# tanner Architects

GRAYTHWAITE 20 EDWARD STREET, NORTH SYDNEY

OUTLINE SCHEDULE OF CONSERVATION REPAIR WORKS AND MAINTENANCE SCHEDULE



Prepared for Sydney Church of England Grammar School

December 2010 Issue A

GRAYTHWAITE SCHEDULE OF CONSERVATION REPAIR WORKS

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# GRAYTHWAITE SCHEDULE OF CONSERVATION REPAIR WORKS

#### 1 INTRODUCTION

#### 1.1 Background

This report provides an outline schedule of conservation repair works and a maintenance schedule for Graythwaite House, the Coach House and former Tom O'Neill Centre at Graythwaite, North Sydney. The report has been prepared on behalf of Sydney Church of England Grammar School (Shore School), and accompanies the Part 3A Stage 1 Project Application for works.

The three historic buildings on the site are proposed to be conserved, refurbished and adapted for new school-related uses. Graythwaite House is proposed to be refurbished for use as staff administration and reception, the Coach House as a caretaker's residence and staff offices, and the Tom O'Neill Centre for music classrooms for students.

The buildings are currently disused and are variously in fair to poor condition. Graythwaite House in particular is in need of immediate remedial repair; the slate and metal roofs are in deleterious condition and water ingress is particularly evident at first floor. The works listed in this report identifies the priority roof repairs to the House which are proposed to be undertaken as part of an immediate phase of works (priority 1), to prevent ongoing deterioration of the historic fabric. All other works (priority 2) are proposed to be undertaken during the refurbishment of the buildings, and are included in the Part 3A Project Application.

#### 1.2 Location

Located at Union Street, North Sydney (Figure 1), the 2.678 hectare property is bounded on the east and north by Shore School, on the south by Union Street and private residential properties fronting Union Street, and on the west by private residential properties fronting Bank Street. The current street address is 20 Edward Street, although a Union Street address was used throughout the nineteenth century and greater part of the twentieth century.

#### 1.3 Historical background and heritage significance

Graythwaite is a place of exceptional heritage significance. Originally known as Euroka, the site comprises expansive parkland that provides a landscaped setting for the nineteenth century house and associated outbuildings. The two-storey sandstone house is a distinctive and imposing example of a nineteenth century residence, while the c1830s Stables building may be the oldest remaining building of its type in the area and provides the earliest remaining fabric from the early settlement of North Sydney. The grand scale of the House Complex, the mature landscaping and size of the property demonstrate the wealth and aspirations of its owners, particularly the Dibbs family, during the boom period of the later nineteenth century.

Graythwaite is also of social and historical significance for its use as a convalescent hospital for returned soldiers from 1916 and then as a long-term hostel for permanently disabled soldiers. Key buildings from this phase of the site's history include the Ward Building (1918) and Recreation Building (1919)—now known as the Tom O'Neill Centre. More recently the site was used as a nursing home and continued to operate as a dementia care facility until its sale in 2009, when it was purchased by the adjoining Sydney Church of England Grammar School (Shore).

Shore's long term vision for the Graythwaite site is to recognise the cultural heritage significance of the property, including its significant buildings and landscape, while complementing and enhancing its existing school facilities.

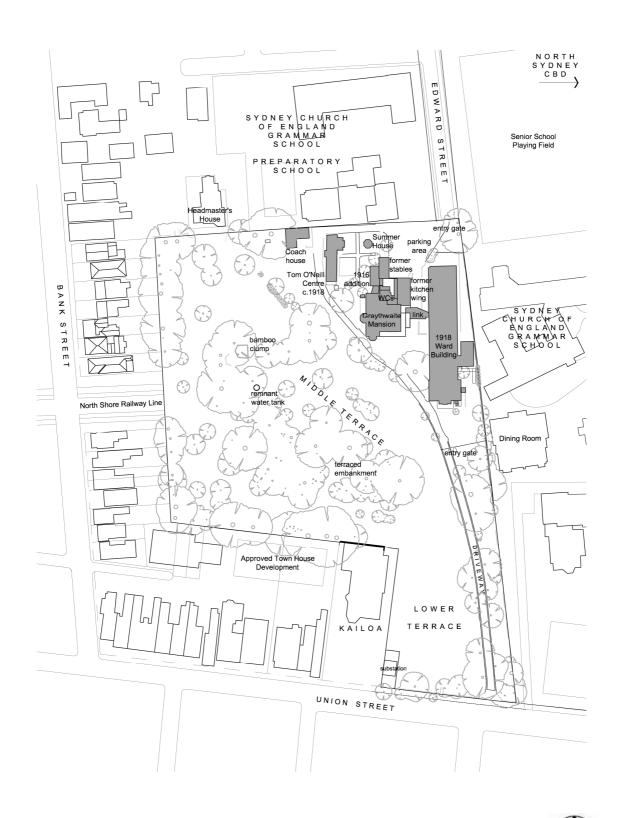


Figure 1 Site plan, not to scale.



#### 1.4 Building descriptions

#### **Graythwaite House**

Graythwaite House is a two-storey building of load-bearing sandstone construction with a basement and attic level. The hipped and gabled roofs are slated, with a steeply-pitched mansard rising from the centre of the main part of the house. A cast iron and timber verandah and balcony returns around the south and east elevations, and has a corrugated galvanised steel roof. To the north-east is two-storey sandstone wing, originally comprising the kitchen and staff accommodation, and to the north-west is the single-storey 1830s sandstone stables building, both with slate roofs (Figure 3). Original floor and roof structures are timber-framed, with later concrete slab floors in some of the rear ground floor rooms. Windows are timber-framed, double-hung sashes.

#### 1.4.1 The Coach House

Constructed in the 1890s, the Coach House is a small building of blond brick construction with timber-framed floor and roof structures (Figure 5). L-shaped in plan, the building is single-storey with an attic level, and has gabled roofs clad in corrugated galvanised steel. Windows are timber-framed double-hung sashes, and there are two large, timber ledged and braced barn doors at ground floor. A verandah, not original, extends across part of the south elevation.

#### 1.4.2 The former Tom O'Neill Centre

The Tom O'Neill Centre was constructed in 1918, shortly after the site's acquisition by the State for use as a convalescent home. The single storey brick building has a gabled roof clad in corrugated galvanised steel (Figure 6), and concrete and timber-framed floors.

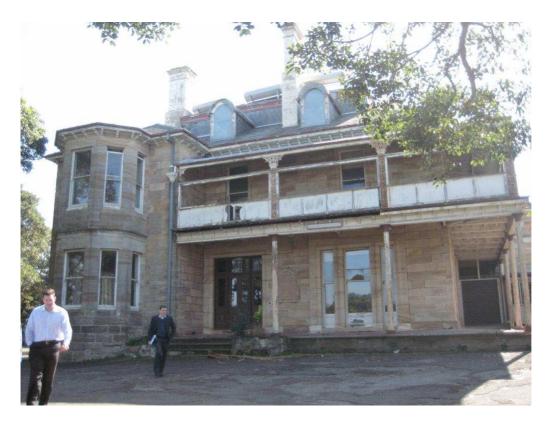


Figure 2 Graythwaite House, south elevation.



Figure 3 Graythwaite House, north elevation.



Figure 4 Graythwaite House, west elevation.



Figure 5 The Coach House, from the south.



Figure 6 The former Tom O'Neill Centre, west elevation.

#### 1.5 Works Priorities

The works have been categorised into two priorities as follows:

**Priority 1** works are urgent roof repair works to Graythwaite House which are required to ensure weather-tightness and structural integrity of the roof structure. Associated roof works include replacement of rainwater goods, flashings, valleys, ridge and hip cappings, eaves and soffit linings, and reconstruction of roof and verandah elements including cast iron balustrading.

These works are proposed to be carried out in the short time as a high priority, to address immediate problems of water ingress.

**Priority 2** works are the remaining urgent and other conservation repair works for Graythwaite House, the Tom O'Neill Centre and the Coach House. Urgent works to the Tom O'Neill Centre and the Coach House include roofing repairs and damp rectification works. The other conservation repair works to all three buildings are those required to rectify defects to prevent future deterioration of non-structural elements, e.g. render and stone repairs, exterior and interior joinery repairs, window and door repairs, repainting and repair of interior fabric and finishes.

Priority 2 works are proposed to be carried out during the adaptation and refurbishment of the buildings, and comprise part of the Part 3A Stage 1 Project Application.

#### 1.6 Exclusions

These schedules of repair do not include landscaping; electrical and mechanical services; lighting; security; and refurbishment works for new uses (e.g. new floor coverings, partitions, suspended ceilings, WCs).

## 2 GRAYTHWAITE HOUSE

# 2.1 Exterior repair works

Building element/ area	Required works	Priority
RENDER		
Render chimneys	Cut out and replace cracked and drummy render; re-render chimney caps.	1
1133911000010010100001010000100010001000	Prepare and paint.	1
North courtyard garden wall	Cut out and replace drummy and damaged render; prepare and paint.	2
Former massage room (room G8)	Cut out and replace drummy and damaged render.	2
	Remove creeper.	2
	Replace render window sills,	2
	Prepare and paint.	2
BRICKWORK	Repoint brick chimney to 1830s stables.	1
TIMBERWORK		
Eaves	Install new timber eaves lining, paint finish.	1
Fascias	Install new timber beaded fascias, paint finish.	1
Gutter mouldings	Install new scotia profile eaves moulding to underside of guttering, paint finish.	1
MAIN VERANDAH		
<ul><li>Roof and floor</li></ul>	Repair defective and rotted verandah roof and floor structure	1
structures	including beams, rafter ends and joints; prepare and paint.	
– Cast ironwork	Demolish infill balustrade panels and timber framing.	1
	Install new cast iron balcony balustrading to and new handrail at	1
	BCA compliant height. Prepare and paint.	
	Treat cast iron columns and frieze brackets for rust; prepare and paint.	
– Flooring	Ground floor: remove concrete slab and lay new sandstone paving.	2
	First floor: remove sheet malthoid flooring. Allow to replace all timber verandah boards; stain and clear finish.	1
– Mouldings	Replace missing and deteriorated timber mouldings and dentils to timber fascias.	1
– Roofing	Install new corrugated galvanised steel roofing.	1
KITCHEN VERANDAH		
<ul> <li>Roof structure</li> </ul>	Repair defective and rotted verandah roof and floor structure including beams, rafter ends and joints; prepare and paint.	2
– Timber posts	Install new timber posts to kitchen verandah.	2
- Flooring	Remove concrete slab and lay new sandstone paving.	2
– Roofing	Install new corrugated galvanised steel roofing.	2
STONEWORK		
- Generally	Remove cement mortar pointing and repoint with lime rich mortar.	
	Remove weed overgrowth.	1

Building element/ area	Required works	Priority
***************************************	Remove redundant surface mounted conduit and services.	2
***************************************	Clean all stonework.	2
	Remove overpainting.	2
	Indent repair minor defects to stonework and where redundant	2
	services and fixtures are removed.	
	Replace severely damaged and missing stonework with sandstone	2
	to match original.	
	Consolidate deteriorated stonework.	2
***************************************	Apply biocide solution to remove lichen and fungal growth.	2
***************************************	Remove all hard cement mortar. Repoint all stonework.	2
	Re-caulk window and door frames.	2
- South elevation		
(main house)	Poultice damp-affected areas of stonework to lower wall.	2
	Remove garden beds and make good stonework to verandah plinth.	2
	Poultice damp affected areas of stonework.	1
	Install new damp-proof course.	2
- South elevation		
(1830s stable)	Remove paint and repair sandstone.	2
	Repair sandstone where corridor link demolished.	2
	Poultice damp-affected areas of stonework.	2
	Install new damp-proof course.	2
- East elevation	Poultice damp-affected areas of stonework to lower wall.	2
(main house)	Touriso damp anotica areas of storiowerk to lower wain	_
(main mode)	Demolish concrete verandah ramp and repair stonework to	2
	verandah plinth.	_
	Remove kitchen exhaust vent and install new stonework to match	2
	existing.	2
- East elevation	Install new damp-proof course.	2
(1830s stable wing)	install new damp proof course.	_
- North elevation	Remove kitchen exhaust vent and install new stonework to match	2
(main house)	existing.	_
(main mode)	Install new damp-proof course.	2
	Poultice damp-affected stonework.	2
	Replace severely deteriorated sandstone window sills.	2
		2
North alayatian	Repair sandstone where 1918 WC annexe removed.	
- North elevation	Doubling down affected stanguary	0
(1830s stable)	Poultice damp-affected stonework.	2
	Remove overgrown vegetation.	<u> </u>
- West elevation	Remove paint from window sills.	2
(main house)		
	Replace missing sub-floor grille.	2
	Install new damp-proof course.	
- West elevation	Install new damp-proof course.	2
(kitchen wing)		
	Remove render to lower walls and repair sandstone.	2
	Repair sandstone where 1918 WC annexe demolished.	2
WINDOWS AND		
EXTERIOR DOORS		
Windows	Reputty glazing.	1

Building element/ area	Required works	Priority
	Replace cracked and missing glazing.	1
	Replace rotted timber window sills to match existing.	1
	Make operable all sash windows: replace all sash cords, free all	1
	pulleys, and make both sashes operable. Install felt seals as required	
	to prevent sash rattle. All sash cords are to be in natural fibre or	
	wire to match existing. Supply new weights where heavier glass is	
	installed.	
	Remove all redundant fittings, blinds and other window coverings;	1
	remove security grilles and insect screens; repair and patch frames	
	and sashes where damaged and replace all missing or damaged	
	mouldings.	
	Existing historic hardware to be retained (sash lifts, fitch fasteners)	1
	shall be cleaned and re-polished.	
	Remove steel sheeting from attic windows.	1
	Reconstruct north stair window where 1918 WC annexe	2
	demolished.	
Doors	Install new timber-panelled door, glazed sidelights and highlight to	2
	ground floor east elevation, where c.1980s link structure	
	demolished.	
	Replace non-original floor door ground floors with timber-panelled	2
	doors.	
	Generally: prepare and paint.	2
ROOFING		
Gutters	Replace all guttering with galvanised steel ogee profile guttering,	1
	paint finish.	
Downpipes	Replace all downpipes with galvanised steel circular downpipes,	1
	paint finish.	
Attic roof	Remove solar panel installation and associated pipework and tanks.	1
	Remove roofing; inspect condition of roofing timbers and repair.	1
	Install new roof insulation.	1
	Install new standing seam sheet copper roofing (or sheet lead	1
	roofing: to be confirmed).	·
	Install new guttering; configuration and outlets to be confirmed.	1
	Repair timber parapet wall framing.	1
	Install new cast iron widow's walk balustrading; height to be BCA	1
	compliant.	'
	Install new fish-scale Penrhyn Welsh slate to vertical face of parapet,	1
	to match existing.	'
	Install new moulded timber parapet capping mouldings and	1
	decorative timber corbels, to match original detail.	'
	Install new lead parapet flashings.	-1
	Install new roof access doors / hatch; prepare and repaint.	! -1
	Repair timber glazed attic clerestory window joinery; prepare and	1
Main roof	repaint.	4
Main roof	Replace all slates to all roof slopes with new Penrhyn Welsh slates.	1
	Install new lead ridge and hip cappings.	1
	Install new lead valley gutters.	1
	Install new lead flashings to chimneys, dormer windows and all roof	1
	penetrations.	

Building element/ area	Required works	Priority
1830s stable roof	Replace all slates to all roof slopes with new Penrhyn Welsh slates.	1
	Install new lead ridge capping.	1
	Install new lead flashings to chimney and roof penetrations.	1
Bay windows,	Remove existing roofing; inspect condition of timber roof structure	1
west and south	and boarding and repair.	
	Install new lead sheet roofing with timber core rolls (to be confirmed).	1
Dormers	Remove roofing and install new curved corrugated galvanised steel	1
	roofing.	
	Repair decorative curved timber barge boards; replace where	1
	missing. Prepare and paint.	
1830s stables	Replace rusted metal roof vents to match existing.	1
EXTERIOR PAINTING	Prepare and repaint all new and existing timber window joinery.	1
	Prepare and repaint all timber roof joinery including fascias, eaves	1
	soffits, dormers.	
***************************************	Prepare and repaint all new and existing door joinery.	2
***************************************	Prepare and repaint all new and existing cast iron.	1
***************************************	Prepare and repaint all rainwater goods.	1
	Prepare and repaint metal wall vents.	2

## 2.2 Interior repair works

# Generally

Building element/ area	Required works	Priority
Interior doors	Unpainted doors: revive French polish finish.	2
	Painted doors: prepare and repaint.	2
	Remove all nails, hooks and other fixtures from doors, fill holes.	2
	Fill timber defects and holes.	2
	Timber used in replacement of door components for painted doors	2
	shall be select kiln-dried Oregon, finish to match existing.	
	Timber used in replacement of door components for French	2
	polished or lacquered doors shall be select Kalantis, finished to	
	match existing.	
	Make all doors fully operable.	2

## **Basement**

Building element/ area	Required works	Priority
Generally	Desalinate all sandstone foundation walls.	2
	Install new drainage sump	2
	Repair timber stair.	2
	Repair timber floor structure to ground floor hallway.	2
	Investigate termite activity and rectify.	2

### **Ground floor**

Building element/ area	Required works	Priority
G1, G2, G3, G4, G6		
Skirtings	Repair where scuffed and chipped; replace where severely missing	2
	to match existing.	

Required works	Priority
Remove timber rails at base of skirting.	2
Prepare and paint.	2
Remove floor coverings and repair tongue and grove timber	2
floorboards.	
	2
good; cut out and fill cracked plaster.	
Repair plaster where new damp-proof course installed.	2
Prepare and paint.	2
Remove surface mounted conduit, redundant services and lighting	2
and make good.	
Cut out and replace cracked and drummy plaster.	2
Repair cracked and damaged areas of cornices.	2
Prepare and paint.	2
Rejuvenate French polish finish.	2
Replace missing hearth tiles; install new cast iron grate.	2
Prepare and re-finish.	2
Structural engineer to investigate integrity of the floor structure:	2
	_
	2
	2
	2
	2
	2
Prepare and paint.	
Remove surface mounted conduit, fire hose reel, redundant services	2
	2
	2
	2
	2
	2
	2
	2
	2
	2
Remove floor covering and demolish floor slab. Install new concrete	2
floor slab on membrane.	
Cut out and replace damaged plaster.	2
Remove surface-mounted wiring and redundant services and make	
	Remove timber rails at base of skirting.  Prepare and paint.  Remove floor coverings and repair tongue and grove timber floorboards.  Remove surface mounted conduit, redundant services and make good; cut out and fill cracked plaster.  Repair plaster where new damp-proof course installed.  Prepare and paint.  Remove surface mounted conduit, redundant services and lighting and make good.  Cut out and replace cracked and drummy plaster.  Repair cracked and damaged areas of cornices.  Prepare and paint.  Rejuvenate French polish finish.  Replace missing hearth tiles; install new cast iron grate.  Prepare and re-finish.  Structural engineer to investigate integrity of the floor structure; undertake structural repairs as required.  Allow to carefully lift up and replace all tiles. Replace where missing, damaged and replaced with mismatching tiles, to match original.  Remove vinyl sheeting at north end, inspect condition of tiles and repair.  Repair where scuffed and chipped; replace where missing or severely damaged to match existing.  Remove surface-mounted wiring and make good.  Remove timber quad moulding and make good.  Prepare and paint.  Remove surface mounted conduit, fire hose reel, redundant services and make good; cut out and fill cracked plaster.  Poultice damp-affected areas of lower wall.  Prepare and paint.  Remove surface-mounted conduit and make good; repair where cracked, uneven and damaged.  Prepare and paint.  Remove surface mounted conduit, redundant services and lighting and make good.  Prepare and paint.  Remove surface mounted conduit, redundant services and lighting and make good.  Prepare and paint.  Remove surface mounted conduit, redundant services and lighting and make good.  Prepare and paint.  Remove surface mounted conduit, redundant services and lighting and make good.  Prepare and paint.

Building element/ area	Required works	Priority
	Install new damp-proof course to south wall; poultice damp-affected sandstone.	2
	Prepare and paint.	2
Doors	Prepare and paint.	2
G9, G9a, G10, G11, G12, G18		
	No works: to be demolished.	_
010		
G16	Democra fleer consider and demolich fleer deb. Install nous consusts	0
Floor	Remove floor covering and demolish floor slab. Install new concrete floor slab on membrane.	2
Walls	Remove surface-mounted wiring and redundant services and repair	2
VVCIIO	sandstone.	_
Ceiling	De-rust corrugated galvanised steel ripple iron sheeting; prepare and	2
	paint.	
Door	Prepare and paint.	2
G7a, G7, G17		
Floor	Remove concrete floor slab. Install new concrete slab on membrane.	2
Walls	Remove non-original redundant services; remove wall tiles and cement render.	2
	Remove all fitted kitchen fittings and fixtures.	2
	Install new damp-proof course to all walls.	2
	Install new hard plaster finish; prepare and paint.	2
Ceiling	Remove suspended tile ceiling and repair original lath and plaster	2
	ceiling.	
Doors	New timber-panelled doors: prepare and paint.	2
G8		
Floor	Remove concrete floor slab. Install new concrete slab on membrane.	2
Walls	Install damp-proof course to all walls.	2
	Poultice damp-affected plaster to lower walls.	2
	Remove redundant services, fixtures; shelving and surface-mounted conduit and make good plaster.	2
	Remove linoleum wall linings and make good plaster.	2
	Prepare and paint.	2
Ceiling	Replace drummy and damaged lath and plaster.	2
	Prepare and paint.	2
G19a, G19b, G19c and attic		
Floor	Remove concrete floor slab; investigate original floor finish. Allow to install new sandstone flags.	2
Walls	Remove paint from walls.	2
TTANO	Poultice damp-affected wall surfaces.	2
	Remove cement pointing and repoint with lime rich pointing.	2
	ce. to define the pointing and repoint with inthe field pointing.	

Building element/ area	Required works	Priority
	Remove non-original fixtures and fittings and repair affected	2
	sandstone.	
Ceiling / attic floor	Remove non-original ceiling to room G19b.	2
	Replace missing timber floor boards to attic.	2
	Prepare and repaint (lime-wash) exposed timber floor / ceiling	2
	structure.	
Doors	Remove roller door and install new pair ledged and braced timber	2
1130110310310310310310310310310310310310	doors; prepare and paint.	
FIRST FLOOR		
Floors	Remove floor coverings and repair tongue and groove floorboards to	2
110010	match original.	-
Skirtings	Remove redundant services and make good; replace where missing	2
Oran til 190	and badly damaged.	-
	Remove timber rails from skirtings and make good.	2
188911111111111111111111111111111111111	Prepare and paint.	2
Walls	Remove surface mounted conduit, redundant services and make	2
· · · · · · · · · · · · · · · · · · ·	good; cut out and fill cracked plaster.	_
1801130001011310101010101010101010101010	Remove non-original partitions, fixtures and fittings and make good	2
	affected plaster surfaces.	_
100010010010010010010010010010010010010	Prepare and paint.	2
Cornices	Cut out and replaced cracked cornices, profile to match existing.	2
Plaster ceilings	Remove redundant services, light fittings and surface-mounted	2
· idetai cominge	conduit.	_
1801130001011310101010101010101010101010	Repair all lath and plaster ceilings with Westox RAP system.	
100010010010010010010010010010010010010	Cut out replace missing, cracked and drummy plaster.	2
	Prepare and paint.	
Pressed metal ceilings	Remove redundant services, light fittings and surface-mounted	2
	conduit.	_
	De-rust, prepare and paint.	2
Doors	Replace missing original hardware to match.	2
	Refurbish all original hardware to working order.	2
100010010010010010010010010010010010010	Prepare and refinish timberwork.	2
Fireplaces	Remove paint from timber mantelpieces and provide stain and clear	2
ТПОРІЙООО	finish.	-
	Remove paint from cast iron grates.	2
Ceiling and roof framing	Structural engineer to inspect timber ceiling and roof framing and	2
	advise required repair works.	
F14a, 14b, F15, F16a, F16		
	No works: to be demolished.	_
ATTIC		
Flooro	Remove floor coverings and repair tongue and groove floorboards to	2
Floors	match original.	

# GRAYTHWAITE SCHEDULE OF CONSERVATION REPAIR WORKS

Building element/ area	Required works	Priority
	Prepare and refinish.	2
Walls	Cut out and replace cracked, damaged and damp affected plaster.	2
	Replace missing areas of plaster.	2
	Prepare and paint.	2
Lath + plaster ceilings	Repair all lath and plaster ceilings with Westox RAP system.	
	Replace missing plaster above stair.	2
	Remove surface-mounted wiring and repair plaster.	2
	Cut out and replace cracked and drummy plaster.	2
Battened fibrous plaster	Remove and install new plasterboard ceilings.	2
ceilings		
	Prepare and paint.	2
Doors	Replace missing original hardware to match.	2
	Refurbish all original hardware to working order.	2
	Prepare and refinish timberwork.	2
Cedar joinery	Revive French polish finish.	2

# 3 COACH HOUSE

# Exterior repair works

Building element/ area	Required works	Priority
Roofing	Install new corrugated galvanised steel roofing and galvanised steel	2
	ridge cappings, rolled barge ends and valley gutters.	
Rainwater goods	Install new roof gutters and downpipes; clean out stormwater drains.	2
Brickwork	Remove redundant fixtures and fittings and repair.	2
Windows	Make all operable.	2
	Replace decayed window sills.	2
Painting	Prepare and paint timber barge boards, exposed rafter ends,	2
	verandah, eaves and soffits, doors and windows.	
	Prepare and repaint render window sills and lintels.	2
Generally	Investigate for termite activity and rectify.	2

# Interior repair works

Building element/ area	Required works	Priority
Walls	Remove redundant services, fixtures and fittings and repair hard	2
	plaster.	
140100110011010110101010101010101010101	Prepare and paint.	2
Ceilings	Prepare and paint.	2
Doors	Prepare and paint.	2
Windows	Remove window coverings and brackets and make good frames.	2
	Prepare and paint.	2

## 4 TOM O'NEILL CENTRE

## Exterior repair works

Building element/ area	Required works	Priority
Roofing	Install new corrugated galvanised steel roofing and galvanised steel	2
100100010000000000000000000000000000000	ridge capping and valley gutters.	
Rainwater goods	Install new roof gutters and downpipes; clean out stormwater drains.	2
Perimeter drainage	Excavate ground levels to the north and east; install surface	2
	drainage and connect to stormwater.	
Brickwork	Remove cement render from lower walls.	2
	Install damp proof course to all walls.	2
	Poultice damp-affected brickwork to lower walls.	2
	Improve sub-floor ventilation beneath timber floor.	2
	Repoint brickwork to lower walls.	2
Windows	Make all operable.	2
	Replace decayed window sills.	2
Painting	Prepare and paint timber barge boards, exposed rafter ends,	2
	verandah, eaves and soffits, doors and windows.	
Generally	Investigate for termite activity and rectify.	2

## Interior repair works

Building element/ area	Required works	Priority
Walls	Repair hard plaster where damp proof courses installed.	2
	Remove redundant services, fixtures and fittings and repair hard	2
	plaster.	
	Prepare and paint.	2
Ceilings	Prepare and paint.	2
Doors	Prepare and paint.	2
Windows	Remove window coverings and brackets and make good frames.	2
100000000000000000000000000000000000000	Prepare and paint.	2

### 5 MAINTENANCE SCHEDULE

## 5.1 Background

The following cyclical maintenance schedule outlines the cleaning, inspection and maintenance regime that should be implemented at the Graythwaite site.

Faults reported and any works undertaken, including cleaning, maintenance and/or repair should be recorded and attached to this schedule.

Qualified and experienced contractors only should be employed to work on the significant building elements and fabric such as the sandstone, slate roofs etc. Remedial work should also be appropriately supervised. Expert professional advice should be sought prior to cleaning or repair work on special heritage finishes or significant building elements and fabric.

#### Slate Roofing

Tasks		When (year)	Life expectancy
Inspect for	Slipped, cracked, broken or missing slates Mould or moss growing on slates Exposed or missing roof nails	2	50+
Clean	Remove dust, dirt, grime and mould with water and a soft brush.  Minimise use of high pressure water jets.	1-2	—
Repair	Re-fix slipped slates as needed using non-ferrous roof spikes/nails.	As required	_
Replace	Replace slates only where they have cracked, broken or are missing, with Penrhyn slates to match the size, texture and colour of the existing.	As required.	_

## Corrugated galvanised steel roofing

			Life
Tasks		When (year)	expectancy
Inspect for	Build up of debris;	2	20-40
	Areas of rust / corrosion;		
	Punctured or damaged sheeting;		
	Broken joints and seals;		
	Loose sheeting;		
183138313831383138313831383138313	Defective flashings to penetrations.		
Clean	Remove dust, dirt, grime and mould with water and a soft	1-2	-
	brush. Sweep low-angle roofs regularly. Minimise use of		
	high pressure water jets and do not saturate other		
183138313831383138313831383138313	elements.		
Repair	Patch small holes using proprietary silicon products.	As required	_
	Introduce slip sheets between rusted lap joints.		
Replace	Replace damage sheets with new compatible roof sheets -	As required	-
	do not mix metals.		

# Metal flashings and cappings

Tasks		When (year)	Life expectancy
Inspect for	Loose, corroded or broken valley, barge and other flashings.	2	15 +
	Missing and unsealed openings at the tops of flashings;		
	Base flashing and counter-flashing of vertical joints.		
Clean	Remove dust, dirt, grime and mould with water and a soft	1-2	_
	brush. Minimise use of high pressure water jets and do not		
	saturate other elements.		
Repair	Re-fix with fasteners of a compatible material – do not mix	As required	_
	metals.		
	Where flashing or capping is substantially damaged, cut out		
	affected section and replace with flashing of matching		
	material, dimension and thickness, lapping and sealing the		
	joints. Use silicone resin products for repairs of small holes		
	only.		
Replace	New flashings should be of a suitable width and thickness	As required	_
	that are compatible with the remaining flashing on the roof,		
	gutters and downpipes – do not mix metals.		

# Chimneys, vent pipes and other roof penetrations

Tasks		When (year)	Life expectancy
Inspect for	Appropriate apron flashings around penetrations Weathering of mortar joints at chimneys; Loose mortar joints that admit water, and; Chimney leans	1-2	10+
Clean	Remove dust, dirt, grime and mould with water and a soft brush. Minimise use of high pressure water jets and do not saturate roof tiles, brickwork or other elements.	1-2	
Repair	Re-fix with fasteners of a compatible metal – do not mix metals.  Where flashing is cracked, buckled or corroded, cut out affected section and replace with flashing of matching material, dimension and thickness, lapping and sealing the joints. Use silicone resin products for repairs of small holes only.  Repoint deteriorated or open mortar joints using compatible mortar with a finished colour to match surviving examples of original mortar elsewhere.	As required	_
Replace	Replace / reconstruct only if chimney structure has failed or vent pipes are significantly damaged. All detailing should be replicated.  New flashings / elements should be of a suitable width and thickness that is compatible with the remaining flashing on the roof, gutters and downpipes – do not mix metals.	As required	_
Repaint	Vent pipes and other roof penetrations should only be repainted if they were originally painted.  Re-finish lead cappings and flashings with lead patination oil. Painted vent pipes and other roof penetrations should be repainted as for other external metal elements (see below).	7	_

# Rainwater goods

			Life
Tasks		When (year)	expectancy
Inspect for	Gutter and downpipes clogged with debris;	1-2	10+
	Gutters and downpipes that are corroded, loose, tilting,		
	dented or missing;		
	Broken seams in metal linings of built-in gutters and		
	downpipes; and		
	Bird nests and roosting places.		
Clean	Clean out and wash guttering on a regular basis to remove	1-2	_
	corrosive elements, particularly areas that are not effectively		
	washed by rainfall.		
	Consider installation of discrete gutter guards if regular		
	cleaning is problematic.		
Repair	Re-fix with fasteners of a compatible material – do not mix	As required	_
	metals.		
	Patch thinned areas of copper rainwater goods materials that		
	are compatible with copper and re-solder open joints.		
Replace	Replace only where deterioration is substantial. Partial	As required	_
	replacement of gutters and downpipes must match the		
	material, profile and appearance of the existing elements.		
	Complete replacement should match the original elements		
	and closely as possible in material, profile and appearance.		
Rectify	If required, introduce additional downpipes in discrete	As required	_
-	locations to match others.		

## **Eaves**

Tasks		When (year)	Life expectancy
Inspect for	Water stains on soffits;	2	10+
	Damaged soffit boards and fascias.		
Clean	Remove dust, dirt, grime and mould with water and a soft	As required	_
	brush. Minimise use of high pressure water jets and do not		
	saturate eaves or other elements.		
Repair	Refix eaves linings and battens using non-ferrous nails.	As required	_
Replace	Replace only where deterioration / damage is substantial.	As required	_
	The replacement eaves should match the material, finish and		
	detail of existing eaves.		
	If existing eaves are asbestos fibre cement sheeting then		
	replace with non-asbestos fibre cement sheeting according		
	to OH&S requirements.		
Repaint	Repaint regularly.	7	_
	If paint problem is localis then only remove affected areas		
	using heat gun, manual sanding or chemical paint removers.		
	Prior to repainting, ensure that all joints are sealed to prevent		
	water penetration. Prime and apply finishing paint that is		
	both compatible with primer and appropriate to prevailing		
	conditions. Repaint using a paint of the same colour and		
	finish (e.g. gloss or semi-gloss) as existing).		

## **Brickwork**

Tasks		When (year)	Life expectancy
Inspect for	Rising or falling damp;	2	50-75+
ii ispect ioi	Staining or spalling;	2	30 73±
	Surface damage;		
	Cracks through joints and / or bricks;		
	Loose bricks, open joints or broken arrises; and		
	Loose or inappropriate mortar in pointing.		
Clean	Remove dust, grime and mould with water and a soft brush.	5-10	
0.00	Minimise use of high pressure water jets and do not saturate	0.0	
	bricks or other elements.		
	Removal of stubborn dirt, grime, mould and graffiti with		
	detergents or other methods should only be undertaken with		
	the assistance of specialist cleaners and only once alternative		
	cleaning methods have been tested – the method which		
	results in the least damage to the brickwork or change in		
	colour or appearance should be selected.		
Repair	Repair only where extensive weathering, exfoliation and	As required	_
,	blistering have occurred or for patching where fastenings		
	have been removed or damage has occurred.		
	Patch using a cement and sand mixture with a colour similar		
	to the remaining brickwork and applied as a series of layers		
	to reconstruct the surface. Pigments to achieve a colour		
	match need to be tested.		
	Note: bulges in brickwork may represent structural failure		
	and a significant safety hazard. Rectification should be		
	undertaken in consultation with a structural engineer.		
Replace	Replace only where extensive splitting, cracking and / or	As required	_
	spalling have occurred. The replacement brickwork should		
	be of matching type, colour, size, shape density and surface		
***************************************	texture to match existing.		
Repoint	Repoint only where existing mortar joints are excessively soft,	As required	_
	crumbling, cracked, badly stained, missing or have been		
	inappropriately pointed with cement-rich mortar.		
	The replacement mortar should be weaker than the		
	sandstone and the finished colour and detailing should		
	match surviving elements of original pointing.		
Repaint	Brickwork should not be painted unless there is evidence	7	_
	that it was originally painted. Repaint (originally painted)		
	brickwork regularly.		
	Remove loose paint and efflorescence by hand scraping,		
	chipping or with a stiff natural bristle brush – do not use wire		
	brushes. Use a softer brush if the mortar or bricks are soft.		
	Proprietary chemical paint removers may be used for large		
	surface areas and only if an alternative is not possible.		
	Sandblasting is not to be used.		
	Use an acrylic primer or undercoat appropriate for brickwork.		
	Apply finishing paint that is both compatible with primer and		
	appropriate to prevailing conditions. Repaint using a paint of		
	the same colour and finish (e.g. gloss or semi-gloss) as the		
	original.		

## Sandstone

Tasks		When (year)	Life expectancy
Inspect for	Rising or falling damp;	5	70+
	Staining, spalling or fretting;		
	Surface damage;		
	Cracks through joints and / or stones;		
	Loose stones or open joints; and		
	Loose or inappropriate mortar in pointing.		
Clean	Remove dust, dirt grime and mould with water and a soft	5	_
	brush. Do not use a high pressure water jet and do not allow		
	the sandstone to become saturated.		
	Removal of stubborn dirt, grime, mould and graffiti with		
	detergents of other methods should only be undertaken with		
	the assistance of specialist cleaners and only once alternative		
	cleaning methods have been tested - the method which		
	results in the least damage to the stone or change in colour		
	or appearance should be selected.		
Repair	Repair only where extensive weathering, exfoliation and	As required	_
	blistering have occurred or for patching where fastenings		
	have been removed or damage has occurred.		
	Plastic mortar repairs should use a mortar mix which has a		
	colour similar to the remaining sandstone and applied as a		
	series of layers to reconstruct the stone surface.		
	Indent stone repairs should use a natural sandstone which		
	has properties, colour and texture which match the original		
	as closely as possible.		
Replace	Replace whole sandstone elements only when extensive	As required	_
	splitting, cracking and / or spalling have occurred.		
	The replacement stone should be a natural sandstone of		
	matching type, colour, size, shape and surface texture to		
	match the original as closely as possible.		
Repoint	Repoint only where existing mortar joints are excessively soft,	As required	_
	crumbling, cracked, badly stained, missing or have been		
	inappropriately pointed with cement.		
	The replacement mortar should be weaker than the		
	sandstone and the finished colour and detailing should		
	match surviving examples of original pointing.		
Repaint	Do not paint sandstone elements.	_	_

# Timber door and window joinery

Tasks		When (year)	Life expectancy
Inspect for	Proper operation of all sashes;	5-7	40– 75+
	Proper operation of window and door hardware and		
	soundness of weather strips;		
	Loose, cracked or other missing glazing putty;		
	Rot and/or deterioration of wood framing; and		
	Door alignment.		
Clean	Remove dust, grime and mould with a soft brush or damp	5	_
	cloth. Do not use a high pressure water jet.		
Repair	Patch cracks, splits and small defects using suitable timber	As required	_
	epoxy paste fillers.		
	Repair all timber joinery using traditional timber repair		
	techniques such as patching, splicing or otherwise		
	reinforcing. Repairs may include replacement of those parts		
	which are either extensively deteriorated or missing.		
	Establish source of any differential settlement and address		
	accordingly of sashes or doors are sticking. Strip back		
	excessive paint build up.	•••••	
Replace	Replace only when existing windows and doors are too badly	As required	_
	deteriorated to be repaired. Replacement windows and		
	doors should match the material, size, colour and		
	configuration of the original elements. New putty for		
	windows and glazed doors should be compatible with		
	adjacent materials. Complete replacement of an original		
	window or door should only be considered in cases of		
	extreme deterioration or where restoration is not feasible.	•••••	
Repaint	Repaint as for other external timber elements.	7	_

## Other external timber elements

Tasks		When (year)	Life expectancy
Inspect for	Excessive moisture and / or swelling between timber and paint; Poor surface preparation; Use of inappropriate paint types, and Peeling, flaking, blistering, cracking or crazing.	5-7	40–75+
Clean	Remove dust, dirt, grime and mould with a soft brush or damp cloth. Do not use a high pressure water jet.	5	—
Repair	Patch cracks, splits and small defects using suitable timber epoxy paste fillers. Repair timberwork using traditional timber repair techniques such as patching, splicing, plugging or otherwise reinforcing.  Repairs may also include replacement of those parts which are either extensively deteriorated or missing.	_	_
Repaint	Painted external timber surfaces should be repainted regularly.  Localised paint problems should be removed using heat gun, manual sanding or chemical removers. Sandblasting is not to be used.  Prior to repainting, ensure that all joints beween members are sealed to prevent water penetration. Prime and apply finishing paint compatible with primer and appropriate prevailing conditions. Repaint using a paint of the same colour and finish as existing.	7	_
Replace	Replacement should only be undertaken when existing timber elements are too badly deteriorated to be repaired.  Replacement elements should match the material, size and detail of the original.	As required	-

# Verandah posts and balustrading

			Life
Tasks		When (year)	expectancy
Inspect for	Damage, corrosion or deterioration of cast iron elements; Loose / missing fixings, and; Posts which lean.	5	50–75+
Clean	Remove dust, dirt, grime and mould with a soft brush or damp cloth. Minimise use of high pressure water jets and do not saturate other elements.	5	_
Repair	Defects should be repaired using appropriate patching techniques for the specific type of material. Loose and missing fixings should be repaired / replaced.  Fill any gouges or deep scratches with epoxy filler prior to sanding.  Note: leaning verandah posts and balustrades may represent structural failure and a significant safety hazard. Rectification should be undertaken in consultation with a structural engineer.	As required	_
Replace	Replace only when existing elements are too severely deteriorated to be repaired.  Replacement elements should match the material, size, colour and configuration of the original elements.	As required	_
Repaint	Remove peeling and loose paint from affected areas with a stiff natural bristle brush – do not use wire brushes.  De-rust, prime and apply finishing paint compatible with primer and prevailing conditions. Repaint using a paint of the same colour and finish as the existing.	7	_

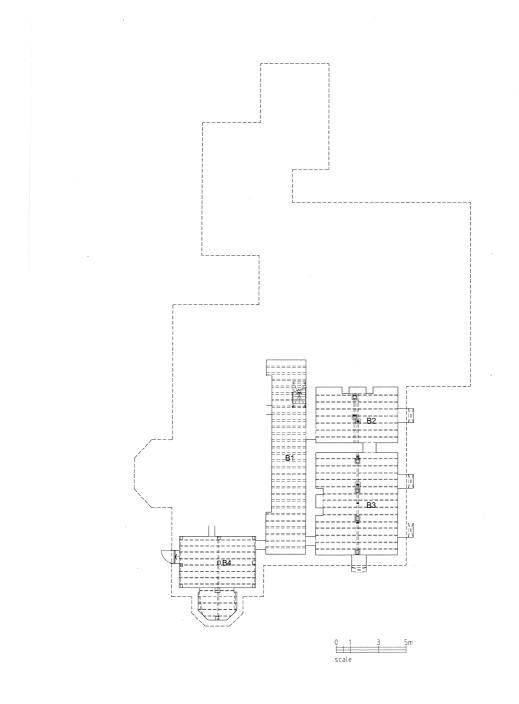




Figure 7 Basement floor plan of the House, existing conditions, not to scale. Source: Tanner Architects 2010.

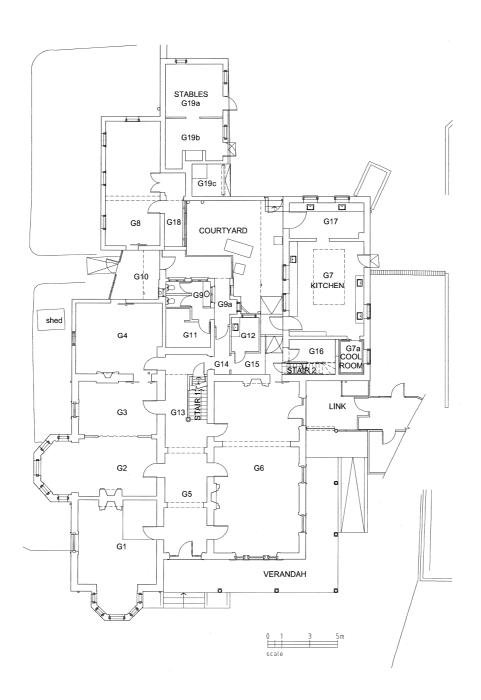




Figure 8 Ground floor plan of the House, existing conditions, not to scale. Source: Tanner Architects 2010.

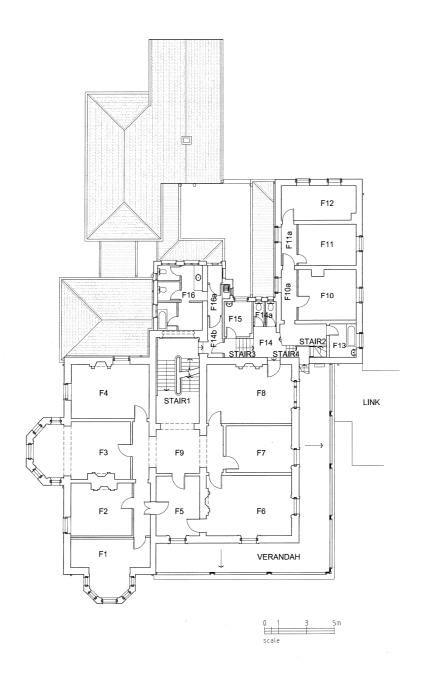




Figure 9 Graythwaite first floor plan of the House, existing conditions, not to scale. Source: Tanner Architects 2010.

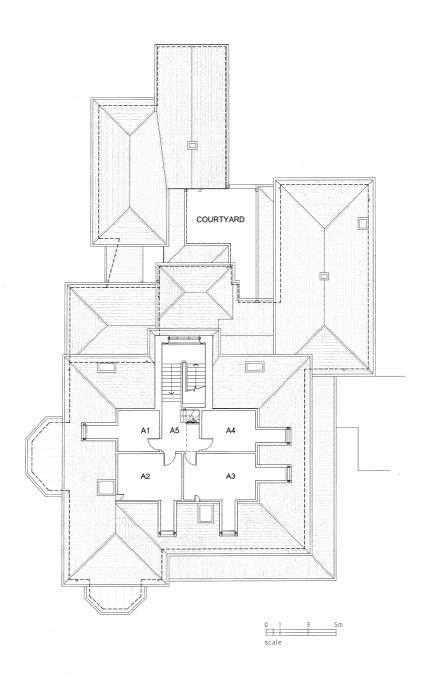




Figure 10 Attic plan of the House, existing conditions, not to scale. Source: Tanner Architects 2010.

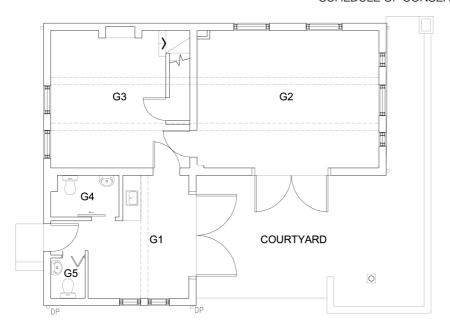


Figure 11 Coach House, ground floor plan, not to scale. Source: Tanner Architects 2010.

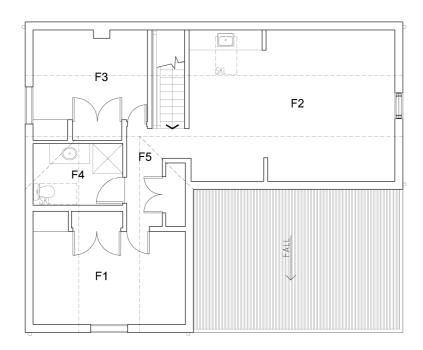


Figure 12 Coach House, first floor plan, not to scale. Source: Tanner Architects 2010.



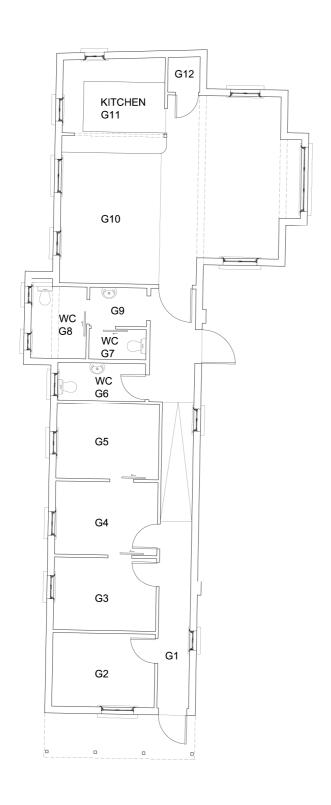




Figure 13 Tom O'Neill Centre, ground floor plan, not to scale Source: Tanner Architects 2010.

# **APPENDIX B PHOTOGRAPHS**

# **Graythwaite House**

## Exterior



Figure 14 North Facade

Source: Tanner Architects 2010



Figure 15 South Facade

Source: Tanner Architects 2010

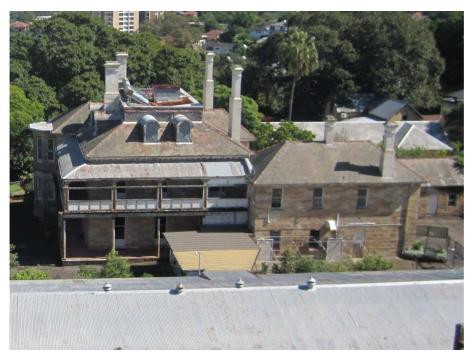


Figure 16 East Facade Source: Tanner Architects 20



Figure 17 West Facade
Source: Tanner Architects 2010

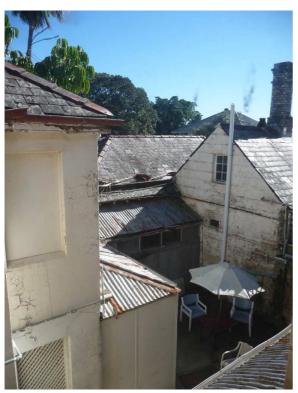


Figure 18 Courtyard Source: Tanner Architects 2010



Figure 19 East facade of 1830s Stables Wing Source: Tanner Architects 2010

### Interior

### Basement



Figure 20 Corridor looking towards timber stair Source: Tanner Architects 2010



Figure 21 Room B3
Source: Tanner Architects 2010

# Ground floor



Figure 22 Corridor G13 Source: Tanner Architects 2010



Figure 23 Room G6 Source: Tanner Architects 2010



Figure 24 Kitchen G7
Source: Tanner Architects 2010



Figure 25 Room G8
Source: Tanner Architects 2010

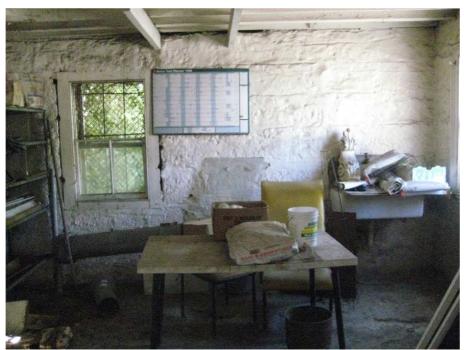


Figure 26 Room G19a of 1830s Stables Wing Source: Tanner Architects 2010

# First floor



Figure 27 Room F9
Source: Tanner Architects 2010



Figure 28 Room F3
Source: Tanner Architects 2010



Figure 29 Room F6
Source: Tanner Architects 2010



Figure 30 Corridor F10a Source: Tanner Architects 2010

### **Coach House**

### Exterior



Figure 31 South facade

Source: Tanner Architects 2010



Figure 32 East facade

Source: Tanner Architects 2010



Figure 33 West facade

Source: Tanner Architects 2010

# Interior

# Ground floor



Figure 34 Room G2

Source: Tanner Architects 2010



Figure 35 Room G3

Source: Tanner Architects 2010

# Attic



Figure 36 Room F2

Source: Tanner Architects 2010

# Tom O'Neill Centre

### Exterior



Figure 37 West facade Source: Tanner Architects 2010



Figure 38 East facade Source: Tanner Architects 2010

### Interior

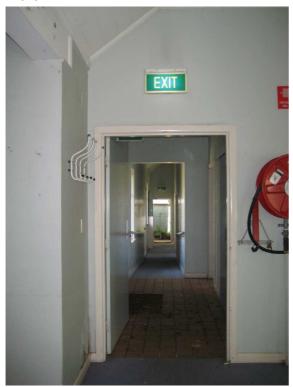


Figure 39 Room G10 looking corridor G1 Source: Tanner Architects 2010



Figure 40 Kitchen G11 Source: Tanner Architects 2010