



# Fabric Survey

R.D Watt Building, Science Road, University of  
Sydney

June 2016

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# 1 Introduction

## 1.1 BACKGROUND

Urbis has been engaged by Lend Lease (on behalf of the University of Sydney) to prepare the following Fabric Survey for the R.D Watt Building, located within the University of Sydney, Camperdown Campus (herein referred to as the 'subject site').

The University of Sydney proposes to undertake alterations to the RD Watt Building, in conjunction with the construction of a new Faculty of Arts and Social Sciences (FASS) Building to the north of the RD Watt building. Approval for the works will be subject to assessment and determination of the State Significant Development Application (SSD7081) to the Department of Planning.

The R.D Watt building is a listed heritage item under schedule 5 of the City of Sydney Local Environmental Plan 2012 (Item No. 174) and is also listed on the University's Section 170 Register.. The subject site is also located within the University of Sydney' Heritage Conservation Area (C5) as listed under the LEP. It is also noted that the Camperdown campus of the university has been nominated to the State Heritage Register; the outcome of which is pending.

This Fabric Survey is required in conjunction with the University of Sydney Campus Improvement Program (CIP) 2014-2020 Conditions of Consent, specifically condition B12 which states:

**Condition B12:** *Future development applications (where relevant) for new built form shall include a building fabric survey, for a comprehensive understanding of condition, and the requirement for conservation and repair of the following buildings...b) RD Watt Building (A04)*

*The building fabric survey must include a façade condition survey and a schedule of internal and external conservation and repair works.*

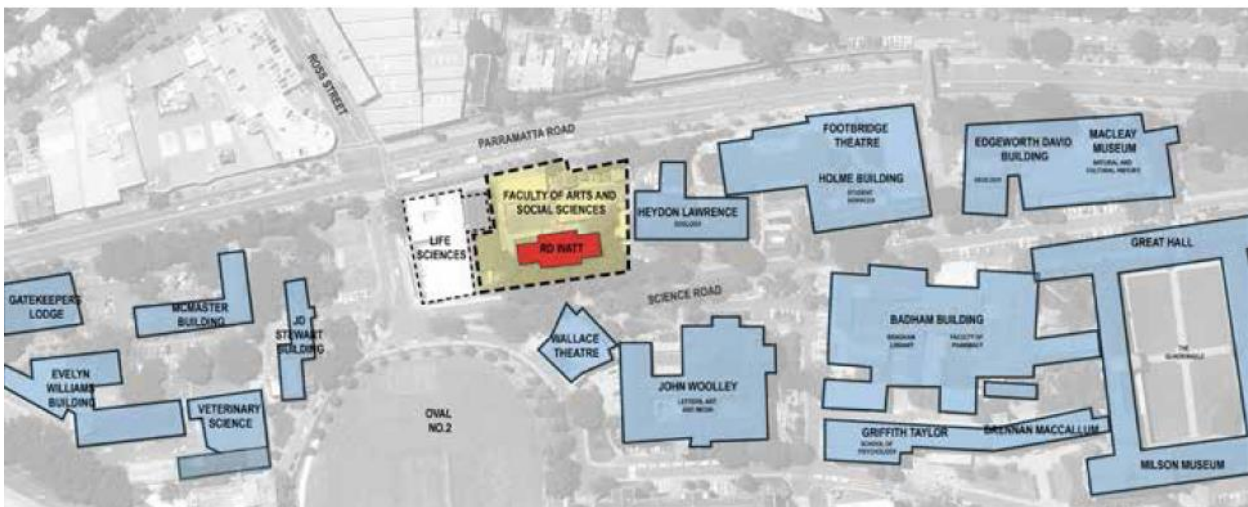
## 1.2 SITE LOCATION

The subject site is located on the Parramatta Road frontage of the main University campus, east of the Parramatta Road/ Ross Street entry (Figure 1). The subject site includes the adjacent R.D Watt Building (to the south of the site), which has a primary frontage to Science Road. The site is also in proximity to noted campus buildings including the Heydon Laurence building (to the east) and the J.D Stewart building (to the west). The site is also located to the northeast of Oval no.2.

FIGURE 1 – LOCATION OF THE SUBJECT SITE IN THE CONTEXT OF THE UNIVERSITY CAMPUS



SOURCE: ARCHITECTUS



SOURCE: ARCHITECTUS

### 1.3 METHODOLOGY AND LIMITATIONS

The R.D Watt building is subject to a Conservation Management Plan, prepared by Clive Lucas Stapleton and Partners (CLS&P) in 2005. This report references the CMP and significance assessment therein.

This Fabric Survey has been prepared following various site inspections of the RD Watt Building in May and June 2016. All external investigations were limited to inspection from the ground level. Roof access was limited to the northern elevation roof terrace only.

Investigation is based on visual inspection only, no intrusive investigations were completed. This schedule was prepared in conjunction with the architectural design and only covers remnant historic

fabric that is proposed to be retained. It does not cover any fabric (historic or contemporary) that is proposed for removal or demolition within the architectural drawings.

## 1.4 AUTHOR IDENTIFICATION

The following report has been prepared by Fiona Binns (Associate Director). Stephen Davies (Director) has reviewed and endorsed its content. Unless otherwise stated, all drawings, illustrations and photographs are the work of Urbis.

## 1.5 THE PROPOSAL

The University of Sydney proposes to undertake alterations to the RD Watt Building, in conjunction with the construction of a new Faculty of Arts and Social Sciences (FASS) Building to the north of the RD Watt building. Associated works to the RD Watt building include the following:

### General works

- Amendments for BCA compliance including
  - Relocating the Electrical Distribution Boards (EDB) in the main stair hall;
  - Amendments to the stair balustrade for BCA compliance;
  - Provision of new dropped ceilings in the main hall to provide for services above;
  - Potential upgrade of existing sprinkler system;
- Amendments for DDA including:
  - Construction of a lift for equitable access (this includes removal of some sections of timber flooring and provision of a concrete floor and lift structure);
- Removal of redundant services (e.g. drenchers) to the rear northern façade and rationalisation of downpipes;
- Provision of a new awning, connecting the entry to the adjacent FASS building and the proposed reception area (within RD Watt);

### Ground Floor/ Basement (RD Watt Level 1 Plan)

- Provision of bike storage facilities within the 'basement' utility area incorporating new door openings to the northern ground floor façade;
- Internal modifications to rooms and room layouts to provide for new lecture theatres, meetings rooms etc;
- Conversion of the former lecture room 109 as a new reception and registration area (incorporating interpretation of the former function in the fitout) and provision of a new opening in the northern façade (converting an extant window);
- Provision of a new accessible WC and retention of the extant women's and men's lavatories;

### First Floor/ RD Watt Level 2 Plan

- Internal modifications to rooms and room layouts to provide for new lecture theatres, meetings rooms etc;

### Second Floor/ RD Watt Level 3 Plan

- Internal modifications to rooms and room layouts to provide for new common room and delegates lecture room;

### Third Floor/ RD Watt Level 4 Plan

- Internal modifications to rooms and room layouts to provide for new facilities (locker room and kitchenette, store and new accessible WC);

### Fourth Floor/ RD Watt Level 5 Plan

- Internal modifications to rooms and room layouts to provide for new facilities study rooms;

## 2 Fabric Survey

### 2.1 GUIDELINES

The following guidelines shall be followed in undertaking this schedule of works.

- All conservation and maintenance works should be carried out with a cautious approach to change; i.e. *to do as much as necessary to care for the place and to make it useable, but otherwise change it as little as possible so that its cultural significance is retained.*
- Any new work and/or materials shall be readily identifiable.
- Only responsible and competent tradespeople experienced in heritage work and traditional materials and methods shall undertake the works.
- All conservation works shall match the standard of the best existing adjacent work.
- The specifications for stonework and brickwork provided shall be followed in undertaking any conservation works on the building.
- Any works shall not detrimentally affect the building's significant fabric.
- A record of all works, including description of the work (methods and materials) and date of completion, shall be provided to the Architect/Building Manager.

Note: All works in this schedule is for the existing heritage fabric and elements that are to be retained.

### 2.2 ABBREVIATIONS

The following abbreviations are used in the Schedules.

#### **Abbreviations**

TFD: To future detail

TME: To match existing

TMO: To match original in size, material, profile and finish

TBS: To be specified

### 2.3 CONDITION

The following condition description was prepared subsequent to the site inspection in April 2016.

The physical condition of the building is generally good. The building shows normal signs of use for a building of this age and has clearly been maintained appropriately throughout its life. It does however require investigation and remediation of damp and associated repairs.

Where condition is noted in the following section 2.7, Table 4, condition is defined as per the condition rating table at Table 1.

TABLE 1– CONDITION RATING TABLE

CONDITION	DESCRIPTION
1 – Excellent	Element has no defects. Condition and appearance are as stable and not deteriorating.
2 – Good	Element exhibits superficial wear and tear, minor defects, minor signs of deterioration to surface finishes, but does not require major maintenance. No major defects exist.
3- Fair	Element is in average condition. Deteriorated surfaces require attention. Services are functional but require attention. Deferred maintenance work exists.
4- Poor	Element has deteriorated badly. Serious structural problems may exist. General appearance is poor with eroded protective coatings. Elements are defective, services are frequently failing, significant number of major defects exist.
5 – Very Poor	Element has failed. It is not operational and is unfit for occupancy or normal use

## 2.4 SIGNIFICANCE OF FABRIC

Where significance is noted in the below survey (section 2.6), gradings are as per the Conservation Management Plan for the building. Any omissions are also omitted from the CMP.

### 2.4.1 R. D WATT BUILDING

The following summary statement of significance for the RD Watt Building has been sourced from the 2005 CMP for the site<sup>1</sup>:

*The RD Watt Building, designed in 1912 by the NSW Government Architect's Office, is an excellent intact Edwardian Arts and Crafts style building with some rare Art Nouveau style features, built to house the newly-established School (later Faculty) of Agriculture at the University of Sydney and reflects the historical circumstances of the 1890s drought and recession which caused the School to be established. Associated with numerous agricultural scientists of note, including RD Watt, foundation professor of Agriculture, and WL Waterhouse (known for his development of a wheat strain resistant to rust), the building continues to be held in high esteem by Faculty of Agriculture staff and students. The portico of the RD Watt Building makes a notable contribution to the streetscape of Science Road at its western end.*

### 2.4.2 GRADINGS OF SIGNIFICANCE

The CMP further recognises the following notable spaces of architectural interest and numerous elements notable for their architectural/technical interest including<sup>2</sup>:

- Central stair, with unusual clear spanning stair flights
- Lecture Theatre (R109).
- Brick and stone facade including gables, gargoyles, chimneys, and weather vane
- Some surviving original metal-framed windows

<sup>1</sup> Clive Lucas Stapleton and Partners, 2005, RD Watt Building, University of Sydney, Conservation Management Plan, pg 43

<sup>2</sup> Ibid 42

- Portico
- Attic stair
- Entrance and internal door cases
- Roof framing
- Surviving roof flashings and rainwater goods
- Original curved glass toilet window ventilators
- Chimney in Common Room (R202); although not in its original position (possibly relocated from Professor's Office, R102).

The components of the place can be ranked in accordance with their relative significance as a tool to planning. Heritage Assessments (NSW Heritage Office, 1996, amended August 2000) identifies the following grades of significance:

TABLE 2 – DEFINITIONS OF SIGNIFICANCE

GRADE	JUSTIFICATION	STATUS
Exceptional	Rare or outstanding item of local or state significance. High degree of intactness. Item can be interpreted relatively easily	Fulfils criteria for local or state listing.
High (1)	High degree of original fabric. Demonstrates a key element of the item's significance. Alterations do not detract from significance.	Fulfils criteria for local or state listing.
Moderate (2)	Altered or modified elements. Contains elements with little heritage value, but which contribute to the overall significance of the item.	Fulfils criteria for local or state listing.
Little (3)	Alterations detract from significance. Difficult to interpret	Does not fulfil criteria for local or state listing
Intrusive (4)	Damaging to the item's heritage significance	Does not fulfil criteria for local or state listing

The following significance rankings are included for reference and have informed the conservation schedule provided in section 2 below.

TABLE 3 – RELATIVE SIGNIFICANCE FOR EXTERNAL ELEMENTS (AS DEFINED IN THE CMP)

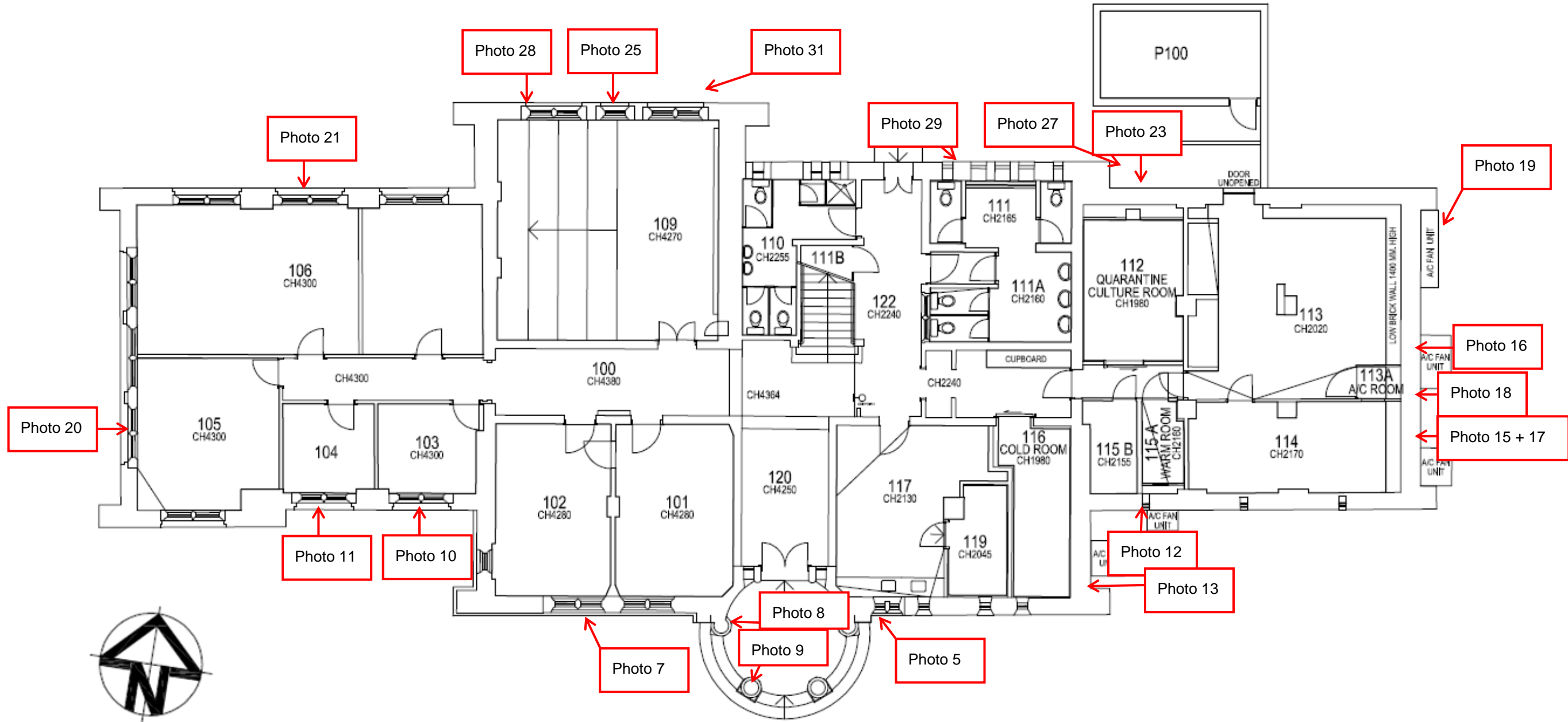
DESCRIPTION	SIGNIFICANCE RANKING
Brick and stone facades	2
Original and reproduction steel framed and leadlight window assemblies	2
Original timber framed door assemblies	2
Decorative stone and brickwork parapets, gable ends, chimneys	1
Stone and copper portico	1

Carved stone crests and gargoyles	1
Original copper rainwater heads	1
Metal downpipes and downpipe brackets	3
Roof eaves, including exposed rafters and boarding	2
Original eaves gutters	2
Replacement eaves gutters	3
Replacement aluminium windows	3
Decorative stone tracery and Coat of Arms	2
String courses, window mullions and transoms	2
Wormells fire hydrant system	3
Tile hung gable, gable timbers, copper clad giant finial and terminating finial feature	1
Safety handrails to roof of west wing	3
Bricked up upper windows to east and west elevations	4
Exposed sprinkler plumbing	3
Exposed plumbing on north elevation	3
Alterations to steel framed windows (including removal of glazing bars)	4
Bridge to McMillan Building (note that only the door remains extant)	3
Glass ventilation panels to men's lavatory windows	1
Package air-conditioning units through original windows	4
Alterations to windows of women's lavatory	4
Condensers to package air-conditioning units around base of building	4
Remains of service enclosures at base of east elevation	4
Alteration to north elevation	4
Access to bridge	3
Replacement window assemblies, where imitation leadlight stripping has fallen off	4

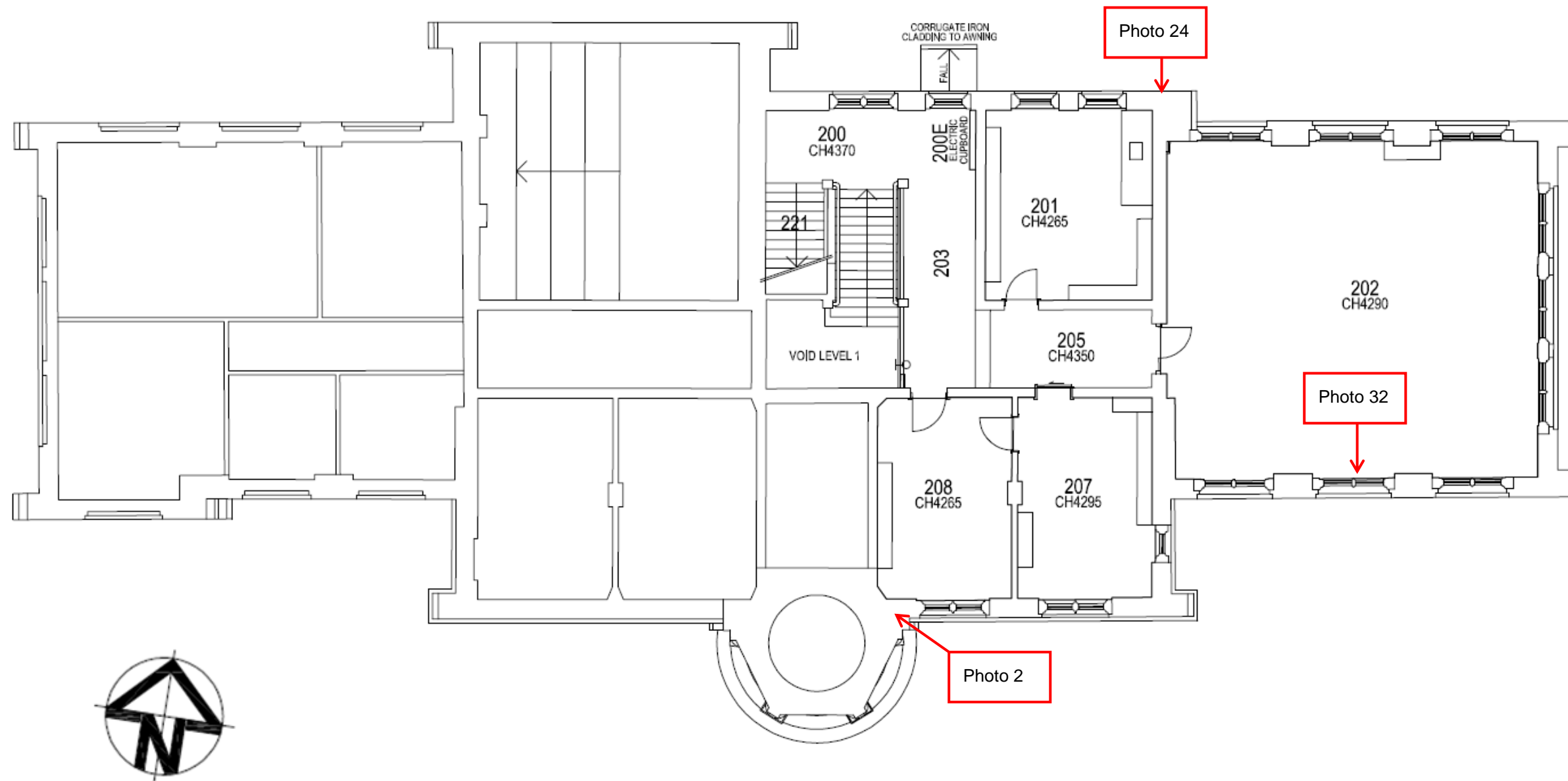
## 2.5 KEY PLANS

Current site plans are provided below for reference

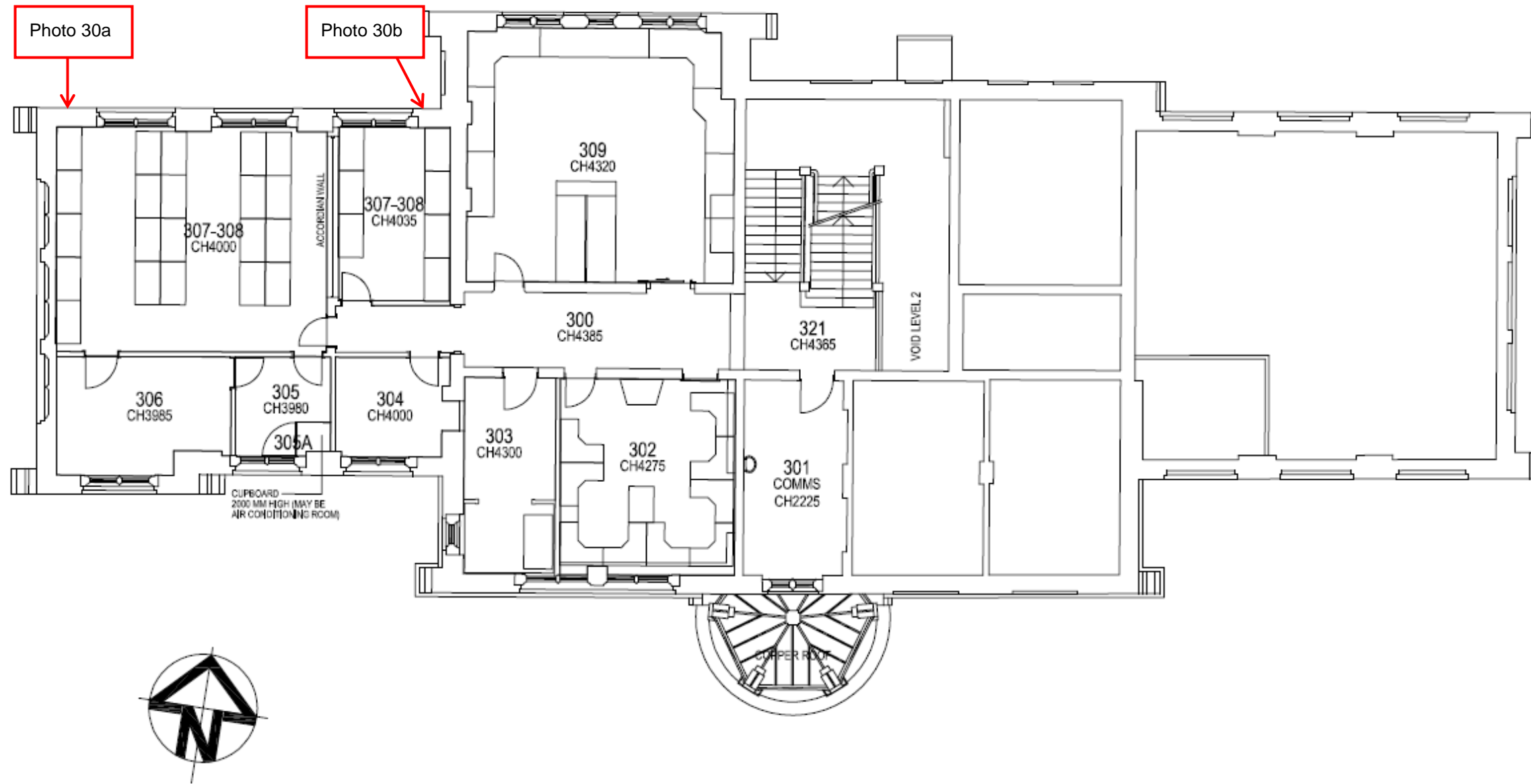
FIGURE 2 – FLOOR PLANS



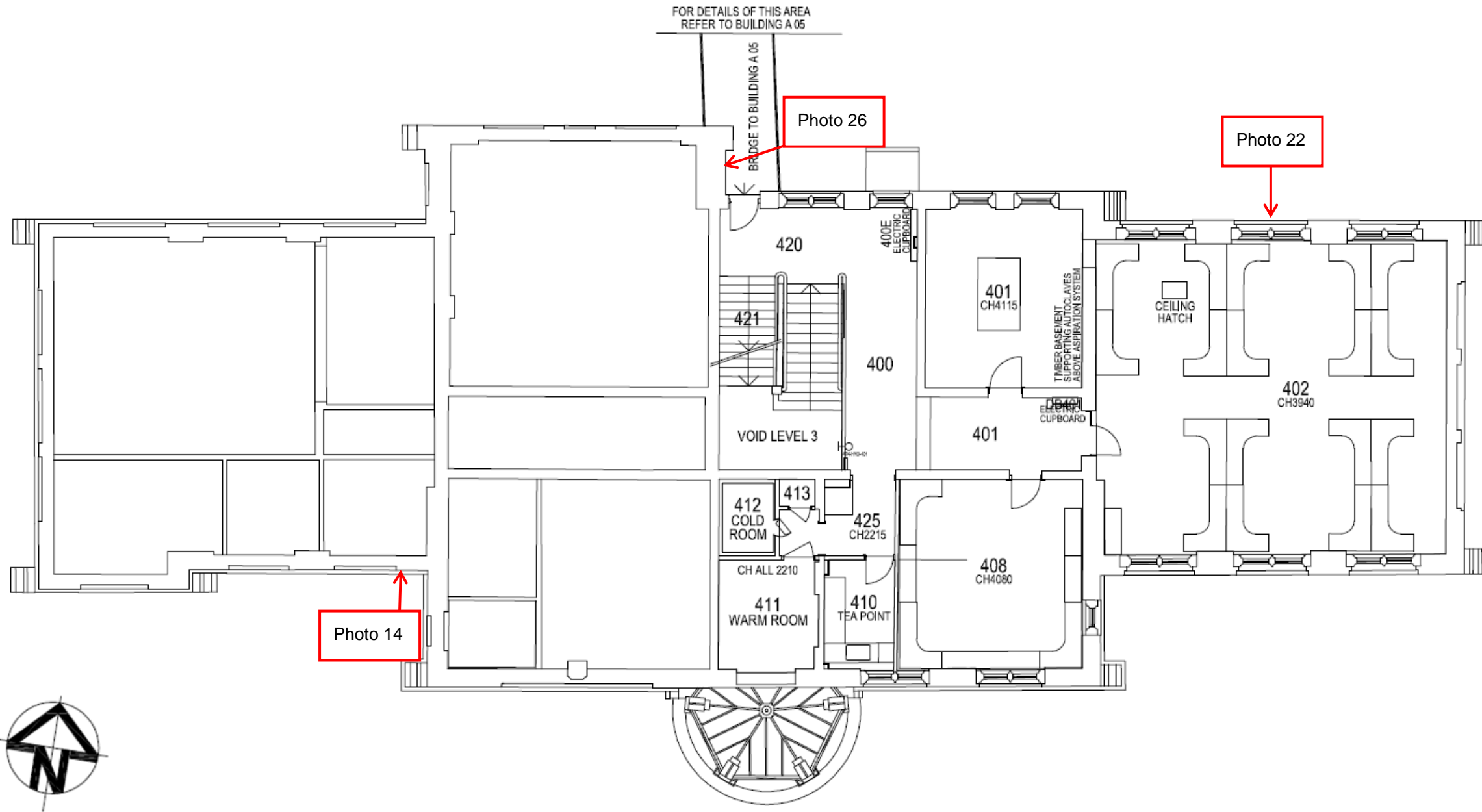
PICTURE 1 – GROUND FLOOR PLAN  
SOURCE: ARCHITECTUS



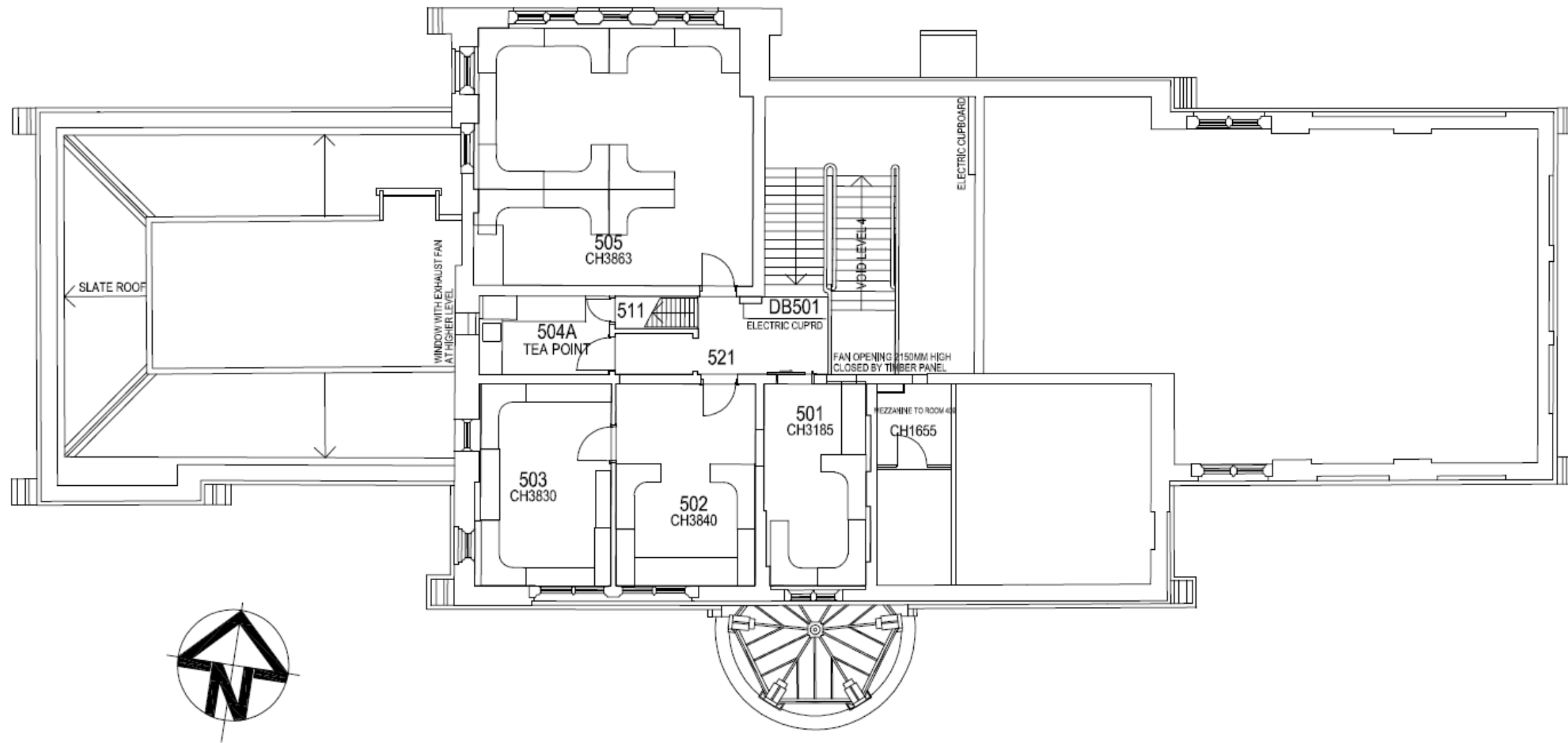
PICTURE 2 – LEVEL 1 PLAN



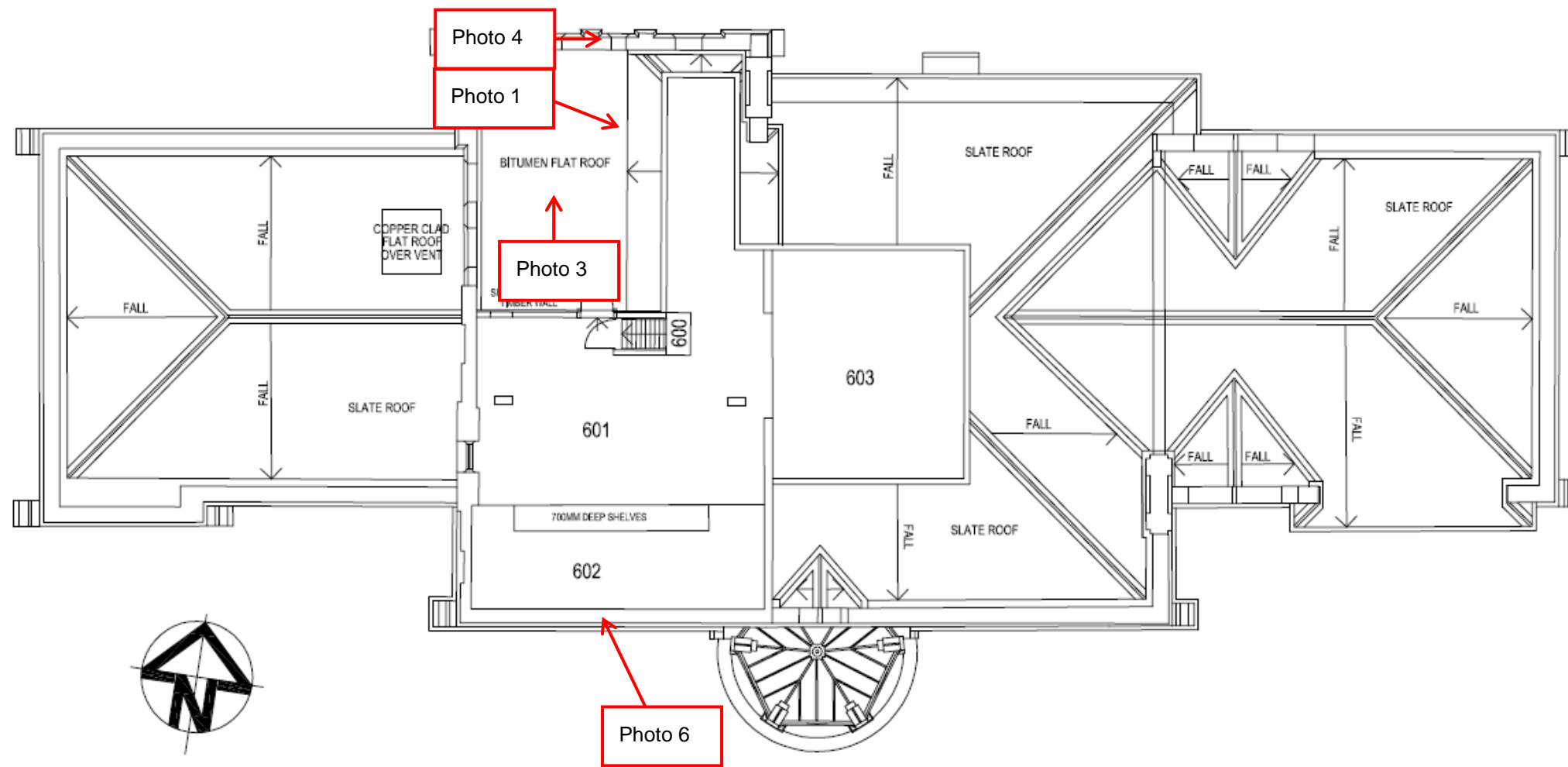
PICTURE 3 – LEVEL 2 PLAN



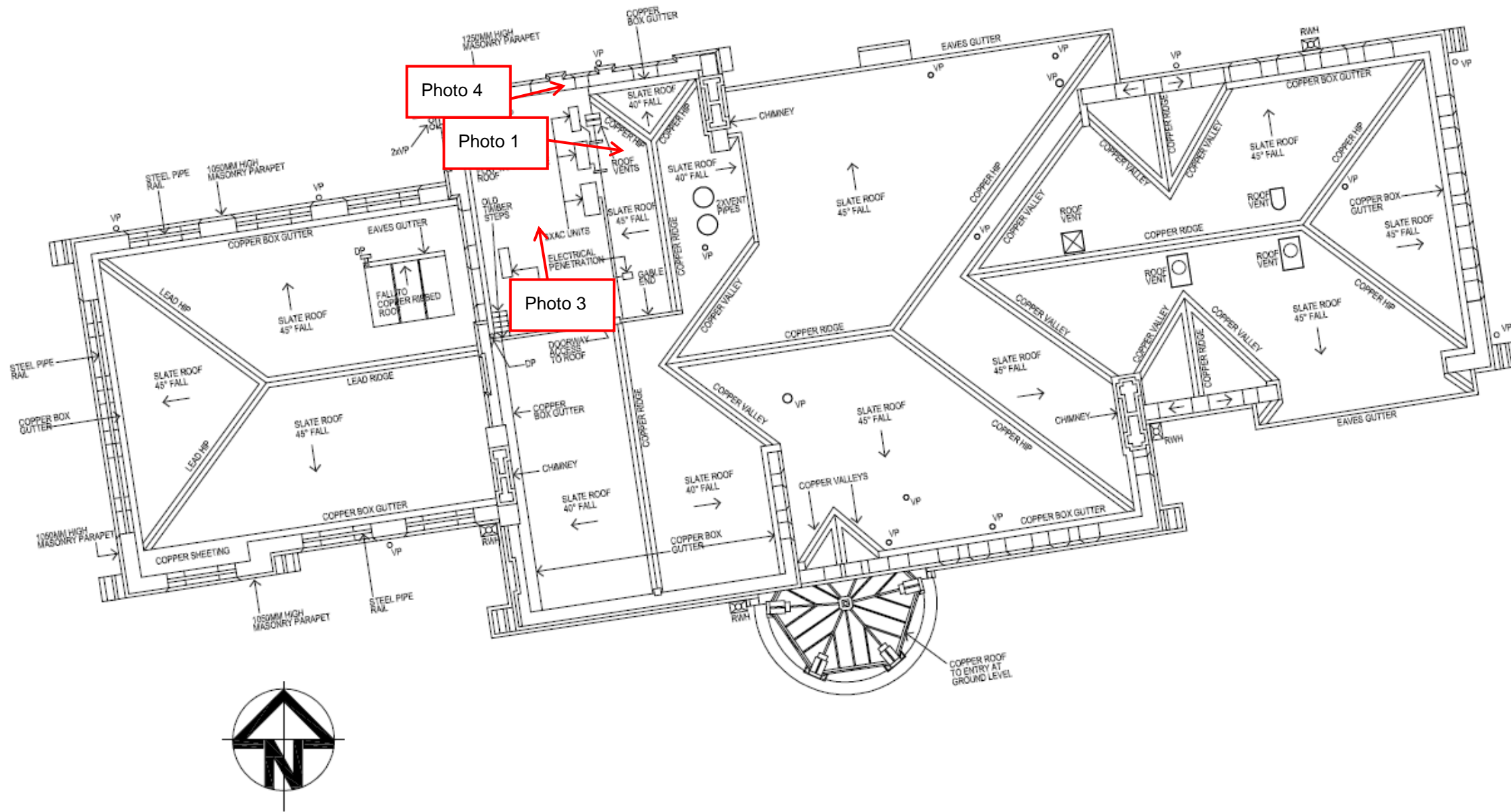
PICTURE 4 – LEVEL 3 PLAN



PICTURE 5 – LEVEL 4 PLAN



PICTURE 6 – ATTIC AND ROOF PLAN



PICTURE 7 –ROOF PLAN

FIGURE 3 – ELEVATIONS



**Key**  
 10 Photo No.



A04-1057

ISSUE	AMENDMENT	DATE
R.D.WATT BUILDING: EXTERNAL REFURBISHMENT		
for the University of Sydney		
ARCHITECTS & PLANNERS HOWARD TANNER & ASSOCIATES PTY. LTD. 52 Albion Street Surry Hills NSW Australia 2010 Telephone (02) 281 4399 Fax (02) 281 4337		
DRAWING: FACADE SERVICES REPAIRS & SCOPE OF WORK		
SCALE 1:100	DATE AUGUST 1993	
DRAWN PN	CHECKED <i>[Signature]</i>	
JOB NUMBER 930120	DRAWING NUMBER A06	

PICTURE 8 –ELEVATION WITH PHOTO LOCATIONS CORRESPONDING T THE IMAGES IN THE BELOW PHOTO SURVEY



## 2.6 FABRIC SURVEY



The following survey outlines required conservation works. Strategies and actions that are single actions have been prioritised in the following table as follows:




- Current works: being conservation works that are required to be undertaken as part of the current program of works;
- High priority works: being works that should ideally be undertaken within the next two to four years;
- Medium priority works: being works that should be undertaken within the next four to six years; and
- Low priority works: works that should be undertaken within the next six years.




As part of this application, the University commits to undertaking those works identified in the Conservation Schedule as 'Current Works'. All other items identified will inform the ongoing conservation and maintenance works for RD Watt.




TABLE 4– FABRIC SURVEY

ITEM #	ELEMENT	SIGNIFICANCE	CONDITION	DESCRIPTION OF ELEMENT AND RECOMMENDATION	PRIORITY	IMAGE/ ADDITIONAL COMMENTS
1.0 Roof						
1.1	Covering		<p><u>Slate:</u></p> <p>West: Good (recently replaced)</p> <p>Centre: Poor</p> <p>East: Poor</p> <p><u>Gutters and Valleys</u></p> <p>Centre: Leaking</p> <p>East: Leaking</p> <p>Fair (copper roofing to entrance portico)</p>	<p>Welsh slate with copper/ muntz metal ridge and hip covering. Indications of patching of the slates and some delamination of the slates. Less than 15 years for slate. Gutters and valleys are leaking.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> <li>• Allow to inspect at roof level. Undertake inspection of roof and allow for partial replacement of roofing as required</li> </ul> <p>Muntz decorative roof over circular entrance porch. The roof to the entrance portico has allowed entry of water to the stonework below (refer to South Elevation stonework below).</p> <p>Recommendation:</p> <ul style="list-style-type: none"> <li>• Undertake inspection of the copper porch roof, stepped flashings and gutter – allow for replacement of flashings or gutters subject to further assessment.</li> <li>• Allow to clean out gutters</li> <li>• Poison and remove fig tree</li> </ul>	<p>Current</p> <p>Current</p>	 <p>Photo 1: View of the northern hipped roof showing patched slates, copper ridge capping and terracotta shingled gable end</p>  <p>Photo 2: Detail of the copper porch roof – check over flashings.</p>




ITEM #	ELEMENT	SIGNIFICANCE	CONDITION	DESCRIPTION OF ELEMENT AND RECOMMENDATION	PRIORITY	IMAGE/ ADDITIONAL COMMENTS
1.2	Roof Terrace	Safety handrails to roof of west wing – Little (3)	Good.	<p>Flat bitumen roof. Generally appears in good condition.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> <li>Remove plant and connect building A/C to FASS building.</li> <li>Make good after removal of condensers</li> <li>Remove redundant services</li> </ul>	Current	 <p>Photo 3: View of the roof terrace</p>
1.3	Chimneys	High (1)	Fair	<p>Face brick with stone cappings. Some stone capping shows deterioration.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> <li>Allow to inspect at roof level. Allow to repair/ replace stone capping (where required). New lead capping for chimney top</li> <li>Allow to repoint open brick joints</li> </ul>	<p>Current (capping)</p> <p>Low (repointing)</p>	 <p>Photo 4: View of the rear chimney.</p>
1.4	Roof plumbing	<p>Original eaves gutters – moderate (2)</p> <p>Replacement eaves gutters – little (3)</p>	Fair	<p>Copper/ muntz metal ridge cappings with lead stepped flashings at chimneys, Box gutter concealed behind crenelated parapet. Copper eaves gutters. Possible leaks. Rot in soffits.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> <li>Allow to inspect all cappings and flashings at roof level as well as concealed box gutters and eaves gutters.</li> </ul>	Current	
1.5	Eaves	<p>Tile hung gable, gable timbers, copper clad giant finial and terminating finial feature – High (1)</p> <p>Roof eaves - Moderate (2)</p> <p>Original eaves gutters – moderate (2)</p>	Good	<p>Exposed timber rafter ends, with timber boarding above. gable end has terracotta shingles with a timber fascia (North and south elevations)</p> <p>Recommendation:</p> <ul style="list-style-type: none"> <li>Allow to inspect at roof level.</li> <li>Check terracotta shingles for watertightness</li> <li>Sand down and repaint rafter ends.</li> <li>Allow to inspect soffits and replace rotted timber boarding (where required)</li> <li>Sand down and repaint timber fascia to gable ends</li> </ul>	Current	


ITEM #	ELEMENT	SIGNIFICANCE	CONDITION	DESCRIPTION OF ELEMENT AND RECOMMENDATION	PRIORITY	IMAGE/ ADDITIONAL COMMENTS
		Replacement eaves gutters – little (3)				
2.0 South Elevation						
2.1	Stonework	<p>Stone and copper portico – High (1)</p> <p>Carved stone crests and gargoyles (1)</p> <p>Brick and stone facades - Moderate (2)</p> <p>Decorative stone tracery and Coat of Arms – Moderate (2)</p> <p>String courses, window mullions and transoms – Moderate (2)</p>	<p>Good</p> <p>Good</p> <p>Fair/ Poor</p> <p>Good/ fair</p>	<p>Random pattern sandstone ashlar coursing at the low level. Generally good condition, evidence of damp and algal growth,</p> <p>Recommendation:</p> <ul style="list-style-type: none"> <li>Investigate damp and determine remediation required. This may include provision of additional drainage and landscaping works</li> </ul> <p>Dressed and rubbed sandstone window frames including transoms and mullions. Generally in good condition, some evidence of damp and algal growth to sills.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> <li>Investigate damp</li> <li>Allow to repoint open joints</li> </ul> <p>Dressed and rubbed sandstone cornice below crenelated parapet with ornate sandstone carvings. Cornice shows considerable damp/ salt activity and deterioration.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> <li>Allow for close inspection of carvings to determine degree of deterioration and remedial work required. This may include patching cornice with synthetic stone.</li> </ul> <p>Crenelated dressed sandstone parapet wall.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> <li>Allow to repoint open joints</li> </ul>	<p>Current</p> <p>Current (investigation)</p> <p>High (repoint)</p> <p>Current</p> <p>Current</p>	 <p>Photo 5: Evidence of damp and moss growth to lower stonework</p>  <p>Photo 6: Detail of the cornice</p>  <p>Photo 7: Detail of dressed stone windows and lower level ashlar</p>



ITEM #	ELEMENT	SIGNIFICANCE	CONDITION	DESCRIPTION OF ELEMENT AND RECOMMENDATION	PRIORITY	IMAGE/ ADDITIONAL COMMENTS
			Fair	<p>Dressed and rubbed sandstone columns to entry porch in good condition, arches and walling to entry porch. The interior stonework of the porch shows extensive deterioration, with salt activity, spalling and fretting of stone caused by water leakage from porch roof above. External stonework and buttresses show evidence of damp.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> <li>• Investigate to determine cause of damp under muntz metal roof</li> <li>• Investigate interior stone to determine extent of decay. Allow to rub back or patch spalled stone (subject to specialist advice)</li> <li>• Allow to desalinate as required</li> <li>• Allow to repoint open joints</li> </ul>	Current	 <p>Photo 8: Detail of spalling to stonework within the entrance porch</p>  <p>Photo 9: Detail of spalling to stonework within the entrance porch</p>
2.2	Brickwork	Brick and stone facades - Moderate (2)	Good	<p>Face brick English bond with corner buttresses and terracotta ventilators, Brick work shows evidence of salt deposits in some areas, extensive areas of damp at the ground level. Plant growth. Evidence of previous fixings and damage to bricks.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> <li>• Allow to poison and remove plant growth</li> <li>• Investigate damp and determine remediation required, This may include provision of additional drainage. Check DPC.</li> <li>• Allow to repoint missing joints TME</li> <li>• Allow for removal of redundant fixings, localised repair and patching to damaged bricks</li> </ul>	Current	 <p>Photo 10: Detail of brickwork showing evidence of salt, damp and extensive build-up of moss/ algal growth as well as plant growth.</p>

ITEM #	ELEMENT	SIGNIFICANCE	CONDITION	DESCRIPTION OF ELEMENT AND RECOMMENDATION	PRIORITY	IMAGE/ ADDITIONAL COMMENTS
						 <p>Photo 11: Detail of brickwork showing evidence of salt, damp and extensive build-up of moss/ algal growth as well as plant growth.</p>
2.3	Windows	<p>Original and reproduction steel framed and leadlight window assemblies – Moderate (2)</p> <p>Alterations to steel framed windows (including removal of glazing bars) – Intrusive (4)</p> <p>Replacement aluminium windows – Little (3)</p>	Good/ Fair	<p>Original steel framed windows with new aluminium replacement windows on the upper levels. Aluminium frames generally in good condition. Some rust evident to the original steel.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> <li>• Allow to de-rust and paint</li> <li>• Repair missing glazing TME on ground floor window east utility window, in conjunction with rationalisation of services</li> </ul>	Current	 <p>Photo 12: Detail of window glazing to be repaired</p>
2.4	Rainwater goods	Original copper rainwater heads – High (1)	Fair	<p>Cast iron down pipes in fair condition. Cooper rainwater heads and elbows.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> <li>• Undertake a full survey of the roof drainage system to ascertain that all outlets flow properly into the rainwater system. Some gargoyles are noted as missing outlets.</li> <li>• Allow to inspect rainwater goods at close range including repair of cracked downpipes etc.</li> <li>• Allow to inspect rainwater heads to determine deterioration</li> </ul>	Current	 <p>Photo 13: Detail of eroded downpipe</p>

ITEM #	ELEMENT	SIGNIFICANCE	CONDITION	DESCRIPTION OF ELEMENT AND RECOMMENDATION	PRIORITY	IMAGE/ ADDITIONAL COMMENTS
<div> </div> <div> <p>Photo 14: Detail of south elevation gargoyle with missing outlet</p> </div>						
<p>3.0 East Elevation</p>						
3.1	Stonework	<p>Carved stone crests and gargoyles (1)</p> <p>Brick and stone facades - Moderate (2)</p> <p>String courses, window mullions and transoms – Moderate (2)</p>	<p>Good</p> <p>Good</p> <p>Fair/ poor</p>	<p>Dressed and rubbed sandstone window frames including transoms and mullions. Generally in good condition, some evidence of damp and algal growth to sills.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> <li>Investigate damp</li> </ul> <p>Crenelated dressed sandstone parapet wall.</p> <ul style="list-style-type: none"> <li>Allow to replace some parapet stones (where required): 50%</li> </ul> <p>Dressed and rubbed sandstone cornice below crenelated parapet with ornate sandstone carvings. Cornice shows considerable damp/ salt activity and deterioration.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> <li>Allow for close inspection of carvings to determine degree of deterioration and remedial work required. This may include patching cornice with synthetic stone</li> </ul>	<p>Current</p> <p>Current</p> <p>Current</p>	<div> </div> <div> <p>Photo 15: Detail of the sill showing evidence of damp.</p> </div>




ITEM #	ELEMENT	SIGNIFICANCE	CONDITION	DESCRIPTION OF ELEMENT AND RECOMMENDATION	PRIORITY	IMAGE/ ADDITIONAL COMMENTS
3.2	Brickwork	Brick and stone facades - Moderate (2)  Remains of service enclosures at base of east elevation – Intrusive (4)	Good	Face brick English bond and stretcher bond mix, with corner buttresses and terracotta ventilators, Brick work shows evidence of salt deposits in some areas, areas of damp at the ground level. Plant growth. Evidence of previous fixings and damage to bricks.  Recommendation: <ul style="list-style-type: none"> <li>• Allow to poison and remove plant growth</li> <li>• Investigate damp and determine remediation required, This may include provision of additional drainage</li> <li>• Allow to repoint missing joints TME</li> <li>• Allow for removal of redundant fixings, localised repair and patching to damaged bricks</li> <li>• Allow to replace damaged squints to lower window sill, repoint brickwork</li> </ul>	Current (investigate)  Current (repointing)  Low (localised repairs)  Medium (squints)	 <p>Photo 16: Detail of low level masonry - allow for investigation of damp and repointing of missing mortar joints</p>  <p>Photo 17: Detail of <b>squints to be replaced</b></p>  <p>Photo 18: Detail of ground level east elevation showing plant growth</p>



ITEM #	ELEMENT	SIGNIFICANCE	CONDITION	DESCRIPTION OF ELEMENT AND RECOMMENDATION	PRIORITY	IMAGE/ ADDITIONAL COMMENTS
				<p>As part of the proposed works:</p> <ul style="list-style-type: none"> <li>Allow for removal of redundant services cabinet and patch repairs</li> </ul>	Current	 <p>Photo 19: Remove redundant services and patch repair</p>
3.3	Windows	<p>Original and reproduction steel framed and leadlight window assemblies – Moderate (2)</p> <p>Alterations to steel framed windows (including removal of glazing bars) – Intrusive (4)</p> <p>Replacement aluminium windows – Little (3)</p>		<p>Original steel framed windows on the upper floor, new aluminium on the lower level. Aluminium frames generally in good condition. Some rust evident to the original steel.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> <li>Allow to de-rust and paint steel windows</li> <li>Replace cracked glass panes to steel window (upper floor north)</li> </ul>	Current	
4.0 West Elevation						
4.1	Stonework	<p>Carved stone crests and gargoyles (1)</p> <p>Brick and stone facades - Moderate (2)</p> <p>String courses, window mullions and transoms – Moderate (2)</p>	Good	<p>Dressed and rubbed sandstone window frames including transoms and mullions. Generally in good condition.</p> <p>Crenelated dressed sandstone parapet wall generally in good condition</p>	<p>No works</p> <p>No works</p>	


ITEM #	ELEMENT	SIGNIFICANCE	CONDITION	DESCRIPTION OF ELEMENT AND RECOMMENDATION	PRIORITY	IMAGE/ ADDITIONAL COMMENTS
4.2	Brickwork		Good	<p>Face brick English bond and stretcher bond mix, with corner buttresses and terracotta ventilators, Brick work shows evidence of salt deposits in some areas, areas of damp at the ground level.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> <li>Investigate damp and determine remediation required, This may include provision of additional drainage</li> <li>Allow to repoint missing joints TME</li> </ul>	Current	 <p>Photo 20: Detail of west elevation lower level brickwork showing evidence of damp and open joints</p>
4.3	Windows	<p>Original and reproduction steel framed and leadlight window assemblies – Moderate (2)</p> <p>Bricked up upper windows – Intrusive (4)</p>	Good	<p>Original steel windows on the ground level in fair condition. Upper windows to the western façade are blind.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> <li>Allow to de-rust and repaint as/ if required</li> </ul>	Current	
5.0 North Elevation						
5.1	Stonework	<p>Carved stone crests and gargoyles (1)</p> <p>Brick and stone facades - Moderate (2)</p> <p>Decorative stone tracery and Coat of Arms – Moderate (2)</p> <p>String courses, window mullions and transoms – Moderate</p>	Good	<p>Dressed and rubbed sandstone window frames including transoms and mullions. Generally in good condition, some evidence of damp to sills.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> <li>Investigate damp</li> <li>Allow to repoint open joints TME</li> </ul>	Current	 <p>Photo 21: One of the ground floor window sills showing evidence of damp.</p>





ITEM #	ELEMENT	SIGNIFICANCE	CONDITION	DESCRIPTION OF ELEMENT AND RECOMMENDATION	PRIORITY	IMAGE/ ADDITIONAL COMMENTS
5.3	Windows	<p>Glass ventilation panels to men's lavatory windows – High (1)</p> <p>Original and reproduction steel framed and leadlight window assemblies – Moderate (2)</p> <p>Replacement aluminium windows – Little (3)</p> <p>Package air-conditioning units through original windows – Intrusive (4)</p> <p>Alterations to windows of women's lavatory – Intrusive (4)</p> <p>Replacement window assemblies, where imitation leadlight stripping has fallen off - - Intrusive (4)</p>		<p>Mix of original steel (with some modified) and new aluminium windows. Steel windows show evidence of rust, but aluminium windows generally in good condition.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> <li>• Allow to de-rust and paint steel windows where required</li> <li>• No works to aluminium windows.</li> </ul> <ul style="list-style-type: none"> <li>• Allow to reinstate missing piece of ventilation glass to mens WC window TME in conjunction with removal of services.</li> </ul>	<p>Current</p> <p>Current</p>	 <p>Photo 28: Detail of a rusted sill.</p>  <p>Photo 29: Detail of the mens WC windows. The western-most window (right) is missing a section of glass.</p>
5.4	Rainwater Goods	<p>Original copper rainwater heads – High (1)</p> <p>Exposed plumbing on north elevation – Little (3)</p>	Fair	<p>Cast iron and other downpipes. Some cooper rainwater heads and elbows.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> <li>• Undertake a full survey of the roof drainage system to ascertain that all outlets flow properly into the rainwater system. Some gargoyles are noted as missing outlets.</li> <li>• Allow to inspect rainwater goods at close range including repair of cracked or corroded downpipes etc.</li> <li>• Allow to inspect rainwater heads to determine deterioration</li> </ul>	Current	

ITEM #	ELEMENT	SIGNIFICANCE	CONDITION	DESCRIPTION OF ELEMENT AND RECOMMENDATION	PRIORITY	IMAGE/ ADDITIONAL COMMENTS
						 <p>Photo 30a) and 30b) Details of gargoyles missing outlets</p>
5.5	Doors	Original timber framed door assemblies – Moderate (2)  Access to (former) bridge – Little (3)	Good	<p>Three doors – two ground floor doors, from main hall and utility area and one on level 3 north façade (former bridge access). Timber. The level 3 upper floor door is redundant as the bridge is no longer extant – refer to the masonry section 5.2 above.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> <li>• Allow to repair and repaint ground floor timber rear door (from hall)</li> <li>• Ground floor door to utility to be removed as part of works</li> <li>• Allow to infill the former level 3 bridge door</li> </ul>	Current	
5.6	General	Brick and stone facades - Moderate (2)  String courses, window mullions and transoms – Moderate (2)		<p>The subject proposal includes conversion of one (1) ground floor window to a door and provision of a new opening on the eastern end of the (north) façade</p> <ul style="list-style-type: none"> <li>• Allow for salvage of the stone window sill and mullion, steel window frames and brick below the sill (subject to approval of the works)</li> <li>• Allow for salvage of bricks in conjunction with new openings.</li> </ul>	Current	 <p>Photo 31: View of the ground floor northern elevation showing window to be modified (left)</p>

ITEM #	ELEMENT	SIGNIFICANCE	CONDITION	DESCRIPTION OF ELEMENT AND RECOMMENDATION	PRIORITY	IMAGE/ ADDITIONAL COMMENTS
Interior 6.0						
6.1	Stonework	String courses, window mullions and transoms – Moderate (2)	Good	<p>Dressed and rubbed sandstone window frames including transoms and mullions.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> <li>• Allow to strip paintwork to all painted stone window reveals throughout the building including levels 1-3.</li> <li>• Strip paint from all stonework with Peelaway or similar as approved by the Heritage Consultant or University Heritage Architect. Thoroughly clean facade immediately after stripping paint ensuring the removal of all paint and chemicals</li> </ul>	Current	 <p>Photo 32: Detail of one of the painted stone windows (room 202 south)</p>
6.2	Brickwork		Good	Allow for localised patch repairs throughout the building in conjunction with new works and removal of services.	Current	
6.3	General			Allow to investigate cause of roof leaks within the eastern offices including room #402 in conjunction with items 1.1 and 1.4 (refer above).	Current	

## 2.7 SPECIFICATIONS

Generally the works comprise the repair and reconstruction of external fabric such as brick and stone surfaces and ironmongery, the repair and reconstruction of the roof and rainwater goods so as to ensure the building is waterproof and conforms to regulations.

### 2.7.1 STONEMWORK

#### Repairs

Any new stones are to be fully bedded with their natural bed at right-angles to loads or thrusts, except where otherwise instructed. The lines of all mouldings, curves, angles etc., are to be worked out of the solid. Except where specifically otherwise instructed, no new stone shall be of less depth than 100mm from the face of the wall.

#### Replace

Remove entire element and replace with new work to profiles matching exactly original profiles.

#### Reface

Remove front section of stone to a minimum 125mm depth and supply and fix new facing 100mm thick. Fully grout up all joints and behind each stone with liquid mixture of lime mortar and stone rubble. Where single stones are refaced fix stones on back side with an approved epoxy resin. Grout up behind as much as possible and fully grout joints. Where single stone refacing is over 750mm long it is to be dowelled at a minimum of 300mm centres into the substrate. Stone window sills are to be refaced to a depth of min. 75mm behind outside face of timber window sill. Where stone is located at a return or reveal the new facing is to be made in an 'L' shape to simulate a stone of full depth

#### Resurface

The stonework is to be tooled in-situ back to a sound surface with profile as close as possible to original.

#### Repoint

Existing mortar shall be removed/ raked out to a minimum depth of 20mm, the joint sufficiently saturated, then repointed with new mortar to match the existing mix, finish and profile.

#### Patch

Where scheduled 'patch' rub back to a sound material. Apply an epoxy bond coat. Whilst the bond coat is still tacky, trowel on the repair mortar. Large patches will require non-corroding stainless steel pins and wire reinforcing mesh for anchorage and reinforcement. The epoxy patch should be no stronger than one part resin to ten parts sand. Blended natural sands (clean, sharp, free from impurities and from an approved source) are to be used to match the stone colour. The repair method is to be by an experienced stonemason approved by the heritage architect.

#### New Stone

Where new stone is required, stone is to be first quality plain "yellow block" Sydney sandstone, free of pronounced figure or veins, as similar as possible in bearing strength porosity, permeability and appearance to the original and from a quarry and bed to be agreed with the University Heritage Architect. Sample stonework is to be provided for approval. Recycled stone may be used with the prior approval of the Architect provided it meets the above requirements.

#### Stone Tooling

All new work is to match the original tooling as determined by examination of adjacent areas and approved by the Heritage Consultant or Architect. The contractor shall not attempt to match weathered tooling, that is, new stonework should look as the original when new.

**All stonework shall be carried out by a mason approved by the Heritage Consultant or the Architect.** Approval of a trades person will be based on their relevant experience in stonemasonry.

## 2.7.2 BRICKWORK

All brickwork shall be carried out by a mason approved by the Heritage Consultant or the Architect. Approval of a trades person will be based on their relevant experience in working with historic buildings.

### Joints

Where rebuilding, repointing or making good to existing face work, match sound original joints as determined by examination of adjacent areas and approved by the Heritage Consultant or the Architect. A sample of the proposed jointing profile for each area of brickwork is to be approved by the Heritage Consultant or the Architect before the work is carried out.

### Point up

Retain all existing sound mortar and flush up with new mortar to match the existing mix, finish and profile.

### Repoint

Existing mortar shall be removed/raked out to a minimum depth of 20mm, the joint sufficiently saturated, then repointed with new mortar to match the existing mix, finish and profile.

### Work to Face Walls

Rebuild and make good to match standard of best existing adjacent work.

### Replace

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

### Make good or repair

Where schedule '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.

### Salvaged bricks

Carefully salvage and clean off all old bricks from demolition for reuse in repair work to existing facebrick and new face brickwork.

### Supply of old bricks

The contractor shall keep a record of old bricks obtained from demolition and calculate additional old bricks that are required for face work including interiors.

## 2.7.3 IRON

### Rust Treatment

All metalwork scheduled 'de-rust' shall be scraped to remove loose and flaky material, then thoroughly wire brushed until bright metal is showing consistently. Wash with proprietary phosphoric acid type rust converter solution and dust off ready for priming and painting.

## 3 Bibliography and References

### 3.1 BIBLIOGRAPHY

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### 3.2 REFERENCES

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*[Note: Some government departments have changed their names over time and the above publications state the name at the time of publication.]*

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