over that time.

Various Mortars



2004 lime mortar – harder capping mortar



2004 lime mortar – friable mortar build-up beneath original surface of conservation works mortar

ATELIER JV

Various Mortars



2004 lime mortar surface finish



2004 lime mortar – weathered and friable



1975 cement (?)



1975 cement (?), (behind 2004 eroded)



1975 cement (?)



Early yellow/orange mortar (assumed to have used sand from a limestone root pocket on site)

ATELIER JV

Various Mortars



Early mortar – grey with shells, stones and possible inclusion of pozzolans



Original mortar (?) appears to have turned back to sand



Original mortar (?) with calcium carbonate shell to surface and extensive salt deposits from ground water movement – stair wall

Cement mortar can be seen to have been used in the re-pointing of the walls in many areas. This is likely to have been predominantly from the 1975 works. The less pervious and stronger composition of cement mortar means that water that seeps into the more porous limestone block is able to sit on the shelf that the cement bed joint creates keeping the limestone block wet or damp for extended periods. This can affect the stability of the stone causing accelerated weathering of the surface and a weakening of the block itself.

The drawings from the 2004 conservation works call for the removal of the cement render and mortar and the re-pointing of the walls with a compatible lime mortar (as do several of the earlier conservation management plan reports), however it appears that budgetary constraints played a part in the final construction scope and that not all of the cement mortar was removed in the final works.

It is worth noting that a substantial section of the Roundhouse walls had collapsed (or been partially demolished) in the early 1900s leaving a gap in the wall to the West and a large section of the parapet missing. This was the case until the conservation works in 1929 and 1959. It is not known how many of the original limestone masonry blocks were re-used to re-build the walls as part of those conservation works, but photos from that era show the

ATELIER JV

blocks lying next to the wall. Comparisons to today's layout of blocks in the wall suggests that they laid original blocks randomly with newer replacement blocks.



Figure 34: Collapsed wall sections 1929



Figure 35: Approx area of Roundhouse walls rebuilt in 1929 / 1959 conservation and restoration works

As part of our structural condition survey we checked the as built layout of stone replacement in the walls against the design documentation produced for the 2004 works. The results are included in Appendix A showing a number of stones that were not replaced in the final works and a few additional alternative stone replacements occurring.

ATELIER JV

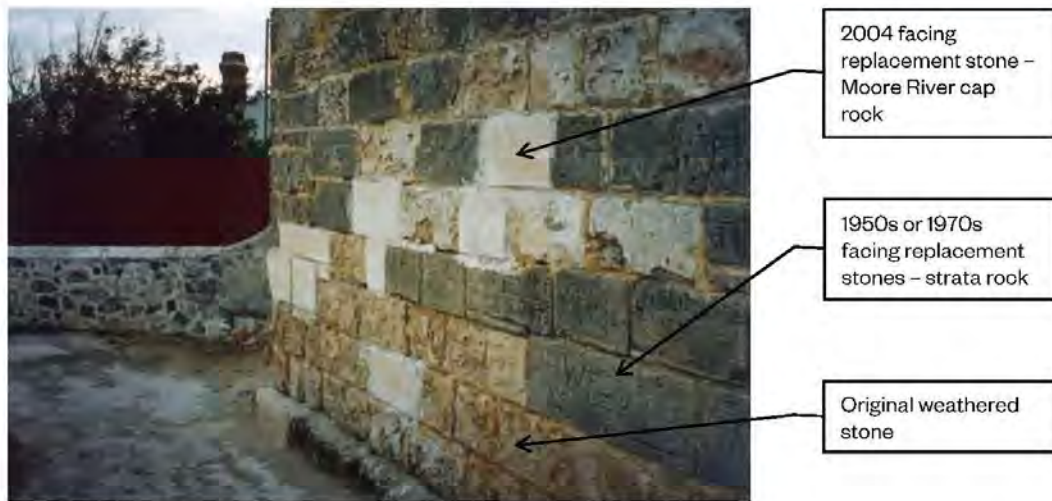


Figure 36: 2004 stone face replacement

Replacement stone (faces or full stones) has typically not been able to use cap rock that would match the original build. The 1950s (and possibly 1970s) work seems to have used strata stone with its distinct banding lines and softer matrix (hence the graffiti carved into it). The 2004 work has taken a different approach and sourced a stronger stone. We understand from Griffiths Architects that the 100mm thick 2004 facing stones were sourced from a quarry in Moore River, WA. They were certainly not sourced from the common natural limestone quarry sites closer to Perth that would deliver something more like the strata rock limestone seen from the 1950s and 1970s work.

It is evident when inspecting the external walls of the Roundhouse that some of the 2004 mortar re-pointing has already come away. This is particularly evident on the NW side where the mortar joints are back to the previous mortar once more. Now that the 2004 mortar has weathered away in places we can also see what appears to be the remaining cement mortar in the bed joints and perp joints behind meaning that substantially deeper re-pointing will be required to remove the cement mortar from the wall. Because the 1975 works appeared to have included a large amount of replacement facing stone blocks (~100mm thick units), repointing to remove all of the cement mortar will require digging into the mortar joints that full depth. Leaving the cement mortar in the wall and re-pointing over it to a depth of approximately 25mm or so could be a contributing factor to the 2004 mortar having become weak and weathered to the state we see it in today. The cement mortar can trap water in the lime mortar pointing and wash out the lime quicker causing it to become weak.



Figure 37: 2004 re-pointing now weathering from joints

The Roundhouse is located on a very exposed site being perched on top of the cliffs directly overlooking the ocean. If works were to follow AS 3700 (Masonry design code) for mortar specification, then this site would require an M4 mortar composition with a high cement content. The use of cement mortar to AS 3700 is not appropriate for the Roundhouse or surrounding walls because the less porous cement causes damage to the limestone as discussed at the start of this section, however it must be understood that the need to use a lime mortar in these walls means that it should not be expected to last a normal building design life. It is entirely possible that the 15 years since the last conservation works on the walls is a reasonable lifespan for lime mortar on this site and something that needs to be included in the City's maintenance budgets. Having said that anecdotal evidence from volunteers and City of Fremantle representatives suggests that the 2004 mortar started to degrade not long after the works were completed. This could be that the mix was not correct or that the weather caused problems with the mortar as it was setting (e.g. heavy rain or high temperatures shortly after conducting the work). We understand that the 2004 mortar mix may have been a 'general-purpose' lime mortar mix:

2004 Mortar composition (?): 2 Parts Lime Putty : 7 Parts White Sand

The durability of this lime mortar could be improved by increasing the lime content.

Slate and brick setting blocks in mortar joints were used as part of the construction during limestone block replacement works to set the joint width between beds of blocks and prevent the mortar from squeezing out while the mortar set. Where the mortar joints have eroded these are visible again.



Figure 38: Slate setting blocks for stones



Figure 39: brick setting block

ATELIER JV

Most steel embedments appear to have been generally removed from the walls, however a few still remain. On the NW and West sides these items are heavily rusted.



Figure 40: Steel embedment for removal - NW side

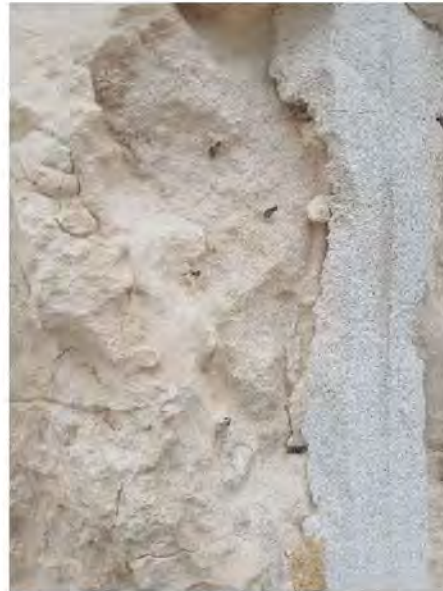


Figure 41: Pins from old sign (removed)



Figure 42: Steel embedments West side



Roundhouse wall Recommendations:

We recommend that testing is carried out to the mortar to determine the likely lime : cement : sand proportions of the various mortars that we see on the building. We have identified six test locations that will provide a comprehensive view of the different mortars. These are as shown on the mark ups in Appendix C of this report.

Our aim is to remove all of the remaining cement mortar from the walls. Re-pointing of the walls is needed to maintain their structural integrity and we are looking to do this by matching as closely as we can the mortar

ATELIER JV

composition of the original lime mortar. Due to the large number of conservation works over time, it may be difficult to pin point the correct mortar that made up the original construction. Sample MT06 as presented in Appendix C of this report may be the most likely candidate. It is also likely that the original mortar is now just returned to sand.

We are anticipating the final mortar composition appropriate for use in re-pointing will be a simple lime : sand mix:

1 Part Lime Putty : 2 Parts Yellow / pink / orange Sand

This can be confirmed once the mortar analysis has been completed and results are available on existing mortars. If additional strength is desired in the mortar to make it last longer then we recommend avoiding the addition of even small amounts of cement and instead would propose the addition of natural pozzolans such as brick dust or ash.

Table 1: Lime Mortar Classification Mix proportions (by volume)

Type	GB Cement	Natural Hydraulic Lime	Lime Putty	Natural Pozzolan	Sand	Additional Materials & Comments
Natural Lime Putty:						
NL1	0	0	1	0	4	Sheltered locations
NL2	0	0	1	0	3	General locations
NL3	0	0	1	0	2	Exposed locations
Artificially Hydraulic Lime Putty:						
AL1	0	0	1	1	3	Sheltered locations
AL2	0	0	1	1	2	General locations
AL3	0	0	1	0.5	1.5	Exposed locations
Hydraulic Lime Mortar:						
NHL2	0	1(NHL2)	0	0	2	Feebly Hydraulic, Sheltered locations
NHL3.5	0	1(NHL3.5)	0	0	2	Moderately Hydraulic, General locations
NHL5	0	1(NHL5)	0	0	2.5	Eminently Hydraulic, Exposed locations

We recommend choosing a sand that will more closely match the colour of the original mortar than the 2004 sand did being more yellow / pink / orange than the white we see from 2004 works.

All mortar joints showing signs of degradation should be repointed. Re-pointing will have to go deep into the wall in order to remove cement mortars ~ 100mm in places.

Given that a reasonably weak lime mortar is going to be used (and was used as part of the 2004 works) it should be anticipated and budgeted for re-pointing works being needed every 15 to 20 years and this should be kept up in order to safeguard the condition of the masonry for generations to come.

The remaining steel embedments should be removed from the walls to prevent them from splitting the masonry locally around the steel as it continues to rust.

We do not feel that any of the stones in the wall require replacement or re-facing and the integrity of the wall is fine at this time. Should stones require replacement or re-facing in the future then we believe that effort should be made to locate a site in WA that has limestone cap rock that would be more suitable for the work than the readily available strata stone or imported stones that have been used in the past. This is not only to maintain the integrity of the building and be true to its original design, but also because it is the best limestone for the site and exposure, so will last far longer as the original stones have done.

The increase of airborne pollutants such as CO₂, sulphur dioxide and nitrogen oxide over recent years due to burning of fossil fuels means that the limestone walls are more susceptible to acid rain dissolving the calcium carbonate and CO₂ reacting with the limestone to form calcium bicarbonate, which then leaches out of the wall. This chemical erosion of the limestone face as a result of climate change is combined with the effects of water, salt and wind erosion to determine how long the limestone of the Roundhouse will last into the future. One thing

ATELIER JV

we can do is lobby our government to make the right decisions with regard to the control and reduction of airborne pollutants such as CO₂ in order to help preserve historic buildings and monuments such as the Roundhouse Fremantle. In the meantime, as CO₂ levels in particular continue to climb and even with major change are unlikely to return to pre-1900 levels we should consider how we might help the building to resist the effects.

A maintenance regime of washing down the walls of the Roundhouse with clean fresh water is one thing that could assist with this issue. This was actually something that was proposed in the conservation management plan by Jack Kent in 1988 and again in the limestone conservation study in 1993 by Palassis Architects, although both of these reports were interested in washing out salts only. Gerard McCann covered this topic in his 1996 report suggesting that washing the wall could simply move the salts around to a new location in the wall. Gerard McCann felt that paper poulticing of the wall to remove salts might be more effective but needed to be tailed. It is not clear if either of these methods has been carried out on the Roundhouse at any point, but we believe that they need to be considered as part of the conservation of the building for the future. Since the reports the City of Fremantle has produced a series of Technical Advice Sheets for heritage buildings including: *"Heritage Building Conservation Technical Advice Sheet 3 - Looking after limestone walls"*. This publication talks about the process of using captive head washing:

"In this system low-pressure water is sprayed at the wall inside a rubber-skirted head that is attached to a wet vacuum cleaner. The vacuum's suction draws most of the water off the wall, bringing with it loose dirt and also soluble salts from in and just under the surface. Slow passes are made across the surface and repeated several times without letting the wall dry between passes."

We recommend that captive head washing is carried out on the Roundhouse annually to reduce the risks of salts and airborne pollutants causing excessive weathering damage to the limestone.



Figure 43: Captive head washing

5.2 Roundhouse 1st Floor

The 1st floor of the Roundhouse is constructed using timber joists spanning the short direction across the room with 1.9m spans. The joists are typically 120x65 at 550mm centres and are Jarrah. Floorboards are laid straight on top with a vinyl finish that has perished. There is no ceiling, so the joists are visible from below, standing at ground floor.

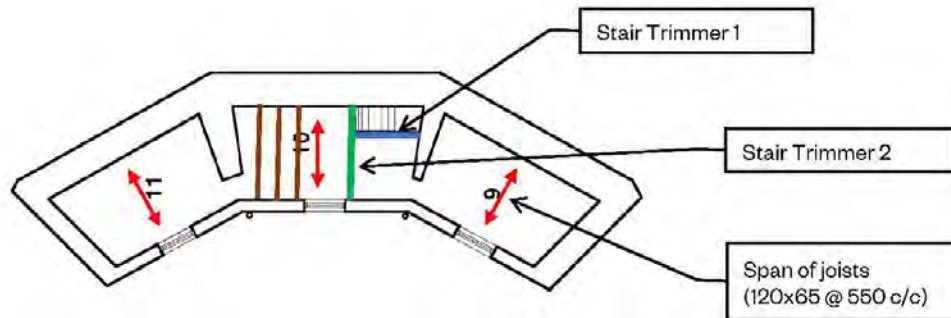


Figure 44: Roundhouse 1st Floor Plan - Considine Griffiths 2004

At the time of the inspection conducted for this report no access had been granted to the upper floor of the Roundhouse for many years. In order to inspect the spaces props were installed at ground floor level to provide added safety.

The joists are in reasonably sound condition with only a few minor shakes and splits in them in a couple of locations. They are well bedded into the walls with adequate bearing and no signs of rot or decay.



Figure 45: 1st floor joists

Following the inspection Atelier JV carried out calculations to check the floor load capacity should the space be desired to be reopened at any point. Two trimmers around the stair dictate the floor load capacity due to their increased load area needed to be taken as they trim around the stair void. Taking these into account the load capacity of the first floor is **300kg/m²**, with a point load capacity of **250kg** summarised as follows:

Table 2: 1st Floor Load capacity

		SLS (kPa)		ULS (kPa)
Dead Loads	Floor Boards	0.15		
	Joists	0.12		
	Ceiling and Services	0.05		
		0.32	x 1.2 =	0.384 kPa
Live Loads	UDL	3	x 1.5 =	4.50 kPa
	PL	2.5	x 1.5 =	3.75 kN

A live load capacity of 3kPa (300kg/m²) or 2.5kN point load (250kg) is acceptable for most anticipated uses of the first floor spaces. This could be increased as far as 5kPa (500kg/m²) or 3kN point load (300kg) with additional strengthening of the floor around the stair void, but we do not feel that this should be required.

A short timber has been strapped to the underside of the stair trimmer, presumably to attempt to increase its capacity following concerns. The method of strapping means that it is performing little to no function and can be removed with no impact.



Added timber can be removed

Roundhouse 1st Floor Recommendations:

We recommend cleaning the debris from the 1st floor. No other structural works are proposed.

5.3 Roundhouse Roof

The roundhouse 1st floor roof is very similar to the 1st floor with a slightly smaller joist width being 120x50 @ 550mm centres. The ceiling joists in at least one of the spaces appeared to be relatively modern and we are assuming that date from the 1975 conservation works, when we know that roof works were undertaken.

Above the ceiling joists is a ceiling void of 100mm and a second set of joists supporting a plywood deck. Based on the 1975 photos this plywood deck was overlain with a screed and then a membrane was applied to the top surface. We are not aware of any roof works since this date. The fall to this roof is quite shallow, which would explain why the contractor that built the Roundhouse had problems with getting it waterproof from the start.

ATELIER JV



Figure 46: Roundhouse roof from NE



Figure 47: Roundhouse roof from SW

ATELIER / JV



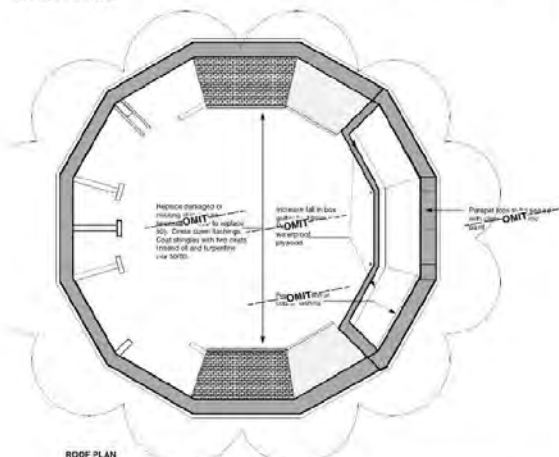
Figure 48: 1st floor space and ceiling joists





The single storey building sections have a much steeper pitched roof clad in shingles.

We have not been able to inspect the roof at this stage, so we have no data to determine the condition and any recommendations on repair or maintenance. We suspect that some work will be required. Inspection of the roof should be undertaken within the next 12 months to determine if there are roof drainage issues that need to be addressed.



5.4 Steps to Roundhouse

ATELIER JV

The steps to the Roundhouse were given a revamp in 1983 with new timber nosings to the short flight constructed by Guy Weguelin. Guy used a 120x55 timber for the step nosing cut into the tread. Since that date a couple of steps have had new pieces inserted, but generally they remain as Guy laid them.



Figure 51: Plaque on steps



Figure 52: Steps

Roundhouse Steps Recommendations:

Whilst the Roundhouse steps timber nosings are quite weathered, there were no serious structural issues found, so we are not proposing any structural works to the steps.

5.5 Bake House Beneath Steps to Roundhouse

ATELIER JV

The bakehouse beneath the steps up to the Roundhouse is constructed in a mix of limestone and brick for the walls and has a barrel-vaulted brick arch ceiling. The floor is a compressed dirt floor. The bakehouse has single door on the North side of the Roundhouse entry stairs with one step down into the room and a chimney flue which connects up with the left hand side front elevation pier of the Roundhouse above to exit out at top of parapet level above the Roundhouse roof.

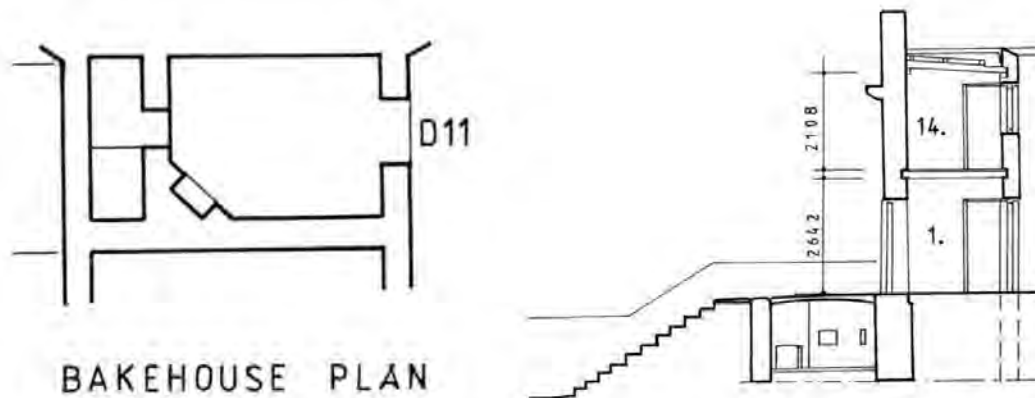


Figure 53: Roundhouse Bake House plan and section by R. McK. Campbell 1984

ATELIER JV

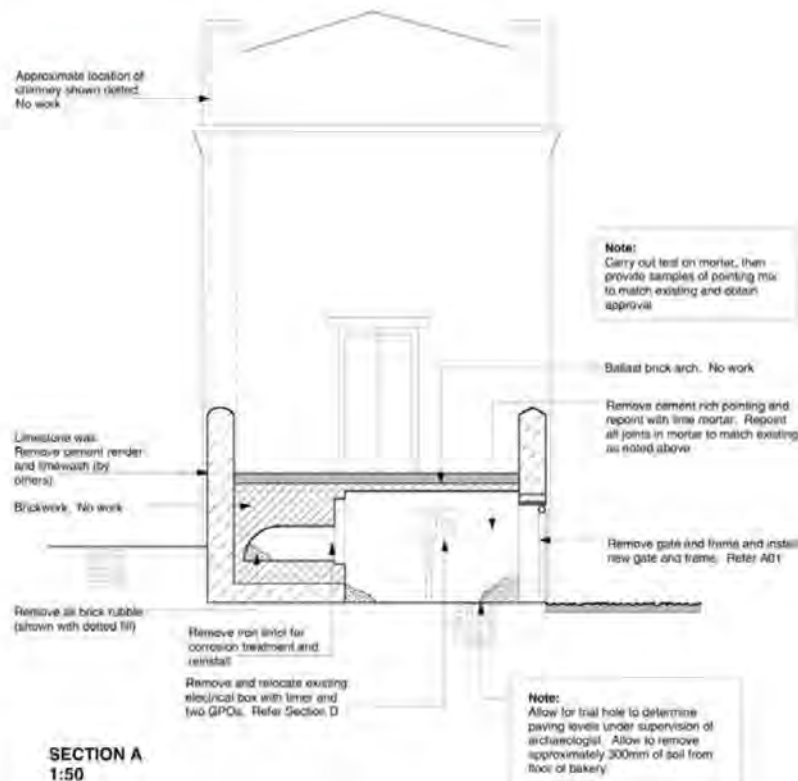


Figure 54: Roundhouse Conservation Drawings, 2002 by Considine Griffiths indicating chimney route.

The bakehouse is currently a damp environment. Given its age there is obviously no waterproofing surrounding the underground room and the masonry is porous to allow water seeping down from the landing of the stairs above to get into the space.

This damp environment is promoting biological growth on the brickwork and limestone walls. Algae and lichen are covering some of the masonry surfaces that are frequently or continuously wet. Biological growth thrives when moisture and a food source such as calcium carbonate coincide in damp locations of buildings that are not exposed to constant sunlight. This is the case with the bakehouse. The masonry staying in a wet condition for extended periods of time and the biological growth will be causing the condition of the masonry to deteriorate over time, so more fretting of the brickwork and limestone can be expected if these conditions are allowed to continue in their current state.

ATELIER JV



Figure 55: Biological growth on bakehouse walls



Figure 56: Fretting brickwork



ATELIER JV



Figure 57: Evidence of recent fretting of bricks in oven roof

The current door on the bakehouse is a solid door well sealed. Whilst this part of the Roundhouse used to be on the tour for tourists visiting the site, we understand that these days it is not often opened up. This means that the water that arrives in the room is unable to dry out. We note from historic records that the door has been changed a number of times in the past and during some of those periods it has been an open slatted gate. See example from 1998 below:



Figure 59: 1998 gate



Figure 58: Current sealed door

With a slatted gate arrangement there would be sufficient air flow to enable the room to dry out particularly if the flue is still clear enough to allow air movement out that route too.

ATELIER / JV

The perspex interpretation boards inside the bakehouse that are located close to the masonry are not helping with this situation as they further prevent air movement from being able to dry the masonry out.



Figure 60: Bakehouse interpretive perspex screens

Bakehouse Recommendations:

In the short term we recommend that the volunteers open up the bakehouse door for extended periods each day they are at the Roundhouse in order to allow the room to dry out.

Better ventilation needs to be introduced to this room. Ideally the door should be removed and an open gate used in its place to allow free air movement at all times. Once this is implemented and the room dries out, then the walls can be cleaned to remove the biological growth.

5.6 Roundhouse Mast

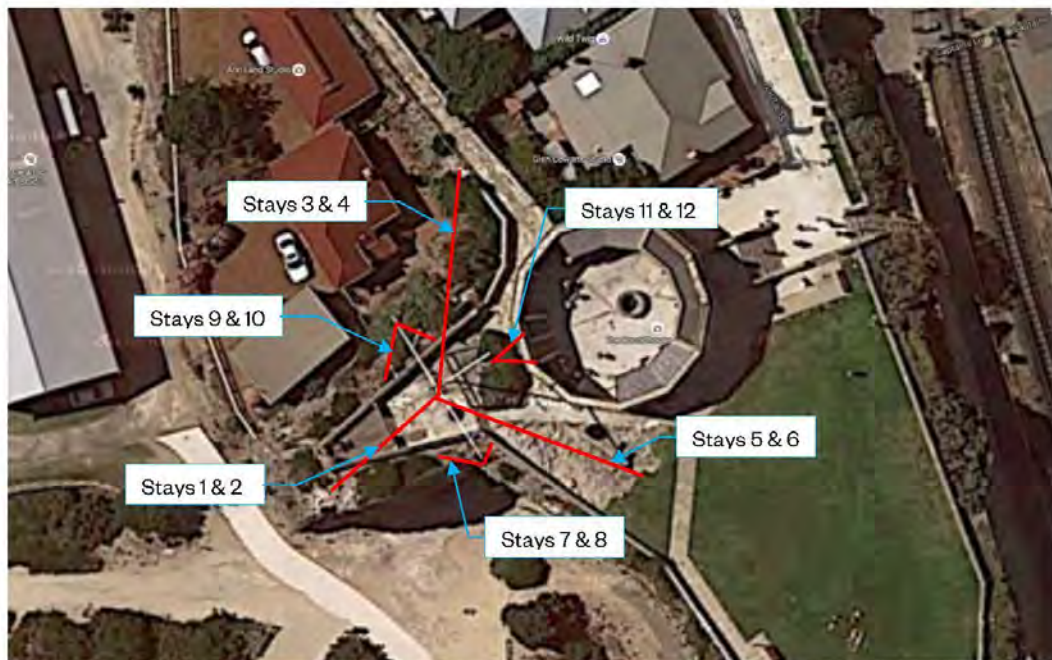
Atelier JV conducted inspections and reported on the condition of parts of the Roundhouse Mast in 2016. Copies of our reports are available from the link below:

- ✓ Roundhouse Mast Structural Condition Report dated 21/03/16 report #: P15181-01
- ✓ Roundhouse Mast Stays Structural Condition Report dated 05/09/16 report #: P15181-02

<https://www.dropbox.com/sh/7266vk539fwbtfm/AAD7SLTUqcdpdltnG1fxo6Y2a?dl=0>

The mast is constructed from a tapered, hollow steel tubular construction which is embedded into the ground 800mm in a concrete encasement and tied down using using 6 primary and 6 secondary stainless steel guide wire stays.

ATELIER JV



The guide wires were refurbished in February 2016 by Raim Services based on a report by Brown Consulting, with Hilti providing load testing to newly installed anchors.

Anchor point for stays 1 & 2 is into natural rock. Adjacent to the anchor point is a pre-existing post that has also been set into the same piece of rock. This existing post is rusting over time and splitting the rock. There is no evidence that the split rock is having an effect on the capacity of the anchor point and in our opinion it is not currently a safety concern for the anchor point. Our report of 2016 recommended re-inspection by an Engineer on a regular basis to monitor this and ensure that it does not become an issue. As part of this inspection we re-inspected the anchor point and saw no further signs of cracks that could cause issues to the anchor point.

2016 condition	2020 condition
	

Page 45

ATELIER JV

In the Roundhouse Mast Structural Condition Report dated 21/03/16 report #: P15181-01 we commented on the condition of the mast in the location of the access hatch at its base:

There is an access hatch at the base of the mast for access to the ropes that allow the lowering of the ball and flags. The ropes are stalled within the body of the mast passed down into the base. A large amount of rope is stored this way and takes a reasonable amount of time to lower into the mast.



Figure 61: Access hatch and rope stored in the mast

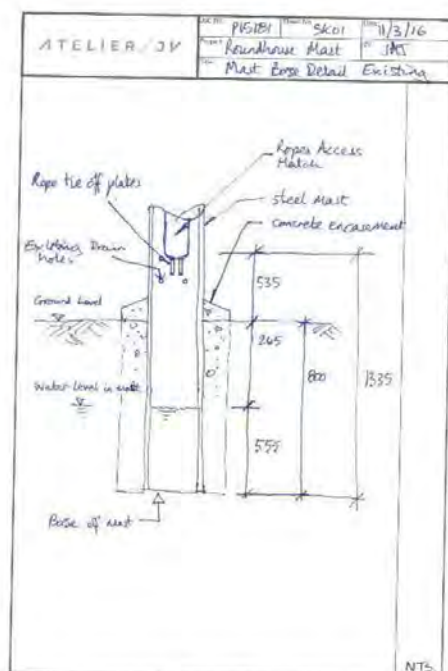


Figure 62: Existing Construction of base of mast

ATELIER JV

On removal of the rope it could be seen that the mast has water sat in the bottom of the base section of mast below ground. The water sat in the mast will not be doing the rope any good in terms of its expected life and the steel of the mast at the water line is at risk of corrosion over time.

Just below the base of the access hatch are two plates and a bar that facilitate the tie off for the pulleys used to lift the time ball. These have badly corroded where the water running down the ropes during periods of rain has been dripping into the base of the mast below over the years.



Figure 63: Corroded Pulley plates

Photos taken up and down the inside of the mast found that the condition of the inside of the mast walls was good considering the water ingress and no signs of rust were observed looking upwards from the access hatch, with only minor rust observed looking downwards. The condition of the mast steel walls has not changed since our 2016 inspection.

Roundhouse Mast Recommendations:

The mast is in a good structural condition for its age, but there are a number of measures that we believe should be implemented to extend its life:

1. Replace the rusted pulley plates welding new plates into the mast to match the existing
2. Fill the base of the mast with cementitious grout to the level of the drain holes to prevent it filling up with water
3. Drill out the two drain holes to 20mm to allow them to drain adequately
4. Construct a rope locker to enable the rope that was stored in the mast to be stored alongside. This may need to be attached to the mast access hatch in some way to prevent the rope from being able to be tampered with by the general public

The detail below shows the proposed remedial measures.

ATELIER JV

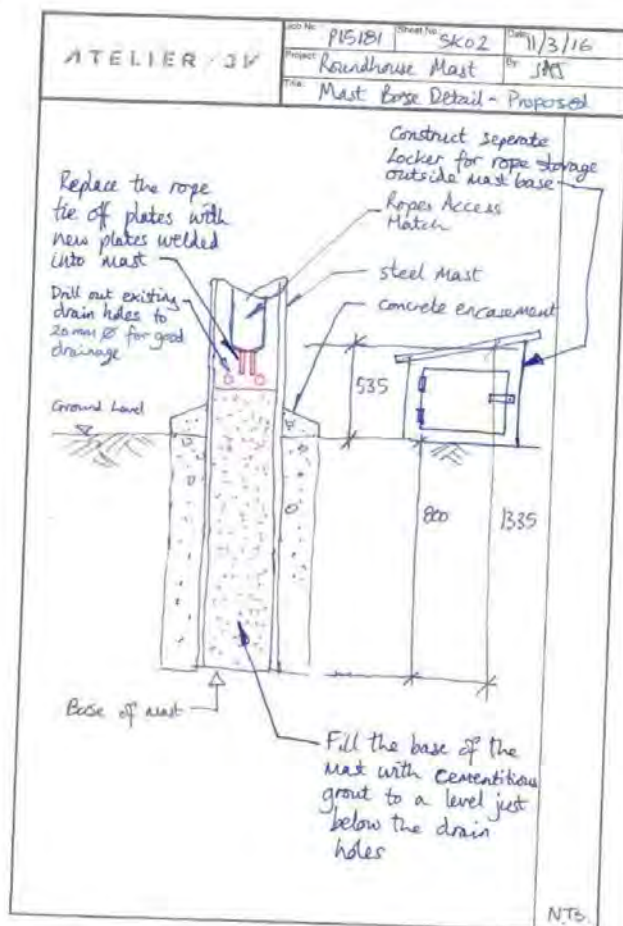


Figure 64: Proposed works to base on mast

5.7 Parapet walls to Arthur Head Cliffs

The parapet walls surrounding the gunners placement and, the mast and the Arthur Head park and pathway areas are a low level limestone wall with a mortar capping, typically 450mm thick. These walls are in a similar situation to the walls of the roundhouse. We do not have any dates on works to these walls, but the mortar used appears to be cement based and liberally applied at the joints and capping.

ATELIER JV



Figure 65: Arthur Head parapet walls

The mortar has caused some substantial pitting of the limestone surface in some locations eroding the limestone blocks into a caved face:



Figure 66: Weathered limestone walls

Arthur Head Walls Recommendations:

The condition of the walls is poor in places, but generally ok and structurally sound. The presence of cement mortar will cause the limestone to continue to degrade and we therefore recommend re-pointing the walls with a lime mortar and repairing the wall where severely eroded. There is a great length to the walls so this work would have quite high costs associated with it and may need to be staged to meet budgetary limits. It would not be unreasonable to expect this to be spread out over 10 years.

5.8 Steps to the High Street

The steps leading down from Arthur Head to the High Street have had the most alterations through their life. The original steps were constructed as a single flight down to the High Street, but in 1938 the whalers tunnel was cut through underneath the Roundhouse and emerged right where the steps came down. The steps were altered to split above the crown of the tunnel entrance into two flights that ran down either side of the tunnel in a Spanish steps style. This was then altered again when the railway was brought through going South from Fremantle. Both flights were demolished at this time and reconfigured to the single flight descending NW that we see today. Other minor alterations had occurred to these steps over the years such as the blocking off of flights and landings at different points in their history.

ATELIER JV

Steps from Arthur Head and Roundhouse to High Street	
1901 – two flights	1929 – North flight closed off
 PHOTOGRAPH Nº 7 BOUND HOUSE STEPS AND WHALERS TUNNEL 1901. COURTESY FREMANTLE CITY COUNCIL LOCAL HISTORY COLLECTION.	 State Library of Western Australia
1963 – prior to demolition, rendered	1966 - demolition
 State Library of Western Australia	 4199
1975 - reconfigured	2020 - cracked
	

The many changes over the years have lead to a mixture of masonry materials, with discontinuities and different foundation conditions for the steps. The steps have been rendered since at least the 60s and we suspect this is because the quality of the stones used for the walls of the steps were not the best.

ATELIER JV

Steps to High Street Recommendations:

The cracks in the render and walls of the steps is quite severe in many locations. They are, however relatively stable and not of major structural concern having been like this for thirty or forty years. Due to the way that the cracks have developed as a result of the changes and represent the lines of infills or major change, the remedy for these would be to take the wall apart locally and rebuild it as a homogenous wall. Deconstruction and rebuild would be required on quite a few areas to get thee walls up to a better standard.



Figure 67: Longstanding, severe, but stable crack to walls of steps

We recommend that the mortar is removed from the walls and that the limestone is repaired and re-pointed in order to allow the wall to breath. We are aware that this poses some risk since the condition of the wall underneath is not known, and we would suggest allowing a decent budget for repairs and rebuilding of the wall in areas other than the cracked locations if this were to be undertaken. A trial render removal would tell us more about the condition.

6. Conclusions and Recommendations

The Roundhouse and the surrounding structure are in reasonable condition and no major concerning structural issues were found from our survey. Careful conservation, maintenance and repair work will keep these structures looking good for a long time to come. The structures are generally inherently robust (with the Roundhouse being a dodecahedron for instance). A summary of our recommendations from this report are as follows:

1. Roundhouse Wall Recommendations:
 - ✓ Conduct mortar testing to determine the likely proportions of the various mortars
 - ✓ Remove all of the remaining cement mortar from the walls.
 - ✓ Re-pointing the walls using a 1 lime : 2 sand mix
 - ✓ Choose a sand that will more closely match the colour of the original mortar
 - ✓ All lime mortar joints showing signs of degradation should also be repointed
 - ✓ Budget for re-pointing works being needed every 15 to 20 years
 - ✓ The remaining steel embedments should be removed from the walls to prevent them from splitting the masonry locally around the steel as it continues to rust
 - ✓ We do not feel that any of the stones in the wall require replacement or re-facing at this stage
 - ✓ Wash the walls by captive head washing technique prior to re-pointing
 - ✓ Repeat captive head washing annually to reduce the risks of salts and airborne pollutants causing excessive weathering damage to the limestone.
2. Roundhouse Floor Recommendations:
 - ✓ Added timber can be removed
3. Roundhouse Roof Recommendations:
 - ✓ We have not been able to inspect the roof at this stage, so we have no data to determine the condition and any recommendations on repair or maintenance. We suspect that some work will be required. Inspect the roof within the next 12 months.
4. Roundhouse Steps Recommendations:
 - ✓ Whilst the Roundhouse steps timber nosings are quite weathered, there were no serious structural issues found, so we are not proposing any structural works to the steps.
5. Bakehouse Recommendations:
 - ✓ In the short term we recommend that the volunteers open up the bakehouse door for extended periods each day they are at the Roundhouse in order to allow the room to dry out.
 - ✓ Better ventilation needs to be introduced to this room. Ideally the door should be removed and an open gate used in its place to allow free air movement at all times. Once this is implemented and the room dries out, then the walls can be cleaned to remove the biological growth.
6. Roundhouse Mast Recommendations:
 - ✓ Replace the rusted pulley plates welding new plates into the mast to match the existing
 - ✓ Fill the base of the mast with cementitious grout to the level of the drain holes to prevent it filling up with water
 - ✓ Drill out the two drain holes to 20mm to allow them to drain adequately
 - ✓ Construct a rope locker to enable the rope that was stored in the mast to be stored alongside. This may need to be attached to the mast access hatch in some way to prevent the rope from being able to be tampered with by the general public
7. Arthur Head Walls Recommendations:
 - ✓ Re-point the walls with a lime mortar and repair the wall where severely eroded.
 - ✓ There is a great length to the walls so this work would have quite high costs associated with it and may need to be staged to meet budgetary limits. It would not be unreasonable to expect this to be spread out over 10 years.
8. Steps to High Street Recommendations:
 - ✓ The cracks in the render and walls of the steps is quite severe in many locations. They are, however, relatively stable and not of major structural concern having been like this for thirty or forty years. Due to the way that the cracks have developed as a result of the changes and represent the lines of infills or major change, the remedy for these would be to take the wall apart locally and rebuild it as a

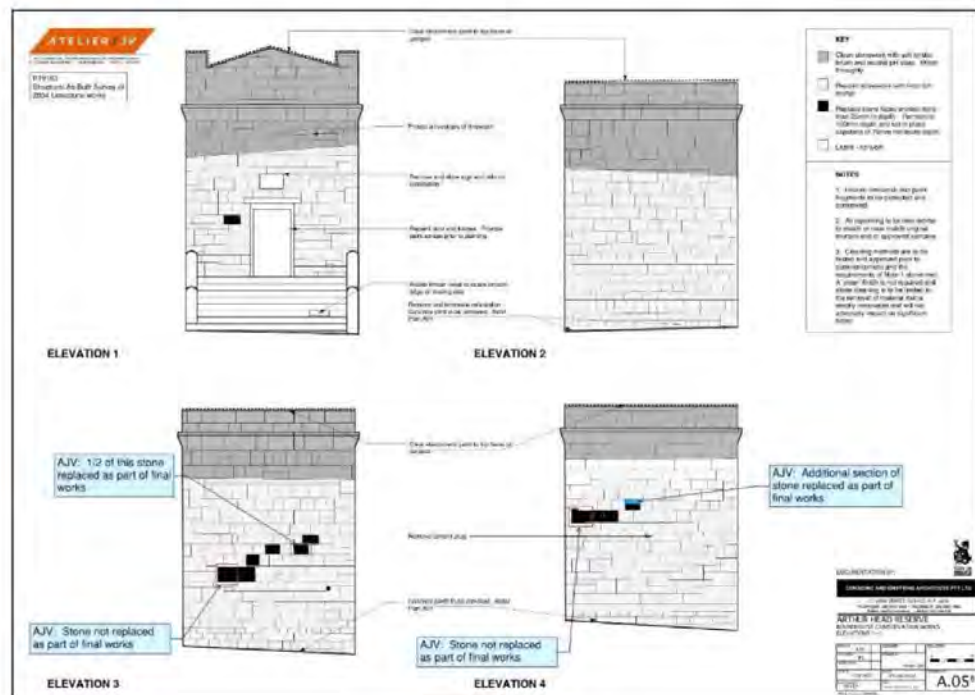
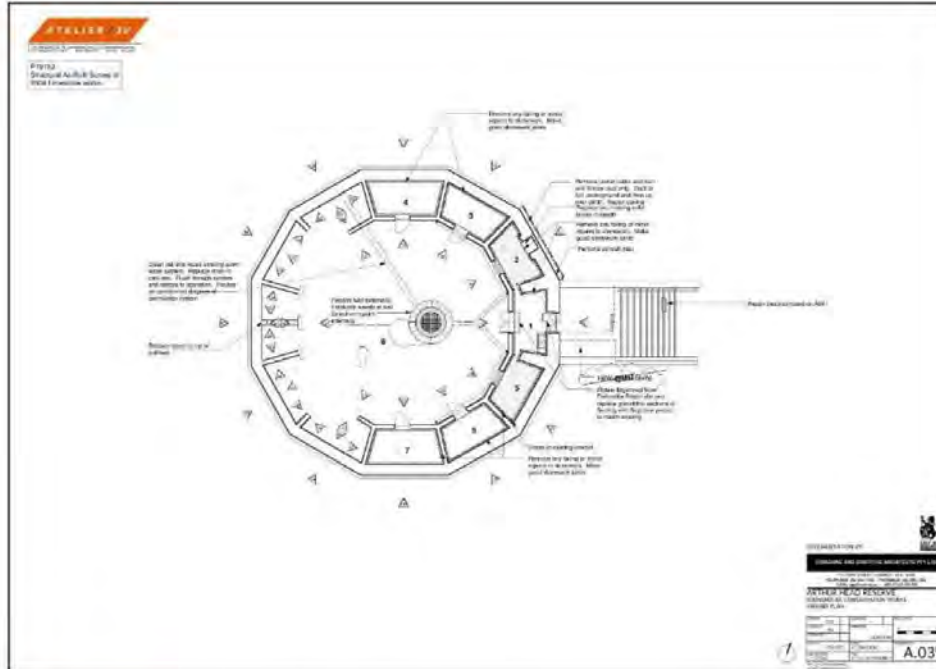
ATELIER JV

homogenous wall. Deconstruction and rebuild would be required on quite a few areas to get these walls up to a better standard

- ✓ We recommend that the mortar is removed from the walls and that the limestone is repaired and re-pointed in order to allow the wall to breath
- ✓ A trial render removal of render should be undertaken above the tunnel at the arch to tell us more about the condition of the wall beneath the render.

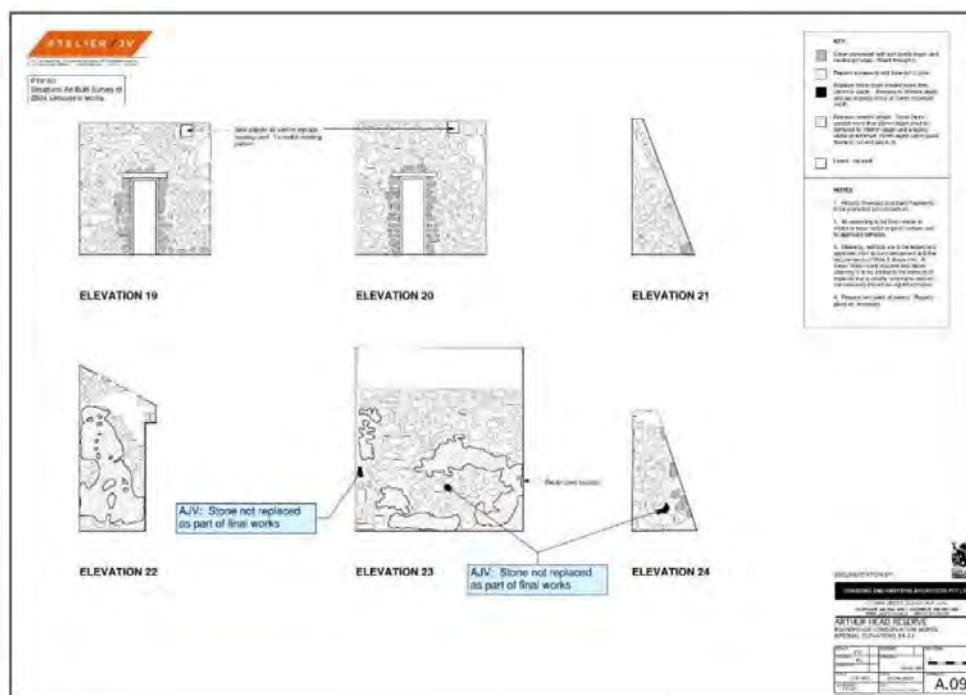
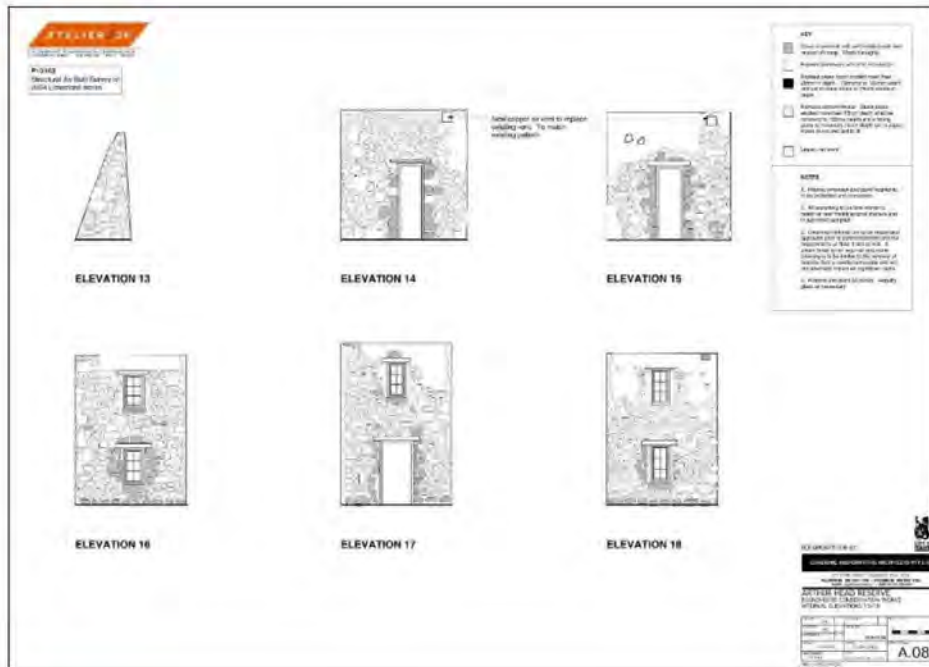
ATELIER/JV

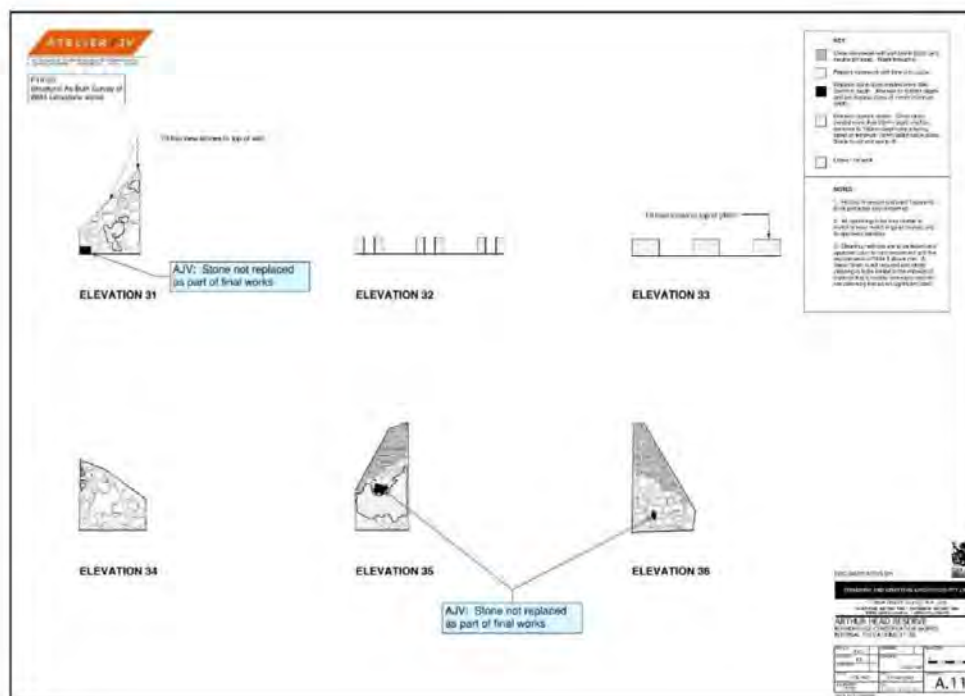
Appendix A – Structural As-Built Survey of 2004 Limestone works





ATELIER JV





ATELIER JV

Appendix B – Calculations

ATELIER/JV

P19163 T 003 Timber Member Design v6.1.xls

Atelier JV Consulting Engineers		ATELIER/JV	
Timber Member Design (AS1720.1 : Amdt 4)		v6.1	14/06/2014
Project: Roundhouse Fremantle		Job No.: P19163	
Client: City of Fremantle		Designer: SAJ	
Location: Arthur Head		Date: 31/01/2020	
Reference: Exfg		Sheet No.: 1	

Floor Joists

Key: Input Output

• Structure Type:
Type = Primary Structures other than Houses

• Member for Design:
Span, L = 1900 mm
Load width, S = 550 mm
A = 1.05 m²

Span on Pitch, Lp = 1900 mm
Pitch = 0 °

• Loading:

		SLS (kPa)	ULS (kPa)
Dead Loads	Floor Boards	0.15	
	Joists	0.12	
	Ceiling and Services	0.05	
		0.32 x 1.2 =	0.384
Live Loads	UDL	5 x 1.5 =	7.50
	PL	3 x 1.5 =	4.50 kN
Wind Loads	Uplift	0.41	0.6
	Pressure	0.41	0.6

Load case 1:	1.5Q + 1.2G =	5.32	7.88 kPa
Load case 2:	1.35G =	0.32	0.43 kPa
Load case 3:	1.2G + Wd =	0.73	0.98 kPa
Load case 4:	0.9G + Wu =	-0.12	-0.31 kPa
Load Case 5:	1.5Q(PL) + 1.2G		
	Max Load =	5.32	7.88 kPa
	UDL, w =	2.93	4.34 kN/m
	Min Load =	-0.12	-0.31 kPa
	UDL, w =	-0.07	-0.17 kN/m

• Bending Moment:

	M*	k _t	M* / k _t
Load case 1a:	ULS: G + Q(UDL) M* = w L ² /8 M* = 1.96 kNm	k _t = 0.80	2.45
Load case 1a:	ULS: G + ψ _t Q(UDL) ψ _t = 0.40 Long Term Live Load Factor M* = w L ² /8 M* = 0.84 kNm	k _t = 0.57	1.47
Load case 2:	ULS: G M* = w L ² /8 M* = 0.11 kNm	k _t = 0.57	0.19
Load case 3:	ULS: Wind Pressure M* = w L ² /8 M* = 0.24 kNm	k _t = 1.15	0.21
Load case 4:	ULS: Wind Suction M* = w L ² /8 M* = 0.08 kNm	k _t = 1.15	0.07
Load Case 5:	ULS: G + Q(PL) M* = w L ² /8 + PL/4 M* = 2.23 kNm	k _t = 0.94	2.38
Max:	M* = 2.23 kNm		2.45
Design:	M* = 1.96 kNm		

Page 1 of 3

Page 61

ATELIER/JV

P19163 T 003 Timber Member Design v6.1.xls

Atelier JV Consulting Engineers		ATELIER/JV
Timber Member Design (AS1720.1 : Amdt 4)		v6.1 14/06/2014
Project: Roundhouse Fremantle	Job No.: P19163	
Client: City of Fremantle	Designer: SAJ	
Location: Arthur Head	Date: 31/01/2020	
Reference: Exfg	Sheet No.: 1	

Member Design:

Capacity Factor:

		Bending Capacity factor, ϕ		
		Residential & Secondary Structures	Primary Structures	Post Disaster Structures
Visually graded	F	0.80	0.65	0.60
Machine-graded	MGP	0.90	0.75	0.70
Proof-graded	F	0.85	0.70	0.65
LVL		0.90	0.85	0.80

Ø Capacity Factor	F Grade	Graded	MGP	LVL
	0.65	Visually	0.75	0.85
	0.70	Proof		

Modification Factors:

k_1 Duration of Load	0.80
k_2 Moisture condition	1.00
k_3 Temperature	1.00

$k_2 = 1.0$, except structures erected in coastal regions of Queensland north of latitude 25°S, and all other regions of Australia north of latitude 16°S

Load Sharing, k_3 :

Number combined (ncom) =	1
Number of members (nmem) =	5
$ncom \times nmem =$	5
$g31 =$	1.00
$g32 =$	1.26

ncom is the number of elements that are effectively fastened together to form a single group
nmem is the number of members that are discretely spaced parallel to each other.

$$k_3 = \frac{g31 + (g32 - g31) [1 - 2S/L]}{1.0} > 1.0$$

k_3 Load Sharing	MGP & F Grade: 1.11
--------------------	---------------------

k_3	LVL: 1.00
-------	-----------

Stability, k_4 :

$S_1 =$	9.64
$\phi_s =$	1.01
k_4 Stability	1.00

For $\phi_s \times S_1 \leq 10$
For $10 \leq \phi_s \times S_1 \leq 20$
For $\phi_s \times S_1 \geq 20$

$$k_{12} = 1.0$$

$$k_{12} = 1.5 - 0.05 \phi_s \times S_1$$

$$k_{12} = 200 / (\phi_s \times S_1)^2$$

Member depth, $d = 120$ mm

Member Sizing:

Strength Design:

Grade of Timber =	F Grade
Bending Capacity Factor, $\phi =$	Visually
$M^* =$	F8
Bending Strength, $(f^* b) =$	0.65
	1.96 kNm
Required Section modulus, $Z =$	22
	MPa
Width, $W =$	154164
	mm ³
Depth, $d =$	65
	mm
	119
	mm

ATELIER JV

P19163 T 003 Timber Member Design v6.1.xls

Atelier JV Consulting Engineers		ATELIER JV
Timber Member Design (AS1720.1 : Amdt 4)		v6.1 14/06/2014
Project: Roundhouse Fremantle	Job No.: P19163	
Client: City of Fremantle	Designer: SAJ	
Location: Arthur Head	Date: 31/01/2020	
Reference: Exfig	Sheet No.: 1	

Serviceability Deflection Design:

Dead and Live with Creep:

Max deflection =	Span / 250	
=	7.6	mm
F Grade		
Grade of Timber =	F8	
W_{dead} =	2.93	kN/m
Elastic modulus, E =	7900	MPa
Dead Loads W_{DL} =	0.18	kN/m
Duration factor, f_2 =	2.00	
Live Loads W_{LL} =	2.75	kN/m
Duration factor, f_2 =	1.25	
qd. Second Moment of Area, I =	10710122	mm ⁴
Width, W =	65	mm
Depth, d =	125	mm

Wind (Instantaneous):

Max deflection =	Span / 250	
=	7.6	mm
F Grade		
Grade of Timber =	F8	
Elastic modulus, E =	7900	MPa
Wind Load W_{wind} =	0.07	kN/m
$W_{suction}$ =	0.40	kN/m
W_{over} =	0.40	kN/m
Duration factor, f_2 =	1.00	
qd. Second Moment of Area, I =	1131636	mm ⁴
Width, W =	65	mm
Depth, d =	59	mm

Check Designed Size:

Width, W =	65	mm
Depth, d =	120	mm
Dead Loads		
Duration factor, f_2 =	2.00	
Second Moment of Area, I =	9360000	mm ⁴
G =	0.18	kN/m
Dead Load Deflection =	0.8	mm
Span / Deflection =	2352	
Live Loads		
Duration factor, f_2 =	1.25	
Second Moment of Area, I =	9360000	mm ⁴
Q =	2.75	kN/m
Live Load Deflection =	7.9	mm
Span / Deflection =	241	
Total Dead and Live		
Max Deflection =	8.7	mm
Span / Deflection =	218	
Wind Load		
Duration factor, f_2 =	1.00	
Second Moment of Area, I =	9360000	mm ⁴
$W_{suction}$ =	0.07	kN/m
W_{over} =	0.40	kN/m
W_{wind} =	0.40	kN/m
Wind Load Deflection =	0.9	mm
Span / Deflection =	2068	

Size =	65 mm x	120 mm	Jarraah Joists at 550 ctre
--------	---------	--------	----------------------------

ATELIER JV

P19163 T 003 Timber Member Design v6.1.xls

Atelier JV Consulting Engineers		ATELIER JV	
Timber Member Design (AS1720.1 : Amdt 4)		v6.1 14/06/2014	
Project: Roundhouse Fremantle		Job No.: P19163	
Client: City of Fremantle		Designer: SAJ	
Location: Arthur Head		Date: 31/01/2020	
Reference: Exfg		Sheet No.: 2	

Stair Trimmer - side of stair

Key:

• Structure Type:
Type =

• Member for Design:
Span, L = mm
Load width, S = mm
A = m²

Span on Pitch, Lp = mm
Pitch =

• Loading:

		SLS (kPa)	ULS (kPa)
Dead Loads	Floor Boards	0.15	
	Joists	0.12	
	Ceiling and Services	0.05	
		0.32 x 1.2 =	0.384
Live Loads	UDL	5 x 1.5 =	7.50
	PL	3 x 1.5 =	4.50 kN
Wind Loads	Uplift	0.41	0.6
	Pressure	0.41	0.6

Load case	Formula	SLS (kPa)	ULS (kPa)
Load case 1:	1.5Q + 1.2G =	5.32	7.88 kPa
Load case 2:	1.35G =	0.32	0.43 kPa
Load case 3:	1.2G + Wd =	0.73	0.98 kPa
Load case 4:	0.9G + Wu =	-0.12	-0.31 kPa
Load Case 5:	1.5Q(PL) + 1.2G		
	Max Load =	5.32	7.88 kPa
	UDL, w =	3.72	5.52 kN/m
	Min Load =	-0.12	-0.31 kPa
	UDL, w =	-0.08	-0.22 kN/m

• Bending Moment:

Load case	Formula	M* (kNm)	k ₁	M* / k ₁
Load case 1a:	ULS: G + Q(UDL)			
	M* = w L ² / 8	1.17 kNm	0.80	1.46
Load case 1a:	ULS: G + ψ _L Q(UDL)			
	ψ _L = 0.40 Long Term Live Load Factor M* = w L ² / 8	0.50 kNm	0.57	0.88
Load case 2:	ULS: G			
	M* = w L ² / 8	0.06 kNm	0.57	0.11
Load case 3:	ULS: Wind Pressure			
	M* = w L ² / 8	0.15 kNm	1.15	0.13
Load case 4:	ULS: Wind Suction			
	M* = w L ² / 8	0.05 kNm	1.15	0.04
Load Case 5:	ULS: G + Q(PL)			
	M* = w L ² / 8 + PL / 4	1.52 kNm	0.94	1.62
Max:	M* =	1.52 kNm		1.62
Design:	M* =	1.52 kNm		

• Load Duration Factor:

Page 4 of 3

Page 64

ATELIER/JV

P19163 T 003 Timber Member Design v6.1.xls

Atelier JV Consulting Engineers		ATELIER/JV	
Timber Member Design (AS1720.1 : Amdt 4)		v6.1	14/06/2014
Project: Roundhouse Fremantle	Job No.: P19163		
Client: City of Fremantle	Designer: SAJ		
Location: Arthur Head	Date: 31/01/2020		
Reference: Exfg	Sheet No.: 2		

Member Design:

Capacity Factor:

		Bending Capacity factor, ϕ		
		Residential & Secondary Structures	Primary Structures	Post Disaster Structures
Visually graded	F	0.80	0.65	0.60
Machine-graded	MGP	0.90	0.75	0.70
Proof-graded	F	0.85	0.70	0.65
LVL		0.90	0.85	0.80

Ø Capacity Factor	F Grade	Graded	MGP	LVL
	0.65	Visually	0.75	0.85
	0.70	Proof		

Modification Factors:

k_1 Duration of Load	0.94
k_2 Moisture condition	1.00
k_3 Temperature	1.00

$k_2 = 1.0$, except structures erected in coastal regions of Queensland north of latitude 25°S, and all other regions of Australia north of latitude 16°S

Load Sharing, k_3 :

Number combined (ncom) =	1
Number of members (nmem) =	5
$ncom \times nmem =$	5
$g31 =$	1.00
$g32 =$	1.26

ncom is the number of elements that are effectively fastened together to form a single group
nmem is the number of members that are discretely spaced parallel to each other.

$$k_3 = \frac{g31 + (g32 - g31) [1 - 2S/L]}{1.0} > 1.0$$

k_3 Load Sharing	MGP & F Grade: 1.00
--------------------	---------------------

k_3	LVL: 1.00
-------	-----------

Stability, k_4 :

$S_1 =$	9.64
$\phi_1 =$	1.01
k_4 Stability	1.00

For $\phi_1 \times S_1 \leq 10$
For $10 \leq \phi_1 \times S_1 \leq 20$
For $\phi_1 \times S_1 \geq 20$

$k_{12} = 1.0$
 $k_{12} = 1.5 - 0.05 \phi_1 \times S_1$
 $k_{12} = 200 / (\phi_1 \times S_1)^2$

Member depth, $d = 120$ mm

Member Sizing:

Strength Design:

Grade of Timber =	F Grade
Bending Capacity Factor, $\phi =$	Visually
$M^* =$	F8
Bending Strength, $(f^* b) =$	0.65
	1.52 kNm
Required Section modulus, $Z =$	22
	MPa
Width, $W =$	113025
	mm ³
Depth, $d =$	65
	mm
	102
	mm

ATELIER JV

P19163 T 003 Timber Member Design v6.1.xls

Atelier JV Consulting Engineers		ATELIER JV
Timber Member Design (AS1720.1 : Amdt 4)		v6.1
Project: Roundhouse Fremantle		Job No.: P19163
Client: City of Fremantle		Designer: SAJ
Location: Arthur Head		Date: 31/01/2020
Reference: Exfig		Sheet No.: 2

Serviceability Deflection Design:

Dead and Live with Creep:

Max deflection =	Span / 250	=	5.2	mm
F Grade				
Grade of Timber =	F8			
W_{dead} =	3.72	kN/m		
Elastic modulus, E =	7900	MPa		
Dead Loads	W_{DL} =	0.22	kN/m	
Duration factor, J_2 =	2.00			
Live Loads	W_{LL} =	3.50	kN/m	
Duration factor, J_2 =	1.25			
qd. Second Moment of Area, I =	4366154	mm ⁴		
Width, W =	65	mm		
Depth, d =	93	mm		

Wind (Instantaneous):

Max deflection =	Span / 250	=	5.2	mm
F Grade				
Grade of Timber =	F8			
Elastic modulus, E =	7900	MPa		
Wind Load	W_{wind} =	0.08	kN/m	
$W_{suction}$ =	0.51	kN/m		
W_{over} =	0.51	kN/m		
Duration factor, J_2 =	1.00			
qd. Second Moment of Area, I =	461329	mm ⁴		
Width, W =	65	mm		
Depth, d =	44	mm		

Check Designed Size:

Width, W =	65	mm		
Depth, d =	120	mm		
Dead Loads	Duration factor, J_2 =	2.00		
Second Moment of Area, I =	9360000	mm ⁴		
G =	0.22	kN/m		
Dead Load Deflection =	0.2	mm		
Span / Deflection =	5770			
Live Loads	Duration factor, J_2 =	1.25		
Second Moment of Area, I =	9360000	mm ⁴		
Q =	3.50	kN/m		
Live Load Deflection =	2.2	mm		
Span / Deflection =	591			
Total Dead and Live	Max Deflection =	2.4	mm	
Span / Deflection =	536			
Wind Load	Duration factor, J_2 =	1.00		
Second Moment of Area, I =	9360000	mm ⁴		
$W_{suction}$ =	0.08	kN/m		
W_{over} =	0.51	kN/m		
Wind Load Deflection =	0.3	mm		
Span / Deflection =	5072			

Size =	65 mm x	120 mm	Jarrah Trimmer
--------	---------	--------	----------------

ATELIER JV

P19163 T 003 Timber Member Design v6.1.xls

Atelier JV Consulting Engineers		ATELIER JV	
Timber Member Design (AS1720.1 : Amdt 4)		v6.1	14/06/2014
Project: Roundhouse Fremantle		Job No.: P19163	
Client: City of Fremantle		Designer: SAJ	
Location: Arthur Head		Date: 31/01/2020	
Reference: Exfg		Sheet No.: 2	

Stair Trimmer - top of stair

Key:

• Structure Type:
Type =

• Member for Design:
Span, L = mm
Load width, S = mm
A = m²
Span on Pitch, Lp = mm
equivalent Pitch =

• Loading:

		SLS (kPa)	ULS (kPa)
Dead Loads	Floor Boards	0.15	
	Joists	0.12	
	Ceiling and Services	0.05	
		0.32 x 1.2 =	0.384
Live Loads	UDL	3 x 1.5 =	4.50
	PL	2.5 x 1.5 =	3.75 kN
Wind Loads	Uplift	0.41	0.6
	Pressure	0.41	0.6

Load case 1:	1.5Q + 1.2G =	3.32	4.88 kPa
Load case 2:	1.35G =	0.32	0.43 kPa
Load case 3:	1.2G + Wd =	0.73	0.98 kPa
Load case 4:	0.9G + Wu =	-0.12	-0.31 kPa
Load Case 5:	1.5Q(PL) + 1.2G		
	Max Load =	3.32	4.88 kPa
	UDL, w =	2.82	4.15 kN/m
	Min Load =	-0.12	-0.31 kPa
	UDL, w =	-0.10	-0.27 kN/m

• Bending Moment:

	M*	k _i	M* / k _i
Load case 1a:	ULS: G + Q(UDL) M* = w L ² /8 M* = 1.87 kNm	k _i = 0.80	2.34
Load case 1a:	ULS: G + ψ _i Q(UDL) ψ _i = 0.40 Long Term Live Load Factor M* = w L ² /8 M* = 0.84 kNm	k _i = 0.57	1.47
Load case 2:	ULS: G M* = w L ² /8 M* = 0.17 kNm	k _i = 0.57	0.29
Load case 3:	ULS: Wind Pressure M* = w L ² /8 M* = 0.38 kNm	k _i = 1.15	0.33
Load case 4:	ULS: Wind Suction M* = w L ² /8 M* = 0.12 kNm	k _i = 1.15	0.10
Load Case 5:	ULS: G + Q(PL) M* = w L ² /8 + PL/4 M* = 1.93 kNm	k _i = 0.94	2.05
Max:	M* = 1.93 kNm		2.34
Design:	M* = 1.87 kNm		

• Load Duration Factor:

Page 7 of 9

Page 67

ATELIER/JV

P19163 T 003 Timber Member Design v6.1.xls

Atelier JV Consulting Engineers		ATELIER/JV
Timber Member Design (AS1720.1 : Amdt 4)		v6.1 14/06/2014
Project: Roundhouse Fremantle	Job No.: P19163	
Client: City of Fremantle	Designer: SAJ	
Location: Arthur Head	Date: 31/01/2020	
Reference: Exfg	Sheet No.: 2	

Member Design:

Capacity Factor:

		Bending Capacity factor, ϕ		
		Residential & Secondary Structures	Primary Structures	Post Disaster Structures
Visually graded	F	0.80	0.65	0.60
Machine-graded	MGP	0.90	0.75	0.70
Proof-graded	F	0.85	0.70	0.65
LVL		0.90	0.85	0.80

Capacity Factor	F Grade	Graded	MGP	LVL
	0.65	Visually	0.75	0.85
	0.70	Proof		

Modification Factors:

k_1 Duration of Load	0.80
k_2 Moisture condition	1.00
k_3 Temperature	1.00

$k_2 = 1.0$, except structures erected in coastal regions of Queensland north of latitude 25°S, and all other regions of Australia north of latitude 16°S

Load Sharing, k_4 :

Number combined (ncom) =	1
Number of members (nmem) =	5
$ncom \times nmem =$	5
$g_{31} =$	1.00
$g_{32} =$	1.26

ncom is the number of elements that are effectively fastened together to form a single group
nmem is the number of members that are discretely spaced parallel to each other.

$$k_4 = \frac{g_{31} + (g_{32} - g_{31}) [1 - 2S/L]}{1.0} > 1.0$$

k_4 Load Sharing	MGP & F Grade: 1.03
--------------------	---------------------

k_4	LVL: 1.00
-------	-----------

Stability, k_{12} :

$S_1 =$	9.64
$\phi_s =$	1.01
k_{12} Stability	1.00

For $\phi_s \times S_1 \leq 10$
For $10 \leq \phi_s \times S_1 \leq 20$
For $\phi_s \times S_1 \geq 20$

$$k_{12} = 1.0$$

$$k_{12} = 1.5 - 0.05 \phi_s \times S_1$$

$$k_{12} = 200 / (\phi_s \times S_1)^2$$

Member depth, $d = 120$ mm

Member Sizing:

Strength Design:

Grade of Timber =	F Grade
Bending Capacity Factor, $\phi =$	Visually
$M^* =$	F8
Bending Strength, $(f' b) =$	0.65
	1.87 kNm
Required Section modulus, $Z =$	22
	159389 mm ³
Width, $W =$	65 mm
Depth, $d =$	121 mm

ATELIER JV

P19163 T 003 Timber Member Design v6.1.xls

Atelier JV Consulting Engineers		ATELIER JV
Timber Member Design (AS1720.1 : Amdt 4)		v6.1 14/06/2014
Project: Roundhouse Fremantle	Job No.: P19163	
Client: City of Fremantle	Designer: SAJ	
Location: Arthur Head	Date: 31/01/2020	
Reference: Exfig	Sheet No.: 2	

Serviceability Deflection Design:

Dead and Live with Creep:

Max deflection =	Span / 250	
=	7.6	mm
F Grade		
Grade of Timber =	F8	
W_{dead} =	2.82	kN/m
Elastic modulus, E =	7900	MPa
Dead Loads W_{DL} =	0.27	kN/m
Duration factor, J_2 =	2.00	
Live Loads W_{LL} =	2.55	kN/m
Duration factor, J_2 =	1.25	
qd. Second Moment of Area, I =	10546199	mm ⁴
Width, W =	65	mm
Depth, d =	125	mm

Wind (Instantaneous):

Max deflection =	Span / 250	
=	7.6	mm
F Grade		
Grade of Timber =	F8	
Elastic modulus, E =	7900	MPa
Wind Load W_{wind} =	0.10	kN/m
$W_{suction}$ =	0.62	kN/m
W_{over} =	0.62	kN/m
Duration factor, J_2 =	1.00	
qd. Second Moment of Area, I =	1748891	mm ⁴
Width, W =	65	mm
Depth, d =	69	mm

Check Designed Size:

Width, W =	65	mm
Depth, d =	120	mm
Dead Loads		
Duration factor, J_2 =	2.00	
Second Moment of Area, I =	9360000	mm ⁴
G =	0.27	kN/m
Dead Load Deflection =	1.2	mm
Span / Deflection =	1522	
Live Loads		
Duration factor, J_2 =	1.25	
Second Moment of Area, I =	9360000	mm ⁴
Q =	2.55	kN/m
Live Load Deflection =	7.3	mm
Span / Deflection =	260	
Total Dead and Live		
Max Deflection =	8.6	mm
Span / Deflection =	222	
Wind Load		
Duration factor, J_2 =	1.00	
Second Moment of Area, I =	9360000	mm ⁴
$W_{suction}$ =	0.10	kN/m
W_{over} =	0.62	kN/m
W_{wind} =	0.62	kN/m
Wind Load Deflection =	1.4	mm
Span / Deflection =	1338	

Size =	65 mm x	120 mm	Jarrah Trimmer
--------	---------	--------	----------------

ATELIER/JV

Appendix C – AJV Proposed Roundhouse Mortar Sample Test Locations

ATELIER / JV



ATELIER / JV



Page 72

ATELIER / JV



ATELIER / JV



Page 74

ATELIER / JV



ATELIER / JV





ATELIER / JV



Page 78

ATELIER / JV



ATELIER JV



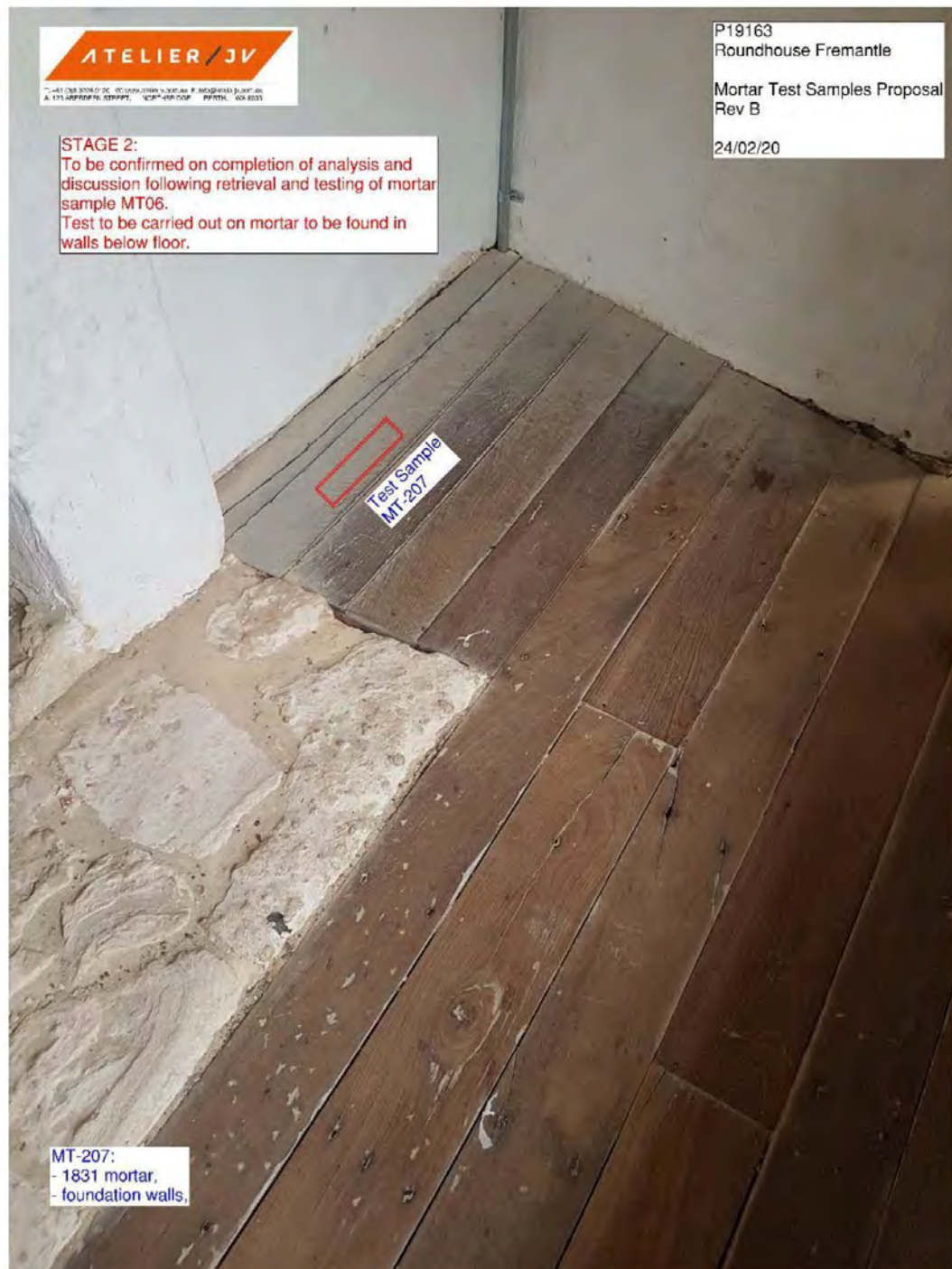
ATELIER / JV



ATELIER / JV



ATELIER / JV





ATELIER / JV



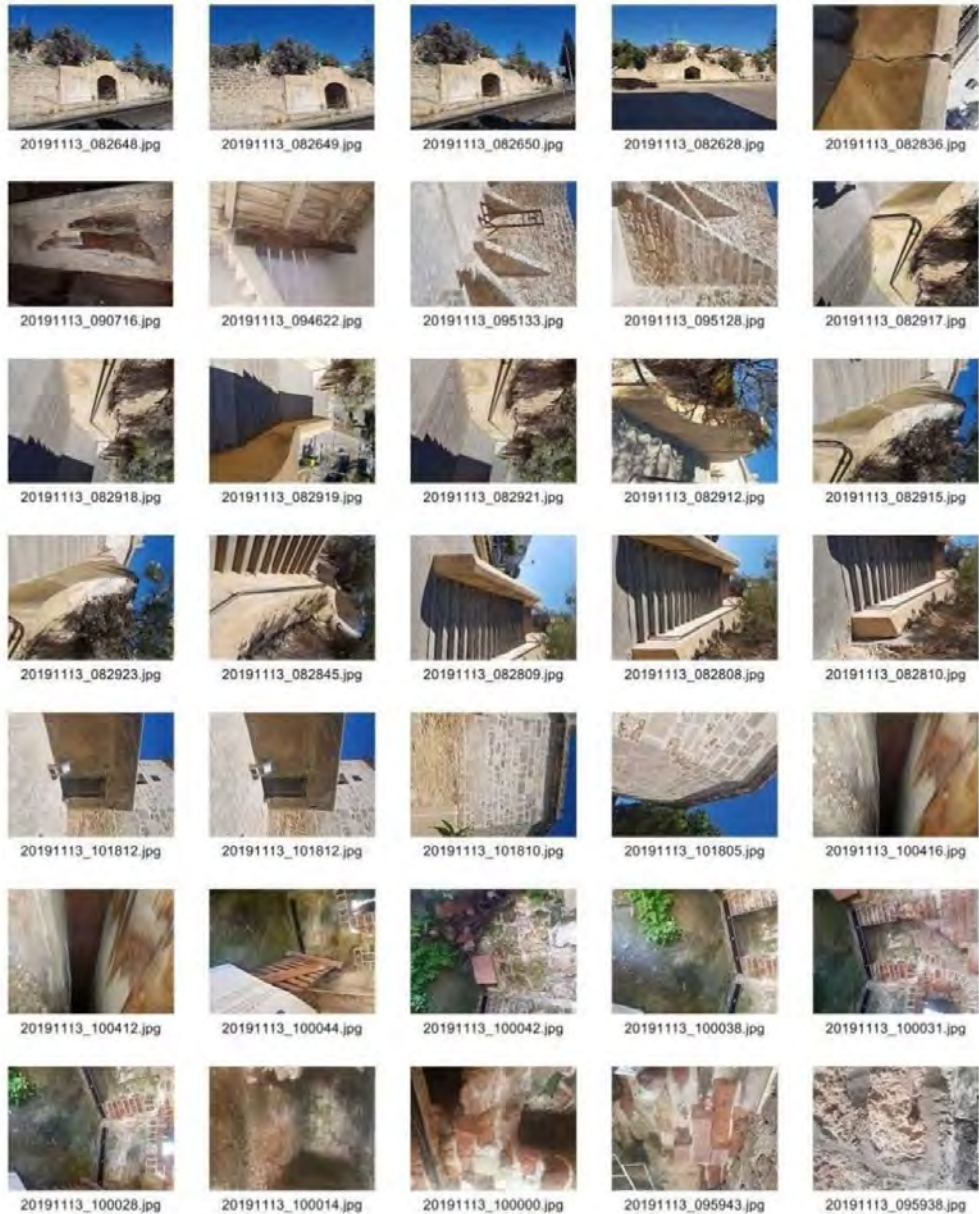


ATELIER JV

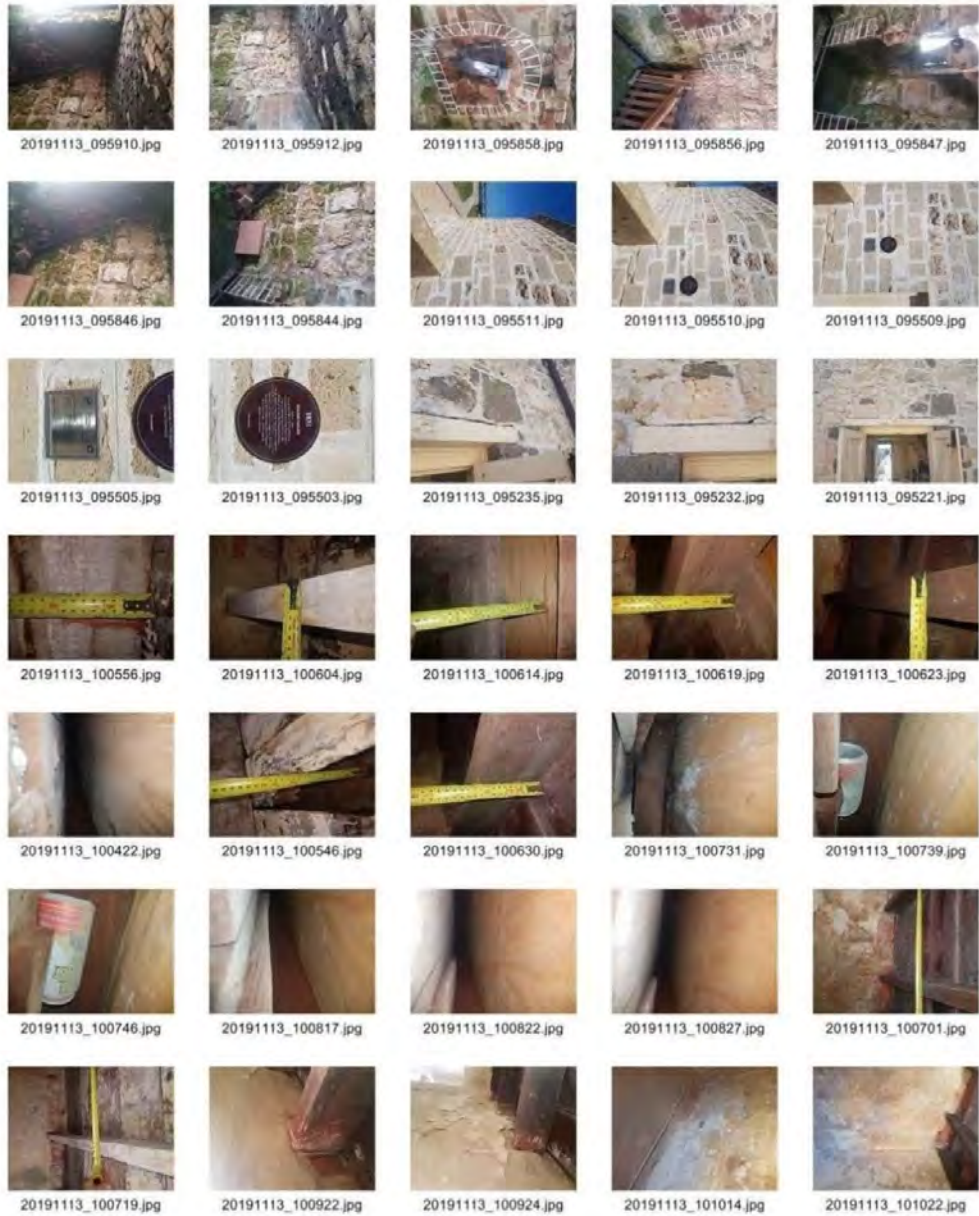
Appendix D - Photographic Record (Thumbnails)

Page 87

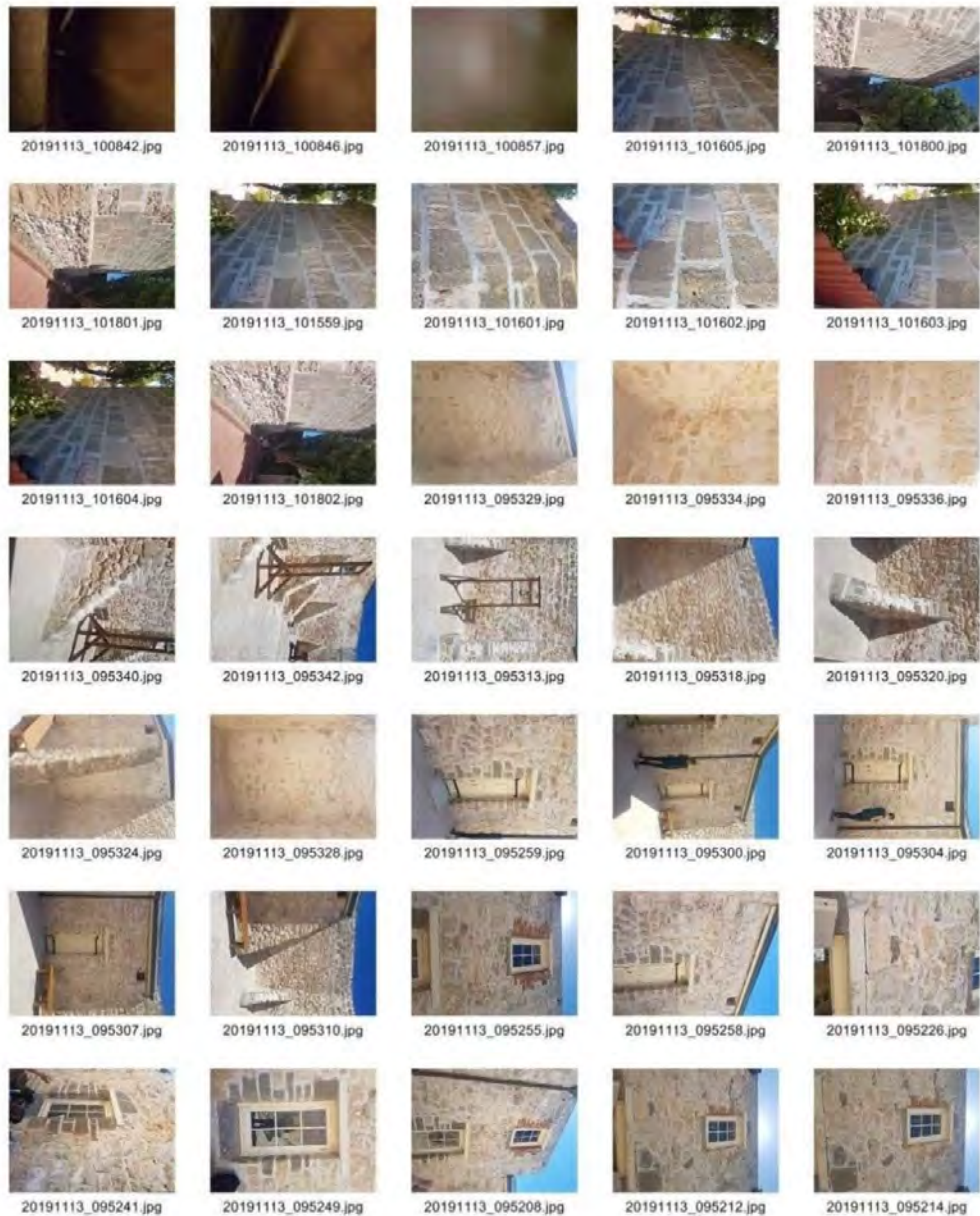
ATELIER JV



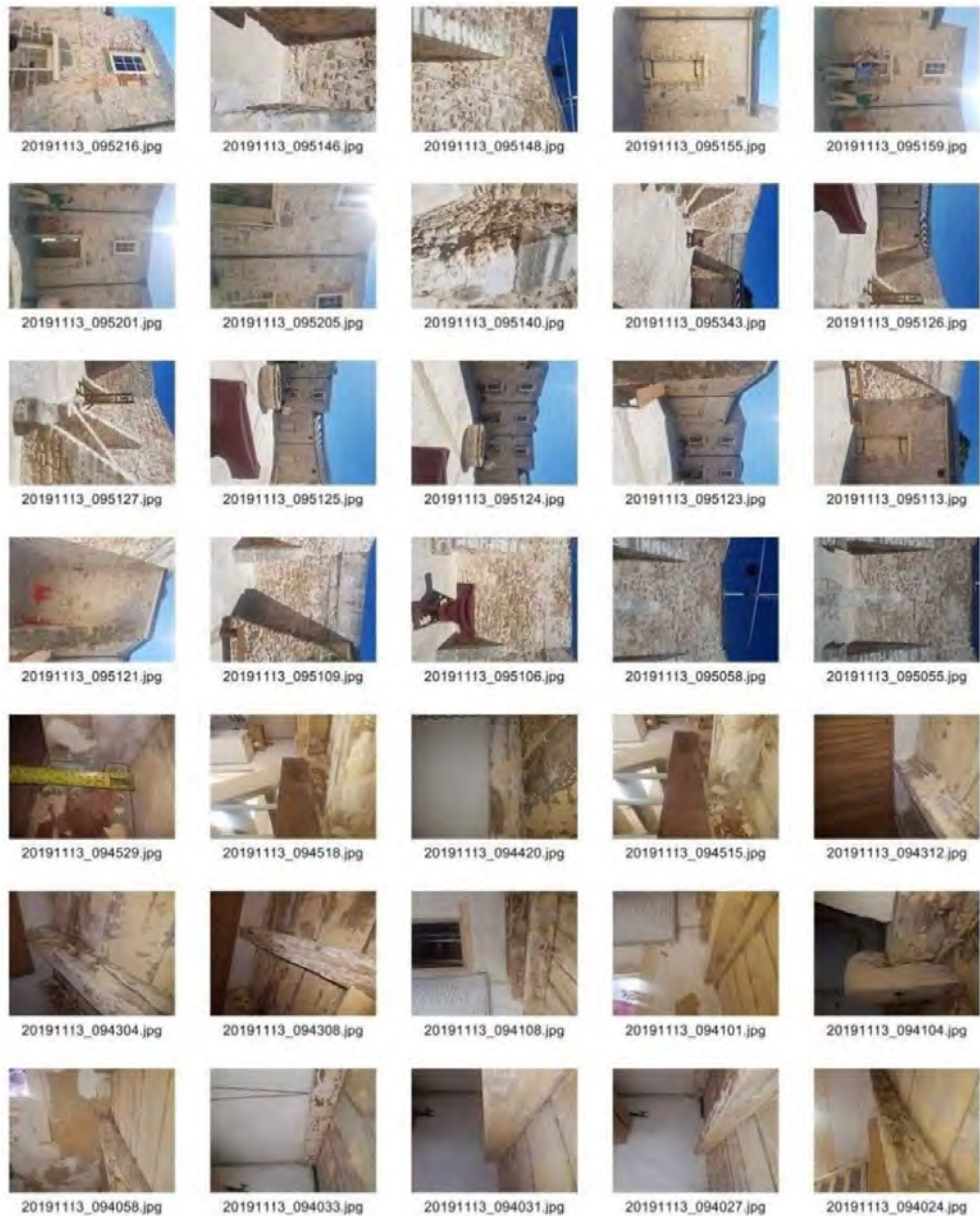
ATELIER JV



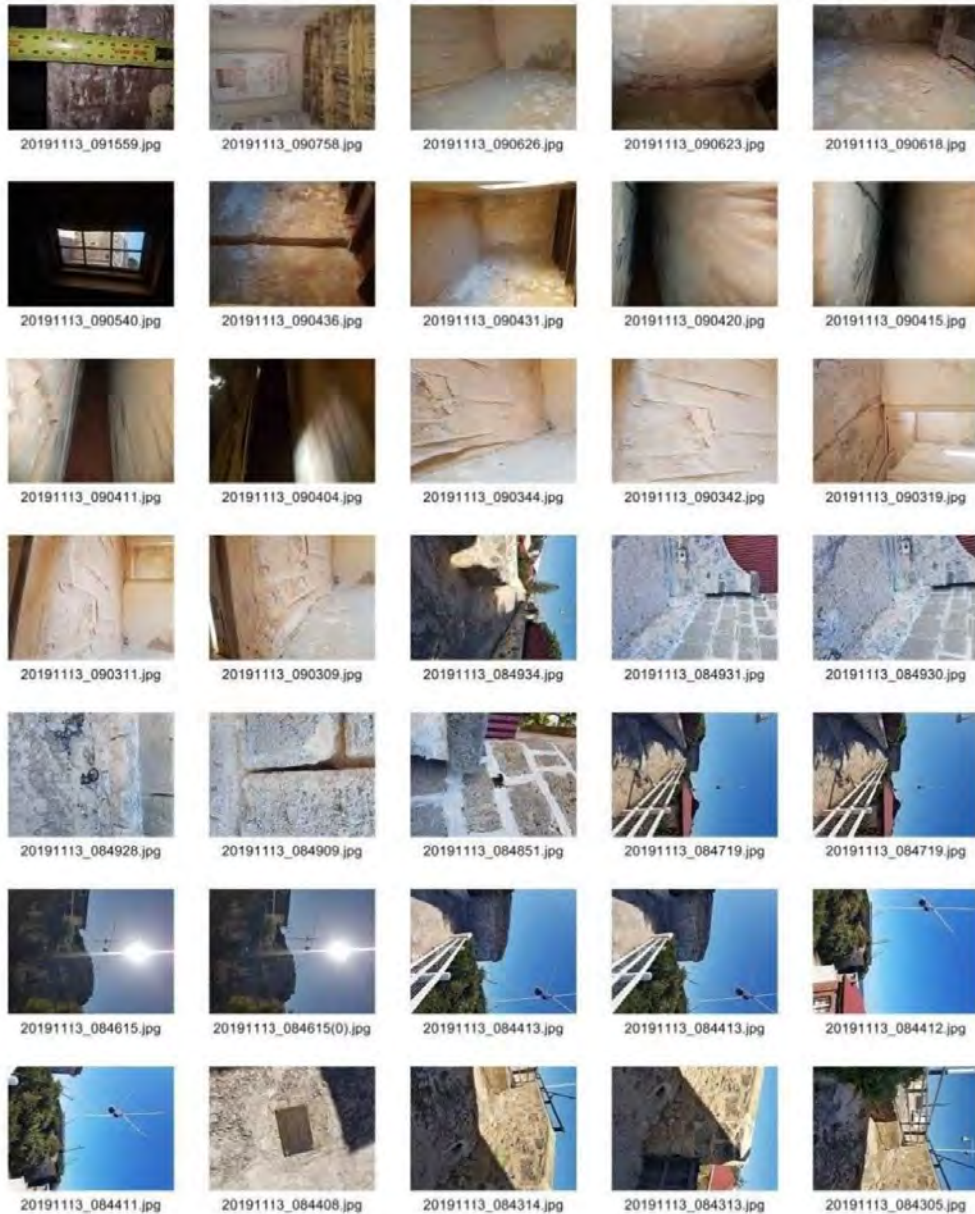
ATELIER JV



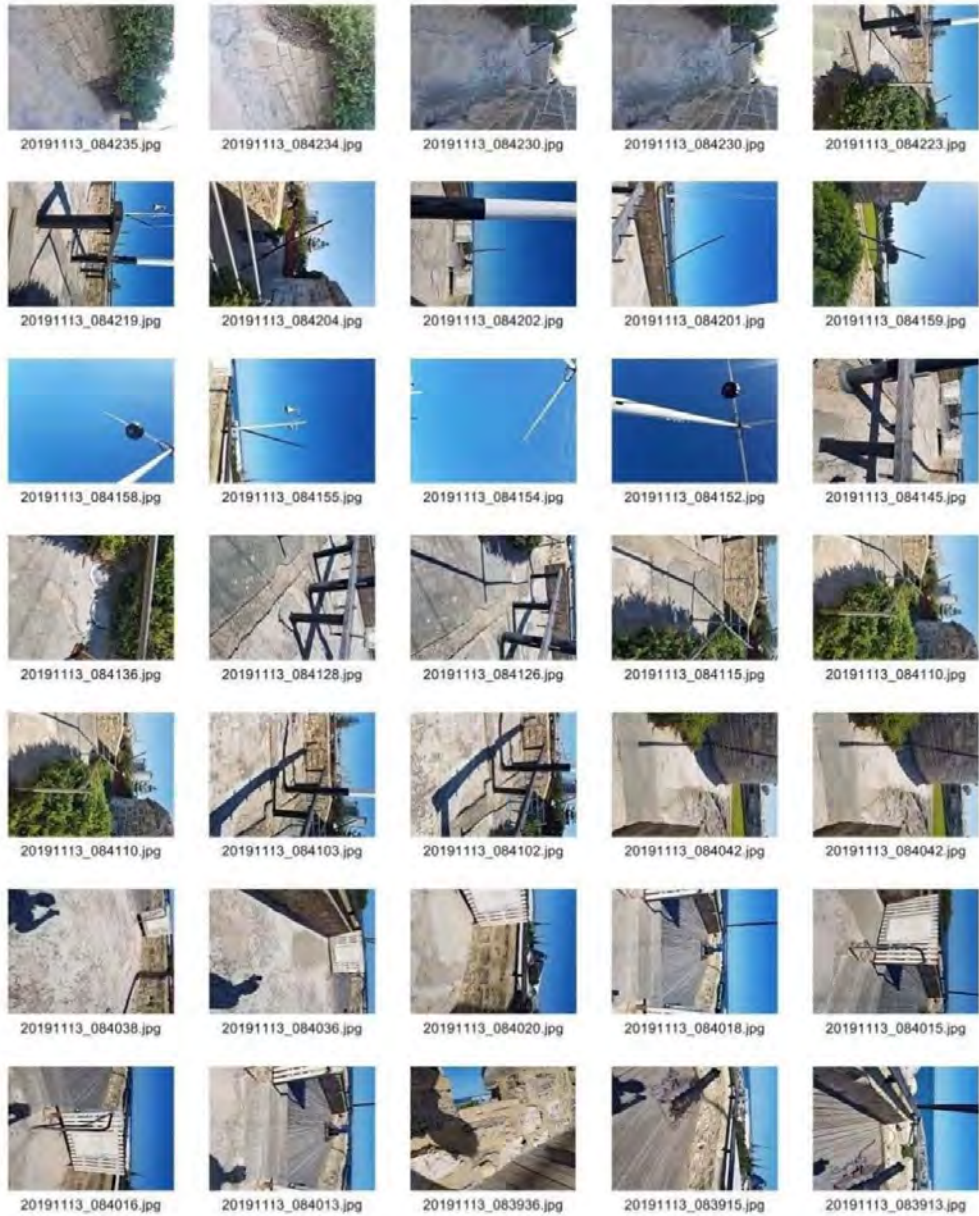
ATELIER JV



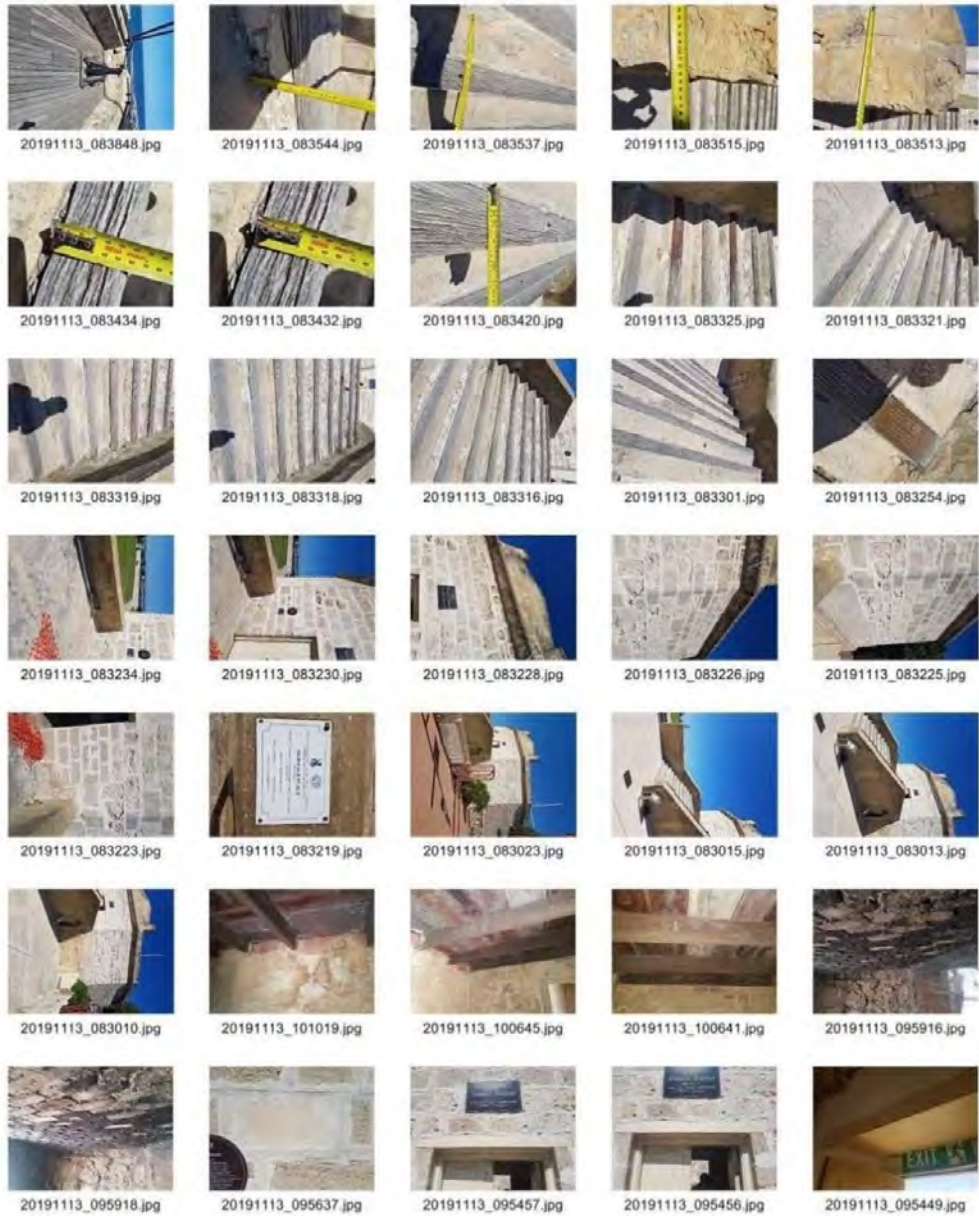
ATELIER JV



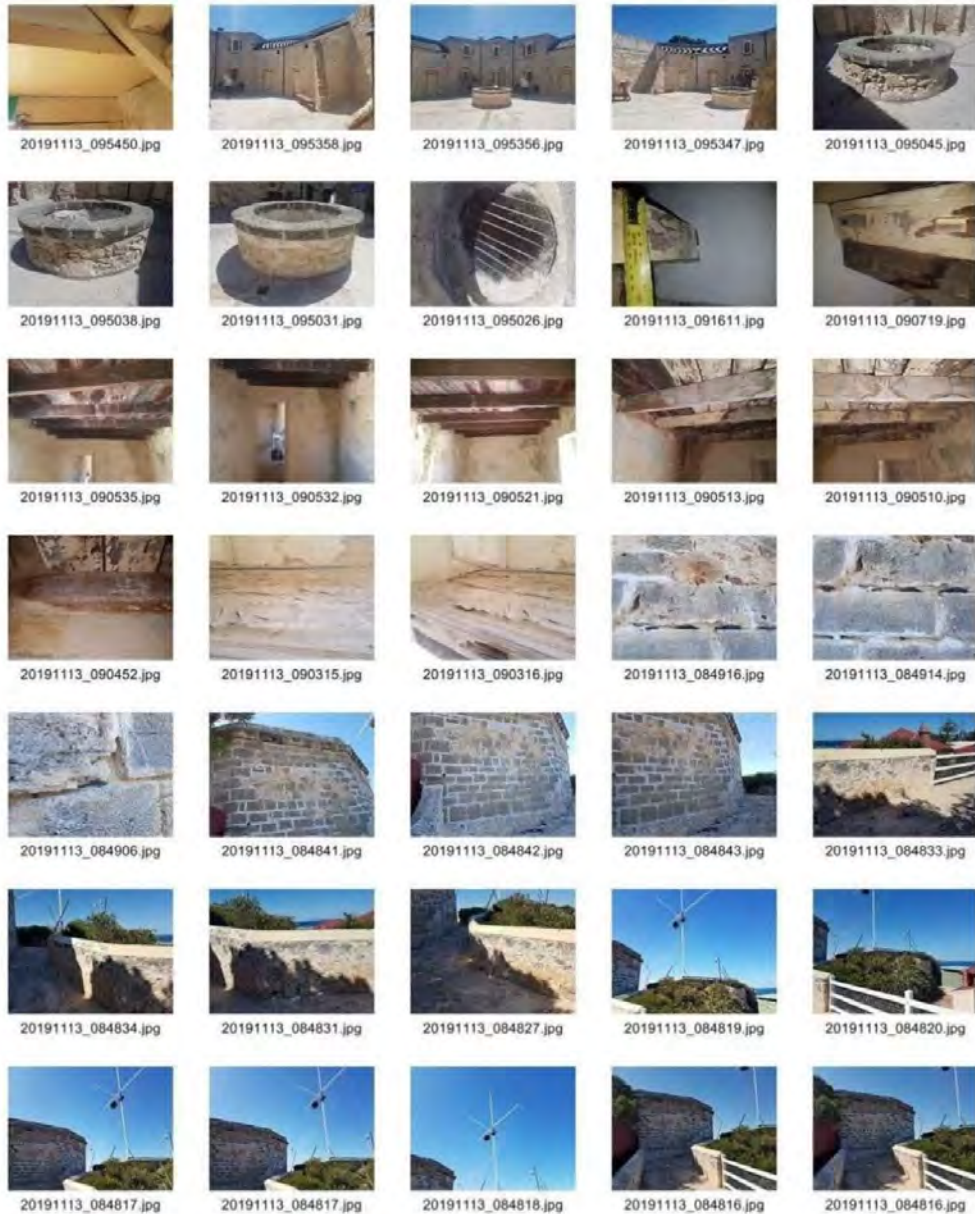
ATELIER JV



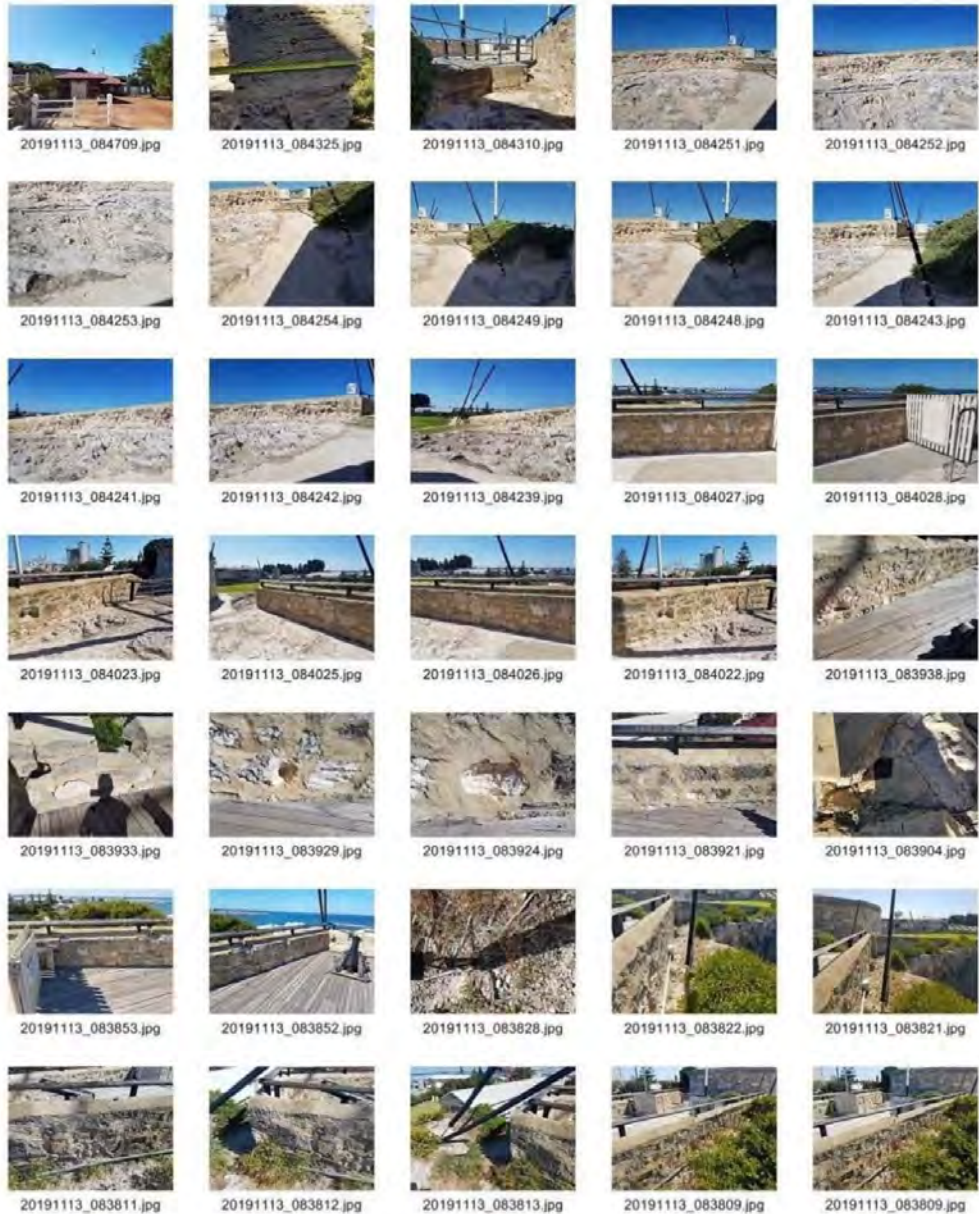
ATELIER JV



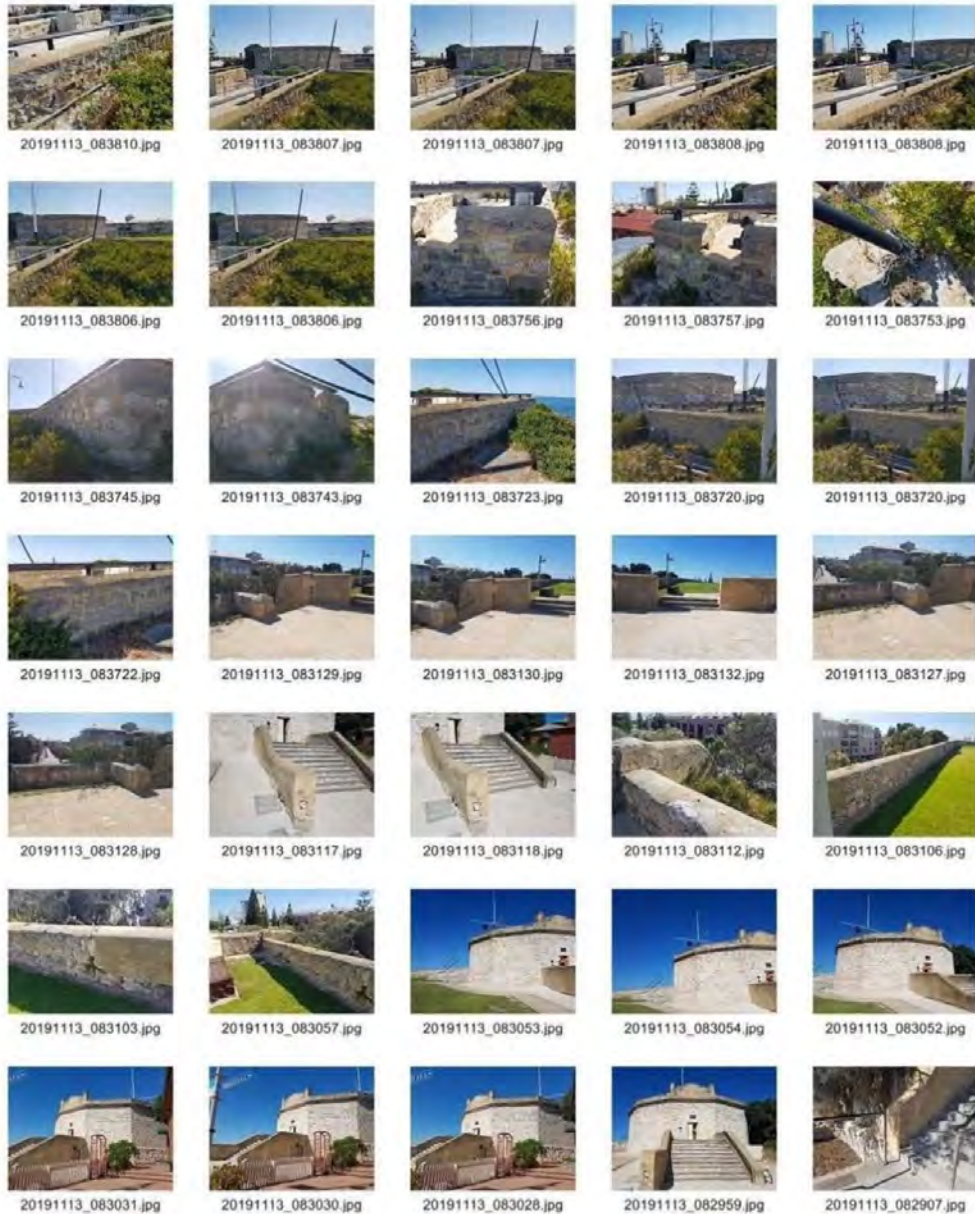
ATELIER JV



ATELIER JV



ATELIER JV



ATELIER JV



20191113_082906.jpg



20191113_082829.jpg



20191113_082827.jpg



20191113_082828.jpg



20191113_082814.jpg



20191113_082754.jpg



20191113_082742.jpg

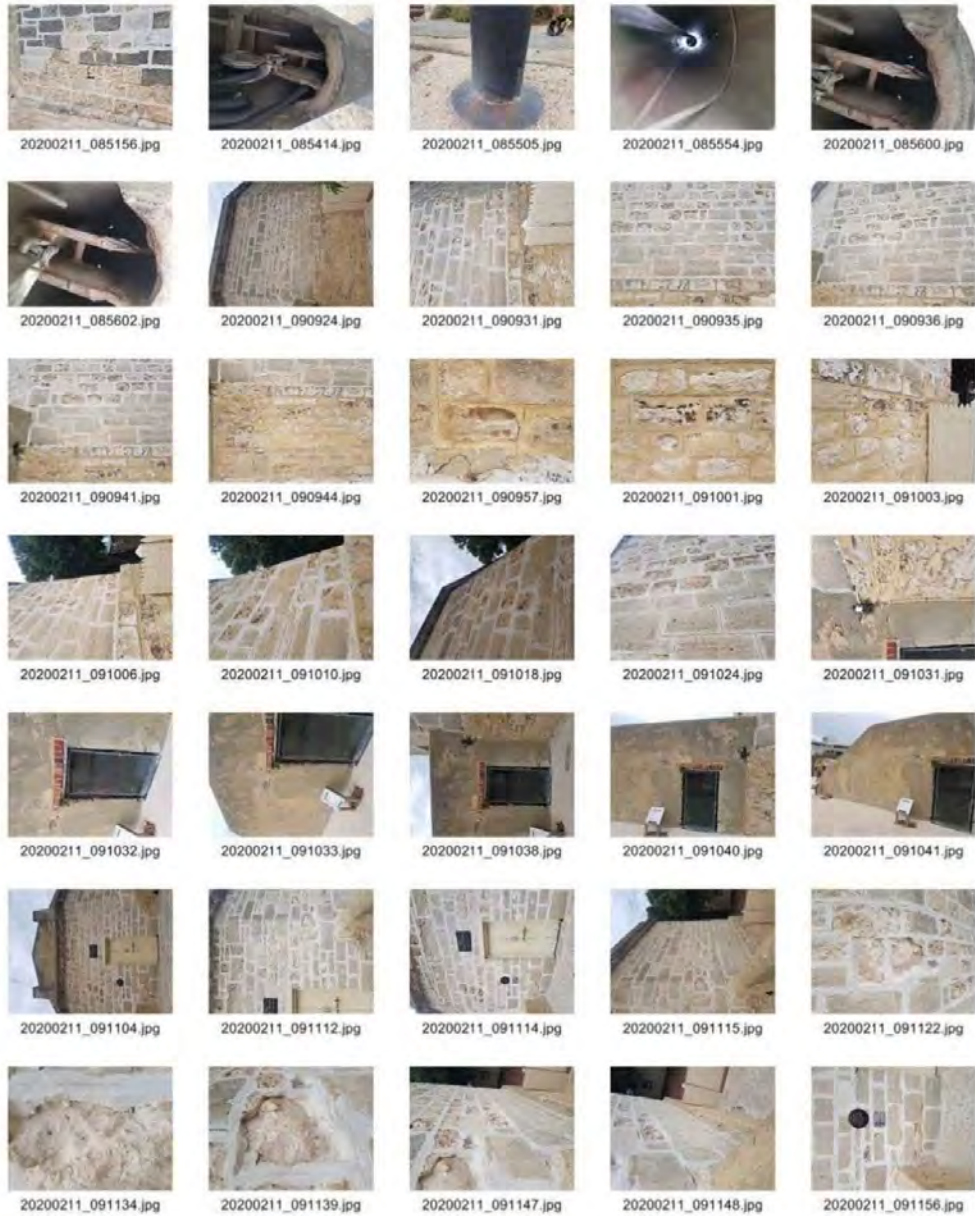


20191113_082716.jpg

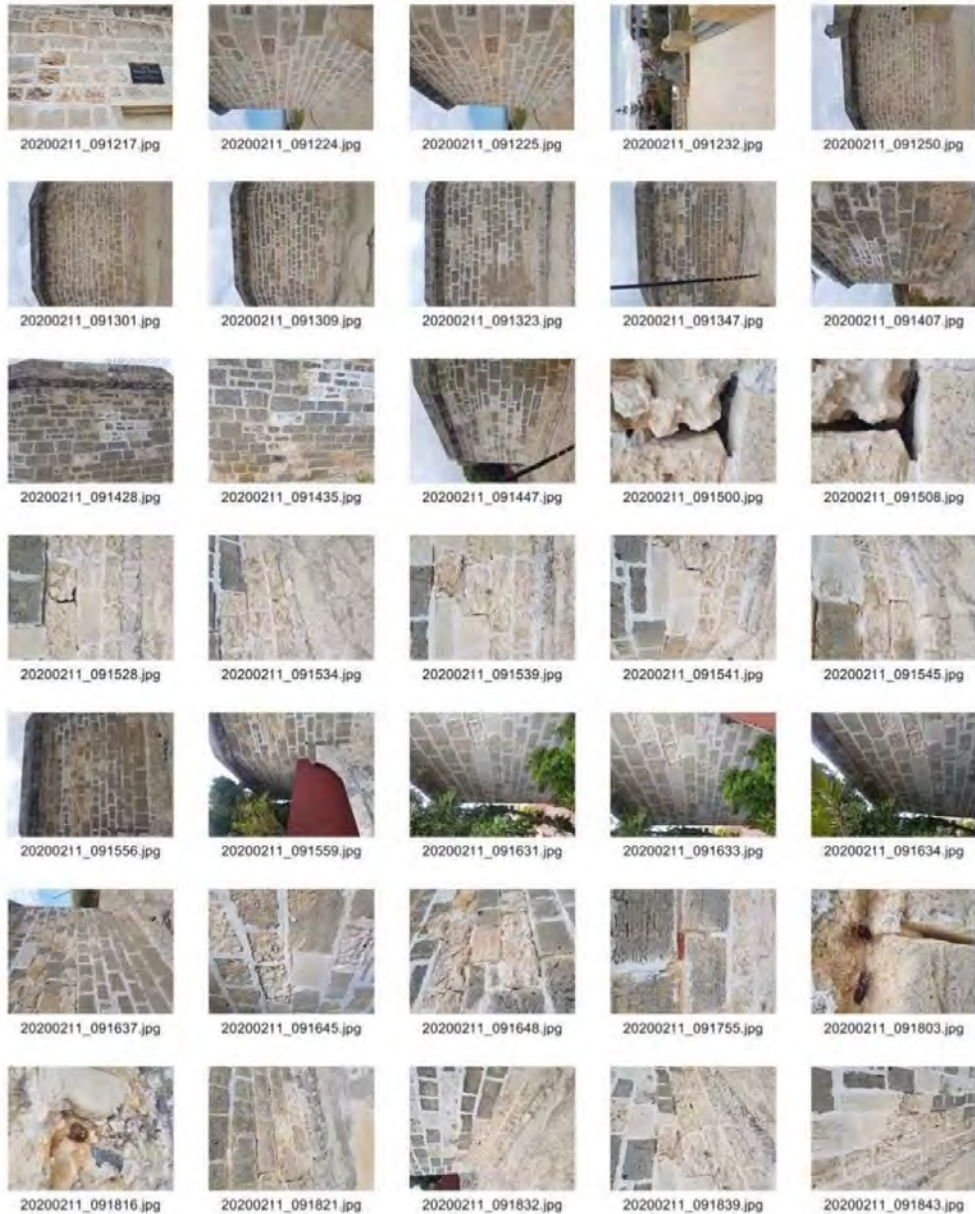


20191113_082705.jpg

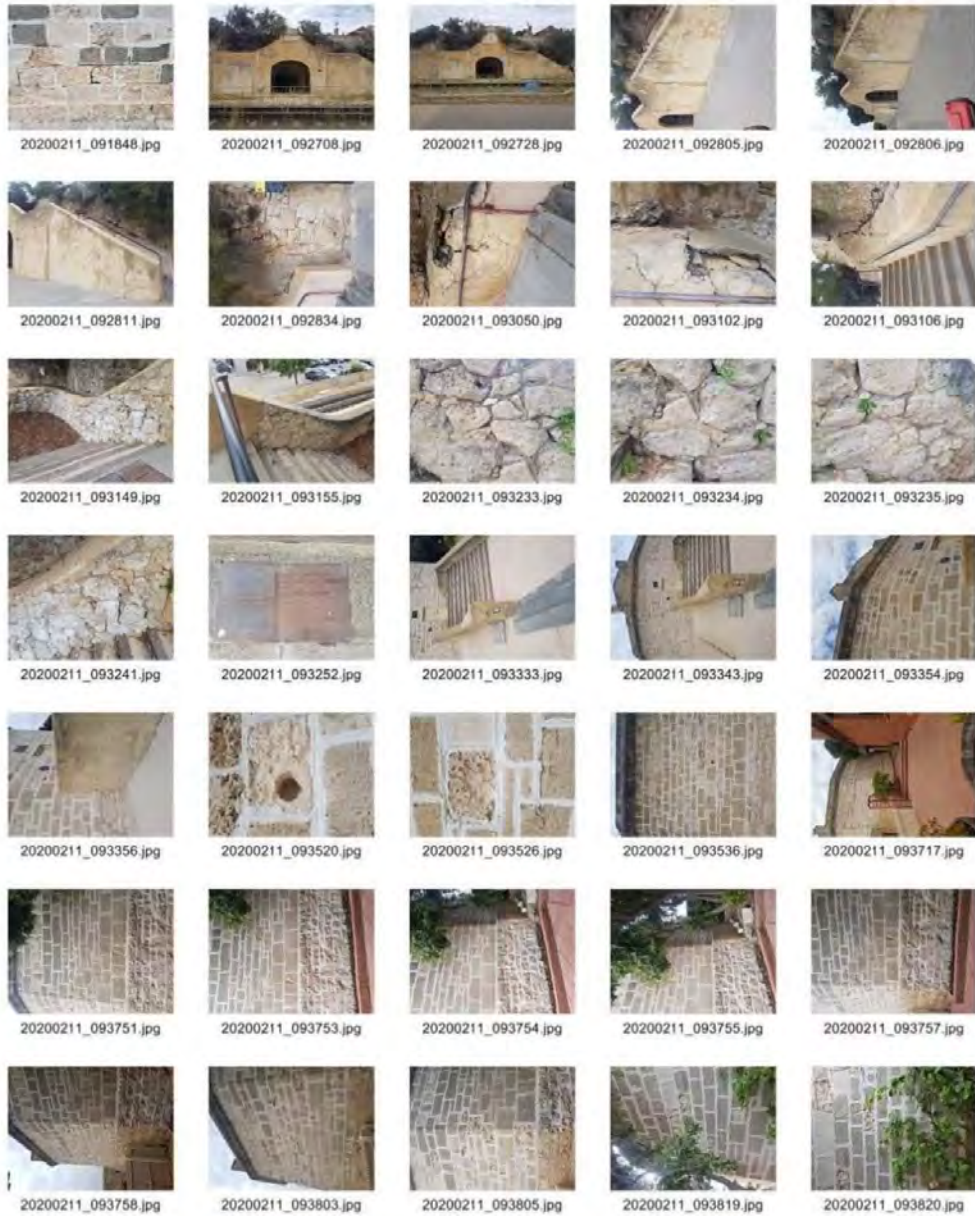
ATELIER JV



ATELIER JV



ATELIER JV



ATELIER JV



20200211_093824.jpg



20200211_093825.jpg



20200211_095435.jpg



20200211_095439.jpg



20200211_095507.jpg



20200211_100911.jpg



20200211_084856.jpg



20200211_084903.jpg



20200211_084919.jpg



20200211_084926.jpg



20200211_084939.jpg



20200211_085000.jpg



20200211_085009.jpg



20200211_085011.jpg



20200211_085014.jpg



20200211_085026.jpg



20200211_085030.jpg



20200211_085049.jpg

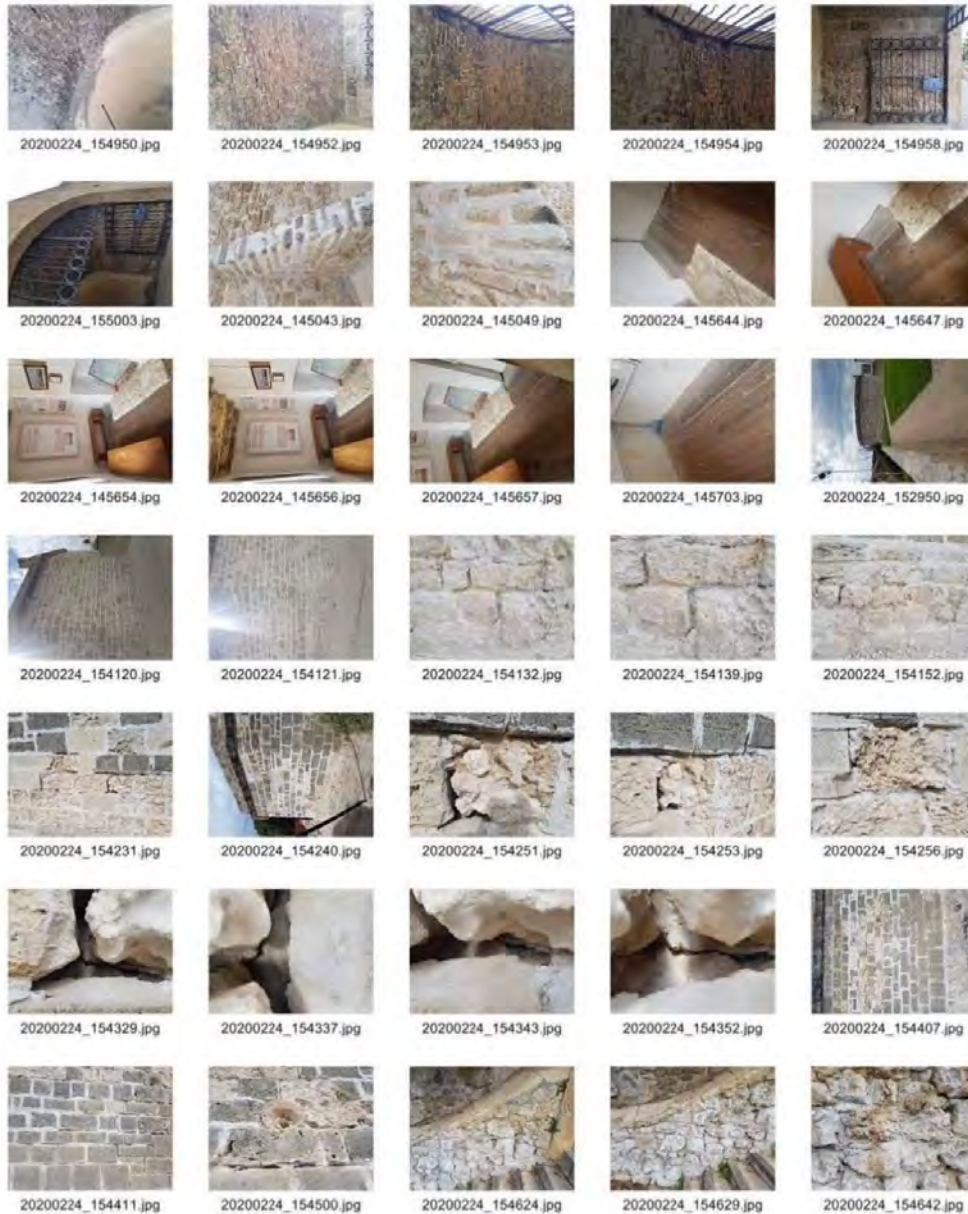


20200211_085117.jpg



20200211_085131.jpg

ATELIER JV



ATELIER JV



20200224_154647.jpg



20200224_154649.jpg



20200224_154653.jpg



20200224_154655.jpg



20200224_154700.jpg



20200224_154711.jpg



20200224_154713.jpg



20200224_154714.jpg



20200224_154721.jpg



20200224_154816.jpg



20200224_154821.jpg



20200224_154822.jpg



20200224_154941.jpg



20200224_154943.jpg



20200224_154944.jpg

Atelier JV (Aust.)
123 Aberdeen Street
Northbridge WA 6003

T: (08) 9228 9120
E: info@atelierjv.com.au
W: www.atelierjv.com.au

—
ATELIER / JV

Round House, Fremantle - Conservation Management Plan

2020

13.4 BUILDING CONDITION ASSESSMENT



Page | 204

Building Condition Assessment

Place Name	Round House & Arthur Head Reserve
Place No.	896
Address	Lot 2051 Phillimore St Fremantle
Date of Inspection	22 November 2019
	Ground level inspection only
General Observation of the Place	The Round House is in fair to good condition. Works have been undertaken in 2004 including localised stone replacement and re-pointing however the pointing is beginning to breakdown and turning to sand. Areas of cement render/mortar still exist which may be harming the underlying substrate. The skillion roofs to the cells are clad with timber shingles which appear from a ground inspection to be in good condition. No access to the flat roof of the two storey section was provided at the time of this report. The ground within the court yard is patched and has areas of potential trip hazards. The ground surrounding the Round House is in a variable condition which is difficult to navigate and is likely to be a trip hazard. Timber elements are in sound condition but require repainting or stripping back and leaving as natural timber. Landscape: generally in good condition. The lawned area is well maintained. A small area of bushes is located towards the rear of the Round House with roots growing into the embankment causing some erosion. The steps from High Street are in a fair condition but the render to the balustrades and retaining wall is cracked and breaking off. Areas of loose masonry. The steps to the Round House are also in a variable condition with falling jarrah nosings and a cracked and uneven landing at the top by the entrance doors. There is no security rail along the top of the balustrade which could be a potential fall hazard.

Condition Rating Codes			Priority Ranking Scale		
Rating	Status	Definition of Rating	Priority Rating	Status	Definition of Rating
A	Excellent	- No defects - As new condition and appearance	1	Immediate Attention	Works required to prevent serious disruption of activities and/or may incur higher costs if not addressed within 1 year
B	Good	- Minor deterioration - Superficial wear and tear - Major maintenance not required	2	Urgent	Works that need to be addressed within 1-2 years to prevent serious deterioration
C	Fair	- Damaged - Worn finishes require future maintenance - Services are functional but need attention	3	Medium Term	Works likely to require rectification within 3 years
D	Poor	- Failed but retrievable - Badly deteriorated - Potential structural problems	4	Long Term	Works that can be safely and economically deferred beyond 3 years
E	Very Poor	- Failed and not retrievable - Not operational - Unfit for occupancy or normal use			

Building/Room/Area Description	Condition Rating	Defect Location	Works to Rectify Defect	Priority Ranking
Steps from High Street	D/E	Failing render	Remove all render, repair substrate using stone to match existing, repoint joints with lime mortar prior to re-rendering with lime render	1
	C	Concrete stair treads	Sections of stair treads are broken. Carry out localised repairs where necessary to provide even finish	2
	B	Patchy paintwork to handrail	Remove remnants of paint and either leave exposed or repaint in approved colour scheme	4
	B	Leaf litter accumulated on blocked off landing	Remove accumulated leaf litter. Carry out regular maintenance works to ensure litter does not accumulate	2
Steps to Round House	C	Failing render to balustrade	Remove, repair substrate and re-render	2
	D	Deteriorating timber nosings	Replace severely worn timbers to match. Ensure abutting timbers are flush. Lightly sand and re-oil stair nosings.	2
	D	Dangerous condition of treads and landing, potential trip hazard	Remove render, repair substrate and re-render with lime render	1
	C	Eroding surface to landing level	Resurface with limestone cement, grade to allow rain to discharge to air drain or discharge outlet through balustrade. Do not allow water to pool at base of walls and at door threshold. If interpretation is to be installed on the step, co-ordinate with designer to create safe and level surface.	2
	B	Patchy paintwork to handrail	Remove remnants of paint and either leave has exposed or repaint in approved colour scheme	4
Paths around Round House including path to public toilets outside study area	C	Uneven pathways around the place, potential trip hazard	Remove and replace with compacted limestone path for equitable access. Remove concrete slabs and other obstacles to provide clear access. Ensure surface is graded to allow stormwater to discharge off pathway.	1
Access driveways to front of Round House (mainly outside study area but impacts on approach)	B	Good condition	On-going monitoring	4
Lookout area	B	Timber deck	Good condition but needs re-oiling every year prior to summer with linseed and turpentine mix	1

Building/Room/Area Description	Condition Rating	Defect Location	Works to Rectify Defect	Priority Ranking
Boundary walls along eastern boundary	D	Concrete paving – uneven and potential trip hazard	Whole area is uneven underfoot due to presence of cap stone and failing concrete finish. Possible solution is to deck to whole section keeping the areas of capstone free for interpretation purposes. Ramped access could be provided to whole area	1
	B	Picket fence	Remove as not in keeping with the original. If retained, repaint to agreed colour scheme	2
	B	Timber safety rail on boundary wall	Check all fixings as evidence of cracking in render. Refix where necessary. Lightly sand and re-oil balustrade	1
	C	Cement render and pointing to boundary wall	Carefully remove render and rake out joints. Repair substrate replacing stones where necessary to match. Repoint with lime render and re-render top of wall but leave remainder un-rendered.	2
	C	Vegetation causing wall to destabilise	Remove and undertake repairs where necessary. Further inspection of wall will be required to determine extent of damage once vegetation removed and additional remediation works	2
Garden areas	B	Planting is regarded as being non-significant. Planting abutting the Round House and boundary walls should be monitored or removed. Movement in brick garden retaining walls.	Any planting that may cause damage due to root growth or size should be removed and repairs carried out to walls. Take care to ensure any potential archaeology is not harmed by the removal process. Deconstruct and rebuild sections of brick garden bed retaining walls where brickwork has shifted and mortar beds have failed. Consider removing raised garden beds against Round House walls.	2
External Elevations	B	Parapet Limestone showing evidence of delamination and spalling.	Monitor	3
	C	Limestone showing signs of staining	Carefully clean stonework using accepted heritage practices – see City of Fremantle Technical Advice Sheet 3	3
	C	Parapet Loss of mortar below coping bricks and above string course – cement mortar	Rake out all cement and loose mortar and repoint with lime mortar. All cement mortar should be removed carefully without	2

Building/Room/Area Description	Condition Rating	Defect Location	Works to Rectify Defect	Priority Ranking
			causing additional damage to the limestone.	
	C	Parapet Closer inspection of higher level elements required to fully determine condition of fabric. From ground level inspection there appears to be a loss of mortar and slight erosion/damage to yellow bricks	Closer inspection required to determine extent of remediation works.	1
	B	String Course Limestone appears to be in sound condition, staining to the face but no substantial loss of mortar. Evidence of cement mortar.	Clean stonework to string course and parapet wall above. Use heritage approved methods of cleaning and all methods are to be tested and approved prior to commencement. Remnant traces of limewash should be protected and not removed through the cleaning process. Rake out all cement mortar from joints and repoint with lime mortar.	2
		Signage	Carefully remove and make good any areas of damage. No new signs should be directly affixed to the Round House	As part of overall works
	B	Main Entrance Jarrah lintel – good condition, failing paint	Rub back paint. Paint may contain lead – ensure best practice for removal is followed. Treat with timber oil to rehydrate timber. Consider leaving in a natural timber state using a linseed oil mix. If repainting, paint to agreed colour scheme, earlier photographs show dark coloured timber.	2
	C	Main Entrance Door – timber ledge and braced, jarrah architrave, non-original door hardware. Good generally, in fair condition though showing signs of timber damage at the base of the door. Paint failing.	Original doors were timber panelled. Consideration to be given to reinstating entrance doors to match original. If existing doors are to be retained, rub back paint. Splice in new sections of jarrah boarding to door at lower level and undertake localised timber repair to architrave. Damage caused by wear and tear and water – weathering protection required. Oil doors and joinery and leave in natural timber state or repaint to agreed colour scheme. The joinery is non-original and so will not provide evidence of historic colour schemes. Photographs from	2

Building/Room/Area Description	Condition Rating	Defect Location	Works to Rectify Defect	Priority Ranking
			the late 1880s show that the joinery was a dark colour and not the cream it is today.	
			Retain and re-oil timber threshold.	
			Replace door hardware with more age/style appropriate hardware.	
	C	Elevations The entire face was repointed during the 2004 works using a lime mortar mix. Whilst the majority of the mortar has adhered, there are areas where it has failed and other areas are turning to sand.	Rake out loose and failing sections of mortar and repoint with approved lime mortar mix. Rake out all cement pointing and repoint with lime based mortar. Ensure all original packing timbers are embedded and protected in mortar. Continuous exposure to environmental conditions may cause localised failures of the wall. Remove any redundant rusted embedded steels that can cause failure to stonework. If redundant steelwork cannot be removed without damaging stonework, consider rust treating instead.	2
	C	Elevation Severely fretted limestone should be replaced to match. Where faces have eroded to more than 25mm these should be replaced.	Currently no stones have been identified for replacement. Monitoring of deterioration required leading to eventual replacement. Replacement stone to match originals from local quarries.	4
	C	Plinth Pointing to the coping stones of the plinth appears to have been undertaken as part of the 2004 works but the remainder of the plinth does not appear as though it has been re-pointed.	Deep areas of missing mortar should be repointed in a lime mortar mix to match the original mortar. Rake out, clean, dampen and repoint with flush finish.	2
	C	Rendered plinth to face 10 – remove	Remove render, repair substrate using lime mortar. Ensure garden beds are not causing damp issues to stonework and check reticulation is not directed at the Round House	2
	Unknown	Top of walls – check condition	Close inspection of tops of walls around perimeter wall and parapet required. Carry out repairs where necessary. Seal with clear breathable waterproof membrane	2
	C	Vegetation growing out of external walls	Inspect full extent of all external walls. Carefully	2

Building/Room/Area Description	Condition Rating	Defect Location	Works to Rectify Defect	Priority Ranking
			remove vegetation growing from walls. Carefully clean lichen from stone surface. Carry out ongoing maintenance inspections to continue to remove additional vegetation.	
Copper Roof	Unknown	No inspection of the roof was possible. No reports of leaks have been made and no obvious evidence of failure noted. Closer inspection required including condition of timber roof structure, copper cladding and flashings, and rainwater goods.	Closer inspection required	1
Cell Roofs	Unknown	No inspection of the roof was possible. No reports of leaks have been made and no obvious evidence of failure noted. Closer inspection required including condition of timber roof structure, shingle cladding and flashings, and rainwater goods.	Closer inspection required If shingles in good condition re-coat with 50:50 linseed oil and turpentine mix. If shingles to be replaced, replace to match. Ensure flashings are dressed down and securely bedded in walls. Repoint with lime mortar where required.	1
Timber fascias	B	Painted timber fascia	Rub-back lightly to remove loose paintwork. Prep and repaint in approved colour scheme	4
Gutters	B and unknown	From ground level inspection the copper gutters to the cells appear in sound condition. Gutters to two storey section are concealed.	Closer inspection required Ensure all gutters are clear of debris and discharge freely into downpipes	1
Downpipes	B	Dented in places and slight erosion around joints. Connections to rainwater head appear fine and connections to wall are sound at lower level	Check condition of joints to ensure water tight. Check rainwater heads to ensure clear of debris. Check all fixings are secure. Remove all debris from drains.	1
Windows	B	Not original Appear in sound condition but paint failing Ensure operable	Replace to more closely match originals based on documentary evidence. Rub back paint, prep and repaint to agreed colour – original colours appeared dark in nature. Ensure windows are operable after repainting. Ensure all window hardware is in good condition Confirm existing glass meets current glazing codes. If not, apply safety film to individual panes.	2

Building/Room/Area Description	Condition Rating	Defect Location	Works to Rectify Defect	Priority Ranking
	D	Brick quoining adjacent to upper level windows	Carefully remove and replace severely eroded bricks. Use salvaged bricks to match and repoint with lime mortar.	2
		Missing iron bars	Reinstate iron bars to all windows to match original. 3 bars per window	4
Concrete floor to courtyard and open cells	C	Areas of eroding surface – potential trip hazard	Patch repair to match existing, ensuring even finished surface. Grade finished surface to ensure stormwater drains away from building and does not pool on surface.	2
Walls	C	Repainted in 2004 but showing signs of further mortar deterioration. Mortar failing either as a result of incorrect mortar mix, walls were wet and not prepped fully prior to application or on-going issues with damp and salts causing natural erosion of the more sacrificial mortar.	Undertake mortar analysis of all mortars on building to determine appropriate mix. Locations have been identified. Rake out all loose and failing mortar to depth of three times the width of joint, clean and repoint using a lime mortar. Ensure all walls are left in a natural stone condition without renders to allow to breathe and moisture to dissipate. Lime wash may be applied to cell walls if required. Consideration may be given to applying a poultice to draw salts out.	2
Warders Quarters	B	Timber floors	Check condition of joists – carefully raise boards to allow for visual access. Allow archaeologists to inspect voids for artefacts Remove debris from subfloor space and ensure satisfactory subfloor ventilation space exists	2
	B	Timber floors – ground level	Sand back and re-oil. Do not use polyurethane coatings Replace damaged floor boards with timber of same age and species.	2
	B	Yorkshire stone flags – good condition	Ensure no loose flagstones to cause trip hazards	2
	B	Timber floors – upper level	Check condition of joists by engineer If required replace to match Carefully remove lino, replace any damaged boards to match. Lightly sand and re-oil	1
	C	Walls – all rooms All rooms showing signs of failure to wall finishes.	Remove render, repair substrate and repoint with lime	1

Building/Room/Area Description	Condition Rating	Defect Location	Works to Rectify Defect	Priority Ranking
			mortar. Leave as natural stone finish or lime wash.	
	Unknown	Ceiling to upper rooms – check roof structure	Closer inspection required.	1
Cell walls	C	Walls – all rooms All rooms showing signs of failure to wall finishes.	Remove render, repair substrate and repoint with lime mortar. Leave as natural stone finish or lime wash.	1
		High level wall vents	Consider replacing existing wall vents with vents containing larger openings for improved air flow	4
Cell ceilings	B	Appear in sound condition, historic staining and general wear of paint finishes.	Closer inspection of timbers and structure required. Rub back and leave as natural timber. Coat all timbers with linseed – turpentine mix.	2
Cell floors	B	Remove granolithic concrete floor and reinstate original, presumed to be natural stone with limestone cement levelling top coat.	Carefully remove existing floor finish. Reinstate limestone cement floor to match cell 2 and other court yard floors	3
Cell Doors	C	Timbers splitting where hardware has been installed. Rusted nails and general wearing of paint finish.	Undertake localised repairs of timber, splicing in new pieces to match where necessary. Fill cracks with timber putty Remove all redundant fixings and make good. Replace hardware with style more appropriate for gaol door. Clean rust from retained hardware and rust treat Rub back paint, prep and repaint doors, architraves and lintels.	2
Well	B	Showing signs of eroding mortar	Rake out joints and repoint with lime mortar. Check condition of well internally and repoint. Clear out vegetation and debris as part of on-going maintenance of place.	2
Bakehouse			Remove Perspex/glazed door. Replace with vented window or metal grille gate. Allow area to dry prior to further works taking place	1
			Offset interpretive Perspex panels off brickwork to allow air flow. Consider installing openings in Perspex to promote air circulation behind	2
		Eroded mortar joints to ceiling and walls	Once area has been allowed to dry out, rake out and repoint fretted mortar joints	

Building/Room/Area Description	Condition Rating	Defect Location	Works to Rectify Defect	Priority Ranking
Timber - generally			using lime mortar. Remove areas of cement pointing and repoint in lime mortar	
			Remove building rubble	1
			Remove vegetation growing out of walls and floor. Carefully clean lichen from stone surfaces	
			Carry out annual termite inspections	

Condition Photographs
Exterior



Figure 1: Failing render to steps from High Street



Figure 2: Failing render to steps from High Street



Figure 3: Failing render to steps from High Street



Figure 4: Failing render to steps from High Street



Figure 5: Collected debris in remnant step landing



Figure 6: Failing render to steps from High Street

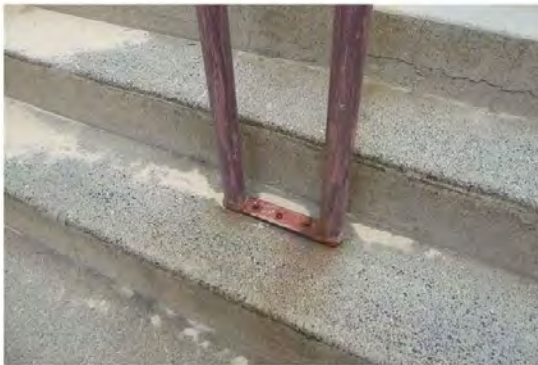


Figure 7: Handrail fixing into steps



Figure 8: Failing render to steps from High Street



Figure 9: Timber nosings to steps to Round House



Figure 10: Timber nosings to steps to Round House



Figure 11: Timber nosings to steps to Round House



Figure 12: Cracked render to balustrade



Figure 13: Missing mortar to risers



Figure 14: Cracked render to balustrade



Figure 15: Drainage channel and discharge point



Figure 16: Commemorative plaque



Figure 17: Steps and front elevation



Figure 18: Parapet



Figure 19: Missing mortar to parapet elements



Figure 20: Parapet



Figure 21: Fretting limestone and missing mortar



Figure 22: Eroding limestone, traces of white wash



Figure 23: Face 2



Figure 24: Example of pointing from 2004



Figure 25: Missing mortar



Figure 26: Plinth to Round House



Figure 27: Plinth abutting steps balustrade



Figure 28: Southern side of balustrade



Figure 29: Limestone path



Figure 30: Missing mortar



Figure 31: Joint packers



Figure 32: Eroded joint



Figure 33: 2004 pointing



Figure 34: Eroded stone



Figure 35: Uneven pathways around Round House



Figure 36: Uneven pathways around Round House



Figure 37: Capstone



Figure 38: Eroded joints



Figure 39: Uneven pathways



Figure 40: Eroded and repaired joints



Figure 41: Repaired joints and replacement limestone



Figure 42: Bad repairs



Figure 43: Eroded joints



Figure 44: Face 4



Figure 45: Defects in limestone



Figure 46: Rope hook in capstone



Figure 47: Packers in joints



Figure 48: Previous repairs



Figure 49: Mix of mortars in repairs



Figure 50: Eroded joints and limestone



Figure 51: Eroded string course stone



Figure 52: Strong course to face 7



Figure 53: Lichen growth on stones face 7



Figure 54: Pathway to rear of Round House



Figure 55: vegetation at rear of Round House



Figure 56: Face 8



Figure 57: Graffiti on stones



Figure 58: Eroded joints



Figure 59: Previous repairs



Figure 60: Previous repairs and eroded joints



Figure 61: Completely eroded joint



Figure 62: Eroded joint revealing packer



Figure 63: Eroded joints



Figure 64: Repairs and eroded limestone



Figure 65: Repairs to face 10

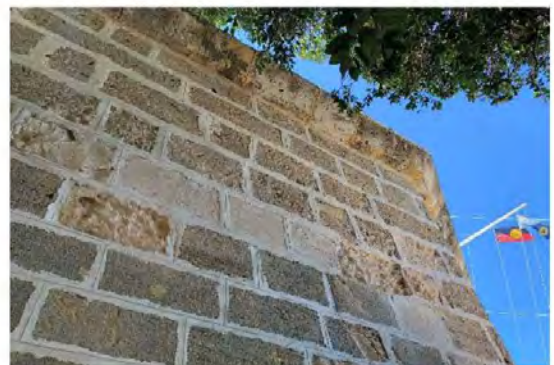


Figure 66: Face 10



Figure 67: Face 10 repairs and eroding limestone



Figure 68: Face 10 proximity of plantings



Figure 69: Rendered plinth to face 10



Figure 70: rendered plinth to face 10



Figure 71: Plinth face 11



Figure 72: Face 11



Figure 73: Face 11



Figure 74: Face 11



Figure 75: Differences in stone quality face 11



Figure 76: Eroding stone face 11



Figure 77: West face of Round House and capstone surface



Figure 78: Timber steps up to look out

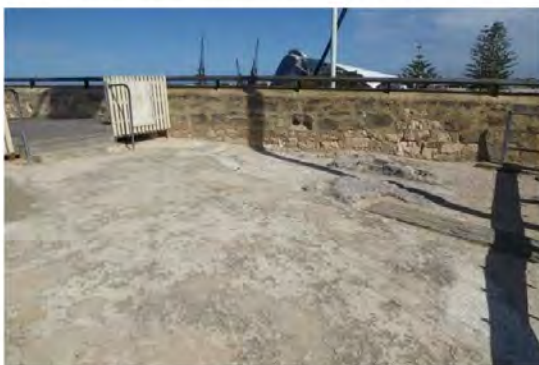


Figure 79: Concrete and capstone surface to look out



Figure 80: Concrete and capstone surface to look out



Figure 81: Concrete and capstone surface to look out



Figure 82: Uneven surface



Figure 83: Timber security balustrade to boundary wall



Figure 84: Previous repairs to boundary wall



Figure 85: Picket fence and gates to look out



Figure 86: Belays



Figure 87: Timber deck



Figure 88: Drying timbers to deck



Figure 89: Cracked render



Figure 90: Eroding stones

Internal Photographs



Figure 91: Internal face of Round House



Figure 92: Various treatments to elevations

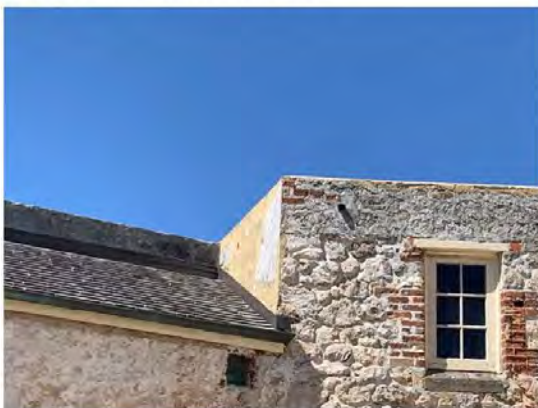


Figure 93: rendered north wall, brick inserts, eroding stone



Figure 94: Replacement limestone and windows



Figure 95: Stone sill



Figure 96: Brick infill around window



Figure 97: Brick infill around window



Figure 98: replacement stone around window



Figure 99: Replacement stones, window and lintels



Figure 100: Entry doors with rust staining



Figure 101: Copper rainwater head



Figure 102: Copper downpipes



Figure 103: Copper downpipes



Figure 104: Fixings to copper downpipes



Figure 105: Silted up drain



Figure 106: Copper gutters



Figure 107: Eroding stones



Figure 108: Gutters and vent



Figure 109: Previous repairs

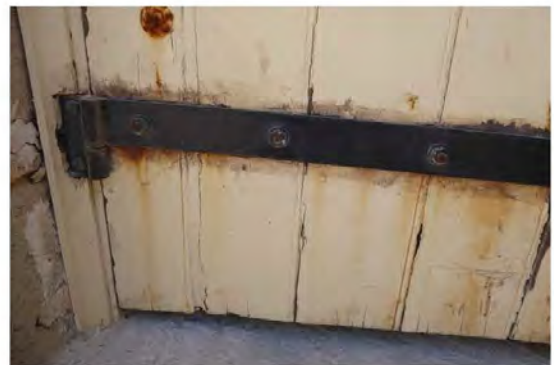


Figure 110: Rusting to door



Figure 111: Dirty doors



Figure 112: Replacement lintel



Figure 113: Eroding joints to 2004 mortar repairs



Figure 114: Stone erosion



Figure 115: Buttress wals



Figure 116: Hard cement and lime repairs

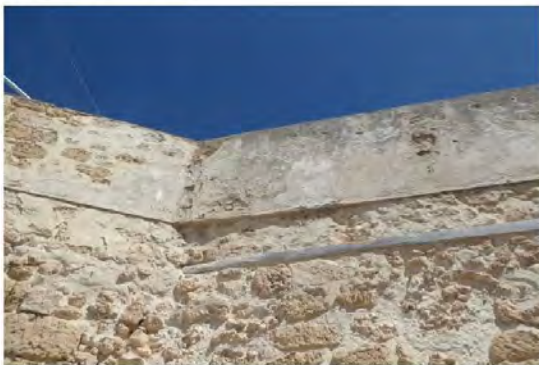


Figure 117: Remnant cement rendering



Figure 118: Eroding joints



Figure 119: Natural stone



Figure 120: Wall termination



Figure 121: Wall



Figure 122: Previous repairs using mortar for stone repairs



Figure 123: Buttress



Figure 124: Previous mortar repairs



Figure 125: Previous repairs



Figure 126: Erosion of stones



Figure 127: Eroding brick to vent



Figure 128: Damaged door



Figure 129: Previous installation



Figure 130: Air vent and replacement gutters



Figure 131: Eroding joints to well



Figure 132: Shingle roof – need closer inspection



Figure 133: Flashings to roof need inspection



Figure 134: Shingle roof – need closer inspection



Figure 135: Yorkshire stone flabs

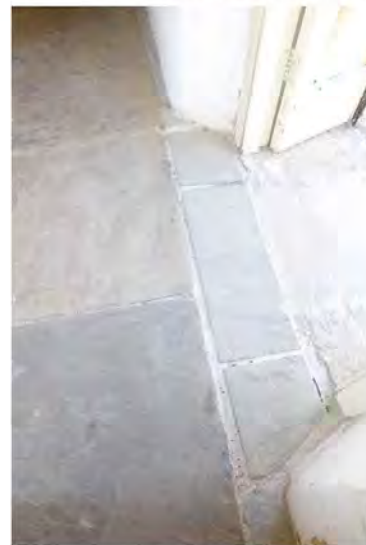


Figure 136: Threshold in Room 1

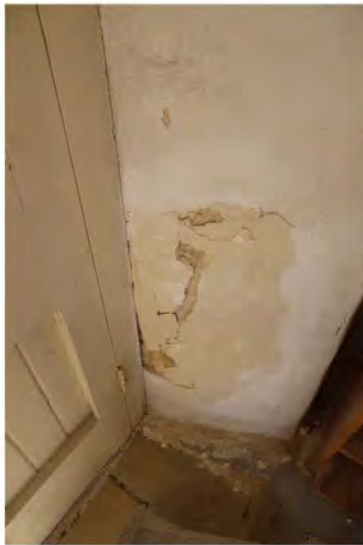


Figure 137: Damaged render caused by damp



Figure 138: Damaged render caused by damp



Figure 139: Entrance doors



Figure 140: View through Room 1



Figure 141: Wearing paint to ceiling



Figure 142: Falling paint due to damp



Figure 143: Drummy and patched render



Figure 144: Drummy and patched render



Figure 145: Timber boards to Room 2



Figure 146: Failing paint to ceiling in Room 2



Figure 147: Interpretation in Room 2



Figure 148: Drummy render



Figure 149: Kitchen floor



Figure 150: Kitchen ceiling



Figure 151: Brick infill in stone chimney



Figure 152: Landing Room 14



Figure 153: Newel post in Room 14



Figure 154: Brittle lino Room 14



Figure 155: View into Room 15

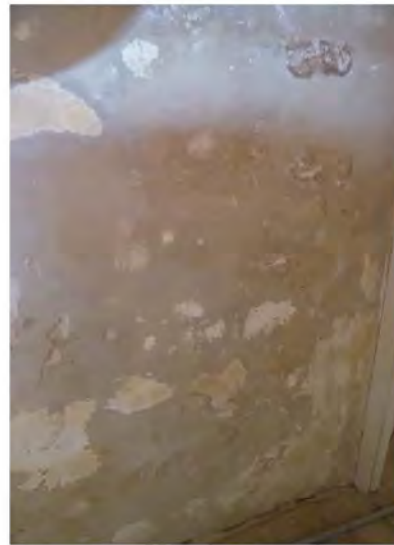


Figure 156: Patched walls Room 1



Figure 157: Wearing point to Room 1



Figure 158: Brick infill



Figure 159: Brick infill and wearing point



Figure 160: Floor to Room 14



Figure 161: Failing paint and render to west wall Room 14



Figure 162: Failing paint and render to west wall Room 14



Figure 163: Failing paint and render to west wall Room 13



Figure 164: Failing paint and render to west wall Room 13



Figure 165: Wearing paint to ceiling in Room 13



Figure 166: Ceiling Room 15



Figure 167: Failing paint and render to west wall Room 15



Figure 168: Failing paint and render to west wall Room 15



Figure 169: Graffiti

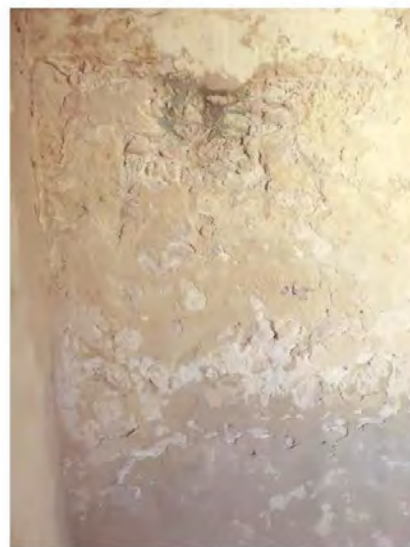


Figure 170: Failing paint and render to west wall Room 15



Figure 171: Room 1 brick infill c.1975



Figure 172: damaged timbers



Figure 173: Wearing paint finish to cells



Figure 174: Wearing paint finish to cells



Figure 175: Wearing paint finish to cells



Figure 176: Wearing paint finish to cells



Figure 177: Wearing paint finish to cells



Figure 178: Previous repairs to limestone



Figure 179: Concrete floor to cells



Figure 180: Previous cement repairs



Figure 181: Wearing paint finish to cells



Figure 182: Previous repairs around Intel



Figure 183: Eroding mortar and stones



Figure 184: Wearing paint finish to cells



Figure 185: Interpretation installations



Figure 186: Wearing paint finish to cells



Figure 187: Wearing paint finish to cells and cement repairs



Figure 188: Painted ceiling to Cell 1



Figure 189: Failing paint to ceiling



Figure 190: Cement render repairs



Figure 191: Eroding joints



Figure 192: Interpretation installation



Figure 193: Wearing paint finish to cells



Figure 194: Underside to ceiling in Cell 2



Figure 195: Wearing paint finish to cell 2



Figure 196: Wearing paint finish to cell 2

Round House, Fremantle - Conservation Management Plan

2020

13.5 COST ESTIMATES



Page | 205

FREMANTLE ROUNDHOUSE CMP



Project: Heritage	Details: Preliminary Estimate 14.05.2020
Building: Overall Cost & Priorities 1 to 4	

Code	Description	Quantity	Unit	Rate	Total
	FREMANTLE ROUND HOUSE CMP TOTAL COST				652,000
	FREMANTLE ROUND HOUSE CMP PRIORITY 1				300,060
	FREMANTLE ROUND HOUSE CMP PRIORITY 2				302,260
	FREMANTLE ROUND HOUSE CMP PRIORITY 3				39,900
	FREMANTLE ROUND HOUSE CMP PRIORITY 4				9,780

FREMANTLE ROUNDHOUSE CMP



Project: Heritage	Details: Preliminary Estimate 14.05.2020
Building: Overall Cost & Priorities 1 to 4	

Code	Description	Quantity	Unit	Rate	Total
------	-------------	----------	------	------	-------

FREMANTLE ROUND HOUSE CMP TOTAL COST

	ESTIMATED TOTAL COST				
	<u>Steps from High Street</u>				
1	Remove cement render to mid level steps wall, rake out any cement pointing and replace seriously damaged stones to match and repoint	34	m2	500	17,000
2	Carry out localised repairs to steps where necessary to provide an even finish		Item		3,000
3	Remove remaining paint to handrail and repaint	18	m	40	720
4	Remove accumulated leaf litter from blocked off landing		Item		300
	<u>Steps to Roundhouse</u>				
5	Remove cement render to upper stair balustrade and repoint stonework with lime mortar	48	m2	400	19,200
6	Replace Jarrah treads to entry steps (elevation 1) [9 no]	39	m	120	4,680
7	Remove render, repair substrate and re-render treads and landing		Item		5,000
8	Resurface landing step with limestone concrete graded for run-off (elevation 1)		Item		600
9	Remove remaining paint to handrail and repaint	20	m	40	800
	<u>Paths around Round House including path to Public Toilets</u>				
10	Allowance for removal and replacement of compacted limestone path including removal of concrete slabs and other obstacles	500	m2	80	40,000
	<u>Lookout Area</u>				
11	Re-oil timber deck	40	m2	50	2,000
12	Timber decking & ramp to match lookout	67	m2	250	16,750
13	Remove or repaint picket fence & gates	7	m	80	560
14	Refix timber safety rail to boundary wall, lightly sand and re-oil	22	m	75	1,650
15	Remove cement render to boundary wall and repoint stonework with lime mortar	75	m2	400	30,000
	<u>Boundary Walls around Eastern Boundary</u>				
16	Remove vegetation causing damage to boundary wall and repair stonework where required		Item		5,000
	<u>Garden Areas</u>				
17	Remove planting causing damage to Round House & boundary walls, repair stonework where required		Item		10,000
18	Deconstruct and rebuild sections of brick garden bed retaining walls where damaged		Item		1,500
	<u>External Elevations</u>				
19	Carefully clean stonework	344	m2	60	20,640
20	Rake out cement pointing to parapet and repoint in lime mortar	40	m2	140	5,600
21	Clean stonework to parapet string course, rake out cement pointing and repoint with lime mortar	62	m	100	6,200
22	Carefully remove existing signage and make good damage		Item		500

FREMANTLE ROUNDHOUSE CMP



Project: Heritage	Details: Preliminary Estimate 14.05.2020
Building: Overall Cost & Priorities 1 to 4	

Code	Description	Quantity	Unit	Rate	Total
FREMANTLE ROUND HOUSE CMP TOTAL COST					(Continued)
23	Treat timber lintel to main entrance to rehydrate with a linseed oil mix		Item		300
24	Rub down, prepare and paint door frame. Repair timber to based of double doors and retain & oil timber threshold (elevation 1)	1	No	700	700
25	Replace hardware to entry doors with appropriate hardware		Item		1,200
26	Rake out joint of stonework to a depth of 100mm and repoint with lime mortar (75% allowed)	258	m2	140	36,120
27	Replace stonework damaged during wall repointing	20	No	400	8,000
28	Remove render to plinth and repoint substrate (elevations 9 and 10)	6	m2	200	1,200
29	Inspect to top of perimeter parapet wall, carry out repairs as required and seal with clear waterproof membrane	60	m	90	5,400
30	Remove vegetation causing damage to Round House walls and repair stonework where required		Item		5,000
31	Rub down, prepare and paint door frame. Repair timber to based of double doors and retain & oil timber threshold (elevation 17)	1	No	700	700
	<u>Copper Roof</u>				
32	Inspect roof and check copper cladding, flashings and timber structure (scaffolding included elsewhere)	22	m2	80	1,760
	<u>Cell Roofs</u>				
33	Coat roof shingles with two coats linseed/turpentine mix 50/50	38	m2	50	1,900
34	Inspect shingles and replace damaged with Sheok shingles (10% allowed)	2	m2	200	400
35	Dress down flashings to shingle roof	47	m	30	1,410
	<u>Timber Fascias</u>				
36	Repaint timber fascia to cells 3, 4, 10 and 11	19	m	40	760
	<u>Copper Gutters</u>				
37	Check condition of copper gutters	19	m	40	760
	<u>Downpipes</u>				
38	Check condition of downpipes including refixing brackets to wall	18	m	60	1,080
39	Check condition of rainwater heads	2	No	50	100
40	Check stormwater system		Item		800
	<u>Windows</u>				
41	Sand back, prepare and repaint existing window including timber lintel (elevations 16 to 18)	5	No	500	2,500
42	Allow for replacement of 3 No. iron bar grilles to windows (elevations 16 to 18)	5	No	600	3,000
43	Allow for replacement of severely eroded bricks around window using salvaged bricks to match in lime mortar (elevation 16)		Item		600
	<u>Concrete Floor to Courtyard and Cells</u>				
44	Repair limestone flooring to courtyard and cells 5 to 9	167	m2	50	8,350
	<u>Walls</u>				

FREMANTLE ROUNDHOUSE CMP



Project: Heritage	Details: Preliminary Estimate 14.05.2020
Building: Overall Cost & Priorities 1 to 4	

Code	Description	Quantity	Unit	Rate	Total
FREMANTLE ROUND HOUSE CMP TOTAL COST					(Continued)
45	Rake out joint of stonework to a depth of 100mm and repoint with lime mortar (75% allowed)	216	m2	140	30,240
	<u>Warders Quarters</u>				
46	Inspect ceiling and floor structures and remove debris from sub-floor		Item		2,500
47	Sand & re-oil timber floor to Room 2	8	m2	75	600
48	Replace damaged floorboard to Room 12, sand & re-oil	8	m2	100	800
49	Inspect Yorkshire stone flag paving		Item		250
50	Remove linoleum flooring, replace damaged Jarrah floorboards, sand & re-oil	23	m2	150	3,450
51	Remove all patches of render, repoint and limewash walls	91	m2	400	36,400
	<u>Cell Walls</u>				
52	Remove all patches of render, repoint and limewash walls	189	m2	400	75,600
53	Allowance for replacing wall vents		Item		1,800
	<u>Cell Ceilings</u>				
54	Rub back cell ceilings and coat timber with linseed/turpentine mix	34	m2	40	1,360
	<u>Cell Floors</u>				
55	Remove existing floor to four cells (3, 4, 10 & 11)	34	m2	40	1,360
56	Reinstate cell floors to match limestone cement floor to courtyard	34	m2	200	6,800
	<u>Cell Doors</u>				
57	Rub down, prepare and paint cell door and frame including localised timber repair, filling cracks with timber putty and removal of redundant fixings (elevations 14, 15, 19 and 20)	4	No	450	1,800
58	Replace hardware to cell doors	4	No	1,000	4,000
	<u>Well</u>				
59	Rake out joints and repoint with lime mortar	15	m2	60	900
60	Clear out vegetation		Item		100
	<u>Bakehouse</u>				
61	Remove perspex door to bakehouse and replace with metal grille gate to allow ventilation	1	No	2,500	2,500
62	Clean plant growth from walls and oven after bakehouse dried out	30	m2	40	1,200
63	Rake out and repoint fretted mortar joints with lime mortar	30	m2	140	4,200
	<u>On-Costs</u>				
64	Builder preliminaries	20	%		89,900
65	Scaffolding	625	m2	40	25,000
66	Design Contingency	5	%		28,200
67	Construction Contingency	10	%		59,300
68	Escalation to tender				0
69	Professional Fees & Disbursements				0

FREMANTLE ROUNDHOUSE CMP



Project: Heritage		Details: Preliminary Estimate 14.05.2020			
Building: Overall Cost & Priorities 1 to 4					
Code	Description	Quantity	Unit	Rate	Total
FREMANTLE ROUND HOUSE CMP TOTAL COST					<i>(Continued)</i>
70	Goods and Services Tax				0
	Estimated Construction Cost (excluding GST)				652,000
FREMANTLE ROUND HOUSE CMP TOTAL COST					652,000

FREMANTLE ROUNDHOUSE CMP



Project: Heritage	Details: Preliminary Estimate 14.05.2020
Building: Overall Cost & Priorities 1 to 4	

Code	Description	Quantity	Unit	Rate	Total
------	-------------	----------	------	------	-------

FREMANTLE ROUND HOUSE CMP PRIORITY 1 IMMEDIATE ATTENTION

	ESTIMATED TOTAL COST				
	<u>Steps from High Street</u>				
71	Remove cement render to mid level steps wall, rake out any cement pointing and replace seriously damaged stones to match and repoint (26) (28)	34	m2	500	17,000
	<u>Steps to Roundhouse</u>				
72	Remove render, repair substrate and re-render treads and landing (26)		Item		5,000
	<u>Paths around Round House including path to Public Toilets</u>				
73	Allowance for removal and replacement of compacted limestone path including removal of concrete slabs and other obstacles (14)	500	m2	80	40,000
	<u>Lookout Area</u>				
74	Re-oil timber deck (6) (11)	40	m2	50	2,000
75	Timber decking & ramp to match lookout (14)	67	m2	250	16,750
76	Refix timber safety rail to boundary wall, lightly sand and re-oil (6)	22	m	75	1,650
	<u>Copper Roof</u>				
77	Inspect roof and check copper cladding, flashings and timber structure (scaffolding included elsewhere) (30)	22	m2	80	1,760
	<u>Cell Roofs</u>				
78	Coat roof shingles with two coats linseed/turpentine mix 50/50 (30)	38	m2	50	1,900
79	Inspect shingles and replace damaged with Sheok shingles (10% allowed) (30)	2	m2	200	400
80	Dress down flashings to shingle roof (30)	47	m	30	1,410
	<u>Copper Gutters</u>				
81	Check condition of copper gutters (32)	19	m	40	760
	<u>Downpipes</u>				
82	Check condition of downpipes including refixing brackets to wall (32) (34)	18	m	60	1,080
83	Check condition of rainwater heads (32)	2	No	50	100
84	Check stormwater system (35)		Item		800
	<u>Warders Quarters</u>				
85	Inspect ceiling and floor structures and remove debris from sub-floor (69)		Item		2,500
86	Remove linoleum flooring, replace damaged Jarrah floorboards, sand & re-oil (6) (9) (10)	23	m2	150	3,450
87	Remove all patches of render, repoint and limewash walls (54)	91	m2	400	36,400
	<u>Cell Walls</u>				
88	Remove all patches of render, repoint and limewash walls (54)	189	m2	400	75,600
	<u>Bakehouse</u>				
89	Remove perspex door to bakehouse and replace with metal grille gate to allow ventilation (8)	1	No	2,500	2,500
90	Clean plant growth from walls and oven after bakehouse dried out (12)	30	m2	40	1,200
91	Rake out and repoint fretted mortar joints with lime mortar (21) (22)	30	m2	140	4,200



FREMANTLE ROUNDHOUSE CMP

Project: Heritage	Details: Preliminary Estimate 14.05.2020
Building: Overall Cost & Priorities 1 to 4	

Code	Description	Quantity	Unit	Rate	Total
------	-------------	----------	------	------	-------

FREMANTLE ROUND HOUSE CMP PRIORITY 1 IMMEDIATE ATTENTION

(Continued)

	<u>On-Costs</u>				
92	Builder preliminaries	20	%		43,300
93	Design Contingency	5	%		13,000
94	Construction Contingency	10	%		27,300
95	Escalation to tender				0
96	Professional Fees & Disbursements				0
97	Goods and Services Tax				0
	Priority 1 Estimated Construction Cost (excluding GST)				300,060

FREMANTLE ROUND HOUSE CMP PRIORITY 1

300,060



FREMANTLE ROUNDHOUSE CMP

Project: Heritage	Details: Preliminary Estimate 14.05.2020
Building: Overall Cost & Priorities 1 to 4	

Code	Description	Quantity	Unit	Rate	Total
FREMANTLE ROUND HOUSE CMP PRIORITY 2 URGENT					
	ESTIMATED TOTAL COST				
	<u>Steps from High Street</u>				
98	Carry out localised repairs to steps where necessary to provide an even finish (26) (28)		Item		3,000
99	Remove accumulated leaf litter from blocked off landing (28)		Item		300
	<u>Steps to Roundhouse</u>				
100	Remove cement render to upper stair balustrade and repoint stonework with lime mortar (26)	48	m2	400	19,200
101	Replace Jarrah treads to entry steps (elevation 1) [9 no] (27)	39	m	120	4,680
102	Resurface landing step with limestone concrete graded for run-off (elevation 1) (26)		Item		600
	<u>Lookout Area</u>				
103	Remove or repaint picket fence & gates (12) (50) (51)	7	m	80	560
104	Remove cement render to boundary wall and repoint stonework with lime mortar (20) (21) (22)	75	m2	400	30,000
	<u>Boundary Walls around Eastern Boundary</u>				
105	Remove vegetation causing damage to boundary wall and repair stonework where required (12) (16) (20) (21)		Item		5,000
	<u>Garden Areas</u>				
106	Remove planting causing damage to Round House & boundary walls, repair stonework where required (12) (16) (20) (21) (22)		Item		10,000
107	Deconstruct and rebuild sections of brick garden bed retaining walls where damaged (12) (17)		Item		1,500
	<u>External Elevations</u>				
108	Rake out cement pointing to parapet and repoint in lime mortar (20) (21) (22)	40	m2	140	5,600
109	Clean stonework to parapet string course, rake out cement pointing and repoint with lime mortar (20) (21) (22)	62	m	100	6,200
110	Carefully remove existing signage and make good damage (21) (23)		Item		500
111	Treat timber lintel to main entrance to rehydrate with a linseed oil mix (47) (48)		Item		300
112	Rub down, prepare and paint door frame. Repair timber to based of double doors and retain & oil timber threshold (elevation 1) (43) (50)	1	No	700	700
113	Replace hardware to entry doors with appropriate hardware (45)		Item		1,200
114	Rake out joint of stonework to a depth of 100mm and repoint with lime mortar (75% allowed) (20) (21) (22)	258	m2	140	36,120
115	Replace stonework damaged during wall repointing (21)	20	No	400	8,000
116	Remove render to plinth and repoint substrate (elevations 9 and 10) (20) (21) (22)	6	m2	200	1,200
117	Inspect to top of perimeter parapet wall, carry out repairs as required and seal with clear waterproof membrane (20) (21) (22) (25)	60	m	90	5,400
118	Remove vegetation causing damage to Round House walls and repair stonework where required (12) (16) (20) (21)		Item		5,000
119	Rub down, prepare and paint door frame. Repair timber to based of double doors and retain & oil timber threshold (elevation 17) (43) (50)	1	No	700	700

FREMANTLE ROUNDHOUSE CMP



Project: Heritage		Details: Preliminary Estimate 14.05.2020			
Building: Overall Cost & Priorities 1 to 4					
Code	Description	Quantity	Unit	Rate	Total
FREMANTLE ROUND HOUSE CMP PRIORITY 2 URGENT (Continued)					
	<u>Windows</u>				
120	Sand back, prepare and repaint existing window including timber lintel (elevations 16 to 18) (41)	5	No	500	2,500
121	Allow for replacement of severely eroded bricks around window using salvaged bricks to match in lime mortar (elevation 16) (21)		Item		600
	<u>Concrete Floor to Courtyard and Cells</u>				
122	Repair limestone flooring to courtyard and cells 5 to 9 (57)	167	m2	50	8,350
	<u>Walls</u>				
123	Rake out joint of stonework to a depth of 100mm and repoint with lime mortar (75% allowed) (36) (37)	216	m2	140	30,240
	<u>Warders Quarters</u>				
124	Sand & re-oil timber floor to Room 2 (10)	8	m2	75	600
125	Replace damaged floorboard to Room 12, sand & re-oil (10)	8	m2	100	800
126	Inspect Yorkshire stone flag paving (8)		Item		250
	<u>Cell Ceilings</u>				
127	Rub back cell ceilings and coat timber with linseed/turpentine mix (53)	34	m2	40	1,360
	<u>Cell Doors</u>				
128	Rub down, prepare and paint cell door and frame including localised timber repair, filling cracks with timber putty and removal of redundant fixings (elevations 14, 15, 19 and 20) (48)	4	No	450	1,800
129	Replace hardware to cell doors (45)	4	No	1,000	4,000
	<u>Well</u>				
130	Rake out joints and repoint with lime mortar (36) (37)	15	m2	60	900
131	Clear out vegetation (12)		Item		100
	<u>On-Costs</u>				
132	Builder preliminaries	20	%		39,500
133	Scaffolding	625	m2	40	25,000
134	Design Contingency	5	%		13,100
135	Construction Contingency	10	%		27,400
136	Escalation to tender				0
137	Professional Fees & Disbursements				0
138	Goods and Services Tax				0
Priority 2 Estimated Construction Cost (excluding GST)					302,260
FREMANTLE ROUND HOUSE CMP PRIORITY 2					302,260

FREMANTLE ROUNDHOUSE CMP



Project: Heritage	Details: Preliminary Estimate 14.05.2020
Building: Overall Cost & Priorities 1 to 4	

Code	Description	Quantity	Unit	Rate	Total
------	-------------	----------	------	------	-------

FREMANTLE ROUND HOUSE CMP PRIORITY 3 MEDIUM TERM

	ESTIMATED TOTAL COST				
	<u>External Elevations</u>				
139	Carefully clean stonework (20)	344	m2	60	20,640
	<u>Cell Floors</u>				
140	Remove existing floor to four cells (3, 4, 10 & 11) (55)	34	m2	40	1,360
141	Reinstate cell floors to match limestone cement floor to courtyard (56)	34	m2	200	6,800
	<u>On-Costs</u>				
142	Builder preliminaries	20	%		5,800
143	Design Contingency	5	%		1,700
144	Construction Contingency	10	%		3,600
145	Escalation to tender				0
146	Professional Fees & Disbursements				0
147	Goods and Services Tax				0
	Priority 3 Estimated Construction Cost (excluding GST)				39,900

FREMANTLE ROUND HOUSE CMP PRIORITY 3

39,900

FREMANTLE ROUNDHOUSE CMP


Project: Heritage	Details: Preliminary Estimate 14.05.2020
Building: Overall Cost & Priorities 1 to 4	

Code	Description	Quantity	Unit	Rate	Total
------	-------------	----------	------	------	-------

FREMANTLE ROUND HOUSE CMP PRIORITY 4 LONG TERM

	ESTIMATED TOTAL COST				
	<u>Steps from High Street</u>				
148	Remove remaining paint to handrail and repaint (50) (51)	18	m	40	720
	<u>Steps to Roundhouse</u>				
149	Remove remaining paint to handrail and repaint (50) (51)	20	m	40	800
	<u>Timber Fascias</u>				
150	Repaint timber fascia to cells 3, 4, 10 and 11 (50) (51)	19	m	40	760
	<u>Windows</u>				
151	Allow for replacement of 3 No. iron bar grilles to windows (elevations 16 to 18) (42)	5	No	600	3,000
	<u>Cell Walls</u>				
152	Allowance for replacing wall vents (20) (21)		Item		1,800
	<u>On-Costs</u>				
153	Builder preliminaries	20	%		1,400
154	Design Contingency	5	%		400
155	Construction Contingency	10	%		900
156	Escalation to tender				0
157	Professional Fees & Disbursements				0
158	Goods and Services Tax				0
	Priority 4 Estimated Construction Cost (excluding GST)				9,780

FREMANTLE ROUND HOUSE CMP PRIORITY 4
9,780

Round House, Fremantle - Conservation Management Plan

2020

13.6 MATERIALS ANALYSIS



Page | 206



22 May 2020

Hocking Heritage and Architecture
156 Onslow Road
SHENTON PARK WA 6008

Attention Ms Prue Griffin

FREMANTLE ROUND HOUSE, WA

- Analysis of Mortar Samples

Client reference: Req. Prue Griffin

Our reference: HHA0320-1A

Investigating officers: Kin Hong Ip, Michael Till¹ & Lance Smith²

Report prepared by: Kin Hong Ip & James P. Mann

James P Mann
Laboratory Manager

	Draft	Reviewed	Released
Name	KHIP	JM	KHIP
Date	22/5/20	22/5/20	22/5/20

AMENDED – This report replaces HHA0320-1 dated 08/05/2020 due to editorial changes. Please dispose of any copies of previous report.

¹ Ancillary XRF analysis services within this report were performed by Greencap

² Ancillary chemical analysis services within this report were performed by Sydney Analytical Laboratories

The client listed above and Stone Initiatives jointly own copyright over this document. This document shall not be reproduced without the express permission of one of the copyright owners and in any case shall only be reproduced in full. Stone Initiatives shall not be liable for loss, cost, damage or expense incurred by any third party resulting from the use of any information or interpretation given in this report. In no case shall Stone Initiatives be liable for consequential damages including, but not limited to, lost profit, damages for failure to meet deadlines and lost production arising from this report. The results relate only to the items tested. Samples will be stored for 30 days.

Stone Initiatives and Materials Testing Group Pty Ltd
Unit 2, 19 Light Crescent, Mount Barker SA 5251

www.stonemta.com.au

ABN 82 462 051 744 | ACN 106 166 296
P +61 (0) 8 6391 6844
M +61 (0) 400 251 020
info@stonemta.com.au



1. INTRODUCTION

A request was received from the client to determine the composition of samples of mortar removed from the Fremantle Round House, WA. The samples were described as follows:

• Inner Courtyard 2004 Mortar	Location: MT01	(our reference: C1198)
• Backing Mortar Inner Courtyard	Location: MT02	(our reference: C1199)
• 2004 Mortar – North-West Side	Location: MT03	(our reference: C1200)
• Grey Mortar	Location: MT04	(our reference: C1201)
• Orange Mortar	Location: MT05	(our reference: C1202)
• c. Original Mortar	Location: MT06A	(our reference: C1203)
• c. Original Mortar	Location: MT06B	(our reference: C1204)

2. INVESTIGATION

2.1. Mortar Analysis

The aim of the analysis was to determine the composition and general properties of the samples; this was carried out in three stages:

- XRD analysis for semi-quantitative identification of constituents.
- Determination of Cement / Lime / Sand content.
- Sizing of aggregate and microscopic examination to determine sand morphology.

2.1.1. XRD Analysis

A representative portion of the samples were pulverised and analysed by X-ray diffraction to identify the minerals present.

2.1.2. Cement (Pozzolan)/Lime/Sand Content

A representative portion of the samples were lightly crushed and analysed in accordance with the methods of Section 7 of AS2701 – 2001; this method provides proportions of key chemical constituents that can be used to calculate approximate cement/lime/sand volume proportions.

2.1.3. Grain size distribution & morphology of sand fraction

A representative portion of the samples were dissolved in dilute hydrochloric acid and dry-sieved to provide a particle size range and allow microscopic examination of the grain morphology.



3. MORTAR COMPOSITIONAL ANALYSIS

3.1. 2004 Mortar – MT01 – Inner Courtyard (Ref: C1198)

3.1.1. Mineralogy

The semi-quantitative mineralogy of the sample follows.

Mineral	2004 Mortar – MT01 Inner Courtyard C1198 (estimated wt%)
Quartz	A (17)
Calcite/Mg-substituted Calcite (CaCO_3) _{0.84} (MgCO_3) _{0.16}	D (65)
Aragonite	A (15)
K-feldspar	Tr (3)

Semi-quantitative Abbreviations

- D = Dominant. Used for the component apparently most abundant, regardless of its probable percentage level.
SD = Sub-dominant. The next most abundant component providing its abundance is judged above 20%.
A = Accessory. Components judged to be present between the levels of roughly 5 and 20%.
Tr = Trace. Components judged to be below about 5%.

Discussion

The mortar sample is composed predominantly of Magnesium-substituted Calcite with an accessory amount of Quartz sands and the Calcite polymorph, Aragonite. The detection of Magnesium-substituted Calcite (Dolomitic limestone – often formed in environments rich in organic matter) is attributed to the presence of marine fossils. The Aragonite detected is attributed to shell-grit within the sand (aggregate) along with the quartz and K-feldspar. No cement constituent was found in the sample which indicates that cement was not used in the mortar mixture.

3.1.2. Cement / Lime / Sand Content

The following results were obtained for the chemical analyses:

Component	2004 Mortar - MT01 Inner Courtyard C1198
Soluble SiO_2 (Weight %)	0.3
CaO (Weight %)	42.0
Sand (Weight %)	19.3

The results from the chemical analysis do not reflect the actual amounts of carbonate minerals in the sample as Magnesium-substituted carbonate would not be detected by this method. An alternative method is needed to evaluate compatible lime/sand ratios to formulate the replacement mortars (see Sections 4 – 6)



3.1.3. Grain Size Distribution

The results of the sieve analysis of the acid insoluble fraction are presented in the table below and presented graphically in Chart 1. below.

Size Fraction (mm/ microns)	Sand Fraction (wt% passing through sieve)
	2004 Mortar – MT01 Inner Courtyard C1198
4.75 mm	100.0
2.36 mm	100.0
1.18 mm	99.5
600 microns	91.2
300 microns	42.5
150 microns	8.2
75 microns	1.2

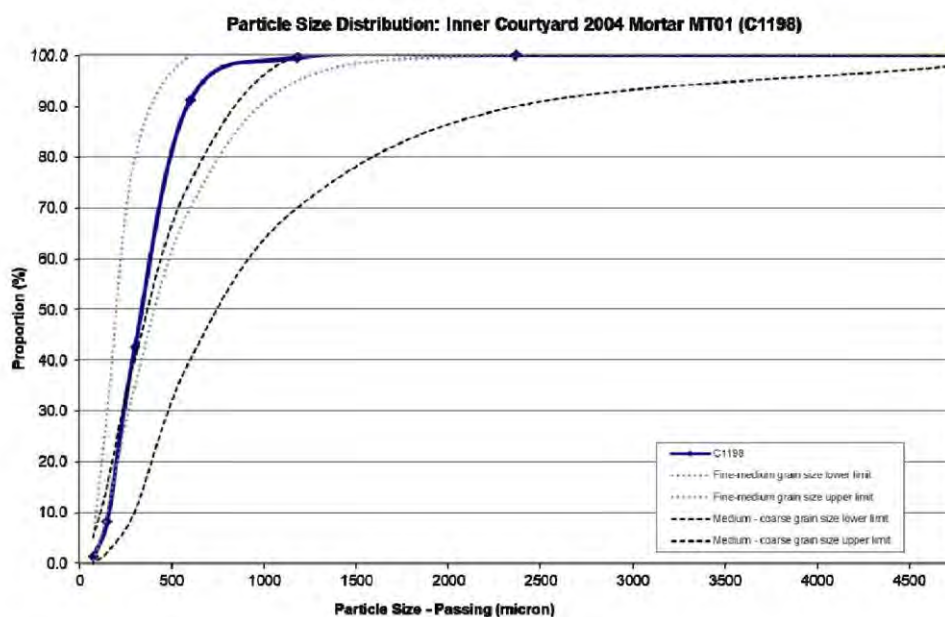


Chart 1: Grain size distribution of aggregates – total passing by size fraction.

3.1.4. Aggregate Description

The aggregate has an overall light-gray colour (Munsell colour 2.5Y 7/2 *light gray*) (Plate1). The aggregate is composed predominantly of sub-rounded (moderately soft) quartz sand grains. The sand is considered to have a medium-fine grain size with relatively clean grains showing mild oxide staining. Specks of darker colour grains are originated from the rock-forming mineral of K-feldspar (Plate 2).



Plate 1: Typical macro appearance of the whole mortar sample (left) and bulk sand fraction (right).



Plate 2: Typical micro appearance of the 600 - 300 micron sand fraction - 6mm field of view.



3.2. Backing Mortar– MT02 – Inner Courtyard (C1199)

3.2.1. Mineralogy

The semi-quantitative mineralogy of the sample follows.

Mineral	Backing Mortar – MT02 Inner Courtyard C1199 (estimated wt%)
Quartz	SD (27)
Calcite/Mg-subst. Calcite	D (57)
Aragonite	A (16)

Semi-quantitative Abbreviations

- D = Dominant. Used for the component apparently most abundant, regardless of its probable percentage level.
SD = Sub-dominant. The next most abundant component providing its abundance is judged above 20%.
A = Accessory. Components judged to be present between the levels of roughly 5 and 20%.
Tr = Trace. Components judged to be below about 5%.

Discussion

The mortar sample is composed predominantly of Magnesium-substituted Calcite (Dolomitic limestone formed in environments rich in organic matter) with an accessory amount of Aragonite which strongly indicates the presence of shell-grit from a marine origin. The sub-dominant amount of Quartz is most likely present as sand grains. No cement constituent was found in the sample which indicates that cement was not used in the mortar mixture.

3.2.2. Cement / Lime / Sand Content

The following results were obtained for the chemical analyses:

Component	Backing Mortar - MT02 Inner Courtyard C1199
Soluble SiO ₂ (Weight %)	0.4
CaO (Weight %)	41.5
Sand (Weight %)	19.4

The results from the chemical analysis do not reflect the actual amounts of carbonate minerals in the sample as Magnesium-substituted carbonate would not be detected by this method. An alternative method is needed to evaluate compatible lime/sand ratios to formulate the replacement mortars (see Sections 4 – 6).



3.2.3. Grain Size Distribution

The results of the sieve analysis of the acid insoluble fraction are presented in the table below and presented graphically in Chart 2. below.

Size Fraction (mm/ microns)	Sand Fraction (wt% passing through sieve)
	Backing Mortar – MT02 Inner Courtyard C1199
4.75 mm	100.0
2.36 mm	100.0
1.18 mm	99.5
600 microns	90.1
300 microns	42.7
150 microns	9.7
75 microns	1.5

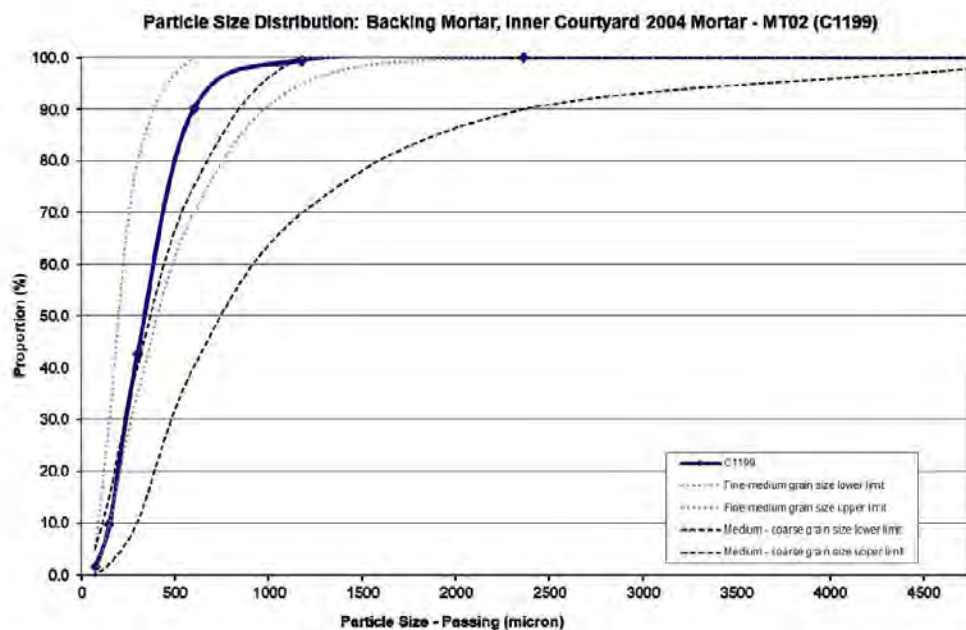


Chart 2: Grain size distribution of aggregates – total passing by size fraction.

3.2.4. Aggregate Description

The aggregate has an overall white colour (Munsell colour 2.5Y 8/2 *white*) (Plate 3). The aggregate is composed predominantly of sub-rounded (moderately soft) quartz sand grains. The sand is considered to have a medium-fine grain size with grains showing minimal iron oxide staining. The occasional pink-colour grains are originated from the Calcite polymorph, Aragonite, present in the aggregate (Plate 4).



Plate 3: Typical macro appearance of the whole mortar sample (left) and bulk sand fraction (right).



Plate 4: Typical micro appearance of the 600 - 300 micron sand fraction - 6mm field of view.



3.3. 2004 Mortar – MT03 – North-West Side (C1200)

3.3.1. Mineralogy

The semi-quantitative mineralogy of the sample follows.

Mineral	2004 Mortar – MT03 North West Side C1200 (estimated wt%)
Quartz	A (18)
Calcite/Mg-subst. Calcite	D (67)
Aragonite	A (10)
Albite	Tr (2)
K-feldspar	Tr (3)

Semi-quantitative Abbreviations

- D = Dominant. Used for the component apparently most abundant, regardless of its probable percentage level.
SD = Sub-dominant. The next most abundant component providing its abundance is judged above 20%.
A = Accessory. Components judged to be present between the levels of roughly 5 and 20%.
Tr = Trace. Components judged to be below about 5%.

Discussion

The mortar sample is composed predominantly of Magnesium-substituted Calcite (Dolomitic limestone formed in environments rich in organic matter) with an accessory amount of Aragonite which strongly indicates the presence of shell-grit from a marine origin. The accessory amount of quartz is present as sand grains within the aggregate along with trace amounts of Albite and K-feldspar. No cement constituent was found in the sample which indicates that cement was not used in the mortar mixture.

3.3.2. Cement / Lime / Sand Content

The following results were obtained for the chemical analyses:

Component	2004 Mortar – MT03 North West Side C1200
Soluble SiO ₂ (Weight %)	1.4
CaO (Weight %)	36.0
Sand (Weight %)	30.3

The results from the chemical analysis do not reflect the actual amounts of carbonate minerals in the sample as Magnesium-substituted carbonate would not be detected by this method. An alternative method is needed to evaluate compatible lime/sand ratios to formulate the replacement mortars (see Sections 4 – 6).



3.3.3. Grain Size Distribution

The results of the sieve analysis of the acid insoluble fraction are presented in the table below and presented graphically in Chart 3. below.

Size Fraction (mm/ microns)	Sand Fraction (wt% passing through sieve)
	2004 Mortar – MT03 North West Side C1200
4.75 mm	100.0
2.36 mm	100.0
1.18 mm	99.5
600 microns	90.0
300 microns	57.9
150 microns	11.3
75 microns	2.4

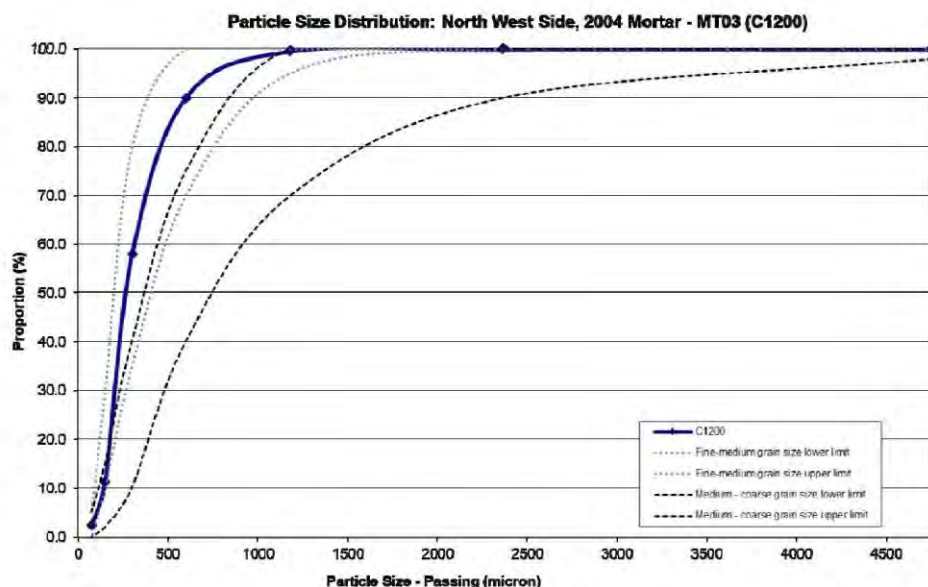


Chart 3: Grain size distribution of aggregates – total passing by size fraction.

3.3.4. Aggregate Description

The aggregate has an overall pale-yellow colour (Munsell colour 2.5Y 7/4 *pale-yellow*) (Plate 5). The aggregate is composed predominantly of sub-rounded (moderately soft) quartz sand grains. The sand is considered to have a medium-fine grain size with grains showing moderate iron oxide staining. The slightly darker colour grains are likely to be K-feldspar and the Calcite polymorph of Aragonite (Plate 6).



Plate 5: Typical macro appearance of the whole mortar sample and bulk sand fraction (right).



Plate 6: Typical micro appearance of the 600 - 300 micron sand fraction - 6mm field of view.



3.4. Grey Mortar – MT04 (C1201)

3.4.1. Mineralogy

The semi-quantitative mineralogy of the sample follows.

Mineral	Grey Mortar – MT04 C1201 (estimated wt%)
Quartz	A (18)
Calcite/Mg-subst. Calcite	D (65)
Aragonite	A (12)
Albite	Tr (2)
K-feldspar	Tr (3)

Semi-quantitative Abbreviations

- D = Dominant. Used for the component apparently most abundant, regardless of its probable percentage level.
SD = Sub-dominant. The next most abundant component providing its abundance is judged above 20%.
A = Accessory. Components judged to be present between the levels of roughly 5 and 20%.
Tr = Trace. Components judged to be below about 5%.

Discussion

The mortar sample is composed predominantly of Magnesium-substituted Calcite (Dolomitic limestone formed in environments rich in organic matter) most likely from marine fossils. The Aragonite detected strongly indicates the presence of shell-grit from marine origin, most likely within the sand along with the quartz. The trace amount of Albite and K-feldspar are common rock forming mineral, which is often found in sand. No cement constituent was found in the sample which indicates that cement was not used in the mortar mixture.

3.4.2. Cement / Lime / Sand Content

The following results were obtained for the chemical analyses:

Component	Grey Mortar - MT04 C1201
Soluble SiO ₂ (Weight %)	0.8
CaO (Weight %)	38.1
Sand (Weight %)	27.5

The results from the chemical analysis do not reflect the actual amounts of carbonate minerals in the sample as Magnesium-substituted carbonate would not be detected by this method. An alternative method is needed to evaluate compatible lime/sand ratios to formulate the replacement mortars (see Sections 4 – 6).



3.4.3. Grain Size Distribution

The results of the sieve analysis of the acid insoluble fraction are presented in the table below and presented graphically in Chart 4. below.

Size Fraction (mm/ microns)	Sand Fraction (wt% passing through sieve)
	Grey Mortar - MT04 C1201
4.75 mm	100.0
2.36 mm	97.7
1.18 mm	96.5
600 microns	93.2
300 microns	67.0
150 microns	17.2
75 microns	0.8

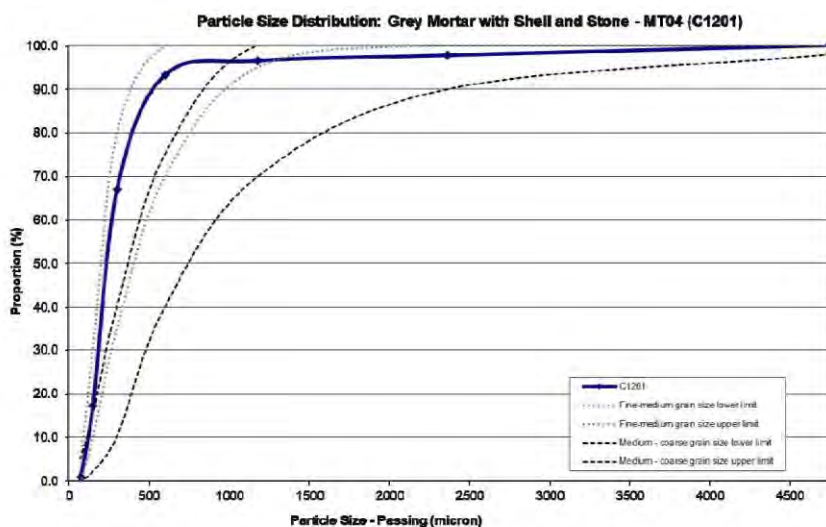


Chart 4: Grain size distribution of aggregates – total passing by size fraction.

3.4.4. Aggregate Description

The aggregate has an overall light gray colour (Munsell colour 2.5Y 7/2 *light gray*) (Plate 7). The aggregate is composed predominantly of sub-rounded (moderately soft) quartz sand grains. The sand is considered to have a medium-fine grain size with grains showing mild iron oxide staining. The darker grains may be originated from the rock-forming minerals in undetectable amounts (<1%) (Plate 8). Or, they may be amorphous pozzolanic or organic materials used as pigment additives.



Plate 7: Typical macro appearance of the whole plaster sample and bulk sand fraction (right).

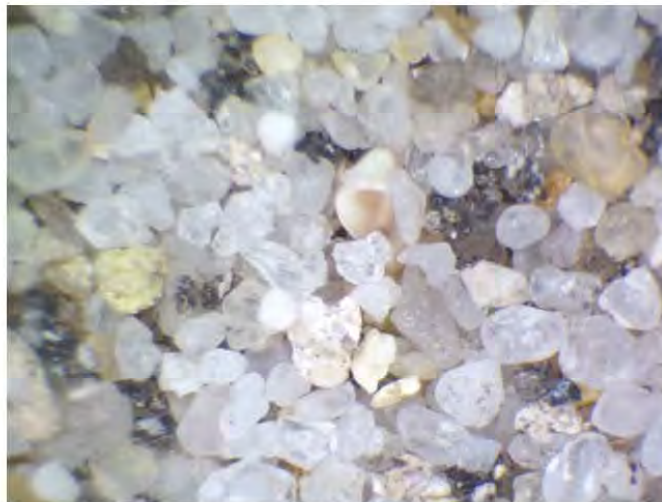


Plate 8: Typical micro appearance of the 600 - 300 micron sand fraction - 6mm field of view.



3.5. Orange Mortar – MT05 (C1202)

3.5.1. Mineralogy

The semi-quantitative mineralogy of the sample follows.

Mineral	Orange Mortar – MT05 C1202 (estimated wt%)
Quartz	D (46)
Calcite/Mg-subst. Calcite	A (16)
Calcite	SD (32)
Aragonite	Tr (3)
K-feldspar	Tr (3)

Semi-quantitative Abbreviations

- D = Dominant. Used for the component apparently most abundant, regardless of its probable percentage level.
 SD = Sub-dominant. The next most abundant component providing its abundance is judged above 20%.
 A = Accessory. Components judged to be present between the levels of roughly 5 and 20%.
 Tr = Trace. Components judged to be below about 5%.

Discussion

The mortar sample is composed predominantly of quartz with a significant proportion of Calcite. The accessory amount of Magnesium-substituted Calcite (Dolomitic limestone formed in environments rich in organic matter) and the trace amount of Aragonite indicate the presence of marine fossils and shell-grit. The trace amount of K-feldspar detected is common rock forming mineral, which is often found in sand. No cement constituent was found in the sample which indicate that cement was not used in the mortar mixture.

3.5.2. Cement / Lime / Sand Content

The following results were obtained for the chemical analyses:

Component	Orange Mortar – MT05 C1202
Soluble SiO ₂ (Weight %)	1.5
CaO (Weight %)	20.8
Sand (Weight %)	52.1

The results from the chemical analysis do not reflect the actual amounts of carbonate minerals in the sample as Magnesium-substituted carbonate would not be detected by this method. An alternative method is needed to evaluate compatible lime/sand ratios to formulate the replacement mortars (see Sections 4 – 6).



3.5.3. Grain Size Distribution

The results of the sieve analysis of the acid insoluble fraction are presented in the table below and presented graphically in Chart 5. below.

Size Fraction (mm/ microns)	Sand Fraction (wt% passing through sieve) Orange Mortar – MT05 C1202
4.75 mm	100.0
2.36 mm	100.0
1.18 mm	99.8
600 microns	89.6
300 microns	44.0
150 microns	7.5
75 microns	1.4

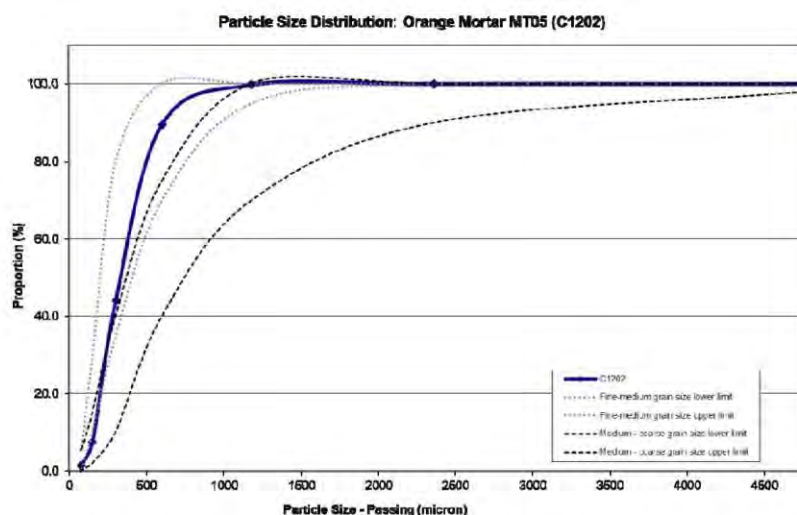


Chart 5: Grain size distribution of aggregates – total passing by size fraction.

3.5.4. Aggregate Description

The aggregate has an overall light yellow-brown colour (Munsell colour 10YR 6/4 light *yellow brown*) (Plate 9). The aggregate is composed predominantly of sub-rounded (moderately soft) quartz sand grains. The sand is considered to have a medium-fine grain size with grains showing moderate iron oxide staining (Plate 10).



Plate 9: Typical macro appearance of the whole sample and bulk sand fraction (right).



Plate 10: Typical micro appearance of the 600 – 300 micron sand fraction - 6mm field of view.



3.6. c. Original Mortar – MT06A (C1203)

3.6.1. Mineralogy

The semi-quantitative mineralogy of the sample follows.

Mineral	c. Original Mortar – MT06A C1203 (estimated wt%)
Quartz	D (42)
Calcite/Mg-subst. Calcite	A (17)
Calcite	SD (33)
Aragonite	Tr (3)
Albite	Tr (2)
K-feldspar	Tr (3)

Semi-quantitative Abbreviations

- D = Dominant. Used for the component apparently most abundant, regardless of its probable percentage level.
SD = Sub-dominant. The next most abundant component providing its abundance is judged above 20%.
A = Accessory. Components judged to be present between the levels of roughly 5 and 20%.
Tr = Trace. Components judged to be below about 5%.

Discussion

The mortar sample is composed predominantly of both Quartz and Calcite, with an accessory amount of Magnesium-substituted Calcite (as marine fossils) and trace amount of Aragonite (as shell-grit). The trace amounts of Albite and K-feldspar detected are common rock forming minerals, which are often found in sand. No cement constituent was found in the sample which indicates that cement was not used in the mortar mixture.

3.6.2. Cement / Lime / Sand Content

The following results were obtained for the chemical analyses:

Component	c. Original Mortar – MT06A C1203
Soluble SiO ₂ (Weight %)	0.9
CaO (Weight %)	22.5
Sand (Weight %)	49.7

The results from the chemical analysis do not reflect the actual amounts of carbonate minerals in the sample as Magnesium-substituted carbonate would not be detected by this method. An alternative method is needed to evaluate compatible lime/sand ratios to formulate the replacement mortars (see Sections 4 – 6).



3.6.3. Grain Size Distribution

The results of the sieve analysis of the acid insoluble fraction are presented in the table below and presented graphically in Chart 6. below.

Size Fraction (mm/ microns)	Sand Fraction (wt% passing through sieve)
	c. Original Mortar – MT06A C1203
4.75 mm	100.0
2.36 mm	100.0
1.18 mm	100.0
600 microns	99.6
300 microns	62.0
150 microns	13.1
75 microns	1.7

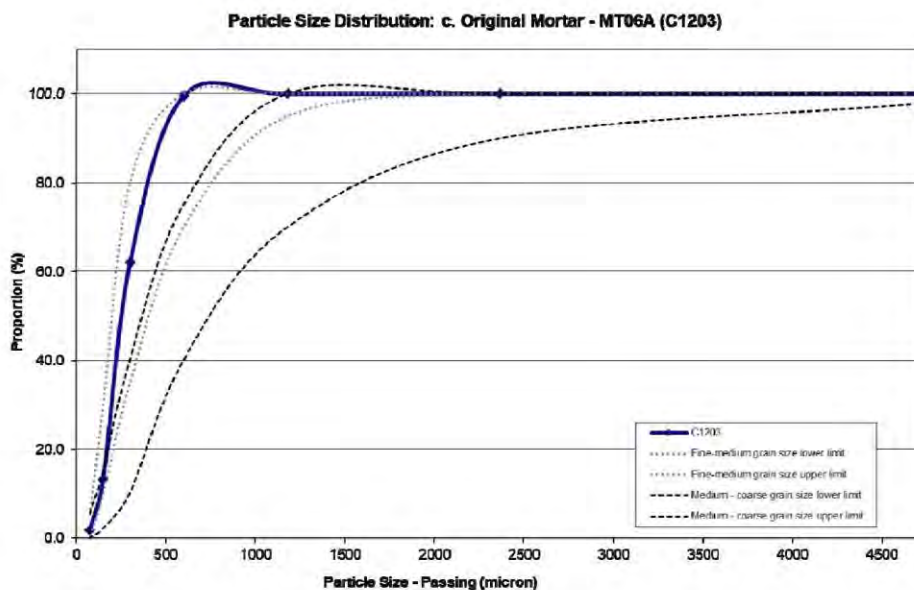


Chart 6: Grain size distribution of aggregates – total passing by size fraction.

3.6.4. Aggregate Description

The aggregate has an overall light brownish-gray colour (Munsell colour 2.5Y 6/2 *light brownish-gray*) (Plate 11). The aggregate is composed predominantly of clean, sub-rounded (moderately soft) quartz sand grains. The sand is considered to have a medium-fine grain size with grains showing minimal iron oxide staining (Plate 12).



Plate 11: Typical macro appearance of the whole plaster sample and bulk sand fraction (right).



Plate 12: Typical micro appearance of the 600 – 300 micron sand fraction - 6mm field of view.



3.7. c. Original Mortar – MT06B (C1204)

3.7.1. Mineralogy

The semi-quantitative mineralogy of the sample follows.

Mineral	c. Original Mortar – MT06B C1204 (estimated wt%)
Quartz	D (40)
Calcite/Mg-subst. Calcite	A (20)
Calcite	SD (33)
Aragonite	Tr (4)
K-feldspar	Tr (3)

Semi-quantitative Abbreviations

- D = Dominant. Used for the component apparently most abundant, regardless of its probable percentage level.
SD = Sub-dominant. The next most abundant component providing its abundance is judged above 20%.
A = Accessory. Components judged to be present between the levels of roughly 5 and 20%.
Tr = Trace. Components judged to be below about 5%.

Discussion

The mortar sample is composed predominantly of Quartz and Calcite. Accessory amount of Magnesium-substituted Calcite (from marine fossils) with a trace amount of Aragonite (as shell-grit) were also detected. The trace amount of K-feldspar is a common rock forming mineral, which is often found in sand. No cement constituent was found in the sample which indicates that cement was not used in the mortar mixture.

3.7.2. Cement / Lime / Sand Content

The following results were obtained for the chemical analyses:

Component	c. Original Mortar – MT06B C1204
Soluble SiO ₂ (Weight %)	1.1
CaO (Weight %)	28.0
Sand (Weight %)	43.1

The results from the chemical analysis do not reflect the actual amounts of carbonate minerals in the sample as Magnesium-substituted carbonate would not be detected by this method. An alternative method is needed to evaluate compatible lime/sand ratios to formulate the replacement mortars(see Sections 4 – 6).



3.7.3. Grain Size Distribution

The results of the sieve analysis of the acid insoluble fraction are presented in the table below and presented graphically in Chart 7 below.

Size Fraction (mm/ microns)	Sand Fraction (wt% passing through sieve)
	c. Original Mortar – MT06B C1204
4.75 mm	100.0
2.36 mm	100.0
1.18 mm	100.0
600 microns	99.6
300 microns	64.0
150 microns	15.0
75 microns	2.8

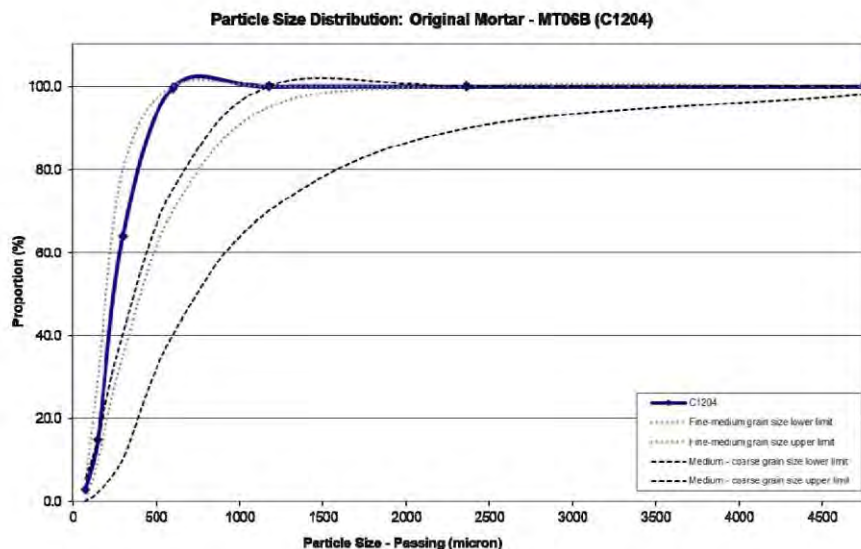


Chart 7: Grain size distribution of aggregates – total passing by size fraction.

3.7.4. Aggregate Description

The aggregate has an overall light brownish-grey colour (Munsell colour 2.5YR 6/2 *light brownish-gray*) (Plate 13). The aggregate is composed predominantly of clean, sub-rounded (moderately soft) quartz sand grains. The sand is considered to have a medium-fine grain size with grains showing minimal iron oxide staining typical of 'beach sand' (Plate 14).



Plate 13: Typical macro appearance of the whole plaster sample and bulk sand fraction (right).



Plate 14: Typical micro appearance of the 600 – 300 micron sand fraction - 6mm field of view.



4. SUMMARY

The composition of the mortar mixes presented below are based on the accuracies of the analyses carried out and the composition of the samples tested.

Based on the test results, all tested mortar samples are calcite-rich mortars which contain similar mineral composition. The presence of large amounts of Magnesium-substituted Calcite (57 – 67%) as well as accessory amount of Aragonite (10 – 16%) in samples C1198 (MT01), C1199 (MT02), C1200 (MT03) and C1201 (MT04) strongly suggest the presence of Dolomitic limestone dust and shell grit of a marine origin. However, the absence of carbonated lime (calcite) in these samples indicates the total absence of 'fired lime' (i.e. neither quicklime from a nearby lime kiln, nor the shell grit was fired and slaked in a smaller scale onsite was used). An unusual mortar mixing method may have been used for these four mixtures similar to that described below:

Unfired silt-like particles (ground Dolomitic limestone) and aggregate (possibly from locally sourced sand which contained significant amount of shell grit - corals, molluscs and other seashell fragments) were mixed with small amount of water to create a paste-like mortar, where no chemical reaction took place in the process of curing/drying. Various sizes of particles were compacted between heavy building stones which generated adequate adhesion between stones.

Samples C1202 (MT05), C1203 (MT06A) and C1204 (MT06A) showed significantly higher Quartz contents (40% – 46%) in the tested mortars with reduced amounts of dolomitic limestone (16 – 20%) and Aragonite (marine shell grit) (3 – 4%). In addition, pure Calcite, mainly from limestone kiln, was identified in all three mortar mixtures (32 – 33%). The percentage composition in the three samples indicates that significant amounts of the pulverised Dolomitic limestone and shell grit were replaced by an increased amount of Quartz sand which bound together with the (fired) limestone-lime upon curing. Hence, samples C1202, C1203 and C1204 are believed to be structurally more cohesive compared to samples C1198, C1199 and C1200.

The presence of larger seashells and a dark pigment in sample C1201 may create a more durable mortar due to the efficient packing of particles with various sizes, and, a possible adhesion enhancement from the amorphous pozzolanic pigment particles.

Aggregates of all the tested samples were found to contain both Quartz sand grains and shell grit fragments. Sand grain samples are of sub-rounded soft Quartz grains, with some samples showing mild to moderate iron staining.

Note:

Historic cement/lime has different physical and strength properties to modern, refined, commercially available cement/lime. An experienced stonemason will be able to adjust the ratios to produce a mortar that matches in appearance as well as strength. In addition, organic materials, such as egg white, casein, animal fat or plant oil were often added into the historic lime/sand mixes to aid workability as well as adhesion. These materials may break down over the years and would not be identified by most analytical instruments. Hence, results provided should be used as a guide only. To recreate the original mortars may be difficult due to material unavailability and application impracticality. The recommended replacement mortar mixtures would be formulated to be compatible with the physical and chemical characteristics of the corresponding original mortars.



5. ADDITIONAL INVESTIGATION

5.1. Rehydration of Original Mortar Samples

Considering the unusual compositions of the samples in the current investigation. Mortar-like pastes were created by adding minimal water to the original mortar samples, which were compacted and dried for observation and evaluation (Plate 15):



Plate 15: Compacted and dried samples from the original mortar mixtures

Discussion

Samples containing pure (fired lime) Calcite (C1202 – C1204) required double the amount of water to form workable pastes than samples with no detectable Calcite (from fired lime) due to the higher water absorbing ability of the fossiliferous Calcium Carbonate. The resulting sample colours were found to correspond to the description from the client. All samples showed texture and integrity of heritage mortars with reasonable adhesion to the polished stone substrates.

Sample cubes containing no pure (fired lime) Calcite (C1198 – C1201) would better represent the original mortars as no apparent curing process occurred, apart from drying and compacting by nearby stones. Such samples would be susceptible to saline humidity and moisture in the environment such as falling damp, rising salt damp and sea spray. Therefore, modified replacement mortar mixtures are recommended for the restoration of the related stone walls. On the other hand, sample cubes containing pure (fired lime) Calcite would be weaker than the original counterparts as the original mortars would be strengthened during the curing process from quicklime to Calcite. Slightly modified replacement mortars are also recommended to match the strength and vapour permeability of the original mortars.



6. RECOMMENDATION

The replacement recommendations presented below are based on the strength and granularity of the original mortars.

6.1. Inner Courtyard 2004 Mortar (C1198 – MT01)

Parts by volume:

- Possible Composition of the Original Mortar:
 - 35% shelly quartz sand and 65% crushed fossilised limestone.
Note: No active lime (i.e. lime putty, hydrated lime, or NHLs) was detected in this sample.
- Recommended Replacement Mortar:
 - 1.0 part lime putty : 3.0 parts aggregate made up of 35% 'moderately soft' medium-fine grained, washed light-gray sand and 65% crushed shell grit to matching particle size.
- Sizing of aggregate:
 - Predominantly within the range of - 600 microns to +150 microns (~85% in this range)
 - The dominant fraction was 600 microns – 300 microns fraction, making up 50% (weight %) of the whole aggregate sample

6.2. Backing Mortar – Inner Courtyard (C1199 – MT02)

Parts by volume:

- Possible Composition of the Original Mortar:
 - 50% shelly quartz sand and 50% crushed fossilised limestone.
Note: No active lime (i.e. lime putty, hydrated lime, or NHLs) was detected in this sample.
- Replacement Mortar:
 - 1.0 part lime putty : 3.0 parts aggregate made up of 50% 'moderately soft' medium-fine grained, washed white sand and 50% crushed shell grit to matching particle size.
- Sizing of aggregate:
 - Predominantly within the range of -1.18 mm to +150 microns (~92% in this range)
 - The dominant fraction was 600 micron – 300 microns fraction, making up 48% (weight %) of the whole aggregate sample



6.3. 2004 Mortar – North West Side (C1200 – MT03)

Parts by volume:

- Possible Composition of the Original Mortar:
 - 35% shelly quartz sand and 65% crushed fossilised limestone.
Note: No active lime (i.e. lime putty, hydrated lime, or NHLs) was detected in this sample.
- Replacement Mortar:
 - 1.0 part lime putty : 3.0 parts aggregate made up of 30% 'moderately soft' medium-fine grained, washed pale-yellow sand and 70% crushed shell grit to matching particle size.
- Sizing of aggregate:
 - Predominantly within the range of -1.18 mm to +150 microns (~90% in this range)
 - The dominant fraction was 300 microns – 150 microns fraction, making up 47% (weight %) of the whole aggregate sample

6.4. Grey Mortar (C1201 – MT04)

Parts by volume:

- Possible Composition of the Original Mortar:
 - 35% shelly quartz sand and 65% crushed fossilised limestone.
Note: No active lime (i.e. lime putty, hydrated lime, or NHLs) was detected in this sample.
- Replacement Mortar:
 - 1.0 part lime putty : 3.0 parts aggregate made up of 50% 'moderately soft' medium-fine grained, washed light-gray sand and 50% crushed shell grit to matching particle size. Flyash or black oxide (up to 1%) maybe used to match the colour of the original mortar.
- Sizing of aggregate:
 - Predominantly within the range of -600 microns to +75 microns (~94% in this range)
 - The dominant fraction was 300 microns – 150 microns fraction, making up 50% (weight %) of the whole aggregate sample



6.5. Orange Mortar (C1202 – MT05)

Parts by volume:

- Possible Composition of the Original Mortar:
 - 65% shelly quartz sand and 35% crushed fossilised limestone.
- Replacement Mortar:
 - 1.0 part lime putty: 2.5 parts aggregate made up of 65% 'moderately soft' medium-fine grained, washed light yellow brown sand and 35% crushed shell grit to matching particle size.
- Sizing of aggregate:
 - Predominantly within the range of -1.18 mm to +150 microns (~93% in this range)
 - The dominant fraction was 300 microns – 150 micron fraction, making up 46% (weight %) of the whole aggregate sample

6.6. c. Original Mortar (C1203 – MT06A)

Parts by volume:

- Possible Composition of the Original Mortar:
 - 65% shelly quartz sand and 35% crushed fossilised limestone.
- Replacement Mortar:
 - 1.0 part lime putty: 2.5 parts aggregate made up of 65% 'moderately soft' medium-fine grained, washed light brownish gray sand and 35% crushed shell grit to matching particle size.
- Sizing of aggregate:
 - Predominantly within the range of -600 microns to +75 microns (~98% in this range)
 - The dominant fraction was 300 microns – 150 micron fraction, making up 50% (weight %) of the whole aggregate sample



6.7. c. Original Mortar below ground walls (C1204 – MT06B)

Parts by volume:

- Possible Composition of the Original Mortar:
 - 60% shelly quartz sand and 40% crushed fossilised limestone.
- Replacement Mortar:
 - 1.0 part lime putty: 2.5 parts aggregate made up of 60% 'moderately soft' medium-fine grained, washed light yellow brown sand and 40% crushed shell grit to matching particle size.
- Sizing of aggregate:
 - Predominantly within the range of -600 microns to +75 microns (~97% in this range)
 - The dominant fraction was 300 microns – 150 micron fraction, making up 49% (weight %) of the whole aggregate sample

14.0 REFERENCES

- (1833-2019). *The West Australian*.
- (1855-1901). *Inquirer and Commercial News*.
- (1885-1955). *The Western Mail*.
- (1902-2019). *The Sunday Times*.
- (1905-1910, 1921-1956). *The Mirror*.
- Australia ICOMOS Inc. (2013). *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance*. Australia ICOMOS.
- Bell adds to history of Round House. (2013, March 12). *Fremantle Gazette*. Retrieved August 2020, from <https://www.perthnow.com.au/community-news/fremantle-gazette/bell-adds-to-history-of-round-house-c-792125>
- Campbell, R. M. (1973). *The Round House Report No. 2*. City of Fremantle.
- Campbell, R. M. (1993, January, February, March, April). Oral History. (L. Stevens, Interviewer) City of Fremantle.
- City of Fremantle. (2020, January). *Walyalup Reconciliation Action Plan July 2019-2022*. Retrieved from City of Fremantle: <https://www.fremantle.wa.gov.au/sites/default/files/Walyalup%20Reconciliation%20Action%20Plan%202019-22.pdf>
- Donaldson + Warn Godden Mackay Logan . (2005). *Whaling Station and Maritime Heritage Trail, Arthur Head Reserve Masterplan*. City of Fremantle.
- Erickson, R. (Ed.). (1988). *The Bicentennial Dictionary of Western Australians pre-1829-1888*. Perth, WA: UWA Press.
- Gerard McCann Architect. (1996). *Review of Conservation Plan, The Roundhouse Conservation Project*. Fremantle : City of Fremantle .
- Gillard, G. (2020, March 10). Retrieved from Fremantle Stuff: <https://fremantlestuff.info/index.html>
- Gordon Geological Consultants. (c1976). *Formation, Usage and Conservation of Arthur Head*. City of Fremantle.
- Green, N. (1984). *Broken Spears : Aborigines and Europeans in the southwest of Australia*. Perth, Western Australia: Focus Education Services.
- Gregory, J., & Gothard, J. (Eds.). (2009). *Historical Encyclopedia of Western Australia*. Nedlands: UWA Press.
- Heritage Council of WA. (2019, November). *Assessment Criteria for Cultural Heritage Significance*. Retrieved from Department of Planning Lands and Heritage: <https://www.dplh.wa.gov.au/getmedia/0bd29032-88d4-40fd-b7b6-a4eea9bc5130/HER-Information-Sheet-Assessment-Criteria>
- Hughes-Hallett, D. (2010). *Indigenous History of the Swan and Canning Rivers*. Retrieved from Department of Biodiversity, Conservation and Attractions: <https://parks.dpaw.wa.gov.au/sites/default/files/downloads/parks/Indigenous%20history%20of%20the%20Swan%20and%20Canning%20rivers.pdf>
- Kent, J. (1988). *Round House - Arthur Head Document 96*. City of Fremantle.
- Kerr, J. S. (1990). *The Conservation Plan: A guide to the preparation of conservation plans for places of European cultural significance*. Sydney, NSW, Australia: National Trust of Australia.
- Landgate. (1953-2020). *Map Viewer Aerial Photographs*. Retrieved January 2020, from <https://www.landgate.wa.gov.au/bmvf/app/mapviewer/>



Round House, Fremantle - Conservation Management Plan

2020

- Landgate. (n.d.). *Certificates of Title and Survey Information*. From <https://www.landgate.wa.gov.au>
- Le Page, J. (1986). *Building a State: The Story of the Public Works Department of Western Australia 1829-1985*. Perth, WA: Water Authority of Western Australia.
- Lyon, R. M. (1979). A Glance at the Manners and Language of the Aboriginal Inhabitants of Western Australia: with a short vocabulary. In N. Green, *Nyungar - The People: Aboriginal customs in the southwest of Australia* (p. 176). Perth : Central Book Agency.
- Macintyre, K., & Dobson, B. (2018, February). *Pre-contact indigenous Fremantle*. Retrieved from Anthropology from the Shed: <https://anthropologyfromtheshed.com/project/map-pre-contact-indigenous-fremantle/>
- Marquis-Kyle, P., & Walker, M. (1994). *The Illustrated Burra Charter: Making Good Decisions About the Care of Important Places*. Sydney: ICOMOS. Retrieved from www.icomos.org/australia
- Naomi Lawrence Architecture + Heritage . (1999). *Arthur Head Reserve, Fremantle - Conservation Plan DRAFT*. City of Fremantle.
- National Trust of Australia (WA). (1965-2017). Round House Correspondence File.
- National Trust. (Various). Archived Files. Archive Boxes 134, 135, 136.
- Nayton, G. (2001). *Fremantle Roundhouse - The Bakehouse*. Archaeological Monitoring of site works.
- O'Connor, S., & Thomson, R. (1984). *Report on an Investigation into the Aboriginal Heritage of the Arthur Head Area, Fremantle*. City of Fremantle.
- Philip Griffiths Architect. (2011). *Arthur Head Reserve Conservation Plan*. City of Fremantle.
- Reece, R., & Pascoe, R. (1985). *A Place of Consequence: A Pictorial History of Fremantle*. Fremantle: Fremantle Arts Centre Press.
- Rottneest Island Authority. (2019, December 12). *Aboriginals on Rottneest Island A long connection with Wadjemup*. Retrieved from Rottneest Island: <https://www.rottnestisland.com/the-island/about-the-island/our-history/aboriginal>
- South West Aboriginal Land and Sea Council. (n.d.). *About the Whadjuk Region*. (South West Aboriginal Land and Sea Council) Retrieved January 2020, from Kaartdijin Noongar - Noongar Knowledge : Sharing Noongar Culture: <http://www.noongarculture.org.au>
- Statham-Drew, P. (2003). *James Stirling Admiral and Founding Governor of Western Australia*. Nedlands: UWA Press.
- van Breman, I. (2013). *Western Building Construction. Roofs*. Perth: Ingrid van Bremen.
- van Bremen, I. (2016). *Western Building Construction Walls*. Perth: Ingrid van Bremen.
- Wise's. (1893-1949). *The West Australian Post Office Directories*.



**Additional Information 2 – Round House Conservation Management Plan –
Engagement Report**



Community Engagement Report

January 2020

Alternate formats available on request.

Round House Conservation Management Plan

Contents

Introduction	2
Community Engagement	3
Findings	4
Next Steps	8
Appendix: Materials Submitted	9
Photographs and Media Supplied	9
Bibliography-Type Submission	17

Introduction

The City is preparing a conservation management plan for the Round House, a significant heritage listed site, which will guide the conservation policy for this building into the future.

Early engagement has been included in this process to help ensure that heritage values of the Round House are appropriately recognised, so they can be assessed and ultimately conserved for the future.

Round House Conservation Management Plan

Community Engagement

The purpose of community engagement was to determine community connection and curiosity about the Round House, as well seek to uncover previously unrecorded stories and photographs. The Round House has had many uses over the years and a focus on more 'candid' or 'incidental' photographs that could be related to these previous uses may identify aspects of the building fabric to conserve or interpret.

Methods used were online on My Say Freo (direct submission or stories tool), by visiting the Fremantle Library to drop in material and direct contact with key stakeholders. Broad engagement was themed around:

- Stories and Connection – What do you know? What can you share? Stories, photos etc.
- Curiosity – What have you wondered? What would you like to know more about?

The Round House building is located on Manjaree (Arthur Head) and the Round House is specifically referred to in the City of Fremantle Walyalup Reconciliation Action Plan as one of several places the City would like to encourage a significant increase in Aboriginal and Torres Strait Islander content and awareness. The Round House building itself has significant history for traditional owners as well as Aboriginals from across WA.

The City engaged via:

- Presentation and discussion at the City of Fremantle Walyalup Reconciliation Action Plan Reference Group (note the reference group is not a decision making group).
- Direct contact to SWALSC with information on the project and seeking a discussion with the Whadjuk Working Party on their preferred approaches for the project. SWALSC have confirmed an item on the February 2020 agenda.

Direct contact, discussion or invitation to contribute was also made to the following stakeholders:

- Fremantle Volunteer Heritage Guides (current building managers and also carrying out an interpretation project).
- Fremantle Ports (former managers of site).
- Department of Education (educational value of the site).
- Fremantle Society (Heritage advocacy group).
- Fremantle Inner City Residents' Association (FICRA).
- Royal West Australian History Society.
- Fremantle History Society.
- Individuals who have had previous involvement in the site.

Awareness and promotion of the engagement was undertaken via:

- Newsbites advert in Herald in 23 November & 7 December 2019.

Round House Conservation Management Plan

- Article in FRE-OH! magazine summer edition.
- My Say Freo e-newsletter November & December.
- Post on City's facebook page.
- Poster in noticeboard at City administration office.

Findings

From 15 November to 22 December 2019 the My Say Freo page was visited by 140 people with 7 direct submissions and 1 story shared online. There were no enquiries at the Fremantle Library and a direct response was received from Fremantle Ports. Two late submissions were emailed directly.



My grand-fathers job in WWII was to blow up Fremantle Harbour when the Japanese arrived. He stored the explosives in the tunnel under the Round House.

My story is my love affair with the building!

For I love it as a focus to the High Street vista, where, along with the (remaining) stair flight flanking the arched Tunnel head and sculpted limestone retaining walls, it completes such a great composition.

As a Ticket-of-Leave man, [he] needed to live with his family in the area of the Round House to ensure that he was home by the time the Round House curfew bell sounded.

Visited with Mosman Park Primary School in 1957 and it left a lasting impression on me...

It's wonderful that currently we are able to have access and visit any day. I find even on a wet, cold and inevitably windy Fremantle day it still offers up enough protection and shelter to be welcoming.



Round House Conservation Management Plan

“

On... the anniversary of [ancestor's] stillborn child, I usually make a visit to sit there and reflect on what it must have been like for her and the other prisoners.

I'd like to know why does it need to be a tourist attraction?

I wrote a theatrical show in 2018 called "Frankenstone" about the Roundhouse's connections with Mary Shelly and Frankenstein.

Why the Fremantle Council (or State Government) doesn't provide more maintenance funds to the Round House given it is a significant tourist draw card?

Was it used for whaling?

Mum was obviously taking [these] photos to remind herself of home, whilst she was so far away. The Fremantle Fishing Boat Harbour and Round House were favourite visiting spots during my parents younger years.

It's important to tell the sad truths and history behind it. It would be great to see some of the convicts' names or stories if that info' can be found, and how they contributed to the building of our port & city. They were people too and I'm sure many were unfairly imprisoned but none-the-less they should be recognised and accredited for their contribution.

”

Round House Conservation Management Plan

Some key points from contributions received are summarised as:

- **Connections and community values**

- Grandfather's job in WWII was to blow up Fremantle harbour when the Japanese arrived. He stored the explosives in the tunnel under the round house.
- Family photographs supplied. My late father was a young Fremantle lawyer who had joined the British Colonial Service and was posted to East Africa. He was awaiting my birth, then flew to London University to study, before taking up his posting. Mum & I followed by boat soon after. Mum was obviously taking [these] photos to remind herself of home, whilst she was so far away. The Fremantle Fishing Boat Harbour and the Round House were favourite visiting spots during my parents younger years and their children always enjoyed returning there.
- I wrote a theatrical show in 2018 called "Frankenstone" about the Roundhouse's connections with Mary Shelly and Frankenstein, via architect Henry Reveley.
- I live adjacent / have views of Round House and see its use and deterioration.
- A school visit in 1957 left a lasting impression on me how the convicts built it. *[note this may be prisoners as it was built before the Imperial Convicts arrived]*
- It should have minimal interpretation: a place to loiter and contemplate.
- I love it as a focus to the High Street vista, where, along with the (remaining) stair flight flanking the arched tunnel head and sculpted limestone retaining walls, it completes such a great composition.
- I love the Round House for its beautiful internal space as an open courtyard enveloped by those stunning textural limestone walls (some walls are heritage, some are not). The strong Fremantle sunlight on them changing through the day makes the tiny space come alive. At night under the stars it's yet another magical space - real architecture.
- It's wonderful that currently we are able to have access and visit any day. I find even on a wet, cold and inevitably windy Fremantle day it still offers up enough protection and shelter to be welcoming.
- Connection as a member of the Volunteer Guides.
- Family history supplied. Great-great-grandmother arrived in Fremantle in August 1842 from Waddeston, Buckinghamshire. She was imprisoned at the Round House (Fremantle Gaol) for one year as an 18 year old for stealing various items of clothing and apparel from an employer. She was found guilty "but recommended to mercy on account of her youth", with the sentence being twelve calendar months

Round House Conservation Management Plan

imprisonment with labour. The recommendation to mercy may have also been due to her pregnancy, and while imprisoned in the Round House she gave birth to a stillborn child. I work in the West End of Fremantle and so the Round House is a part of my daily life. On... the anniversary of [her] stillborn child, I usually make a visit to sit there and reflect on what it must have been like for her and the other prisoners – her great-great-granddaughter has enjoyed a vastly better life than her! And can enjoy the place that this first gaol in colonial Fremantle has become.

- Local history story supplied (focussed on the Krakouer brothers who founded Holland's Track, the first direct route to the Goldfields). Theodore Krakouer's family would have originally come from Krakow, a town in Poland, with a large Jewish community. Theodore was charged with stealing clothes and a small amount of jewellery.

At his trial in Portsmouth in 1851, he was sentenced to 15 years in WA. After a stretch in Portland Gaol, Theodore arrived in the Swan River Colony on HMS Mermaid, as WA Convict No.232. As mentioned, Theodore was a Ticket of Leave man, meaning he could go off to work each day. When the bell rang at the Round House, he had to be back in his home. Many of the T.o.L. families lived in cottages around the Round House to ensure that they were back by the curfew. Theodore worked as a teamster in livery stables around Fremantle, similar to the one that existed in the current Atwell Arcade. He also worked in the bush, out along the Williams Rd, and seems to have passed on his ability with horses to his sons [Rudolph & David].

On April 14 1893, Rudolph and David [Krakouer] left with John Holland and John Carmody to cut a route across to the Goldfields. The group started from Broomehill, 302km southeast of Perth. The Krakouer Bros and Holland reached Coolgardie 2 months later. They had surveyed and cleared over 500 km of unexplored country, providing the catalyst for a major development of the Goldfields.

- **Curiosity**

- Was it used for whaling?
- Why does it need to be a tourist attraction?
- What was the psychology and intentions of the architect Henry Reveley? Intrigued how a person with Henry's background, and friendship circle, and connections to Shelly could travel half way around the world to build a prison.
- Why the Fremantle Council or State Government doesn't provide more maintenance funds to the Round House given it is a significant tourist draw card?
- It's important to tell the sad truths and history behind it. It would be great to see some of the convicts' names or stories if that info' can be found, and how they contributed to the building of our port & city.

Round House Conservation Management Plan

- **Maintenance raised / other comments**

- Stairway access and wall façade crumbling. Water does not fall into drainage in courtyard when it rains. Inside walls need attention. Some uneven floors in inside rooms.
- Needs repairs (general comment).
- Wish the symmetrically placed (hence out of place) twentieth century flag pole could move elsewhere.
- It does not have a place where disable people (wheel chair or the like) can enter and navigating the front steps difficult.
- Needs urgent care. If repair doesn't happen soon it will all crumble.

Next Steps

The valuable input received will be used, in conjunction with research and site inspections, to inform the conservation management plan. With permission, some of the items submitted will be added to the City's local history collection.

Engagement with traditional owners is also ongoing, with an agenda item scheduled for February 2020.

Following this a draft conservation management plan will be available for feedback in 2020 and all contributors will be contacted when this is ready.

Round House Conservation Management Plan

Appendix: Materials Submitted

Photographs and Media Supplied



Morning view from Samson Bond warehouse apartments 23 November 2019



Frankenstone poster, November 2018.

Video made from the live
'Frankenstone' show performed
November 2018:

vimeo.com/327526836

Round House Conservation Management Plan

BIRTH IN THE STATE OF WESTERN AUSTRALIA

DUPLICATE REGISTRY OF BIRTH.

10.36

DATE		CHILD'S		PARENTS'					INFORMANTS
REGISTERED.	BIRTH.	NAME.	SEX.	WHERE BORN.	NAME.	DESCRIPTION.	RESIDENCE.	DATE.	SIGNATURE.
May 15 th 1900.	April 2 nd 1899.	Not named. Hill Farm.	Female.	Hemant Land.	Isaac Hemant	Isaac Isaac	Isaac Isaac	Isaac	William P. Dwyer

NOTE: Any alteration of the substance of this certificate will render the document valueless. Any person attempting an alteration is liable to prosecution.

Submitted extract of birth certificate of child born in Fremantle Jail, April 1845



Submitted image of Rudolph Krakouer, who grew up in the shadow of the Round House, year unknown

Round House Conservation Management Plan



Family images submitted, taken October 1953.

Round House Conservation Management Plan



Family images submitted, taken October 1953.

Round House Conservation Management Plan



Supplied by Fremantle Ports, dated 1937.



Supplied by Fremantle Ports, dated 1938.

Round House Conservation Management Plan



*Supplied by
Fremantle Ports,
dated 1949.*



*Supplied by
Fremantle Ports,
dated 1951.*



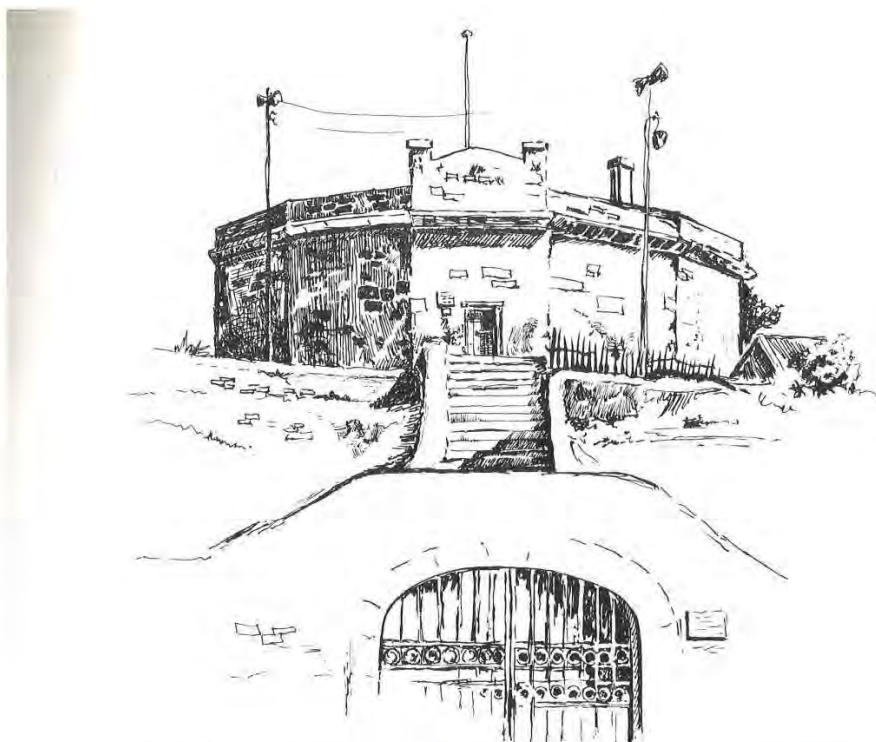
*Supplied by
Fremantle Ports,
dated circa 1961.*

Round House Conservation Management Plan



Supplied by Fremantle Ports, dated 1969.

Round House Conservation Management Plan



Old Round House, Arthur Head, Port of Fremantle

The construction of the Round House—the Colony's first gaol—was commenced on the 1st September, 1830, to the design of the Civil Engineer, Mr. H. W. Reveley. The building was completed on the 18th January, 1831.

The contractor was a Mr. Lewis whose price for the erecting of the Round House and the gaoler's residence was £1,603/10/-. The terms of the contract specified that the building was to contain eight cells with walls of stone and roof of weatherboard. It would appear that the weatherboard roof was not a success as three months later the roof was shingled to keep out the rain.

The tunnel under the Round House was excavated through Arthur Head (then commonly known as Gaol Hill) by the Fremantle Whaling Company, work being started in August, 1837, and completed some five months later. The tunnel served to link the jetty at Bathers Bay with High Street.

On approaching Fremantle from the sea, the Round House was at that time the most prominent piece of architecture in the town and it was described as "a handsome octagonal building of white cut stone, erected near the edge of a precipice which overhangs the mouth of the river." Inside the building the room on the right of the door was the kitchen, while that on the left was the dining room.

The Round House is the oldest remaining building designed by Mr. Reveley and indeed is probably the oldest building of any size in the State.

Neither the Round House nor the tunnel through Arthur Head was constructed by convict labour. The first convicts sent to Western Australia arrived on the 1st June, 1850.

About this time, the accommodation available at the Round House became entirely inadequate to meet the demands of a growing town and one of the earliest activities of the convicts was the construction of a new gaol. The Round House was then used as a lock-up.

From about 1850 police and gaolers' residences were situated to the left of the Round House, while the police station was on the right.

Still later (about 1865) the Round House was used for native prisoners being conducted to or from the native penal settlement on Rottnest Island.

An extensive search through historical records fails to disclose any further information regarding the Round House, and as far as can be ascertained the building fell into disuse and remained unoccupied for many years.

On the 15th July, 1936, the Round House and adjacent land was vested in the Fremantle Port Authority.

Port of Fremantle Quarterly — Summer, 1968

Page 17

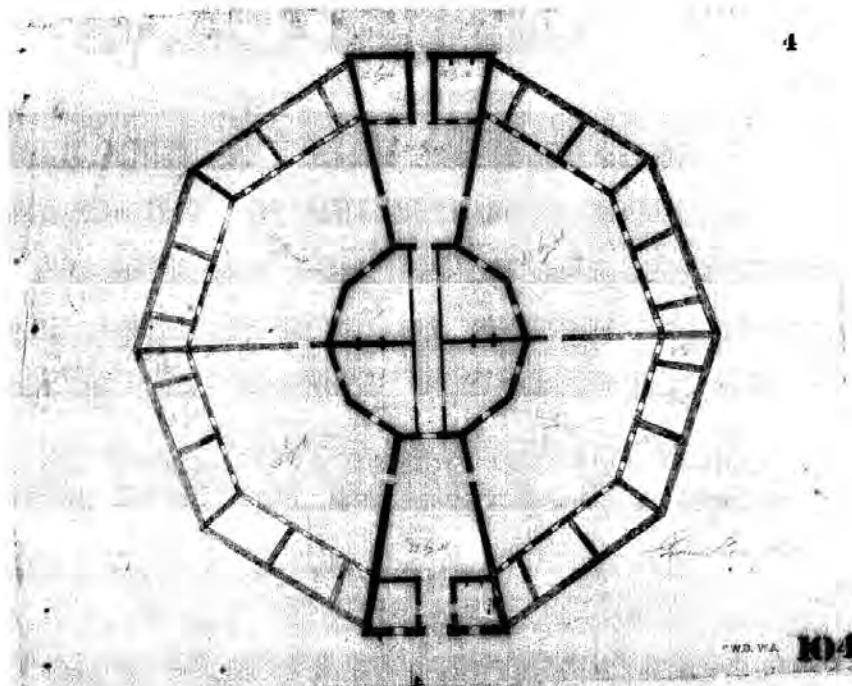
Supplied by Fremantle Ports 'Port of Fremantle Quarterly', dated summer 1968.

Round House Conservation Management Plan

Bibliography-Type Submission

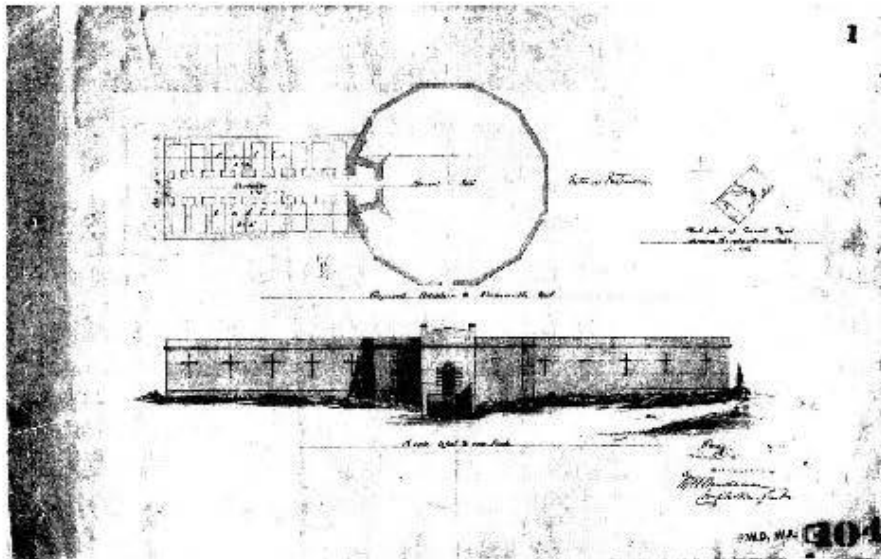
A contributor submitted a bibliography-type listing of photograph resources, with a particular focus on the building rather than its social history or stories. It is included as a separate document. They also noted some particular records:

- Digitised copies of the original handwritten gaolers' reports are held in the State Record Office - one year's reports (1841) included as an example.
- Plans from the early twentieth century (circa 1911) which were reproduced for panels displayed at the Round House as the 'original drawings'. By which time the single cells (which is what they were) had been converted to earth closets as there was a family living in the Round House and a waste collection service available.
- Plan of the original sketches of a much, much bigger Gaol that Reveley envisaged (SRO 1830), in it are drawn many single cells (as evidence that they were cells and not privies!). As is known from the Fremantle Prison the bucket was the usual method of waste removal and privies (even though the Gaoler lived on site) were something included in only in grand houses in the 19th century.

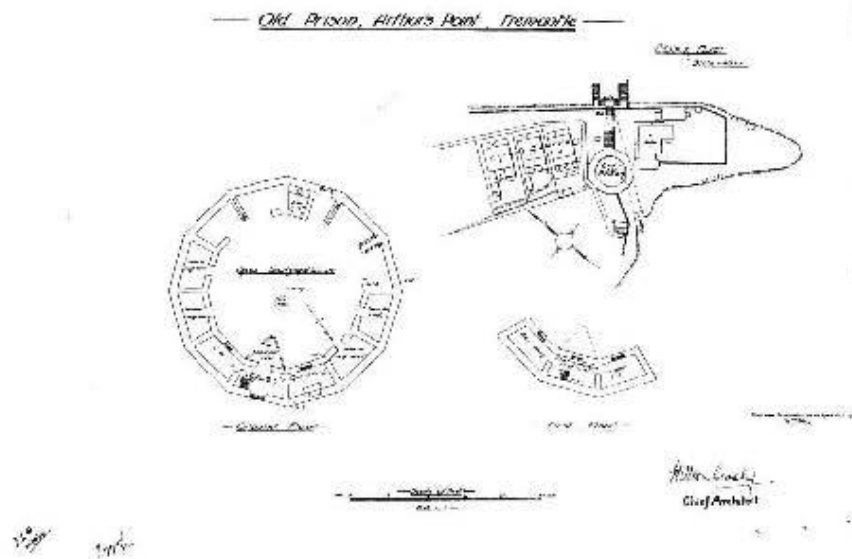


Proposed 10 sided Gaol Plan, Technical Drawing 1829, Willey Reveley

Round House Conservation Management Plan



Proposed Gaol Extension, Elevation and Plan 1840's?



1914 PWD Technical Drawing, Site Plan Arthur Head showing Pilot's Cottages and Round House, Hillson Beasley, Chief Architect SLWA Battye, Map Collection.