

Spilsby Sessions House Viability Study

Architectural Report
Updated June 2022



Introduction



Tim Ronalds Architects, as a team with structural engineer Cambridge Architectural Research and quantity surveyor Bristow Consulting, were commissioned by The Sessions House to prepare this Viability Study Architectural Report, following a competitive selection process.

This Architectural Report responds to the brief issued by The Sessions House in May 2017 and subsequent brief and design development. It has been prepared in parallel with operational planning carried out by Culver-Dodds Cultural Consultancy.

The scope of the work has been:

- to study the existing building, compiling a set of drawings as existing, and making the necessary surveys of its condition;
- to gain from The Sessions House an understanding of the proposed and possible future activities in the building;
- to consider the architectural and conservation issues and, having explored options, suggest outline proposals for the conservation and continuing life of the old Sessions House, Spilsby.
- to support those proposals with a robust cost estimate.

This study was updated in June 2022 to reflect updated thinking on operational use, the current condition of the building, and current construction inflation.

Contents

	Page
Introduction	2
Design Team	4
Existing Building	
Development	7
Photographs	10
Drawings	13
Significance	22
Building Condition	
Structural Survey	26
Condition Survey	34
Immediate Needs	52
Architectural Commentary	53
Architectural Proposals	55
Scope of Construction Work	66
Construction Cost Estimate	67
Project Programme	74

June 2022

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Design Team

Tim Ronalds Architects

Tim Ronalds Architects, established in 1982, specialise in arts, education and public buildings and have been responsible for the conservation of many historic and listed buildings, with considerable experience of grant-funded projects, several with Heritage Lottery funding. The practice recently completed the redevelopment of the multi-award-winning Wilton's Music Hall. Tim Ronalds is an RIBA Conservation Architect. The practice is led by three directors and staff are of high calibre and well trained. Director Adam Goodfellow, whose curriculum vitae is included on the following pages, has led the design team for this report.

Philip Cooper, Cambridge Architectural Research (structural engineer)

Philip Cooper is an expert in the conservation and restoration of historic structures, widely varying in their nature and issues. Philip has worked with Tim Ronalds Architects on a number of listed building projects: Hackney Empire, Salisbury Arts Centre, The Old School House (Knole Estate, Sevenoaks), and Wilton's Music Hall.

Bristow Consulting (quantity surveyor)

Bristow Consulting have extensive experience in the conservation and alteration of historic buildings, and were led for this report by Lindsay Cornock and Nav Kang. Lindsay and Nav worked with Adam Goodfellow and Philip Cooper on the Wilton's Music Hall project.

The design team has worked in conjunction with Bruce Kinght, the Board of The Sessions House and Culver-Dodds Cultural Consultancy.

Adam Goodfellow

MA (Hons.Arch DipArch (Edin) RIBA



Adam has been with the practice since 1999 (nearly 20 years, 11 years as Director). He is a highly competent Project Architect & Lead Designer, very experienced at leading design teams to complete successful and award-winning building projects. He has particular expertise in the sensitive design and management of complex projects involving historic buildings through detail design, procurement and construction.

Professional Practice

2007 - Director, Tim Ronalds Architects
1999 - 2007 Architect, Tim Ronalds Architects
1996 - 99 NBF Partnership

Education

1991 - 95 University of Edinburgh
MA Architecture
Honours Year Design Distinction
Diploma in Architecture
1997 RIBA Part 3

Key Relevant Projects as Project Architect, Lead Designer, Lead Consultant and Principal Designer as noted

Wilton's Music Hall

Restoration of Grade II* Listed music hall.
Project Architect, Lead Designer, Lead Consultant & Principal Designer RIBA Stages A-L of phased project design and contract administration Traditionally procured JCT contract completed 2016.

Awards:

RIBA Award for Architecture 2016
RIBA London 2016 Building of the Year
RIBA London 2016 Conservation Award
New London Architecture 2016 Restoration Award

Ironmonger Row Baths

£16M remodelling of Grade II Listed public baths building to form modern leisure centre. Appointment covered architecture & structural & M&E and acoustic engineering
Two stage Design & Build contract completed 2014.
Project Architect & Lead Designer RIBA Stages 0-4 design
Novated to contractor at start of RIBA Stage 5; site inspection through Stage 5
Awards:
RIBA Award for Architecture 2013
Civic Trust Award 2013

Regent Street Cinema

£3M conversion of part of Grade II Listed building for the University of Westminster to form 250 seat public cinema and celebrate the place where the Lumière brothers showed the first film to a British Audience. Traditionally procured JCT contract completed 2016.
Project Architect, Lead Designer & Lead Consultant RIBA Stages A-L design and contract administration

Malthouse Drama Centre

£9M conversion of existing C19 maltings building to form a Drama Centre in Canterbury
Project Architect, Lead Designer & Principal Designer for RIBA Stages D-K design and contract administration. Traditionally procured JCT contract currently on site.

Hackney Empire

£15M (2004 cost) redevelopment & refurbishment of Grade II* Listed Matcham theatre with two new buildings, front of house and backstage. Traditionally procured JCT contract. Completed 2004
Project Architect for Backstage building- responsible for RIBA Stages A-L design and contract administration
Overall Project Architect for completion of entire project under a Construction Management approach after main contractor went into administration leaving 1/3 of project uncompleted.
Royal Fine Art Commission Building of the Year Award 2004
RIBA Conservation Commendation 2013

Salisbury Arts Centre

£3M conversion of Grade II* former Church and new extension to form Arts Centre.
Traditionally procured JCT contract completed 2007
Project Architect, Lead Designer & Lead Consultant RIBA Stages A-L design and contract administration

Royal Central School of Speech & Drama

£12M new drama and teaching spaces
Project Architect & Lead Designer RIBA Stages E-K design and contract administration.
Traditionally procured JCT contract currently on site

Old Vic

Project Architect for £12M HLF funded development study

CURRICULUM VITAE

Name Philip Cooper

Position Director

Professional Qualifications BSc (Eng) MA (Cantab). CEng. FICE. FStructE
Affiliated Lecturer of the University of Cambridge

Member ACE, SPAB, ICOMOS UK

CAMBRIDGE
ARCHITECTURAL
RESEARCH
LIMITED



Summary Philip is a consulting engineer who combines university teaching with practice in the design office. He began his career in research and teaching, later joining Harris & Sutherland in London. In 1986 he became Professor of Structural Design at Leeds University, sponsored by the Institution of Structural Engineers. Following several years in the Cambridge office of Harris & Sutherland he became a founding director of the Cambridge office of Scott Wilson and was responsible for a wide range of the projects undertaken in the office. He joined Cambridge Architectural Research as a director in 2009. He is engineer to the Royal Academy of Arts in London, a former member of the Cathedrals Fabric Commission for England, visiting professor of structural design at Bath University and lecturer at Cambridge and the Architectural Association. He is an expert in conservation and restoration of historic structures but also an innovative designer using new materials.

2009 – 2018 Director, Cambridge Architectural Research Ltd.

2004 – 2009 Combined role as Visiting Professor of Civil Engineering, Bath University with Technical Director of Scott Wilson

2003 Technical Director, Cameron Taylor

1991 - 2003 Director, Harris & Sutherland Cambridge office

1986 - 1991 Combined role as Professor of Structural Design at Leeds University with manager in charge of Harris & Sutherland Cambridge office

1978 – 1986 Harris & Sutherland London and founding director of H&S Cambridge office

1974 - 1978 Assistant Lecturer, University of Cambridge

Project experience

Old School House, Knole Estate, Sevenoaks, £1.3m 2018

Royal Academy of Arts, London. Many exhibitions + Summer Canopy. 1997- 2018

St Johns College Chapel, Cambridge £425k, 2016

Darwin College, Cambridge. New Bradfield Building £2m 2017

Wilton's Music Hall, £4.5m. 2005-2015

Crowland Manor, Peterborough, £175K, 2016

Nymans, National Trust. £0.3m 2014

Chilpancingo Sundial, Mexico £1.5m, 2009-2011

Royal Observatory Greenwich Planetarium. £11m. 2002-2007

Pines Calyx. St Margarets Bay, £0.6m 2005 *I Struct E Small building Prizewinner*

Regent Palace Hotel 2005

Sawston Hall Hotel 2007

New Hall, Cambridge, library and kitchen refurbishment. £2m. 2001

Landmark Theatre, Ilfracombe, North Devon District Council. £4m. 1999 *I Struct E Prizewinner*

Blackwell, The Arts and Crafts House, Windermere. £1.7m. 2001

Refectory, Great Walsingham, Norfolk. £2m. 2000

Hackney Empire Theatre, London. £11m. 1998 - 2003

Salisbury Arts Centre, Salisbury, Wilts. £1.9m. 2002-2003

25 King Street, Kings Lynn, Kings Lynn Conservation Trust

Schumacher College, Dartington Hall, Devon

Queens House, Greenwich. £0.6m. 1999

Visitor centre for Sir Harold Hillier Arboretum

Sports hall for Leys School, Cambridge



CURRICULUM VITAE

Swimming Pool, Ipswich 1979

Major residential and commercial developments for Cambridge Colleges

Reconstruction of church stone spire in Hereford

Keeling House, Hackney. Concrete repair

Library for Anglia Polytechnic University, Cambridge

University of Arts, Kings Cross. Feasibility Study 2005



Cambridge University and Colleges: Churchill College New archive for political history

Clare Hall - Clare Hall new student accommodation and swimming pool

Darwin College Bradfield Room £1.2m 2016-2017

Gonville and Caius College Waterhouse Building, monitoring of structure, Cockerell Library, refurbishment

King's College - Garden hostel court scheme for student accommodation

Madingley Hall - Extension to adult education conference centre

New Hall - Renewal of prestressed tendons for library roof



Trinity College
Great Court, major renovation programme which started in 1973 and was completed in 1992. (*Europa Nostra Diploma of Merit Award 1991*)
The Library extension and underground bookstore. (*RICS Efficient Building Award 1993*)
Blue Boar Court, student accommodation. (*RIBA Regional Award 1991*)

Wren Library, refurbishment

Nevilles Court, refurbishment

Burrells Field, student accommodation (*Supreme Brick Building of the Year Award 1996, Civic Trust Award 1997, RIBA Regional Award 1998*)



Trinity Hall College Fellows Terrace, refurbishment of graduate flats

Vice Chancellor's House Official residence



University of Lancaster University Library extension and Ruskin Library

Oxford University - Queens College Proposals for underground library

Anglia Polytechnic University Extension to library

University of Warwick New Business School

Papers and Publications

British New Towns: the distribution of land uses. Research paper for the Martin Centre for Architectural Studies. 1974

British New Towns: activities and their densities. Research paper for the Martin Centre for Architectural Studies. 1974

'Rediscovering the lost art.' Consulting Engineer, vol 43, no 6, June 1979. pp 62-63, 65-66

'Movement joints in long brickwork buildings.' Construction Industry Research and Information Association (CIRIA). Unpublish.

'Movement and Cracking in Masonry.' (CIRIA). Special Publication 44, June 1986

'Education, Research and Training.' Education for The Built Environment, pp 31-58, Madingley Hall Seminar, Cambridge. September 11-13 1991. The Ove Arup Foundation

'The Scope of Education for Structural Engineers', Education for Structural Engineering, pp 3-8, Conf Univ of Nottingham Sept 16-18 1992, Edit D. McKay 1992. Innovative Engineering Press, Sheffield

'Do I Have the Right Model?', Paper given to IABSE British Group Colloquium, Pembroke College, Cambridge, July 1996

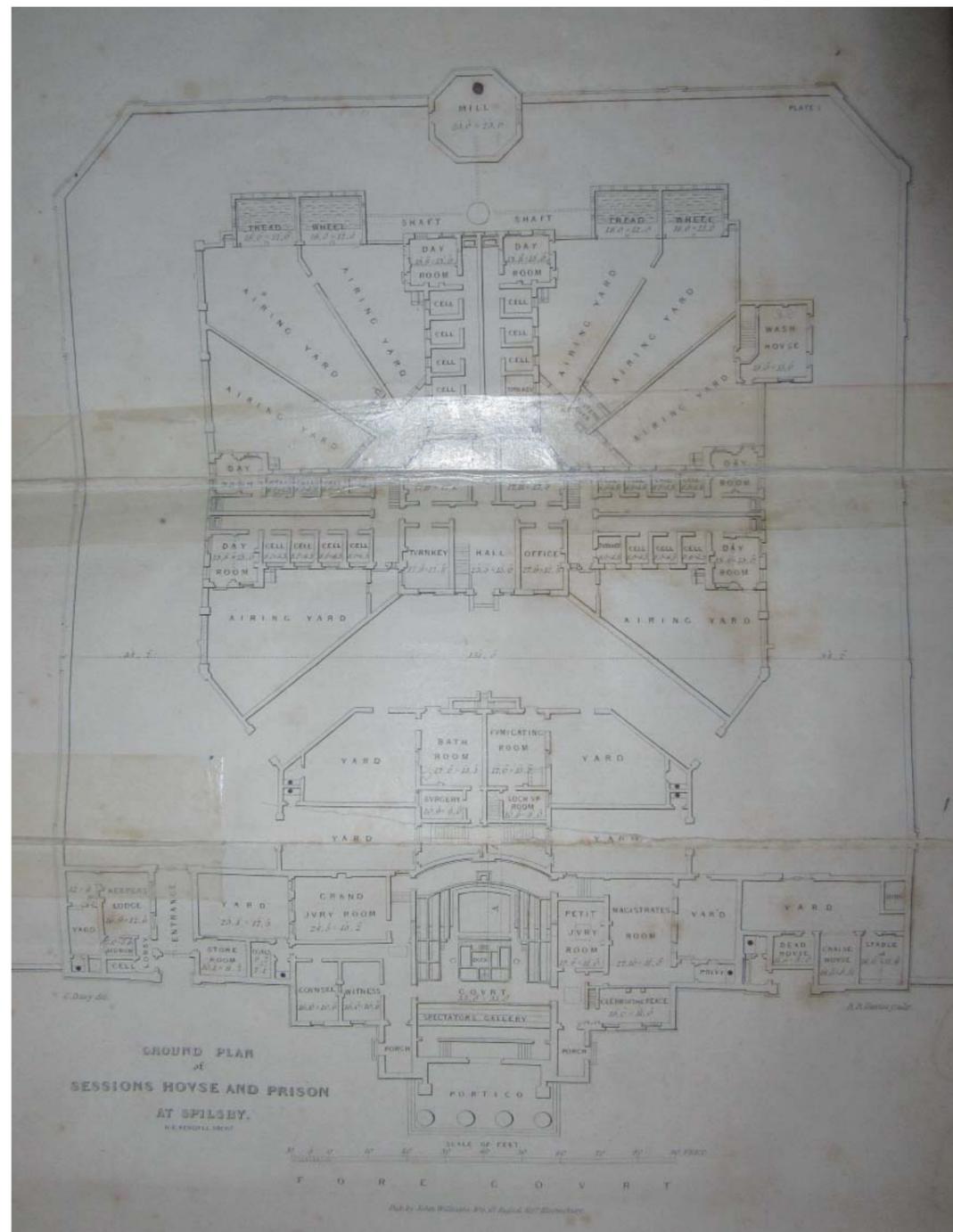
'Engineers and architects: vision of a better future.' The Structural Engineer vol 81 no 7, 1 April 2003 pp 13-16

Broadcasting



'How to build a Cathedral' BBC 4. Structural engineering presentation on BBC 4 documentary presented by architectural historian Jon Cannon

Existing Building Development



1820s ground floor plan

The "Old Sessions House" was originally constructed in 1827 as a court and gaol (House of Correction) to serve Lindsey, one of three administrative Parts of Lincolnshire at the time. The architect was H. E. Kendall (1776–1875). The building was rigorously specified and executed to a robust and high standard. The drawings and specifications were included as one of eight case studies in C. Davy's 1841 publication *Architectural Precedents*.

The majority of the original prison, which was considerably larger than the parts that now remain, was demolished, but the building retains its imposing sandstone Greek Doric portico and sandstone-dressed adjoining buildings, with further brick buildings to the rear dating from the 1870s.

Outline Chronology

1824-1827: Construction of courthouse and prison, host to the Lindsey quarter sessions from 1827 to 1872.

1870s: Demolition of the majority of the prison, retaining the courtroom and side buildings, with alterations and new construction to form magistrates' court and police station with police house and a few cells.

1880s: Adjacent streets and houses built over the site of the prison.

1970s: End of use as a court and police station.

1984: Purchase and conversion to a theatre, with the majority of the building's features retained intact.

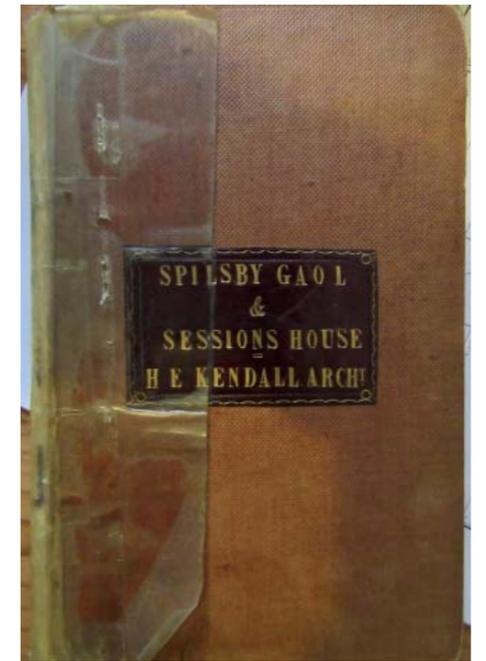
2000s: Decline in condition and maintenance of the building.

2017: Operation of the building taken on by The Sessions House and the Spilsby Sessions House project initiated.

Existing Building Development



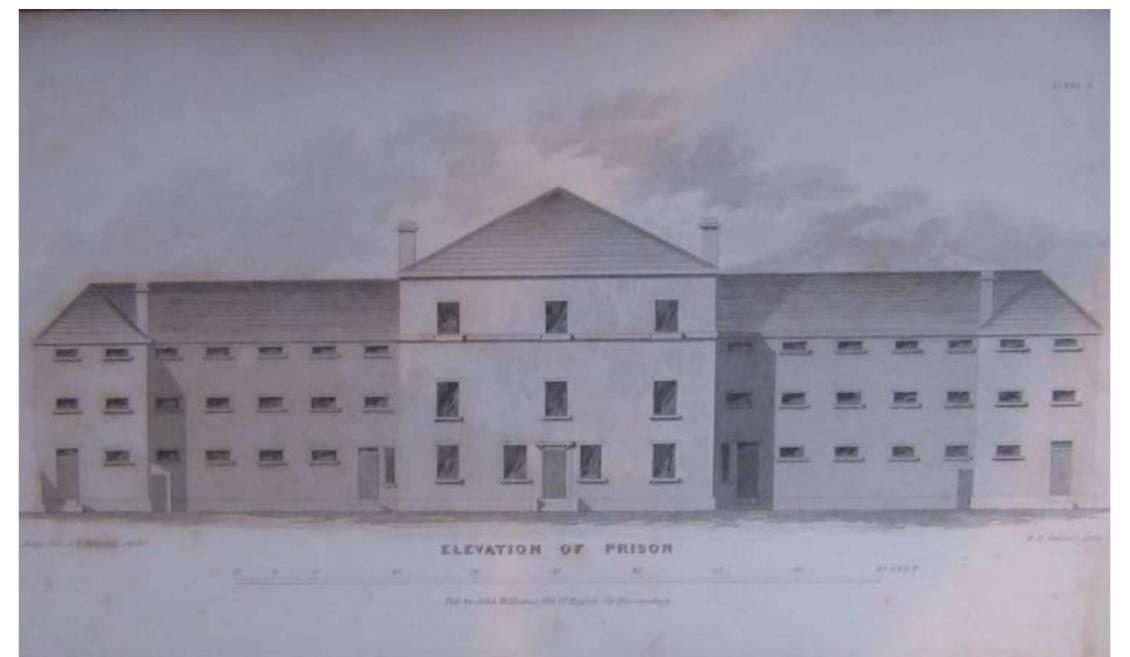
1820s front elevation



1841 publication

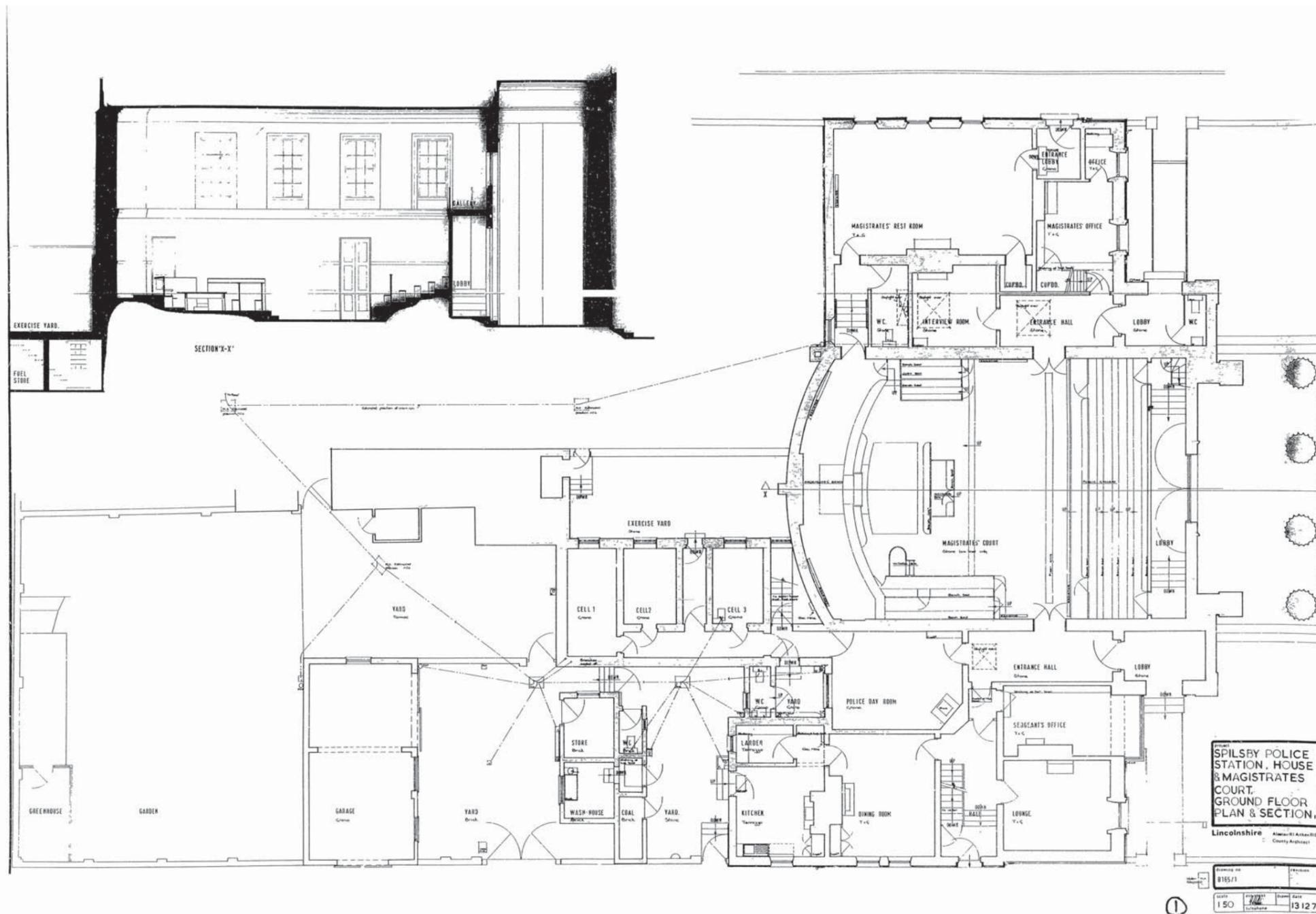


1820s prison block section



1820s prison block elevation

Existing Building Development



1976 plan and section based on a survey of 1896



the magistrates' court in the 1920s

Existing Building Photographs



the building front today remains largely as seen in the 1820s



adjoining western wing; the bay window is an 1870s addition to form a desk sergeant's office



courtroom; the scaffold to the left is currently supporting two failed main roof trusses

Existing Building Photographs



the elegant, former magistrate's retiring room



rear of the courtroom



the magistrate's retiring room is original 1820s

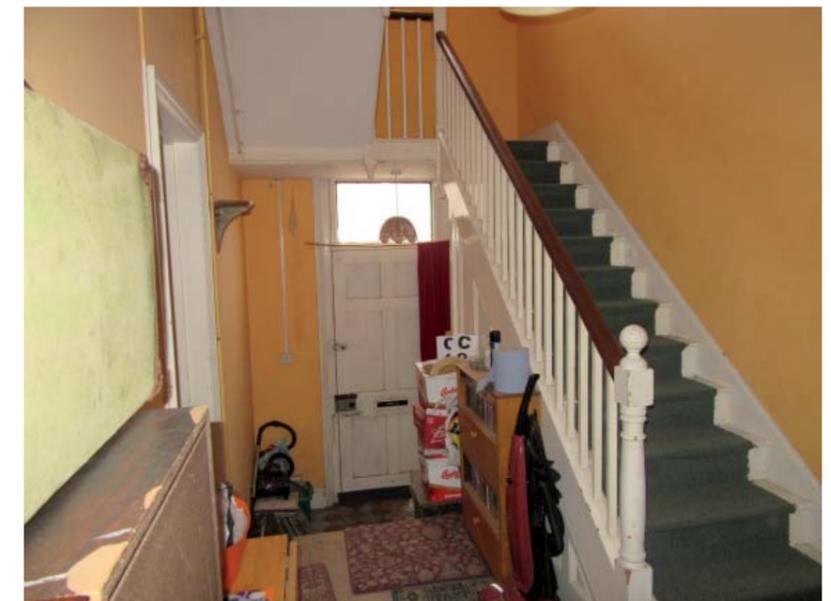
Existing Building Photographs



police house, 1870s; the joint in the brickwork between the 1870s and 1820s construction can be seen to the far right of the photograph



yard buildings, 1870s onwards



staircase of the police house

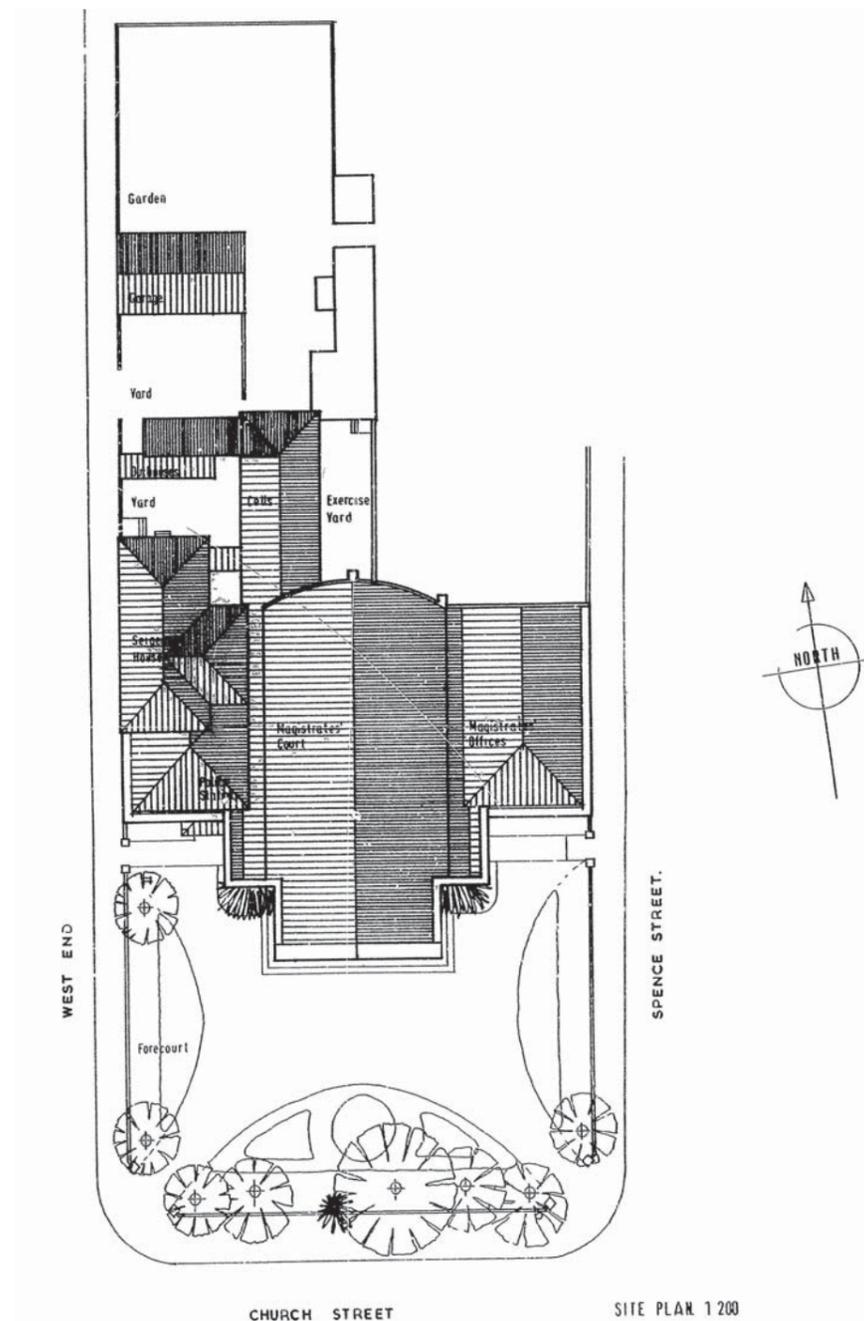
Existing Building Drawings

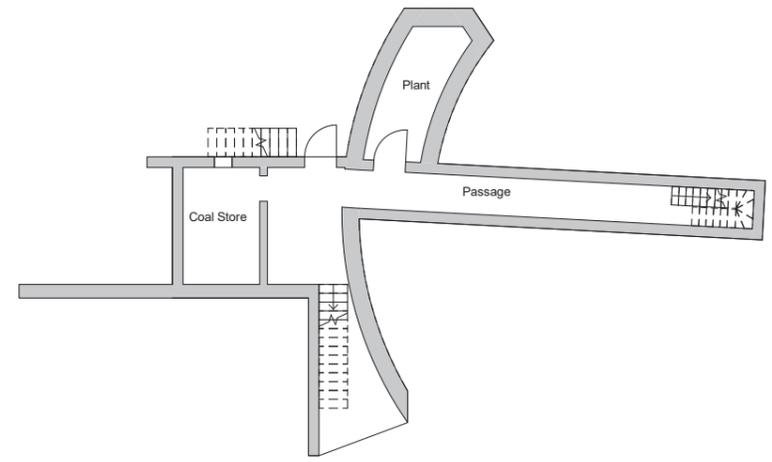
The following as-existing drawings have been created from site observation and digital tracing of a set of 1976 scaled drawings obtained by the client, themselves traced from a survey of 1896. They are drawn at an indicative level of detail and accuracy, suitable to the current needs of the project.

A comprehensive, laser-scanned, measured building survey needs to be undertaken by appropriate specialists at the outset of the next stage, to fully record the building and provide a reliable basis for design development and construction work. An estimate of the survey cost is incorporated in the project budget.

Drawings as Existing

- Basement Plan, TSH 010
- Ground Floor Plan, TSH 011
- First Floor Plan, TSH 012
- Roof Plan, TSH 013
- Section A-A, TSH 014
- Section B-B, TSH 015
- East and West Elevations, TSH 016
- North and South Elevations, TSH 017





Rev.	Date	Status/Notes

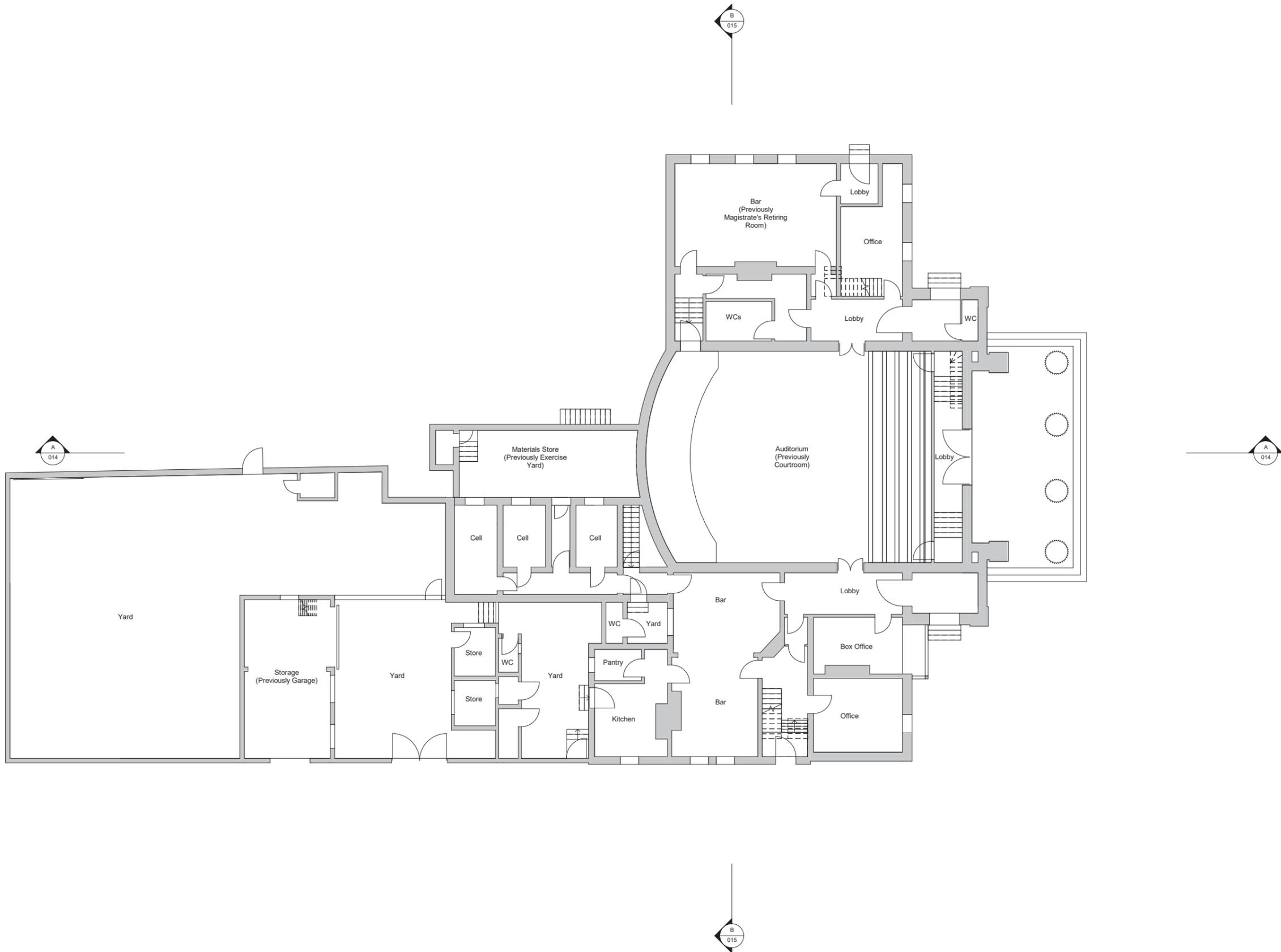
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The Sessions House

Basement Plan
 As Existing

Scale (at A1)	Drawn	Checked
1 : 100	OK	AG

TSH 010



Rev.	Date	Status/Notes

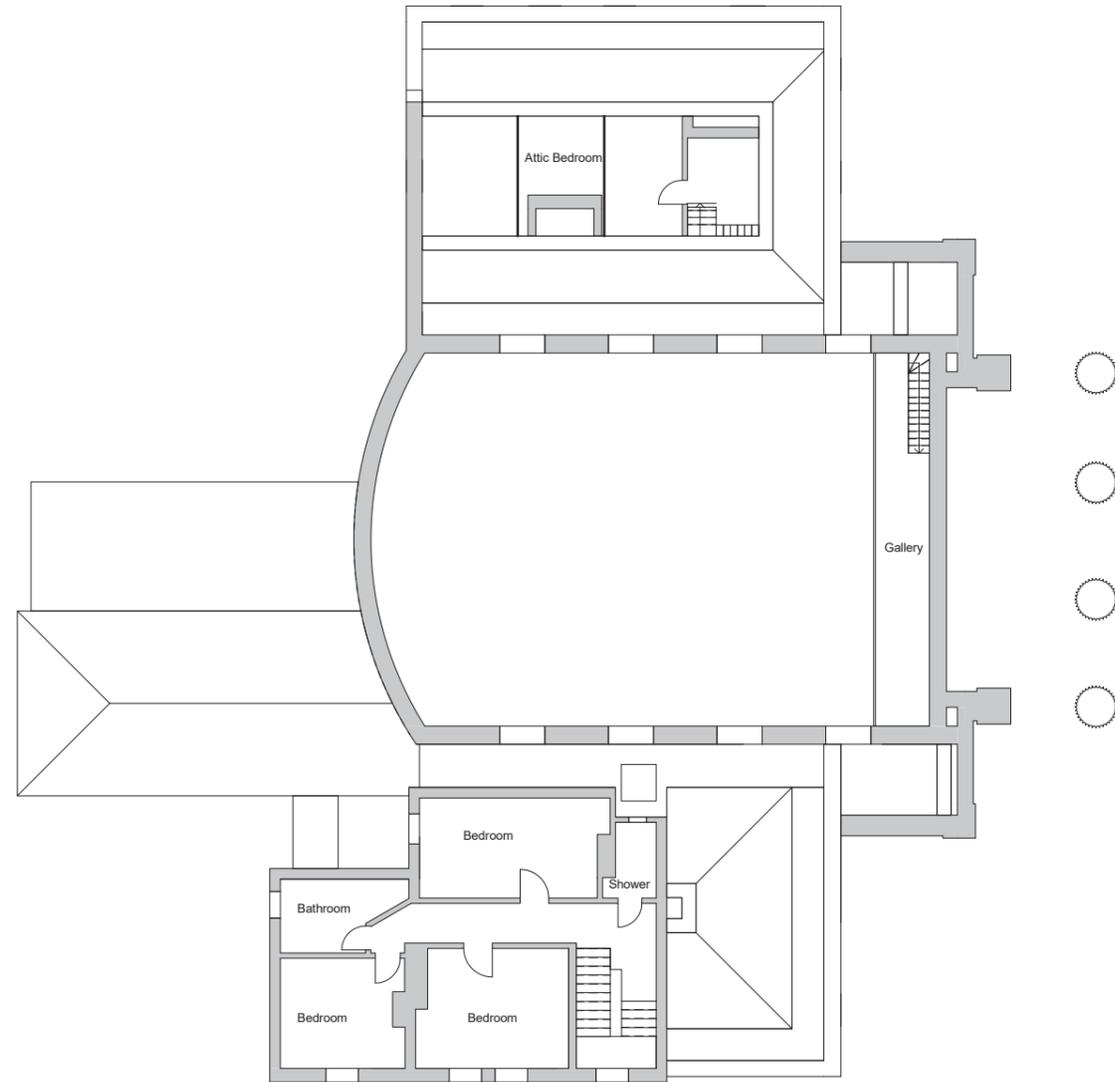
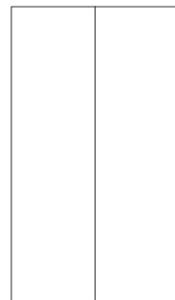
Tim Ronalds Architects
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 office@timronalds.co.uk

The Sessions House

Ground Floor Plan
 As Existing

Scale (at A1)	Drawn	Checked
1 : 100	OK	AG

TSH 011



Rev.	Date	Status/Notes

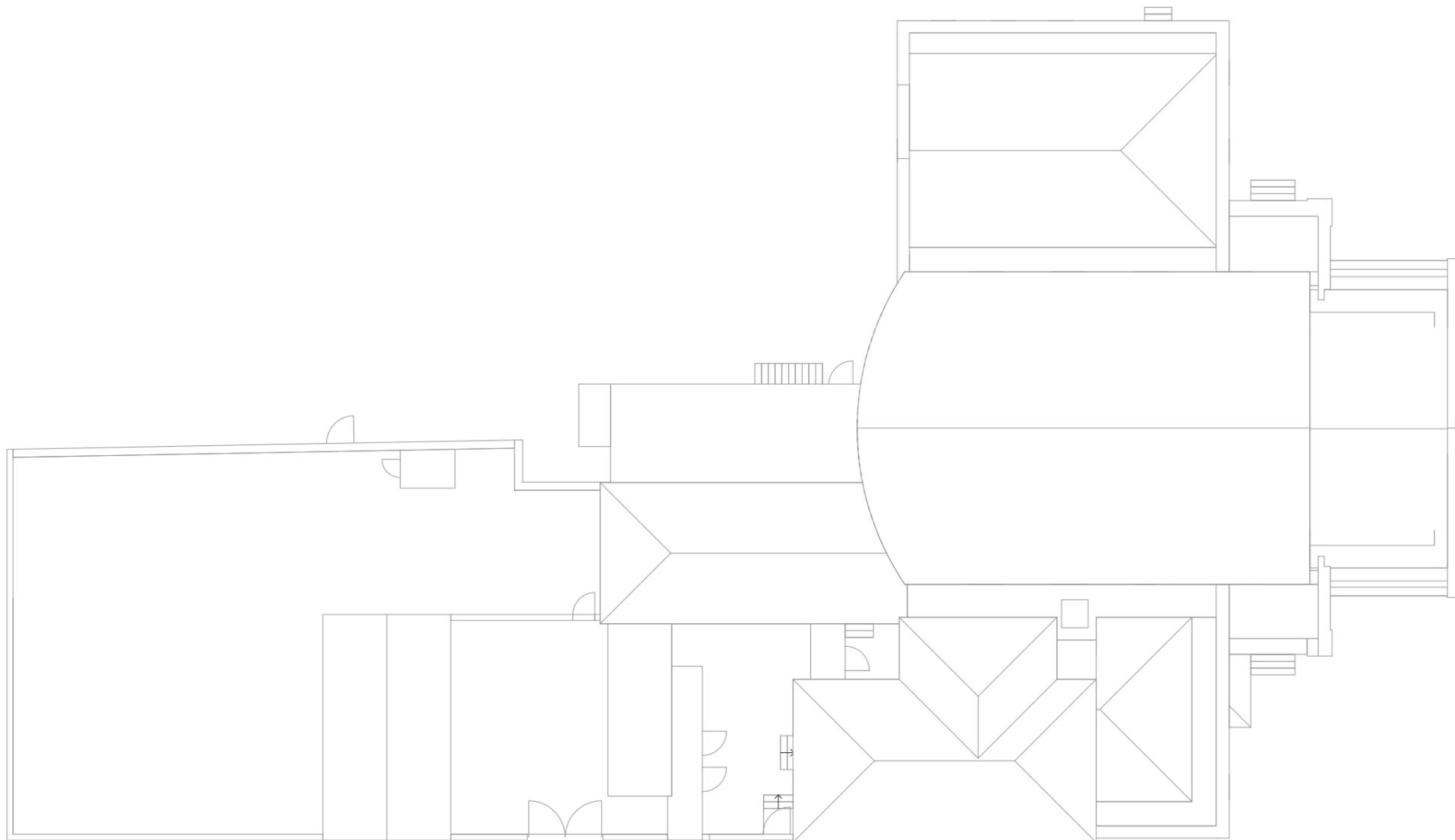
Tim Ronalds Architects
 108 Weston Street . London SE1 3QB
 tel: 020 7490 7704
 office@timronalds.co.uk

The Sessions House

First Floor Plan
 As Existing

Scale (at A1)	Drawn	Checked
1 : 100	OK	AG

TSH 012



Rev.	Date	Status/Notes
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Tim Ronalds Architects

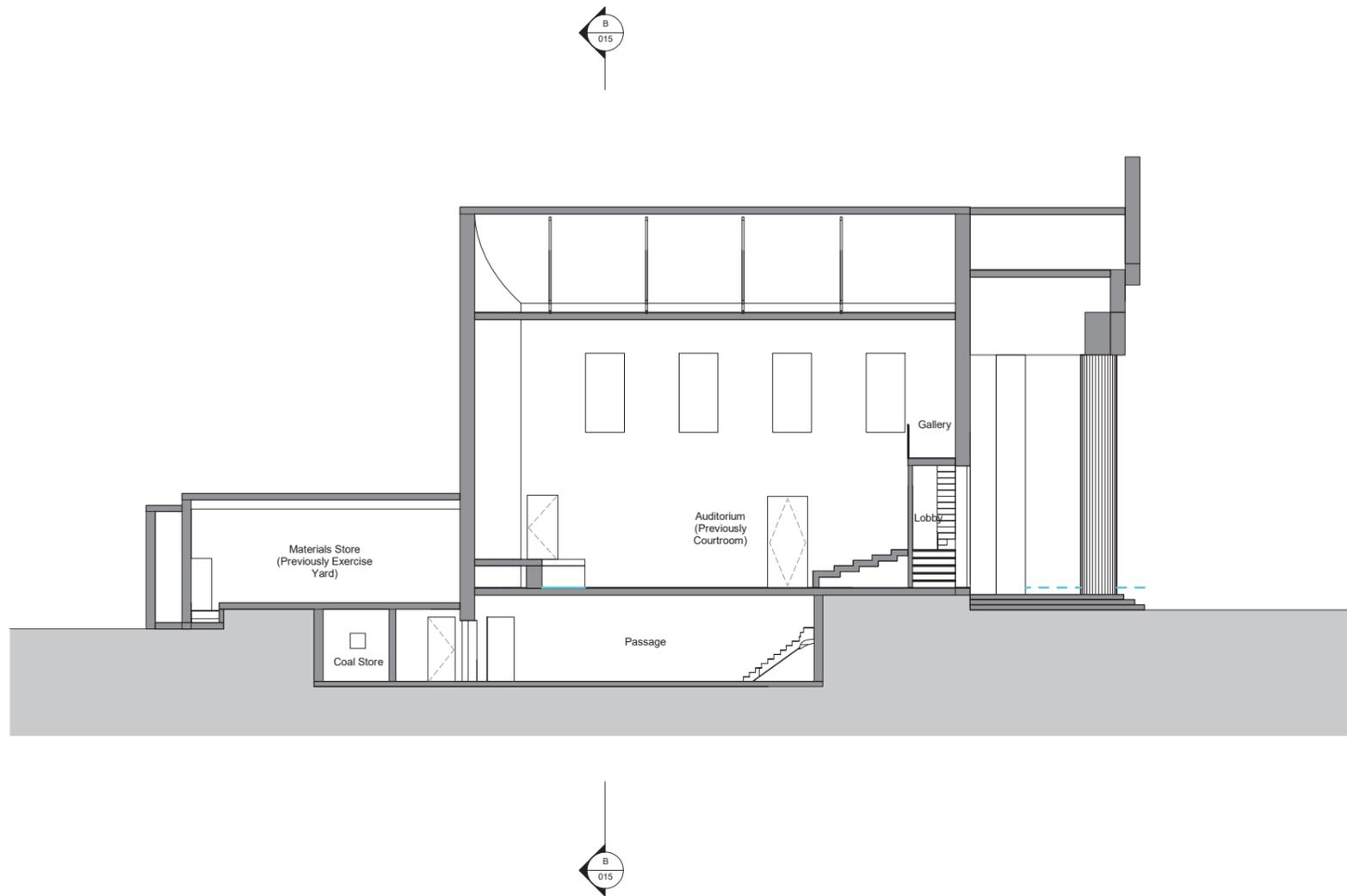
108 Weston Street . London SE1 3QB
tel: 020 7490 7704
office@timronalds.co.uk

The Sessions House

Roof Plan
As Existing

Scale (at A1)	Drawn	Checked
1 : 100	OK	AG

TSH 013



Rev.	Date	Status/Notes

Tim Ronalds Architects

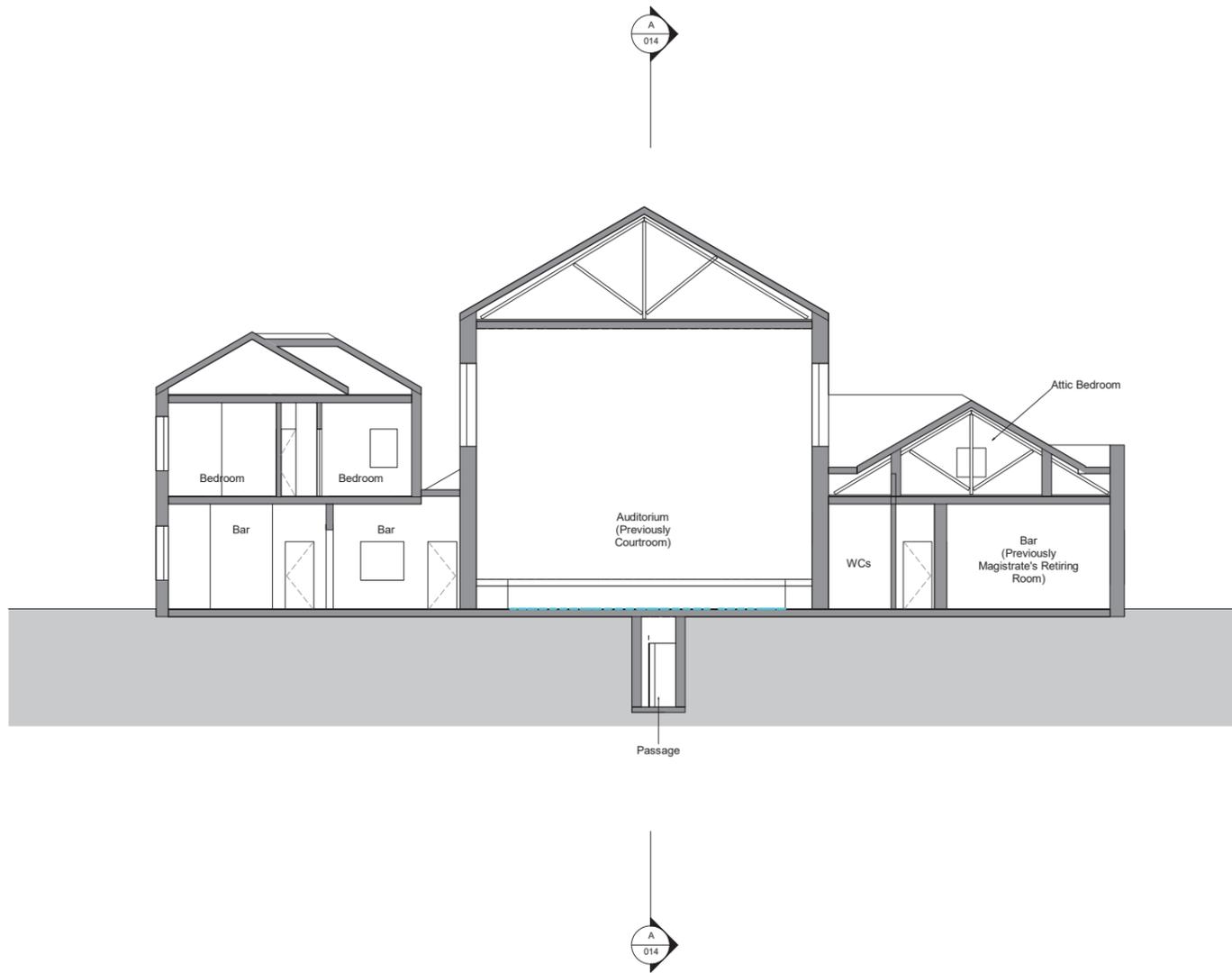
108 Weston Street . London SE1 3QB
 tel: 020 7490 7704
 office@timronalds.co.uk

The Sessions House

Long Section A-A
 As Existing

Scale (at A1)	Drawn	Checked
1 : 100	OK	AG

TSH 014



Rev. Date Status/Notes

Tim Ronalds Architects

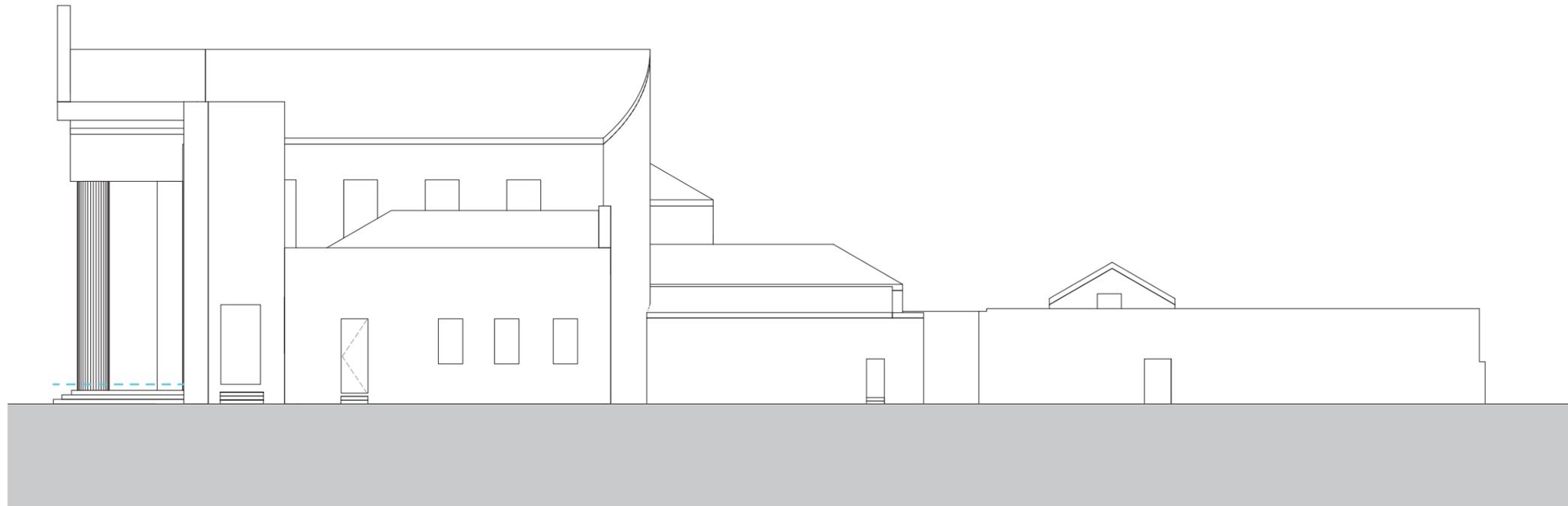
108 Weston Street . London SE1 3QB
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The Sessions House

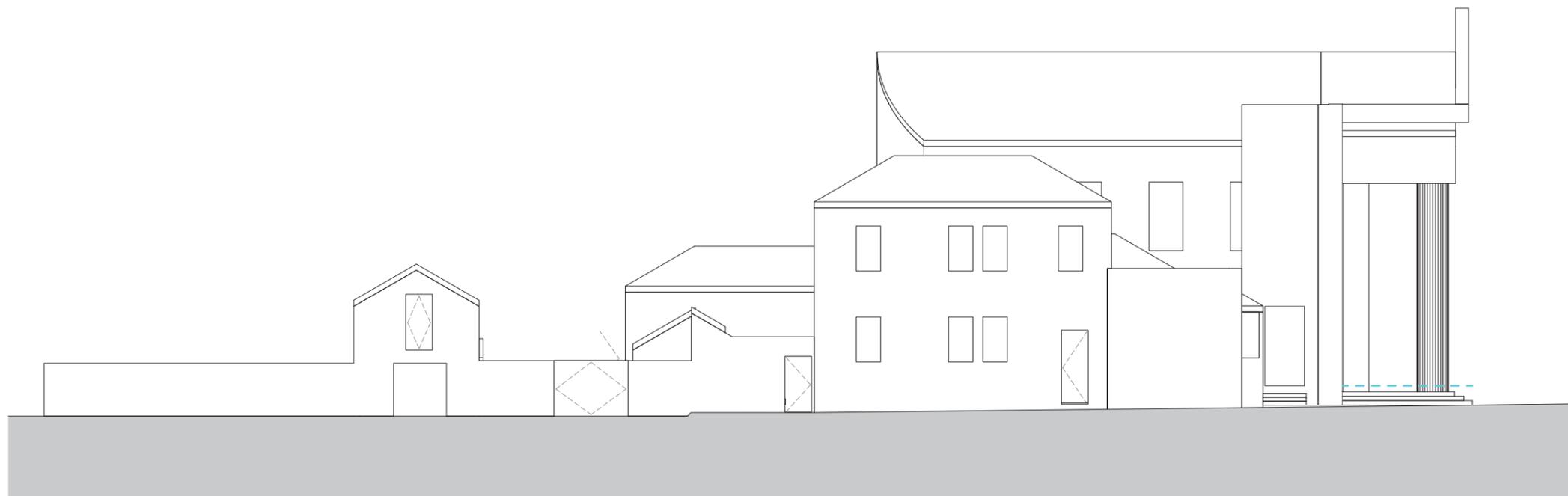
Cross Section B-B
 As Existing

Scale (at A1) Drawn Checked
 1 : 100 OK AG

TSH 015



1 East Elevation
1:100



2 West Elevation
1:100

Rev.	Date	Status/Notes

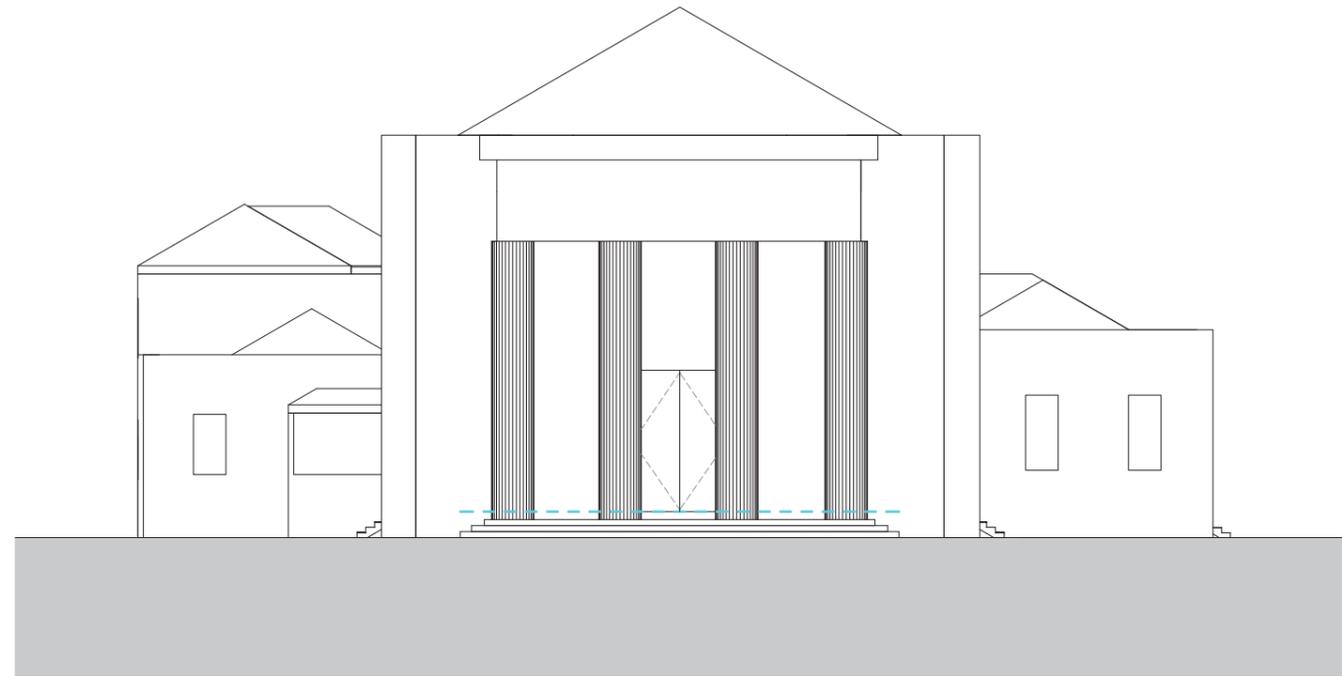
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The Sessions House

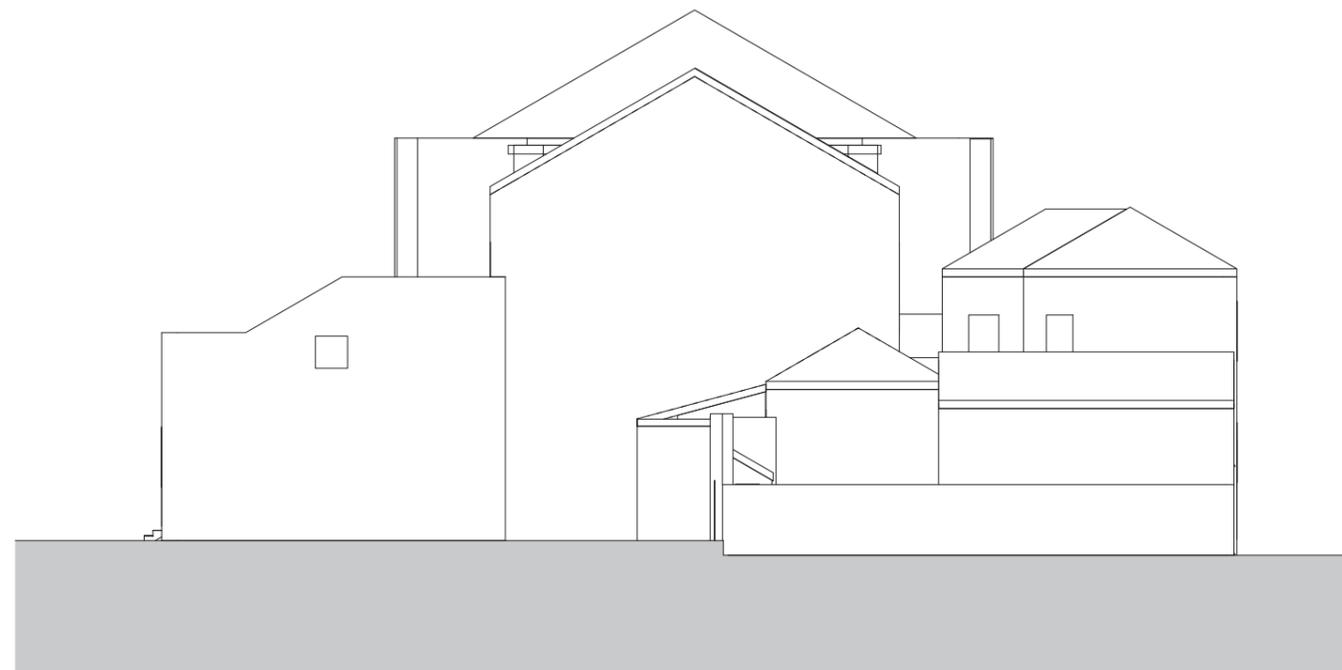
West and East Elevations
As Existing

Scale (at A1)	Drawn	Checked
1:100	OK	AG

TSH 016



1 South Elevation
1:100



2 North Elevation
1:100

Rev.	Date	Status/Notes

Tim Ronalds Architects

108 Weston Street . London SE1 3QB
tel: 020 7490 7704
office@timronalds.co.uk

The Sessions House

North and South Elevations
As Existing

Scale (at A1)	Drawn	Checked
1:100	OK	AG

TSH 017

Existing Building Significance



grafitti, 1857, 1862

Listing Text

SPILSBY CHURCH STREET TF 36 NE (north side) 2/50 Spilsby Theatre (formerly listed as 3.2.67 Court House) II Former Sessions House and police station, now theatre. 1824, by H. E. Kendall in Greek Doric style, altered later C19. Sandstone ashlar with slate roofs, yellow brick to rear. Central courtroom with subsidiary ranges in yellow brick with ashlar dressings to either side. Tetrastyle giant portico with pediment, fluted Doric columns, triglyph frieze. Tall central panelled double doors with latticed overlight. Corner pilasters. To right a single storey 2 bay range, glazing bar sashes having sandstone architraves and parapet. To left a similar range but with C19 rectangular bay replacing one sash. The left hand elevation to West End Road is a 2 storey block with plinth, first floor band and corbelled eaves and has a flush 6 panel door with plain overlight to right and 3 glazing bar sashes. To first floor are 4 similar windows. All openings have cambered brick heads with keyblocks. Interior retains contemporary doors and cornices. The Petty Sessions were formerly held here twice a week.

The old Sessions House, Spilsby, was built as a House of Correction serving Lindsey, one of the three administrative areas of Lincolnshire at the time. It was constructed during an important period of prison reform and the original plans show many of the features being discussed and adopted at the time: treadmills, enclosed external “airing” yards, a bathroom and a fumigation room. The original prison building was much more substantial than the courthouse and associated spaces that survive.

Less would be known about the original prison were it not one of the nine buildings published in C. Davy’s 1841 ‘Architectural Precedents’. The architect of the prison, H. E. Kendall, contributed drawings (plans, elevation and sections), and the written specifications for the construction. These give us a fascinating and detailed insight into the concerns and practices of construction at the time. As well as being an example of national interests and approaches to architecture and prison design at the time, the building also has notable particular features, discussed again in the architectural commentary section of this report.

The old Sessions House and the church are the two major historic buildings in the town of Spilsby. It is Listed Grade II, and is part of the Spilsby Conservation Area. The Planning Use Class is 'sui generis'. Although the prison buildings are lost, much of the courthouse complex survives intact. The courtroom retains many original fittings: its stone floor, public galleries and many finishes and fittings. The judge’s dais appears to be an 1870s replacement, but has the same configuration as the original. The wing to the east is 1820s and contains the judge’s retiring room intact with finishes and fittings. The 1870s alterations to form a police station and magistrate’s court created a very different collection of buildings, but these are of interest in their own right. The 1984 adaption to use as a theatre made minimal alterations to the building and its features and character as police station and court remain largely unchanged.

The building has great significance, for its place in prison history, for the study of architecture and construction, for its importance in the history of the area and for its distinctiveness and character. Its more recent history, and its future as an arts venue, are vital to the life of the local community and the cultural network of the wider area. The building has a fascinating local, regional and national story to tell, and much can be done in the approach and design of a conservation and refurbishment project to bring that to the fore.

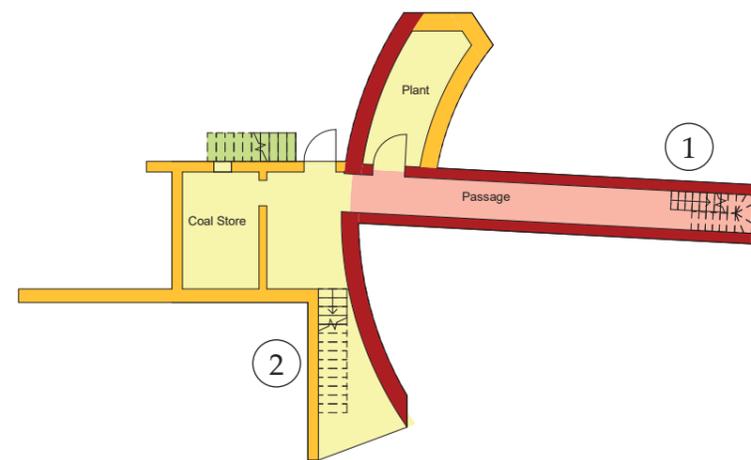
Existing Building Significance, Basement Level

 Highly significant

 Significant

 Less significant

 Neutral significance



① prisoner's tunnel and stair to courtroom

② access arrangements to the tunnel are different on the 1820s plans

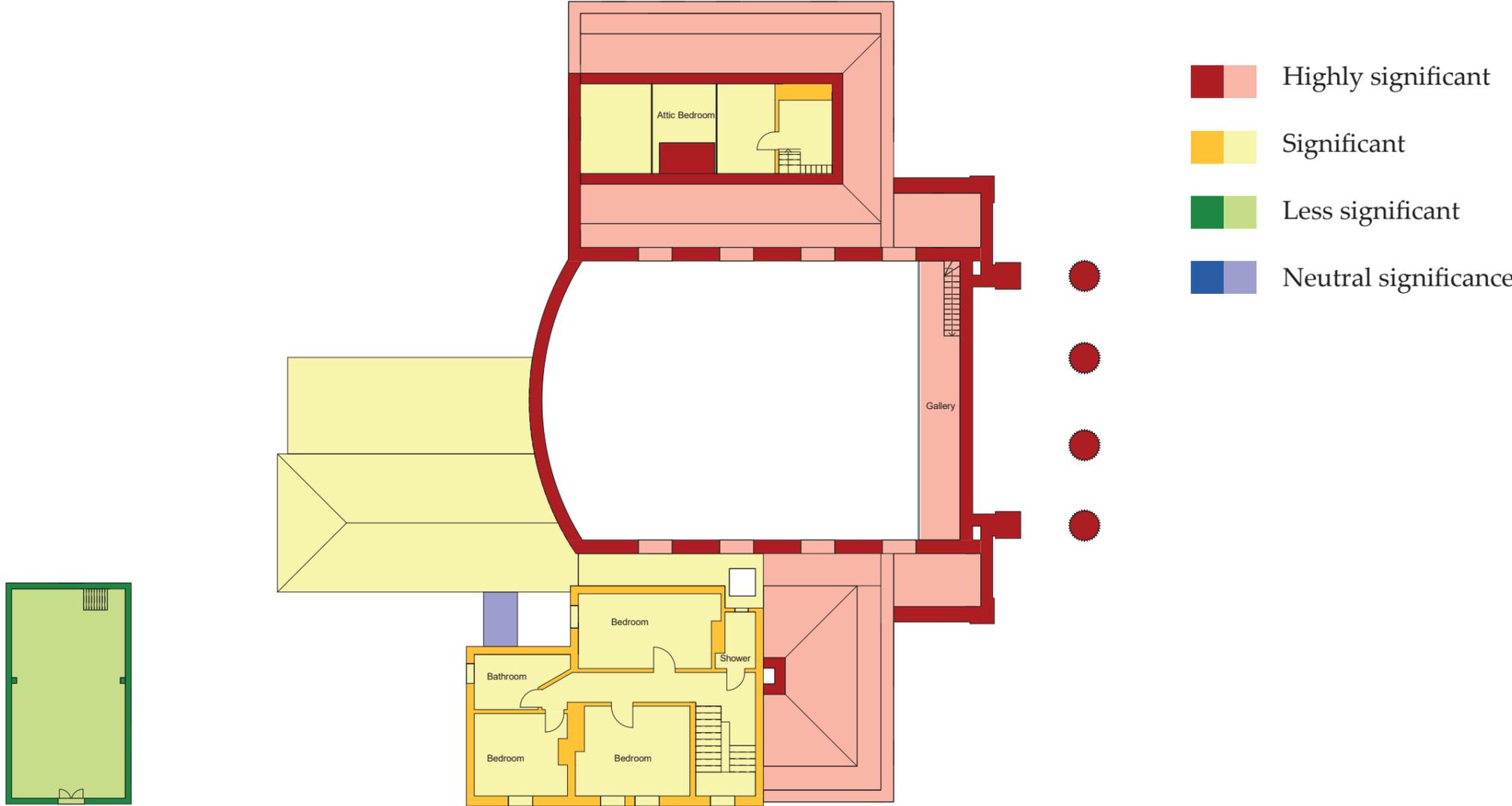
Existing Building Significance, Ground Level



- Highly significant
- Significant
- Less significant
- Neutral significance

- ① original fireplace has been removed
- ② although a stair is shown on the 1820s plans, this appears to date from the 1870s
- ③ doorway dates from the 1870s
- ④ judge's dais is 1870s timber construction
- ⑤ bay window dates from 1870s conversion to police station
- ⑥ opening between previously separate rooms dates from 1980s
- ⑦ the iron cell doors were retained from the original prison and reused for the police cells in the 1870s
- ⑧ bricked up in the 1870s

Existing Building Significance, First Floor Level



Spilsby Theatre, Spilsby, Lincolnshire. Structural Overview November 3, 2017

1. Introduction

This structural overview of Spilsby Theatre is based upon a one day site inspection on November 3 2017 to look at the whole building and record the visible defects. This report describes the defects I saw, considers the structural repairs that will be needed, and points the way forward to safeguarding the building's future.

The original Spilsby Courthouse was built in 1829 to a high standard with fine craftsmanship. This masonry and timber building, with its imposing stone portico is very solid, but it has deteriorated due to lack of maintenance especially at roof level. Fundamentally, most of the structural fabric is in fair condition, but there are defects which must be put right to make the building usable. In particular, 2 main roof trusses have fractured, the roof coverings gutters and rainwater downpipes are in poor condition, and the stone façade is suffering from rusting embedded iron causing some stones to spall.

2. Roof Structure Over Magistrates Court and Portico

The timber structure over the main auditorium comprises 5 main king post trusses (T1 to T5 on the Plan, see Drawing 3) spanning 11m East to West at 2.45m centres. These trusses support the ridge and 2 purlins (150 x 100mm), which support common rafters (155 x 47mm) at 330mm centres, and then 55 x 20 battens at 240mm spacing, covered with 250 x 500mm slates, all at 30 degree pitch. Fibreglass insulation approx. 150mm thick is laid over the ceiling joists (100 x 70 mm) at 330mm centres, and these carry the horizontal lathe and plaster ceiling (see Drawings 2 , 3, 4).

There is one timber Queen post truss supporting the shallower pitched Portico roof, and the usual arrangement of purlins and rafters. The pitch angle is only 15 degrees, and so this part of the roof is covered in lead. Though I was not able to climb up and see it from close quarters, there is a rather awkward junction between the slate and lead, just visible from Spence Street, and this lead appears very weathered indeed (see photo 4, and 5).

Two of the main trusses (T1 and T2, near the Portico) have suffered decay at the East end, and the bottom booms have fractured next the supporting wall. This has happened because the bearing position of the principal rafter is not over the wall - rather it falls short, and puts bending stress into the bottom boom of the truss. These trusses now sag, and this has pushed the top part of the East wall out of plumb, (see photos 1, 2 and 3, and drawing 4). The sagging has fractured the ceiling. These 2 trusses, now propped on temporary scaffolding, need to be repaired probably using new timber and steel plates spliced onto the existing timber. The trusses will need to be jacked up, in order to restore their position above the lathe and plaster ceiling. This work will mean taking off the slates, but since some of the slates are showing signs of delamination and there is no sarking felt, it will be desirable to renew the slates and leadwork. Because all the trusses are weak at their ends, it will be necessary to strengthen both ends of all 5 trusses by adding steel shoes hidden in the roof space (see drawing 4). It will also be necessary to look at the bearing ends of all other trusses, some of which were hidden from view.

3. Fractured Stone on the South Elevation

The front façade walls are 175mm - 225mm thick stone firmly bonded to brick backing with some through or "bonding" stones tying the two materials together (see photo 12), making an overall thickness approx. 450mm. Rusting iron cramps built into the stone facing on the South elevation are causing the stone to spall (see photos 6, 7). Corners and edges of some stone have been prised off by the expansion of the rusting iron cramps which were used by the masons to hold the stone wall together. This is a common problem for 19th century

buildings where the embedded wrought iron eventually rusts and triples in size, forcing the stone surface to spall. The stones are very large, and the iron cramps, acting like giant staples, would have been especially useful during construction to fasten a newly placed stone onto its neighbour. The pattern of spalling suggests that cramps were inserted both parallel to the face at the perpend joint (vertical joint between 2 stones), and at 90 degrees to the façade to tie the stone back to brickwork behind. It is likely that iron cramps have been used throughout, but only some have rusted enough to fracture the stone surface.

Methods of repair include: Removing the rusting iron

Cathodic protection

Water Repellent Barrier

The best cure is to remove all the rusting iron cramps, and replace them with new stainless steel. This is hardly feasible, especially with such large stones. Where stones have spalled and the rusty iron is visible, it would be possible to cut back small areas of stone, then remove the iron, and finally restore the surface with a patch of new stone. This leaves many as yet undamaged iron cramps with potential for rust and spalling in the future.

Where embedded iron is continuous, as in an iron frame, there is an effective electrical method of halting corrosion called Cathodic Protection (CP), also known as Sacrificial Anode Cathodic Protection (SACP). By inserting anodes (which may be Magnesium or coated Titanium) close to the rusting iron, a small electrical current flows through the stone, and this protects the iron from further corrosion. At Spilsby theatre, the cramps are independent and not connected together, so for CP to work, it would be necessary to electrically connect the cramps by inserting a ribbon of wire within the bed joints. CP may be cost effective if scaffold access to the whole stone façade is needed anyway.

Reference 1

Treating the stone with a water repellent coatings such as Silane or Siloxane, would be a cheaper way to reduce the rate of corrosion in the embedded iron. These clear coatings form a barrier against water ingress. They penetrate the stone and reduce the wettability of the masonry surface, yet the pore structure remains open and "breathable". By shedding water this treatment keeps the stone drier and hence the corrosion rate of iron is reduced, so the old cramps should last longer. (Reference 2)

4. Cracks in Walls

The walls are mostly brickwork, though the front façade is stone (approx. 225mm thick) with brickwork backing. Generally speaking, the walls are of adequate thickness, and they appear to be plumb, without any serious signs of settlement. It must be presumed that the foundations are generally adequate, since there are few signs of serious distortion of window or door frames. Some more minor defects are described below:

There are some minor cracks in a few of the brickwork walls:

- a) North (curved) wall of the courtroom. High up on the gable section of this wall there are some cracks in between the ventilation openings that allow air into the loft, see photo 8. This may be caused by slight movement in the timber roof structure (see photo 9). Stitch repair with helical stainless steel (Helifix) bars would be possible.
- b) On the East wall of the Courtroom just below gutter, the top of the wall has been pushed out of plumb because of the failing timber king post trusses T1 and T2 (see photo 3). This section of wall, about 6m long and 0.7m high, just below the gutter will have to be rebuilt when the truss ends are repaired (as described in Parag 2)
- c) There are signs of settlement and associated cracking in the North wall of the single storey store outbuilding where there are steps down (see photo10). The main drain passing north through this passage, and it is possible that leaks from the drain have caused some settlement (approx. 25mm) visible at

eaves level on the north wall. It seems that this cracking is associated with movement of foundations below ground level.

- d) In the 2 storey barn (former stables), there is diagonal crack above the main sliding door at the East end of the South wall. This may be due to deflection of the lintel beam over the door, or local settlement in the foundation below ground level. A trial pit at this corner would be needed to better understand the cause.

5. Roof Covering, Roof lights, Gutters, Chimneys

Limited access for this survey meant it was only possible to climb up onto the lower roofs each side of the Courthouse, not onto the high roof over the Courtroom. Most of the roofs are slate, though the front portico is covered with lead. There are lead flat valley gutters behind the parapet walls. Some slipped slates have been held in place by tangs (metal wire or lead hook, see photos 11 and 12), and seen from the loft spaces underneath, some slates are showing signs of delamination (see photo 13). There were also signs of water staining on the rafters, so it is clear that the roof has leaked in the past, though there were no obvious wet patches on ceilings.

The roof lights have been boarded and felted over so they no longer admit daylight to the ground floor (see photo 12). The frames look in poor condition. The workshop, formerly Exercice Yard, has a lightweight corrugated metal roof (photo 14)

Many of the gutters are cast iron, and most are in need of attention, since they leak at joints and the roof hoppers and cast iron downpipes also leak within the entrance areas on both sides (see photo 11). By modern standards there are too few rainwater downpipes.

The brickwork chimneys are generally plumb, but the flaunching and chimney pots could not be seen close up.

It will be necessary to take off the slates and lead, re-felt the roofs, and put back new or reclaimed slate and lead to make the roof sound and weathertight. By

taking off the slate, it will be easier to jack up the 2 failed trusses, fit new steelwork strengthening, and rebuild the section of leaning wall.

6. Future New Suspension Booms for lighting, speakers, scenery etc.

When the roof slates are removed, it would be possible to thread in new trusses spanning East West across the 11m width of the courtroom, and these would be positioned in the ideal places to carry lights etc. Secondary members spanning North South could also be inserted within the loft in order to provide more suspension points. It may even be possible to adapt and strengthen the existing timber King Post trusses, and make them strong enough for the extra load. This may be more economical than providing wholly new trusses, but to justify this approach would involve further calculation. A rough estimate suggests that, once the bearing ends of all 5 trusses are strengthened, it should be possible to carry the extra weight of scenery/lighting on the timber trusses.

7. References

1. Cathodic protection of Embedded Iron in Church Towers, Dr David Farrell, Rowan Technologies Ltd.
2. Stone Consolidation, Elizabeth Garrod , www.buildingconservation.com

Philip A R Cooper FStructE

Structural Engineer

Cambridge Architectural Research Ltd

Structural Survey



Photo 1. King Post Truss T1, East end, failure of bottom boom which has dropped partly through ceiling and pushed brick wall out of plumb.



Photo 2. Truss T1 has dropped approx. 75mm at the purlin, so the purlin is no longer adequately supported. This has caused the roof to drop and push outwards, causing the East wall to lean out of plumb.

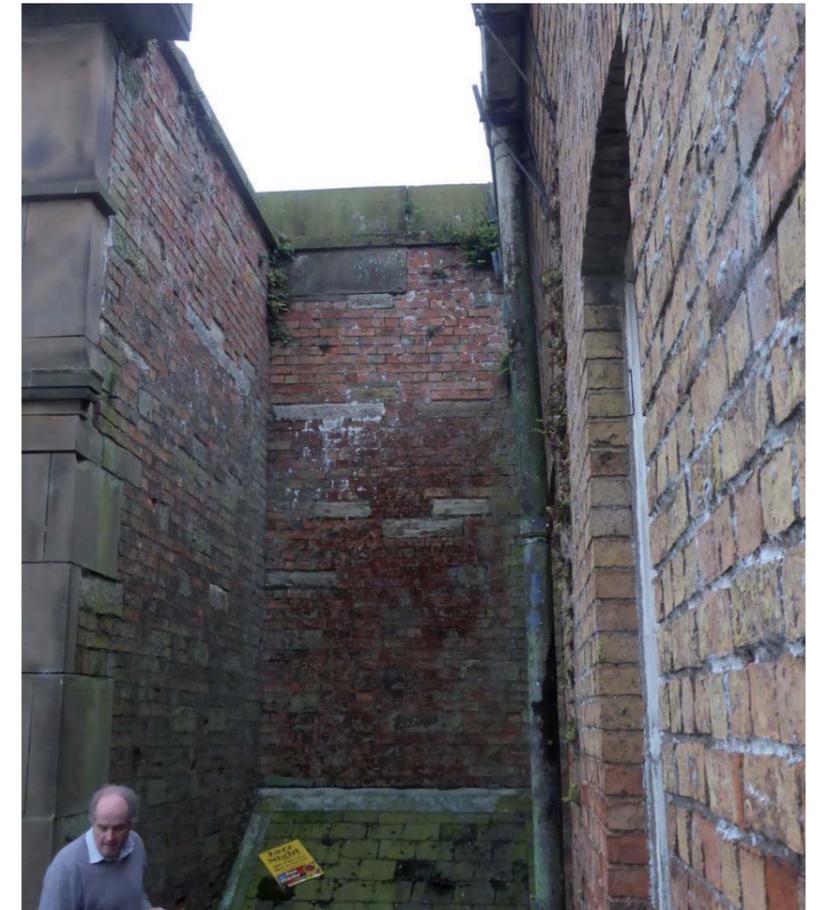


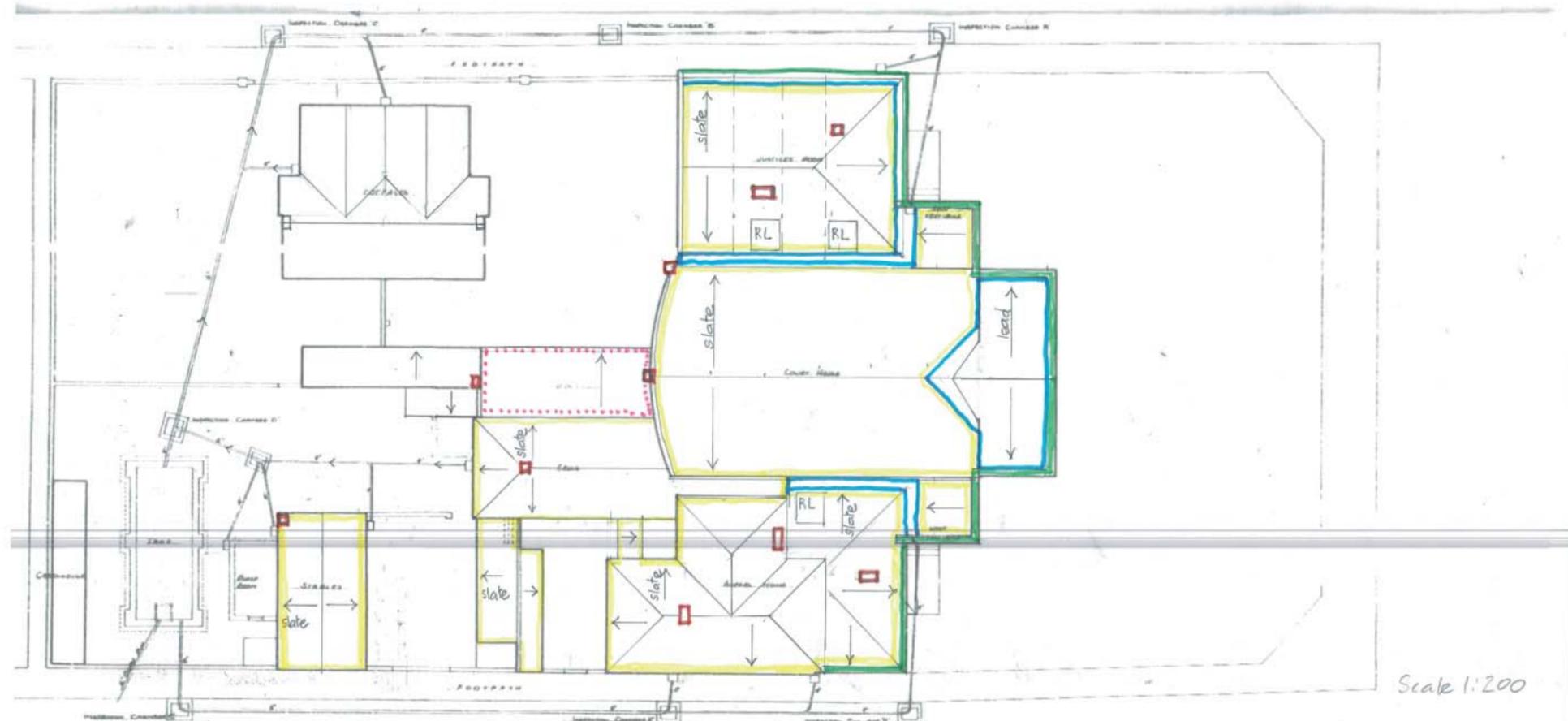
Photo 3. Top of East Wall out of plumb caused by fractured trusses T1 T2.

Structural Survey

ROOF PLAN : Structural Survey Nov. 3, 2017

Drawing 2

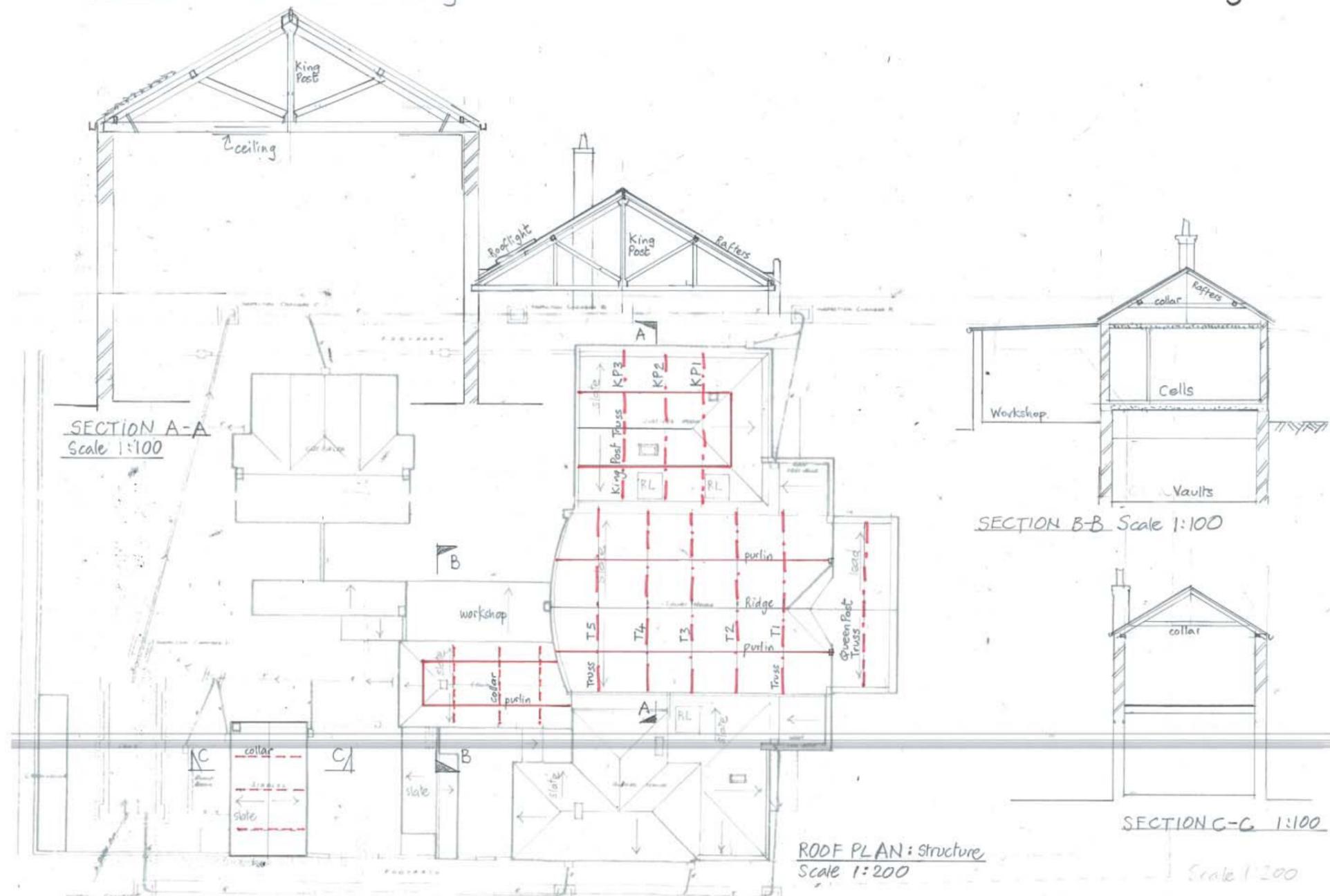
-  lead roof covering
-  brickwork chimney
-  stonework parapet
-  Slate Roof, ~ 30° pitch.
-  Corrugated Metal Roof sheet



Structural Survey

ROOF STRUCTURE Structural Survey Nov 3 2017

Drawing 3.

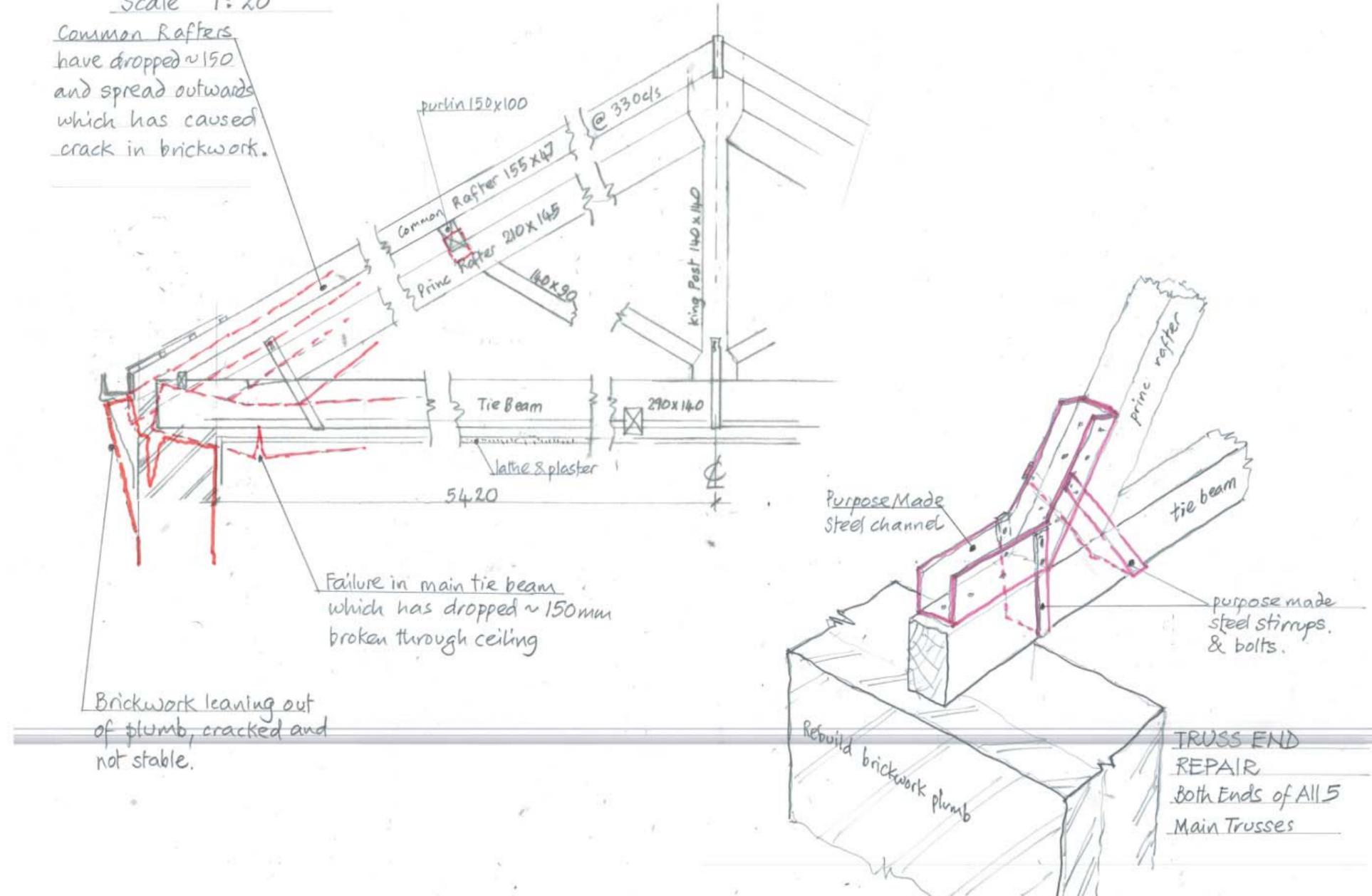


Structural Survey

KING POST TRUSS TI OVER COURTROOM, Structural survey Nov 3, 2017
Scale 1:20

Drawing 4.

Common Rafters have dropped ~150 and spread outwards which has caused crack in brickwork.



Building Condition

In general, the building is well built and well founded, showing no serious signs of movement. There is the significant problem of the corroding iron cramps in the facade stonework that must be addressed, but otherwise the walls are good condition, needing only localised repointing.

The roof coverings, although well constructed, are aged and appear not have received much attention over their life. They are now in need of complete replacement. Water ingress over a number of years has caused the failure of the two courtroom roof trusses, and other areas of rot and damage to internal finishes. Refurbishment of the roofs is an essential component of the project.

Many original internal finishes and features survive, from both the 1820s and 1870s constructions, in good and fair condition. These can all be retained in the proposed project.

All electrical and mechanical services are at least thirty years old and in need of complete replacement. The gas-fired heating and hot water services are at present inoperable.

Details of the condition survey follow.

Condition Survey Facade



1.1



1.2



1.3



1.4

1.1

The south elevation is the main facade of the building. The imposing Doric portico and brick-built wings to either side survive largely unaltered from the 1820s. The stone walls of the portico are backed with brickwork. The stone is generally in good condition and well detailed with little deterioration other than the significant problem cracking and spalling caused by corrosion of the iron cramps used in the original construction to tie the stones together and to the backing wall. This is discussed in detail in the structural survey report.

1.2

Panel of stone wall showing the typical extent of the spalling and cracking.

1.3

Iron cramps laid both along the joints and back to the brickwork behind.

1.4

Typical damage to stone from the corrosion of the iron cramps.

Condition Survey Facade



1.5



1.6



1.7



1.8



1.9

1.5

The south-western end of the portico with water staining visible. The stone is largely undamaged. Vegetation has begun to grow in joints where mortar is missing.

1.6, 1.7

The same south-western corner viewed from below showing water staining from a roof leak.

1.8

Apex of the pediment: the stone has survived well but needs pointing repairs. A lead covering would be beneficial and should be considered.

1.9

Cornice: vegetation has taken root where mortar is missing.

Condition Survey Facade



1.10



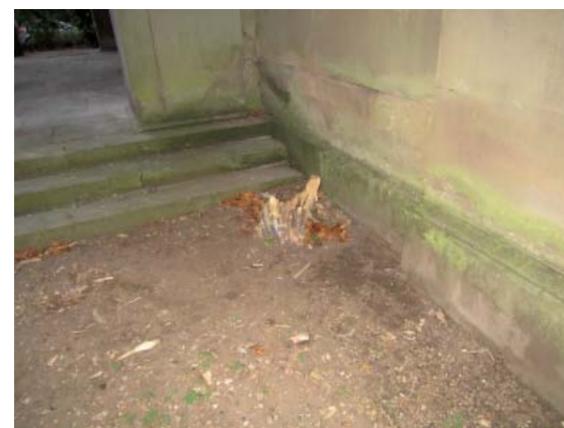
1.11



1.12



1.13



1.14

1.10

Staining and deterioration from damp, at the back of the portico where the stone is less able to dry out. Water-repellant treatment might be beneficial in these areas and should be considered at the next design stage.

1.11

Similar damage to the backs of the column. The fronts of the columns, which face the sun, are much less affected.

1.12

The stone floor slabs in the portico are suspended on sleeper walls. Cracked stones are in danger of collapse and should be replaced.

1.13

Water damage at low level. This location is not hidden from the sun but drying out was hampered by extensive vegetation.

1.14

Stump in the same location, showing the long-standing and extensive vegetation that had been allowed to grow all over much of the building, now largely removed by the new occupants.

Condition Survey

West Elevation



2.1



2.2



2.3



2.4

2.1

The east wing (magistrate's room) is 1820s construction. The as-built arrangement shows slight differences with the drawings in the 1841 publication.

2.2

Detail of the door and plinth: staining and mild spalling from rising damp; missing pointing. Rainwater goods in need of refurbishment or replacement.

2.3

Detail at the base of the plinth: the condition of the stone under the cement fillet should be investigated. A more appropriate detail might be considered or the fillets renewed.

2.4

The iron floor ventilators have cracked the stone in every bay.

Condition Survey

North Elevation



3.1



3.2



3.3



3.4

3.1

North wall of the courtroom: the brick and brickwork are in good condition with only localised repointing needed.

3.2

Detail of the north wall of the courtroom. Pointing is deteriorated or missing from the copings and vegetation has started to take root in open joints.

3.3

North wall of the courtroom (to left of photo) and east wall of the exercise yard (to right of photo). These walls abut the neighbour's garden at no. 5 Spence Street. The roof of the exercise yard is temporary and if replaced as part of the project, should be reversed to fall in the opposite direction and provide a gutter readily accessed from the client's side.

3.4

The only cracking evident is at one of the loft ventilators.

Condition Survey

East Elevation



4.1



4.2

4.1

The police house dates from the 1870s. As elsewhere, it is well built with no signs of structural problems. Brickwork is in good condition with only localised repointing needed. The joint between the 1820s and 1870s brickwork can be seen at the far right of the photo. There are no stone dressings or plinths.

4.2

Detail of the northern end of the wall. The extensive plant growth has now been mostly removed.

4.3

Gutters and downpipes are likely to have been in service for 140 years, without much attention, and may yet only need refurbishment rather than full replacement.

4.4

A large amount of the plant growth over the building has now been removed.



4.3



4.4

Condition Survey

Yard Buildings



5.1



5.2



5.3



5.4

5.1

Former police garage. The yard buildings are less substantially built than the main buildings, and have suffered to a much greater extent from unchecked vegetation, now removed by the current occupants. Nevertheless, the brickwork and pointing are in fair condition. Exposed wooden components such as doors and windows have significant rot and are likely to need replacement.

5.2

Gable: slating and undercloak missing.

5.3

Vegetation has been removed by the client but the stumps remaining show that uncontrolled growth has been allowed for decades.

5.4

Gutters have not been maintained for many years.

Condition Survey Yard Buildings



6.1



6.2



6.3



6.4

6.1

Cell block north wall: missing downpipe and erosion of pointing.

6.2

Movement and cracking in the north-west corner of the cell block. The stump or the drain to the bottom-right of the photo suggests the cause.

6.3

Brickwork under the white-painted beam looks to be a later in-fill which was not well founded and has moved.

6.4

Remains of vegetation show the extent of uncontrolled growth.

Condition Survey

Roofs



7.1



7.2



7.3



7.4

7.1

Upper east wall of courtroom and reverse of portico wall: brickwork is largely sound with some repointing needed. The gutters of the courtroom roof are difficult to access and maintain; discrete, fixed-ladder access to gutter outlet points would be a significant improvement to maintainability.

7.2

Plant growth at a gutter leak.

7.3

Reverse of portico wall: vegetation needs to be removed and pointing to the copings and brickwork repaired. The intermittent stones that create a bond between the stone facings and brickwork backing wall can be seen.

7.4

The slating and leadwork were originally carried out to a high standard. The absence of sarking felt and presence of torching, to be seen from inside the roofspaces, suggest that the roofing might not have been overhauled since it was first installed, possibly as long ago as the 1870s. The roofing now needs complete replacement. The photograph shows a gutter outlet that passes under the wall and runs internally to a downpipe in the porch at the side of the portico (there is the same arrangement on the west side of the building). It is prone to blocking and opening out the hole in the wall to improve access for clearing it is likely to help.

Condition Survey

Roofs



7.5



7.6



7.7



7.8

7.5

Windows generally, and particularly at high level to the courtroom, as this photo, need reglazing, new cills and repairs to sashes, glazing bars and frames.

7.6

Temporary patch-ups have a habit of staying for the long-term.

7.7

Typical condition of parapet gutters. Alongside renewal of lead and pointing, thought should be given to a slim and discrete handrail to give safe access for clearing the gutters.

7.8

The iron cramps joining the parapet stones are corroding but have not yet damaged the stones. These should be cut out and replaced with stainless steel set into hot lead. Alternatively, lead wrapping to the parapets might be considered, but the risk of theft and the cost of replacement of extensive areas of lead should be accounted for at these more accessible levels.

Condition Survey

Roofs



7.9



7.10

7.9

At the west side, a convenient and safe access for maintaining the gutters can be arranged from the yard area. The boarded area is one of the rooflights with laylights fitted in the ceilings below. These appear on the 1820s plans.

7.10

The western twin of problematic, enclosed outlet detail discussed at 7.4.

7.11

Chimneys generally appear sound but need repointing and new flaunching.

7.12

Missing lead has caused deterioration of the brickwork and vegetation growth.



7.11



7.12

Condition Survey Courtroom Roof Space



8.1



8.2



8.3



8.4

8.1

Northern end of the courtroom loft with the last main truss visible. The pile of material at the gable wall is the work of birds getting in through missing grilles in the ventilation slots.

8.2, 8.3

Detached and split timbers are the result of the movement of two of the main roof trusses and the eastern wall where they bear, discussed in more detail in the Structural Survey.

8.4

The roof timbers are generally in good condition. The torching to underside of the slates can be seen.

Condition Survey

Other Roof Spaces



9.1



9.2



9.3



9.4



9.5



9.6



9.7



9.8



9.9

9.1 Occupied loft space above the magistrate's retiring room. The proposals include an adaption to the roof trusses to make a more useable passageway on the left-hand-side.

9.2 Typical roospace adjacent to occupied loft. In general, in all roofspaces, rafters and ceiling joists are in fair condition, with some rot in vulnerable locations.

9.3 One of the rooflights with a laylight in the ceiling below that show on the 1820s plans.

9.4 Roospace above the cells. The ceiling is formed from stone slabs laid across the tops of the cell walls.

9.5 Typical wall plate, in fair condition.

9.6 Garage roofspace.

9.7 Roospace above the police house.

9.8 Internal view of the rooflight pictured at 7.9.

9.9 Temporary roof above the former exercise yard. The high level windows to the right are at the backs of the cells.

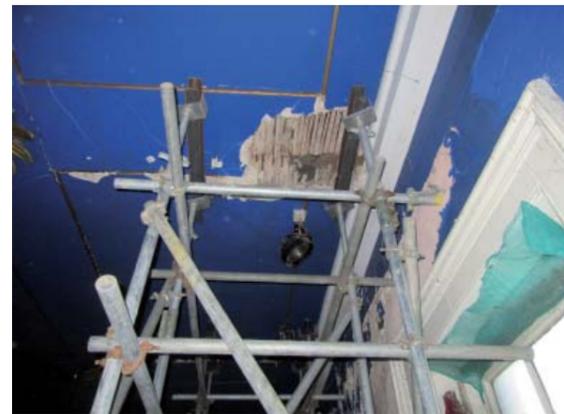
Condition Survey Courtroom



10.1



10.2



10.3



10.4

10.1

The courtroom ceiling is a simple flat ceiling, with some ornamental detailing.

10.2

Damage to internal finishes from water ingress at the lead valley gutter under the windows. A wooden ring beam built into the brickwork at cill level, common practice at the time of construction, has become exposed and its condition will need further investigation at the next project stage.

10.3

Damage to finishes at caused by the movement of one of the two damaged main trusses. The scaffold is the temporary support to the trusses. Note: Since 2017, further water ingress has caused rot and movement in a second roof truss.

10.4, 10.5

Damage to finishes at points of water ingress.



10.5

Condition Survey

Courtroom Associated Spaces



11.1



11.2

11.1
The portico door is so substantial as to be beyond deterioration and is only in need of cosmetic attention. Ironmongery is complete and operable.

11.2
Underground prisoner's tunnel: There are no signs of structural problems. Surfaces are a little damp but there are no indications of substantial water ingress. Attempts to waterproof the area would be costly and destructive of the wonderful atmosphere. Keeping the area well ventilated is more appropriate.

11.3
An old gas lamp fitting in the tunnel.



11.5

11.4
Tunnel viewed from above, from the courtroom sub-floor.

11.5
The prisoner's entrance into the middle of the courtroom from the tunnel is bricked up, possibly done in the 1870s (the stair and entrance do not appear on the 1976 plan based on the 1896 survey).



11.3



11.4

Condition Survey

Magistrate's Room and Associated Spaces



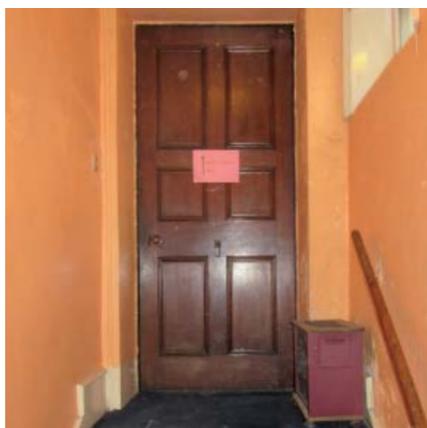
12.1



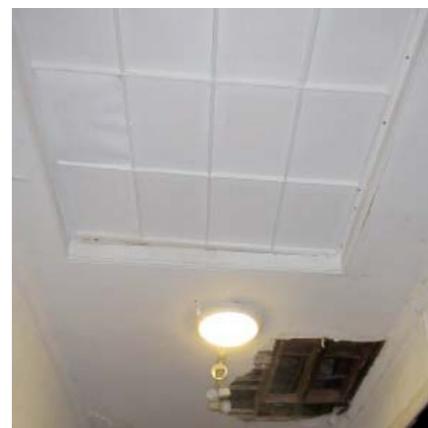
12.2



12.3



12.4



12.5



12.6



12.7

12.1, 12.2, 12.6

The former magistrate's retiring room retains its original finishes and fittings in good condition, including a fine marble fireplace.

12.3

The bar was created from elements of the prisoner's dock, and counsels' and jury's enclosures, in stained oak. Numerous other pieces of these enclosures remain stored loose in the courtroom sub-floor.

12.4

A number of fine panelled doors remain, with original ironmongery, again in stained oak.

12.5

One of the laylights above the lobbies on either side of the courtroom, shown on the 1820s plans.

12.7

Water damage to wall and floor under a leaking parapet gutter.

Note: Further water ingress since 2017 has damaged much of the ceiling plaster and caused additional rot in the floor.

Condition Survey

Police House and Associated Spaces



13.1



13.2



13.5

13.1

The main spaces of the police house are typical of all the rooms: finishes largely survive, in fair condition. The arch in the photo was made in the 1980s, connecting two previously separate rooms to form a tapas restaurant. The corner fireplace, to the left of the photo, is lost.

13.2

Western lobby to the courtroom: The door to outside is original 1820s, as is the particularly fine double door into the courtroom that can just be seen on the left-hand-side of the photo. The coat of arms that used to hang above the judge is leaning on the right-hand wall.

13.3

The former exercise yard and temporary roof.

13.4

The station sergeant's desk remains and, confusingly, faces the window. The counter to the bottom-right of the photo is another new fitting assembled from the courtroom enclosures.

13.5

One of the cell entrances: The cast iron door, with its unusual radial grille/window that can be opened and closed and cast iron "panelling" below, has the mark of an architect about it: it is an 1820s cell door from the prison, reused in the 1870s. A number of these doors crop up in the nearby houses that were built on the site of the prison.



13.3



13.4

Condition Survey

Immediate Needs



14.1

14.1

The partial collapse of two of the main trusses in the courtroom is a serious problem, preventing the use of this space by the public. However the more immediate problem, and the one with the potential to cause more widespread damage is the condition of the roofs. These are letting in water in a number places, which will cause cumulative damage to wooden structures and internal finishes. Photo 14.1 shows a recent collapsed portion of the ceiling of magistrate's room. Wet plaster gains weight considerably, and wet rot can be seen on the ceiling laths, not visible from the loft space through the mineral wool. The room is now out of use.



14.2

It makes no sense fully re-covering the roof without carrying out the other works envisaged as part of the project: structural timber repairs, services installation, wall repairs. Instead, if funding can be found, temporary repairs should be carried out wherever possible, as soon as possible, to try to stop further deterioration and damage. Following discussion with the quantity surveyor a budget of £ 15,000 - 25,000 is suggested for temporary roof repairs.

Architectural Commentary



1



2 public entrance



3



4 judge's retiring room



5 prisoner's entrance

The architecture of the courthouse is pure theatre. The various participants' experiences of the building were very different.

The imposing Greek Doric portico, quite out of place in a small market town, is intended for the members of the public. The entrance to the public galleries is through the door under the portico. This door is not only very large but has a false panel above it and tapers to create false perspective (photo 2, taken at eye-level). Inside the courtroom, a giant coat of arms is suspended above the judge (photo 3, the arms are of George IV). The public are to feel awe and fear at the might and majesty of the law, lest they stray from their honest path.

The prisoner passes through an unadorned underground brick tunnel, climbing a tight set of steps at the end to appear in the middle of the courtroom, through a hole in the floor like a creature from the underworld, into the glare of scrutiny from the public on one side and officialdom on the other.

The judge has comfortable and homely apartments with a separate entrance, nicely proportioned, well lit by three cased sash windows, with elegant features and a fine marble fireplace, all in the best Georgian tradition.

Architectural Commentary



It is not just the building's unusual architecture that is so interesting and valuable, but also its story over time. There is no one point in the building's past that can be easily identified or that is appropriate for it to be restored back to. Instead, the many surviving characteristics and features of the building, from all stages in its past, should be conserved, allowed to be apparent, and made more accessible. No more should be done than is necessary and new elements should not overwhelm the old.

This is not to say that the building should not be properly repaired and conserved for the future, but a thoroughgoing restoration can make a building look new, wiping out the sense of age and history. All should be retained and preserved, any work should be done carefully and modestly, and no more should be done than is necessary. This was the approach to conservation used at Wilton's Music Hall in east London, and the outcome has been well received. At Spilsby, many more of the internal finishes and fittings survive than at Wilton's.



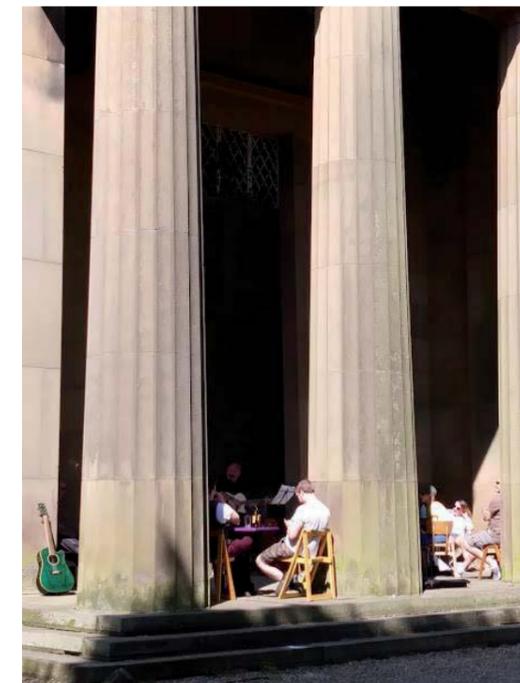
The range of existing spaces in the building are well suited to their proposed use with minimal adaptation. Some change is essential to provide the functions needed for the viability of the project, but these can be kept to the less significant parts of the historic building, and are simply another chapter in the story of adaptive re-use of the building.

Architectural Proposals



recent Sessions House light show

The forecourt is a prominent landmark of the town. With better access, surfacing, planting, lighting, and an exciting activity programme of the kind now being developed it can become a key attraction for the town and area.



Architectural Proposals



the courtroom in use for performance

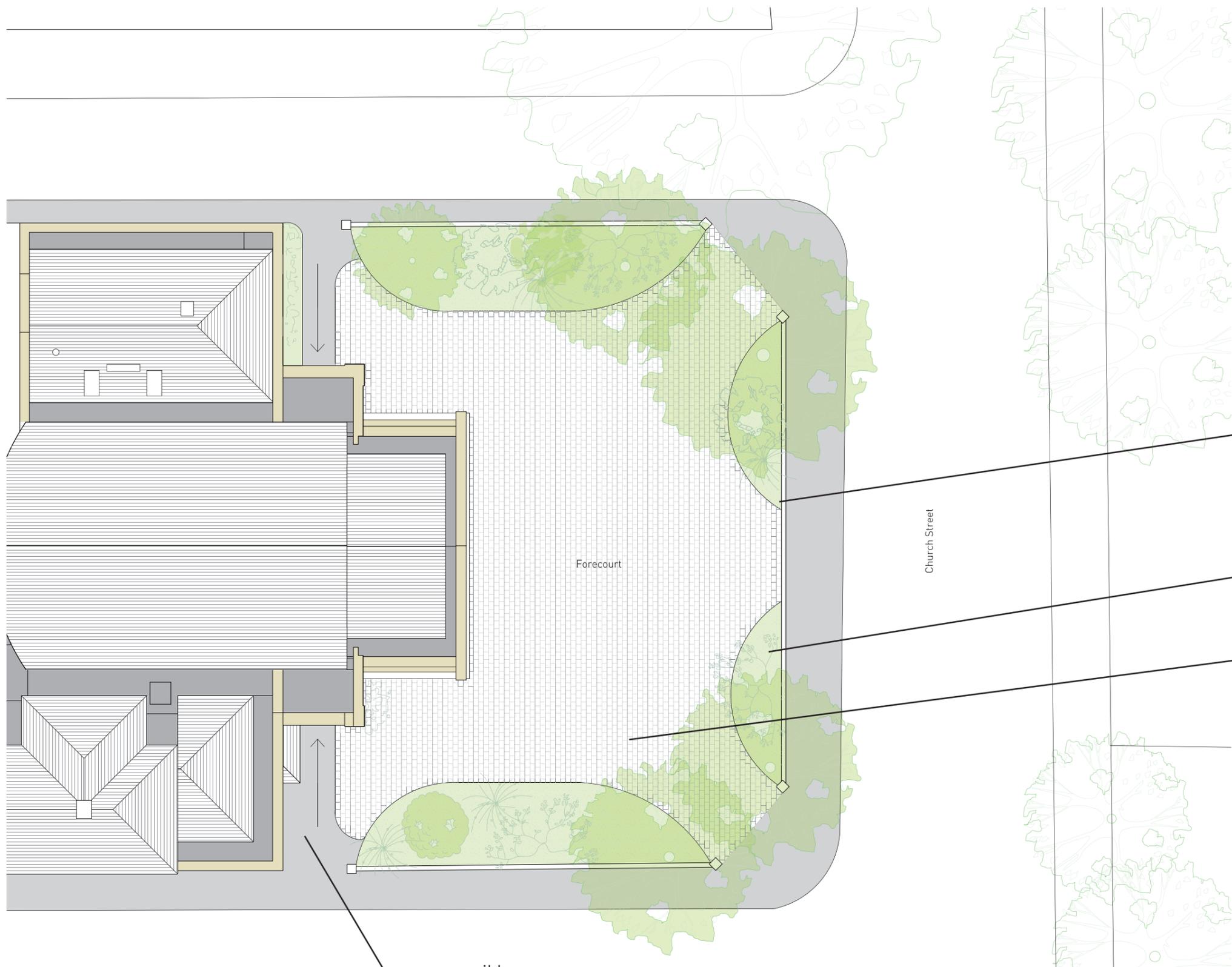
Architectural Proposals



The viability study work considered a range of options for the use and configuration of the building. This June 2022 update shows the selected option, which has been refined over the course of the project so far. The design is based around a core use of the courtroom and a performance space, which would incorporate as wide as possible range of activities and events. Configuration studies of the space available on the old courtroom showed that a seating capacity of approximately 125 was the maximum achievable. With its many and varied peripheral spaces, multiple street frontages and parking space, the building is well suited to accommodating not only the main hall and its associated spaces but also a number of additional activities or uses that might support revenue generation, raise the profile of the centre, and the profile of the town and district.

Alterations needed to the existing building have been discussed with the local authority Conservation Officer, who is supportive of the proposed use and the proposals in general, and welcoming of the opportunity to repair and conserve the building, and make it more sustainable. Further study and consultation with the Conservation Officer of the works to provide performance space in the courtroom will be needed at the next design stage.

Layouts of the preferred option follows.



new accessible ramps

repairs to perimeter wall

new planting and beds

new granite sett paving and drainage

Rev	Date	Update Status/Notes
*	17.06.22	Update

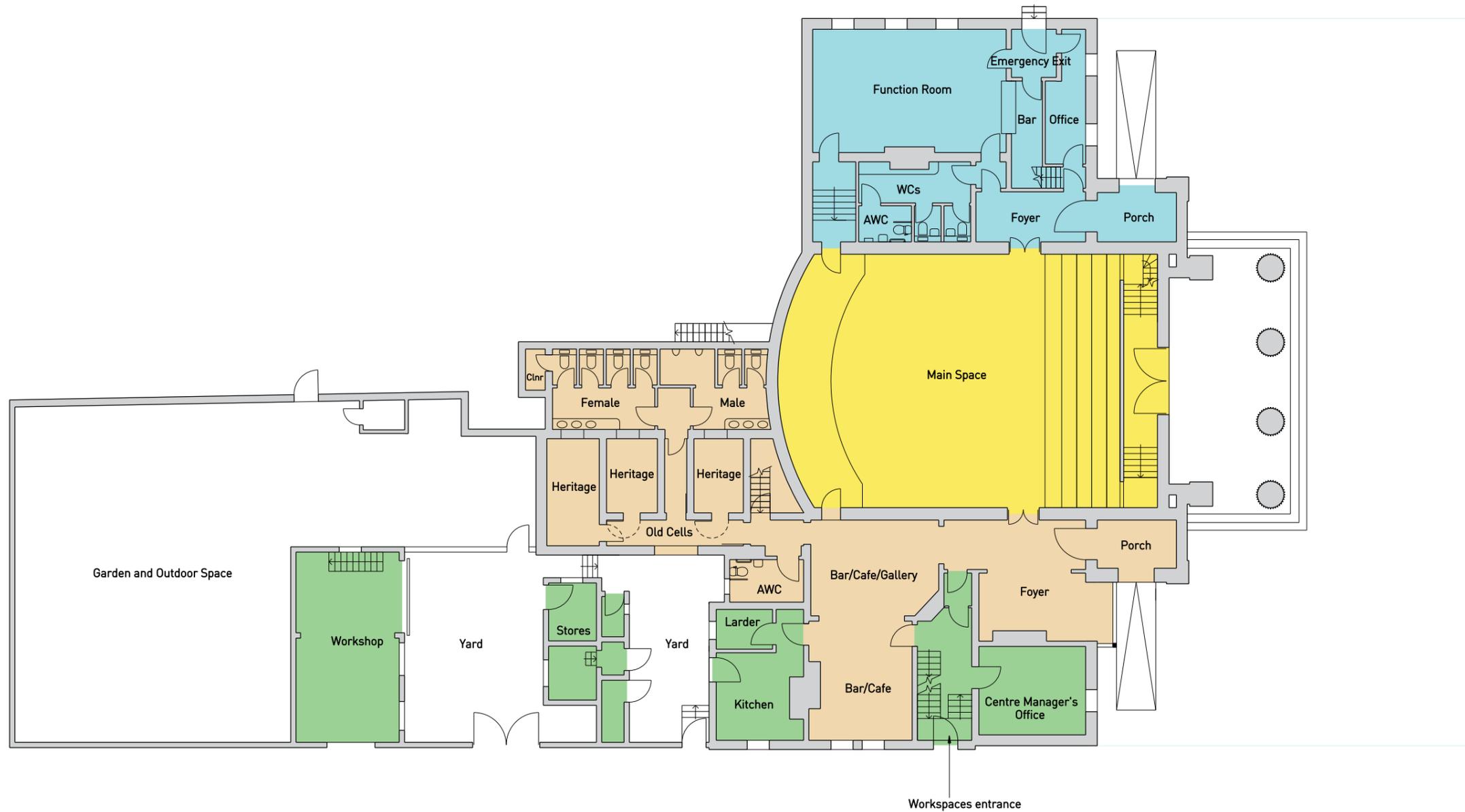
Tim Ronalds Architects
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 office@timronalds.co.uk

Spilsby Sessions House

Site Plan as Proposed

Scale (at A1)	Drawn	Checked
1:100	SK	AG

TSH 049



- KEY
- Auditorium
 - Front of House
 - Function
 - Back of House

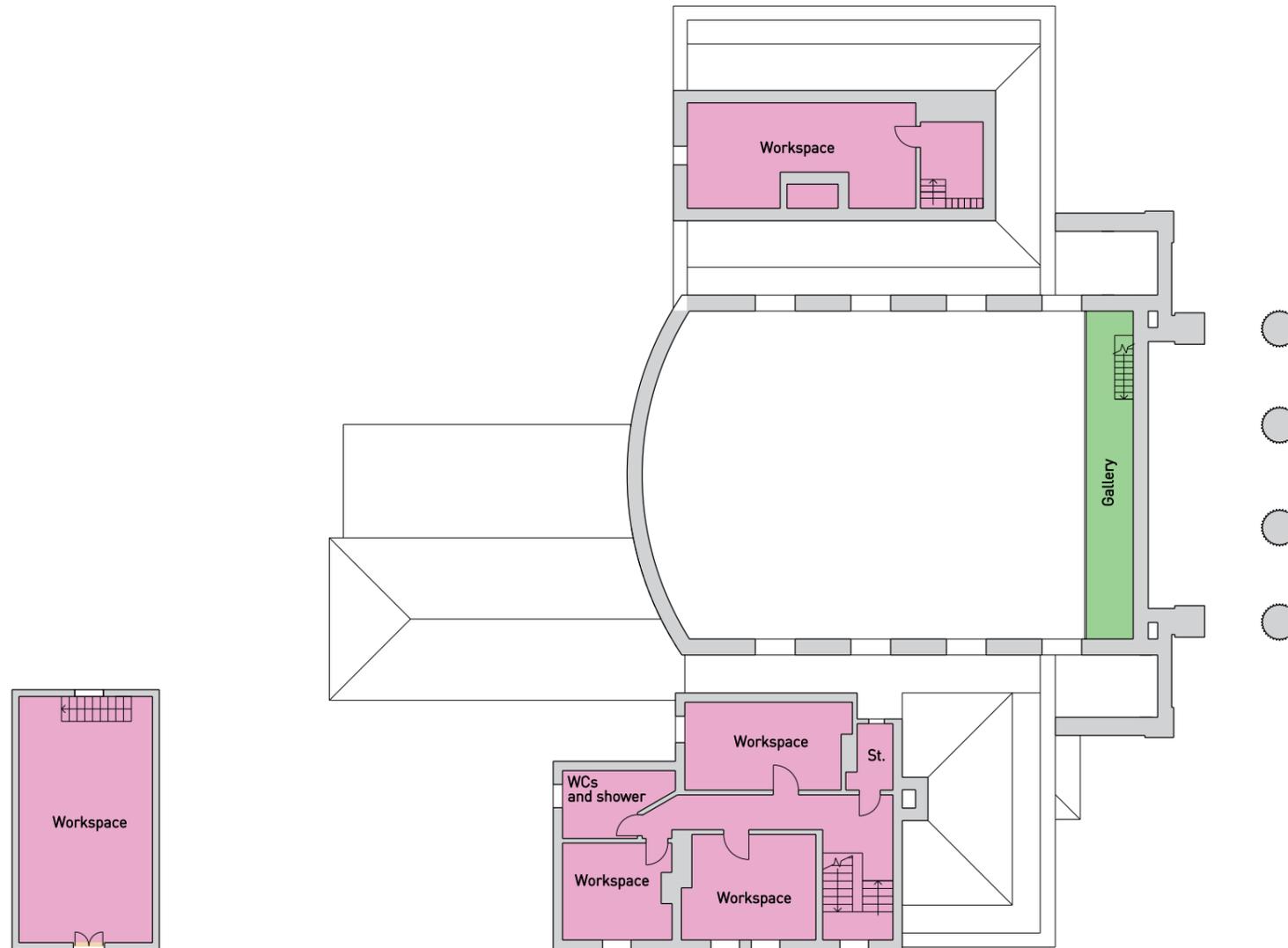
B	16.06.22	Update.
A	20.10.20	Phasing Study.
*	01.06.18	Viability Study.
Rev	Date	Status/Notes

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Spilsby Sessions House

**Ground Floor Plan
 as Proposed**

Scale (at A1)	Drawn	Checked
1:100	OK	AG



KEY

- Lettable Workspace
- Back of House

Rev	Date	Status/Notes
B	16.06.22	Update.
A	20.10.20	Phasing Study.
*	01.06.18	Viability Study.

Tim Ronalds Architects

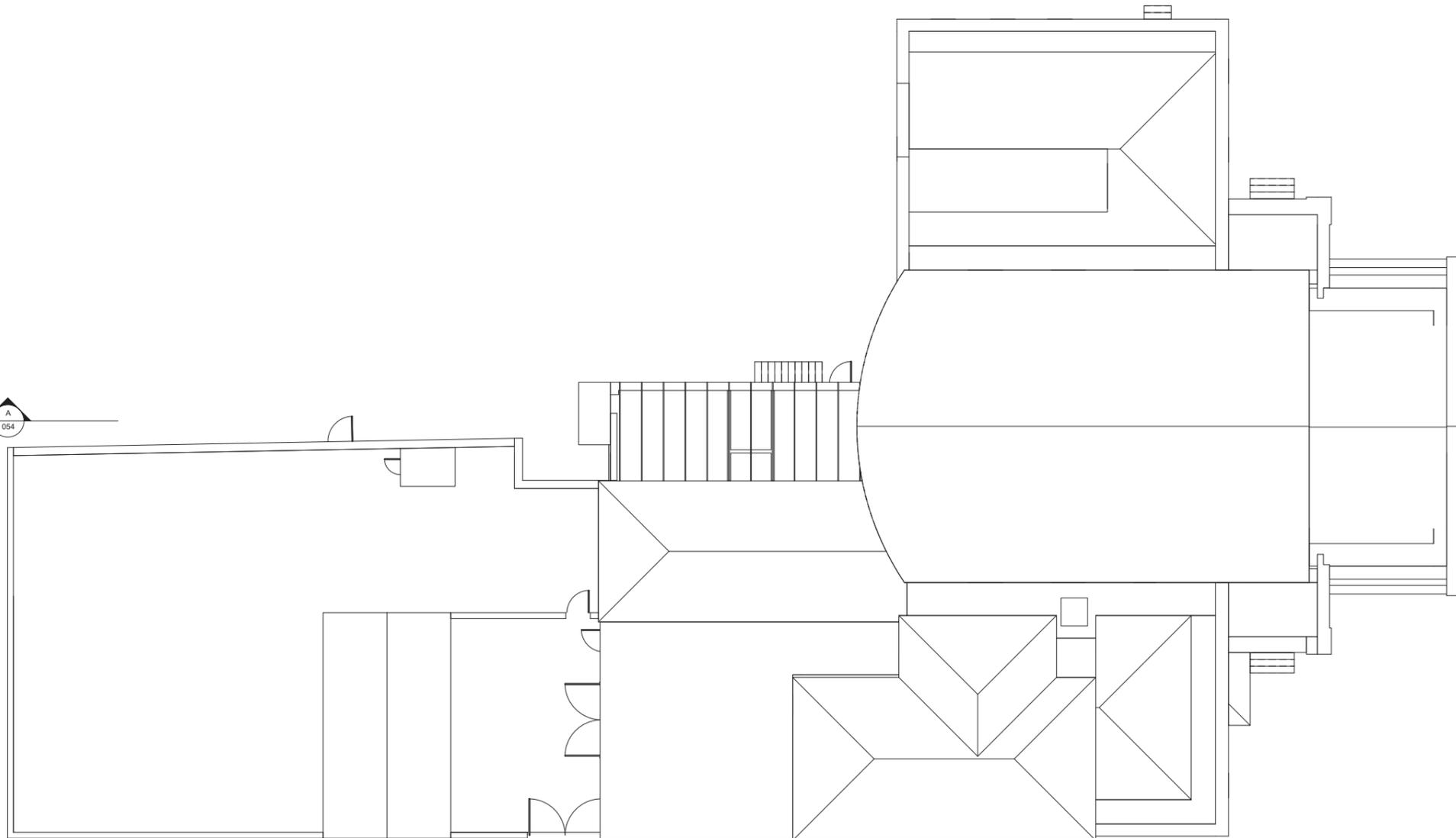
57 Kingsway Place . London EC1R 0LY
 tel: 020 7490 7704
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Spilsby Sessions House

**First Floor Plan
 as Proposed**

Scale (at A1)	Drawn	Checked
1:100	OK	AG

TSH 051 B



Rev. Date Status/Notes

Tim Ronalds Architects

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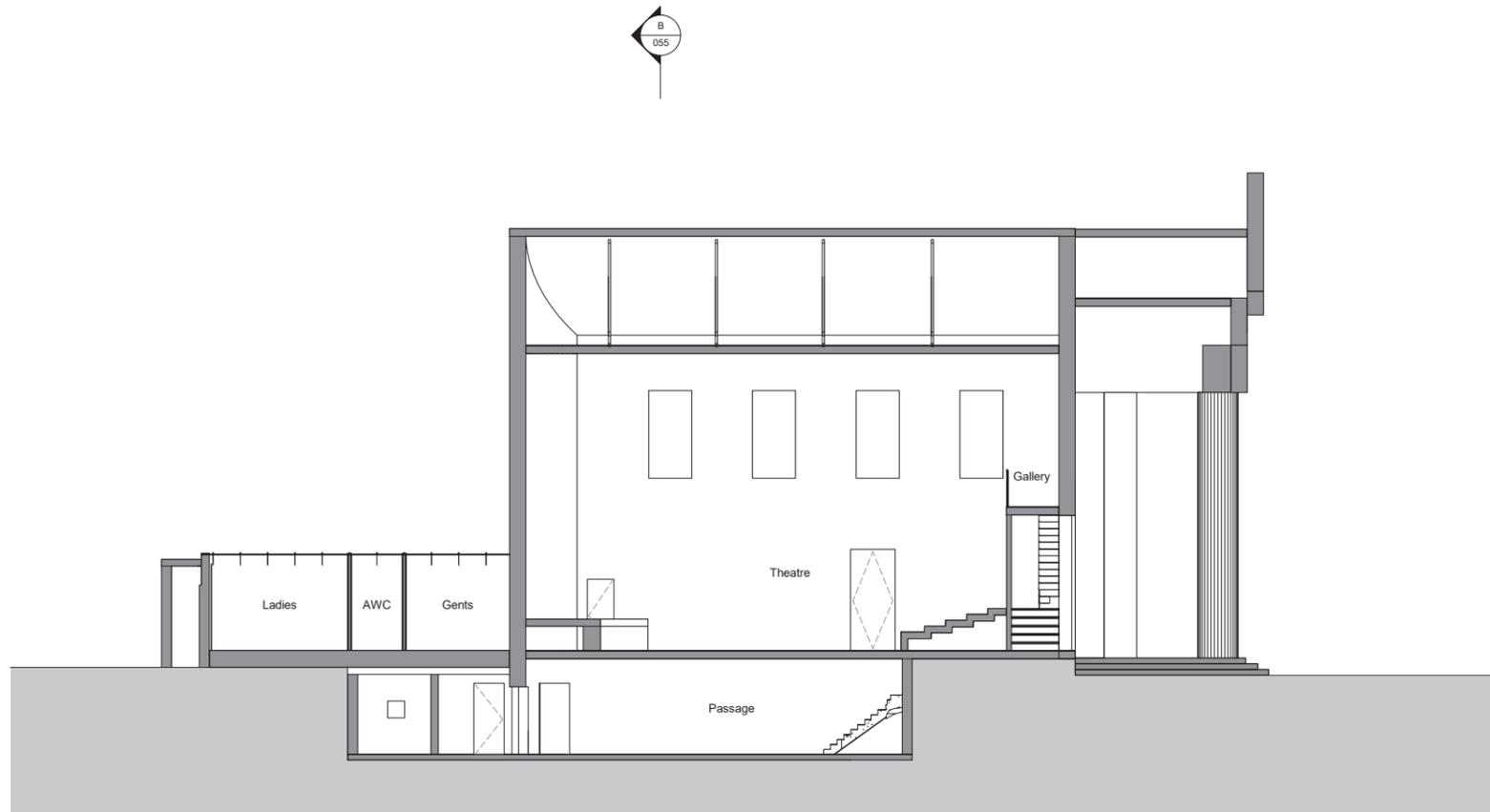
The Sessions House

Roof Plan
As Prop.

Scale (at A1) Drawn Author Checked Checker
1 : 100

TSH 053





Rev.	Date	Status/Notes

Tim Ronalds Architects

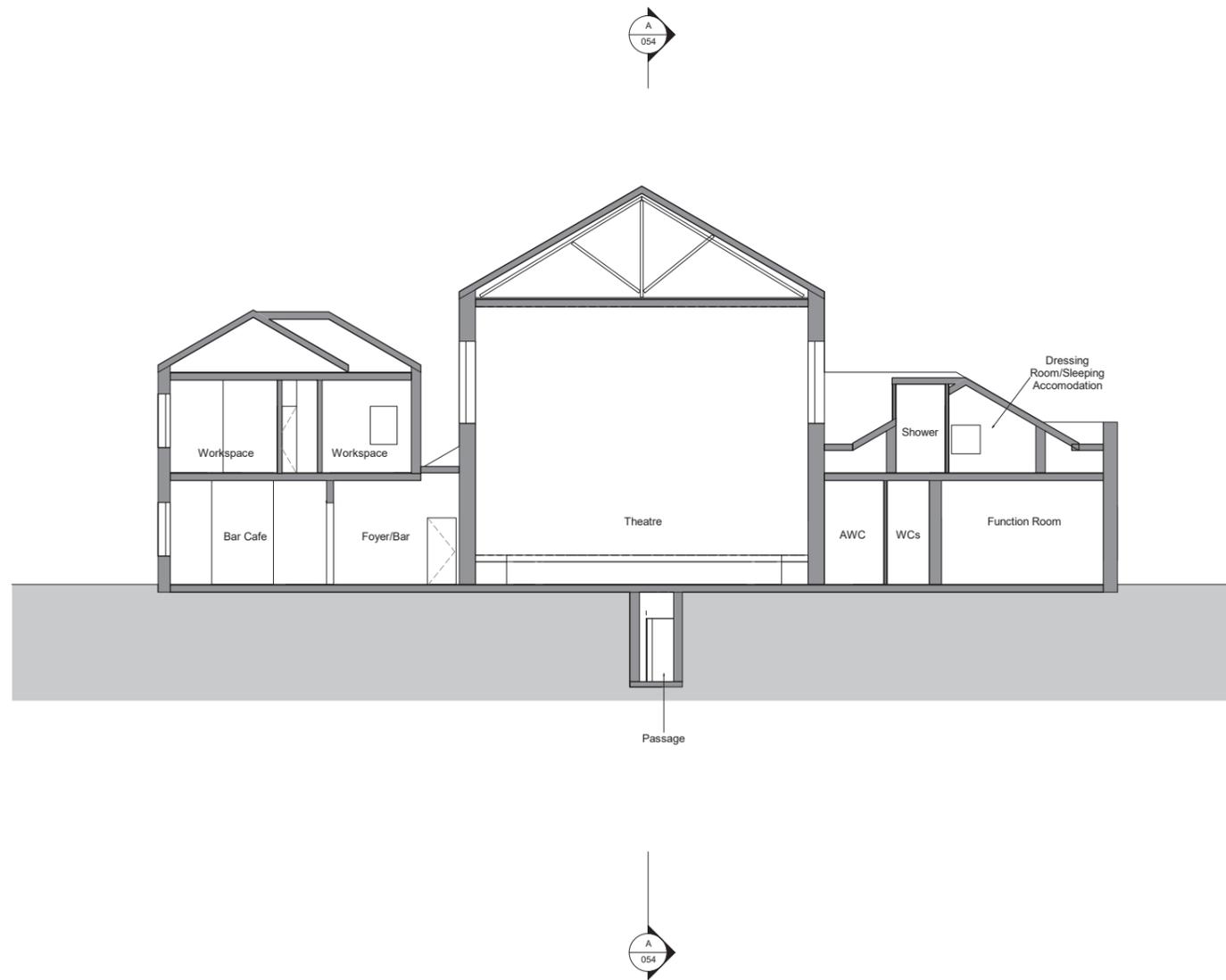
108 Weston Street . London SE1 3QB
 tel: 020 7490 7704
 office@timronalds.co.uk

The Sessions House

Long Section A-A
 As Prop.

Scale (at A1)	Drawn	Checked
1 : 100	OK	AG

TSH 054



Rev.	Date	Status/Notes

Tim Ronalds Architects

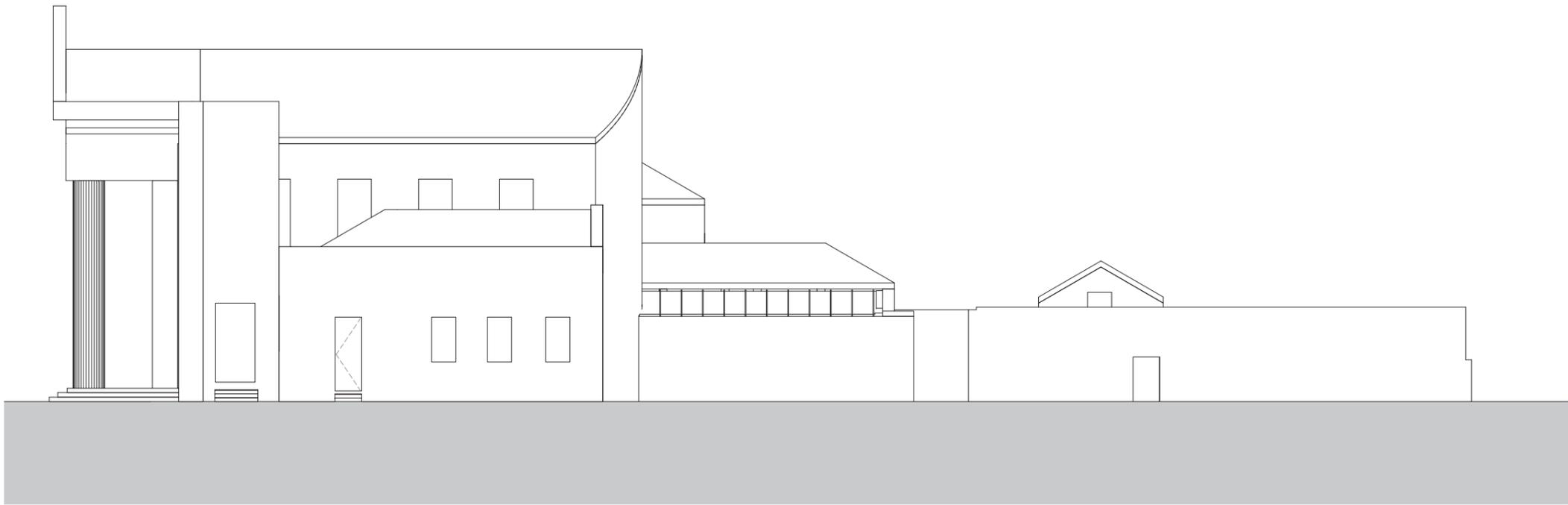
108 Weston Street . London SE1 3QB
 tel: 020 7490 7704
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The Sessions House

Cross Section B-B
 As Prop.

Scale (at A1)	Drawn	Checked
1 : 100	OK	AG

TSH 055



East Elevation
1 : 100



West Elevation
1 : 100

Rev.	Date	Status/Notes

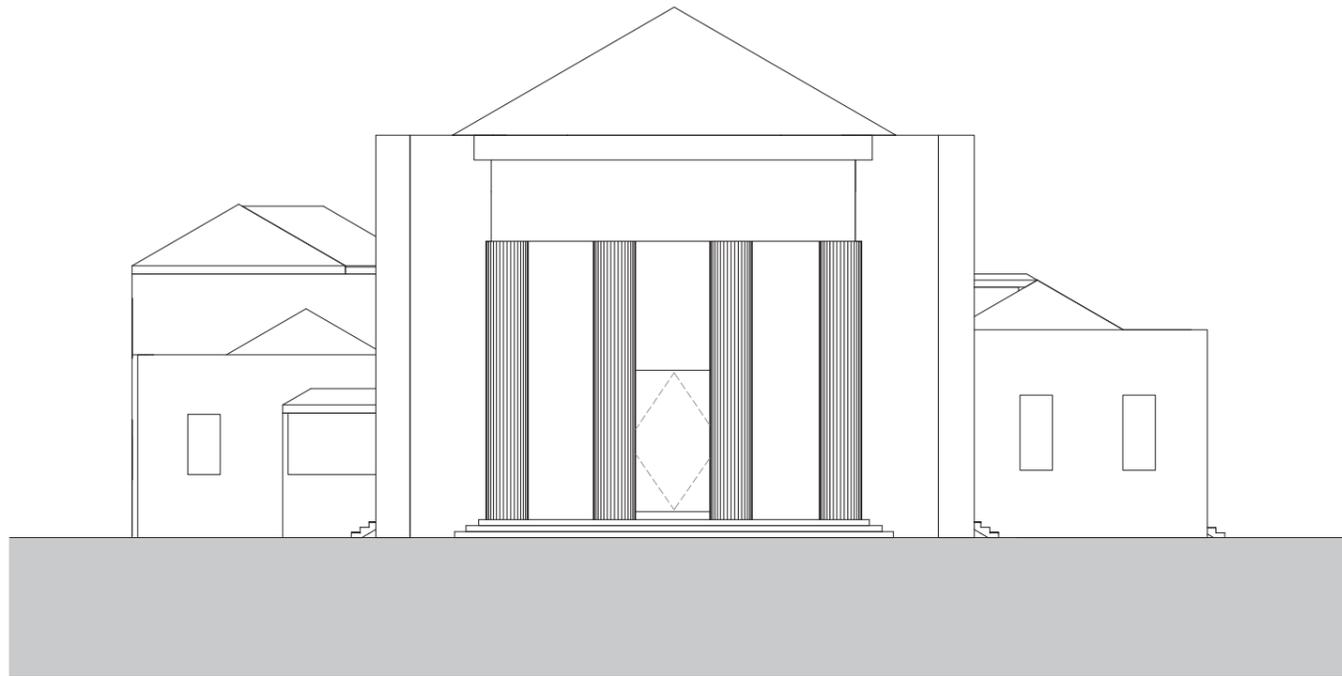
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The Sessions House

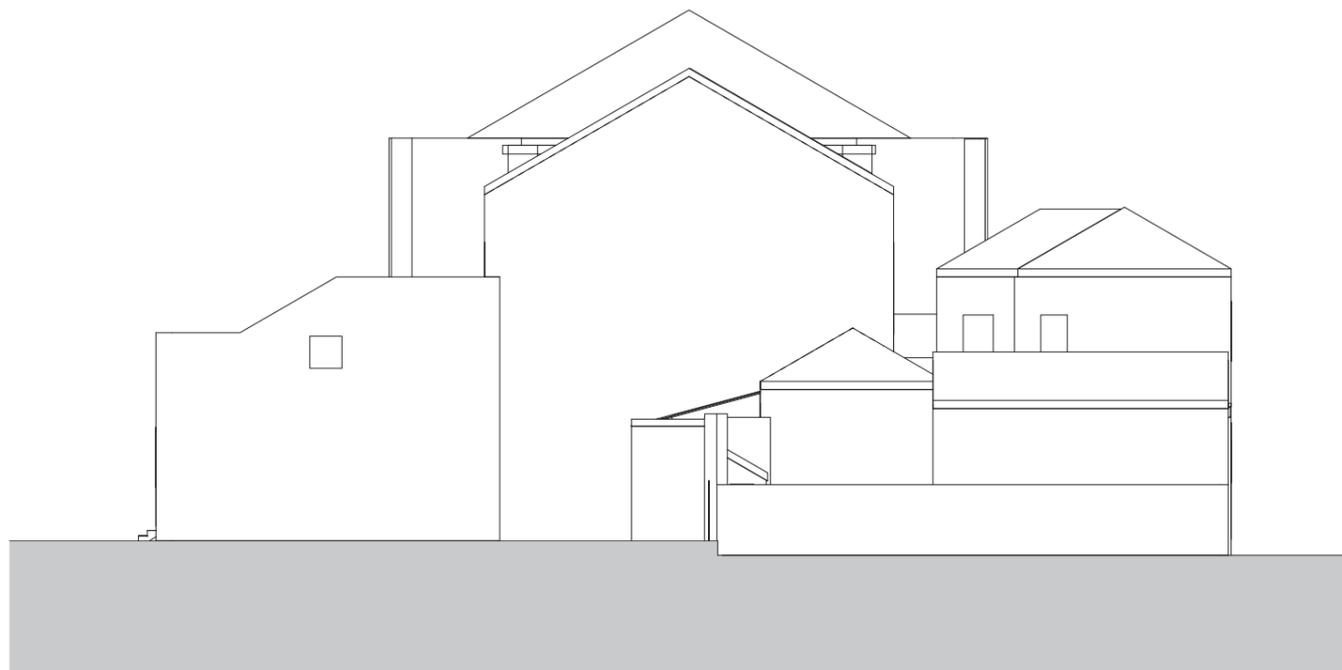
West and East Elevations
 As Prop.

Scale (at A1)	Drawn	Checked
1 : 100	OK	AG

TSH 056



South Elevation
1 : 100



North Elevation
1 : 100

Rev.	Date	Status/Notes

Tim Ronalds Architects

108 Weston Street . London SE1 3QB
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The Sessions House

North and South Elevations
As Prop.

Scale (at A1)	Drawn	Checked
1 : 100	OK	AG

TSH 057

Architectural Proposals

Scope of Construction Work

Interior

- Alterations and new openings to internal walls as indicated on drawings.
- Repairs to 3no. main hall timber trusses as noted in structural engineering report.
- Alterations to courtroom floor to create flat floor to maximise flexibility.
- Alterations to 3no. existing timber trusses to form passageway in eastern attic space.
- New loft insulation.
- Repairs to wall plaster.
- Repairs to existing fibrous plaster ceiling in main hall.
- Allow for replacing all other ceilings with plasterboard and skim.
- New panelled doors 50%; repairs and fire-proofing to existing doors 50%; preparation of fire assessment.
- Repairs/piecing in to existing timber sash windows.
- Reglazing all windows with slim double-glazed units; new Ventrolla-type draught-stripping.
- Secondary glazing to main hall, function room and bar.
- New electrical services including new utility intake.
- New mechanical services, new ventilation system to auditorium, new ASHP radiation heating.
- Kitchen fit-out (good quality domestic).
- Reception counter
- Bar counter
- Café servery.
- Café tables and chairs.
- Redecoration throughout.

Theatrical Fit-out

- 3no. new suspension trusses in loft space.
- New AV and lighting system.
- New retractable seating unit.
- 40no. loose chairs for function room.

Exterior

- All roofs stripped of slates, lead and battens. Replacement or splicing-on new rafters and gutter linings (assume 30% of plan area). New battens. New Code 6 lead gutters and Code 5 flashings. New natural slates.
- Repairs to cracked brickwork as noted in structural engineering report.
- Pointing repairs/ repointing: allow for 200 sq.m raking out and repointing in lime mortar. Repointing and new flaunching all chimneys. Re-bedding and repointing all copings.
- Repairs to spalling stone with rusting iron cramps as noted in structural engineering report.
- New patent glazing roof to form WCs in old exercise yard.
- Repairs/ replacement and redecoration to cast iron gutters.
- 4no. access ladders to roof.
- Redecorate timber work.

External Works

- Two new paved ground-bearing ramps at entrance, one at each side, with open, painted galvanised steel handrail to one side of each ramp.
- Repairs to existing external brick yard walls. New brick-on-edge copings throughout.
- New granite sett paving and planting beds to forecourt.
- Perimeter wall repairs and new railings.
- Gullies and soakaway drainage to forecourt.

The construction cost estimates have been produced by quantity surveyor Bristow Consulting on the basis of drawings and discussions with Tim Ronalds Architects and Cambridge Architectural Research

Bristow

Spilsby Theatre Order of Cost Estimate Update

22nd June 2022
Rev 3

Building smart
solutions to scale.



Cost and Project
Management

Contents

Bristow

1.0	Order of Cost	2
2.0	Assumptions & Exclusions	3
3.0	Elemental Summary	4
4.0	The Cost Model	5-8

1.0 ORDER OF COSTS

Bristow

INTRODUCTION

Based on the information received (as Identified in Section 2) the Order of Cost Estimate below identifies a Total Anticipated Outturn Development Cost (subject to exclusions as listed within Section 2) for the works to be carried out as a single project.

			Single Phase Works
1	BUILDING WORKS		1,609,000
2	THEATRE TECHNICAL		143,000
3	EXTERNAL WORKS		383,000
4	MEASURED WORKS TOTAL		2,135,000
5	Main Contractors Preliminaries Estimate	17.50%	374,000
6	Main Contractors Overheads & Profit Estimate	5.00%	125,000
7	WORKS COST ESTIMATE (BASE ESTIMATE)		2,634,000
8	Design Development Risk Allowance	10.0%	263,400
9	Inflation from Base Date to Q3 2020	1.5%	43,000
10	Inflation from Q3 2020 to Q4 2023	15.0%	441,000
11	Construction inflation Q4 2023 to Q4 2024 (up to midpoint of construction)	1.5%	51,000
12	ANTICIPATED BUILDING CONTRACT VALUE (EXCLUDING VAT)		3,432,000
13	Construction Risk Estimate	10.00%	343,000
14	ANTICIPATED OUTTURN CONSTRUCTION COST (EXCLUDING VAT)		3,775,000
<u>Other Development Costs:</u>			
15	Professional Fees	20.7%	783,000
16	Surveys & Investigations	Psum	50,000
17	Statutory Fees	0.40%	15,000
18	Legal Fees	Psum	15,000
19	Insurances	Psum	25,000
20	Utilities Consumption Allowance During Construction	Psum	20,000
21	Specialist Theatre Technical & Performance Fitout Equipment (yet to be defined by theatre consultant)		Included
22	Loose Fittings & Furnishings	Psum	150,000
23	Global Client Contingency	5%	242,000
24	BASE COST ESTIMATE		5,075,000
25	VAT		Excl
26	ANTICIPATED OUTTURN DEVELOPMENT COST (EXCLUDING VAT)		5,075,000

2.0 ASSUMPTIONS & EXCLUSIONS

3.1 Basis

- This Feasibility Cost Estimate is based on marked up existing building plans provided by Tim Ronalds Architects and proposed Basement, Ground & First floor plans as drawing Nos SPI/050, 051 & 052 together with Tim Ronalds Architects Scope of Works dated 25/04/18. and a Structural Overview report prepared by P A R Cooper of Cambridge Architectural Research Ltd dated 03/11/17. No detailed design information on services, structure or acoustics is available. Tim Ronalds Architects have provided a further drawing; Site
- Cost Base Date: 3Q20
- Allowances for Inflation have been included based BCIS Indices.
- Please note a site visit has not been carried out.

3.2 Assumptions

- Cost Estimate based on current prices and specification outlined within this Feasibility Cost Estimate (Section 1.0 identifies work items).
- The works will be procured on a Traditional Single Stage Competitive Tender basis.
- Site is clear of contamination.
- Building will not be in operation throughout the duration of the building works.
- Risk Allowances Estimate as identified in Section 1.0 (Item 11) will be applicable to this project but will require Design Team clarification.
- Work to be carried out during normal working week hours. Weekend working has not been accounted for.
- No BREEAM requirements

3.3 Exclusions

- Grants & other sources of funding
- Party wall matters, Rights of Light issues.
- Allowance for Decanting
- Archaeological investigations and specialist supervision.
- Effect of high value liquidated damages on tender prices.
- VAT

3.0 ELEMENTAL SUMMARY

Bristow

		Single Phase £	NOTES
0	Facilitating Works	45,000	
1	Substructure	-	
2	Superstructure		
2A	Frame & Upper Floors	27,000	
2B	Roof	324,000	
2C	Rooflights & Light Tubes	-	
2D	Stairs, Balustrades & Canopies	10,000	
2E	External Walls	93,000	
2F	External Windows & Doors	55,000	
2G	Internal Partitions	13,000	
2H	Internal Doors	33,000	
3	Internal Finishes		
3A	Wall Finishes	55,000	
3B	Floor Finishes	38,000	
3C	Ceiling Finishes	82,000	
4	Fixtures & Furnishings	60,000	
5	MEP Installation		
5A	Sanitaryware	125,000	
5B	Mechanical Services	357,000	
5C	Electrical Services	262,000	
5D	Lift Installations	-	
5E	BWIC	30,000	
6	Specialist Installations	143,000	
7	External Works	383,000	
13	BUILDING WORKS ESTIMATE	2,135,000	

4.0 Single Phase		Bristow					
REF	ITEM DESCRIPTION	QTY	UNIT	RATE	TOTAL	NOTES	%
				£	£		
0.0	FACILITATING WORKS				45,000		2.11%
0.1	Remove dias to auditorium & replace floor below	1	Psum	10,000	10,000		0.47%
0.2	Removal of stone floor to old public seating gallery within auditorium & replacement with new concrete floor on existing sleeper walls.	32	m2	350	11,200		0.52%
0.3	Alterations and new openings to internal walls as indicated on drawings	805	m2	30	24,150		1.13%
1.0	SUBSTRUCTURE				0		0.00%
	<i>No works required</i>						0.00%
2	SUPERSTRUCTURE						
2A	FRAME AND UPPER FLOORS				27,000		1.26%
2A.1	Repairs to 3 no main hall timber trusses as noted by Structural Engineer	3	nr	7,500	22,500		1.05%
2A.2	Alterations to 3no. existing timber trusses to form passageway in attic dressing room.	3	nr	1,500	4,500		0.21%
2B	ROOF				324,000		15.18%
2B.1	All roofs stripped of slates, lead and battens. New battens. New Code 6 lead gutters and Code 5 flashings. New natural slates. Area measured on plan	805	m2	250	201,250		9.43%
2B.2	Replacement or splicing-on new rafters and gutter linings (assume 30% of plan area).	242	m2	100	24,200		1.13%
2B.3	Extra for accoustic upgrade to auditorium	102	m2	150	15,300		0.72%
2B.4	Allowance for new flashings & rainwater installation	1	Psum	15,000	15,000		0.70%
2B.5	New patent glazing roof to form WCs in old exercise yard.	19	m2	500	9,500		0.44%
2B.6	4no. access ladders to roof.	4	nr	750	3,000		0.14%
2B.7	Temporary roof repairs	1	nr	15,000	15,000		0.70%
2B.8	Mineral Wool Roll Loft Insulation to all areas and associated ventilation details	805	m2	50	40,250		1.89%
2C	ROOFLIGHTS						0.00%
	No works required						0.00%
2D	STAIRS & BALUSTRADES				10,000		0.47%
2D.1	New timber staircase to barn	1	PS	10,000	10,000		0.47%
2E	EXTERNAL WALLS				93,000		4.36%

4.0 Single Phase

Bristow

REF	ITEM DESCRIPTION	QTY	UNIT	RATE £	TOTAL £	NOTES	%
2E.1	Repairs to cracked brickwork as noted in structural engineering report.	1	Psum	20,000	20,000		0.94%
2E.2	Pointing repairs/ repointing: allow for raking out and repointing in lime mortar.	200	m2	65	13,000		0.61%
2E.3	Repointing and new flaunching all chimneys. Re-bedding and repointing all copings as noted in structural engineering report.	1	Psum	10,000	10,000		0.47%
2E.4	Repairs to spalling stone with rusting iron cramps as noted in structural engineering report.	1	Psum	25,000	25,000		1.17%
2E.5	Redecorate timber work	1	Psum	10,000	10,000		0.47%
2E.6	Light Doff Clean of main stone façade	1	Psum	15,000	15,000		0.70%
2F	EXTERNAL WINDOWS & DOORS				55,000		2.58%
2F.1	Repairs/piecing in to existing timber sash windows.	26	nr	750	19,500		0.91%
2F.2	Reglazing all windows with Slimglaze double-glazed units; new Ventrolla-type draught-stripping.	33	m2	800	26,400		1.24%
2F.3	Secondary glazing to main hall, function room and bar	17	m2	550	9,350		0.44%
2G	INTERNAL WALLS & PARTITIONS				13,000		0.61%
2G.1	New studwork, 250thk, insulation, and plasterboard lining to the Barn, including skim coat	93	m2	145	13,485		0.63%
2H	INTERNAL DOORS & GLAZED SCREENS				33,000		1.55%
2H.1	New panelled doors complete with frame, ironmongery & decorations	14	nr	1,600	22,400		1.05%
2H.2	Repairs and fire-proofing to existing doors including redecoration.	14	nr	750	10,500		0.49%
3	INTERNAL FINISHES						
3A	WALL FINISHES				55,000		2.58%
3A.1	Repairs to wall plaster. Provisional Area	250	m2	35	8,750		0.41%
3A.2	Redecoration throughout	898	m2	40	35,920		1.68%
3A.3	Allowance for upgraded finishes to kitchen	1	nr	10,000	10,000		0.47%
3B	FLOOR FINISHES				38,000		1.78%
3B.1	General repairs to existing timber floors	1	nr	10,000	10,000		0.47%
3B.2	Sanding down, sealing & varnishing existing timber floors	805	m2	35	28,175		1.32%
3C	CEILING FINISHES				82,000		3.84%

4.0 Single Phase

Bristow

REF	ITEM DESCRIPTION	QTY	UNIT	RATE	TOTAL	NOTES	%
				£	£		
3C.1	Repairs to existing fibrous plaster ceiling in main hall.	1	nr	50,000	50,000		2.34%
3C.2	Allow for replacing all other ceilings with plasterboard and skim.	703	m2	45	31,635		1.48%
4	FITTINGS & FURNISHINGS						
4A	Fittings & Furnishings				60,000		2.81%
4A.1	Kitchen fit-out (good quality domestic). Figure advised by TRA	1	nr	25,000	25,000		1.17%
4A.2	Reception counter. Figure advised by TRA	1	nr	10,000	10,000		0.47%
4A.3	Bar counter. Figure advised by TRA	1	nr	15,000	15,000		0.70%
4A.4	Café tables and chairs. Assume 4 tables & 16 chairs	1	nr	4,800	4,800		0.22%
4A.5	Small bar counter and kitchenette for Function Room bar	1	nr	5,000	5,000		0.23%
5	MEP INSTALLATION						
5A	SANITARY APPLIANCES				125,000		5.85%
5A.1	WC Installation Complete	10	nr	12,500	125,000		5.85%
5B	Mechanical Installation				357,000		16.72%
5B.1	New mechanical services, new gas utility intake, new ventilation system to auditorium, new radiator heating.	805	m2	350	281,750		13.20%
5B.2	Extra Over for new ASHP installation and Associated Electricals	1	PS	75,000	75,000		3.51%
5C	Electrical Installation				262,000		12.27%
5C.1	New electrical services	805	m2	300	241,500		11.31%
5C.2	Allowance for new electrical intake	1	nr	20,000	20,000		0.94%
5D	Lift Installations						0.00%
	<i>No works required</i>						0.00%
5E	BWIC				30,000		1.41%
5E.1	Generally to services installation		4%	744,000	29,760		1.39%
6.0	SPECIALIST INSTALLATIONS				143,000		6.70%
6.1.	3 no new suspension trusses & winches in loft space.	3	nr	5,000	15,000		0.70%
6.2	New AV and lighting system. Figure advised by TRA	1	Psum	75,000	75,000		3.51%
6.3	New retractable seating	125	nr	300	37,500		1.76%
6.4	Acoustic lining to auditorium walls	1	Psum	15,000	15,000		0.70%

4.0 Single Phase

Bristow

REF	ITEM DESCRIPTION	QTY	UNIT	RATE £	TOTAL £	NOTES	%
7.0	EXTERNAL WORKS				383,000		17.94%
7.1	Two new paved ground-bearing ramps at entrance, one at each side, with open galvanised steel handrail to one side of each ramp.	2	nr	15,000	30,000		1.41%
7.2	New ground-bearing concrete slab and brick paving to café terrace.	46	m2	400	18,400		0.86%
7.3	Repairs to existing external brick yard walls. New brick-on-edge copings throughout.	1	Psum	20,000	20,000		0.94%
7.4	Allowance for 2 no road gullies & new soakaway to front of building & reinstatement of paving.	1	Psum	15,000	15,000		0.70%
7.5	Addition for front area surfacing and landscaping provision for performance	600	m2	150	90,000		4.22%
7.6	Adaptation of existing surface water drainage	535	m2	30	16,050		0.75%
7.7	Repair to low level walls around the front area, with new railings	55	m	600	33,240		1.56%
7.8	Complete resurfacing - granite setts (smooth)	400	m2	300	120,000		5.62%
7.9	Forming planting beds and new planting	1	Psum	20,000	20,000		0.94%
7.10	Flood lighting	1	Psum	10,000	10,000		0.47%
7.11	2no street banners and poles at the vehicle entrances	2	nr	5,000	10,000		0.47%
7.12							0.00%
	BUILDING WORKS ESTIMATE				2,135,000		67%

Construction Project Programme

	2022							2023							2024															
	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N
LUF Application		■	■	■																										
Design Team appointments					■																									
Surveys					■	■	■																							
Conservation Plan						■	■	■																						
RIBA Stage 2 Concept Design						■	■	■																						
Statutory Consents - Preapplication							■	■																						
RIBA Stage 3 - Spatial Coordination									■	■	■																			
Statutory Consents - Planning and Listed Building Application												■	■	■	■															
RIBA Stage 4 - Technical Design												■	■	■	■															
Tender Documents																	■													
Tendering and Appointment																	■	■	■											
Construction																			■	■	■	■	■	■	■	■	■	■	■	

June 2022

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