Mount Thorley Warkworth Historic Heritage Management Plan 2019 Compliance Audit Inspection

Report prepared for

Yancoal Australia, Mount Thorley Warkworth

March 2020

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ARROW HERITAGE SOLUTIONS

Introduction

Yancoal Australia (Yancoal) manage the Mount Thorley Warkworth (MTW) mining complex located in the Hunter Valley, approximately 8km south-west of Singleton. Approval for the continuation & expansion of the mine was granted on 26 November 2015 under two separate project approvals: the Warkworth Continuation Project Approval (SSD-6464) & the Mount Thorley Operations Project Approval (SSD-6465).

Pursuant to Condition 46 of the Warkworth Continuation Project Approval, Yancoal have developed an MTW Historic Heritage Management Plan (HHMP) that covers the whole MTW mining complex. The MTW HHMP was approved by the Department of Planning & Environment on 11 October 2017 and sets out the principles, processes & measures through which historic heritage will be managed within the HHMP Area. This includes the commitment (Provision 19) to conduct annual HHMP compliance inspections with members of the community through the auspices of the Community Heritage Advisory Group (CHAG). The purpose of the HHMP compliance inspections is to:

a. inspect areas and sites to assess compliance with the provisions of the HHMP;
b. inspect and monitor the condition and management of various sites; and
c. review the effectiveness and performance of the HHMP provisions in the management of historic heritage at MTW.

Proposed Activity and Project Brief

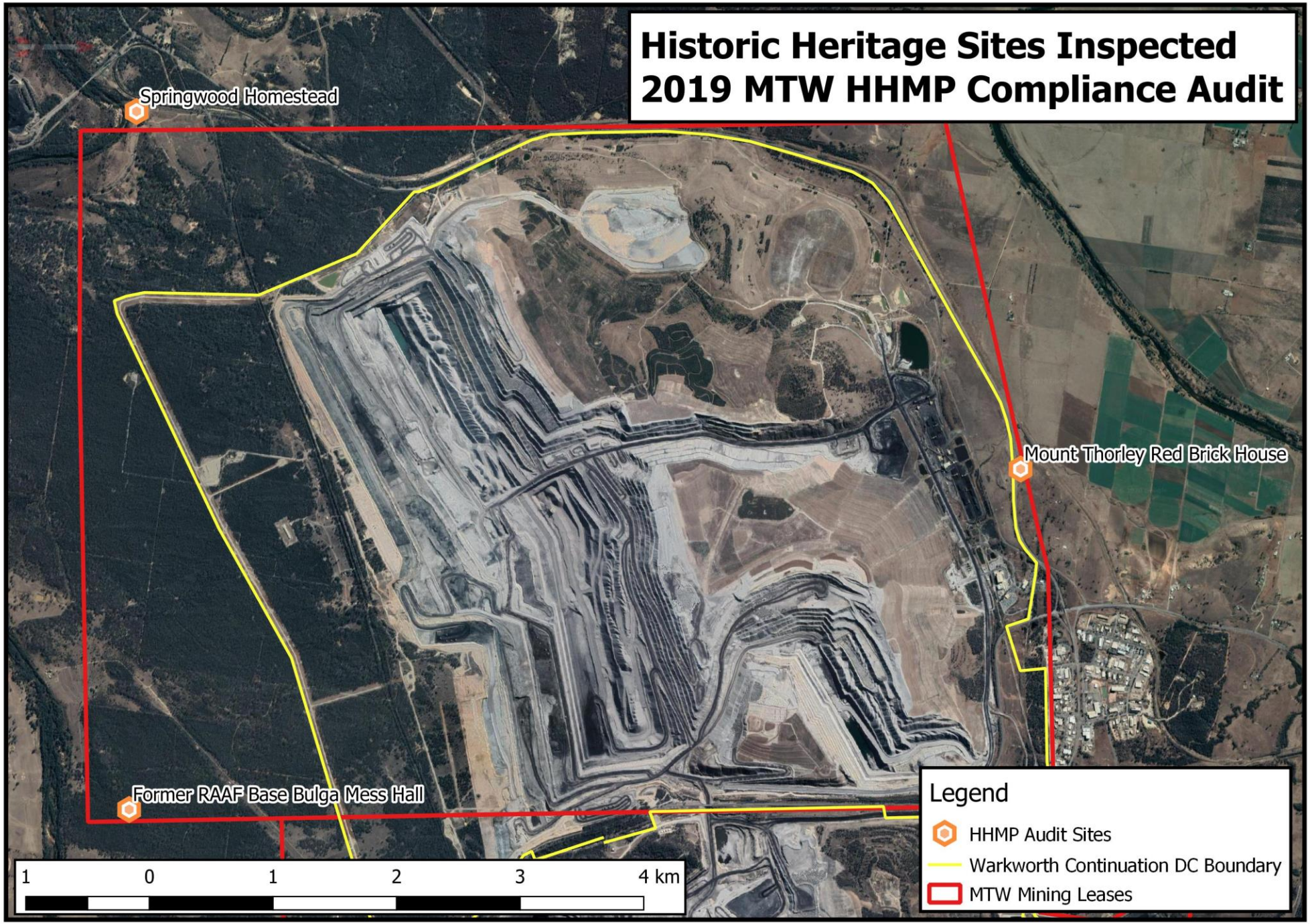
The following historic sites (shown in the map below) within the MTW HHMP area were to be inspected to assess compliance with actions listed in the HHMP and specific Conservation Management Plans (CMP), and a detailed photographic record for each site was collated to add to the previous photographic data:

- Former RAAF Base Bulga Mess Hall
- Springwood Homestead
- Mount Thorley Brick Farm House

Timing & Personnel

The 2019 MTW HHMP compliance inspection was conducted on Wednesday 4 March 2020. The personnel involved in this inspection were:

Name	Position/Organisation
Joel Deacon	Archaeologist, Arrow Heritage Solutions
Wade Covey	Environment and Community Coordinator, MTW
Neville Hodkinson	CHAG representative
Stewart Mitchell	CHAG representative
Wesley Warren	CHAG representative

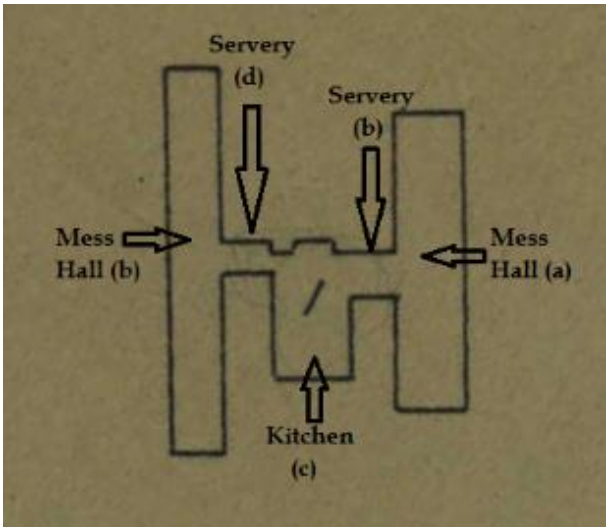

Historic Heritage Sites Inspected
2019 MTW HHMP Compliance Audit
Springwood Homestead
Mount Thorley Red Brick House
Former RAAF Base Bulga Mess Hall
1 0 1 2 3 4 km
Legend
HHMP Audit Sites
Warkworth Continuation DC Boundary
MTW Mining Leases

Arrow Heritage Solutions were engaged as independent heritage consultants to conduct the HHMP compliance inspection, and Joel Deacon acted as technical advisor and author of this report. MTW's Environment and Community Coordinator arranged the compliance inspection program and escorted the field team. Neville Hodkinson, Stewart Mitchell and Wesley Warren participated in the inspection as representatives of the CHAG forum.

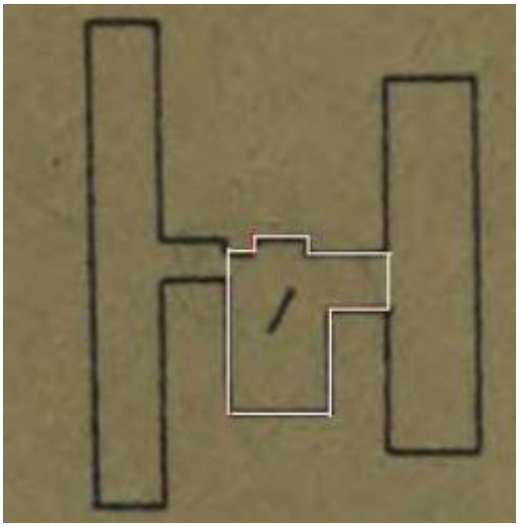
Former RAAF Base Bulga Mess Hall

Following the Japanese attack on Pearl Harbour in December 1941, plans were approved to expand existing RAAF bases and establish new ones, including a number of sites in the Hunter Valley. Bulga was identified as a potential site for an operational base and the area was officially taken over by the RAAF on 12 June 1942 for use as a relief landing strip. By July 1943 the site was completed, including the kitchen and mess hall, however, by January 1944 the use of the site was limited due to the decreasing threat of attack. A 1946 condition report noted this building as deteriorating. In January 1953, the building was noted as missing a few sheets of iron and windows.

The building sits in the former camp area west of the north-south runway. It was originally irregular in plan comprising a central kitchen area measuring 13.4 x 8.8m, with long rectangular mess halls to the east and west, connected by a servery on either side. The remnant structure today comprises the kitchen building and the foundation of one of the serveries (see below).



Original layout of building



Remaining structure

The remnant building is "L" shaped in plan with brick and concrete footings. During the original assessment conducted by ERM in November 2012 (which informed the CMP) the building was noted as being in poor condition with trees physically impacting on the building fabric, and some minor settlement issues resulting in cracking and failing brickwork. The western section of the building was the most intact part, retaining the original timber frame, corrugated asbestos cement roof sheeting and walls clad with corrugated iron sheeting.

The building is currently structurally unsound, with a large tree impacting on the roof and a number of timber elements either missing or in a deteriorated state. Corrugated asbestos roof sheeting is also missing in some places, and damaged and in poor condition where it remains. Much of the corrugated iron sheeting is corroded. Brickwork is also cracking in a number of locations resulting in significant movement outward, loss of mortar and loss of bricks along the southern and eastern elevations.

View to mess from south-east (2012)

Remnant kitchen area (2012)

As a result, a number of structural recommendations were outlined by ERM in the CMP developed for the site in 2012. These recommendations were not intended to return the building to a serviceable state, rather they seek to do the minimum required to allow safe access to the building to prevent significant damage, and also allow safe access for asbestos removal and internal inspection of the building in the short to medium term.

CMP Requirements

Short to medium term structural recommendations included:

a) **Remove fallen tree branch.** The tree branch impacting on the roof of the building should be removed, using an external mobile elevated platform or boom lift;
b) **Temporary propping.** The building should be temporarily propped and supported as per Bligh Tanner plans SK 1.0 A and SK 2.0 A (contained within the CMP) to allow for safe access into the building and more detailed inspection of the structure.
c) **Asbestos Removal.** Asbestos removal should be completed by a licensed asbestos removal specialist, include the roof sheeting, all asbestos dust and fibres, and loose fragments that are known to exist in the remaining area.
d) **Stabilise framework and replace roof.** Any structural roof members that are destabilized once the roof sheeting is removed are to be secured as required. Side walls which lose stiffness once the roof sheeting has been removed are to be propped temporarily until the new roof has been replaced.
e) **Archaeological clean-up.** Asbestos removal and clean-up should be supervised by a historical archaeologist to ensure any identified items of significance are retained.
f) **Further building inspection.** A structural engineer should complete a building inspection to identify structural repairs and stability requirements with four weeks of the building being cleaned up and decontaminated from asbestos.

Following the internal inspection of the building noted in (f) above, further advice may be provided regarding medium to long term recommendations. Due to the lack of integrity of the building, recommendations are unlikely to be directed at restoration of the building, but more towards retaining the remnant structure in a safe environment and reducing further deterioration. Repair drawings have been provided in the CMP to remedy any major cracking in the brickwork or where sections of brickwork have either partially collapsed or broken away from the wall.

Photographic Comparison 2012 – 2018 - 2020

During the inspection of the Former RAAF Base Bulga Mess Hall for this report, a number of photographs were taken from the same angles and of the same features as were taken during the ERM 2012 assessment and archival recording as well as during the 2018 HHMP compliance inspection. These photographs provide a visual baseline condition assessment of the building, and also allow a comparative analysis of the deterioration levels over the last six to eight years. These photographs are set out below, along with comments pertinent to management recommendations.

2012	2018	2020
		
East elevation **2012-18:** no discernible change – note fallen branch from tree on western side. **2018-20:** no discernible change – fallen branch has moved.		

2012	2018	2020
		
View to north-east elevation **2012-18:** roof over open kitchen area has deteriorated, causing severe lean on far wall. **2018-20:** top of far wall now collapsed.		
		
South-east elevation **2012-18:** evidence of increased bow to southern wall. **2018-20:** bow in wall appears to have increased.		

2012	2018	2020
		
South elevation **2012-18:** evidence of increased bow to southern wall and missing panel above entry. **2018-20:** increased bow to southern wall.		
		
West elevation **2012-18:** shows deterioration of roofing members above open kitchen area and leaning north wall, and further collapse of asbestos roof due to fallen dead tree. **2018-20:** top of north wall now collapsed, further damage to roof with branch now fallen to ground.		

2012	2018	2020
		
North elevation **2012-18:** no discernible change. **2018-20:** top of north wall now collapsed.		
		
North-east elevation **2012-18:** difficult to discern change. **2018-20:** difficult to discern change.		

2012	2018	2020
		
Concrete and brick foundation at east side of building **2012-18:** difficult to discern change. **2018-20:** no discernible change.		
		
View to building interior from north-east **2012-18:** shows collapse of remnant roofing members above open kitchen area. **2018-20:** further minor deterioration of asbestos sheeting panelling.		

2012	2018	2020
		
Grease trap at south end of building **2012-18:** shows bow to south wall. **2018-20:** shows increased bow to south wall.		
		
Storage area at south end of building **2012-18:** further slight collapse of storage area. **2018-20:** shows loosening of corrugated iron wall sheeting due to bowing in wall.		

2012	2018	2020
		
Windows and entry at west elevation **2012-18:** shows large trunk/branch portions of tree collapsed on roof, which has destroyed roof ventilator. **2018-20:** shows majority of branches fallen from roof, leaving increased damage to sheeting.		
		
Timber window detail, west elevation **2012-18:** no discernible change. **2018-20:** no discernible change.		

2012	2018	2020
		
Showing cylindrical ventilator and damage to roof, view from west **2012-18:** shows significant roof damage from fallen dead tree, including to ventilator. **2018-20:** shows increased damage to roof sheeting from fallen branch.		
		
Detail of north-west elevation **2012-18:** shows increased collapse over open kitchen area, as well as new damage to brick foundation at north-west corner. **2018-20:** shows fallen top of north wall plus increased (animal?) damage to brick foundation at north-western corner.		

2012	2018	2020
		
Showing interior damage at kitchen at north end of building **2012-18:** shows increased collapse over and accumulation of debris within open kitchen area. Note also severe lean to north wall. **2018-20:** shows collapsed top of north wall and collapse of remaining full cross-beam.		
		
Showing interior damage at kitchen at north end of building **2012-18:** shows increased collapse over and accumulation of debris within open kitchen area. Note also severe lean to north wall. **2018-20:** shows collapsed top of north wall and collapse of remaining full cross-beam.		

2012	2018	2020
		
View to interior of south end of building, view from east **2012-18:** shows increased collapse over open kitchen area. **2018-20:** shows further minor deterioration of asbestos panelling.		

2012	2018	2020
		
Showing stove at kitchen at north end **2012-18:** note the remaining two stove doors have become unhinged and build up of debris from collapsed roof. **2018-20:** stove now obscured by collapsed north wall.		

2012	2018	2020
		
View to interior, showing west entry to building **2012-18:** no discernible change. **2018-20:** no discernible change.		

2012	2018	2020
		
Showing west interior space **2012-18:** no discernible change. **2018-20:** no discernible change.		
		
Damaged brick foundation at south-east corner **2012-18:** no discernible increase to cracked brick foundation. **2018-20:** further cracking of foundation (to left of shot) and some slumping of corner bricks.		

2012	2018	2020
		
Detail of damaged brick foundation **2012-18:** some further collapse of concrete/cement above brick foundation. **2018-20:** some slumping outwards of corner brick foundation.		
		
View to interior of building, looking north from south entry **2012-18:** no discernible change. **2018-20:** no discernible interior change, but shows collapsed north wall.		

2012	2018	2020
		
View to interior of building from entry at west **2012-18:** no discernible change. **2018-20:** no discernible change.		
		
Showing interior of building, viewed from north-west corner **2012-18:** shows collapsed roofing members above open kitchen area and accumulation of debris. **2018-20:** shows collapsed north wall across stove and additional fallen roof member.		

2012	2018	2020
		
Showing interior of building, viewed from north-west corner **2012-18:** shows collapsed roofing members above open kitchen area and accumulation of debris. **2018-20:** shows additional collapsed roofing member.		

The comparative photographs above show the changes at the building over the past eight years. During this time, and with an emphasis on the last two years, apart from the general deterioration of the panelling and timber within the 75 year old mess hall, the more significant changes can be summarised as:

- The collapsed dead tree on western side of asbestos roof has now fallen to the ground, but damage has been caused to sheeting and roofing members, as well reducing structural stability of southern wall, which shows an increase in bowing since the 2018 inspection;
- Due to the complete collapse of remaining roofing members over the open kitchen area the top portion of the northern wall has now failed and fallen inside the building footprint; and
- Increased damage to brick foundation in north-west corner, and new slumping of south-west foundation corner.

Recommendations

High Priority Actions

1. If not already conducted, have an asbestos expert assess and develop a clean up and disposal plan to deal with both the broken fragments and intact asbestos sheeting;
2. Remove any remaining tree branches from the roof. In addition, to prevent similar damage in the future, serious consideration should be given to removing or lopping those trees that are located close enough to the building that they may cause damage if they fall or drop large branches;

High Priority Actions to Follow Actions 1 & 2

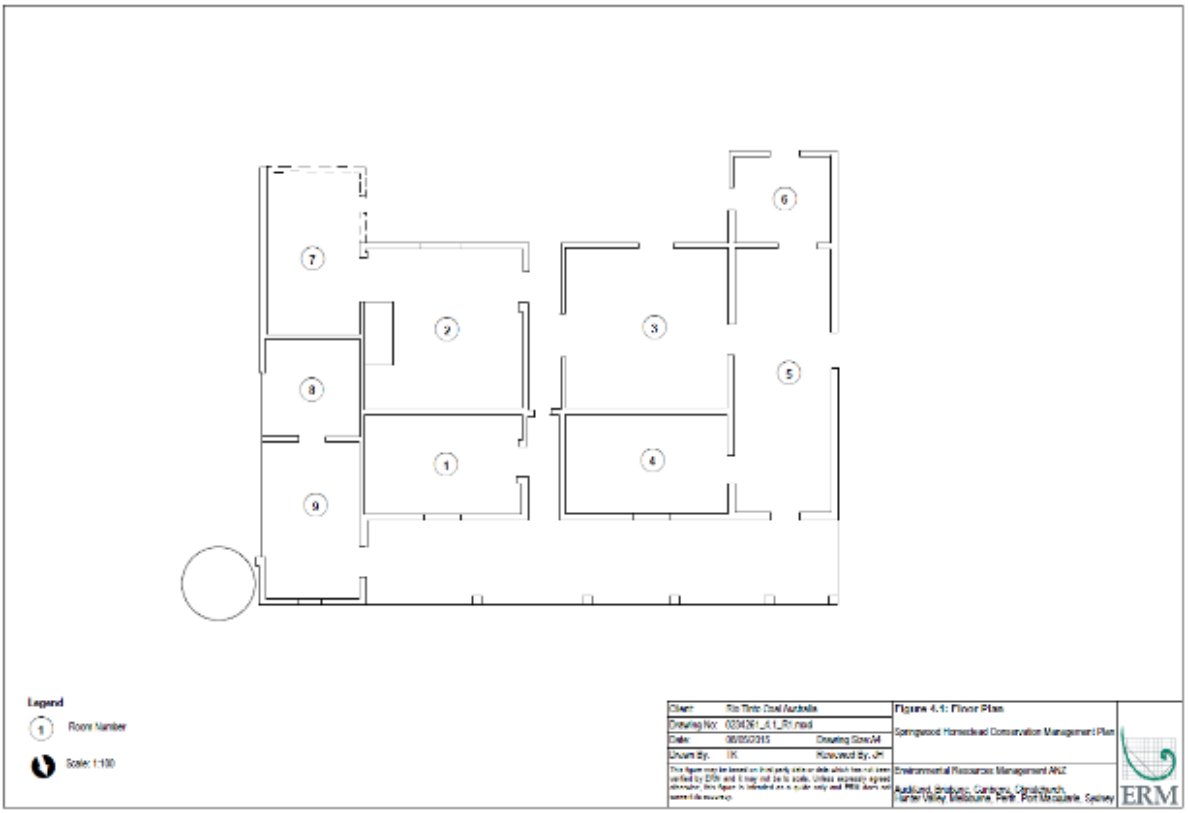
3. Pending the results of the asbestos assessment, the building and surrounds should be thoroughly cleaned of asbestos and other rubbish material. An archaeologist should be present to collect any items of historic importance or that relate to the original fabric of the building. These can be stored inside the building and potentially re-used during further stabilization programs;
4. Pending the results of the asbestos assessment, any parts of the building framework, such as roofing members of walls should be stabilized and propped, using the Bligh Tanner plans as a guide;
5. A structural engineer should then inspect the building before any further works are commenced to make further recommendations on stability requirements and structural repairs. These further works should aim to reduce the likelihood and extent of any further deterioration at the site rather than seek to rebuild or renovate as it is unlikely that there would be any valid or appropriate option to re-use the site; and

Ongoing

6. Continue the photographic monitoring program at the building using the views and locations previously catalogued so that any future changes to the building can be documented.
7. Consider using drone technology to undertake an aerial assessment of the site to determine any further actions required in areas that cannot be inspected from the ground.

Springwood Homestead

Based on historical research, Springwood Homestead is likely to have been constructed c.1860, and displays many characteristics of late Old Colonial Georgian and Victorian Georgian architecture, including an original shingle broken-backed roof, fanlights or transom lights, panelled doors and under-roof verandahs. The homestead is low-set, constructed in vertical timber slabs and built around a four room square core, as shown in the plan below (taken from ERM's 2015 CMP).



Springwood Homestead in 2012

Given that Springwood Homestead is timber framed and in direct contact with the ground, it is remarkable that it is still standing and in a generally stable condition, with most roof rafters appearing to be still in place. Although the building fabric is generally intact there are a number of areas where the level of structural damage to the roof, wall and flooring members is high. The majority of the damage has occurred from termites and fungal decay, resulting in localised collapse of outer external walls and roof structures. Within the CMP developed for the site by ERM in 2015, a number of stabilisation measures have been recommended that will assist to reduce the extent of damage, however a return to a habitable state is not planned.

CMP Recommendations

Although many recommendations are made within the CMP, the more important management measures have been incorporated within a conservation works schedule that covers the following issues:

- Drainage and weatherproofing;
- Asbestos;
- Vegetation;
- Termites and vermin;
- Building fabric; and
- Structural capacity and wind loads.

The works schedule prioritises the required conservation works and are presented with technical specifications from a structural engineer. Those measures that attend to the buildings structural integrity are the focus of the schedule.

High Priority

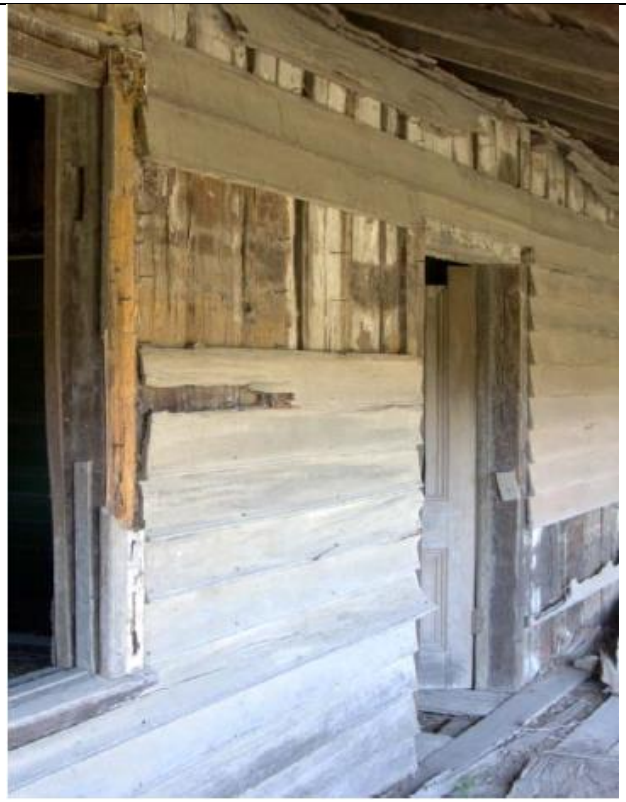
a) Remove debris from roof using a cherry picker or similar;
b) Remove tree from eastern elevation and stabilize building in this location;
c) Remove vine from eastern wall using combination of pruning and herbicide;
d) Remove tree from south-west corner and stabilize building in this location;
e) Prune all overhanging branches and maintain regular maintenance program; and
f) Reinstate southern verandah and roof to match northern elevation.

Moderate to Low Priority

g) Place treated plywood sheeting over door openings;
h) Prune trees, spray weeds and slash grass;
i) Clean up of site surrounds, overseen by archaeologist;
j) Clean up of building interior, overseen by archaeologist;
k) Refix loose ceiling boards, retaining evidence of fabric if unable to fix;
l) Refix loose and dislodged slabs and plates; and
m) Place treated plywood sheeting over openings and undertake repairs to windows.

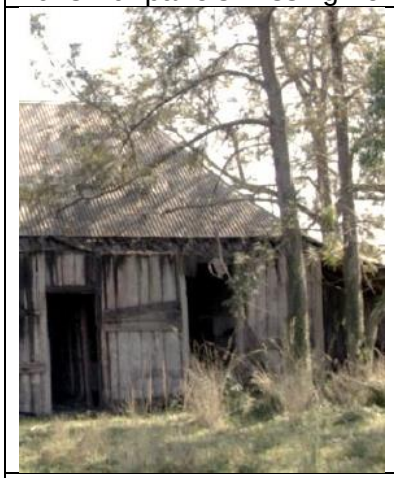
Photographic Comparison 2014 – 2018 - 2020

During the inspection of Springwood Homestead for this report, a number of photographs were taken from the same angles and of the same features as were taken during the 2018 HHMP compliance inspection and the ERM 2014 assessment that informed the 2015 CMP. These photographs provide a visual baseline condition assessment of the building, and also allow a comparative analysis of the changes over the last six years. These photographs are set out below, along with comments pertinent to management recommendations.

2014	2018	2020
		
Northern entrance **2014-8:** further deterioration of overlaid weatherboard. **2018-20:** No major increase in deterioration.		

2014	2018	2020
		
Eastern elevation **2014-8:** no discernible change. **2018-20:** roof slumping appears to have increased.		
		
Looking towards south-west corner from east **2014-8:** no discernible change to tree impact, but note missing vertical slabs from southern wall. **2018-20:** no major increase in deterioration.		

2014	2018	2020
		
Looking towards south-west corner from south-west **2014-8:** no discernible change to tree impact, but note missing vertical slabs from southern wall. **2018-20:** no discernible change, but vine still growing.		
		
Southern elevation **2014-8:** vertical timber slabs have been removed from southern wall. **2018-20:** possible deterioration of shingles at roof edge, and missing panels from above back door.		

2014	2018	2020
		
Southern elevation **2014-8:** vertical timber slabs have been removed from southern wall. **2018-20:** panels missing from above back door.		
		
Southern elevation **2014-8:** vertical timber slabs have been removed from southern wall. **2018-20:** possible deterioration of shingles at roof edge, and missing panels from above back door.		

2014	2018	2020
		
Southern elevation **2014-8:** vertical timber slabs have been removed from southern wall. **2018-20:** possible deterioration of shingles at roof edge, and missing panels from above back door.		
		
Southern elevation doorway **2014-8:** door has been removed. **2018-20:** no discernible change.		

2014	2018	2020
		
South-eastern corner **2014-8:** vertical slabs have been removed causing further collapse of roof. **2018-20:** further deterioration of eastern wall.		
		
Eastern side **2014-8:** debris has been cleaned and stored and a weed removal program conducted. The house area has also been fenced. **2018-20:** further deterioration of eastern wall and regrowth of weeds.		

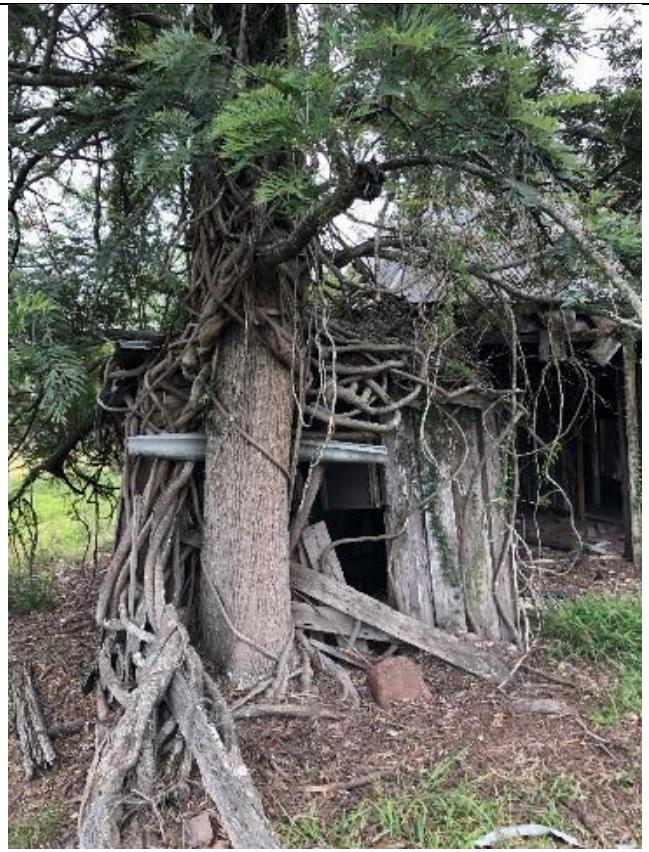
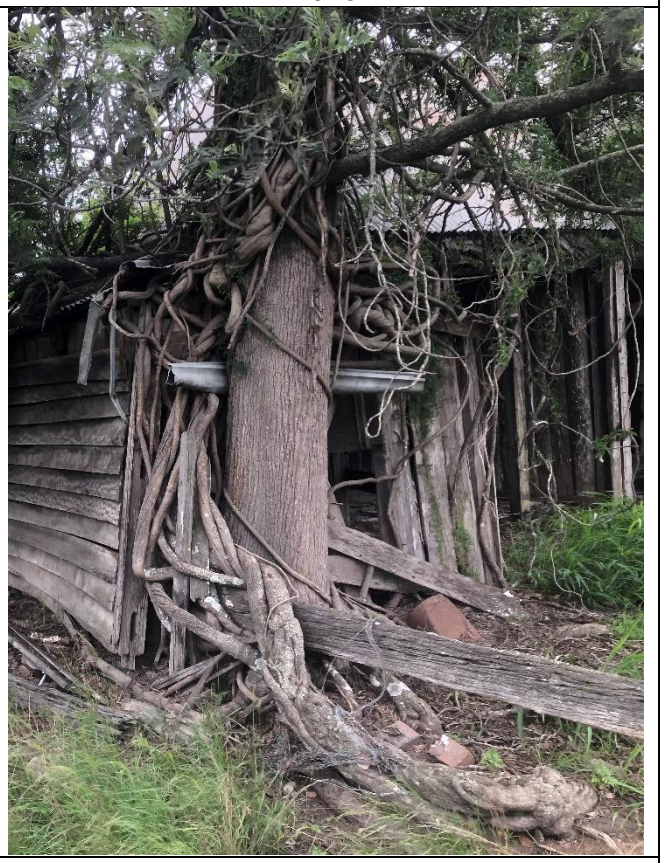
2014	2018	2020
		
Room 2 interior **2014-8:** increased debris caused by removal of southern wall. **2018-20:** no discernible change.		
		
Room 4 ceiling **2014-8:** no discernible change. **2018-20:** no discernible change.		

2014	2018	2020
		
South-west corner **2014-8:** shows removal of vertical slabs from southern wall. **2018-20:** no discernible change.		
		
Northern elevation **2014-8:** further deterioration of weatherboard panelling. **2018-20:** no discernible change, though termite activity present.		

2014	2018	2020
		
South-east corner **2014-8:** shows removal of vertical slabs from southern wall and further collapse of roof. **2018-20:** further roof slumping and deterioration of eastern wall.		

2014	2018	2020
		
Eastern elevation **2014-8:** possible further collapse of crossbeam and guttering. **2018-20:** tree continues to impact eastern roof line.		

2014	2018	2020
		
Northern elevation **2014-8:** slumping of verandah along edge beam. **2018-20:** no discernible change.		

2014	2018	2020
		
View of south-west corner from south **2014-8:** shows removal of vertical slabs from southern wall as well as some increase in vegetation growth. **2018-20:** no discernible change but continuing vegetation impacts.		

The comparative photographs above show the changes at the building over the past six years. During this time, and with an emphasis on the last two years, the more significant changes are:

- The removal of all of the vertical timber slabs from the southern wall continue to have a negative impact on the structural integrity of this side of the building and also allow weather and its associated adverse impacts into the building;
- The continued growth of trees and vines are also having impacts on structural stability in the south-western corner and along the eastern roof line; and
- Noticeable increase in termite activity.

It was noted during the 2018 inspection that some management measures had been implemented, including the removal of weeds and vegetation from around the homestead, the clean up of debris from around the exterior of the building, and the erection of fencing.

Recommendations

Management recommendations have been prioritised as high or moderate importance, and high priority recommendations should be actioned as soon as possible, after which the conservation works schedule within the CMP can be re-evaluated and amended by a structural engineer prior to further works being commenced.

High Priority

1. Remove the trees and vines currently impacting the building at the eastern elevation and south-west corner, and treat to prevent regrowth. Coincident with this removal, acrow props should be installed where appropriate, i.e. where the trees themselves have been supporting the building structure, and as per the structural engineer's instructions at Annex B of the CMP;
2. Once vegetation has been removed, clean all debris from the roof and prune (or consider the removal of) all other trees in close vicinity of the building with potential to drop leaf/branch litter on roof;
3. Clear the surroundings of the building of rubbish, overgrowth and weeds in the accompaniment of an archaeologist to ensure any items of historical relevance are salvaged and stored within the homestead;
4. Due to the damage caused by the removal of the vertical slabs, once the items above are complete, a structural engineer should then re-inspect the building before any further works are commenced to make further recommendations on stability requirements and structural repairs; and
5. Implement a termite and pest control regime at the building.

Moderate Priority

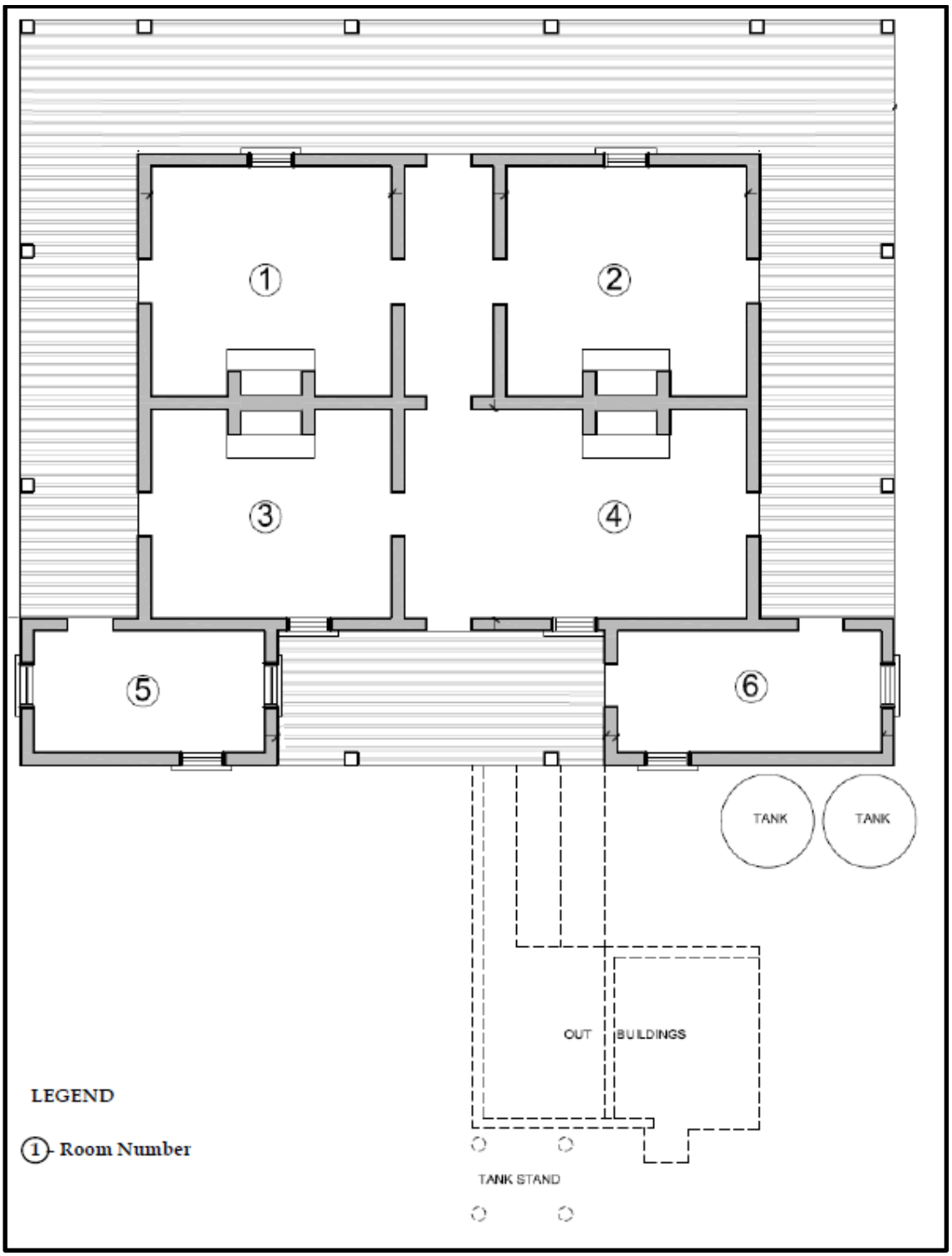
Once the high priority recommendations have been attended to, the structural engineer may recommend different or additional measures than originally put forward. Notwithstanding these, the following moderate priority measures are recommended to attain compliance with the CMP and enhance the condition of the homestead:

1. Due to their propensity to harbour termites and transfer infestation to the building, remove all peppercorn trees from around the building;
2. Future condition inspections should photograph the building using the photograph views and locations presented above so that any changes to the building can be documented in subsequent inspections;
3. Implement and maintain a regular vegetation maintenance program;

4. Pending structural engineer's advice, reinstate southern wall, verandah and roof to match northern elevation.
5. Pending reconstruction of southern wall, place treated plywood sheeting over door and window openings;
6. Clean up of building interior, overseen by archaeologist;
7. Pending structural engineer's advice, refix loose ceiling boards and loose and dislodged wall slabs and plates, retaining evidence of fabric if unable to fix;
8. Ensure the minor recommendations and 'policies' listed throughout Section 7 of the CMP are considered in the future management of the homestead; and
9. Give consideration to an archaeological excavation and research program at the site, with possible community involvement, to explore the areas of archaeological potential identified in the CMP.
10. Consider using drone technology to undertake an aerial assessment of the site to determine any further actions required in areas that cannot be inspected from the ground.

Mount Thorley Brick Farm House

The Mount Thorley Brick Farm House is located off the Golden Highway opposite the MTW coal handling and preparation plant, c.10km south-west of Singleton. The portion of land on which the house sits was purchased by Eliza Glass in 1870 and the physical attributes of the house, which display characteristics of Victorian Georgian architecture, suggest that it was constructed during the following decade. The building is roughly square in plan, with four principal rooms flanking a central hallway.



Floor plan of Mount Thorley Brick Farm House, north up (from ERM 2015 CMP)

The masonry structure of the building is sound, however, it was noted as being in poor physical condition in 2015 (when a CMP was developed for the site by ERM), with a collapsed verandah roof, missing or loose roof sheeting, missing or collapsed verandah posts, and floorboards and areas affected by termites. The conservation works schedule within the CMP considered the following issues at Mount Thorley Brick Farm House:

- Drainage and weather-proofing;
- Asbestos;
- Vegetation;
- Termites and vermin;
- Building fabric; and
- Structural capacity and wind loads.

Recommendations were made within the CMP's conservation works schedule to address the elements above, a number of which were completed by the proponent prior to the 2018 compliance inspection. These works included:

- Removal and safe storage of verandah;
- Initial vegetation clearing;
- Sheeting and sealing of all window and door openings;
- Clean up of scattered debris surrounding building; and
- Repair of loose roof sheeting and patching of holes.

Mount Thorley Brick Farm House (2012)

Photographic Comparison 2015 – 2018 - 2020

During the inspection of the Mount Thorley Brick Farm House for this report, a number of photographs were taken from the same angles and of the same features as were taken during the 2018 HHMP compliance inspection and the ERM 2015 assessment that informed the CMP. These photographs provide a visual baseline condition assessment of the building, and also allow a comparative analysis of the changes over the last five years. These photographs are set out below, along with comments pertinent to management recommendations.

2015	2018	2020
		
View of north-west corner (verandah focus) **2015-8:** verandah removed and stored inside building **2018-20:** no discernible change		

2015	2018	2020
		
View of northern side (surrounding vegetation focus) **2015-8:** grass vegetation slashed around building **2018-20:** vegetation has regrown around building		

2015	2018	2020
		
		

View of door and window panelling
2015-8: sheeting installed on all openings, however some repair required
2018-20: some repair of paneling required

2015	2018	2020
		

View of rear of building (focus on debris)
2015-8: debris has been cleared and stacked
2018-20: vegetation has regrown around building and stacked debris

View of rear of building (focus on debris)
2015-8: debris has been cleared and stacked
2018-20: vegetation has regrown around building and stacked debris

2015	2018	2020
		

View of north-west roof corner (focus on damaged roof)
2015-8: roofing sheets have been replaced and holes patched
2018-20: some minor roof holes and lifted sheeting noted

2015	2018	2020
		
		

View of eastern verandah (focus on verandah floor)
2015-8: posts and sheeting removed, damaged boards remain exposed
2018-20: damaged boards remain and vegetation growth throughout

2015	2018	2020
		

View of rear of building (focus on skillion roof)
2015-8: skillion roof and rafters have collapsed
2018-20: no discernible change

View of north-east of building (focus on top of wall)
2015-8: wall element has collapsed bricks stacked under window)
2018-20: no discernible change

2015	2018	2020
		

View of north-east of building (focus on skillion roof)
2015-8: roof framing, sheeting and guttering has collapsed
2018-20: no discernible change

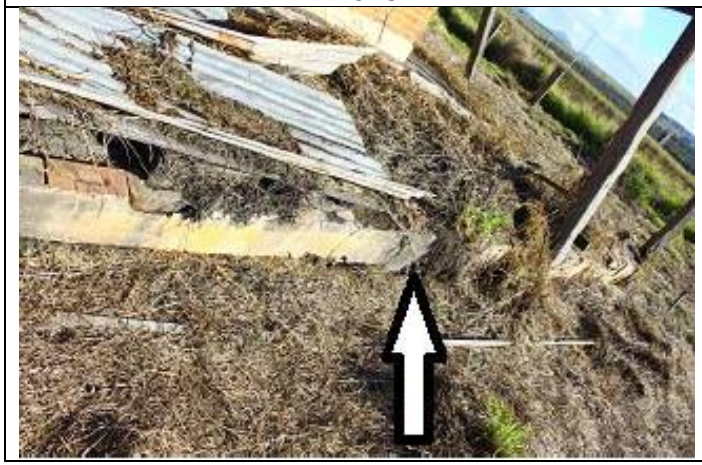
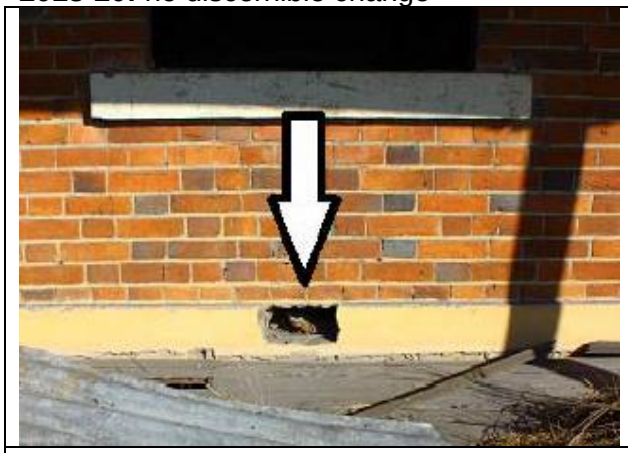
View of rear of building (focus on guttering)
2015-8: main roof holes repaired but northern section of skillion roof collapsed and guttering unchanged
2018-20: no discernible change, however vegetation regrowth evident

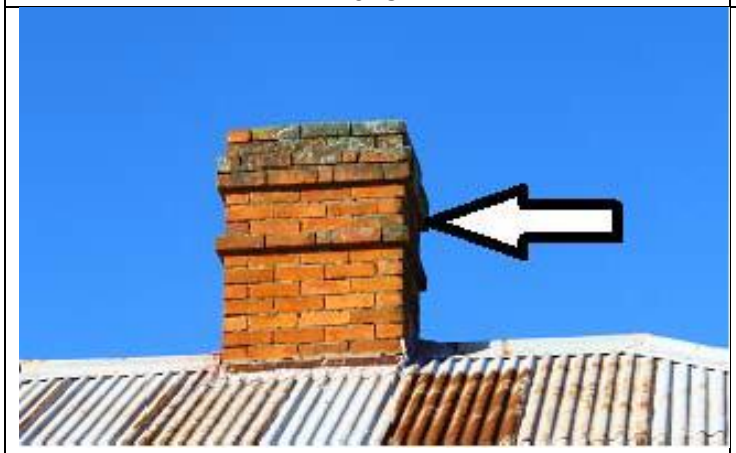
2015	2018	2020
		

View of north-east corner of building (focus wall below window)
2015-8: bricks from roof above stacked in front of required repointing, window sheeting removed
2018-20: no discernible change

View of south-east of building (focus on top of wall)
2015-8: no discernible change
2018-20: no discernible change

2015	2018	2020
		
View of eastern verandah (focus on dwarf wall wall) **2015-8:** debris cleared from verandah, no change to dwarf wall **2018-20:** no discernible change		
		
View of ventilation grilles **2015-8:** grilles not replaced **2018-20:** no discernible change		

2015	2018	2020
		

View of southern chimney
2015-8: no discernible change
2018-20: no discernible change

Recommendations

The comparative photographs above show the changes at the building over the past five years. During this time, and with an emphasis on the last two years, the more significant changes are:

- Significant regrowth of vegetation around the building;
- Considerable damage and exposure to the rear of the building;
- Loose, damaged and removed window and door sheeting; and
- Some new roof holes and loose sheeting.

While many of the high and moderate priority recommended actions within the CMP conservation works schedule have been completed in the past, the 2019 inspection has identified that some items need renewed attention. The recommendations outlined below are required to minimise the risk of further deterioration in the building structure.

High Priority

1. Implement a regular vegetation slashing and maintenance schedule for the building surrounds, ensuring all debris is clear from ground-level ventilation openings;
2. Replace any damaged plywood door/window coverings and ensure all coverings are tightly attached;
3. Patch fix any new damage to roofing sheets;
4. Implement a termite inspection regime and treat as required, giving consideration to removing the peppercorn trees surrounding the building;
5. If any asbestos or fibrous cement sheeting remains at the property, engage an asbestos removalist to remove as required;

Moderate Priority

6. After the next vegetation slashing campaign, check that all debris surrounding the house has been removed. If this has not occurred, remove all debris, ensuring an archaeologist is on hand to identify and catalogue any early architectural fittings or rare pieces of joinery that should be retained for future restoration purposes;
7. Reinstall verandah, including verandah decking and northern brick dwarf wall, re-using original material where possible, as per recommendations M5, M6 and L1 in the CMP conservation works schedule;
8. As the roof above Room 6 has collapsed, salvage any reusable masonry or timber and set aside within room. Engage a structural engineer to advise on feasibility of reconstructing the roof. (NB. Recommendation M9 in the CMP conservation works schedule erroneously refers to Room 5 rather than Room 6 as shown in the photograph);
9. Replace gutters around the house to match existing materials and ogee profile. Install new down-pipes and ensure they are discharging away from the building.
10. Repoint mortar joints with lime based mortar on brickwork below Room 6 eastern elevation window sill, on northern wall of room 5 and all chimneys;
11. Install new ventilation grilles to existing ground level openings; and
12. Future condition inspections should photograph the building using the photograph views and locations presented above so that any changes to the building can be documented in subsequent inspections.
13. Consider using drone technology to undertake an aerial assessment of the site to determine any further actions required in areas that cannot be inspected from the ground.