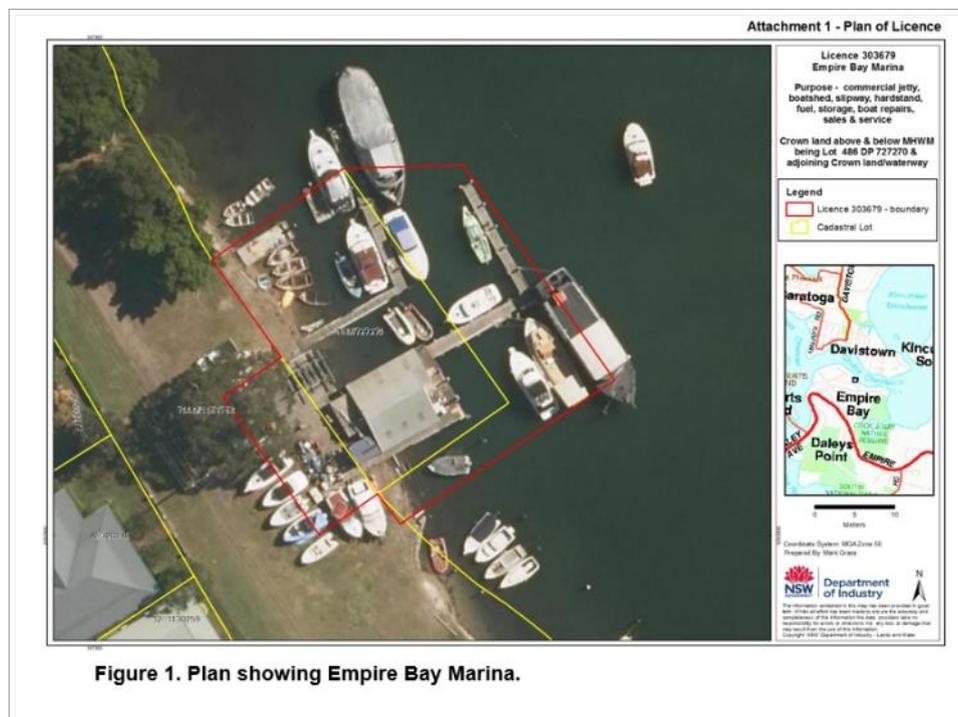


## BUILDING CONDITION REPORT

|                           |  |
|---------------------------|--|
| Client ref number:        | DOC20/034626   |
| Client:                   | NSW Department of Planning Industry & Environment  |
| Client contact:           | Mark Grace   |
| Subject property address: | Empire Bay Marina<br>16B Sorrento Rd, Empire Bay NSW 2257  |
| Date of inspection:       | 2 <sup>nd</sup> April 2020   |
| Weather conditions:       | Fine   |
| Inspection purpose:       | Inspect and assess the condition of the structures comprising the Empire Bay Marina. The subject site is shown on Figure 1 |



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## 1. INTRODUCTION

1.1 iPRA Pty Ltd has been engaged by Mark Grace of NSW Department of Planning, Industry & Environment to provide a Building Condition and Structural Integrity Assessment inspection report.

With these instructions, Simon Greirson from iPRA Pty Ltd has completed the required report as follows.

1.2 Present for the inspection were;

- Mark Grace of NSW Department of Planning, Industry & Environment.
- Rachelle Velleman licensee and operator of marina.
- Simon Greirson – Building Consultant engaged to carry out general Building Condition Inspection.
- Chad Skelton – Consulting Engineer engaged by iPRA to carryout structural condition report.
- Terry Fox – Consulting Electrician engaged by iPRA to carryout electrical safety inspection.

1.3 Inspection & Report conditions

It is important to understand this report has been compiled, where deemed as required, in accordance with AS 4349.0 - 2007 Inspection of buildings Part 0: General requirements.

This report will contain sufficient information to enable a similarly suitably qualified expert, who was not involved in the inspection, to check the report and independently verify the conclusions and / or opinions reached by the original inspectors.

Note: the inspection of buildings includes subjective appraisal by an experienced practitioner and normally considerable reliance is placed on the results of the inspection. In such cases the client should receive not only an indication of the inspector's considered opinion but also sufficient supporting information to enable the client to form an opinion regarding the basis of the conclusions and the weight that should be attached to support such conclusions.

1.4 With respect to UNIFORM CIVIL PROCEDURE RULES 2005 - SCHEDULE 7.

If this report is to be utilised as an expert witness, in proceedings or proposed proceedings, the author Simon Greirson of 182 Gills Lane Brunkerville NSW 2323, acknowledges this code and agrees to be bound by it.

1.5 Qualifications

Simon Greirson confirms his expertise in general building works (Cert 4) to include detail building inspections with recognised qualifications and NSW licensing for residential building work, plus (Cert 3) pest control to include termite damage and fungal decay inspections.

Furthermore, Simon Greirson has undertaken specific nationally recognised courses for general building inspections, pre-purchase pest and building inspections and asbestos assessment.

General practical building experience dates back to 1990.

Building Consulting (BC) experience dates back to 2010 – 2011, commencing with the Queensland flood disaster followed by QLD Cyclone Yasi. It was after these major insurable events, Simon followed his interest in major loss damage arising from an incident, with the view of providing detailed causation and resultant damage reports, major loss scopes of works, and general building inspection reports whether it be trade related defects or dilapidation.

On average iPRA Pty Ltd, under the direction of Simon Greirson carry out 100 building reports per year.

## 2. SCOPE OF WORKS

Inspect and assess the condition of the structures comprising the Empire Bay Marina to include:

- Structures at Empire Bay Marina being the boatshed, piers/pilings, decking and retaining walls
- Subfloor framing and piers/posts
- Wall framing
- Roof and ceiling framing
- Weatherboard coverings/cladding
- Roof cladding
- Access points – public safety associated with access and egress
- Windows
- Retaining wall, including any wall below the boatshed
- Identification of any hazardous materials, e.g. asbestos including testing of fibres
- Painted surfaces and testing for lead-based paint
- Electrical components to include exposure risks, i.e. by public or by weather
- Identify any trip and fall hazards
- Jetty and walkway/decking for potential collapse and safety
- Plumbing and wastewater - portaloos servicing and any drainage from sinks, handbasins, etc
- Vermin and termite activity
- Floor and decking levels
- Fire safety

Submit a written report detailing:

- Compliance of the above items with applicable building codes and standards
- Listing of any defects and non-compliance
- Basic site plan showing the finished floor levels for the purpose of capturing the extent of surfaces being out of level
- Scope of works required to repair any defects up to standard
- Estimated costing to undertake the recommended scope of works to repair defects

Out of scope:

- Site survey – this is being undertaken by the Department and the site boundary may not be marked at the time of the building assessment
- Fuel storage and supply, including underground petroleum storage tanks, lines, vents and bowser
- Slipway – including the rails, hardstand, cradle, winch
- Vessels – moored or stored at the site.
- Underwater (diving) inspection and assessment of jetty piers

## 3. INFORMATION SOUGHT BY, or SUPPLIED TO IPRA

The building consultant has read and utilised information out of these reports as he sees fit to do so.

- (a) Structural Engineers Report APPENDIX 1
- (b) Electrical Inspection Report APPENDIX 1
- (c) ASET Laboratory Services Report (Analysis of asbestos and lead based paint samples)  
APPENDIX 1
- (d) June 2018 Structural Review Report by Little Engineering Co.

## 4. SUMMARY OF INSPECTION

This summary is not the report. The report to follow including appendices shall be read in full with this summary. If there is any discrepancy between information provided in this summary and that contained within the body of the report, the information in the body including appendices, shall override this summary.

### 4.1 The Structural Engineers inspection has found the following;

#### Structural Comments and Recommendations

##### Marina building –

- 4.1.1 The marina building is structurally in very poor condition, the piles, floor framing, wall framing, mezzanine framing and roof framing are all considered to be structurally inadequate for the anticipated loads in accordance with the relevant Australian standards.
- 4.1.2 The piles and connection of the floor framing to the piles is considered to be a major structural defect and due to this item alone we recommend the marina be closed to all personnel until rectification works can be completed.
- 4.1.3 We are concerned that in a storm event the marina building could collapse into the channel.

##### Main and Second Jetty -

- 4.1.4 The Jetty structures above water level are in reasonable conditions with some areas of decking boards requiring replacement.
- 4.1.5 The piles on the main jetty should be replaced where there has been significant section loss to ensure structural adequacy under anticipated loads.

### 4.2 The Electrical inspection has found the following;

#### Conclusion-

- 4.2.1 There are some major electrical safety concerns on this property that are not compliant to the Australia Standards and should be **addressed immediately** to prevent serious injury.  
The hazards not only affect the employees of the Marina but may and could affect the public.
- 4.2.2 All cables need to be fixed and secure, All cables need to be enclosed the entire length with approved material such as conduit, light fittings and enclosures need to be sealed, cables in workshop need to be tidied up to prevent a safety incident, live and single insulated cables should be enclosed.

#### Electrical Item #10 **Urgent Attention Required** -

- 4.2.3 Risk of electrocution, the power point is off the wall and live cables are exposed. It is a major risk not only due to the power point being off the wall, but the power point is at foot level where a person is working.  
There is also an extension lead coming out of the power point and not plugged into a wall outlet.

#### Electrical Item #15

- 4.2.4 Switchboard has no close-fitting doors or enclosed and is exposed to water splash through the hole in the wall.  
Potential tripping out of the property. A dangerous environment may occur if water comes into contact with the switchboard. A switchboard maybe located in an area that may be affected by water splashing or steam provided that the switchboard is provided with a suitable enclosure or installed in a cupboard with close – fitting doors. Since there are no covers on the switchboard and water can come through the side on the wall within 600mm of the main switchboard it is deemed a damp environment and falls under section 6.2 of AS 3000 and does not comply to standards due to the close proximity of potential water ingress.

#### 4.3 Potential for hazardous materials, tested samples has found the following;

##### Asbestos Identification

4.3.1 Outdoor shower room. **No** asbestos detected.

4.3.2 Indoor loft/office. **No** asbestos detected.

##### Lead Analysis

4.3.3 External WB - Left side N/W wall. **Lead Content = 3.0%**

4.3.4 External WB - Right side S/E wall. **Lead Content = 1.7%**

Note: SafeWork NSW – Notification of Lead Risk Work form identifies a ‘work risk’ where machine sanding or buffing surfaces coated with paint containing **more than one per cent** by dry weight of lead.

#### 4.4 The Building Consultant has found the following;

4.4.1 Further to, or in agreement with, Engineers findings,

- a. Subfloor framing and piers/piles to be in a dilapidated state,
- b. Wall frames distorted as a direct result of subfloor dilapidated state,
- c. Ceiling / roof framing ‘overloaded’ and ‘undersized’ for current mezzanine usage.

4.4.2 Vermin activity - no obvious signs,

4.4.3 Termite activity - structural damage some wall framing,

4.4.4 Weatherboard cladding – visually deteriorated,

4.4.5 Roof cladding – aging but overall satisfactory,

4.4.6 Window and Door joinery – aging but overall satisfactory,

4.4.7 Trip and Fall Hazards – visually evident and of concern,

4.4.8 Jetty and walkway / decking – in need of some repair,

4.4.9 Plumbing – no waste water plumbing found,

4.4.10 Floor and decking levels – mainly undulating but there are some areas with distinct steps / trip points,

4.4.11 Fire safety – no visually obvious fire protection / fighting equipment easy at hand on the public jetty areas. It’s believed fire extinguishers are housed within the boatshed, but these are not easily accessible 24/7.

Further advice is highly recommended from a specialist fire protection firm specific to marina / public jetty applications.

## 5. DESCRIPTION of INSPECTED SITE

An inspection of the site has noted the following:

5.1 Empire Bay marina site consists of;

- 5.1.1 one (1) x boatshed with internal workshop facilities, marine parts storage, an office, and external work areas;

Note- boat shed deemed to be **Class 8** building

<https://www.abcb.gov.au/Resources/Publications/Education-Training/Building-classifications>

- 5.1.2 A slipway is positioned to the Northerly elevation;

- 5.1.3 two (2) x timber framed jetty / walkways positioned to the North Easterly elevation, one (1) of which is abutted against / attached to the boatshed structure;

- 5.1.4 with regards to the jetties, these are accessible at any given time (24/7 – all year round) by general public.

5.2 The boatshed does have;

- 5.2.1 town water supply;

- 5.2.2 mains power supply;

- 5.2.3 a kitchenette area;

- 5.2.4 an 'out of service' outdoor shower area;

- 5.2.5 a 'serviced' portaloos;

- 5.2.6 areas of which can be accessible by the general public, as witnessed by the consultant on the day of inspection.

5.3 The boatshed does not have;

- 5.3.1 connected / serviced waste water or sewer service;

- 5.3.2 any waste water piping or servicing;

- 5.3.3 furthermore, there appears to be very little, if any, 'clearly recognisable' waste control measures in place for;

- a. waste oil storage

- b. spill control measures

- c. general waste containment

- d. contaminated surface water runoff (storm water)

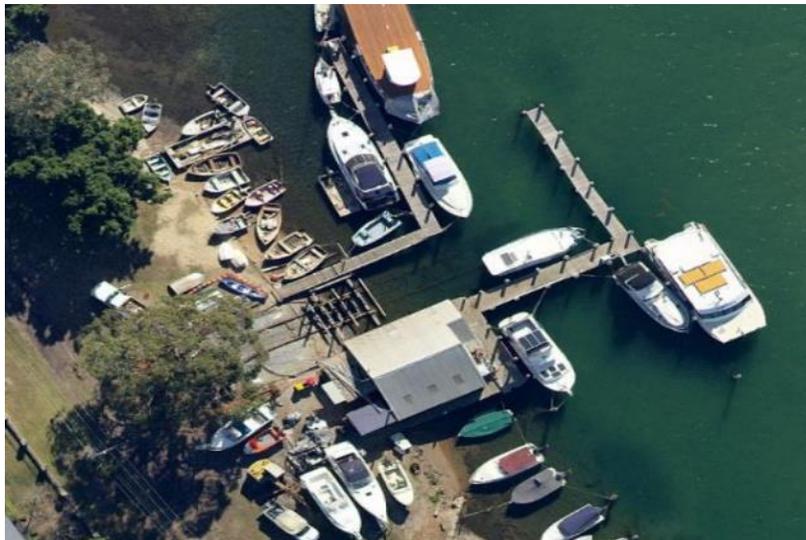


Image shows the inspected site 16B Sorrento Rd Empire Bay NSW

5.4 Empire Bay boatshed is listed as a heritage item under Gosford Local Environmental Plan 2014. Information sought as follows from NSW Government Office of Environmental & Heritage

(<https://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=1620199>);

- 5.4.1 History – Empire Bay marina (boatshed) commenced business in 1921. (sourced from EBM website)
- 5.4.2 Statement of significance - Empire Bay Boatshed, off Sorrento Road, on the foreshore of Empire Bay has historic and social significance as an important element in a precinct of early buildings on the foreshore of Empire Bay associated with the development of the area. (sourced from environment.nsw.gov)
- 5.4.3 Physical description - Small scale, single storey timber framed marina on timber piles, adjoining public foreshore of Empire Bay. Part of foreshore precinct associated with residential buildings along foreshore strip. Gabled roof with corrugated acrylic skylights. Eaves overhang gable ends with no barge boards or gutters. Skillion roof over small wing addition abutting front gable end. Timber weatherboard cladding. Timber framed windows with double hung and hopper sashes. Timber panelled, double leaf front door. Opening in top of gable end. Gantry at rear. (sourced from environment.nsw.gov)
- 5.4.4 Physical condition - The building appears generally sound. Date condition updated, 12 Jan 2014. (sourced from environment.nsw.gov)

BC Note & opinion – that would be based upon a simple visually observation not a detailed building inspection / condition report.

- 5.4.5 Modifications - Intact and generally in good condition despite elements requiring basic maintenance and painting. (sourced from environment.nsw.gov)

BC Note & opinion – the above statement would again be based upon visual observations and it would appear little, if any corrective and/or preventive maintenance has been undertaken.

- 5.4.6 Recommended management - Recommend for retention on the Gosford City Council LEP. Consideration should be given for requirement of an Assessment of Heritage Impact prior to any proposals for alterations or additions which may adversely impact on the significance of the boatshed, its curtilage and landscape value. The form, scale and character of the boatshed should be retained together with its curtilage and landscape value. (sourced from environment.nsw.gov)

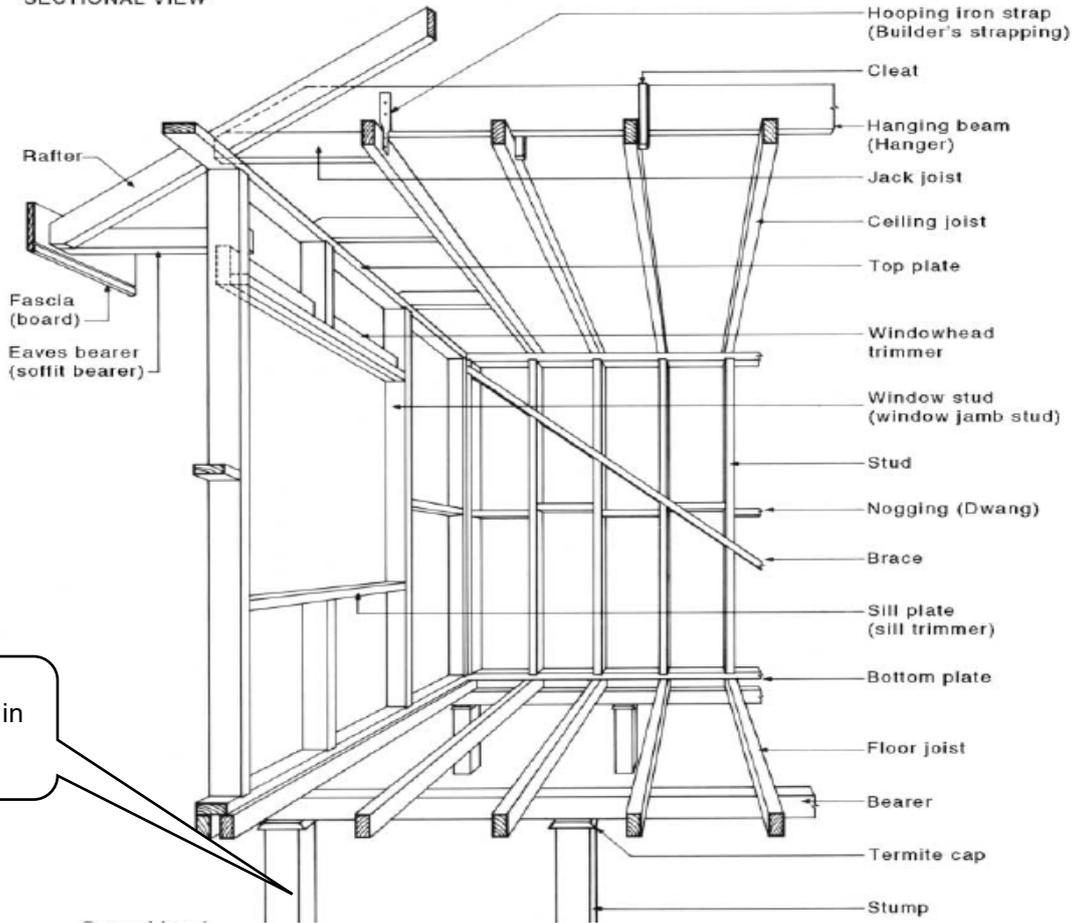
| Management Category    | Description  | Date Updated |
|------------------------|--|--------------|
| Statutory Instrument   | List on a Local Environmental Plan (LEP)             | 12 Jan 14    |
| Recommended Management | Consult with owner and/or community                  | 12 Jan 14    |
| Recommended Management | Prepare a maintenance schedule or guidelines         | 12 Jan 14    |
| Recommended Management | Carry out interpretation, promotion and/or education | 12 Jan 14    |

BC Note & opinion – the current inspection which this report is based upon, has clearly identified many Major Defects starting with severe ‘structural’ subfloor framing and support deficiencies, that can only be rectified by means of completed demolition / rebuild, or removal (lifting) of the boatshed to gain adequate access to all pier / pile supports. This alone will impede ‘cost’ viability of rectifying the identified issues whilst maintaining Heritage requirements.

### 18 TIMBER FRAME CONSTRUCTION

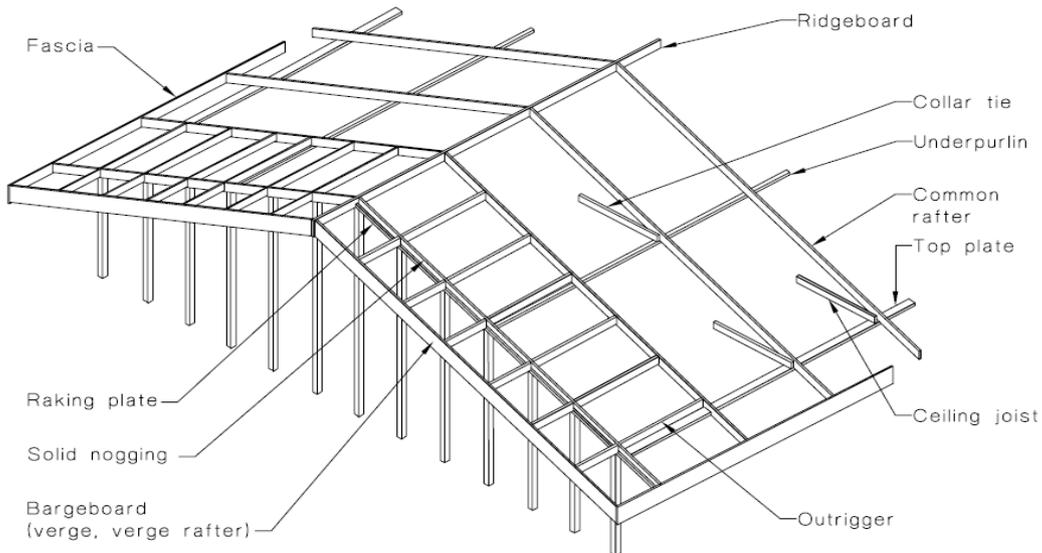
TERMINOLOGY FOR TYPICAL  
TIMBER FRAME CONSTRUCTION

SECTIONAL VIEW



Piles / piers in this case

### 19 FRAMING MEMBERS - GABLE ROOF CONSTRUCTION



## 6. INSPECTION FINDINGS

### 6.1 Subfloor framing and piers / piles:

|                                     |  |
|-------------------------------------|--|
| Concern raised by report requestor: | What's the current condition of subfloor structure and supporting piers / posts?   |
| Element or area inspected:          | Piers / piles, Bearers, Beams, Joists, Flooring<br>Note – original T&G strip flooring has been covered over by plywood sheeting. This limits the ability to inspect the strip flooring, however, the plywood overlay sheeting appears to be satisfactory.  |
| Location:                           | Main boat shed   |
| Affected element:                   | Supporting piers / piles, bearers / beams and floor joists in a <u>dilapidated</u> state.  |
| Defect or sign:                     | <ul style="list-style-type: none"> <li>• Deformation</li> <li>• Leaning</li> <li>• Lack of support</li> <li>• Usage of inappropriate materials</li> <li>• Sagging</li> </ul>   |
| Visible extent:                     | <ul style="list-style-type: none"> <li>• Widespread</li> </ul>   |
| Defect type:                        | <ul style="list-style-type: none"> <li>• <u>Major defect</u><br/>A defect of sufficient magnitude where rectification has to be carried out in order to avoid unsafe conditions, loss of utility or further deterioration of the property.</li> <li>• <u>Structural defect</u><br/>Fault or deviation from the intended structural performance of a building element.</li> </ul>   |
| Recommendation:                     | <p>Refer to most recent structural engineers report.</p> <p>Engineer has recommended the following -<br/>Rectification works for the marina building would be extensive including;</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Replacement of piles,</li> <li><input type="checkbox"/> Strengthening or replacement of all floor structure and fixing to the new piles, re-levelling of the floor structure.</li> </ul> <p><b>Essentially the entire marina building structure will need to be either replaced or strengthened. We anticipate the strengthening measure would be significantly more expensive than rebuilding. All strengthening/rebuilding of the structure must be undertaken in accordance with structural engineering direction.</b></p> |
| Implementation:                     | <ul style="list-style-type: none"> <li>• The above recommendation should be implemented immediately. The client has also been informed of the urgency of this matter by email.</li> </ul> <p><b>Important Note:</b><br/><b>AS 4997 -2005 Guidelines for maritime structures states the following;</b><br/><b>Subsection 6.2.3 Maintenance</b></p> <p>All maritime structures deteriorate over time. Early maintenance is generally recommended to prevent more significant damage. Whilst a structure may have a prescribed design life of 25, 50 or 100 years, local marine environments, operational conditions and other factors will lead to maintenance requirements. Regular (annual or otherwise) inspections of the structure will permit early</p>                          |

|   |  |
|---|--|
|   | <p>detection allowing the implementation of economic maintenance measures, Maintenance will then be determined by the inspection results.</p> <p><b>A typical maintenance program will include –</b></p> <ul style="list-style-type: none"> <li><b>(a) regular inspections;</b></li> <li><b>(b) a program of routine minor maintenance; and</b></li> <li><b>(c) a program of major maintenance.</b></li> </ul>   |
| <p>Building code, and / or Australian Standard, regularity authority applied to defect:</p> | <p><b>NCC 2019 Building Code of Australia - Volume One</b></p> <p>BP1.1 Structural reliability</p> <p>(a) <u>A building or structure, during construction and use, with appropriate degrees of reliability, must—</u></p> <ul style="list-style-type: none"> <li><u>(i) perform adequately under all reasonably expected design actions; and</u></li> <li><u>(ii) withstand extreme or frequently repeated design actions; and</u></li> <li><u>(iii) be designed to sustain local damage, with the structural system as a whole remaining stable and not being damaged to an extent disproportionate to the original local damage; and</u></li> </ul> <p>(b) The actions to be considered to satisfy (a) include but are not limited to—</p> <ul style="list-style-type: none"> <li><u>(i) permanent actions (dead loads); and</u></li> <li><u>(ii) imposed actions (live loads arising from occupancy and use); and</u></li> <li><u>(iii) wind action; and</u></li> <li><u>(vi) liquid pressure action; and</u></li> <li><u>(x) differential movement; and</u></li> <li><u>(xiii) ground movement caused by—</u> <ul style="list-style-type: none"> <li>(B) landslip or subsidence; and</li> <li>(C) siteworks associated with the building or structure; and</li> </ul> </li> <li><u>(xv) termite actions.</u></li> </ul> <p><b>Australian Standard 4997 – 2005 Guidelines for the design of maritime structures</b></p> <p><b>Section 6 Durability</b></p> <p><b>6.1 GENERAL</b></p> <p>Maritime structures are generally sited in very aggressive environments for normal structural materials, and the design of maritime structures should include consideration of the requirements to withstand the aggressive environment while the structure remains serviceable.</p> <p><b>6.2 DESIGN LIFE</b></p> <p><b>6.2.1 General</b></p> <p><u>Design life is defined as the period for which a structure or a structural element remains fit for use for its intended purpose with appropriate maintenance. The design life of maritime structures will depend on the type of facility and its intended function (see Table 6.1). This design life will depend on the owner’s requirements.</u></p> <p>As well as determining loads for a facility, it is necessary to decide on a realistic design life for the structure. This design life should be based on consideration of capital and maintenance expenditure. Durability is to be realized either by a maintenance program, or, in those cases when maintenance cannot (or is not expected to) be carried out, by design such that deterioration will not lead to failure. In the latter case the initial capital cost is expected to be high.</p> |

The designer should determine an appropriate maintenance regime consistent with the adopted design and materials that will achieve the design life. Particular care should be taken when considering design life and maintenance regimes for inaccessible members. Sections or components of the structure that have limited access or are inaccessible after construction should have a design life (with no maintenance) equal to the design life of the structure.

At the end of the design life, the structure should have adequate strength to resist ultimate loads and be serviceable, but may have reached a stage where further deterioration will result in inadequate structural capacity.

**TABLE 6.1**  
**DESIGN LIFE OF STRUCTURES**

| Facility category | Type of facility              | Design life (years) |
|-------------------|-------------------------------|---------------------|
| 1                 | Temporary works               | 5 or less           |
| 2                 | Small craft facility          | 25                  |
| 3                 | Normal commercial structure   | 50                  |
| 4                 | Special structure/residential | 100                 |

**6.2.2.4 Timber**

The following items should be considered when selecting timber as a material in the design of a maritime structure:

- (a) Individual timber members are relatively small, forming an assembly of members within a structure. Members can usually be replaced easily within a structure to maintain the structural capacity, without significant interruption to service operations.
- (b) The service life of timber members will vary significantly depending on application, timber quality (grade), species natural durability and preservative treatment. The following times to first maintenance can be expected:
  - (i) Timber piles exposed to marine organisms .....5–10 years.
  - (ii) Timber piles not exposed to marine organisms .....10–30 years.
  - (iii) Timber decking exposed to weathering.....10–25 years.
- (c) The deterioration of timber is usually by mechanical degradation, rot or attack by living organisms (decay fungi, termites, marine borers).
- (d) Where not in a continuously wet environment, natural shrinkage due to drying timber will result in the need to tighten bolted connections during early years of the structure’s life.
- (e) A maintenance strategy may allow for regular and frequent replacement of timber members throughout the design life, as individual components deteriorate. Considerations include—
  - (i) the availability of skilled carpenters, able to maintain the works over the structure’s design life;
  - (ii) the future availability of suitable timber species and member sizes;
  - (iii) the commitment of resources to regular inspection and maintenance of structures; and
  - (iv) the detailing and accessibility of bolted connections for ease of replacement during maintenance works.

Additional photographs:

6.1 Subfloor framing and piers/posts  
Photographic Evidence



Photograph 1 shows overview of subfloor framing and supporting piers.



Photograph 2 shows an example of ratchet straps providing some form of support / tie-down / tension bracing to prevent separation in subfloor framing members.



Photograph 3 shows a close up view of the same location.



Photograph 4 shows ratchet straps securing a steel beam and old bearer / beam support. This is not a satisfactory repair method.



Photograph 5 shows a bottle jack positioned upon a very old pier that now supports the subfloor loading, again an inadequate method of repair. Note – there is 1x threaded rod that connects the green coloured pier to bearer, but that is again not an adequate means of supporting loading.



Photograph 6 shows a failed ('split') bearer.



Photograph 7 shows where a pier continues to subside, with evidence of 'blocking' (packing) being placed upon each other. No visible tie downs to this location, meaning if the pier was to rotate, this section of floor would collapse.



Photograph 8 shows another view point of where packing blocks are being placed upon piers.



Photograph 9 shows where a bearer is now 'unsupported'.



Photograph 10 shows another example of where a large section of timber has been placed on top of existing pier/ pile with no means of adequate strapping or hold down connecting that pier to bearer.



Photograph 11 shows steel C section placed in lieu where one would expect to see a timber bearer. Furthermore, there is timber packing blocks placed upon the piers to support the C section. An inadequate repair method. Again, ratchet straps are in use to tie supporting timber framing members together.



Photograph 12 shows decayed timbers and separation at pier – bearer connection points.



Photograph 13 shows a bottle jack, placed upon 2x timber packers, supporting 'structural' bearer and floor loads. It appears this has been in place for a 'long' period of time. Furthermore, we have other supporting timber framing members for decking that have fallen away.



Photograph 14 shows the decking boards to Southern side that are collapsing due to lack of bearer support.



Photograph 15 shows plywood sheeting placed above that location.



Photograph 16 shows the same location with a trip hazard present due to defective repair method.



Photograph 17 shows another example of timber blocks placed upon the piers with no connection ties.



Photograph 18 shows Northern elevation with various timber blocks and 'add-ons' being utilised to support the subfloor structure.



Photograph 19 shows another view of the same location with the same defects.



Photograph 20 shows missing portions of timber flooring, being covered over with plywood sheeting.



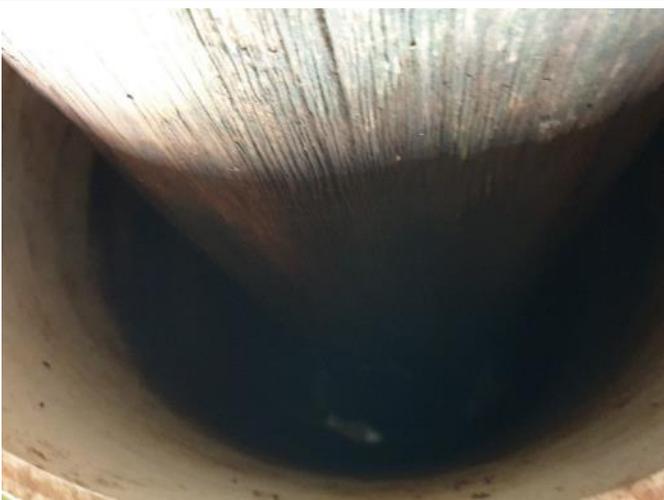
Photograph 21 shows a dilapidated cast concrete column that has been packed with concrete as means of supporting timber bearer. Again, inadequate repair type.



Photograph 22 shows timber wedges, blocking and lack of shoulder support for bearer.



Photograph 23 shows timber joist has slipped off the bearer.



Photograph 24 shows example of many PVC shrouds are NOT filled with concrete (to encase decayed timber piers), even though that would be the anticipated purpose of these shrouds.



Photograph 25 shows a bearer with no support and furthermore breaking away from joist.

## 6.2 Wall framing:

|                                     |   |
|-------------------------------------|---|
| Concern raised by report requestor: | What's the current condition of wall framing?   |
| Element or area inspected:          | The greater majority of wall framing were inaccessible and obstructed, and / or covered over with wall linings.   |
| Location:                           | External wall elevations, visual observations.  |
| Affected element:                   | Walls.  |
| Defect or sign:                     | <ul style="list-style-type: none"> <li>Leaning (out of plumb)</li> <li>Deformation</li> <li>Sagging</li> <li>Termite damage – note see subsection 6.14</li> </ul>   |
| Visible extent:                     | <ul style="list-style-type: none"> <li>Widespread</li> </ul>  |
| Defect type:                        | <ul style="list-style-type: none"> <li><u>Major defect</u><br/>A defect of sufficient magnitude where rectification has to be carried out in order to avoid unsafe conditions, loss of utility or further deterioration of the property.</li> <li><u>Structural defect</u><br/>Fault or deviation from the intended structural performance of a building element.</li> </ul>  |
| Recommendation:                     | <p>Effectively the leaning (out of plumb) walls are due to rotation of supporting piers. Additionally, the walls are not level, in horizontal plane.</p> <p>In other words, consequential damage due to failings within subfloor framing and pier supports.</p> <p>As per Subsection 6.1 - Essentially the entire marina building structure will need to be either replaced or strengthened. We anticipate the strengthening measure would be significantly more expensive than rebuilding. All strengthening/rebuilding of the structure must be undertaken in accordance with structural engineering direction.</p> |
| Implementation:                     | <ul style="list-style-type: none"> <li>The above recommendation should be implemented without delay.</li> </ul>   |
| Additional photographs:             |   |

6.2 Wall framing  
Photographic Evidence



Photograph 26 shows an example of the obstructions that limited the viewing of wall framing.



Photograph 27 shows an example of the obstructions that limited the viewing of wall framing.



Photograph 28 shows an example of the obstructions that limited the viewing of wall framing.



Photograph 29 shows an example of the obstructions that limited the viewing of wall framing.



Photograph 30 shows an example of the deformation – sagging along bottom edge of external wall, due to dilapidated subfloor framing and pier subsidence.



Photograph 31 shows the Eastern corner wall out of plumb, leaning to the right, again due to dilapidated subfloor and pier subsidence.

### 6.3 Roof and ceiling framing:

|                                     |   |
|-------------------------------------|---|
| Concern raised by report requestor: | What's the current condition of roof and ceiling frame?   |
| Element or area inspected:          | Limited viewing of roof and ceiling framing.  |
| Location:                           | Boat shed – internal areas.   |
| Affected element:                   | Ceiling framing.  |
| Defect or sign:                     | <ul style="list-style-type: none"> <li>Over spanned and requires strengthening</li> <li>Overloaded</li> </ul> <p>Modifications to existing framing that now sees the timber members as 'over spanned', and undersized for current usage.</p>  |
| Visible extent:                     | <ul style="list-style-type: none"> <li>Widespread</li> </ul>  |
| Defect type:                        | <ul style="list-style-type: none"> <li><u>Major defect</u><br/>A defect of sufficient magnitude where rectification has to be carried out in order to avoid unsafe conditions, loss of utility or further deterioration of the property.</li> <li><u>Serviceability defect</u><br/>Fault or deviation from the intended serviceability performance of a building element.</li> <li><u>Structural defect</u><br/>Fault or deviation from the intended structural performance of a building element.</li> </ul>   |
| Recommendation:                     | <p>Refer to most recent structural engineers report.</p> <p>Engineer has noted the following -</p> <p>Structural defects noted within the marina building mezzanine floor and roof structure included;</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> All structural members were undersized for the design loads, 8th April 2020</li> <li><input type="checkbox"/> Member fixings were inadequate or non-existent,</li> <li><input type="checkbox"/> Timber roof members at the western end of the building over the entry door showed signs of extensive termite damage.</li> </ul> <p>Table 3.1 of AS1170 – Structural design actions – Permanent imposed and other actions outlines the imposed live loads on different structures, for the marina mezzanine, the most appropriate category is E – Storage areas – General storage, this type of structure has a uniformly distributed imposed live load of 2.4kPa (240 kg/m<sup>2</sup>) per meter height of storage.</p> <p>Rectification works for the marina building would be extensive including;</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Replacement of piles,</li> <li><input type="checkbox"/> Strengthening or replacement of all floor structure and fixing to the new piles, re-levelling of the floor structure,</li> <li><input type="checkbox"/> Replacement/strengthening of wall framing and levelling,</li> <li><input type="checkbox"/> <b>Replacement/strengthening off all mezzanine and roof framing.</b></li> </ul> |
| Implementation:                     | <ul style="list-style-type: none"> <li>The above recommendation should be implemented without delay.</li> </ul>   |
| Additional photographs:             |   |

### 6.3 Roof and ceiling framing Photographic Evidence



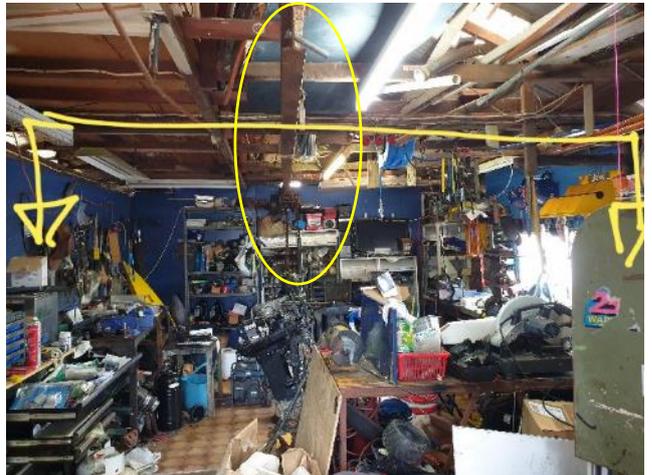
Photograph 32 shows an overview of timber ceiling / roof frame.



Photograph 33 shows an overview of the mezzanine area with stored items.



Photograph 34 shows the original ceiling frame has been modified with the addition of steel tension braces to underside of ceiling joists as a means of supporting the mezzanine loads.



Photograph 35 shows the steel UB crane girder with drawing illustrating the distributed load points to wall framing. The issue with this is, if any live load is applied to the UB steel beam (i.e. engine lifting) then those loads are transferred down to subfloor and piles / piers which have serious structural defects.



Photograph 36 shows the chain block that appears to still be in use.



Photograph 37 shows another view point of mezzanine loading and another steel tension brace.

#### 6.4 Weatherboard coverings/cladding:

|  |  |
|--|--|
| Concern raised by report requestor:  | What's the current condition of weatherboard cladding?   |
| Element or area inspected:   | Weatherboard cladding  |
| Location:  | All external elevations  |
| Affected element:  | Weatherboard cladding  |
| Defect or sign:  | <ul style="list-style-type: none"> <li>• Missing portions</li> <li>• Termite damage</li> <li>• Decay</li> <li>• Loose</li> <li>• Ineffective in preventing weather ingress to some locations</li> </ul>  |
| Visible extent:  | <ul style="list-style-type: none"> <li>• Widespread</li> </ul>   |
| Defect type:   | <ul style="list-style-type: none"> <li>• <u>Major defect</u><br/>A defect of sufficient magnitude where rectification has to be carried out in order to avoid unsafe conditions, loss of utility or further deterioration of the property.</li> <li>• <u>Serviceability defect</u><br/>Fault or deviation from the intended serviceability performance of a building element.</li> </ul> |
| Recommendation:  | Replacement of all weatherboards   |
| Implementation:  | <ul style="list-style-type: none"> <li>• The above recommendation should be implemented without delay.</li> </ul>  |
| Building code, and / or Australian Standard, regularity authority applied to defect: | <p>NCC 2019 –<br/>FP1.4 Weatherproofing</p> <p>A roof and external wall (including openings around windows and doors) must prevent the penetration of water that could cause—</p> <p>(a) unhealthy or dangerous conditions, or loss of amenity for occupants; and</p> <p>(b) undue dampness or deterioration of building elements.</p>   |
| Additional photographs:  |  |

6.4 Weatherboard coverings/cladding  
Photographic Evidence



Photograph 38 shows an example of deteriorating weatherboards and failing fixings resulting in fallen cladding.



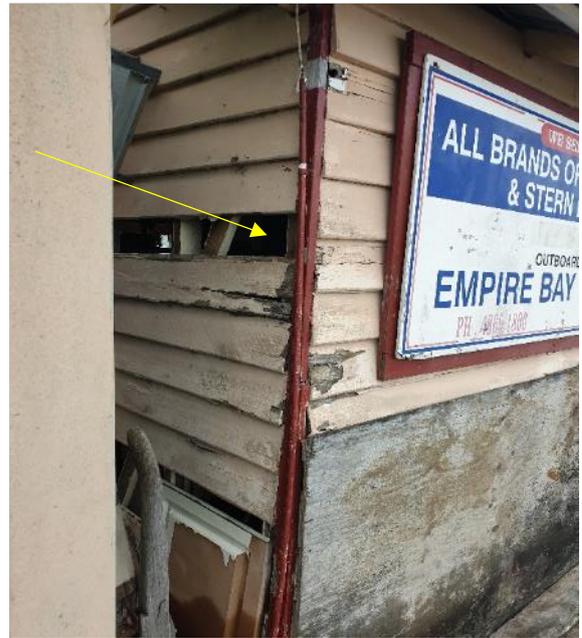
Photograph 39 shows loose weatherboard.



Photograph 40 shows missing weatherboards in which plywood now covers the area.  
Note - where areas are still open to 'weather' elements (rain etc) that is where main switch board is located.



Photograph 41 shows weatherboards have fallen away and then the area has been covered over, but above that is more weatherboards which are loose.



Photograph 42 shows the location where wind driven rain could affected the main switch board located behind this wall.

### 6.5 Roof cladding:

|                                     |   |
|-------------------------------------|---|
| Concern raised by report requestor: | What's the current condition of roof cladding?  |
| Element or area inspected:          | Roof exterior   |
| Location:                           | Main roof   |
| Affected element:                   | Metal corrugated roof sheeting  |
| Defect or sign:                     | <ul style="list-style-type: none"> <li>Corroding / rusted</li> </ul>  |
| Visible extent:                     | <ul style="list-style-type: none"> <li>Localised</li> </ul>   |
| Defect type:                        | <ul style="list-style-type: none"> <li><u>Major defect</u> (for locations where rain can enter.)<br/>A defect of sufficient magnitude where rectification has to be carried out in order to avoid unsafe conditions, loss of utility or further deterioration of the property.</li> </ul> |
| Recommendation:                     | Replacement of affected roof sheets.  |
| Implementation:                     | <ul style="list-style-type: none"> <li>The above recommendation should be implemented as soon as possible.</li> </ul>   |
| Additional photographs:             |   |

6.5 Roof cladding  
Photographic Evidence



Photograph 43 shows where rusted roof sheeting above outdoor shower area is in fact allowing weather elements to enter a small storage area in the boatshed. Electrical wiring in close proximity.



Photograph 44 shows corrosion to roof sheets is occurring.



Photograph 45 shows corrosion to guttering.



Photograph 46 shows corrosion of roof sheets above outdoor shower area.



Photograph 47 shows the roof cladding above boat shed appears satisfactory.



Photograph 48 shows the roof cladding above boat shed appears satisfactory.

## 6.6 Access points - public safety associated with access and egress:

|  |  |
|--|--|
| Concern raised by report requestor:  | What issues are present with public access?  |
| Element or area inspected:   | Site   |
| Location:  | Boatshed walkways and jetties  |
| Affected element:  | Front and side access  |
| Defect or sign:  | <ul style="list-style-type: none"> <li>• Trip hazards</li> </ul>   |
| Visible extent:  | <ul style="list-style-type: none"> <li>• Widespread</li> </ul>   |
| Defect type:   | <ul style="list-style-type: none"> <li>• <u>Major defect</u><br/>A defect of sufficient magnitude where rectification has to be carried out in order to avoid unsafe conditions, loss of utility or further deterioration of the property.</li> </ul>  |
| Recommendation:  | <p>Rectification of trip hazards by:</p> <ol style="list-style-type: none"> <li>Filling in holes / voids created by fuel storage tank works with packing sand;</li> <li>Removing loose laid piping associated with refuelling system;</li> <li>Removing redundant wire rope from slipway;</li> <li>Or, provide temporary fencing / barriers to prevent general public access slip way 'work zone';</li> <li>Remove stored containers from jetties that hinders safe passage, i.e. in case of emergency;</li> <li>Remove stored items to Southern access walkway that again prevents ease of egress in the event of an emergency exit;</li> <li>Level out any misaligned jetty decking including missing sections to ensure trip hazards are mitigated – completely removed;</li> <li>Removal or re-organise stored boats and equipment in a manner that if an emergency situation arises, safe passage is easily identifiable for escape without injury;</li> <li>Removal of flammable stored items and products that provide little benefit to the business, rather a hinderance and heightened safety concerns.</li> </ol> |
| Implementation:  | <ul style="list-style-type: none"> <li>• The above recommendation should be implemented immediately. The client has also been informed of the urgency of this matter by email.</li> </ul>  |
| Building code, and / or Australian Standard, regularity authority applied to defect: | <p><a href="https://www.safework.nsw.gov.au/resource-library/list-of-all-codes-of-practice">https://www.safework.nsw.gov.au/resource-library/list-of-all-codes-of-practice</a></p> <p><a href="https://www.safework.nsw.gov.au/_data/assets/pdf_file/0012/50070/How-to-manage-work-health-and-safety-risks-COP.pdf">https://www.safework.nsw.gov.au/_data/assets/pdf_file/0012/50070/How-to-manage-work-health-and-safety-risks-COP.pdf</a></p>  |
| Additional photographs:  |  |

6.6 Access points - public safety associated with access and egress  
Photographic Evidence



Photograph 49 shows the piping that lays upon the ground – trip hazard. Furthermore, trip hazards exist where concrete meets soil.



Photograph 50 shows operational slipway and it's fixtures are fully accessible to the general public.



Photograph 51 shows stored defunct steel rope.



Photograph 52 shows stored items on jetty which hinders safe passage, especially in the case of an emergency, or simply if a member of the public failed to see and trip over these items.



Photograph 53 shows more potential trip hazards.



Photograph 54 shows stored items to Southern elevation that hinders safe egress, especially in an emergency situation.



Photograph 55 shows another view of Southern elevation with stored items preventing a safe passage for general public.



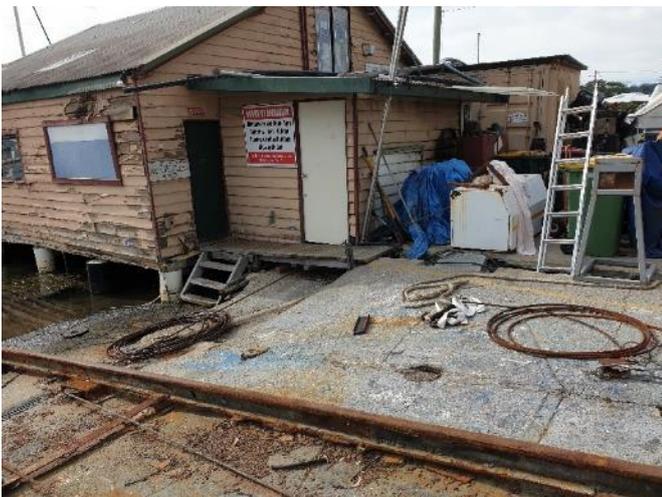
Photograph 56 shows trip hazard to jetty area.



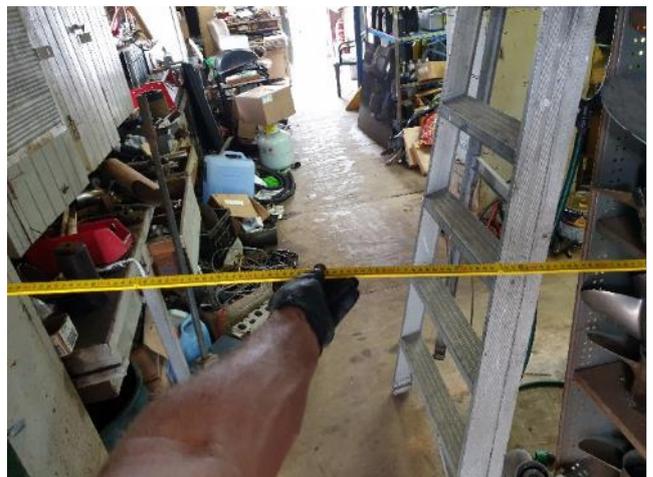
Photograph 57 shows stored items on jetty, again potential safety hazard in the event of an emergency, or simply if a member of the public failed to see and trip over these items.



Photograph 58 shows many obstacles that may inflict harm to general public in the case of an emergency.



Photograph 59 shows another view of 'work' zones fully accessible by general public, with **no** signage to advise them of the hazards that exist associated with a 'working' marina.



Photograph 60 shows general access width of 700mm wide at this location. Note all the stored items on the floor, which can pose a risk in the event of an emergency.

### 6.7 Windows:

|                                     |   |
|-------------------------------------|---|
| Concern raised by report requestor: | What's the current condition of windows?  |
| Element or area inspected:          | Windows   |
| Location:                           | All elevations  |
| Affected element:                   | Window joinery  |
| Defect or sign:                     | <ul style="list-style-type: none"> <li>Weathering damage</li> <li>Non operational (i.e. openable or covered over due to damage).</li> </ul> |
| Visible extent:                     | <ul style="list-style-type: none"> <li>Widespread</li> </ul>  |
| Defect type:                        | <ul style="list-style-type: none"> <li><u>Minor defect</u><br/>A defect other than a major defect.</li> </ul>                               |
| Recommendation:                     | Repair or replacement.<br>Note there appears to be no safety related issues with the windows, for a Class 8 structure.                      |
| Implementation:                     | <ul style="list-style-type: none"> <li>The above recommendation should be implemented as soon as possible.</li> </ul>                       |
| Additional photographs:             |   |

### 6.7 Windows Photographic Evidence



Photograph 61 shows an example where 2x windows have been covered over, along with centre window in a 'weathered' state.



Photograph 62 shows another weathered window.

### 6.8 Retaining wall, including any wall below boatshed:

|                                     |  |
|-------------------------------------|--|
| Concern raised by report requestor: | What's the current condition of retaining walls?   |
| Element or area inspected:          | Shoreline  |
| Location:                           | Under boatshed and to Southern side.   |
| Affected element:                   | Retaining walls  |
| Defect or sign:                     | <ul style="list-style-type: none"> <li>Eroded</li> <li>Collapsed</li> <li>General deterioration</li> </ul>   |
| Visible extent:                     | <ul style="list-style-type: none"> <li>Widespread</li> </ul>   |
| Defect type:                        | <ul style="list-style-type: none"> <li><u>Major defect</u><br/>A defect of sufficient magnitude where rectification has to be carried out in order to avoid unsafe conditions, loss of utility or further deterioration of the property.</li> <li><u>Serviceability defect</u><br/>Fault or deviation from the intended serviceability performance of a building element.</li> </ul> |
| Recommendation:                     | Replacement of retaining walls   |
| Implementation:                     | <ul style="list-style-type: none"> <li>The above recommendation should be implemented without delay.</li> </ul>  |
| Additional photographs:             |  |

### 6.8 Retaining wall, including any wall below boatshed Photographic Evidence



Photograph 63 shows Southern retaining wall in a collapsed / eroded state.



Photograph 64 shows retaining wall under boatshed with general deterioration.

### 6.9 Identification of hazardous materials -ACM's:

|                                     |  |
|-------------------------------------|--|
| Concern raised by report requestor: | Is Asbestos present in building materials?   |
| Element or area inspected:          | Wall and ceiling linings   |
| Location:                           | Loft/ mezzanine area<br>Outdoor shower area  |
| Affected element:                   | Fibre cement cladding  |
| Defect or sign:                     | Outdoor shower area has damaged fibre cement sheeting.   |
| Visible extent:                     | <ul style="list-style-type: none"> <li>• Localised</li> </ul>  |
| Defect type:                        | <ul style="list-style-type: none"> <li>• <u>Minor defect</u><br/>A defect other than a major defect.</li> <li>• <u>Serviceability defect</u><br/>Fault or deviation from the intended serviceability performance of a building element.</li> </ul> |
| Recommendation:                     | Replacement of damage portions of FC wall / ceiling linings.   |
| Implementation:                     | <ul style="list-style-type: none"> <li>• The above recommendation should be implemented as soon as possible.</li> </ul>  |
| Testing results:                    | <ul style="list-style-type: none"> <li>• Outdoor shower room. <b>No asbestos detected.</b></li> <li>• Indoor loft/office. <b>No asbestos detected.</b></li> </ul>  |
| Additional photographs:             |  |

### 6.9 Identification of hazardous materials - ACM Photographic Evidence



Photograph 65 shows FC sample taken from outdoor shower ceiling.



Photograph 66 shows sample taken from FC wall lining to loft / mezzanine level.

## 6.10 Identification of hazardous materials – Lead Based paints:

|                                     |   |
|-------------------------------------|---|
| Concern raised by report requestor: | Is Lead present in external paint product?  |
| Element or area inspected:          | Peeling paint   |
| Location:                           | Northern and Southern walls   |
| Affected element:                   | Paint finishes  |
| Defect or sign:                     | Painted surfaces are well deteriorated and peeling.<br>Environmental hazard.  |
| Visible extent:                     | <ul style="list-style-type: none"> <li>Widespread</li> </ul>  |
| Defect type:                        | <ul style="list-style-type: none"> <li><u>Serviceability defect</u><br/>Fault or deviation from the intended serviceability performance of a building element.</li> </ul> |
| Recommendation:                     | Removal / replacement of weatherboards. The current cladding is beyond a state of reasonable repair.  |
| Implementation:                     | <ul style="list-style-type: none"> <li>The above recommendation should be implemented as soon as possible.</li> </ul>   |
| Test results:                       | External WB - Left side N/W wall. <b>Lead Content = 3.0%</b><br>External WB - Right side S/E wall. <b>Lead Content = 1.7%</b>   |
| Additional photographs:             |   |

### 6.10 Identification of hazardous materials – Lead Based paints Photographic Evidence



Photograph 67 shows an example of peeling paint being removed for testing.



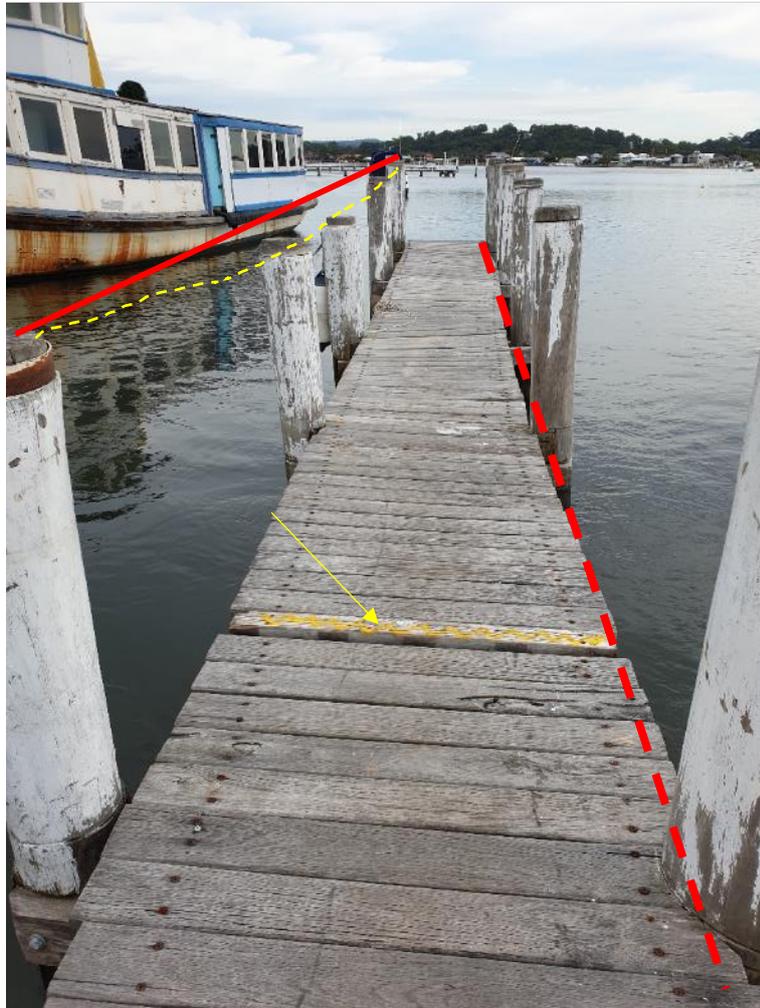
Photograph 68 shows any peeling paint is highly probably to fall into waterways causing potential harm to aquatic marine life. Note – recreational fishing carried out within the area.

## 6.11 Jetty and walkway/decking potential collapse and safety:

|  |   |
|--|---|
| Concern raised by report requestor:  | What's the current condition of walkway / jetty?  |
| Element or area inspected:   | Jetty structures  |
| Location:  | Two (2) x timber framed jetty / walkways positioned to the North Easterly elevation, one (1) of which is abutted against / attached to the boatshed structure<br>With regards to the jetties, these are accessible at any given time (24/7 – all year round) by general public.   |
| Affected element:  | Timber framing members and decking  |
| Defect or sign:  | <ul style="list-style-type: none"> <li>• Damaged</li> <li>• Sagging</li> <li>• Partly missing</li> <li>• Marine borer damage</li> </ul>   |
| Visible extent:  | <ul style="list-style-type: none"> <li>• Localised (Timber framing members and decking)</li> <li>• Widespread (Marine borer damage)</li> </ul>  |
| Defect type:   | <ul style="list-style-type: none"> <li>• <u>Major defect</u><br/>A defect of sufficient magnitude where rectification has to be carried out in order to avoid unsafe conditions, loss of utility or further deterioration of the property.</li> <li>• <u>Serviceability defect</u><br/>Fault or deviation from the intended serviceability performance of a building element.</li> </ul>  |
| Recommendation:  | Replacement of missing decking boards with similar sized HWD material.<br>Replacement of bearer and joist framing where deteriorated.<br>Furthermore, as per engineers' recommendations, piles on the main jetty should be replaced where there has been significant section loss to ensure structural adequacy under anticipated loads.  |
| Implementation:  | <ul style="list-style-type: none"> <li>• The above recommendation should be implemented immediately. The client has also been informed of the urgency of this matter by email.</li> </ul>   |
| Building code, and / or Australian Standard, regularity authority applied to defect: | <p><b>Australian Standard 4997 – 2005 Guidelines for the design of maritime structures</b></p> <p>Subsection 6.2.3 Maintenance</p> <p>All maritime structures deteriorate over time. Early maintenance is generally recommended to prevent more significant damage. Whilst a structure may have a prescribed design life of 25,50 or 100 years, local marine environments, operational conditions and other factors will lead to maintenance requirements. Regular (annual or otherwise) inspections of the structure will permit early detection allowing the implementation of economic maintenance measures, Maintenance will then be determined by the inspection results.</p> <p>A typical maintenance program will include –</p> <ol style="list-style-type: none"> <li>regular inspections;</li> <li>a program of routine minor maintenance; and</li> <li>a program of major maintenance.</li> </ol> |

|                                |  |
|--------------------------------|--|
| <p>→</p> <p>→</p>              | <p>(b) The service life of timber members will vary significantly depending on application, timber quality (grade), species natural durability and preservative treatment. The following times to first maintenance can be expected:</p> <p>(i) Timber piles exposed to marine organisms .....5–10 years.</p> <p>(ii) Timber piles not exposed to marine organisms .....10–30 years.</p> <p>(iii) Timber decking exposed to weathering.....10–25 years.</p> <p>(c) The deterioration of timber is usually by mechanical degradation, rot or attack by living organisms (decay fungi, termites, marine borers).</p> |
| <p>Additional photographs:</p> |  |

6.11 Jetty and walkway/decking potential collapse and safety  
Photographic Evidence



Photograph 69 shows the main jetty that has subsidence due to previous impact incident by moored ferry. The 'yellow' section of decking is an inadequate repair, leading to a trip hazard.



Photograph 70 shows an example of sectional loss as identified by structural engineer.

## 6.12 Plumbing and wastewater – portaloo, sinks and basins:

|                                     |  |
|-------------------------------------|--|
| Concern raised by report requestor: | Are these discharging waste water into the environment below?  |
| Element or area inspected:          | Portaloo   |
| Location:                           | Rear Eastern elevation of boat shed  |
| Affected element:                   | Toilet and shower area   |
| Defect or sign:                     | <ul style="list-style-type: none"> <li>Shower room and hand basin has no waste water piping<br/>Note - this area appears to be not in use</li> </ul>   |
| Visible extent:                     | <ul style="list-style-type: none"> <li>Localised</li> </ul>  |
| Defect type:                        | <ul style="list-style-type: none"> <li><u>Serviceability defect</u><br/>Fault or deviation from the intended serviceability performance of a building element.<br/>Note – shower area cannot be utilised.</li> </ul> |
| Recommendation:                     | Seek further proof of regular servicing of portaloo.<br>Note – if waste product is suspected as being illegally dumped into waterways, further investigation is required.  |
| Implementation:                     | <ul style="list-style-type: none"> <li>The above recommendation should be implemented as soon as possible.</li> </ul>  |
| Additional photographs:             |  |

6.12 Plumbing and wastewater – portaloos, sinks and basins  
Photographic Evidence



Photograph 71 shows the location of portaloos and rear outdoor shower.



Photograph 72 shows an inspection of subfloor area confirmed no signs of waste water plumbing.



Photograph 73 shows no signs of portaloos as being discharged to waterway located below.



Photograph 74 shows further inspection of areas with no signs of waste water plumbing.

6.13 Vermin and termite activity:

|                                     |  |
|-------------------------------------|--|
| Concern raised by report requestor: | Any signs of termite or vermin activity?   |
| Element or area inspected:          | HWD piers / piles<br>Wall framing  |
| Location:                           | <ul style="list-style-type: none"> <li>• Boat shed</li> <li>• Jetties</li> </ul> |
| Affected element:                   | Timber wall framing<br>Timber piers/piles  |
| Defect or sign:                     | Termite damage   |

|  |  |
|--|--|
|  | Note – vermin activity such as rodents is highly likely given the amount of store products within the boatshed and on site, providing ideal harbourage conditions for breeding cycles.   |
| Visible extent:  | <ul style="list-style-type: none"> <li>Undetermined</li> </ul>   |
| Defect type:   | <ul style="list-style-type: none"> <li><u>Major defect</u><br/>A defect of sufficient magnitude where rectification has to be carried out in order to avoid unsafe conditions, loss of utility or further deterioration of the property.</li> <li><u>Structural defect</u><br/>Fault or deviation from the intended structural performance of a building element.</li> </ul> |
| Recommendation:  | Replacement of wall framing affected by termite activity.<br>Note – given the majority of wall framing is covered over or obstructed, its highly likely more termite activity has gone undetected.   |
| Implementation:  | <ul style="list-style-type: none"> <li>The above recommendation should be implemented without delay.</li> </ul>  |
| Building code, and / or Australian Standard, regularity authority applied to defect: | AS 4349.3 Timber pest inspections  |
| Additional photographs:  |  |

### 6.13 Termite activity Photographic Evidence



Photograph 75 shows termite damage to weatherboards.



Photograph 76 shows termite damage to timber wall framing, located to loft / mezzanine area to Western wall.



Photograph 77 shows termite damage ceiling joist which are in fact acting as mezzanine floor joists. Note - steel tension brace connected to subject timber. There's a heavy 'structural' reliance on this timber member.



Photograph 78 shows large sectional loss to the structural timbers due to termite.



Photograph 79 shows obvious termite damage to rafters above door entry point.



Photograph 80 shows obvious fungal decay (wood rot) to outdoor shower location.

#### 6.14 Fire safety:

|                                     |  |
|-------------------------------------|--|
| Concern raised by report requestor: | Any obvious fire safety related issues?  |
| Element or area inspected:          | Site   |
| Location:                           | Jetties and main boat shed   |
| Affected element:                   | N/A  |
| Defect or sign:                     | No visually obvious fire protection / fighting equipment easy at hand on the public jetty areas. |

|                         |   |
|-------------------------|---|
|                         | It's believed fire extinguishers are housed within the boatshed, but these are not easily accessible 24/7.                  |
| Visible extent:         | <ul style="list-style-type: none"> <li>• Undetermined</li> </ul>  |
| Defect type:            | <ul style="list-style-type: none"> <li>• <u>Serviceability defect</u></li> </ul>  |
| Recommendation:         | Further advice is highly recommended from a specialist fire protection firm specific to marina / public jetty applications. |
| Implementation:         | <ul style="list-style-type: none"> <li>• The above recommendation should be implemented without delay.</li> </ul>           |
| Additional photographs: |   |

6.14 Fire safety  
Photographic Evidence



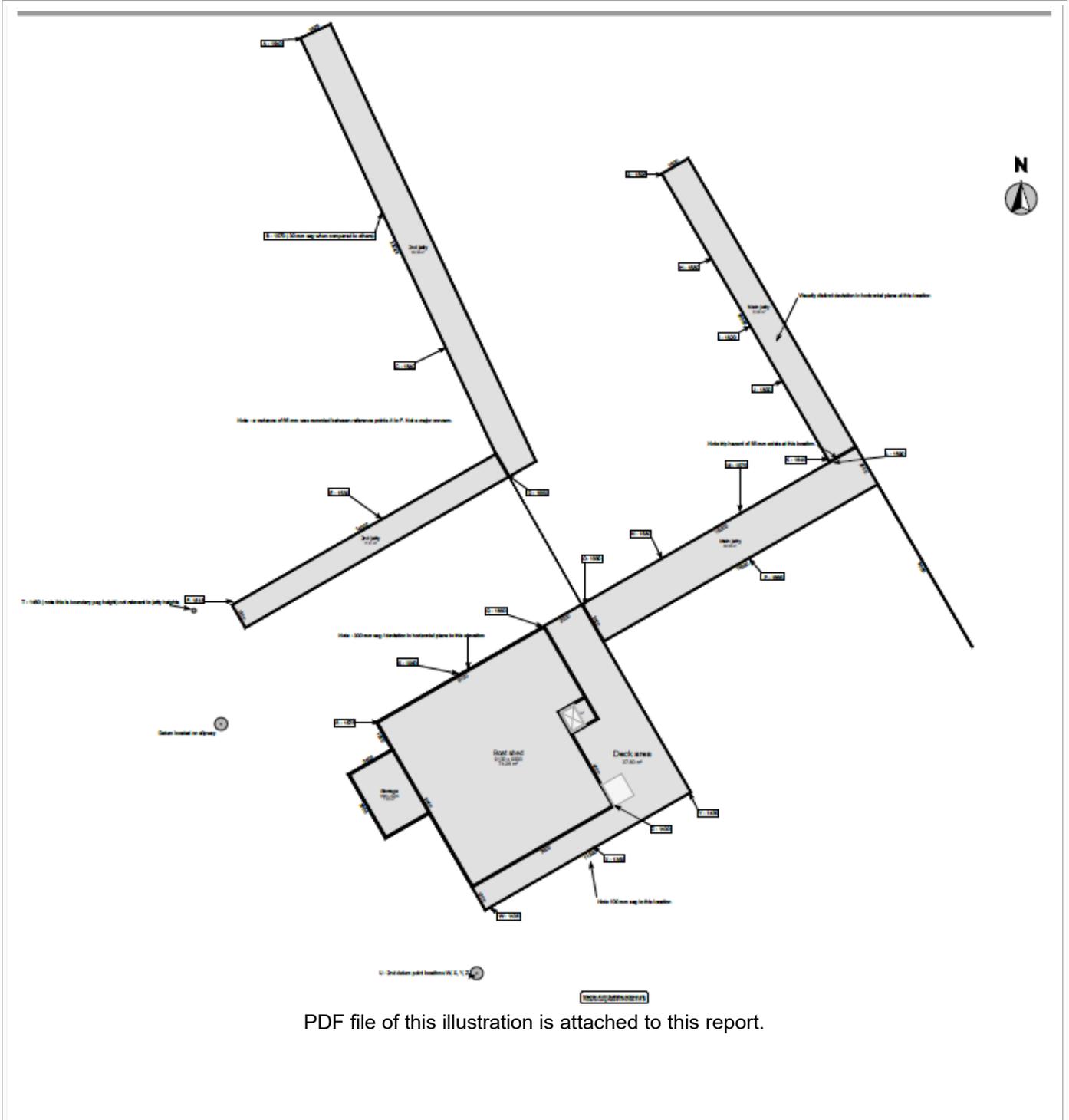
Photograph 81 shows stored fire extinguishers in hard to find location. (Maybe old equipment)



Photograph 82 shows 1x fire extinguisher located within doorway of boat shed.

## 7. SITE PLANS / DRAWINGS

The following is provided as an illustrative guide only for the areas of concern to which this inspection report has been based around.



## 8. CONCLUSION

My completed inspection of the areas of concern pointed out by the report requestor has found that the overall boatshed structure is in such a dilapidated state, that a retain and repair option will not be economically viable.

Further to this opinion, is the fact a separate structural engineers report has similar findings and opinions. Of particular importance is Australian Standards 4997 -2005 Guidelines for the design of maritime structures which recognises all maritime structures deteriorate over time.

Therefore, early maintenance is generally recommended to prevent more significant damage. Whilst a structure may have a prescribed design life of 25, 50 or 100 years, local marine environments, operational conditions and other factors will lead to maintenance requirements.

Based upon extent and severity of defects found, it's of the building consultant's opinion the above fore-mentioned requirement has not been satisfactorily implemented.

With respect to Empire Bay boatshed being listed as a heritage item under Gosford Local Environmental Plan 2014, we understand the heritage significance of the boatshed would play a vital role in assessment for retain and repair.

However, on the basis of what one may wish to achieve, versus, actual cost viability of major structural renovations, the building consultant is of the opinion the long-term deterioration of the structure, to the point of disrepair clearly identified within this report suggests demolition may be the most reasonable solution for interested parties to consider.

## 9. LIMITATIONS OF INSPECTION & REPORT

The inspection is limited to the readily accessible areas of the building and site and is based on a visual examination of surface work, and / or invasive inspection where required. Additional works such as testing of building materials may also be completed if the consultant sees fit to do so.

This report has been completed in accordance with:

- Australian Standard Inspection of buildings AS 4349.0 – 2007

Definitions for terms utilised within this report when making comment on current condition. Major defect

A defect of sufficient magnitude where rectification has to be carried out in order to avoid unsafe conditions, loss of utility or further deterioration of the property.

Minor defect

A defect other than a major defect.

Serviceability defect

Fault or deviation from the intended serviceability performance of a building element.

Structural defect

Fault or deviation from the intended structural performance of a building element.

Structural element

Physically distinguishable part of a structure, e.g. wall, columns, beam, connection.

And may refer to:

10. Relevant Australian Standards (AS) and National Construction Code (NCC)

11. Manufacturers Guidelines



This report is not an all-encompassing report dealing with the building from every aspect. It is a reasonable attempt to identify any obvious defect, maintenance or design issues and resultant damage at the time of the inspection.

**THIS IS A VISUAL INSPECTION ONLY** limited to those areas and sections of the property fully accessible and visible to the Inspector on the date of Inspection. The inspection **DOES NOT** include breaking apart, dismantling, removing, testing or moving objects and is in the opinion of the inspector's view relating to the Australian Standards.

No liability shall be accepted on an account of failure of the report to notify problems in any area of the subject property physically inaccessible for inspection, or to which access for inspection is denied by or to the consultant.

This report is not a certificate of compliance with the requirements of any act, regulation, ordinance or by-law.

#### Liability

iPRA Pty Ltd and/ or the engaged consultant will not be liable for any loss, damage, cost or expense arising from the use of this report incurred by any party including the client named in this report.

#### Statement of Accuracy

The observations recorded in this report are a true and accurate documentation of the inspection.

Signed by-

A handwritten signature in blue ink, appearing to read 'S Greirson', with a long horizontal line extending to the right.

**Simon Greirson**  
Senior Consultant

Builders Supervisor Certificate # 41563S  
Builders Contractor License# 260976C  
PMT (Work Cover NSW) # 15-102327-001  
Conduct Asbestos Assessment CPCBC5014A  
Public Liability and Professional Indemnity Insurance- BROVR002132  
(Wallace Risk)  
Worker Comp. Insurance- MWN 6066918033 (Allianz)

## 10. IMPORTANT CONDITIONS & DISCLAIMERS

**CONSUMER COMPLAINTS PROCEDURE:** In the event of any controversy or claim arising out of, or relating to this Report, either party must give written Notice of the dispute to the other party. If the dispute is not resolved within ten (10) days from the service of the Notice then the dispute shall be referred to a mediator nominated by the Inspector. Should the dispute not be resolved by mediation then either party may refer the dispute to the Institute of Arbitrators and Mediators of Australia for resolution by arbitration.

**THE USE OF PHOTO'S:** The report may include photographs, along with extension file links, and refer to the Australian Standards. Some pictures are intended as a courtesy and are added for information. Some are to help clarify where the inspector has been, what was looked at and the condition of the component at the time of the inspection. Some pictures may be of deficiencies or problem areas, these are to help you better understand what is documented in the report and may allow you to see areas or items you normally would not see. Not all problem areas or conditions will be supported with photos or Australian Standards.

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**DISCLAIMER OF LIABILITY TO THE THIRD PARTIES:** This Report is made solely for the use and benefit of the Client named on the front of this report. No liability or responsibility whatsoever, in contract or tort, is accepted to any third party who may rely on the report wholly or in part. Any third party acting or relying on this report, in whole or in part does so at his or her own risk.

## APPENDIX 1 – Additional reports

Note PDF files of each of the following reports are attached to this PDF report.

- Structural engineer
- Electrical
- Aset laboratories – ACM and Lead testing reports

End of Appendix 1