



# Architectural Projects

1711 – Macarthur Memorial Park,  
Varroville Outbuildings,  
166+176 St Andrews Road, Varroville  
Conservation Works and Maintenance Schedules  
May 2017 – Version 01 Preliminary Issue

# Architectural Projects

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1711 – MACARTHUR MEMORIAL PARK, VARROVILLE OUTBUILDINGS,  
166+176 ST ANDREWS ROAD, VARROVILLE  
– CONSERVATION WORKS AND MAINTENANCE SCHEDULES

## Document Control

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## CONTENTS

<b>1.</b>	<b>INTRODUCTION</b> .....	<b>1</b>
1.1.	BACKGROUND .....	1
1.2.	SITE LOCATION AND DESCRIPTION .....	1
1.3.	AUTHORSHIP .....	1
1.4.	TERMINOLOGY AND DEFINITIONS .....	1
<b>2.</b>	<b>THE SLAB HUT</b> .....	<b>3</b>
2.1.	ESSENTIAL AND DESIRABLE CONSERVATION WORKS – EXTERNAL .....	3
2.1.1.	Generally .....	3
2.1.2.	Roofing .....	4
2.1.3.	Walls .....	4
2.1.4.	Timber Structure .....	4
2.1.5.	Damp .....	5
2.1.6.	Openings .....	5
2.2.	EXTERNAL WORKS SCHEDULE .....	6
2.3.	ESSENTIAL AND DESIRABLE CONSERVATION WORKS - INTERNAL .....	9
2.3.1.	Generally .....	9
2.3.2.	Floor .....	9
2.3.3.	Joinery .....	9
2.3.4.	Walls and Ceiling .....	10
2.3.5.	Other .....	10
2.3.6.	Doors .....	10
2.3.7.	Windows .....	10
2.3.8.	Demolition .....	10
2.4.	INTERNAL WORKS SCHEDULE .....	11
2.5.	MAINTENANCE PROGRAM .....	12
2.5.1.	External .....	12
2.5.2.	Internal .....	15
2.5.3.	Building Services .....	15
<b>3.</b>	<b>THE FORMER COACH HOUSE</b> .....	<b>16</b>
3.1.	ESSENTIAL AND DESIRABLE CONSERVATION WORKS – EXTERNAL .....	16
3.1.1.	Generally .....	16
3.1.2.	Roofing .....	17
3.1.3.	Stonework .....	18
3.1.4.	Footings and Foundations .....	20
3.1.5.	Brickwork .....	20
3.1.6.	Render .....	21
3.1.7.	Damp .....	21
3.1.8.	Openings .....	22
3.1.9.	Woodwork .....	22
3.1.10.	Windows .....	23
3.1.11.	Doors .....	25
3.1.12.	Metalwork .....	27

3.2.	EXTERNAL WORKS SCHEDULE .....	28
3.3.	ESSENTIAL AND DESIRABLE CONSERVATION WORKS - INTERNAL .....	35
3.3.1.	Generally .....	35
3.3.2.	Floor .....	35
3.3.3.	Roof framing .....	35
3.3.4.	Columns .....	35
3.3.5.	Walls .....	36
3.4.	INTERNAL WORKS SCHEDULE .....	37
3.5.	MAINTENANCE PROGRAM .....	39
3.5.1.	External .....	39
3.5.2.	Internal .....	42
3.5.3.	Building Services .....	42
<b>4.</b>	<b>THE COTTAGE .....</b>	<b>43</b>
4.1.	ESSENTIAL AND DESIRABLE CONSERVATION WORKS – EXTERNAL .....	43
4.1.1.	Generally .....	43
4.1.2.	Roofing .....	44
4.1.3.	Brickwork .....	44
4.1.4.	Render .....	44
4.1.5.	Damp .....	44
4.1.6.	Openings .....	46
4.1.7.	Woodwork .....	46
4.1.8.	Windows .....	46
4.1.9.	Doors .....	49
4.2.	EXTERNAL WORKS SCHEDULE .....	51
4.3.	ESSENTIAL AND DESIRABLE CONSERVATION WORKS - INTERNAL .....	57
4.3.1.	Generally .....	57
4.3.2.	Floor .....	57
4.3.3.	Joinery .....	57
4.3.4.	Walls and Ceiling .....	58
4.3.5.	Other .....	59
4.3.6.	Doors .....	59
4.3.7.	Windows .....	60
4.3.8.	Demolition .....	62
4.3.9.	Subfloor .....	63
4.4.	INTERNAL WORKS SCHEDULE .....	64
4.5.	MAINTENANCE PROGRAM .....	68
4.5.1.	External .....	68
4.5.2.	Internal .....	71
4.5.3.	Building Services .....	71

## 1. INTRODUCTION

### 1.1. BACKGROUND

Architectural Projects were commissioned by Netcorp Pty Ltd to prepare this document in February 2017. The purpose of this report is to provide for the continuous protective care of the fabric and setting of heritage items:

- The Slab Hut (early 1800's)
- The former Coach House (1830-1860)
- The Cottage (1860-1880)

The schedules comprise Essential Conservation Works (corrective works needed to bring the buildings to an acceptable standard), and Desirable Conservation Works, (works that will enhance the heritage significance of the buildings but are not necessary for the protection of the fabric), and a Maintenance Program (outlining cyclical Maintenance Works that should be implemented as part of the ongoing management of the buildings.)

These schedules have been programmed in accordance with the Conservation Management Plan for the site, prepared by Urbis Pty Ltd in October 2015 for the Catholic Metropolitan Cemeteries Trust.

These schedules are to be read in conjunction with the plans for the proposed conservation works prepared by Architectural Projects Pty Ltd in May 2017.

### 1.2. SITE LOCATION AND DESCRIPTION

The site is located on the Varroville Estate, 166 and 176 St Andrews Road, Varraville.

The site comprises a group of outbuildings and other early structures, remnant vineyard farming, handmade dam and evidence of an early access road.

The building / site is identified as a heritage item in the Campbelltown LEP 2015 and is defined as Lot 22, in DP564065, Lot B in DP370979, Lot 1 in D210016A and Lot 1 in DP218016B.

### 1.3. AUTHORSHIP

The report has been prepared by a team consisting of the following key members:

- Gary O'Reilly – Architectural Projects Pty Ltd – Heritage Architect
- Jennifer Hill – Architectural Projects Pty Ltd – Heritage Architect
- Tomaso Carrer – Architectural Projects Pty Ltd – Architect

### 1.4. TERMINOLOGY AND DEFINITIONS

The terms fabric, place, preservation, reconstruction, restoration, adaptation and conservation used throughout this report have the meaning given them in Australia ICOMOS Charter for the Conservation of Places of Cultural Significance (*Burra Charter*).

The terminology used to describe building styles follows the nomenclature set out in Apperly, R., Irving, R. and Reynolds, P. *A Pictorial Guide to Identifying Australian Architecture*, 1989.

In order to achieve a consistency in approach and understanding of the meaning of conservation by all those involved a standardised terminology for conservation processes and related actions should be adopted. The terminology in the *Burra Charter* is a suitable basis for this. Article 1 of the *Burra Charter* gives the following definitions:

Place	means site, area, building or other work, group of buildings or other works together with associated contents and surround.
Cultural significance	means aesthetic, historic, scientific or social value for past, present or future generations.
Fabric	means all the physical material of the place.
Conservation	means all the processes of looking after a place so as to retain its cultural significance. It includes maintenance and may, according to circumstance include preservation, restoration, reconstruction and adaptation and will be commonly a combination of more than one of these.
Maintenance	means the continuous protective care of the fabric, contents and setting of a place, and it is to be distinguished from repair. Repair involves restoration and reconstruction and it should be treated accordingly.
Preservation	means maintaining the fabric of a place in its existing state and retarding deterioration.
Restoration	means returning the existing fabric of a place to a known earlier state by removing accretions or by reassembling existing components without the introduction of new material.
Reconstruction	means returning a place as nearly as possible to a known earlier state and is distinguished by the introduction of materials (new or old) into the fabric. This is not to be confused with either recreation or conjectural reconstruction, which are outside the scope of the <i>Burra Charter</i> .
Adaptation	means modifying a place to suit propped compatible uses.
Compatible use	means a use, which involves no change to the culturally significant fabric, changes that are substantially reversible, or changes which require a minimal impact.

## 2. THE SLAB HUT

### 2.1. ESSENTIAL AND DESIRABLE CONSERVATION WORKS – EXTERNAL

#### 2.1.1. Generally

The Slab Hut dating from the early 1800s is to be conserved and reconstructed from salvaged materials in a manner to ensure its long term conservation.

During the execution of the works, preserve and protect all original and sound fabric and finishes.

Major conservation issues in relation to the Slab Hut are:

- The extremely poor condition of the slab but which has partially collapsed and is covered in chicken mesh and a vine. In fact the commencement of the works may instigate a more comprehensive collapse.
- The impact of active termites on the timber slabs and structural beams.
- The lack of protection from ground water in the timber bottom plate and timber slabs.
- The lack of stability of the structure.
- Due to the invasive nature of the vine growing over the structure it is not possible to enter the interior and therefore determine the condition of the interior of the Slab Hut.
- The structure remains unprotected from the weather, ground water, the invasive vine and termites and thereby continues to deteriorate.

Other issues are:

- The lack of detailed understanding of the original construction in determining appropriate conservation methodologies prior to commencing work on the Slab Hut.

Ensure regular maintenance and inspection of site drainage and ventilation as well as plumbing and roof and guttering systems.

Where scheduled to 'remove redundant services or fittings', patch element following removal to match sound adjacent work unless otherwise scheduled. Surfaces shall be primed where bare metal or timber is showing, then painted with the same number and type of coats as adjacent paintwork. Finish coat to surfaces to be 'made good' shall be applied to whole areas, i.e. to nearest edge or re-entrant or salient angle.

Where scheduled 'to match existing', new elements shall do so exactly in outward appearance. Moulding profiles, member sizes, construction etc. must sound existing. The builder is not expected to match exactly things such as timber species, construction methods etc. that are not exposed to view at completion but, unless specifically approved, the construction method shall be of a traditional nature for which there is longstanding precedent.

Where scheduled to 'make good', patch element to match sound adjacent work unless otherwise scheduled. Surfaces shall be primed where bare metal or timber is showing, then painted with the same number and type of coats as adjacent paintwork.

Where scheduled 'provide', the contractor is required to supply, fit and fix item and element as scheduled, shown or detailed.

Where scheduled 'set aside', carefully dismantle or take down elements referred to and store within dwelling.

#### 2.1.2. Roofing

The galvanised corrugated steel roofing, although not the original roofing, should be conserved and reinstated as part of the reconstruction of the Slab Hut.

The steel roofing should be documented photographically after the structure is cleared of vines and mesh and before any items are removed from their present location. All sheets should be clearly labelled (removable) and drawings prepared documenting the relative location of each sheet.

All fixings should be carefully removed without damaging the existing timber substructure or the existing steel roofing. All nails and fixings should be collected and safely stored for reuse.

The condition of the existing steel roofing should be assessed by the heritage architect. Each sheet should be assessed for its suitability for reuse and maintaining watertightness when reconstructed.

The heritage architect should then determine conservation works required for each roofing sheet and an approach to incorporating recycled or new roofing sheets to match the existing into the roof.

#### 2.1.3. Walls

The Slab Hut was most likely constructed with a timber bottom plate sitting on or near the ground level. To date investigations have not revealed a masonry base or footing. Historically there may not be a separation between the timber plate and the ground therefore, there is no opportunity to locate a damp proof course in the original construction.

Further on site investigation to establish the original footings or foundations to the Slab Hut is required. A reconstruction methodology is required which maintains a clear separation between the timber bottom plate and the ground. This should be determined on site by the heritage architect.

#### 2.1.4. Timber Structure

The Slab Hut appears to have been constructed with a hardwood bottom plate, corner posts and a top plate. The top and bottom plate are rebated to house the timber slabs which form the walls. The top plate also supports the rafters and roof framing.

At present not all elements are visible. The construction method should be confirmed by the heritage architect during the disassembling of the existing structure.

All timber elements should be photographically recorded prior to and during the disassembling of the structure. Each element should clearly numbered prior to removal.

Prior to work commencing, the vine covering the structure should be poisoned and the site inspected for termites and an eradication program completed.

Where possible stable elements of the construction should remain insitu or temporarily propped without damage to the structure or its components.

All items that have already collapsed or fallen from the structure and are to be removed should be stored on a raised pallet which is roofed with a corrugated steel roof to protect the stored elements from the weather.

As the structure is exposed carefully photographically record and number all extant rafters.

Conservation works and the reconstruction methodology should be determined by the heritage architect once the remaining materials, stability and condition of the timber and original construction methods have been assessed.

#### 2.1.5. Damp

##### Background

Rising damp occurs as a result of capillary suction of moisture from the ground into porous masonry building materials. Rising damp may show as a high-tide-like stain on interior finishes, blistering of paint, loss of plaster, growth of moulds. Externally a damp zone may be evident at the base of walls, with associated fretting and crumbling of the masonry. Rising damp will carry salts up into the masonry to where the damp evaporates and can often be seen as a white efflorescence leading to fretting and crumbling on the surface. While rising damp is often caused by bridging of the Damp Proof Course (DPC), not all dampness in buildings is due to rising damp. Leaking water pipes or failed roofs and gutters may be the cause. Horizontal or penetrating damp can be due to leaking water supply or waste pipes, or failure of tile grouts in wet areas. These tend to produce small, localised patches of dampness whereas rising damp may affect the base of a whole building.

##### Control and Treatment of Damp

###### Site drainage and ventilation

- Ensure gutters and downpipes are working
- Ensure rainwater is carried well away from the base of walls
- Ensure site is well drained – no ponding against walls
- Minimise splash from hard pavements into walls
- Maintain about 200 mm between DPCs and ground level
- Check for and fix any plumbing leaks, including sewers
- Check for fungal rot, borers and termites in damp floor timbers
- Ensure adequate (but not too much) underfloor ventilation
- Monitor changes, for these may be sufficient

#### 2.1.6. Openings

Openings in the slab walls were limited to rudimentary doors, windows (to be confirmed) and gable ventilation louvres.

At this time the photographic evidence available is insufficient to determine the details of these elements. Further as the building is not able to be adequately inspected it is not possible to set out details of the construction works required.

All doors, frames and windows and louvres should be numbered and photographically recorded during the disassembling of the existing structure. Further attention should be paid to the method of attachment and construction. All salvaged doors and windows should be carefully removed, preferably intact, and stored on an elevated pallet and protected from the weather for condition assessment by the heritage architect. The required conservation works are to be determined by the heritage architect.

All nails removed as part of those works should be recorded and numbered and stored separately in a safe location.

2.2. EXTERNAL WORKS SCHEDULE

ELEMENT	WORKS	ESSENTIAL/ DESIRABLE
2.2.1. Site	<p>General</p> <ul style="list-style-type: none"> <li>– The site is likely to be a source of archaeological material</li> <li>– All relics uncovered are to be photographed in situ immediately notify architects for instructions</li> </ul>	Essential
2.2.2. Excavation	<p>Archaeology</p> <ul style="list-style-type: none"> <li>– All excavation to occur under archaeological supervision</li> <li>– Protect and store relics found within the site. Notify architects</li> <li>– Under archaeological supervision, excavate down to a sufficient level to improve drainage and conservation of the building.</li> </ul>	Essential
2.2.3. Demolition	<p>General</p> <ul style="list-style-type: none"> <li>– Poison the existing invasive vine currently covering the structure.</li> <li>– Remove all low-lying vegetation surrounding the structure.</li> <li>– Inspect the site and confirm all active termite infestation of the structure. Establish a terminate eradication programme. Do not commence works until it is confirmed that active termites have been eradicated.</li> <li>– The heritage architect will need to be present on site to direct work activities, photographic recording and documentation of the existing fabric during the uncovering, temporary support of and the dismantling of the existing structure.</li> <li>– Remove the existing vine.</li> <li>– Remove the existing chicken mesh covering the structure.</li> <li>– Complete a Hazardous Materials Register as it is understood that the existing sheet lining contains asbestos in the form of asbestos cement.</li> <li>– Remove the sheet lining in accordance with the Hazardous Materials Register AS2601 Cl. 1.6.2 and NSW Work Cover requirements.</li> <li>– Remove all internal non-original timber framing.</li> </ul>	Essential
2.2.4. Roof	<p>Roofing</p> <ul style="list-style-type: none"> <li>– After removal of the vine and mesh photographically record and number all existing galvanised corrugated steel roofing sheets.</li> <li>– All existing roof sheets are to be salvaged, conserved and reconstructed to their former location.</li> <li>– Carefully remove existing nails and fixings without damaging the roof sheeting or the timber sub-framing.</li> <li>– Store all fixings for condition assessment and reuse.</li> <li>– Carefully remove each roofing sheet and store as detailed.</li> </ul>	Essential

ELEMENT	WORKS	ESSENTIAL/ DESIRABLE
	<ul style="list-style-type: none"> <li data-bbox="624 562 1326 696">– The heritage architect is to assess the condition of each sheet and establish its suitability for reuse and extent and type of conservation works required. The heritage architect is also to determine the extent of recycled or new roofing sheets required.</li> <li data-bbox="624 707 1326 837">– After completion of the conservation works to the roof sheeting and the reconstruction of the roof framing reinstall the roof sheeting, ridge capping and cappings using the original fixings where possible or new fixings to match the existing.</li> </ul>	
2.2.5. Roof framing	<ul style="list-style-type: none"> <li data-bbox="624 853 1326 954">– After removal of the roof sheeting photographically record and number all existing roof framing and battens including all those members which have fallen to the ground.</li> <li data-bbox="624 965 1326 1066">– Progressively photographically record the dismantling process with particular reference to construction methods, relative position of each member to each other and fixings.</li> <li data-bbox="624 1077 1326 1200">– Carefully dismantle all timber components and assemble separately, in order of position on the ground and photographically record the arrangement prior to relocating to a secure weatherproof storage as detailed.</li> <li data-bbox="624 1211 1326 1346">– The heritage architect is to assess the condition and suitability for reuse of each timber component. The heritage architect is also to determine the most appropriate conservation works to be completed as well as new components to be incorporated into the reconstruction.</li> </ul>	
2.2.6. Walls	<p data-bbox="624 1361 699 1384">General</p> <ul style="list-style-type: none"> <li data-bbox="624 1395 1326 1518">– After removal of the vine and mesh photographically record and number all existing timber bottom plates, corner posts, slabs, top plates. Include all those members which have already fallen to the ground.</li> <li data-bbox="624 1529 1326 1630">– Progressively photographically record the dismantling process with particular reference to construction methods, relative position of each member to each other and fixings.</li> <li data-bbox="624 1641 1326 1742">– All those sections of the structure remaining stable should be maintained insitu and temporarily supported as required without damaging the timber elements.</li> <li data-bbox="624 1753 1326 1886">– Carefully dismantle all timber components and assemble separately, in order of position on the ground and photographically record the arrangement prior to relocating to a secure weather-proof storage as detailed.</li> </ul>	Essential

ELEMENT	WORKS	ESSENTIAL/ DESIRABLE
	<ul style="list-style-type: none"> <li data-bbox="624 555 1326 696">– The heritage architect is to assess the condition and suitability for reuse of each timber component. The heritage architect is also to determine the most appropriate conservation works to be completed as well as new components to be incorporated into the reconstruction.</li> <li data-bbox="624 696 1326 768">– Reassemble the timber structure in accordance and under the guidance of the heritage architect.</li> </ul>	
2.2.7. Openings	<ul style="list-style-type: none"> <li data-bbox="624 779 1326 880">– Photographically record the doors, frames and windows and number as the structure is uncovered with particular reference to construction methods, joints and fixings.</li> <li data-bbox="624 880 1326 958">– Carefully remove the doors, frames and windows and securely store in a weather-proof structure as detailed.</li> <li data-bbox="624 958 1326 1099">– The heritage architect is to assess the condition of each component and suitability for reuse. The heritage architect is also to determine the most appropriate conservation works required as well as new components to be incorporated into the reconstruction.</li> <li data-bbox="624 1099 1326 1171">– Reassemble the doors and windows and louvres in accordance with and under the guidance of the heritage architect.</li> </ul>	Essential
2.2.8. Verandah	<ul style="list-style-type: none"> <li data-bbox="624 1182 1326 1283">– Photographically record and number the verandah, columns and verandah roof framing as the structure is progressively uncovered with particular reference to construction methods, joints and fixings.</li> <li data-bbox="624 1283 1326 1361">– Carefully remove the verandah components and securely store in a weather-proof structure as detailed.</li> <li data-bbox="624 1361 1326 1440">– Investigate the area below the verandah for evidence of earlier paving. If found seek instructions from the heritage architect.</li> <li data-bbox="624 1440 1326 1581">– The heritage architect is to assess the condition of each component and suitability for use. The heritage architect is also to determine the most appropriate conservation works required as well as new components to be incorporated into the reconstruction.</li> <li data-bbox="624 1581 1326 1655">– Reassemble the verandah in accordance and under the guidance of the heritage architect.</li> </ul>	

2.3. ESSENTIAL AND DESIRABLE CONSERVATION WORKS - INTERNAL

2.3.1. Generally

The condition of the interior is generally ruinous. As the building has collapsed it has not been possible to inspect the interior to determine the full extent of the existing condition.

The interior is generally in need of major reconstruction and maintenance works. Redundant services should be removed and finishes made good.

It would be desirable to remove later intrusive additions to the interior such as the timber framing and asbestos sheet (to be confirmed) lining and concrete floor.

Where scheduled 'to match existing', new elements shall do so exactly in outward appearance. Moulding profiles, member sizes, construction etc. must match sound original work that shall be preserved for comparison. The contractor is not expected to match things such as timber species, construction methods etc. that are not exposed to view at completion.

Where scheduled 'make good' surfaces shall be primed where bare metal or timber is showing, then painted with the same number and type of coats as adjacent paintwork. Finish coat to surfaces to be 'made good' shall be applied to whole areas, ie to nearest edge or re-entrant or salient angle.

Where scheduled 'patch' or 'replace', remove boards as necessary and replace in boards to match sizes and profiles of existing boards. Salvaged boarding is to be reused where sound in lengths greater than 1350 mm.

Where scheduled 'refix' check over flooring, determine which boards are loose and re-nail. Take up flooring as necessary, repair and check underfloor ventilation, replace damaged bearers and joists, reuse sound flooring, replace with boards milled to match.

2.3.2. Floor

Generally

It is most likely that the building was constructed with an earthen floor. More recently a concrete slab has been installed to the interior.

Carefully remove the existing concrete floor without damaging original timber framed construction surrounding it and investigate evidence of alternate floor construction under the existing concrete slab. Seek instruction from the heritage architect regarding final floor finish.

Concrete

Remove existing non-original concrete slab floor.

2.3.3. Joinery

Retain and preserve all existing joinery. Patch and repair existing damaged joinery to match existing. Refinish existing joinery to match existing.

#### 2.3.4. Walls and Ceiling

##### General

With the original wall construction of bottom plate, corner posts, top plate and infill timber slabs it is likely that there were no internal frames or linings. The internal finishes to timber components should be assessed once the interior becomes accessible.

#### 2.3.5. Other

Remove existing trims damaged or as scheduled and replace with trims to match existing in size, profile and material.

Where scheduled to 'salvage' or 'preserve' existing fixtures and fittings, care must be taken not to damage the fittings. When refixing, only fixings of the correct size and configuration are to be used and if necessary treated for rust and cold galvanised before installation. Fittings are to be left clean.

#### 2.3.6. Doors

##### Generally

The door(s) were not available for inspection. The internal finishes and maintenance works required should be assessed once the interior becomes accessible.

#### 2.3.7. Windows

##### Generally

The window(s) were not available for inspection. The internal finishes and maintenance works required should be assessed once the interior becomes accessible.

#### 2.3.8. Demolition

Archivally record the building or components prior to demolition.

Where demolition of windows occurs, remove original joinery and stock pile for reuse.

Stock pile panelled timber doors, fanlights and architraves where demolished.

Where demolition of walls occurs, remove original joinery and stock pile for reuse

2.4. INTERNAL WORKS SCHEDULE

ELEMENT	WORKS	ESSENTIAL / DESIRABLE
2.4.1. Floors	<ul style="list-style-type: none"> <li>– Carefully demolish existing concrete slab.</li> <li>– Investigate underneath existing slab for evidence of previous floor. Seek instruction from the heritage architect on the final floor finish.</li> </ul>	Desirable
2.4.2. Walls	<ul style="list-style-type: none"> <li>– Refer to External Work Schedule for details of reconstruction of wall structure.</li> <li>– Demolish existing non-original timber framing and internal sheet wall linings.</li> <li>– The heritage architect is to inspect internal frames to timber structure to determine final wall finish once interior becomes accessible.</li> </ul>	Essential Essential Essential
2.4.3. Ceiling	<ul style="list-style-type: none"> <li>– Refer to External Work Schedule for details of reconstruction of roof structure.</li> <li>– The heritage architect is to inspect the internal timber ceiling (?) and roof structure to determine finishes to ceiling, if any, or exposed roof framing once the interior becomes available.</li> </ul>	Essential
2.4.4. Fixtures and fittings	<ul style="list-style-type: none"> <li>– The heritage architect is to inspect interior fixtures and fittings found when the interior becomes accessible to determine items to be retained, demolished or repaired.</li> </ul>	Essential
2.4.5. Services	<ul style="list-style-type: none"> <li>– Remove all existing services and make good.</li> </ul>	Essential
2.4.6. Doors	<ul style="list-style-type: none"> <li>– The heritage architect is to inspect the door(s) to determine internal finishes and maintenance works required when the interior becomes accessible.</li> </ul>	Essential
2.4.7. Windows	<ul style="list-style-type: none"> <li>– The heritage architect is to inspect the window(s) to determine internal finishes and maintenance works required when the interior becomes accessible.</li> </ul>	Essential

2.5. MAINTENANCE PROGRAM

This Maintenance Program has been prepared to ensure the long term protection of the fabric, and is based on cyclical inspection monitoring and recording of the condition of the fabric.

2.5.1. External

BUILDING ELEMENT	ANNUAL	2 YEARS	5 YEARS	10-15 YEARS
Timber	Inspect for grime, growth from joints, bird excretion and termite activity. Check wall ventilators and damp proof courses are not covered with soil or rubbish.		Inspect for loose and missing weatherboards, corner stops and mouldings. Check around ground line and sills for weathering. Rectify	
Door joinery		Inspect for loose, damaged jambs, mouldings, thresholds. Clean. Minor repairs. Inspect for loose jambs, decay at the threshold. Check door joints firm and mouldings intact. Replace broken or cracked glass or putty. Check operation of doors and hardware.	Inspect, repair and touch up.	

BUILDING ELEMENT	ANNUAL	2 YEARS	5 YEARS	10-15 YEARS
Window joinery		Inspect for loose, damaged mouldings, architraves, sills and sashes. Check putty and glazing. Clean. Minor repairs. Inspect for loose or damaged mouldings, architraves, decayed stiles at sill level, weathered sills, loose or decayed sash joints and broken or cracked glass or putty. Check operation of windows and hardware.	Inspect, repair and touch up.	
Painted finishes		Inspect for deterioration and weathering. Clean. Minor repairs. Inspect for paint deterioration and weathering.	General painting externally.	General painting internally.
Roof	Remove rubbish and leaves. Inspect for loose or raised fixings, sheet edges deformed surfaces, cracked joints.	Clean. Minor repairs.	Inspect, repair and touch up. Inspect for loose or raised fixings, sheet edges and surfaces that are deformed or rusted. Check for dissimilar metals at flashings.	Replace when necessary.
Flashings / cappings	Inspect for loose raised fixings and displacement.	Clean. Minor repairs. Inspect for loose or raised fixings, cappings that have lifted, slipped or are deformed.	Inspect, repair and touch up.	Replace when necessary.

BUILDING ELEMENT	ANNUAL	2 YEARS	5 YEARS	10-15 YEARS
Roof Drainage: Gutters / Downpipes Dishdrains & sumps	Inspect. Clear. Check water falls to outlets. Ensure leaf guards to outlets, rainwater heads and sumps sit correctly and are clear of debris. Check if downpipes are connected to the stormwater system. Check that stormwater drains are not blocked.	Clean. Minor repairs. Inspect for rust stains, growth, rust around downpipes and outlets. Inspect gutter and downpipe joints for cracks, deformation, loose or missing brackets.	Inspect, repair and touch up.	Replace when necessary.
Eaves	Inspect	Clean. Minor repairs.	Inspect, repair and touch up.	
Structure			Check timber members secure and true. Inspect for cracks in masonry and masonry straight and true. Inspect for signs of rust in steel. Check fixings secure.	

2.5.2. Internal

BUILDING ELEMENT	ANNUAL	2 YEARS	5 YEARS	10-15 YEARS
Walls	Normal cleaning	Inspect for cracking, water penetration indicators	Repair as necessary. Touch up	Repaint as required.
Ceilings/framing	Normal cleaning	Inspect	Repair as necessary. Touch up.	
Joinery	Normal cleaning	Inspect	Repair as necessary. Touch up.	
Fittings & Fixtures	Normal cleaning		Repair as necessary. Touch up.	
Finishes	Normal cleaning	Inspect. Touch up.	Repair as necessary. Touch up.	Renew as necessary.

2.5.3. Building Services

BUILDING ELEMENT	ANNUAL	2 YEARS	5 YEARS	10-15 YEARS
Stormwater	Inspect for dish drains and sumps blocked with rubbish, leaves or silt. Ensure gullies and sump gratings are operable.			
Water		Inspect taps for drips.		

### 3. THE FORMER COACH HOUSE

#### 3.1. ESSENTIAL AND DESIRABLE CONSERVATION WORKS – EXTERNAL

##### 3.1.1. Generally

During the execution of the works, preserve and protect all original and sound fabric and finishes.

Major conservation issues are:

- Extensive cracking and outward rotation of the north and south gable walls due to differential settlement related to the performance of the footings and founding material.
- Substantial separations at each end of the main north/south spine wall where the gable walls have moved away from the spine wall.
- The collapse of the western roof due to loss of support along the western edge including the collection and protection of the existing timber shingles now exposed to the weather.
- Rising damp throughout the brickwork leading to brick deterioration at the lower levels.
- Deterioration of the cathead landing platform to the south gable opening together with the timber joinery associated with the opening.
- Repairs to the existing corrugated steel roofing.
- Adjustment of surrounding ground levels to fall away from the building and to be lowered below existing floor levels.

Other issues are:

- Collapsed brickwork to the northern side of the carriage (workshop) area.
- The re-support of the double timber beams supporting the roof at the original eastern elevation entry gates.
- Reinstatement of the original eastern gates.
- Repairs/reconstruction of windows and door joinery.
- Deterioration of the existing eastern timber columns.
- Establish an adequate and secure roof drainage system.

Ensure regular maintenance and inspection of site drainage and ventilation as well as plumbing and roof and guttering systems.

Where scheduled to 'remove redundant services or fittings', patch element following removal to match sound adjacent work unless otherwise scheduled. Surfaces shall be primed where bare metal or timber is showing, then painted with the same number and type of coats as adjacent paintwork. Finish coat to surfaces to be 'made good' shall be applied to whole areas, i.e. to nearest edge or re-entrant or salient angle.

Where scheduled 'to match existing', new elements shall do so exactly in outward appearance. Moulding profiles, member sizes, construction etc. must match existing. The builder is not expected to match exactly things such as timber species, construction methods etc. that are not exposed to view at completion but, unless specifically approved, the construction method shall be of a traditional nature for which there is longstanding precedent.

Where scheduled to 'make good', patch element to match sound adjacent work unless otherwise scheduled. Surfaces shall be primed where bare metal or timber is showing, then painted with the same number and type of coats as adjacent paintwork.

Where scheduled 'provide', the contractor is required to supply, fit and fix item and element as scheduled, shown or detailed.

Where scheduled 'set aside', carefully dismantle or take down elements referred to and store within dwelling.

### 3.1.2. Roofing

The original shingle roof is still extant under the eastern section of the original building. This roofing would seem to be in reasonable condition.

The existing shingles were previously covered with galvanised corrugated steel roofing which is in a fair condition with some repairs required and ridge and barge cappings to be replaced to make the roof watertight.

The eastern skillion roof is a 1950s extension to the main roof and is in fair condition requiring similar maintenance to main roof. The roof over the extension is also corrugated steel.

Reconstruct missing section of the timber shingle roof reusing salvaged shingles, infill the corrugated steel roofing to match existing salvaged from site.

The western roof of the original building is a skillion roof hung off the main gable roof. This roof has collapsed to the ground. The rafters remain extant albeit collapsed and approximately half will require replacement due to termite or dry rot damage. There is some evidence of the verandah beam but no evidence of the supporting columns along the western side. The verandah beam would seem to have been supported by a pocket in the brickwork to each of the north and south gable walls.

- Collect all shingles that are currently lying on the ground, salvage and store for reuse.
- Collect all shingles currently attached to the collapsed roof framing and battens. Carefully detach and store for reuse.
- Dismantle existing roof framing and establish those rafters suitable for reuse (anticipated to be 50% of existing), store salvaged members for reuse in repairs.
- Reconstruct timber verandah beam and columns to detail.
- Reconstruct brickwork seating at ends to verandah beam.
- Reconstruct western skillion roof.
- Reconstruct roof framing utilising salvaged rafters and new rafters to match existing.
- Augment roof framing in accordance with engineer's details
- Reconstruct timber shingle roof with new battens to match existing and salvaged shingles.
- Undertake repairs to shingles to main roof utilising salvaged shingles.
- Refix all loose shingles and replace damaged shingles and infill openings in shingle roof.
- Install new galvanised corrugated steel roofing to match existing profiles over the top of the reconstructed timber shingle roofing.
- Install new battens in a manner similar and size to the eastern section of the roof.
- Install new edge rolls to gables and ridge cappings
- Install new galvanised steel ogee gutters and 90 DIA round downpipes and connect to a new stormwater drainage system.

### 3.1.3. Stonework

The aim is to carry out work that will prevent further deterioration of the stone foundation courses and ensure prolonged life of the stonework with minimal intervention. Stone deterioration occurs because of water penetration through open joints, salt attack, soiling by atmospheric pollutants, build up of bird droppings and cracking due to corrosion of fixings and fittings. Conservation Works will halt or alleviate salt attack and remedy structural inadequacies.

A detailed inspection of stonework should be carried out and detailed stone construction documentation should be prepared.

Submit the name and contact details of proposed subcontracting firm and the specialist stoneworker.

Submit shop drawings showing the following where applicable: Details of proposed replacements to existing stonework, mouldings and other enrichment. Identify new stone, stone indents, tooling back, synthetic stone applied in situ, and precast synthetic stone. If it is proposed to reuse sound matching stone recovered from the works for stone replacement, submit proposals on a stone-by-stone basis. If it is proposed to use cleaning agents, submit proposals. Select stone which is to match existing only after the existing stone has been satisfactorily cleaned. Provide samples of the prepared restoration stone, washing, alkaline testing and repointing to stonework.

#### Stone Restoration

Stabilise stone elements that are structurally unsound. Replace deteriorated sandstone base courses.

Remove all redundant plugs, fixings and attachments.

Protect existing building surfaces from damage resulting from the provision, use, and removal of construction plant. Isolate points of contact or potential contact. Do not tie back or otherwise attach constructional plant direct to stonework. Make attachments through existing openings, and seal the openings effectively against dust and weather. Confine cleaning and runs to specific components.

Carry out in situ work to existing stonework using methods which do not disturb the bed of the original stone. Provide propping or lateral support to eliminate movement of undisturbed components.

Remove stone required to be refixed, mark for identification, and store.

Sweeten replacement stonework as necessary to provide accurate mouldings and surfaces to match existing. Sweeten designated existing stonework to remove surface imperfections and protrusions at joint lines from rubbed stone surfaces. Provide the fixings (including keys, cramps and dowels) necessary to install the replacement stone firmly and permanently into the existing stonework.

#### Stone Repair

Rebonding to existing but sound stonework. Joint repair generally all exposed stone work. Where the existing stone has defects which cannot be repaired by redressing or rubbing, cut out the defective stone and replace it with matching natural, cast, or synthetic stone, as appropriate. As necessary to expose a firm sound surface, and at least 100 mm in width and of sufficient depth to allow practical replacement. Rebond fractured stone which is otherwise sound, using a synthetic

resin adhesive and stainless steel or bronze dowels. Repair weathered or otherwise damaged existing joints, using materials compatible with the original jointing and pointing.

#### Stone Cleaning

Clean the existing exposed stonework to the foundation course. Clean the stonework progressively without using acid and without damage to the work.

Take the necessary precautions to prevent damage to the building and its surroundings, and nuisance to occupants and the public, resulting from cleaning operations. Prevent water and cleaning wastes from entering the building or spraying over surrounding areas. Provide temporary caulking where necessary to prevent the entry of water and cleaning wastes into gaps such as open or suspect joints, scaffold tie penetrations, and building-pavement junctions. Remove on completion of cleaning. Supply clean, fresh water, non-staining to stonework, for stonework cleaning operations including pre-wetting, soaking, washing down and final washing. Use cleaning water, which contains no solvents, chemicals or other admixtures.

Before cleaning commences, remove foreign matter including old finishes, graffiti, bird droppings, soot and facade vegetation without damaging the stonework. Where encrustations require scraping, use a wooden scraper on vulnerable stone surfaces. Poison designated vegetation, and remove carefully by hand.

Before commencing cleaning operations test clean a designated area including final washing and testing of the surface for neutrality. If it is below 6.8, include an alkaline additive to increase the pH to 7.2. If necessary, filter the cleaning water to remove existing minerals or other substances injurious to stonework. After the final washing and before removing the scaffold, test the surface for acid/alkali neutrality. If the required pH of 7.2 is not achieved, repeat washing, and re-test.

Clean stonework in a progressive sequence of vertical bays. Start cleaning each bay from the top and work downward to the bottom.

Immediately before cleaning, pre-wet the wall areas to be cleaned, and any masonry areas underneath the areas to be cleaned, using cleaning water applied using spray mist nozzles fixed at appropriate centres and at a uniform distance from the stone surface. Immediately after the soaking period, clean the stonework by scrubbing, assisted by fine water jets to remove the soiled water and cleaning wastes continuously from the stonework surface. Repeat the soaking and scrubbing processes until the required final appearance is achieved. Ensure that arises and joints are not damaged by abrasion. Use soft bristle brushes. Do not use severely worn brushes. At the completion of the scrubbing process wash the stonework down using water. Repeat the process until cleaning wastes have been removed. Allow to dry. Detergent cleaning not permitted.

#### Repointing

Extent of repointing - all stone work to the exposed foundation course.

Match as closely as possible the colour, texture, strength and porosity of the original mortar mix.

Repoint the joints of a designated sample repointing area on the site, to demonstrate the suitability of the proposed pointing method. Repoint loose, fretted, broken or missing mortar joints with mortar compatible with stone. Rake-out and repoint existing stonework joints as required using composition mortar with slaked lime, sand and cement.

Replace any incompatible hard cement mortar to joints in stonework.

Carefully remove old mortar by hand. Widening of joints is not permitted. Reinstate original joint profile. Protect stone surfaces from mortar stains with masking tape. Keep joints damp for minimum three (3) days.

Do not commence repointing until repair work in the vicinity has been completed. Rake out the joints to a depth of at least 20 mm, without damage to the stone edges. Clean the opposing surfaces of the raked joint to remove residual pointing, foreign material and loose stone. Do not undercut or feather the stone arises. Immediately before repointing use a fine water spray to dampen the joint surfaces without over-wetting. Insert backing in vertical joints only, to give a joint depth of 20 mm before pointing. Mix the mortar to a putty-like consistency. Fill the joint in several operations by inserting the material and compacting it using a jointing key, applying pressure normal to the joint (i.e. not drawn along). Half fill the joint in the first operation, then complete the filling and cut the joint off flush. Strike the joint to a dense smooth flush surface. Chiseling of stone block wall is not permitted.

#### 3.1.4. Footings and Foundations

Undertake geotechnical investigation of existing subsoil conditions in accordance with structural engineer's direction.

Undertake the underpinning of the existing brickworks either prior to repairing brickwork or after repairing existing brickwork as directed by the structural and geotechnical engineers.

#### 3.1.5. Brickwork

##### Work to Existing Walls

Where rebuilding, repointing or making good to existing face work, match sound original joints as determined by examination of adjacent areas.

Repair/reconstruct existing brickwork in accordance with structural engineer's details.

Repair all major cracks by a combination of local rebuilding, crack stitching and mortar filling each repair specific to the particular requirements of the situation. Establish the appropriate method, in each instance, after on site discussions with the structural engineer and heritage architect.

Reconstruct sections of collapsed brick using salvaged bricks.

Remove sections of cement render to existing lower brickwork.

Install new damp proofing course immediately above the finished floor level to all existing reconstructed brickwork.

Restore north and south gables by tying back to timber roof structure in accordance with structural engineer's detail.

##### Repointing

Repoint all existing face brickwork.

On completion of repairs, all loose and open joints throughout are to be carefully cleaned out to a minimum depth of 20mm, wetted thoroughly, grouted and pointed with lime mortar, filled solidly back as far as possible and finished to match existing. Widening of existing joints to admit pointing is not permitted. The repointing is intended purely as filling to prevent the permeation of water between units into the walling behind. Do not allow mortar to spread over face of bricks. Following pointing joints are to be kept damp for minimum 14 days to prevent premature drying out and consequent cracking and loosening of mortar.

#### Replace

Where scheduled 'replace', remove entire area or element nominated and build new work matching exactly adjacent original work.

#### Make Good or Repair

Where scheduled 'make good' or 'repair' existing brickwork remove all decayed or faulty bricks from area or element nominated and build in salvaged bricks of same size and jointing pattern as original. Rake out or remove remainder of loose or faulty mortar from joints and repoint.

#### 3.1.6. Render

Where scheduled 'to match existing', new elements shall do so exactly in outward appearance.

Use render mixes that are of equal strength to the original render.

#### 3.1.7. Damp

##### Background

Rising damp occurs as a result of capillary suction of moisture from the ground into porous masonry building materials. Rising damp may show as a high-tide-like stain on interior finishes, blistering of paint, loss of plaster, growth of moulds. Externally a damp zone may be evident at the base of walls, with associated fretting and crumbling of the masonry. Rising damp will carry salts up into the masonry to where the damp evaporates and can often be seen as a white efflorescence leading to fretting and crumbling on the surface. While rising damp is often caused by bridging of the Damp Proof Course (DPC), not all dampness in buildings is due to rising damp. Leaking water pipes or failed roofs and gutters may be the cause. Horizontal or penetrating damp can be due to leaking water supply or waste pipes, or failure of tile grouts in wet areas. These tend to produce small, localised patches of dampness whereas rising damp may affect the base of a whole building.

##### Control and Treatment of Damp

###### Site drainage and ventilation

- Ensure gutters and downpipes are working
- Ensure rainwater is carried well away from the base of walls
- Ensure site is well drained – no ponding against walls
- Minimise splash from hard pavements into walls
- Maintain about 200 mm between DPCs and ground level
- Check for and fix any plumbing leaks, including sewers
- Check for fungal rot, borers and termites in damp floor timbers
- Ensure adequate (but not too much) underfloor ventilation
- Monitor changes, for these may be sufficient

###### Treat mild damp sacrificially

- Use weak mortars in eroding joints, or
- Weak plasters and renders to control damage
- Monitor changes before considering further treatment
- Ongoing sacrificial treatments may be sufficient

#### Remove excessive salts

- Remove surface salt deposits by dry vacuuming, then
- Use captive-head washing for near-surface salts
- Use poultices of absorbent clay and/or paper pulp
- Use sacrificial plasters, renders and mortars
- Monitor effectiveness – re-treat if necessary
- Periodic maintenance treatments as required

#### Review results before proceeding

- Allow at least one year of monitoring
- Account for unusual events – storms, floods, drought etc
- Routine maintenance activities may be sufficient

#### Inserting damp-proof courses

- Install DPCs at a level that will also protect floor timbers
- Monitor for 'leaks'

#### Desalinating walls

- When salts abound, do not just insert DPC
- Also remove excessive salts from above DPC
- Use poulticing, captive-head washing and sacrificial treatments
- Monitor annually for further salt attack
- Re-treat if necessary until salts are reduced to a less harmful level

### 3.1.8. Openings

#### Flashings and Weatherings

Install flashings, weather bars, drips, storm moulds, caulking, pointing or the like so that water is prevented from penetrating the building between door / window frames and the building structure under the prevailing service conditions, including normal structural movement of the building. Flashings and weatherings shall be compatible with the other materials in the installation and coated with a non-staining compound where necessary.

Remove all non-original cappings.

### 3.1.9. Woodwork

External Joinery – Sand down and spot prime bare areas to previously painted joinery. Putty up and make good cracks, nail holes and damaged areas. Remove existing trims damaged or as scheduled and replace with trims to match sizes, profiles and material of existing trims. Refix all fascias, bargeboards and trims.

Enamel Paint on External Woodwork – Wash, sand down and spot prime bare areas with pink primer. Putty up and make good cracks, nail holes and damaged areas and paint: One (1) coat of tinted undercoat, two (2) coats of gloss enamel paint, sand down and dust off between each coat.

Stain on external wood work – wall, sand down after repairs completed.

Punch and stop all existing and new hand holes, cracks damaged are colour match to timber species and stain.

3 coats of transparent stain to match original. Sand down and dust off between each coat.

## 3.1.10. Windows

## Generally

- Unless otherwise scheduled preserve and restore all windows. Patch frames and sashes as necessary.
- Re-putty and reglaze as required.
- Rehang all weighted sashes on first quality sash cord and put all sashes in first class working order. Replace hinges as necessary.
- Replace stop beads and parting beads as necessary for above work.
- When replacing pulley stiles reuse axle pullies.
- When replacing sashes sound pieces of existing sash may be reused in new sashes.
- When 'to match' fit specified element or hardware to match complete window or preserved hardware that is similar.
- Generally rake out all external junctions between windows, new and existing, and render and seal joint with new paintable sealant.
- Replace all lead sill covering to all windows as required to secure waterproofness. Remove internal sill stop bead and conceal fixing to existing lead covering. Refix stop bead.
- Replace all defective or loose putty. Putty to be linseed oil and whitening of first quality manufactured to AS 1263 – Oil based putty. Carefully remove old putty so as not to damage existing stiles, rails and glazing bars. Repair joinery damaged. Prime rebates before reglazing.
- Replace all broken or damaged glass. Preserve and reuse existing glass where possible.
- Patch – Where an element is scheduled patch, check out defective areas to square section and glue, pin and clamp new patch into cavity. The new section is to fit tightly showing minimum evidence of patching. Timber colour, species and grain to match existing. Plane off and stop up.
- Splice on (or piece in) – Where an element is scheduled splice on or piece in, check out defective areas to form a scarf joint. Scarf on new piece of same cross section to original and securely glue, clamp and otherwise fix to ensure adequate bearing. Recess fixings and conceal. For example bolt heads and nuts to be concealed with timber patches.
- Matching Joinery – Where scheduled to match existing, new elements shall do so exactly in outward appearance. Moulding, profiles member sizes, construction etc. must match that nominated which shall be preserved for comparison. The contractor is not expected to match things such as timber species construction methods etc. that are not exposed to view at completion.
- Epoxy Repair – Where scheduled repair with epoxy resin to a non-structural element, the extent of the hollow section is to be ascertained without damaging the element or removing it from its fixings. A proprietary 2 part epoxy shall be forced into the cavities from openings made approx. 100 mm apart along the length of the affected area. Once cured, all epoxy residues are to be cleaned off to match sound adjacent work and lightly sanded ready for painting. Where scheduled repair with epoxy resin to structural elements, the extent of repair is to be determined in consultation with the structural engineer and the whole repair carried out under his supervision.
- Existing Paint Finishes – unless otherwise specified all existing paintwork to joinery shall be preserved and only cleaned off where necessary to effect a proper repair.
- New glass to sashes, louvres and casements throughout is to be of approved manufacture free of air bubbles, blemishes and flaws of any description. Where not in contravention of BCA, glass to be clear float glass, thickness to match existing glazing in sashes to existing building. Provide expansion clearance for all glass in frames, sashes, etc. All timber rebates to be primed before glazing. Putty to be linseed oil. Glass in timber window sashes to be back puttied, sprigged and puttied in. All to match existing details.

#### Frames

Generally remove existing window sashes and patch and reseal frame as necessary to provide secure operation of sashes.

Where scheduled reseal carefully remove frame and check over and replace grounds and other fixings as necessary. Reinstall frame plumb and square to original details.

Where scheduled patch check out defective areas to square section and glue, pin and clamp new patch into cavity. Plane off flush and stop up.

Where scheduled replace remove existing and unless otherwise specified install new frame and sashes to match profile of original exactly. Provide all grounds, fixings to original detail.

Where scheduled relocate, dismantle frame, jamb or sashes together with architraves and install at new location nominated to match original details. Provide all necessary fixings to match original details.

#### Sills

Where scheduled replace sill, remove frame from masonry opening, brace and detach decayed sill from tenons of jamb linings. Check over frame and verify further defective elements (if any). Fit new sill to match details of original and reseal in masonry opening plumb and square. Unless otherwise specified refix existing architraves, mouldings and trims.

Where schedule existing window sill, retain existing sill in situ. Repair existing sill to match existing as required.

#### Sashes

Generally, put in working order. Rehang and reglue as necessary.

Where scheduled put in working order, check over, ease and refit sashes replacing parting beads, stop beads and pocket covers as necessary to match existing. Replace sash cords or sash springs to match existing as necessary. Ensure free operation of all sash weights or sash springs.

Where scheduled re-glue sash, remove sash to shop, dismantle and replace members nominated in schedule. Glue, reassemble and clamp. Prime and reglaze using original glass.

Where scheduled rehang sashes, rehang sashes of first quality sash cord and existing weights.

Where scheduled replace sash, makeup new sash to match details exactly of existing sash or sash nominated. Unless otherwise specified salvage and reuse sash lifts and other hardware.

#### Hardware

Unless otherwise specified, butt hinges to match existing. All to match original configuration and finish or as nominated. Where schedule retain existing hardware, retain and protect all existing hardware and put in working order.

Hardware scheduled to be 'preserve', 'salvage' or 'set aside' shall on no account be interfered with except as scheduled. Should doors be taken off, hinges shall be reused together with the original handmade screws.

Where hardware is scheduled remove patch door frame and doors at fixings.

Unless otherwise specified hardware schedule 'preserve' shall be cleaned off of old paint using methods which in no way damage the surface of the item.

Unless otherwise specified chrome surfaces are to be polished using a non-abrasive proprietary polish and a soft cloth. Lacquer is not to be used to preserve shine.

Where scheduled fit new, set aside existing patch windows as necessary. Install new hardware to manufacturer's specification.

New hardware to match original hardware.

#### 3.1.11. Doors

##### Generally

- Remove door. Patch, reseal frames as necessary.
- Put doors in working order replacing worn hinges as necessary to match existing.
- Repair split panel, check door for fit, adjust or reglue if sagging. Retain hardware – additional barrel bolt or security pin permissible.
- Replace all broken glass and defective puttying. Rehang door.

##### Patch

- Where an element is scheduled 'patch', check out defective areas to square section and glue, pin and clamp new patch into cavity. The new section is to fit tightly showing minimum evidence of patching. Timber colour, species and grain to match existing. Plane off and stop up. Where doors have been cored for lock cylinders patching may not be done with dowel.

##### Splice on (or piece in)

- Where an element is scheduled 'splice on' or 'piece in', check out defective areas to form a scarf joint. Scarf on new piece of same cross section to original and securely glue, clamp and otherwise fix to ensure adequate bearing. Recess fixings and conceal. For example bolt heads and nuts to be concealed with timber patches.

##### Matching Joinery

- Where scheduled 'to match existing', new elements shall do so exactly in outward appearance. Moulding, profiles member sizes, construction etc. must match that nominated which shall be preserved for comparison. The contractor is not expected to match things such as timber species construction methods etc. that are not exposed to view at completion.

##### Epoxy Repair

- Where scheduled 'repair with epoxy resin' to a non-structural element, the extent of the hollow section is to be ascertained without damaging the element or removing it from its fixings. A proprietary 2 part epoxy shall be forced into the cavities from openings made approx. 100 mm apart along the length of the affected area. Once cured, all epoxy residues are to be cleaned off to match sound adjacent work and lightly sanded ready for painting. Where

scheduled 'repair with epoxy resin' to structural elements, the extent of repair is to be determined in consultation with the structural engineer and the whole repair carried out under his supervision.

#### Existing Paint Finishes

- Unless otherwise specified all existing paintwork to joinery shall be preserved and only cleaned off where necessary to effect a proper repair.

#### Frames

Where scheduled replace remove existing and unless otherwise specified install new frame to match profile of original exactly. Provide all grounds, fixings to original detail.

Where scheduled reseat carefully remove frame and check over and replace grounds and other fixings as necessary. Reinstall frame plumb and square to original details.

Where scheduled patch check out defective areas to square section and glue, pin and clamp new patch into cavity. Plane off flush and stopup.

#### Door Leaf

Where scheduled refit, remove door and plane off or add to rails stiles as necessary to provide close fit to existing frame. Glue, pin and clamp additional pieces of larger dimensions than finished size and plane down flush.

Where scheduled relocate, salvage door from position nominated. Fit and hang as above in scheduled location.

Where scheduled patch, generally as for door frames. Where doors have been cored for lock cylinders patching may NOT be done with dowel.

Where scheduled replace mouldings, provide or replace nominated panel mouldings matching exactly profile indicated. Spring into position to provide tight mitres and pin at maximum 200 centres. Prime external mouldings before fixing.

Where scheduled repairs split panels, ease split sections apart, apply glue to edges and realign. Sand off and stop up.

#### Hardware

Unless otherwise scheduled preserve knockers, bolts, knobs, handles, pulls hooks sash lifts drops and fasteners etc. Check over repair and refix as necessary. Provide ferrules and shoes missing to bolts. Remove paint and black japan steel and polish brass and chrome before completion.

Where scheduled existing hardware retained, protect and retain hardware and put in working order.

Where scheduled fit new, remove and set aside existing patch door frames and architraves as required. Install new hardware as scheduled to manufacturer's specification.

3.1.12. Metalwork

**Previously Painted Metalwork**

Repair/ Replace all damaged metal work sections to match existing. Wash, sand down and dust off. Spot prime bare areas according to nature of exposed material and prepare for painting where previously painted. Investigate appropriate rust converter and primer to match unpainted galvanised finish. Spot prime with coldgal where existing finish is galvanised and unpainted. Remove all external steel grilles to windows and make good to opening.

Retain and repair steel windows. Remove frames. Thoroughly clean. Remove rust, coat, hot dip galvanize and replace. Where repair is not possible, reconstruct in steel to match existing.

3.2. EXTERNAL WORKS SCHEDULE

ELEMENT	WORKS	ESSENTIAL/ DESIRABLE
3.2.1. Site	<p>General</p> <ul style="list-style-type: none"> <li>– The site is likely to be a source of archaeological material</li> <li>– All relics uncovered are to be photographed in situ immediately notify heritage architects for instructions</li> <li>– Remove concrete pavings surrounding the building. Regrade existing ground lines to lower ground line.</li> <li>– Generally to 200 mm below EFL with falls away from building</li> <li>– Retain and protect all evidence of remnant timber fences and fence posts, structures and pavings in the vicinity of the former Coach House.</li> </ul>	Essential
3.2.2. Excavation	<p>Archaeology</p> <ul style="list-style-type: none"> <li>– All excavation to occur under archaeological supervision</li> <li>– Protect and store relics found within the site. Notify heritage architects.</li> <li>– Under archaeological supervision, excavate down to a sufficient level to improve drainage and conservation of the building particularly to north and south side of existing buildings.</li> </ul> <p>Existing Ground Levels</p> <ul style="list-style-type: none"> <li>– Remove top 1 layer of soil surrounding building to north and south sides. Lower ground levels by a minimum of 200mm below existing finished floor level.</li> </ul>	Essential
3.2.3. Landscaping	<ul style="list-style-type: none"> <li>– Retain and protect all trees in the vicinity of the former Coach House.</li> <li>– Reinststate turfing to all areas disturbed by excavation or regrading of existing ground levels</li> </ul>	Essential Desirable
3.2.4. Pests	<ul style="list-style-type: none"> <li>– Inspect the interior of the building and the immediate surrounds for infestations of termites and site pests.</li> <li>– Eradicate all infestations found by appropriate means.</li> <li>– Establish a long term approach by appropriate means to termite management and an inspection regime</li> </ul>	Essential
3.2.5. Demolition	<p>General</p> <ul style="list-style-type: none"> <li>– Demolish repairs or non-original columns to eastern opening to G.01.</li> <li>– Demolish existing GD.02.</li> <li>– Remove existing GW.03 and salvage for reuse in GD.01.</li> <li>– Demolish existing electrical services cabinet.</li> <li>– Demolish all existing services, conduits and cabling and make good.</li> </ul>	Essential

ELEMENT	WORKS	ESSENTIAL/ DESIRABLE
	<ul style="list-style-type: none"> <li>– Demolish a small section of the existing concrete slab to G.01 at location of new timber column footing and investigate the original floor finish under concrete slab</li> <li>– Demolish north east temporary boarding to WG.01.</li> <li>– Demolish existing barge boards and cappings.</li> </ul>	
3.2.6. Roofing	<p>General</p> <ul style="list-style-type: none"> <li>– Collect and salvage all existing timber shingles that have fallen to the ground in G.04.</li> <li>– Collect and salvage all existing timber shingles attached to the collapsed roof to G.04.</li> <li>– Collect and salvage all existing timber rafters of acceptable condition to G.04.</li> <li>– Retain existing roof sheeting insitu to the eastern roof.</li> <li>– Retain existing timber shingle roofing insitu to the eastern roof.</li> <li>– Retain existing timber shingle roofing insitu to western roof except G.04.</li> <li>– Inspect all existing timber framing members and seek instructions from the heritage architect as to the required necessary repairs.</li> <li>– Remove all existing ridge and barge cappings.</li> </ul> <p>Timber shingle roof east</p> <ul style="list-style-type: none"> <li>– Inspect the underside of all existing timber roof shingles to the eastern roof to be retained in situ and identify damage to existing shingles.</li> <li>– Seek instruction from heritage architect as to required repairs.</li> <li>– Infill opening in existing roof with salvaged shingles to match existing.</li> </ul> <p>Corrugated steel roofing – east</p> <ul style="list-style-type: none"> <li>– Retain all existing roof sheeting insitu.</li> <li>– Inspect the whole of the existing corrugated steel roof and identify all loose and missing fixings/severely corroded roofing and seek instructions from the heritage architect as to required repairs.</li> <li>– Install all required fixings missing or of non-original type to match existing.</li> <li>– Infill opening in existing roof with salvaged galvanised corrugated steel roofing to match condition of existing with fixings to match existing after infill to timber shingle roof completion.</li> </ul>	<p>Essential</p> <p>Essential</p> <p>Essential</p>

ELEMENT	WORKS	ESSENTIAL/ DESIRABLE
	<p>Timber shingle roofing – west</p> <ul style="list-style-type: none"> <li>– Photograph thoroughly the existing roof and construction methods prior to dismantling.</li> <li>– Collect all existing timber shingles that have fallen to the ground. Those that are of an unacceptable condition for reuse are to be stored on a pallet where directed. Those of acceptable condition are to be stored separately for reuse.</li> </ul> <p>Collect all existing timber shingles that are currently attached to the collapsed roof framing. Carefully remove shingles and de-nail. Those that are of an unacceptable condition for reuse are to be stored on a pallet together with all salvaged nails where directed. Those of acceptable condition are to be stored separately for reuse.</p> <ul style="list-style-type: none"> <li>– Remove existing timber battens.</li> <li>– Remove all collapsed existing timber rafters and store those rafters of acceptable condition or reuse separately.</li> <li>– Repair pockets in the north and south brick walls for re-supporting the ends of a reconstructed verandah beam.</li> <li>– Reconstruct roof framing, verandah beam and timber columns to detail and to match existing known timber species and sizes and to align with north and south gable walls..</li> <li>– Install additional timber framing to reconstructed roof in accordance with structural engineer’s details.</li> <li>– All new timber framing to match existing framing is to be stained in colour as directed by the heritage architect.</li> <li>– Additional timber framing is to be of non-matching timber species but of the same section sizes.</li> <li>– Screw fix a 150x75x2mm brass plaque on the reconstructed framing as directed by the heritage architect. The plaque is to be engraved with the date of reconstruction, name of heritage architect and building contractor.</li> <li>– Inspect the whole existing timber shingle roofing to be retained and refix all loose existing shingles with nails. Replace deteriorated shingles with existing salvaged shingles and infill openings in existing shingles with existing salvaged shingles. Use fixings to match existing.</li> <li>– Install battens to roofing in accordance with existing spacing and section size.</li> </ul>	<p>Essential</p>

ELEMENT	WORKS	ESSENTIAL/ DESIRABLE
	<ul style="list-style-type: none"> <li>– Install timber shingles to roof framing in accordance with the existing details. Aggregate all reused timber shingles together. All new shingles required to complete the roof are required to match sizes, shape and timber species of the existing timber single and be nail fixed.</li> <li>– Install new galvanised corrugated steel roofing to match existing eastern roof profiles. In short lengths to match east roof. Fix roofing over battens to match the east roof fixings.</li> </ul>	
	<p>Barge Boards</p> <ul style="list-style-type: none"> <li>– After repairs to the brickwork are completed install new ex 200x25mm DAR timber barge boards to north and south gables to match exiting.</li> </ul>	Essential
	<p>Cappings</p> <ul style="list-style-type: none"> <li>– Install new galvanised steel ridge cappings and edge rolls to barge boards to new corrugated steel roofing.</li> </ul>	Essential
3.2.7. Rainwater Goods	<p>Gutters and downpipes</p> <ul style="list-style-type: none"> <li>– Install new galvanised steel ogee gutters and circular 90mm DIA downpipes to east and west elevations and connect to new stormwater drainage system.</li> </ul>	Essential
3.2.8. Walls	<p>General</p> <ul style="list-style-type: none"> <li>– Conserve all stone.</li> <li>– Remove and service conduits, cables and equipment.</li> <li>– Remove existing steel tension rod and 2/no seel and plates.</li> <li>– Remove all organic matter attached to or growing over existing walls.</li> </ul> <p>Stone</p> <ul style="list-style-type: none"> <li>– Inspect exposed foundations for all open joints, soft attach, stone cracking.</li> <li>– Remove all bird droppings, organic matter and soiling by atmospheric pollutants.</li> <li>– Clean exposed stone using gentle water spray methods.</li> <li>– Desalinate using a poultice method as required.</li> <li>– Repair cracks to existing exposed stone work in situ to match existing.</li> <li>– All exposed stone work is to be repointed as specified.</li> <li>– Repair/replace all crumbling fretted stone to match existing.</li> <li>– Repoint all loose, fretted, broken or missing mortar finish with mortar compatible with stone.</li> <li>– Chasing of stone is not permitted.</li> </ul>	Essential



ELEMENT	WORKS	ESSENTIAL/ DESIRABLE
	<p>Windows</p> <ul style="list-style-type: none"> <li>– GW.01                             <ul style="list-style-type: none"> <li>– Put in working order.</li> <li>– Retain and reseal existing frame</li> <li>– Reconstruct 2/no double hung sashes to detail</li> <li>– Replace parting beads</li> <li>– Repair sill</li> <li>– Install new sash catch and lifts to detail.</li> </ul> </li> <li>– GW.02                             <ul style="list-style-type: none"> <li>– Put in working order.</li> <li>– Retain and reseal frame</li> <li>– Repair sill</li> </ul> </li> <li>– AW.01                             <ul style="list-style-type: none"> <li>– Retain existing frames, frame and reseal</li> <li>– Repair sill</li> <li>– Install new parting beads and new 6-pane double hung sashes to detail</li> <li>– Install new sash catch and lifts to detail.</li> </ul> </li> </ul>	<p>Desirable</p> <p>Desirable</p> <p>Desirable</p>
3.2.10. Painting	<p>General</p> <ul style="list-style-type: none"> <li>– All external finishes that have been previously painted are to be painted except as noted.</li> <li>– Investigate condition of existing finishes to be repainted and prepare specification for cleaning, preparation work and painting.</li> </ul> <p>Scope</p> <ul style="list-style-type: none"> <li>– Paint the following surfaces:                             <ul style="list-style-type: none"> <li>– Render</li> <li>– Timber joinery, windows, doors, columns and beams</li> <li>– Timber louvres</li> <li>– Timber barge boards</li> <li>– Galvanised steel gutters, downpipes and edge rolls</li> <li>– Miscellaneous metalwork.</li> </ul> </li> </ul> <p>Paint Analysis</p> <ul style="list-style-type: none"> <li>– Undertake a paint scrape analysis of all existing external painted surfaces (where appropriate) and analyse results to interpret an original colour scheme. Paint previously painted surfaces in interpretative original colour scheme.</li> </ul>	<p>Essential</p> <p>Essential</p> <p>Desirable</p>

ELEMENT	WORKS	ESSENTIAL/ DESIRABLE
3.2.11. Stormwater Drainage Systems	<ul style="list-style-type: none"> <li data-bbox="644 562 1011 584">– Investigate subsoil absorption rates.</li> <li data-bbox="644 607 1318 734">– Design and construct a suitable subsoil absorption trench suitably sized for the roof area of the former Coach House. Locate well away from the building on a downhill slope. Submit specification and location for approval by heritage architect.</li> <li data-bbox="644 757 1318 808">– Excavate and install new stormwater drainage pipework to drain all downpipes to new absorption trench.</li> </ul>	Essential

### 3.3. ESSENTIAL AND DESIRABLE CONSERVATION WORKS - INTERNAL

#### 3.3.1. Generally

The interior of the former Coach House is essentially a series of functional spaces with basic internal finishes, with no decorative features, appropriate to the original use.

The condition of the interior is generally poor and requires considerable maintenance

Where scheduled 'make good' surfaces shall be primed where bare metal or timber is showing, then painted with the same number and type of coats as adjacent paintwork. Finish coat to surfaces to be 'made good' shall be applied to whole areas, ie to nearest edge or re-entrant or salient angle.

Where scheduled 'patch' or 'replace', remove boards as necessary and replace in boards to match sizes and profiles of existing boards. Salvaged boarding is to be reused where sound in lengths greater than 1350 mm.

Where scheduled 'refix' check over flooring, determine which boards are loose and re-nail. Take up flooring as necessary, repair and check underfloor ventilation, replace damaged bearers and joists, reuse sound flooring, replace with boards milled to match.

#### 3.3.2. Floor

The existing concrete floors are not the original floors but will be retained unless original floor finishes are found to exist under the concrete after investigation.

Cut a small opening in the existing concrete floor to G.01 where a new footing is to be located for a new timber column C.05. Investigate for evidence of the original floor under. If evidence is found seek instructions from the heritage architect for the works required.

Remove all soil, waste and organic matter that covers the concrete slab to G.04. Investigate for evidence of holes or pockets in paving for timber columns. If found seek instructions from the heritage architect. Investigate for evidence of original floor under the concrete slab at the edges of the slab or where broken sections are found. Clean thoroughly the existing concrete floor.

#### 3.3.3. Roof framing

Investigate and inspect condition of existing roof framing and identify all damaged framing members. Seek instruction from the heritage architect on required works.

Repair and replace timber boards to the catshead loading landing.

#### 3.3.4. Columns

Remove existing temporary steel columns (2/no) supporting double roof beam.

Install new timber columns C.05 and C.06 to match section size of C.01. Install new footings and galvanised steel shoe (concealed). Finish footing flush with existing concrete floor slab.

### 3.3.5. Walls

#### General

Internal walls are generally of face brickwork except for the 1950s breeze block additions which have been rendered. The brickwork requires substantial repairs in accordance with structural engineer's details.

Reconstruct collapsed sections of existing with salvaged bricks to match existing. Coursing to match existing with mortar, strength and mix to match existing.

Remove non-original sections of cement render to face brickwork to G.01 (south and west).

#### Chases

Chases in brickwork are not permitted.

Install damp proof courses to all interior walls immediately above the finished floor level.

Remove all surface mounted services, conduits, cables and equipment and make good.

Leave insitu metalwork lugs and nails as evidence of former use to G.02 and G.03.

3.4. INTERNAL WORKS SCHEDULE			
ELEMENT	WORKS		ESSENTIAL / DESIRABLE
3.4.1. General	<ul style="list-style-type: none"> <li>– Thoroughly clean down all surfaces including exposed roof framing with water. Do not pressure or acid clean.</li> <li>– Remove all loose and organic matter</li> </ul>		Essential
3.4.2. Floors	<p>Concrete floors</p> <ul style="list-style-type: none"> <li>– Remove all soil, organic matter and debris.</li> <li>– Water pressure clean concrete floors</li> </ul>		Essential
3.4.3. Walls	<p>Face brickwork</p> <ul style="list-style-type: none"> <li>– Underpin internal walls in accordance with engineer’s detail</li> <li>– Install damp proof course to all internal brickwork.</li> <li>– Carry out maintenance works and repairs including reconstructive crack stitching and mortar filling in accordance with engineer’s details.</li> <li>– Repoint all internal face brickwork with mortar to match colour and strength and profile of existing mortar.</li> </ul> <p>Render</p> <ul style="list-style-type: none"> <li>– Infill missing section of breeze block and re-render to match existing.</li> <li>– Install new damp proof course to breeze block walls.</li> </ul>		Essential
3.4.4. Roof Framing (Exposed)	<p>Timber roof framing</p> <ul style="list-style-type: none"> <li>– Inspect all timber roof framing and identify damaged framing. Seek instructions from heritage architect on required works.</li> <li>– Repair/replace boarding to loading landing.</li> <li>– Remove any stored rubbish.</li> <li>– Clean and wash down all exposed timber.</li> <li>– Remove all services, conduits, cables and equipment and make good.</li> </ul>		Essential
3.4.5. Timber columns	<ul style="list-style-type: none"> <li>– Replace 2/no steel columns with new timber column C.06 to match C.01</li> <li>– Install new timber column CO.5 to match CO.1</li> </ul>		Desirable
3.4.6. Services	<p>General</p> <ul style="list-style-type: none"> <li>– Chasing of walls for new electrical cables in brickwork or breeze blocks is not permitted.</li> <li>– Remove all exposed conduits, services and make good.</li> </ul> <p>Electrical Switch Plates</p> <ul style="list-style-type: none"> <li>– Wall mounted steel switch boxes and steel conduits from roof framing above.</li> </ul> <p>Lighting</p> <ul style="list-style-type: none"> <li>– Install new pendant and up-lighting to each room.</li> </ul> <p>Electrical switchboard</p> <ul style="list-style-type: none"> <li>– Remove existing cabinet and conduits to G.04.</li> <li>– Locate new wall mounted switchboard in G.03 as directed by heritage architect.</li> </ul>		Essential
			Essential
			Desirable
			Essential

ELEMENT	WORKS	ESSENTIAL / DESIRABLE
3.4.7. Painting	<p>Paint only timber joinery including:</p> <ul style="list-style-type: none"> <li>- Timber columns</li> <li>- Timber beams existing and new</li> <li>- Timber louvres</li> <li>- Timber doors</li> <li>- Timber windows</li> <li>- Render</li> </ul> <p>Do not paint:</p> <ul style="list-style-type: none"> <li>- Face brick</li> <li>- Existing roof framing</li> <li>- Existing underside to timber shingle roofing.</li> </ul>	Essential
	<p>Paint Analysis</p> <p>Undertake a paint scrape analysis of all existing internal painted surfaces (where appropriate) and analyse results to interpret an original colour scheme. Paint previously painted surfaces in interpretative original colour scheme.</p>	Desirable

3.5. MAINTENANCE PROGRAM

This Maintenance Program has been prepared to ensure the long term protection of the fabric, and is based on cyclical inspection monitoring and recording of the condition of the fabric.

3.5.1. External

BUILDING ELEMENT	ANNUAL	2 YEARS	5 YEARS	10-15 YEARS
Brickwork			Inspect for loose, fretted, broken, missing mortar joints and bricks, and surface salts. Touch up. Inspect for cracked or drummy render.	Check pointing. Repoint where necessary.
Stone / Render	Inspect for grime, growth from joints, bird excretion and termite activity. Check wall ventilators and damp proof courses are not covered with soil or rubbish.		Inspect for loose, fretted, broken or missing mortar joints to stones around windows, doors, along flashings and cornices and other projections. Inspect for signs of delamination, crumbling, surface salts, rising or falling damp.	
Timber	Inspect for grime, growth from joints, bird excretion and termite activity. Check wall ventilators and damp proof courses are not covered with soil or rubbish.		Inspect for loose and missing trims fascias and barges. Check around ground line and columns for weathering. Rectify	

BUILDING ELEMENT	ANNUAL	2 YEARS	5 YEARS	10-15 YEARS
Door joinery		<p>Inspect for loose, damaged jambs, mouldings, thresholds. Clean. Minor repairs.</p> <p>Inspect for loose jambs, decay at the threshold. Check door joints firm and mouldings intact. Replace broken or cracked glass or putty. Check operation of doors and hardware.</p>	Inspect, repair and touch up.	
Window joinery		<p>Inspect for loose, damaged mouldings, architraves, sills and sashes. Check putty and glazing. Clean. Minor repairs.</p> <p>Inspect for loose or damaged mouldings, architraves, decayed stiles at sill level, weathered sills, loose or decayed sash joints and broken or cracked glass or putty. Check operation of windows and hardware.</p>	Inspect, repair and touch up.	
Painted finishes		<p>Inspect for deterioration and weathering. Clean. Minor repairs. Inspect for paint deterioration and weathering.</p>	General painting externally.	General painting internally.

BUILDING ELEMENT	ANNUAL	2 YEARS	5 YEARS	10-15 YEARS
Roof	Remove rubbish and leaves. Inspect for loose or raised fixings, sheet edges deformed surfaces, cracked joints. Rectify.	Clean. Minor repairs.	Inspect, repair and touch up. Inspect for loose or raised fixings, sheet edges and surfaces that are deformed or rusted. Check for dissimilar metals at flashings and rectify.	Replace when necessary.
Flashings / cappings	Inspect for loose raised fixings and displacement. Rectify.	Clean. Minor repairs. Inspect for loose or raised fixings, cappings that have lifted, slipped or are deformed. Rectify.	Inspect, repair and touch up.	Replace when necessary.
Roof Drainage: Gutters / Downpipes Dishdrains & sumps	Inspect. Clear. Check water falls to outlets. Ensure leaf guards to outlets, rainwater heads and sumps sit correctly and are clear of debris. Check if downpipes are connected to the stormwater system. Check that stormwater drains are not blocked. Rectify.	Clean. Minor repairs. Inspect for rust stains, growth, rust around downpipes and outlets. Inspect gutter and downpipe joints for cracks, deformation, loose or missing brackets. Rectify.	Inspect, repair and touch up.	Replace when necessary.
Eaves	Inspect	Clean. Minor repairs.	Inspect, repair and touch up.	
Structure			Check timber members secure and true. Inspect for cracks in masonry and masonry straight and true. Inspect for signs of rust in steel. Check fixings secure.	

3.5.2. Internal

BUILDING ELEMENT	ANNUAL	2 YEARS	5 YEARS	10-15 YEARS
Walls	Normal cleaning	Inspect for cracking, water penetration indicators	Repair as necessary. Touch up.	Repaint as required.
Concrete floors	Normal cleaning	Inspect	Repair as necessary. Touch up.	
Roof framing	Normal cleaning	Inspect	Repair as necessary. Touch up.	
Joinery	Normal cleaning	Inspect	Repair as necessary. Touch up.	
Fittings & Fixtures	Normal cleaning		Repair as necessary. Touch up.	
Finishes	Normal cleaning	Inspect. Touch up.	Repair as necessary. Touch up.	Renew as necessary.

3.5.3. Building Services

BUILDING ELEMENT	ANNUAL	2 YEARS	5 YEARS	10-15 YEARS
Stormwater	Inspect for dish drains and sumps blocked with rubbish, leaves or silt. Ensure gullies and sump gratings are operable. Clean and rectify.			
Water		Inspect taps for drips. Rectify.		

#### 4. THE COTTAGE

##### 4.1. ESSENTIAL AND DESIRABLE CONSERVATION WORKS – EXTERNAL

###### 4.1.1. Generally

During the execution of the works, preserve and protect all original and sound fabric and finishes.

Major conservation issues are:

- Localised settlement in the north east and south east corners of the original building.
- Minor settlement at the east end of the internal masonry cross wall.
- Minor cracking to the south gable wall.
- Rising damp to existing brickwork.
- Inadequate clearance to existing timber floor framing and a lack of cross ventilation to the subfloor space.
- Decay of east verandah columns and beam.
- Deterioration of existing weatherboards to west wall.
- Substantial deterioration of western additions.
- Maintenance to existing roof sheeting.

Other issues are:

- Concealment of internal wall finishes by non-original sheet linings.
- Concealment of internal spaces by the non-original ceiling structure and lining.
- Poor quality construction of the 1950s linings.
- Poor quality construction of the additions to the western side.

Ensure regular maintenance and inspection of site drainage and ventilation as well as plumbing and roof and guttering systems.

Where scheduled to 'remove redundant services or fittings', patch element following removal to match sound adjacent work unless otherwise scheduled. Surfaces shall be primed where bare metal or timber is showing, then painted with the same number and type of coats as adjacent paintwork. Finish coat to surfaces to be 'made good' shall be applied to whole areas, i.e. to nearest edge or re-entrant or salient angle.

Where scheduled 'to match existing', new elements shall do so exactly in outward appearance. Moulding profiles, member sizes, construction etc. must sound existing. The builder is not expected to match exactly things such as timber species, construction methods etc. that are not exposed to view at completion but, unless specifically approved, the construction method shall be of a traditional nature for which there is longstanding precedent.

Where scheduled to 'make good', patch element to match sound adjacent work unless otherwise scheduled. Surfaces shall be primed where bare metal or timber is showing, then painted with the same number and type of coats as adjacent paintwork.

Where scheduled 'provide', the contractor is required to supply, fit and fix item and element as scheduled, shown or detailed.

Where scheduled 'set aside', carefully dismantle or take down elements referred to and store within dwelling.

#### 4.1.2. Roofing

The original timber shingle roof is still extant under the corrugated steel roofing to the whole of the original cottage. The timber shingle roof, from inspections to the underside, would seem to be in a reasonable condition.

The existing shingles were previously covered with galvanised corrugated steel roofing. The steel roofing remains in fair condition and should be maintained insitu to protect the timber shingle roof beneath. Some repairs to the steel roofing shall be required to make the roof watertight.

Install new edge rolls to gables and ridge cappings and new lead soaker finishings to the north chimney.

Install new galvanised steel ogee gutters and round downpipes and connect to a new stormwater drainage system.

#### 4.1.3. Brickwork

##### Work To Existing Walls

Where rebuilding, repointing or making good to existing brickwork, match sound original joints as determined by examination of adjacent areas.

##### Crack Stitching

Complete crack stitching repairs to existing brickwork in accordance with engineer's details.

##### Replace

Where scheduled 'replace', remove entire area or element nominated and build new work matching exactly adjacent original work.

##### Make Good or Repair

Where scheduled 'make good' or 'repair' existing brickwork remove all decayed or faulty bricks from area or element nominated and build in salvaged bricks of same size and jointing pattern as original. Rake out or remove remainder of loose or faulty mortar from joints and repoint.

#### 4.1.4. Render

Where scheduled 'to match existing', new elements shall do so exactly in outward appearance. Moulding profiles, member sizes, construction etc. must sound existing. The builder is not expected to match exactly things such as timber, construction methods etc. that are not exposed to view at completion but, unless specifically approved, the construction method shall be of a traditional nature for which there is longstanding precedent.

Use render mixes that are of equal strength to the original render.

#### 4.1.5. Damp

##### Background

Rising damp occurs as a result of capillary suction of moisture from the ground into porous masonry building materials. Rising damp may show as a high-tide-like stain on interior finishes, blistering of paint, loss of plaster, growth of moulds. Externally a damp zone may be evident at the base of walls, with associated fretting and crumbling of the masonry. Rising

damp Will carry salts up into the masonry to where the damp evaporates and can often be seen as a white efflorescence leading to fretting and crumbling on the surface. While rising damp is often caused by bridging of the Damp Proof Course (DPC), not all dampness in buildings is due to rising damp. Leaking water pipes or failed roofs and gutters may be the cause. Horizontal or penetrating damp can be due to leaking water supply or waste pipes, or failure of tile grouts in wet areas. These tend to produce small, localised patches of dampness whereas rising damp may affect the base of a whole building.

### Control and Treatment of Damp

#### Site drainage and ventilation

- Ensure gutters and downpipes are working
- Ensure rainwater is carried well away from the base of walls
- Ensure site is well drained – no ponding against walls
- Minimise splash from hard pavements into walls
- Maintain about 200 mm between DPCs and ground level
- Check for and fix any plumbing leaks, including sewers
- Check for fungal rot, borers and termites in damp floor timbers
- Ensure adequate (but not too much) underfloor ventilation
- Monitor changes, for these may be sufficient

#### Treat mild damp sacrificially

- Use weak mortars in eroding joints, or
- Weak plasters and renders to control damage
- Monitor changes before considering further treatment
- Ongoing sacrificial treatments may be sufficient
- Remove excessive salts
- Remove surface salt deposits by dry vacuuming, then
- Use captive-head washing for near-surface salts
- Use poultices of absorbent clay and/or paper pulp
- Use sacrificial plasters, renders and mortars
- Monitor effectiveness – re-treat if necessary
- Periodic maintenance treatments as required

#### Review results before proceeding

- Allow at least one year of monitoring
- Account for unusual events – storms, floods, drought etc
- Routine maintenance activities may be sufficient

#### Inserting damp-proof courses

- Slot sawing with mechanical DPC
- Active electro-osmotic damp-proofing
- Install DPCs at a level that will also protect floor timbers
- Monitor for leaks

#### Desalinating walls

- When salts abound, do not just insert DPC
- Also remove excessive salts from above DPC
- Use poulticing, captive-head washing and sacrificial treatments
- Monitor annually for further salt attack
- Re-treat if necessary until salts are reduced to a less harmful level

#### 4.1.6. Openings

##### Flashings and Weatherings

Install flashings, weather bars, drips, storm moulds, caulking, pointing or the like so that water is prevented from penetrating the building between door / window frames and the building structure under the prevailing service conditions, including normal structural movement of the building. Flashings and weatherings shall be compatible with the other materials in the installation and coated with a non-staining compound where necessary.

Remove all non-original cappings.

#### 4.1.7. Woodwork

External Joinery – Sand down and spot prime bare areas to previously painted joinery. Putty up and make good cracks, nail holes and damaged areas. Remove existing trims damaged or as scheduled and replace with trims to match sizes, profiles and material of existing trims. Replace all fascias, bargeboards and trims.

Existing weatherboards – Check over all existing timber weatherboards and repair/replace deteriorated/damaged boards to match existing timber species and profiles. Reserve and aggregate together the exiting weatherboards to be retained where sections are to be replaced. Refix all loose weatherboards to be retain with fixings to match existing.

Consolidate areas of new weatherboards to the base of a wall. Sand down all timber weatherboards to remove loose paint. Stop and fill cracked boards and prime all boards.

Enamel Paint on External Woodwork – Wash, sand down and spot prime bare areas with pink primer. Putty up and make good cracks, nail holes and damaged areas and paint: One (1) coat of tinted undercoat, two (2) coats of gloss enamel paint, sand down and dust off between each coat.

#### 4.1.8. Windows

##### Generally

Unless otherwise scheduled preserve and restore all windows. Patch frames and sashes as necessary.

Re-putty and reglaze as required.

Rehang all weighted sashes on first quality sash cord and put all sashes in first class working order where appropriate.

Replace hinges as necessary.

Remove all sash spring balances and make good to frames.

Replace stop beads and parting beads as necessary for above work.

When replacing pulley stiles reuse axle pullies.

When replacing sashes sound pieces of existing sash may be reused in new sashes.

When 'to match', fit specified element or hardware to match complete window or preserved hardware that is similar.

Generally rake out all external junctions between windows, new and existing, and render and seal joint with new paintable sealant.

Replace all lead sill covering to all windows as required to secure waterproofness. Remove internal sill stop bead and conceal fixing to existing lead covering. Refix stop bead.

Replace all defective or loose putty. Putty to be linseed oil and whitening of first quality manufactured to AS 1263 – Oil based putty. Carefully remove old putty so as not to damage existing stiles, rails and glazing bars. Repair joinery damaged. Prime rebates before reglazing.

Replace all broken or damaged glass. Preserve and reuse existing glass where possible.

**Patch** – Where an element is scheduled 'patch', check out defective areas to square section and glue, pin and clamp new patch into cavity. The new section is to fit tightly showing minimum evidence of patching. Timber colour, species and grain to match existing. Plane off and stop up.

**Splice on (or piece in)** – Where an element is scheduled 'splice on' or 'piece in', check out defective areas to form a scarf joint. Scarf on new piece of same cross section to original and securely glue, clamp and otherwise fix to ensure adequate bearing. Recess fixings and conceal. For example bolt heads and nuts to be concealed with timber patches.

**Matching Joinery** – Where scheduled 'to match existing', new elements shall do so exactly in outward appearance. Moulding, profiles member sizes, construction etc. must match that nominated which shall be preserved for comparison. The contractor is not expected to match things such as timber species construction methods etc. that are not exposed to view at completion.

**Epoxy Repair** – Where scheduled 'repair with epoxy resin' to a non-structural element, the extent of the hollow section is to be ascertained without damaging the element or removing it from its fixings. A proprietary 2 part epoxy shall be forced into the cavities from openings made approx. 100 mm apart along the length of the affected area. Once cured, all epoxy residues are to be cleaned off to match sound adjacent work and lightly sanded ready for painting. Where scheduled 'repair with epoxy resin' to structural elements, the extent of repair is to be determined in consultation with the structural engineer and the whole repair carried out under his supervision.

**Existing Paint Finishes** – unless otherwise specified all existing paintwork to joinery shall be preserved and only cleaned off where necessary to affect a proper repair.

New glass to sashes, louvres and casements throughout is to be of approved manufacture free of air bubbles, blemishes and flaws of any description. Where not in contravention of BCA, glass to be clear float glass, thickness to match existing glazing in sashes to existing building. Provide expansion clearance for all glass in frames, sashes, etc. All timber rebates to be primed before glazing. Putty to be linseed oil. Glass in timber window sashes to be back puttied, sprigged and puttied in. All to match existing details.

Retain Timber Venetian Blinds record if necessary, check operation.

#### Frames

Generally remove existing window sashes and patch and reseal frame as necessary to provide secure operation of sashes.

Where scheduled reseat carefully remove frame and check over and replace grounds and other fixings as necessary. Reinstall frame plumb and square to original details.

Where scheduled patch check out defective areas to square section and glue, pin and clamp new patch into cavity. Plane off flush and stop up.

Where scheduled replace remove existing and unless otherwise specified install new frame and sashes to match profile of original exactly. Provide all grounds, fixings to original detail.

Where scheduled relocate, dismantle frame, jamb or sashes together with architraves and install at new location nominated to match original details. Provide all necessary fixings to match original details.

#### Sills

Where scheduled replace sill, remove frame from masonry opening, brace and detach decayed sill from tenons of jamb linings. Check over frame and verify further defective elements (if any). Fit new sill to match details of original and reseat in masonry opening plumb and square. Unless otherwise specified refix existing architraves, mouldings and trims.

#### Sash

Generally, put in working order. Rehang and reglue as necessary.

Where scheduled put in working order, check over, ease and refit sashes replacing parting beads, stop beads and pocket covers as necessary to match existing.

Where scheduled re-glue sash, remove sash to shop, dismantle and replace members nominated in schedule. Glue, reassemble and clamp. Prime and reglaze using original glass.

Where scheduled rehang sashes, rehang sashes of first quality sash cord and existing weights.

Where scheduled replace sash, makeup new sash to match details exactly of existing sash or sash nominated. Unless otherwise specified salvage and reuse sash lifts and other hardware.

#### Hardware

Unless otherwise specified, butt hinges to be black painted steel. All to match original configuration or as nominated.

Hardware scheduled to be 'preserve', 'salvage' or 'set aside' shall on no account be interfered with except as scheduled. Should doors be taken off, hinges shall be reused together with the original handmade screws.

Where hardware is scheduled 'remove' patch door frame and doors at fixings.

Unless otherwise specified hardware schedule 'preserve' shall be cleaned off of old paint using methods which in no way damage the surface of the item.

Unless otherwise specified chrome surfaces are to be polished using a non-abrasive proprietary polish and a soft cloth. Lacquer is not to be used to preserve shine.

Where scheduled 'fit new', set aside existing patch windows as necessary. Install new hardware to manufacturer's specification.

New hardware to match original chrome hardware.

#### 4.1.9. Doors

##### Generally

- Remove door. Patch, reseal frames as necessary.
- Put doors in working order replacing worn hinges as necessary to match existing.
- Repair split panel, check door for fit, adjust or reglue if sagging. Retain hardware – additional barrel bolt or security pin permissible.
- Replace all broken glass and defective puttying. Rehang door.

##### Patch

- Where an element is scheduled 'patch', check out defective areas to square section and glue, pin and clamp new patch into cavity. The new section is to fit tightly showing minimum evidence of patching. Timber colour, species and grain to match existing. Plane off and stop up. Where doors have been cored for lock cylinders patching may not be done with dowel.

##### Splice on (or piece in)

- Where an element is scheduled 'splice on' or 'piece in', check out defective areas to form a scarf joint. Scarf on new piece of same cross section to original and securely glue, clamp and otherwise fix to ensure adequate bearing. Recess fixings and conceal. For example bolt heads and nuts to be concealed with timber patches.

##### Matching Joinery

- Where scheduled 'to match existing', new elements shall do so exactly in outward appearance. Moulding, profiles member sizes, construction etc. must match that nominated which shall be preserved for comparison. The contractor is not expected to match things such as timber species construction methods etc. that are not exposed to view at completion.

##### Epoxy Repair

- Where scheduled 'repair with epoxy resin' to a non-structural element, the extent of the hollow section is to be ascertained without damaging the element or removing it from its fixings. A proprietary 2 part epoxy shall be forced into the cavities from openings made approx. 100 mm apart along the length of the affected area. Once cured, all epoxy residues are to be cleaned off to match sound adjacent work and lightly sanded ready for painting. Where scheduled 'repair with epoxy resin' to structural elements, the extent of repair is to be determined in consultation with the structural engineer and the whole repair carried out under his supervision.

##### Existing Paint Finishes

- Unless otherwise specified all existing paintwork to joinery shall be preserved and only cleaned off where necessary to effect a proper repair.

#### Frames

Where scheduled replace remove existing and unless otherwise specified install new frame to match profile of original exactly. Provide all grounds, fixings to original detail.

Where scheduled reseat carefully remove frame and check over and replace grounds and other fixings as necessary. Reinstall frame plumb and square to original details.

Where scheduled patch check out defective areas to square section and glue, pin and clamp new patch into cavity. Plane off flush and stopup.

#### Door Leaf

Where scheduled refit, remove door and plane off or add to rails stiles as necessary to provide close fit to existing frame. Glue, pin and clamp additional pieces of larger dimensions than finished size and plane down flush.

Where scheduled relocate, salvage door from position nominated. Fit and hang as above in scheduled location.

Where scheduled patch, generally as for door frames. Where doors have been cored for lock cylinders patching may NOT be done with dowel.

Where scheduled replace mouldings, provide or replace nominated panel mouldings matching exactly profile indicated. Spring into position to provide tight mitres and pin at maximum 200 centres. Prime external mouldings before fixing.

Where scheduled repairs split panels, ease split sections apart, apply glue to edges and realign. Sand off and stop up.

4.2. EXTERNAL WORKS SCHEDULE

ELEMENT	WORKS	ESSENTIAL/ DESIRABLE
4.2.1. Site	<p>General</p> <ul style="list-style-type: none"> <li>– The site is likely to be a source of archaeological material.</li> <li>– All relics uncovered are to be photographed in situ immediately notify architects for instructions.</li> <li>– Remove concrete pavings surrounding the building. Regrade existing ground lines to lower ground line. Generally to 200 mm below EFL with falls away from building.</li> <li>– Retain and protect all evidence of remnant timber fences and fence posts, structures and pavings in the vicinity of the Cottage.</li> </ul>	Essential
4.2.2. Excavation	<p>Archaeology</p> <ul style="list-style-type: none"> <li>– All excavation to occur under archaeological supervision.</li> <li>– Protect and store relics found within the site. Notify heritage architects.</li> <li>– Under archaeological supervision, excavate down to a sufficient level to improve drainage and conservation of the building particularly to north and south side of existing buildings.</li> </ul> <p>Existing Ground Levels</p> <ul style="list-style-type: none"> <li>– Remove top layer of soil surrounding building to north and south sides and regrade falls away from building. Lower ground a minimum of 300mm below existing timber floor levels.</li> </ul>	Essential
4.2.3. Demolition	<p>General</p> <ul style="list-style-type: none"> <li>– Demolish existing concrete slab to western side</li> <li>– Demolish 1950s additions G.05 (wc) and G.07 and G.09 and make good to existing walls.</li> <li>– Demolish existing infill framing and boarding to GD.12. Salvage boarding for reuse.</li> <li>– Demolish non-original columns C4 and temporary repairs to columns C1, C2, C3 and C5 and temporarily support existing verandah.</li> <li>– Remove corrugated steel wall cladding to existing roof ventilator and retain and possibly reuse.</li> <li>– Demolish metal cladding to existing verandah beam.</li> <li>– Demolish exiting security screen door and non-original door to DG.01.</li> <li>– Demolish existing electrical services cabinet and conduits to north elevation.</li> </ul>	Essential

ELEMENT	WORKS	ESSENTIAL/ DESIRABLE
4.2.4. Landscaping	<ul style="list-style-type: none"> <li>– Retain and protect all trees in the vicinity of the former Cottage.</li> <li>– Reinstate turfing to all areas disturbed by excavation or regrading of existing ground levels.</li> </ul>	Essential Desirable
4.2.5. Pests	<p>General</p> <ul style="list-style-type: none"> <li>– Inspect the interior of the building, the subfloor space and the immediate surrounds for infestations of termites and other pests.</li> <li>– Eradicate all infestations found by appropriate means.</li> <li>– Establish a long term approach to termite management and an inspection regime.</li> <li>– Make the heritage architect aware of extent of damage identified and seek instructions for required works.</li> </ul>	Essential
4.2.6. Roofing	<p>General</p> <ul style="list-style-type: none"> <li>– Retain and maintain existing timber shingle roofing insitu.</li> <li>– Retain and maintain existing corrugated steel roofing.</li> </ul> <p>Timber shingle roofing</p> <ul style="list-style-type: none"> <li>– Inspect the underside of all existing timber roof shingles to be retained insitu and identify damage due to dry rot and termites to existing shingles. Seek instructions from heritage architect as to the required repairs.</li> <li>– Reconstruct timber shingle roofing to the roof of the existing ventilator.</li> </ul> <p>Corrugated steel roofing – east</p> <ul style="list-style-type: none"> <li>– Retain all existing roof sheeting insitu.</li> <li>– Inspect the whole of the existing corrugated steel roof and identify all loose and missing fixings, severely corroded roofing and seek instructions from the heritage architect as to required repairs.</li> <li>– Install all required fixings missing or of non-original type to match existing. Reserve all existing fixings to be retained.</li> <li>– Cut off sections of roofing folded over the top of existing barges.</li> <li>– Reinstate existing corrugated steel roof over the new timber shingles to the roof ventilator.</li> </ul> <p>Barge Boards</p> <ul style="list-style-type: none"> <li>– After repairs to render to gable walls are completed install new ex200x25DAR timber barge boards to north and south gables to match existing.</li> </ul> <p>Fascias</p> <ul style="list-style-type: none"> <li>– After repairs to the timber weatherboarding completed install new ex200x25DAR timber fascia to west elevation.</li> </ul>	Essential  Essential  Essential  Essential

ELEMENT	WORKS	ESSENTIAL/ DESIRABLE
	<p>Cappings</p> <ul style="list-style-type: none"> <li>– Install new galvanised steel ridge cappings and edge rolls to barge boards to north and south elevations.</li> <li>– Install lead covers to 2/no fireplace chimneys.</li> </ul> <p>Flashings</p> <ul style="list-style-type: none"> <li>– Install new lead soaker flashing and edge roll to north chimney and replace existing apron flashings to chimney. Repoint around flashings to match existing render.</li> </ul>	<p>Essential</p> <p>Essential</p>
4.2.7. Rainwater Goods	<p>Gutters and downpipes</p> <ul style="list-style-type: none"> <li>– Install new galvanised steel ogee gutters and circular 90mm DIA downpipes to east and west elevations and connect to new stormwater drainage system.</li> </ul>	Essential
4.2.8. Walls	<p>General</p> <ul style="list-style-type: none"> <li>– Remove and service conduits, cables and equipment.</li> <li>– Remove all organic matter attached to or growing over existing walls.</li> </ul> <p>Render</p> <ul style="list-style-type: none"> <li>– Inspect all existing brickwork and identify loose and damaged render and remove.</li> <li>– Investigate and analyse existing render mix and strength prior to installation of new render.</li> <li>– Re-render areas where render missing, damaged or removed to match the texture, finish and strength of the existing render.</li> </ul> <p>Timber weatherboards</p> <ul style="list-style-type: none"> <li>– Check all existing weatherboards to be retained and repair/replace deteriorated/damaged boards to match existing timber species and profiles.</li> <li>– Refix all loose weatherboards with fixings to match existing.</li> <li>– Make all repairs to subframe where identified necessary.</li> <li>– Repair/replace all missing or deteriorated trims, corner moulds, storm moulds, architraves and opening surrounds to match existing.</li> <li>– Reconstruct hardwood timber frame to former DG.06 opening to detail.</li> <li>– Reconstruct hardwood timber frame to former DG.08 opening to detail.</li> </ul>	<p>Essential</p> <p>Essential</p> <p>Essential</p>



ELEMENT	WORKS	ESSENTIAL/ DESIRABLE
	<ul style="list-style-type: none"> <li>- GW.02                             <ul style="list-style-type: none"> <li>- Replace window frame and sashes to match GW.03 (modified)</li> <li>- New sash catch and lifts to detail</li> </ul> </li> <li>- GW.03                             <ul style="list-style-type: none"> <li>- Retain existing window frame and sashes and reset.</li> <li>- Remove existing non-original glazing bars and install new glazing bars to match perimeter mould to sills and rails. Install 6-panes.</li> <li>- Re-glaze sash with clear glass.</li> <li>- Install sash and lifts to detail.</li> </ul> </li> <li>- GW.04                             <ul style="list-style-type: none"> <li>- Retain existing window frame and sashes and reseal.</li> <li>- Remove existing sash balance and make good.</li> <li>- Remove existing glazing bars and install glazing bars to match GW.03 (as amended) 6-panes and reglaze.</li> <li>- Install sash catch and lifts to detail.</li> </ul> </li> <li>- GW.05                             <ul style="list-style-type: none"> <li>- Retain existing window frame and sashes and reseal.</li> <li>- Remove existing sash balance and make good.</li> <li>- Remove existing glazing bars and install glazing bars to match GW.03 (as amended) 6-panes and reglaze.</li> <li>- Install sash catch and lifts to detail.</li> </ul> </li> <li>- GW.07                             <ul style="list-style-type: none"> <li>- Retain existing window frame and sashes and reseal.</li> <li>- Remove existing sash balance and make good.</li> <li>- Remove existing glazing bars and install glazing bars to match GW.03 (as amended) 6-panes and reglaze</li> <li>- Install sash catch and lifts to detail.</li> </ul> </li> </ul>	<p>Desirable</p> <p>Desirable</p> <p>Desirable</p> <p>Desirable</p> <p>Desirable</p> <p>Desirable</p>
4.2.12. Painting	<p>General</p> <ul style="list-style-type: none"> <li>- All external finishes that have been previously painted are to be painted except roof sheeting.</li> <li>- Investigate condition of existing finishes to be repainted and prepare specification for cleaning, prep work and painting.</li> </ul>	Essential

ELEMENT	WORKS	ESSENTIAL/ DESIRABLE
	<p>Scope</p> <ul style="list-style-type: none"> <li>- Paint the following surfaces:                             <ul style="list-style-type: none"> <li>- Render</li> <li>- Timber joinery, windows, doors, columns and exposed framing</li> <li>- Timber louvres</li> <li>- Timber barge boards and fascias</li> <li>- Galvanised steel gutters, downpipes and edge rolls</li> <li>- Miscellaneous metalwork.</li> </ul> </li> </ul> <p>Paint Analysis</p> <p>Undertake a paint scrape analysis of all existing external painted surfaces (where appropriate) and analyse results to interpret an original colour scheme. Paint previously painted surfaces in interpretative original colour scheme.</p>	Desirable
4.2.13. Stormwater Drainage Systems	<ul style="list-style-type: none"> <li>- Investigate subsoil absorption rates.</li> <li>- Design and construct a suitable subsoil absorption trench suitably sized for the roof area of the cottage. Locate well away from the building on a downhill slope. Submit specification and location for approval by heritage architect.</li> <li>- Excavate and install new stormwater drainage pipework to drain all downpipes to new absorption trench.</li> </ul>	Essential
4.2.14. Services	<p>Electrical main switch board</p> <ul style="list-style-type: none"> <li>- Remove existing external cabinet and surface mounted conduits.</li> <li>- Locate main electrical switch board in location to be determined by the heritage architect on site to the west elevation of the building. All cables and conduits to be concealed in wall framing.</li> </ul>	Desirable

#### 4.3. ESSENTIAL AND DESIRABLE CONSERVATION WORKS - INTERNAL

##### 4.3.1. Generally

The condition of the interior the Cottage is fair. The interior has been substantially changed through the addition of various rooms, internal linings and a false ceiling. It is preferred that the rooms, linings and ceilings are removed and the interior reinstated to its original form and finishes where possible.

Significant maintenance is required to the interior.

Where scheduled 'to match existing', new elements shall do so exactly in outward appearance. Moulding profiles, member sizes, construction etc. must match sound original work that shall be preserved for comparison. The contractor is not expected to match things such as timber species, construction methods etc. that are not exposed to view at completion.

Where scheduled 'make good' surfaces shall be primed where bare metal or timber is showing, then painted with the same number and type of coats as adjacent paintwork. Finish coat to surfaces to be 'made good' shall be applied to whole areas, ie to nearest edge or re-entrant or salient angle.

Where scheduled 'patch' or 'replace', remove boards as necessary and replace in boards to match sizes and profiles of existing boards. Salvaged boarding is to be reused where sound in lengths greater than 1350 mm.

Where scheduled 'refix' check over flooring, determine which boards are loose and re-nail. Take up flooring as necessary, repair and check underfloor ventilation, replace damaged bearers and joists, reuse sound flooring, replace with boards milled to match.

##### 4.3.2. Floor

###### Timber Floors

Remove existing floor coverings. Retain and conserve all existing timber floors and floor framing.

Refix, patch or replace damaged boards as necessary. Remove boards as necessary and replace in boards to match sizes and profiles of existing boards. Salvaged boarding is to be reused where sound in lengths greater than 1350 mm. Check over flooring, determine which boards are loose and re-nail.

Existing timber floors are to be cleaned to approval, sand by hand which may include remove existing finishes. All new patching works to existing floors shall be stained and finished to match existing. Stop with matching filler and produce a smooth sanded surface free from irregularities and suitable to receive the finish.

All existing and patched timber flooring shall be finished in three coats of tung oil and finished with a full bodied polished wax (spirit based) using a minimum of three coats of approved wax and rubbed back smooth between coats. Wax shall be machine polished to gloss.

##### 4.3.3. Joinery

Retain and preserve all existing joinery. Patch and repair existing damaged joinery to match existing. Refinish existing joinery to match existing. All timber work is to be fixed to masonry surfaces employing traditional timber grounds, wedges, plugs etc and all hardware fixed to masonry or plastered surfaces is to be fixed employing a timber mounting block, plate, batten, cleat etc.

Where scheduled 'strip joinery' completely strip varnish, shellac, paint or other finish from existing surfaces, using solvent type stripper or hot air gun. Clean down to bare timber and finish with 240-400 paper and steel wool.

Existing Internal Painted Woodwork – Surfaces are to be sanded papered smooth, stop with linseed oil putty then painted:

One (1) coat undercoat (tinted)

Two (2) coats semi-gloss enamel.

New Woodwork scheduled to be 'painted' is to be sanded smooth and primed with pink primer, stopped with linseed oil putty and then painted. (Note: hardwood to be primed):

One (1) coat undercoat (tinted),

Two (2) coats semi-gloss enamel.

#### 4.3.4. Walls and Ceiling

##### General

The plasterer is to be experienced in the preparation, application and finishing of lime plaster. Protect adjacent surfaces, particularly joinery and floors from defacement and damage due to droppings and traffic.

Remove all loose and flaking paint. Patch all damaged areas and flush up stripped areas to level of surrounding paintwork with patching compound. Sand down and dust off.

Unless otherwise specified all bare areas and patched surfaces to be painted with:

One (1) coat acrylic sealer

Two (2) coats flat acrylic

New Painted Plaster Walls and Ceilings – To be thoroughly cleaned down and all imperfections made good and given:

One (1) coat acrylic sealer

Two (2) coats flat acrylic

##### Set Plaster

Generally fill areas of surface damage with traditional plaster mix. Re-adhere drummy plaster with acrylic – resin based adhesive injected into void.

##### New Plaster Work

Where areas of set plaster are missing a schedule is to be replaced / reconstructed, rake out all loose, drummy and defective work. Thoroughly wet all brickwork, concrete etc., and prepare surface to ensure a good key before applying plastering. Rake out joints or brickwork to a depth of 10 mm. Surfaces not initially suitable shall be hacked to provide key. Scratch or cross broom all first coats to provide key for subsequent coats. Use traditional plaster mix.

##### Joining Up

At junctions between new and existing plastering (minor patching not included) scabble surface of existing and place 100 mm wide lath over joint between new and existing plaster and set over lath to prevent later cracking at joint.

#### Embedded Items

Ensure that water pipes and the like are sheathed to permit thermal movement. Where ungalvanised steel items are to be embedded in gypsum plaster, provide rust protection treatment not inferior to prime painting with zinc rich primer.

#### Chases

Chases are not permitted.

#### 4.3.5. Other

Remove existing trims damaged or as scheduled and replace with trims to match existing in size, profile and material.

Where scheduled to 'salvage' or 'preserve' existing fixtures and fittings, care must be taken not to damage the fittings. When refixing, only fixings of the correct size and configuration are to be used and if necessary treated for rust and cold galvanised before installation. Fittings are to be left clean.

#### 4.3.6. Doors

##### Generally

Remove door. Patch, reseal frames as necessary.

Put doors in first class working order replacing worn hinges as necessary to match existing.

Repair split panel, check door for fit, adjust or reglue if sagging. Retain hardware – additional barrel bolt or security pin permissible.

Rehang doors.

**Patch** – Where an element is scheduled 'patch', check out defective areas to square section and glue, pin and clamp new patch into cavity. The new section is to fit tightly showing minimum evidence of patching. Timber colour, species and grain to match existing. Plane off and stop up. Where doors have been cored for lock cylinders patching may not be done with dowel.

**Splice on (or piece in)** – Where an element is scheduled 'splice on' or 'piece in', check out defective areas to form a scarf joint. Scarf on new piece of same cross section to original and securely glue, clamp and otherwise fix to ensure adequate bearing. Recess fixings and conceal. For example bolt heads and nuts to be concealed with timber patches.

**Matching Joinery** – Where scheduled 'to match existing', new elements shall do so exactly in outward appearance.

Moulding, profiles member sizes, construction etc. must match that nominated which shall be preserved for comparison.

The contractor is not expected to match things such as timber species construction methods etc. that are not exposed to view at completion.

**Existing Paint Finishes** – unless otherwise specified all existing paintwork to joinery shall be preserved and only cleaned off where necessary to effect a proper repair.

#### Frames

Where scheduled 'replace' remove existing and unless otherwise specified install new frame to match profile of original exactly. Provide all grounds, fixings to original detail.

Where scheduled 'reseat' carefully remove frame and check over and replace grounds and other fixings as necessary. Reinstall frame plumb and square to original details.

Where scheduled 'patch' check out defective areas to square section and glue, pin and clamp new patch into cavity. Plane off flush and stopup.

#### Door Leaf

Where scheduled 'refit', remove door and plane off or add to rails stiles as necessary to provide close fit to existing frame. Glue, pin and clamp additional pieces of larger dimensions than finished size and plane down flush.

Where scheduled 'relocate', salvage door from position nominated. Fit and hang as above in scheduled location.

Where scheduled 'patch', generally as for door frames. Where doors have been cored for lock cylinders patching may NOT be done with dowel.

Where scheduled 'replace mouldings', provide or replace nominated panel mouldings matching exactly profile indicated. Spring into position to provide tight mitres and pin at maximum 200 centres. Prime external mouldings before fixing.

Where scheduled 'repair split panels', ease split sections apart, apply glue to edges and realign. Sand off and stop up.

Where scheduled 'replace', remove existing or otherwise nominated door to shop and match details exactly sized to suit existing frame opening. Fit and hang door(s).

#### Hardware

Unless otherwise scheduled 'preserve' knockers, bolts, knobs, handles, pulls hooks sash lifts drops and fasteners etc. Check over repair and refix as necessary. Provide ferrules and shoes missing to bolts. Remove paint and black japan steel and polish brass and chrome before completion.

Where scheduled 'fit new', remove and set aside existing patch door frames and architraves as required. Install new hardware as scheduled to manufacturer's specification.  
New hardware to match original hardware or acceptable alternative.

#### 4.3.7. Windows

##### Generally

Unless otherwise scheduled preserve and restore all windows. Patch frames and sashes as necessary. Re-putty and reglaze as required.

Rehang all weighted sashes on first quality sash cord and put all sashes in first class working order. Replace hinges as necessary.

Replace stop beads and parting beads as necessary for above work.

When replacing pulley stiles reuse axle pullies.

When replacing sashes sound pieces of existing sash may be reused in new sashes.

When 'to match', fit specified element or hardware to match complete window or preserved hardware that is similar.

Generally rake out all external junctions between windows, new and existing, and render and seal joint with new paintable sealant.

Replace all lead sill covering to all windows as required to secure waterproofness. Remove internal sill stop bead and conceal fixing to existing lead covering. Refix stop bead.

Replace all defective or loose putty. Putty to be linseed oil and whitening of first quality manufactured to AS 1263 – Oil based putty. Carefully remove old putty so as not to damage existing stiles, rails and glazing bars. Repair joinery damaged. Prime rebates before reglazing.

Replace all broken or damaged glass. Preserve and reuse existing glass where possible.

**Patch** – Where an element is scheduled 'patch', check out defective areas to square section and glue, pin and clamp new patch into cavity. The new section is to fit tightly showing minimum evidence of patching. Timber colour, species and grain to match existing. Plane off and stop up.

**Splice on (or piece in)** – Where an element is scheduled 'splice on' or 'piece in', check out defective areas to form a scarf joint. Scarf on new piece of same cross section to original and securely glue, clamp and otherwise fix to ensure adequate bearing. Recess fixings and conceal. For example bolt heads and nuts to be concealed with timber patches.

**Matching Joinery** – Where scheduled 'to match existing', new elements shall do so exactly in outward appearance.

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The contractor is not expected to match things such as timber species construction methods etc. that are not exposed to view at completion.

**Existing Paint Finishes** – unless otherwise specified all existing paintwork to joinery shall be preserved and only cleaned off where necessary to effect a proper repair.

New glass to sashes, louvres and casements throughout is to be of approved manufacture free of air bubbles, blemishes and flaws of any description. Where not in contravention of BCA, glass to be clear float glass, thickness to match existing glazing in sashes to existing building. Provide expansion clearance for all glass in frames, sashes, etc. All timber rebates to be primed before glazing. Putty to be linseed oil. Glass in timber window sashes to be back puttied, sprigged and puttied in. All to match existing details.

Retain Timber Venetian Blinds record if necessary, check operation.

#### Frames

Generally remove existing window sashes and patch and reseal frame as necessary to provide secure operation of sashes.

Where scheduled reseat carefully remove frame and check over and replace grounds and other fixings as necessary.

Reinstall frame plumb and square to original details.

Where scheduled patch check out defective areas to square section and glue, pin and clamp new patch into cavity. Plane off flush and stop up.

Where scheduled replace remove existing and unless otherwise specified install new frame and sashes to match profile of original exactly. Provide all grounds, fixings to original detail.

Where scheduled relocate, dismantle frame, jamb or sashes together with architraves and install at new location nominated to match original details. Provide all necessary fixings to match original details.

#### Sills

Where scheduled replace sill, remove frame from masonry opening, brace and detach decayed sill from tenons of jamb linings. Check over frame and verify further defective elements (if any). Fit new sill to match details of original and reseal in masonry opening plumb and square. Unless otherwise specified refix existing architraves, mouldings and trims.

#### Sash

Generally, put in working order. Rehang and reglue as necessary.

Where scheduled put in working order, check over, ease and refit sashes replacing parting beads, stop beads and pocket covers as necessary to match existing.

Where scheduled re-glue sash, remove sash to shop, dismantle and replace members nominated in schedule. Glue, reassemble and clamp. Prime and reglaze using original glass.

Where scheduled rehang sashes, rehang sashes of first quality sash cord and existing weights.

Where scheduled replace sash, makeup new sash to match details exactly of existing sash or sash nominated. Unless otherwise specified salvage and reuse sash lifts and other hardware.

#### Hardware

Unless otherwise specified, butt hinges to be painted black galvanised steel. All to match original configuration or as nominated.

Hardware scheduled to be 'preserve', 'salvage' or 'set aside' shall on no account be interfered with except as scheduled. Should doors be taken off, hinges shall be reused together with the original handmade screws.

Where hardware is scheduled 'remove' patch door frame and doors at fixings.

Unless otherwise specified hardware schedule 'preserve' shall be cleaned off of old paint using methods which in no way damage the surface of the item.

Unless otherwise specified chrome surfaces are to be polished using a non-abrasive proprietary polish and a soft cloth. Lacquer is not to be used to preserve shine.

Where scheduled 'fit new', set aside existing patch windows as necessary. Install new hardware to manufacturer's specification.

New hardware to match original chrome hardware.

#### 4.3.8. Demolition

Archivally record all items to be demolished prior to demolition.

Where demolition of a window occurs, remove original joinery and stock pile for reuse  
Stock pile panelled timber doors, fanlights and architraves where demolished.

Where demolition of walls occurs, remove original joinery and stock pile for reuse

4.3.9. Subfloor

Inspect subfloor space as to adequate clearance under floor framing, adequate ventilation and condition of existing timber floor framing and underside of timber strip flooring and identify required maintenance. Seek instructions from the heritage architect as to the works required.

Involve an archaeologist in any works involving subfloor disturbance in areas that may contain occupation deposits. Occupation deposits should be retained in situ wherever possible and where disturbance is necessary to conserve the building, these deposits should be excavated under archaeological supervision.

Where structural strengthening of timber members is required, place new members in accordance with engineer's detail adjacent to original timber members to take the load. Retain original timber members in situ for interpretive purposes.

4.4. INTERNAL WORKS SCHEDULE		ESSENTIAL / DESIRABLE
ELEMENT	WORKS	
4.4.1. Floors	<p>Subfloor</p> <ul style="list-style-type: none"> <li>– Inspect under existing timber boards for original timber flooring.</li> <li>– Inspect sub-floor area and open sub-floor area to western side by removal of additions, concrete slab and lowering of ground levels.</li> <li>– Inspect floor framing for adequate clearance to the underside of the floor bearers. Clean out under floor space and remove soil where possible to achieve a minimum of 300mm clearance. Re-support or underpin existing piers as required. Install missing piers where required.</li> <li>– Inspect existing floor framing for dry rot and termite damage.</li> <li>– Repair and install additional floor framing in accordance with heritage architect’s instructions.</li> <li>– Secure all floor framing and ensure floor is firm without movement. Pack framing with non-compressible packing as required.</li> </ul> <p>Ground Floor Existing Timber Floor</p> <ul style="list-style-type: none"> <li>– Remove all existing floor coverings.</li> <li>– Provide access hatches to sub floor area if none is found. Retain flooring cut out to form new opening for the new access hatch. Trim opening to timber to match existing.</li> <li>– Seek instruction from the heritage architect as to location and number of access hatches to provide access to all areas of subfloor space.</li> <li>– Inspect sub floor space and clear out. Provide as much clearance under existing table framing as is practical.</li> <li>– Reconstruct brick piers where required and install missing brick piers as required.</li> <li>– Install new sub floor ventilation system and duct to exterior.</li> <li>– Check all timber floor framing and secure, all flooring is securely supported without movement pack framing with non-compressible packing as required</li> <li>– Notify architect of deteriorated framing members and seek instruction</li> <li>– Check all strip flooring. Retain and protect original strip flooring. Repair as necessary to match existing. Reserve loose boards with fixings to match existing. Punch and stop nails with putty colour matched to timber. Sand and polish existing timber flooring with spirit and bees wax</li> </ul>	<p>Essential</p> <p>Essential</p>
4.4.2. Walls	<p>Plaster and render</p> <ul style="list-style-type: none"> <li>– Retain and protect all existing plastered surfaces except where noted. Remove all loose and dummy plaster.</li> <li>– Remove all existing hardboard linings and battens.</li> <li>– Remove all cement based render and replace with lime render and set plaster to match existing.</li> <li>– Infill with lime render and set plaster to match existing finish.</li> <li>– Rake out all existing cracks to solid surrounds.</li> <li>– Repair and reconstruct to original finish as necessary.</li> <li>– Consolidate plaster wall surfaces with a modified acrylic consolidant.</li> </ul>	Desirable

ELEMENT	WORKS	ESSENTIAL / DESIRABLE
	<ul style="list-style-type: none"> <li>– Repair cracks with plaster of similar strength and consistency.</li> </ul>	
	<p>Timber lining</p> <ul style="list-style-type: none"> <li>– Remove all timber hardboard lining sheets to existing timber framed walls and plaster walls and associated non-original framing or battens.</li> <li>– Inspect exposed timber framing for deterioration. Seek instruction from heritage architect as to work required.</li> <li>– Reconstruct timber framing as required. Retain original framing insitu and install new members required to augment existing framing.</li> <li>– Install timber lining boards to all timber framed walls where no lining exists after removal of hardboard sheeting. New timber boards to be primed to all sides prior to installation and to match existing reeded boards in G.04 (west wall).</li> <li>– Install thermal insulation to wall cavity.</li> <li>– As no skirtings are to be used ensure a tight fit between timber lining boards and existing flooring.</li> </ul>	Desirable
	<p>Non-original walls</p> <ul style="list-style-type: none"> <li>– Remove existing timber framed walls and linings between rooms G.02/G.03, G.01/G.04, G.01/G.06 and make good to adjacent walls and floor.</li> </ul>	Desirable
	<p>New internal walls</p> <ul style="list-style-type: none"> <li>– New infill external wall to former opening GD.06 to be lined with timber lining boards to match G.04 (west wall)</li> </ul>	Desirable
	<p>Original timber lined walls</p> <ul style="list-style-type: none"> <li>– Retain and protect existing timber lined wall to existing G.04 (west wall). Repair boards as required to match existing.</li> <li>– Retain and protect existing timber lined wall between G,01 and G02 above existing brickwork.</li> <li>– Collect existing timber lining boards which have been removed to form an opening between ceiling space to G.01 and G.04 that are currently loose on the ceiling framing and reinstate to former vertical location. Make good any infill required to match existing.</li> </ul>	Desirable
4.4.3. Ceiling	<p>General</p> <ul style="list-style-type: none"> <li>– Demolish all existing false ceiling linings to G.01, G.02, G.03, G.04, G.05 and G.06.</li> <li>– Demolish all existing timber framing to false ceilings to G.02 and G.03.</li> <li>– Demolish existing framing to G.01, G.04, G.05 and G.08 but retain 3/no existing tie beams (refer to drawings). Carefully remove 2/no former tie beams and reinstall to former location (to align with the beams).</li> </ul> <p>Original ceiling</p> <ul style="list-style-type: none"> <li>– The original timber board ceiling is still extant over existing rooms G.01, G.04, G.05 and G.06 in the current ceiling void. Retain and protect existing timber board ceiling linings.</li> <li>– Inspect ceiling lining boards and identify any deterioration due to dry rot or termites. Seek instructions from heritage architects as to the required works.</li> </ul>	Desirable
		Essential

ELEMENT	WORKS	ESSENTIAL / DESIRABLE
	<ul style="list-style-type: none"> <li>– Reinstate/infill any necessary boards to match existing.</li> <li>– Reinstate any missing trims or beads including trim board the opening to the roof ventilator.</li> <li>– Install a removable timber framed mesh hatch to roof ventilator (over).</li> </ul>	
4.4.4. Fixtures and fittings	<ul style="list-style-type: none"> <li>– Retain existing timber fireplace surrounds mantels hearths and wood store to G.01.</li> <li>– Remove existing infills or doors.</li> <li>– Remove timber lining to fireplace to G.02 and reconstruct hearth as required.</li> <li>– Inspect fireplaces. Repair and reconstruct as necessary to original detail.</li> <li>– Repair or reconstruct hearth to original detail as necessary.</li> <li>– Clean all brickwork to hearths.</li> </ul>	Desirable
4.4.5. Services	<p>General</p> <ul style="list-style-type: none"> <li>– Chasing of walls for new electrical cables in brickwork is not permitted.</li> <li>– Remove all exposed conduits, services and make good.</li> <li>– Locate all light switches and general power outlets only on timber framed walls with all conduits and cables concealed in wall framing. Do not locate outlets and switches on masonry walls.</li> <li>– Locate all new lights as pendants/surface mounted lights on timber lined ceiling to G.01. All conduits and cables to be concealed in ceiling framing.</li> <li>– Locate all new lights as pendants/surface mounted lights on timber roof framing to G.02. All cabling to be located and in painted galvanised steel conduits attached to the side of framing. Paint to a colour similar to timber framing.</li> <li>– New Light fittings to verandah to be attached to ceiling framing. Conceal cabling to top free of framing.</li> </ul> <p>Electrical main switch board</p> <ul style="list-style-type: none"> <li>– Remove existing external cabinet and surface mounted conduits.</li> <li>– Locate main electrical switch board in location to be determined by the heritage architect on site to the west elevation of the building. All cables and conduits to be concealed in wall framing.</li> </ul>	Desirable
4.4.6. Doors	<p>DG.02</p> <ul style="list-style-type: none"> <li>– Remove existing doorset, frame and architrave.</li> <li>– Install new timber boarded door and frame to detail.</li> <li>– Install hardware to detail.</li> </ul>	Desirable
4.4.7. Windows	<ul style="list-style-type: none"> <li>– Remove all existing architraves to windows.</li> <li>– Install new timber sill and architraves to detail (interpretative as original detail not extant).</li> </ul>	Desirable



4.5. MAINTENANCE PROGRAM

This Maintenance Program has been prepared to ensure the long term protection of the fabric, and is based on cyclical inspection monitoring and recording of the condition of the fabric.

4.5.1. External

BUILDING ELEMENT	ANNUAL	2 YEARS	5 YEARS	10-15 YEARS
Render	Inspect for grime, growth from joints, bird excretion and termite activity. Check wall ventilators and damp proof courses are not covered with soil or rubbish.		Inspect for loose, fretted, broken or missing mortar joints to stones around windows, doors, along flashings and cornices and other projections. Inspect for signs of delamination, crumbling, surface salts, rising or falling damp.	
Timber	Inspect for grime, growth from joints, bird excretion and termite activity. Check wall ventilators and damp proof courses are not covered with soil or rubbish.		Inspect for loose and missing weatherboards, corner stops and mouldings, fascias and barge boards. Check around ground line and sills for weathering. Rectify.	
Door joinery		Inspect for loose, damaged jambs, mouldings, thresholds. Clean. Minor repairs. Inspect for loose jambs, decay at the threshold. Check door joints firm and mouldings intact. Replace broken or cracked glass or putty. Check operation of doors and hardware.	Inspect, repair and touch up.	

BUILDING ELEMENT	ANNUAL	2 YEARS	5 YEARS	10-15 YEARS
Window joinery		Inspect for loose, damaged mouldings, architraves, sills and sashes. Check putty and glazing. Clean. Minor repairs. Inspect for loose or damaged mouldings, architraves, decayed stiles at sill level, weathered sills, loose or decayed sash joints and broken or cracked glass or putty. Check operation of windows and hardware.	Inspect, repair and touch up.	
Painted finishes		Inspect for deterioration and weathering. Clean. Minor repairs. Inspect for paint deterioration and weathering. Repaint as required.	General painting externally.	General painting internally.
Roof	Remove rubbish and leaves. Inspect for loose or raised fixings, sheet edges deformed surfaces, cracked joints.	Clean. Minor repairs.	Inspect, repair and touch up. Inspect for loose or raised fixings, sheet edges and surfaces that are deformed or rusted. Check for dissimilar metals at flashings.	Replace when necessary.
Flashings / cappings	Inspect for loose raised fixings and displacement.	Clean. Minor repairs. Inspect for loose or raised fixings, cappings that have lifted, slipped or are deformed.	Inspect, repair and touch up.	Replace when necessary.

BUILDING ELEMENT	ANNUAL	2 YEARS	5 YEARS	10-15 YEARS
Roof Drainage: Gutters / Downpipes Dishdrains and sumps	Inspect. Clear. Check water falls to outlets. Ensure leaf guards to outlets, rainwater heads and sumps sit correctly and are clear of debris. Check if downpipes are connected to the stormwater system. Check that stormwater drains are not blocked.	Clean. Minor repairs. Inspect for rust stains, growth, rust around downpipes and outlets. Inspect gutter and downpipe joints for cracks, deformation, loose or missing brackets.	Inspect, repair and touch up.	Replace when necessary.
Eaves	Inspect	Clean. Minor repairs.	Inspect, repair and touch up.	
Structure			Check timber members secure and true. Inspect for cracks in masonry and masonry straight and true. Inspect for signs of rust in steel. Check fixings secure.	

4.5.2. Internal

BUILDING ELEMENT	ANNUAL	2 YEARS	5 YEARS	10-15 YEARS
Walls	Normal cleaning	Inspect for cracking, water penetration indicators	Repair as necessary. Touch up	Repaint as required.
Timber floors	Normal cleaning	Inspect	Repair as necessary. Touch up.	
Ceilings and exposed framing	Normal cleaning	Inspect	Repair as necessary. Touch up.	
Joinery	Normal cleaning	Inspect	Repair as necessary. Touch up.	
Fittings & Fixtures	Normal cleaning		Repair as necessary. Touch up.	
Finishes	Normal cleaning	Inspect. Touch up.	Repair as necessary. Touch up.	Renew as necessary.

4.5.3. Building Services

BUILDING ELEMENT	ANNUAL	2 YEARS	5 YEARS	10-15 YEARS
Electrical	Inspect. Repair parts as necessary. Certify.		Periodic replacement of life-cycle parts as programmed.	
Fire Protection	Inspect. Repair parts as necessary. Certify.		Periodic replacement of life-cycle parts as programmed.	
Stormwater	Inspect for dish drains and sumps blocked with rubbish, leaves or silt. Ensure gullies and sump gratings are operable.			