

SOUTH RANGE

KEDLESTON HALL, DERBYSHIRE



Historic Building Survey on behalf of the National Trust

April 2016

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SUMMARY OF PROJECT DETAILS

OASIS ID:	Thejessol-241 539
TJC Project Code:	SRK16
Project Type(s):	Historic Building Survey – Level 3 Digital Photography
National Grid Reference:	SK 31151 40285 (centered)
County:	Derbyshire
District/Unitary Authority:	Amber Valley
Parish:	Kedleston
Elevation (above sea level):	c.90m
Designation Status(s):	Covered Arcade and attached Ice House - Grade II Listed Building (NHLE No.1109083)
HER Record No(s):	Derbyshire 21916
NT HBSMR	62005 – MNA113380
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NON-TECHNICAL SUMMARY

This report represents a programme of historic building recording and analysis of the standing fabric that comprises the South Range and Ice House at Kedleston Hall, Derbyshire. The building is owned by the National Trust and forms part of the complex of ancillary buildings to the west of Kedleston Hall, at the rear of the Brewhouse Yard; it is centered on NGR SK 31151 40285.

The first phase of the South Range is likely to have been completed by c.1760, when the stables and Brewhouse Yard were being laid out to a design by Samuel Wyatt. A drainage plan from 1766 indicates that the South Range contained a Slaughter House (two separate rooms), two privies, a Greenhouse and Garden Room. This historic building survey has however, questioned aspects of the accuracy of the 1766 plan as no evidence for the privies has been found within the extant fabric of the building, and it may represent a development plan that was not fully implemented. The Greenhouse and Garden Room were still in use by 1800, although in 1804 Joseph Vernon was paid to remove the heating system. This is perhaps when the western half of the building was converted to an Aviary. In the 1920s an ornamental lily pond was built to the south of the Aviary, which in turn was adapted to a swimming pool, and subsequently enlarged in 1946. The eastern half of the South Range was converted into the existing open fronted space in the 1930s, which involved raising the floor, blocking the doorways to the north and opening up three arches to the south. Since acquiring the South Range as part of the Kedleston Estate in 1987, the National Trust has re-roofed the building and in-filled the swimming pool to the south.

Adjacent to the end gable of the South Range a brick vaulted Ice House was built in the mid-19th century. The entrance adapted an earlier doorway through the brick boundary wall the enclosed the east of the Brewhouse Yard. The Ice House has a brick vault, and the ice well has been in-filled.

This historic building survey of the South Range has identified six broad phases of alteration and the extant building is notably different from the original structure that was built in the 1760s. The building was designed to have two differing functions. The west end was a greenhouse with a garden room that faced south, whilst the east end was part of the ancillary service activities in the Brewhouse Yard. The subsequent changes have involved raising the floor in the east end of the building, blocking the doorways to the north and opening up three arches to the south. A central access corridor has been inserted and the west end was initially converted to an Aviary, although this has subsequently been removed to form an open fronted arched loggia.

Future recommendations to enhance/inform the understanding of the site include paint analysis, a structural survey of the Ice House and trial excavations to understand the earlier floor levels at either end of the South Range.

I INTRODUCTION

BACKGROUND

This document presents the results of a historic building survey of the South Range of the Brewhouse Yard at Kedleston Hall, Derbyshire (**Figure I**). It has been prepared for the National Trust, who own the site. The building forms part of a series of buildings and ranges that comprise the Brewhouse Yard, and were built between 1760 and 1764.

AIMS

The aim of the project is to enable informed decisions to be made regarding the future of the South Range, in accordance with the heritage value or significance that it has. The need for the survey has been highlighted in recent surveys at Kedleston Hall, notably within a Conservation Statement (NCA 2014) and an analysis of the available documentary sources (NT 2014).

The South Range has had a complex historical development (see **Section 3**) and a greater understanding of the architectural development of the building is essential to plan for its future use and presentation to the public.

PRINCIPAL DELIVERABLES DERIVING FROM THIS WORK:

- To produce a set of measured floor plans, elevations and cross sections of the building enhanced with archaeological information;
- To establish the constructional sequence of the extant historic fabric;
- To understand the historical setting of the building;
- To understand the significance;
- To consider the impact of adaptive reuse of the site to surrounding heritage assets;
- To make recommendations for any additional investigations/research that would further inform the understand of the significance of the site;
- Provide advice regarding future development options for the site.

DISSEMINATION

Copies of this report will be distributed to the National Trust, the Derbyshire Historic Environment Record (HER), and a digital copy will be uploaded to the OASIS (Online AccesS to the Index of archaeological investigationS) with the reference number: **thejesso1-241 539**.

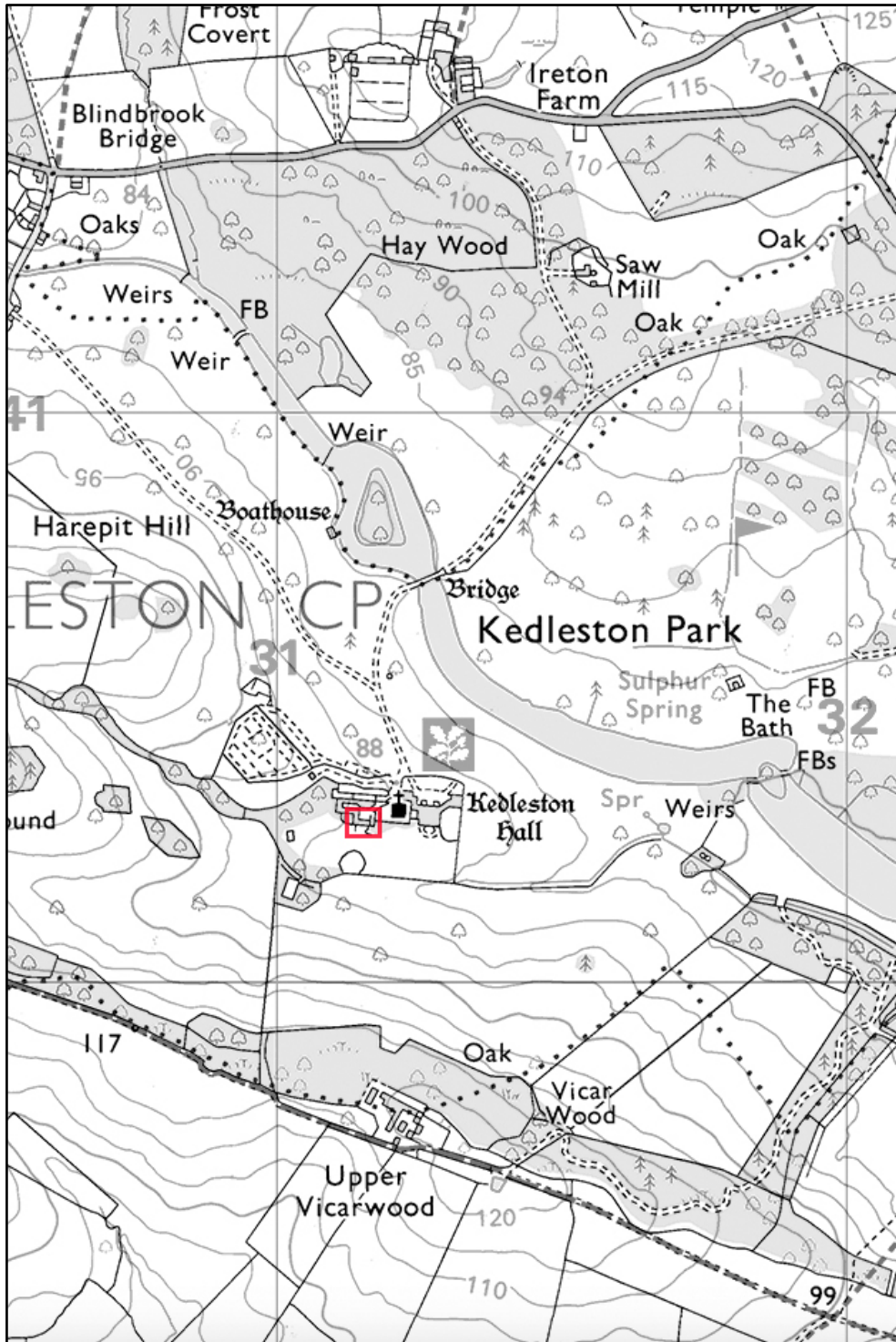


Figure 1: Location of the south range of the stables at Kedleston Hall

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2 SITE LOCATION AND BASELINE CONDITION

LOCATION OF SITE AND SETTING

The South Range is located within the Brewhouse Yard at Kedleston Hall, Derbyshire (**Figure 1**). The south elevation has been converted to an arched loggia that faces the gardens to the southwest of the hall (**Figure 2**). The building is comprised of a rectangular linear range, which has been subdivided and altered on numerous occasions. It forms part of the initial phase of the development of service buildings at Kedleston Hall.

The Site is centred on NGR SK 31153 40289.

DESIGNATION(S)

- The south range is a Grade II listed building – NHLE No. 1109083.
- The building falls within the curtilage of Kedleston Stables (Grade II* - NHLE No.1109125), Kedleston Hall (Grade I – NHLE No.1311507), the Church of All Saints (Grade I – NHLE No.1335331) and falls within the boundary of the Registered Park and Garden (Grade I – NHLE No.1000451).

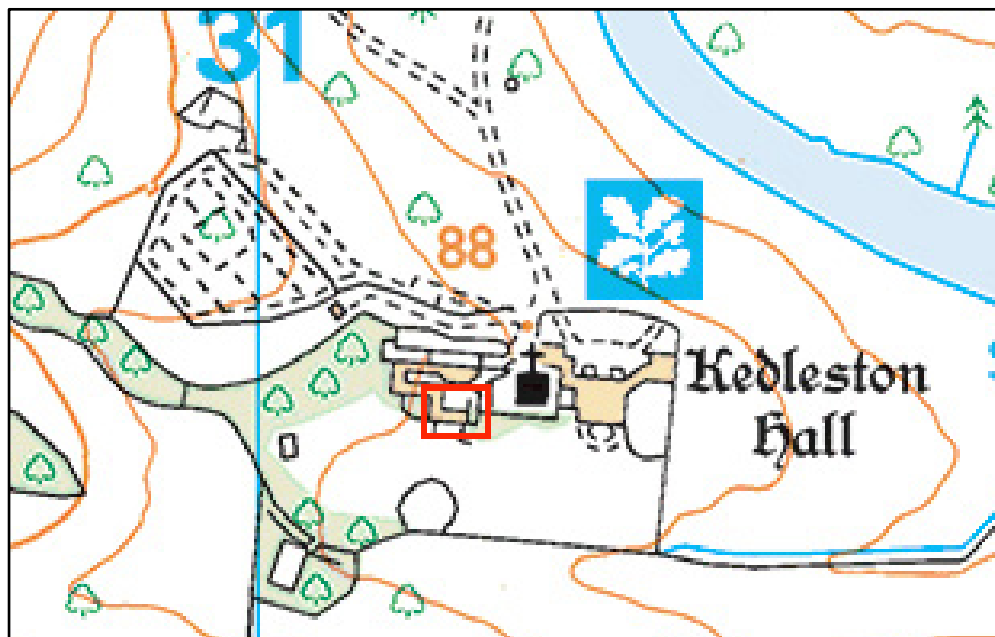


Figure 2: Position of South Range in relation to Kedleston Hall

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PREVIOUS INVESTIGATIONS AND SURVEYS

There have been a number of previous surveys of the Brewhouse Yard and Stables, which have included an examination of the South Range and Ice House, a summary list is presented below:

- **1989: National Trust** – Gary Marshall. Kedleston Archaeological Survey.
- **1997: Mercian Heritage** – Richard Morriss. The south range (Building E) was not reported upon in detail.
- **2013: Archeritage** – Detailed archaeological analysis of the gardens and parkland;
- **2014: Nick Cox Architects** – Conservation Statement and analysis of the condition of the historic fabric. The South Range is referred to as the 'Loggia' (Building No.4);
- **2014: Dr Danielle Westerhof** – An analysis of the documentary sources relating to the history and creation of the stables;
- **2015: HTLA Landscape Consultants** – Conservation Management Plan. The South Range was examined as part of the survey of the gardens.

GEOLOGY

The underlying bedrock geology beneath Kedleston Hall is the Tarporley Siltstone Formation - Siltstone, Mudstone and Sandstone. No superficial deposits are recorded (BGS Digital data 2016).

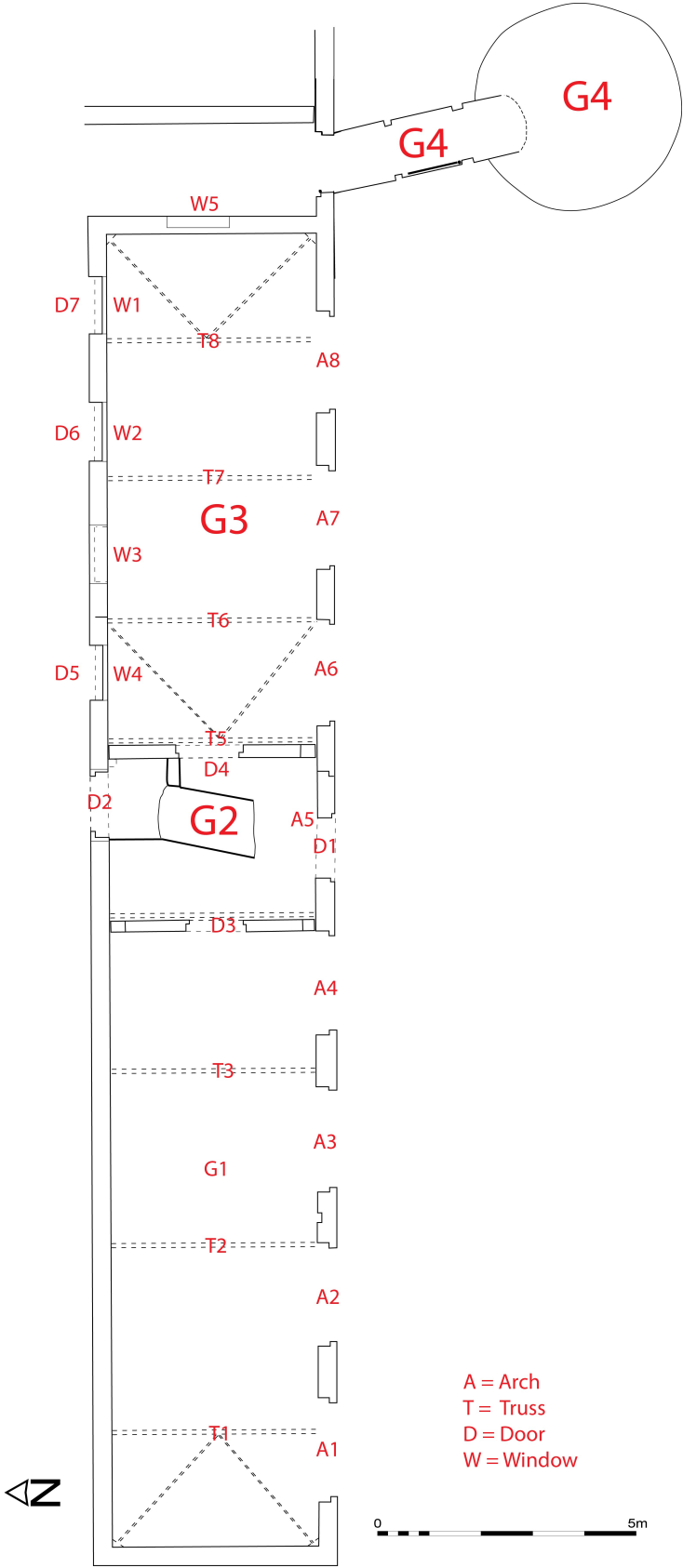


Figure 3: Layout of building with reference terminology.

3 METHODOLOGY

INTRODUCTION

This historic building survey has been prepared in accordance with a guidance prepared the Chartered Institute for Archaeologists (ClfA 2014) and Historic England (EH 2006). The project methodology has comprised of a series of stages, including a review of previous work, site survey and photography. The survey has been undertaken with reference to a project specification prepared by the National Trust (NT 2016).

LIMITATIONS

The scope of this report has focused upon the extant standing fabric of the building. It has not been possible to gain access to the external northwest wall of the building, however apart from this all areas of the building have been fully examined. It should be noted that the south elevation was partially obscured by climbing plants which made the analysis of sections of the brickwork difficult.

The scope of the report is limited to:

- Consultation with plans produced by Nick Cox and Rodney Melville Architects in regards;
- Review of relevant archive and documentary material;
- Detailed site survey comprising of measured drawing, photography and photogrammetry;
- Consideration of the setting of the Site;
- The preparation of this report;
- Understanding the significance, presented as a summary statement.

NOMENCLATURE

The terminology used throughout this document has been derived from existing names and descriptions associated with Kedleston Hall. The South Range has previously been known as the 'Loggia', however for the purpose of this survey this descriptive term is not used. Additional descriptions are based upon an assessment of the current and historic character of the site, however, it should be noted that future research may identify additional descriptions for these areas or spaces.

SITE SURVEY

The site was inspected by Oliver Jessop MClfA during February 2016.

DOCUMENTARY AND ARCHIVE RESEARCH

A review of the previous archaeological and architectural surveys has been undertaken to identify gaps in knowledge, and to ensure that the full historical development of the building is understood.

The following archaeological databases and archive repositories were consulted:

- Archaeological Data Service (ADS) – York;
- Derbyshire Record Office;
- Derbyshire Historic Environment Record.
- Geological mapping;
- Heritage Gateway;
- Historic England Archive (red boxes);
- Historic mapping including relevant Ordnance Survey Maps;
- Internet archives;
- Kedleston Hall Archives;
- National Trust Archaeological Archive;
- National Heritage List for England – Historic England;
- Previous technical documents and reports prepared for the National Trust.

SITE SURVEY

A series of floor plans, elevations and cross sections throughout the South Range have been prepared using a combination of hand survey and photogrammetry to identify features of archaeological significance.

To accompany the drawn record a digital photographic survey has been undertaken to record the building and its wider historic setting. All elevations (interior and exterior) and architectural details have been photographed. The locations of the photographs have been recorded on a site plan and documented on a pro-forma register.

4 UNDERSTANDING THE SITE - HISTORY

INTRODUCTION

This section of the report presents a summary history of the development, and use of the South Range. It has been compiled from a variety of sources, especially the detailed analysis of the stables undertaken in 2014 by Danielle Westerhof and notably by Nick Cox Architects. Copies of historical visual sources including illustrations, maps and photographs are included as **Appendix I**.

HISTORICAL SUMMARY

Soon after Robert Adam's involvement at Kedleston began, one of the estate carpenters, Samuel Wyatt (1737-1807), was appointed Clerk of Works and placed in charge of building the first phase of the Stable complex to Adam's design in the early 1760s. He is subsequently credited with designing the Stables built during a second phase of development in the later 1760s.

The first phase (1760-1764) was largely completed when George Ingman produced his survey map of the Kedleston estate in 1764 (**Appendix I.1**). The survey depicts an open courtyard with ranges of buildings along each side. The South Range exists at this date, the internal detail of which is depicted on a drainage plan by Wyatt dated to 1766 (**Appendix I.3**). The range contained a Slaughter House (two separate rooms), two privies, a Greenhouse and Garden Room (**Appendix I.4**). It has been suggested by HTLA (2015, 202) that the purpose of the Greenhouse and Garden Room was associated with pleasure and display, being used for growing exotic plants and fruit, and thus reflects an important element of the garden landscape rather than the daily functioning of a large estate.

The modified Ingman survey (**Appendix I.5**), appears to illustrate that the eastern end of the South Range had been extended or modified, although the overall scale of the drawing is such that exact measurements of scale and proportion cannot be relied upon – as is demonstrated by the junction of the West Range and the west end of the South Range, which is incorrect and should be set back from the corner of the building. The exact nature of this alteration at the east end is unclear and may be associated with the 'plumbers shop' first mentioned in 1798. The drawing (**Appendix I.5**) also indicates that there was a path running due south from the east end of the building and then running parallel to the south elevation. If this were so, then the Ice House cannot have been built when this drawing was prepared as it would appear that the doorway through the boundary wall would have provided the access to these footpaths. The building is not included on a painting of Kedleston by Cuitt, c.1780 (**Appendix I.2**), although this does not necessarily mean that it had been built as it shielded from view by a clump of trees.

The accounts confirm that the Slaughter House was regularly maintained as part of general repairs to the outbuildings at Kedleston. The 'wire windows' in the Larder and Slaughter House were painted in 1801, and repairs were undertaken to the roof in 1811 using Westmoreland slates. In 1833, Gamble & Cubley painted 28••• yards in the Slaughter House 'iron colour and buff'. In 1848, the same painters billed for painting five wire windows and frames here.

The Greenhouse and Garden Room were still in use by 1804, although a new Greenhouse had been built in the Pleasure Grounds in 1800. Around that time, Joseph Vernon, the principal contractor for the new Greenhouse, also made alterations in the 'old' Greenhouse, including the removal of its heating system and making an outside door, while bricking up a 'doorway at the end'.

26 July: To bricking up the doorway at end of the old Green House pulling down the old furnace, breaking out an outer door, piecing up, pulling in the arch, laying floor, coating & whitewashing.

The 1804 inventory notes that a small number of potted plants are listed in the Greenhouse, while the Garden Room may have continued to be used as a storage space for gardening equipment. There is some indication that by 1809, the Greenhouse, if not also the Garden Room, had become an aviary - a use that continued until the early 20th century. In 1833, the aviary was painted a lead colour and green.

Between the alterations that are coloured in red on the undated Ingham plan (**Appendix I.5**) and the publication of the 1st edition Ordnance Survey map in 1881 (**Appendix I.6**) the Ice House is depicted for the first time and presumably dates from the intervening period, c.mid-19th century. In addition to this, the OS map details a series of rectangular pens to the southwest of the building that are interpreted as external cages from the aviary. The 1881 map and its successor from 1901 (**Appendix I.7**) both detail that the eastern half of the south façade was a wooded area, with no view of the east end of the building. This would concur with the split use of the South Range which appears to have had a service function that faced the Brewhouse Yard to the north and a garden function facing south.

By the time Lord Curzon inherited the Kedleston Estate in 1916, the South Range had become part of the Pleasure Grounds. This is demonstrated by a drawing of the south elevation c.1920 from when Lord Curzon was developing new proposals for the building (**Appendix I.9**). The illustration depicts arched openings at the west end, with a blind wall towards the east, although there are two false arches that continue the appearance of symmetry along the facade.

Since the works to the building were incomplete when Curzon died in 1925, a new design was implemented which converted it into an open fronted loggia with a swimming pool to the south.

The 1914 OS map (**Appendix I.8**) indicates that the central passage **G2** had been introduced at this point. A plan by A.S.G. Butler, the architect in charge of overseeing the alterations at Kedleston, dated June 1924 (**Appendix I.10**), shows the passage through the range from the Yard into the Pleasure Grounds and indicates that the doors into the former privies and Slaughter House still opened up into the Yard at a lower level than today. The Slaughter House is referred to as the “Plumber” [shop], and there is a boiler in the room to the west. It is not entirely clear what the function of the boiler was, although it may have been associated with heating the swimming pool.

The swimming pool was extended in 1946 with the help of two German prisoners of war and the earth was used to fill up the Ice House.

A pergola was added to the area in 1928. In 1940, when parts of the estate were requisitioned by the army, it appears that the Slaughter House was among the areas in the stables required for military purposes. The main body of the various regiments stationed at Kedleston was lodged in a purpose-built camp on the site of the current car park, while the officers occupied the ground floor of the mansion. A schematic plan from this period (**Appendix I.15**) suggests that the area immediately to the south of the building was within a large area enclosed by a fence, although the level of detail cannot be relied upon.

Since acquiring the property in 1987 the National Trust has undertaken repairs to the roof, but almost no works to the interior of the South Range. To the south of the building the setting has been enhanced, comprising of landscape works that in-filled the swimming pool and creating a rockery above the Ice House.

5 UNDERSTANDING THE SITE – HISTORIC FABRIC

INTRODUCTION

This section of the report presents the results of the archaeological analysis of the exposed historic fabric. To accompany the written description a series of drawings have been prepared (**Figures 5-10**) and colour photographs of the various structural elements are included as **Appendix 2**. The South Range is described first, followed by the Ice House.

The buildings have a very simple layout (**Figure 3**). The South Range is subdivided into three spaces **G1-G3**. There is a central through passage **G2** that connects the Brewhouse Yard with the Gardens, with side doors leading into the main rooms **G1, G3**. To the east of the building the south wall continues as a brick boundary wall that contains an arched doorway leading to a narrow passage **G4** and the Ice House **G5**.

The building is approximately orientated on a west-east alignment and for the purpose of this survey the north elevation faces Brewhouse Yard, with the south opening on to the Gardens.

PHASED DEVELOPMENT OF THE SOUTH RANGE

The building can be sub-divided into six phases of development and alteration (See **Figure 4**).

- | | |
|----------------|--|
| Phase 1 | Construction of the South Range and adjacent boundary wall. The building comprises of a Glass House and Garden Room facing the garden to the south and a Slaughter House accessed from Brewhouse Yard to the north |
| Phase 2 | Internal alterations to adapt the Glass House and Garden Room to an aviary. Slaughter House remains (?) unchanged. External enclosures added for birds along the south elevation |
| Phase 3 | Adaptation of doorway in boundary wall to create an entrance to a new Ice House |
| Phase 4 | Removal of the west wall of the Aviary and insertion of a central connecting passageway |
| Phase 5 | Opening up of false arches in south wall and creation of a new opening. This work included the raising of the floor and blocking of doorways leading to Brewhouse Yard |
| Phase 6 | Infilling of external swimming pool and minor alterations to setting of the South Range. Roof repaired by the NT |

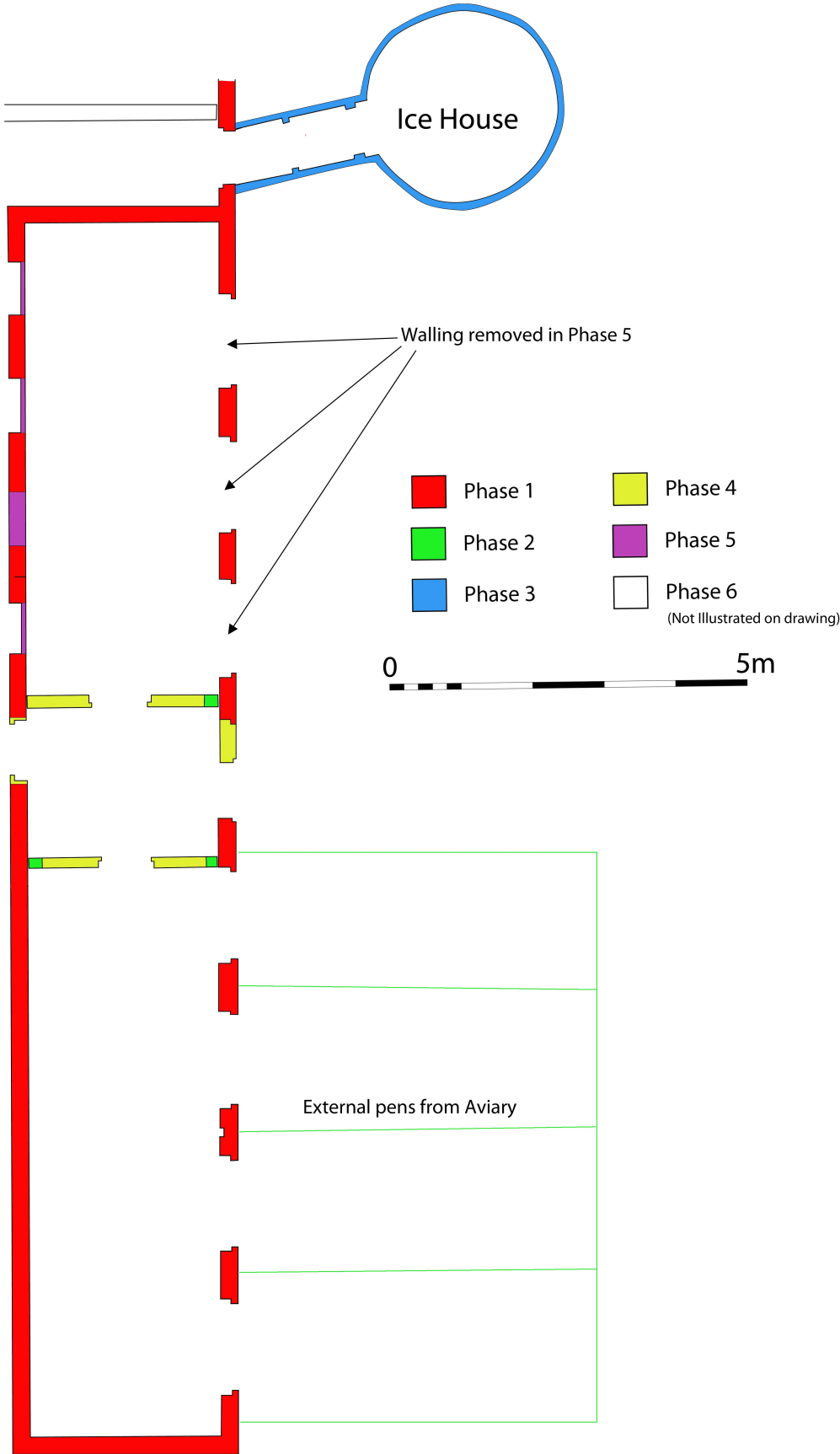


Figure 4: Phased development of the South Range and Ice House

DESCRIPTION OF FABRIC – SOUTH RANGE EXTERIOR

The South Range is a long narrow rectangular building (**Appendices 2.1, 2.5, 2.10**), with external dimensions of 26.35m x 4.8m. The walls are made from narrow hand made bricks c.23 x 11 x 5.5-6cm in an irregular bond with a white/creamy coloured lime mortar. Additional care has gone into the construction of the south elevation (**Appendix 2.2**), which retains evidence for wheel struck pointing (**Appendix 2.16**) and close jointed rubbed brick semi-circular arches (**Appendix 2.15**) for the arcaded openings (**Appendix 2.2**).

The height to the eaves from the ground measures 3.6m on the south elevation and 4m on the north. There is a plain un-moulded horizontal plank forming a continuous soffit board, with a bolection moulded cyma reversa and half rounded detail above (**Appendix 2.18**). This detailing is relatively consistent around the whole of the exterior, with small areas of replacement. The only evidence for guttering has been noted along the south elevation (**Appendix 2.3**). Prior to the insertion of the modern plastic gutter with simple strap fixings (**Appendix 2.20**), was an earlier gutter with a V-shaped profile and supported on metal brackets. One example of these brackets is still in-situ at the southeast corner of the building (**Appendix 2.19**), and there are regularly spaced slots within the soffit plank for further brackets now removed. The roof has a shallow pitch with hips at either end (**Appendix 2.5**). It is clad with slate and has lead flashings with a rolled detail (**Appendix 2.17**). The roof has been replaced by the NT during the last 20 years. The only feature of note is mid way along the north pitch of the roof is a short chimney stack c.0.5m in height (**Appendix 2.13**), apparently having been repointed during the roof repairs.

South Elevation

The principal elevation of the building is the south façade (**Appendix 2.1**). It comprises of a series of equally spaced arches **A1-A8** (**Appendices 2.3, 2.4**), measuring 1.78m wide and 2.54m in height (**Appendix 2.2**). The only architectural embellishment is a simple ashlar string band of square section pale yellow sandstone, set at 1.64m above the ground level (**Appendix 2.15**). The fifth arch from the west **A5** has been in-filled with brick. A decorative doorway **D1** has been inserted into this former opening with gothic inspired detailing (**Appendices 2.62, 2.63**) and a metal studded '1680' date and initials **NC** (**Appendix 2.67**). This doorway represents the alterations to the building c.1930 and the initials are assumed to reference Nathaniel Curzon.

The arches **A1-A5** represent the extent of the former Garden Room and Greenhouse that were depicted on the 1766 drainage plan by Wyatt (**Appendix 1.4**). Arches **A6, A7** were originally intended to be false (blind) openings, which continued the symmetry of the façade as during the 18th century were largely obscured by a shrubbery and woodland planting (**Appendix 1.1**). They were still blocked in first part of the 20th century as evidenced by an early architectural drawing

(Appendix 1.9) and an aerial photograph (Appendix 1.14), only being opened up following the extensive re-modeling in the 1930s. The eastern arch **A8** is a new creation that closely matches the others. Its date is unclear, but the mid-20th century is likely as it has been repointed with cement, rather than a lime-mortar. There is further evidence for cement repairs to the jambs of arches **A1-A4** (Appendix 2.27), which presumably relates to when the doorways and glazing were removed.

Evidence for the former external aviary pens or enclosures as depicted on the 1881 OS map (Appendix 1.6) survives in the form of small cement-filled sockets and cut notches in the ashlar string course centrally positioned on the piers between each arch (Appendix 2.2).

West Elevation (External)

The west elevation (Appendix 2.3) was largely obscured during the site inspection by a drystone wall to the earth bank that circumnavigates the western side of the stable complex, and dense planting (Appendix 2.5). No features of note were observed apart from a modern plastic drain pipe.

East Elevation (External)

The east elevation (Appendix 2.7) is partially obscured by a later stone dividing wall within the Brewhouse Yard (Appendix 2.9), and contains a rectangular recess in the upper section measuring 1.2 x 1.5m and 0.15m deep. The opening is interpreted as secondary insertion for a false window **W5**. Unlike the 18th century windows elsewhere within the courtyard this opening does not have a flat arched rubbed brick lintel, and is therefore likely to be later in date.

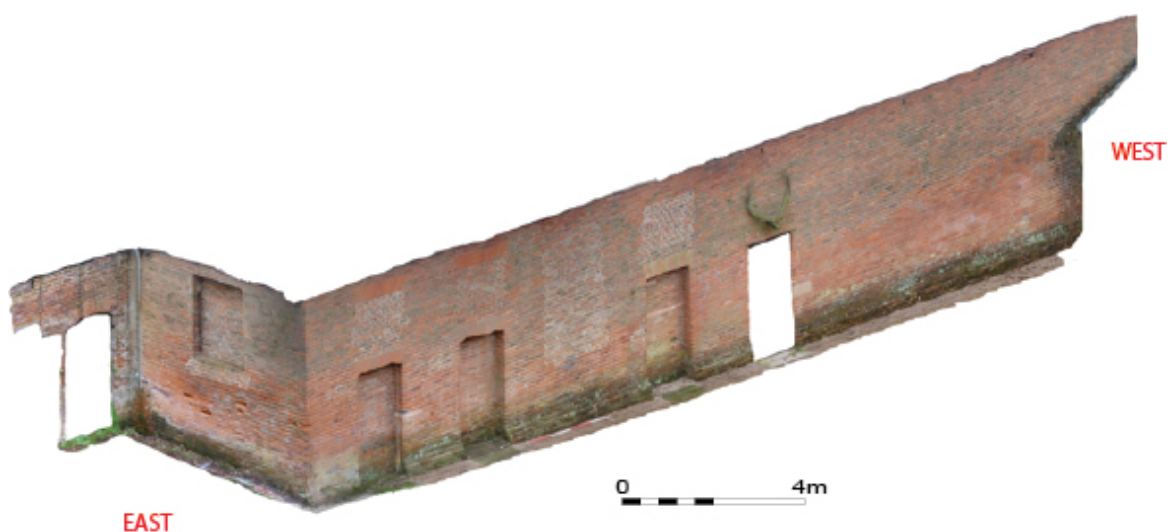


Figure 5: Three dimensional model of the northeast corner of the South Range

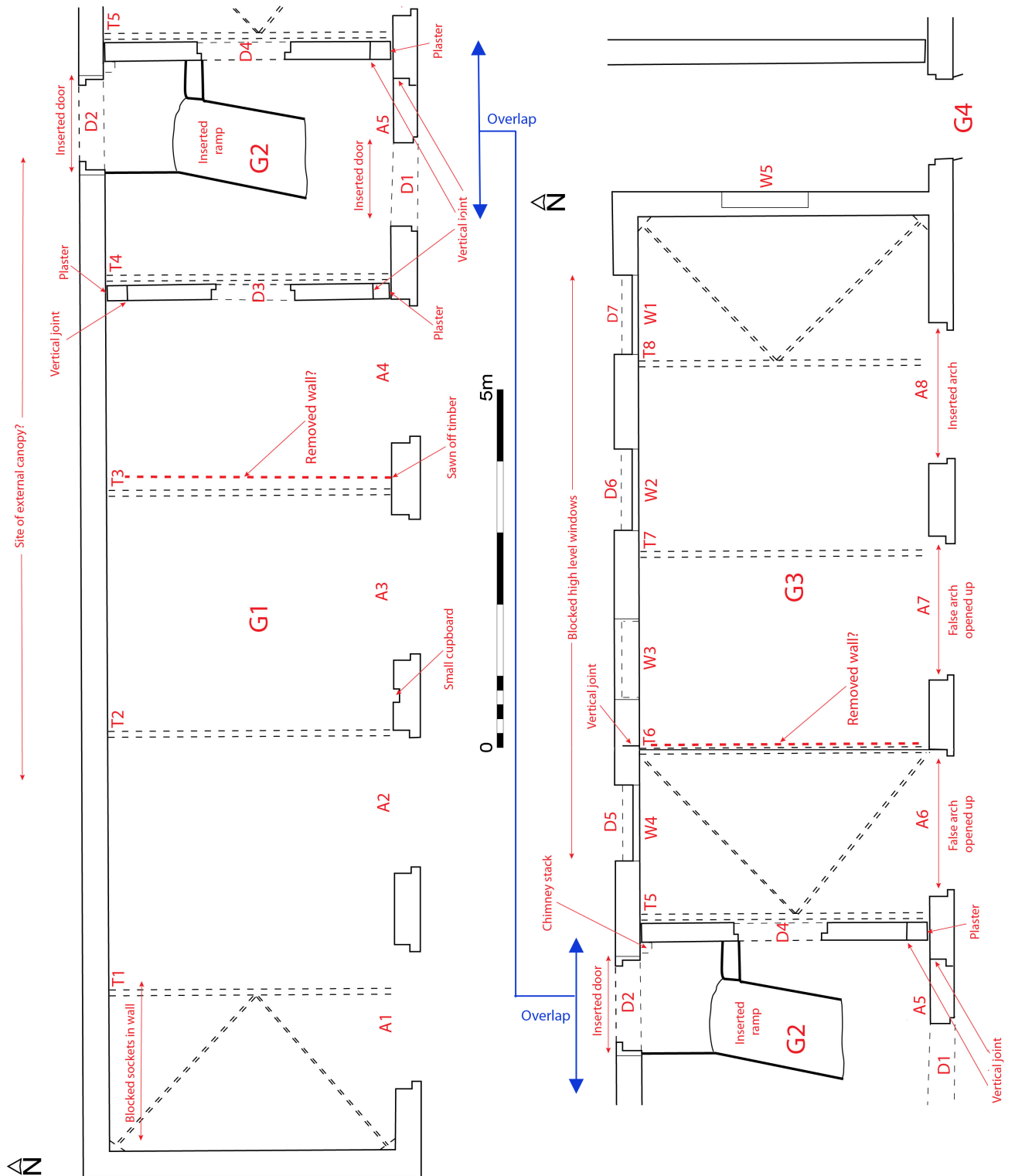


Figure 6: Floor plan of South Range

North Elevation (External)

The north elevation faces the Brewhouse Yard (**Appendix 2.10**) and in its current form has no openings apart from a centrally positioned doorway **D2**. The eastern end of the elevation comprises of a blind wall which forms the rear of the former 18th century Garden House and Greenhouse (**Figure 5**). Built against the wall with a vertical construction joint is the gardeners potting sheds, that may represent the west range depicted on the 1764 Ingham survey (**Appendix I.1**). There is a brick offset plinth along the base of the elevation, c.28cm in height.

Between the west east wall of the potting sheds and **D2** are three small timber sockets set flush with the brickwork, c.20cm below the eaves of the building. They are 7.8m apart and it is suggested that they represent the site of a former covered portico, presumably supported on vertical posts, similar to those above the garages elsewhere in the Brewhouse Yard.

The central doorway **D2** is a secondary insertion into the building (**Appendix 2.14**) and dated to the alterations undertaken in the 1910s. It has what appears to be a flat arched brick lintel, but upon close inspection this detail comprises of crude incised grooves in the brickwork, pointed with mortar to imitate individual bricks. The opening is supported upon a narrow metal strap, forming a crude lintel. The timber door is an 18th century design and reused, matching **D3** and **D4**.

The eastern half of the north elevation contains evidence for extensive alterations (**Appendices 2.11, 2.14**) in the form of blocked in doorways **D5, D6** and **D7**, and windows **W1, W2, W3** and **W4**. The recessed opening for the former doorways are directly comparable to those on the opposite side of the Brewhouse Yard (**Appendix 2.12**) and it is suggested that they were once directly comparable in appearance, perhaps even originally containing the doors **D2-D4**, prior to their reused c.1930.

In the upper section of the elevation are three irregular patches in the brickwork above **D5, D6** and **D7**. This apparent in-filling directly corresponds with the high level windows and side windows adjacent to the doorway on the Estate Office on the opposite side of the Brewhouse Yard (**Appendix 2.12**), and it can be suggested that this end of the South Range mirrored this arrangement. It should be noted that the external ground level is 0.4m lower on the north than the south side of the building, which directly relates to a split function for the building (see **Figure 8**). Access would have been from the Brewhouse Yard at the lower level, and the internal flooring has been raised in **G3** when the door and window openings were blocked (**Appendix 2.47**). It is also suggested that the blocked doorway **D5** (**Appendix 2.13**) originally gave direct access to the

former Garden House from the Brewhouse Yard was at this lower level, and necessary to access the boiler and under-floor heating that was removed by Joseph Vernon in 1804.

The brickwork of the north elevation appears to differ along the length of the building, a detail noted by Nick Cox Architects in their survey in 2014. The dimensions of the bricks are largely consistent varying from 22.5-23 x 11 x 5.5-6cm and such a variation is not unusual in handmade bricks. What is perhaps more apparent is a subtle change in brick bond between the blocked doorway **D5** and blocked window **W3** (see **Appendix 2.13**). The bond changes from a random bonding to the west, to a more regular Flemish bond to the east, which broadly corresponds with the internal vertical joint noted in **G3** (see **Appendix 2.51**). Interestingly, the Nick Cox report suggests that this detail in the brickwork may relate to a change in construction or build, although it has not been possible to locate positive evidence within the brickwork elsewhere within the eastern end of the building. It may even explain the differences that have been noted with the 1764 plan and the lack of internal structural evidence for the privies. Whether the building was built as a shorter structure and then lengthened during the building process is possible, although as noted above the similarity in the dimensions of the handmade bricks, and the nature of the composition of the lime mortar makes it difficult to be certain.

DESCRIPTION OF FABRIC – SOUTH RANGE INTERIOR

The full internal dimensions of the South Range are 4m x 25.55m, although this historic building survey has concluded that there were two principal divisions within the building, one representing the former Garden House and Greenhouse measuring 4m x 17.9m, and the other representing the Slaughter House and latterly the Plumbers Shop measuring 4m x 7.3m. This subdivision of space is evidenced by the redundant hip rafters (**Appendix 2.53**) above **G3**, and a vertical construction joint in the brickwork in the north wall (**Appendix 2.51**).

Room G1

Room **G1** is a single open space measuring 4m x 11.95m (**Appendices 2.21, 2.22**). The flooring comprises of flagstones which butt against the wall faces and continue below the edges of the brick piers of the arched arcade forming the south elevation (**Appendix 2.32**). The paving appears to be divided into two separate phases (see **Figure 7**), with the southern part of the floor comprising of larger rectangular slabs, and smaller stones along the north wall. This change in flooring is likely to reflect the changes to the use of the interior, the smaller slabs potentially being earlier in date.

The roof structure is fully exposed to the underside of the rafters and slates which have been re-laid. It appears that a number of the rafters have been rotated, with exposed baton nails on the

underside. There are three exposed king-post trusses **T1–T3**, each is of an identical construction, with pegged joints and raking struts that project from a joggle joint on the king-post (**Appendix 2.33**). The purlins appear to be notched into either side of the principal joints of each truss. None of the roof timbers are decorated, but are a dark brown colour, which may represent a wood stain, or potentially discoloration caused by smoke. The documentary accounts suggest that the floor under the western half of the building was originally heated, which would have presumably been via hot air in heated pipes generated from a boiler. If this were so, then the staining could be as a result of fumes from the heating process. The other feature of note is that the underside of the trusses **T1–T5**, all have scarring from timber laths and plaster, indicating that a ceiling has been removed.

The west elevation of **G1** (**Appendix 2.22**) comprises of an un-plastered brick wall. At the wall head are diagonal braces supporting the hip rafters (**Appendix 2.32**), but there are no other features of note. The north elevation is a blind wall with no openings with a similar appearance to the west wall (**Appendices 2.25, 2.26**), both of which are painted white which partially obscures the historic fabric. It has however been possible to identify a short row of blocked joist/beam holes c.2.52m above the floor in the western part of the elevation. The purpose of the holes is unclear, although they may relate to the internal layout of the room when it was used as an aviary (see **Appendix 1.10**), allowing cages and other structures to be built against this wall.

The east wall of **G1** (**Appendix 2.21**) is brick, with evidence of a horizontal break in construction at eaves level. The brickwork above this is secondary and corresponds with the upper courses of the north and south elevations where the brickwork has been raised around the rafters. This brickwork has a cement mortar and it is likely that it dates to mid-20th century. There are vertical construction joints at either side of the east wall, indicating that it is a secondary insertion, that would have been inserted beneath the lath and plaster ceiling of the original room. The west wall contains a doorway which includes a re-used 18th century door **D3** (**Appendix 2.64**). The door has been decorated with metal studs with the dates 1760 and 1925, along with the initials NSC and RSC under coronets (**Appendix 2.66**). These initials are the monograms of Nathaniel Curzon (1st Baron Scarsdale, d.1804) and Richard Curzon (2nd Viscount Scarsdale, d.1977). The embellishment of these earlier 18th century doors, dates to the 1930s period of alteration when they were re-used in their current location, perhaps when the former external doors into **G3** were blocked. It is interesting to note that the letters on two of the studwork monograms, have nail holes from earlier central letters beneath them (**Appendices 2.66, 2.69**).

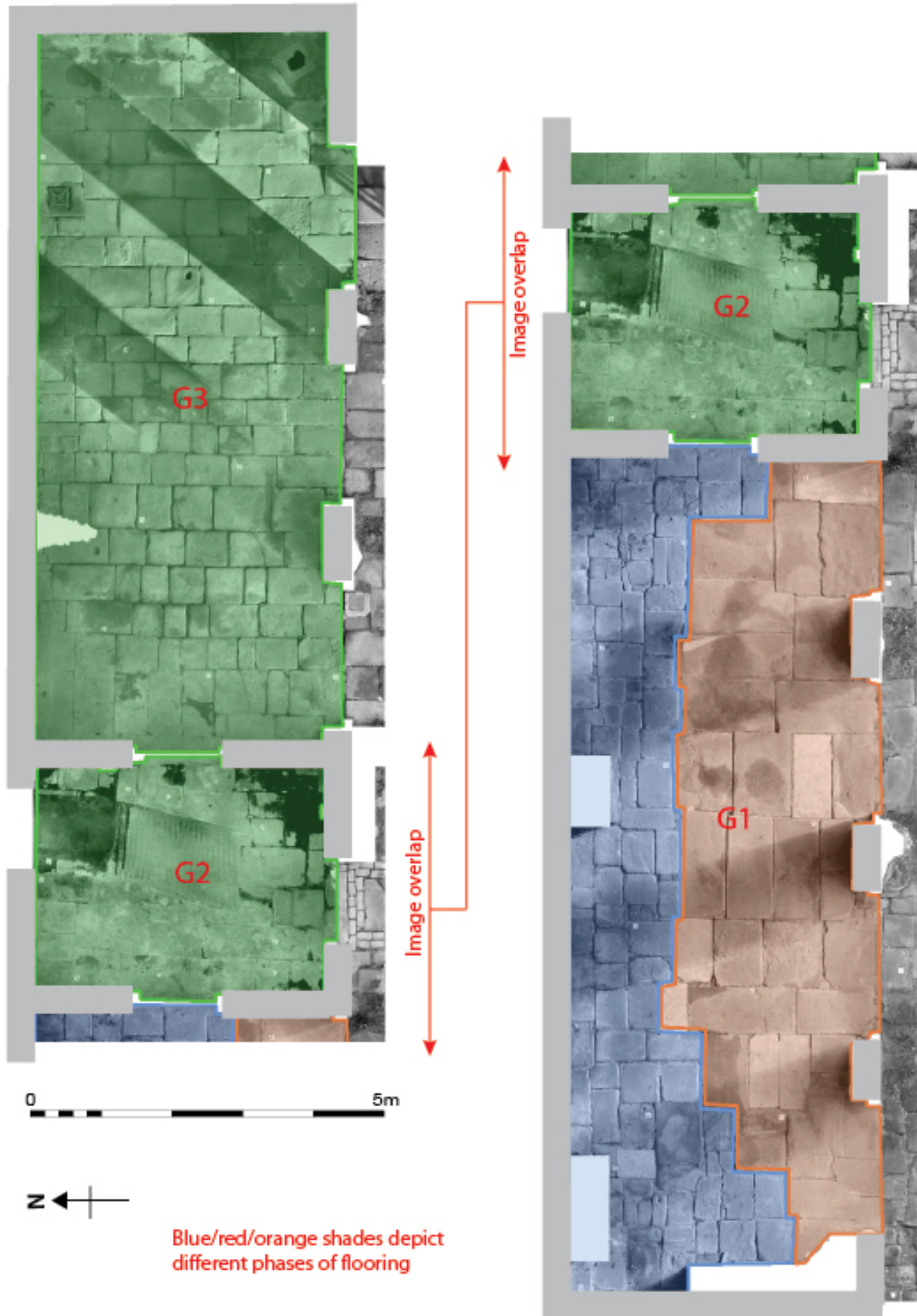


Figure 7: Floorplan of the South Range with detail of internal paving

The south wall of **G1** comprises of an open arcade of four arches **A1-A4** (**Appendices 2.23, 2.28**). The arches are all contemporary in date and have recessed jambs to take glazing, or doorways. Sections of the jambs have been repointed in cement mortar (**Appendix 2.27**) representing the alterations in c.1930. Set into the piers between each arch are remnants of horizontal timbers at a height of 1.45m above the floor (**Appendix 2.23**). Above the arches are further horizontal timbers exposed within the brickwork, which are likely to relate to having been used to secure internal structures. One of the timbers contains redundant carpentry marks, indicating that they are re-used and may be secondary insertions. At the east end of the elevation, there are shallow indents in the timbers indicating a row of rafters, or beams at this level which may have been associated with the 19th century adaptation of the room at an aviary. Between **A2** and **A3** is a small metal cupboard set into the brickwork (**Appendices 2.29, 2.30**), and there is a sawn off beam between **A3** and **A4** (**Appendices 2.24, 2.31**). It is suggested that this timber may represent the location of a former internal partition that would have separated the Garden Room from the Greenhouse, an arrangement illustrated on 1766 drainage plan (**Appendix 1.4**).

Room G2

G2 is a passageway in the center of the South Range that measures 3.15m x 4m. It has been created by the insertion of two brick walls into an earlier room (the Garden Room and Greenhouse). The flooring comprises of stone slabs (**Figure 7**), which have been cut in to forming a sloping ramp leading down to the Brewhouse Yard (**Appendix 2.40**). Each of the four walls contains a door and the passage acted as an internal lobby within the South Range. The north wall contains an inserted door **D2** (**Appendix 2.35**). At eaves level, unlike the two other rooms, the timber wall-plate is still exposed (**Appendix 2.42**) and has not been bricked up, confirming that this upper level brickwork in **G1** and **G3** is secondary. In the northeast corner is the truncated remnant of a chimney flue that leads to the external stack on the roof above (**Appendix 2.36**).

The south elevation of **G2** has been extensively altered, originally comprising an open arch identical to those in the south wall of **G1** (**Appendix 2.37**). Above the blocked-in archway is a horizontal timber, which corresponds with those in the south wall of **G1**. The timber retains scarring from removed beams, or joists and presumably formed part of the aviary prior to the west wall of the passageway being inserted. At the wall head the timber wall-plate is exposed similar to the north elevation. Both the west (**Appendix 2.40**) and east walls (**Appendix 2.40**) of **G2** are identical in their construction. The walls are both inserted into the building, where the brickwork butts up against the north and south walls of the building sections of lime plaster survives trapped behind the inserted bricks (**Appendices 2.43, 2.44**). This is significant as it confirms that the interior of the former Garden Room and Glasshouse were originally plastered and not exposed brickwork as today. Traces of pale white, cream paint survives on the surface of the plaster.

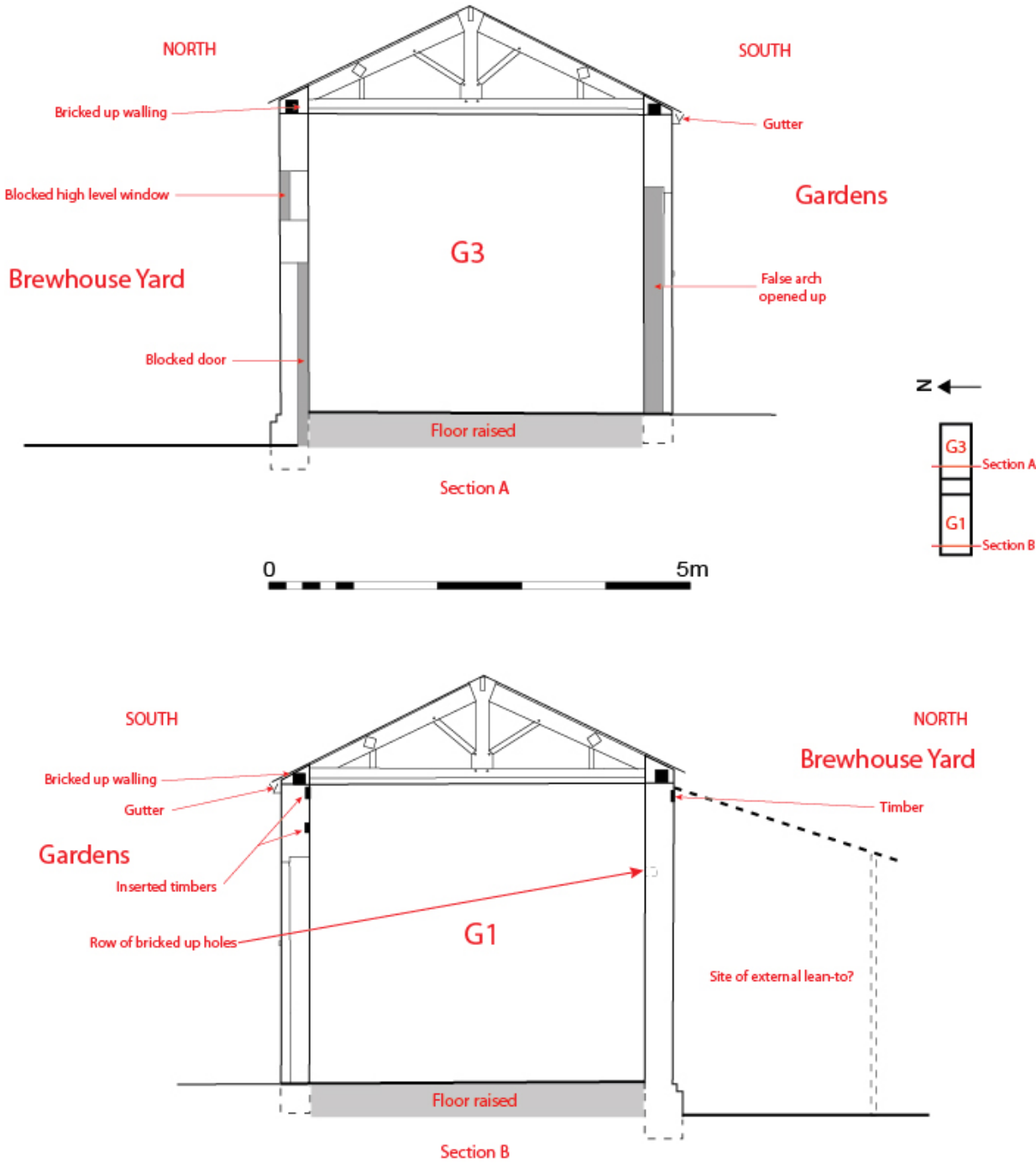


Figure 8: Cross-sections through the South Range

Each of the inserted walls contain central doorways **D3** (Appendix 2.38) and **D4** (Appendix 2.39) with re-used doors identical to **D2**. The doorways **D1**, **D3** and **D4** all have narrow internal timber lintels and sandstone blocks used to secure the hinges and latches, suggestive that they are all contemporary in date, c.1930. The upper section of the walls has been raised in brick to form a fully enclosed space right up to the ridge. The construction of the roof is identical to **G1** (Appendix 2.41), with evidence on the underside of **T4** for a removed lath and plaster ceiling that originally over-sailed the inserted walls below. Incorporated within both the west and east walls are partial vertical joints, c.0.28m inset from external wall faces. These features are unexplained as they have been built against the earlier wall plaster and appear to represent short brick piers c.1.3m in height. It is possible that they represent a transitional phase in the adaptation of the building at the end of the 18th century, perhaps supporting beams, or even arches that spanned the 4m width of the building, being replaced as full height brick walls in c.1930.

Room G3

Room **G3** is a single open space measuring 4m x 9.8m (Appendices 2.44, 2.45). The flooring comprises flagstones that appear to have been laid in a single phase, c.1930, and subsequently raised the floor level at this end of the building by 0.4m (Figure 8). The slabs extend to the wall edge with the exterior strip of paving running along the south elevation. This confirms that they post-date the creation of the opening **A8**, and also that of **A6** and **A7**, which were slightly recessed as indicated by elevation drawing from the 1910s (Appendix 1.9). Within the paving are two small metal drains (Appendices 2.49, 2.50).

The roof structure is fully exposed to the underside of the rafters and slates which have been re-laid (Appendix 2.57). There are four exposed king-post trusses **T5-T8**, each is of an identical construction, with pegged joints and raking struts that project from a joggle joint on the king-post (Appendices 2.52, 2.56). The purlins appear to be notched into either side of the principal joints of each truss. At the west end of the room between **T5** and **T6** (Appendices 2.53-2.55) there are raking diagonal beams that suggest that there may have formerly been a hip in the roof line at this point. This detail does correlate with a vertical joint in walling below (Appendix 2.51), but is not clearly reflected as a break in construction on the external north face (Appendix 2.14).

What is interesting to note is that the roof timbers to the east of this vertical joint are painted and, unlike those above **G1**, are not stained or discolored. One possible explanation is that there was an internal wall at this point which has been removed, thus exposing the differences in treatment of the roof space and requiring the replacement of the tie beam of **T6** (Appendix 2.55). If this were the case, the eastern end would have been open to the underside of the rafters in what was once the Slaughter House, and Plumbers Shop whilst in the adjacent Garden Room there was a

plaster ceiling attached to the underside of the tie beams,. On the underside of **T7** is evidence for earlier metal fixings, or brackets (**Appendices 2.60, 2.61**).

The east elevation of **G2** (**Appendix 2.45**) comprises of an unplastered brick wall. At the wall head are diagonal braces supporting the hip rafters. The walls are painted and it is unclear whether there is a blocking for a former window **W5**, which is expressed externally and assumed to have been a blind window for decorative effect (**Appendix 2.7**).

The west wall of **G2** (**Appendix 2.46, 2.48**) is brick, with evidence of a horizontal break in construction at eaves level. The brickwork above this is secondary and corresponds with the upper courses of the north and south elevations where the brickwork has been raised around the rafters (**Appendix 2.58**). This brickwork has a cement mortar and it is likely that it dates to mid-20th century. There are vertical construction joints at either side of the east wall, indicating that it is a secondary insertion, that would have been inserted beneath the lath and plaster ceiling of the original room. The west wall contains a doorway which includes a re-used 18th century door **D4** (**Appendix 2.65**). The door has been decorated with metal studs with the dates 1760 and 1933 when the doors were inserted in the 1930s, along with the initials NSC and RSC under coronets (**Appendix 2.68, 2.69**). This door dates to the 1930s period of alteration, and the initials refer to Nathaniel Curzon (1st Baron Scarsdale, d.1804) and Richard Curzon (2nd Viscount Scarsdale, d.1877). Similar to alterations on the decorative studs on **D3**, the RSC are adaptations of an earlier mono-gram. Above the door is a projecting round ended ledge (**Appendix 2.59**), that was possibly intended to support a bust, or item of sculpture.

The north wall of **G3** (**Appendix 2.47**) is characterised by a row of four high level recesses that are interpreted as representing former windows on the external elevation **W1-W4** (**Appendix 2.11**). The flooring has been raised and these windows would have provided additional light into what was originally used as a work space. Beneath **W1, W2** and **W4** are disturbed sections of brickwork which correlate with the external blocked doorways at the east end of the north elevation. Beneath **W3** and at a height of c.0.56m above the floor are three inserted timbers within the brick, above which the brickwork is disturbed. This is interpreted as a large window to the side of the former doorway (see **Appendix 2.12** for a comparison), which may have had a bench in front of it, demarked by the timbers set into the wall. Between **W3** and **W4** is a vertical scar in the brickwork, which is interpreted as a former wall alignment forming the end of the Garden Room, Greenhouse. With the flooring being lower, **D5** would have provided access to a lower level, presumably for the heating system for the Greenhouse. The term Garden Room, may therefore relate to ancillary space, rather than a garden office, or bothy.

The south wall of **G3** comprises of an open arcade of three arches **A6-A8** (**Appendices 2.45-2.46**). The arches **A6-A7** were originally false openings, and the eastern opening **A8** is a secondary insertion to match the rest of the south façade of the building (**Appendix 2.1**). The jambs of each arch have been pointed in cement mortar, representing the alterations in c.1930.

DESCRIPTION OF FABRIC – THE ICE HOUSE

The Ice House is located to the southeast of the South Range (**Figure 3**). It is accessed via an arched doorway (**Appendix 2.8**) in the brick boundary wall to the Brewhouse Yard that runs west-east towards the Churchyard. This wall appears to be a continuation of the south wall of the South Range, as there is no discernable construction joint at the southeast corner of the building (**Appendix 2.19**). The boundary wall is made from hand made red brick with a sandstone coping, 3.42m in height. The arched opening is integral to the construction of the wall and has a recessed jamb on the north face, and the remains of a hinge pintle (**Appendix 2.72**) from an inward opening door into the Brewhouse Yard. It is suggested that the door was originally intended as a means of access to the gardens. Above the doorway and immediately beneath the coping are three rectangular openings that have been blocked with brick (**Appendix 2.8**). The recesses may have once supported timberwork for a covered roof above the doorway that has since been removed.

On the south side of the boundary wall is a prominent earth mound partially hidden by planting and a large tree (**Appendices 2.3, 2.6**). This mound covers the domed chamber that forms the Ice House and has been re-landscaped by the National Trust in the last 20 years.

The entrance passageway into the Ice House (**Figures 9, 10**) does not align with the earlier 18th century doorway through the external brick wall around the Brewhouse Yard, and is offset at an angle of approximately 10 degrees. The passageway is 2.9m long and 1.2m in width. The ceiling comprises of a series of three arched round headed brick vaults, which step down by 0.1m as you enter further into the passage. At the junction of the passageway and the brick boundary wall (**Appendix 2.72**) the brickwork of the vault is lower than the arched head of the doorway (**Appendix 2.72**) indicating that they are not contemporary and that the passageway is a secondary insertion. In the center of the middle vault above the entrance passage is a small hole in the ceiling, which is most likely to represent a fixing point for a metal hook, perhaps used to hang a lantern.

The height of the passageway from floor to ceiling is 2.12m to 2.21m, and the bricks measure 23.5 x 11 x 6cm. At the end of the passage is a stone threshold (**Appendix 2.71**) and the remains of metal fixings for an earlier gate (the existing metal gate is a modern replacement). The upper part of the Ice House is of a standard form comprising a brick dome that measures 4m in diameter.

The approximate height of the dome above the threshold is c.1.9m (**Appendix 2.70**), however the interior void that would have formed the main chamber, or ice well has been backfilled with earth and general debris and its true dimensions are unknown. Based on examples of contemporary Ice Houses it would be expected that the profile of the chamber would have been 'egg' shaped, with a drain at the base.

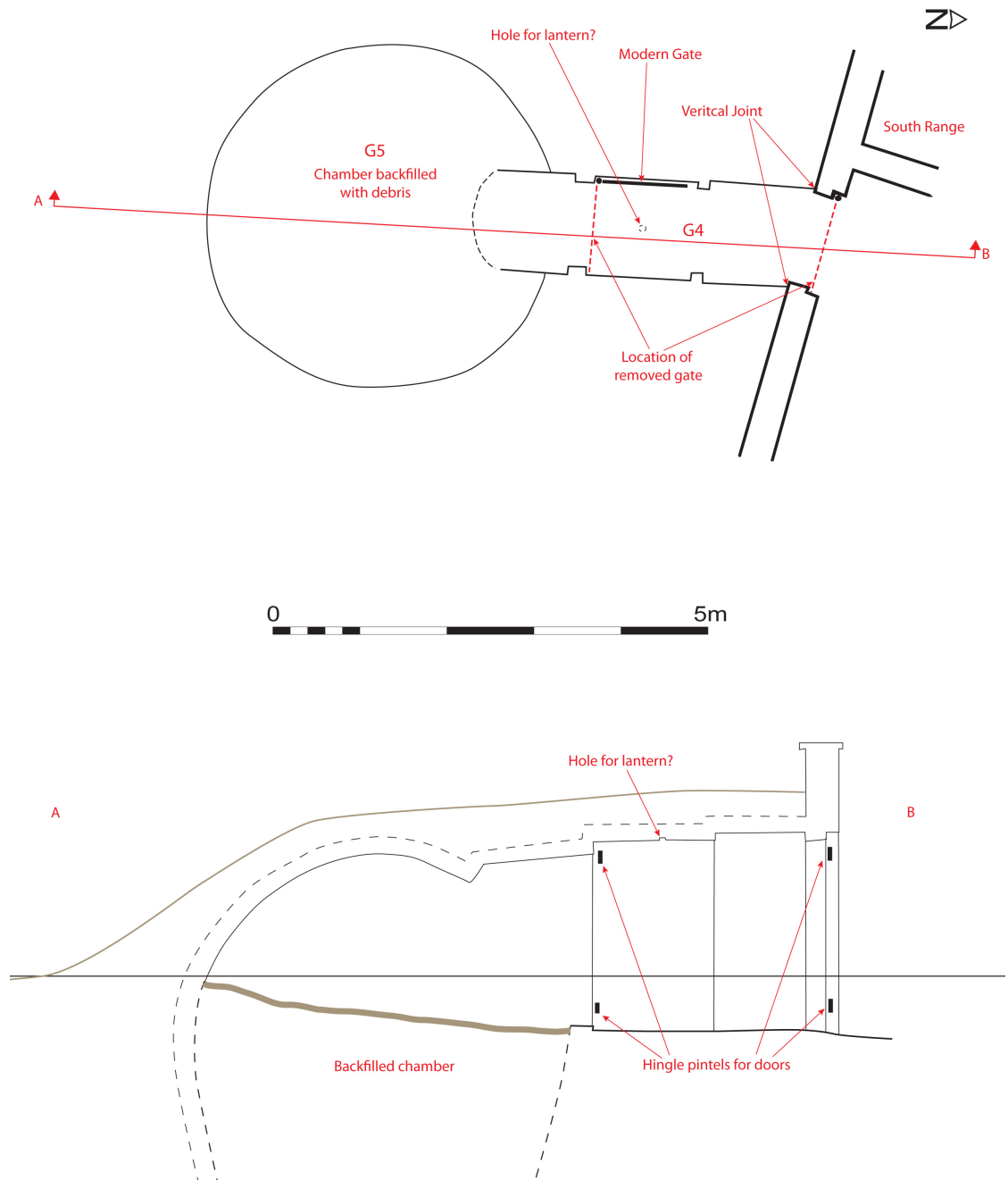


Figure 9: Floor plan and section of the Ice House

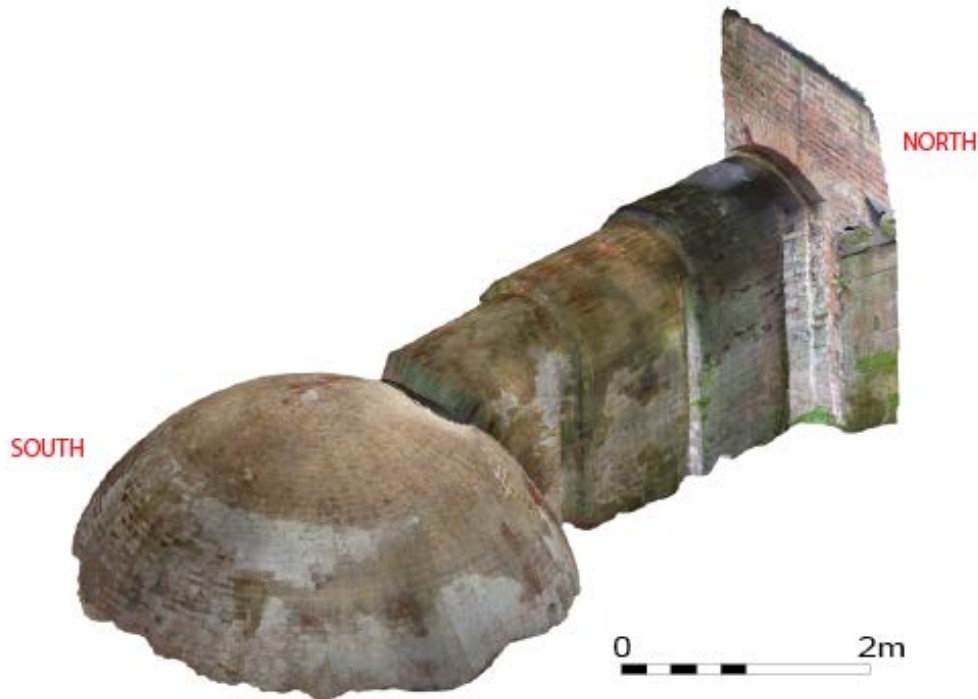


Figure 10: Three dimensional model of the Ice House passageway and domed chamber

DISCUSSION

This archaeological survey of the South Range and Ice House at Kedleston Hall has identified a series of structural details that were previously unrecorded. It would appear that the flooring in the east end of the South Range has been raised in **G3**, following the conversion of the room to front on to the gardens, rather than being associated with ancillary activities within the Brewhouse Yard.

The external brick blockings in eastern part of the north elevation do not correlate with the arrangement depicted on the 1766 drainage plan (**Appendix I.3**) and it is suggested that this plan may therefore may have been an intended design, which was adapted when construction works were undertaken. There is the possibility that the whole of the eastern end has been rebuilt, however, if this were the case then it would be expected to find more evidence in the form of structural joints for such a large alteration.

The discovery that the Garden Room and Greenhouse were once a plastered internal space is interesting, and that when the central passage **G2** was inserted the walls were built from underneath right up to the ceiling with the plaster left *in-situ*.

There are still questions that need to be answered, in a particular relating to the treatment of the earlier flooring, which may have included an under-floor heating system in **G1** and a workshop floor for the slaughterhouse in **G3**. The form of the chamber in the Ice House is also unknown and is worthy of further examination.

6 CONDITION, SIGNIFICANCE AND RECOMMENDATIONS

SUMMARY OF CONDITION (AFTER NCA 2014)

The South Range

The current condition of the fabric of the South Range was assessed by Nick Cox Architects in 2014, a summary of their conclusions is as follows:

Some work has been carried out to the roof since the last Quinquennial. A number failed laths have been re-laid along with some slates, however there are still a number of missing and slipped slates. Apart from providing weathering, the health and safety aspects should be considered if slates start to fall from the roof. There is evidence of some timber decay in the form of beetle activity. The condition of the rainwater goods is also particularly poor. Where the gutter on the south side has failed, water is damaging the brickwork below. At the east end, where the water butt has been removed, the walls are becoming saturated. There is some algal growth.

The absence of rainwater goods on the north slope means that there is splashback causing continued decay of the bricks at low level. The poor rainwater disposal arrangements also promote a certain amount of dampness in the floor.

The Ice House

The Ice House is accessed via a brick arched passageway with a metal security gate. The brickwork is damp and overgrown with lichen/mosses. The flooring is also uneven and consideration should be given to removing this vegetative growth to enable repointing of the brickwork as appropriate. The interior of the main chamber and stability of the earth covered mound above is unknown, and further investigation is recommended. The interior of the building appears to be dry and has a regular circulation of air, however it does contain backfilled debris which may be having a negative impact upon the historic fabric of the structure.

STATEMENTS OF SIGNIFICANCE

The South Range

The South Range is one of the earliest surviving elements of the Stables and Brewhouse Yard at Kedleston Hall that still retain aspects of their 18th century appearance. Internally the building has suffered from secondary alteration and considerable re-modeling, which has detracted from its overall aesthetic value. The building is attributed to be the work of Samuel Wyatt and therefore of considerable importance in regards to its intended function in the early layout of the stables and ancillary domestic offices at Kedleston, previously acknowledged by its Grade II listing.

The existing south façade makes an important focal point when viewed from the gardens and as a whole the building makes a positive contribution to its wider setting.

The Ice House

The Ice house is a neglected element of the stable complex, however it has considerable significance in relation to the role it played for the storage of ice at Kedleston, which was once considered a lavish and almost exotic product, especially in the warmer months of the year. The existing condition of the structure significantly detracts from its overall aesthetic value, although it can still be considered as having a degree of heritage value, which would be heightened if the interior was restored.

RECOMMENDATIONS

The South Range

The current use of the South Range is limited to it functioning as either a means of access from the Brewhouse Yard to the gardens for NT staff and volunteers, or as two open fronted rooms with access to the gardens. The British climate is such that the use of the building is largely restricted to warmer months of the year, however it does provide an external covered space that the NT regularly uses for historic building events and potentially for new outdoor classes, especially in inclement weather.

As the result of this archaeological survey, new uses are suggested for the two main spaces **G1** and **G3**. The eastern room **G3** has undergone the largest amount of change and alteration during the last 250 years and very little of the former internal subdivision survives. Consequently, the room is very difficult to understand in terms of its historical use and, if adapted, could prove to be a good location as an outdoor interpretation room to explain the development of the gardens, stables and external elements of the estate. It could also provide an additional space for small functions.

The western room **G1**, similar to **G3**, is one large open space. It had a very different function to **G3** and it would be possible to recreate the lost elements with a high degree of authenticity. It is therefore suggested that consideration should be given to returning **G1** to an enclosed room that could be put to a variety of uses.

The survey has confirmed a number of elements which could be reinstated, including:

- the walls being originally plastered and not rough faced painted brick as they are today;
- there was a lath and plaster ceiling attached to the underside of the roof trusses;
- the arches were likely to have been enclosed with fenestration.

The likelihood that the room was once heated from below as a greenhouse in the 18th century would need to be confirmed by archaeological investigation, but the possibility of this former arrangement does give scope for the installation of sympathetically designed under-floor heating which would not detract from the internal appearance of the room and reflect the original feel and appearance of the space. This 'new' room would then have a variety of possible uses including a classroom, meeting room, function room for events, or as a garden office.

Ice House

The Ice House at Kedleston is a neglected structure that is rarely visited and has not been made accessible to members of the public. The reasons for this are two-fold: firstly, its location, which is accessed from a private yard that is not on the visitor route, and secondly its use as a dumping ground for earth and general rubbish resulting in c.70% of the internal chamber is buried and inaccessible.

When it was in use the Ice House would have provided a year-round supply of ice to the household for a variety of uses, notably within the kitchens. Once electric refrigeration became more widespread during the early years of the 20th century, ice houses rapidly fell out of use and became abandoned.

Depending upon the available resources, consideration should be given to repairing the Ice House, which would provide a new feature for the visiting public. The design of the building is such that it cannot be easily adapted to an alternative use. However, if it was restored it could provide a very practical explanation of its function to the public, coupled with information about how the ice would have been used within the house. The latter could be provided by an audio-visual display projected onto the walls of the chamber for viewing from the entrance passageway. This would entail additional research into the design and development of ice-houses within the 18th and 19th centuries.

INVESTIGATIVE WORKS

Works that are recommended to enhance our understanding of the former use and appearance of the South Range and Ice House includes:

A. Structural survey

1. The structural condition of the Ice House is poorly understood. An internal and external survey is recommended to ensure that the building can be maintained within a stable condition;
2. Any structural survey of the Ice House should detail any repair works needed to maintain the historic fabric in state of good repair;
3. A mitigation strategy to be prepared in conjunction with any structural survey which will consider the benefit of the excavation of the contents of the ice well;
4. Any future proposals for the excavation of the ice well need to be assessed for any hazards, such as asbestos
5. Any structural survey should clearly assess any evidence for animal disturbance.

B. Paint analysis

1. The roof timbers in the South Range above **G3** contain traces of paint. Their analysis may help determine how the spaces were originally decorated;
2. The roof timbers above **G1** and **G2** in the South Range are stained and analysis of their surface may confirm the possibility that this is derived from smoke blackening caused by the boiler used in **G2**, or an earlier under-floor heating system for the 18th century glasshouse;
3. The sections of plasterwork trapped behind the inserted walls in **G2** in the South Range contain paint traces which will confirm whether the walls were originally painted white, or decorated in any way.

C. Archaeological excavation

1. Following a structural survey of the Ice House, should a mitigation strategy be developed that recommends the excavation of the interior of the Ice Well, it is recommended that is undertaken under archaeological supervision;
2. It is recommended that an evaluation trench should be excavated in **G1** in the South Range to assess whether there are subsurface remains associated with its earlier use as a Green House;
3. It is recommended that that two evaluation trenches should be excavated in **G3** in the South Range to confirm that the floor levels have been raised and to understand the relationship of the former (lower level) access from the north into the building.

7 SUPPORTING INFORMATION

AUTHORSHIP

This report has been prepared by Oliver Jessop MClfA, with graphics produced by Ian Atkins MClfA. Editing has been provided by Manda Forster PhD MClfA.

ACKNOWLEDGEMENTS

Danielle Westerhof and Rachael Hall are thanked for arranging access during the site surveys, for providing background records and for their advice and guidance regarding the proposed future use of the building. The garden staff at Kedleston are acknowledged for clearing the building and for helping during the fieldwork.

SOURCES AND REFERENCES CONSULTED

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- 1766 – Samuel Wyatt, 'Kedleston Hall Drains Plan'
- c.1780 – View of Kedleston Hall from the South attributed to George Cuitt the elder [NT Inv. No. 108774]
- mid-19th century – Copy of George Ingman's 1764 survey with alterations [KHMR/KM/15/6]
- 1910s – Anon. Drawing of loggia elevation [CMS 109526]
- 1920s – Anon. Pencil drawing of proposed changes to South Range
- 1924 – Plan of the 'Kedleston Aviary' by Butler
- 1930s – Aerial photograph of Kedleston Hall from the southwest
- c.1942 – War department plan of the Brewhouse Courtyard
- Ordnance Survey maps 1881, 1901, 1914
- British Geological Map of Britain (digital data), 2016

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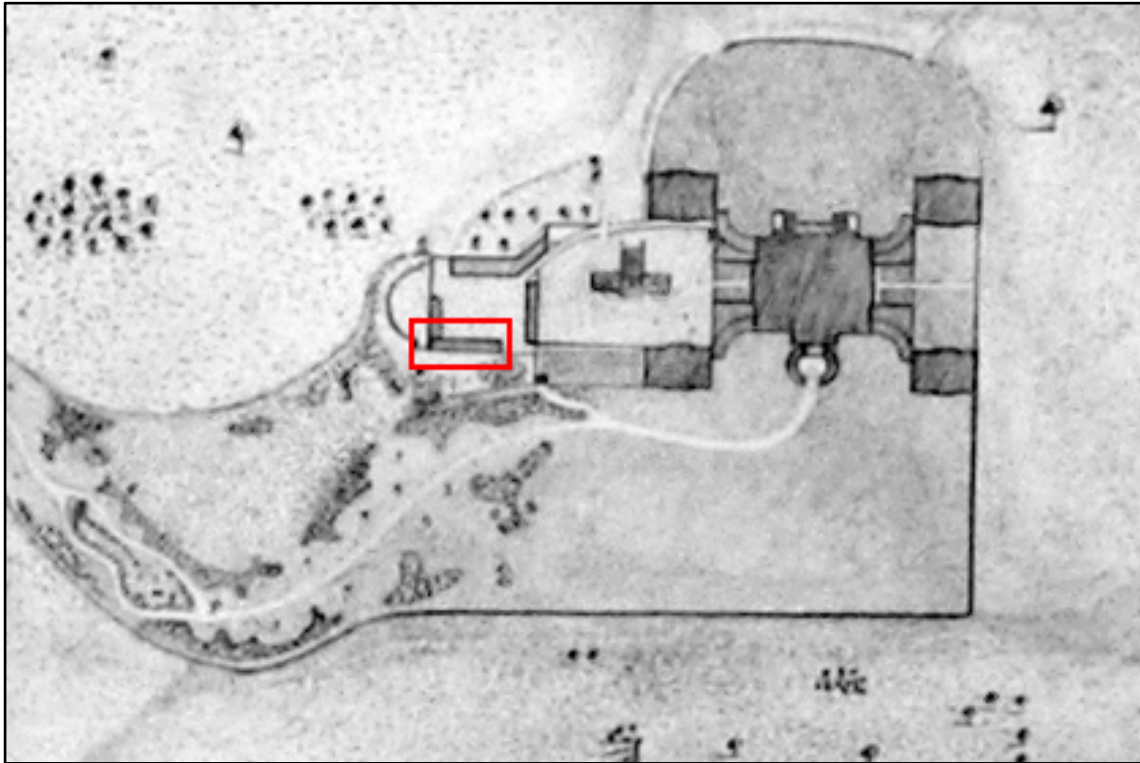
NT. 2016. *Project Brief, Historic Building Survey (Survey Level 3) – Stables South (“Garden”) Range at Kedleston Hall (NT), Derbyshire*. (Unpublished) National Trust

INTERNET RESOURCES

- ADS: www.archaeologydataservice.ac.uk
- British Geological Survey: www.bgs.ac.uk
- Heritage Gateway: www.heritagegateway.org.uk
- National Archives: www.discovery.nationalarchives.gov.uk
- National Heritage List: www.english-heritage.org.uk/professional/protection/process/national-heritage-list-for-england/

Appendix I:

Historic illustrations and photographs



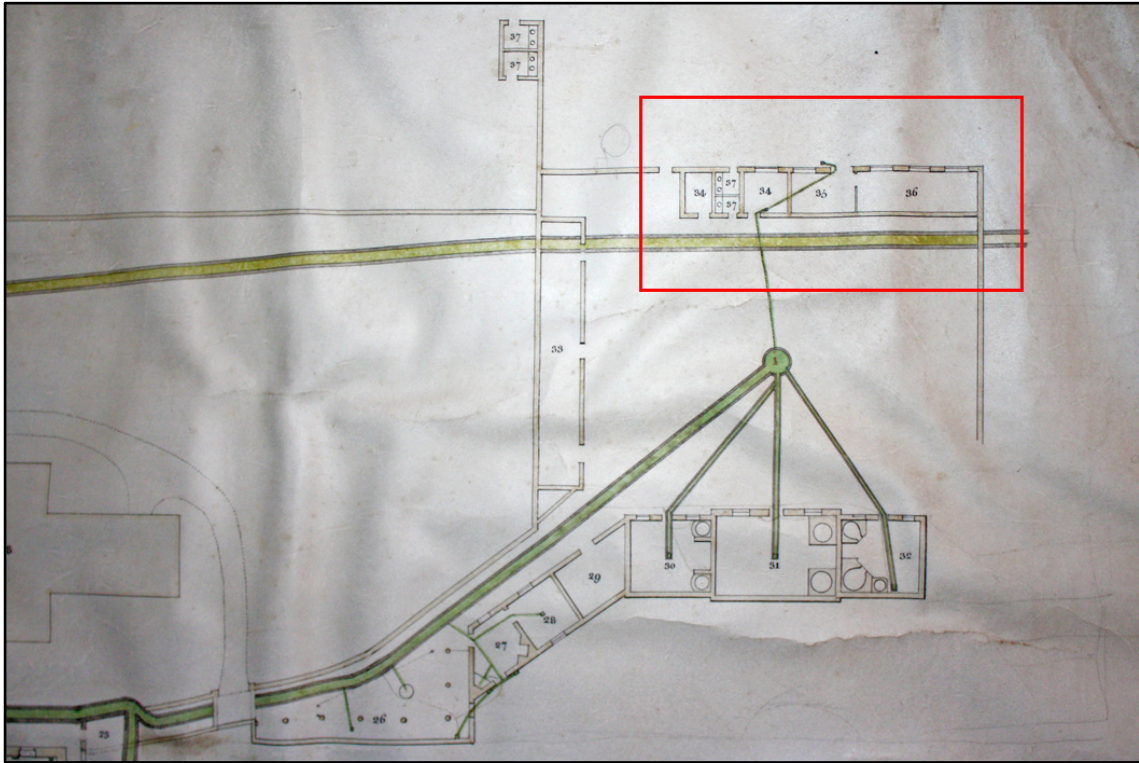
Appendix I.1: Extract from 1764 map by Ingman (site marked in red)

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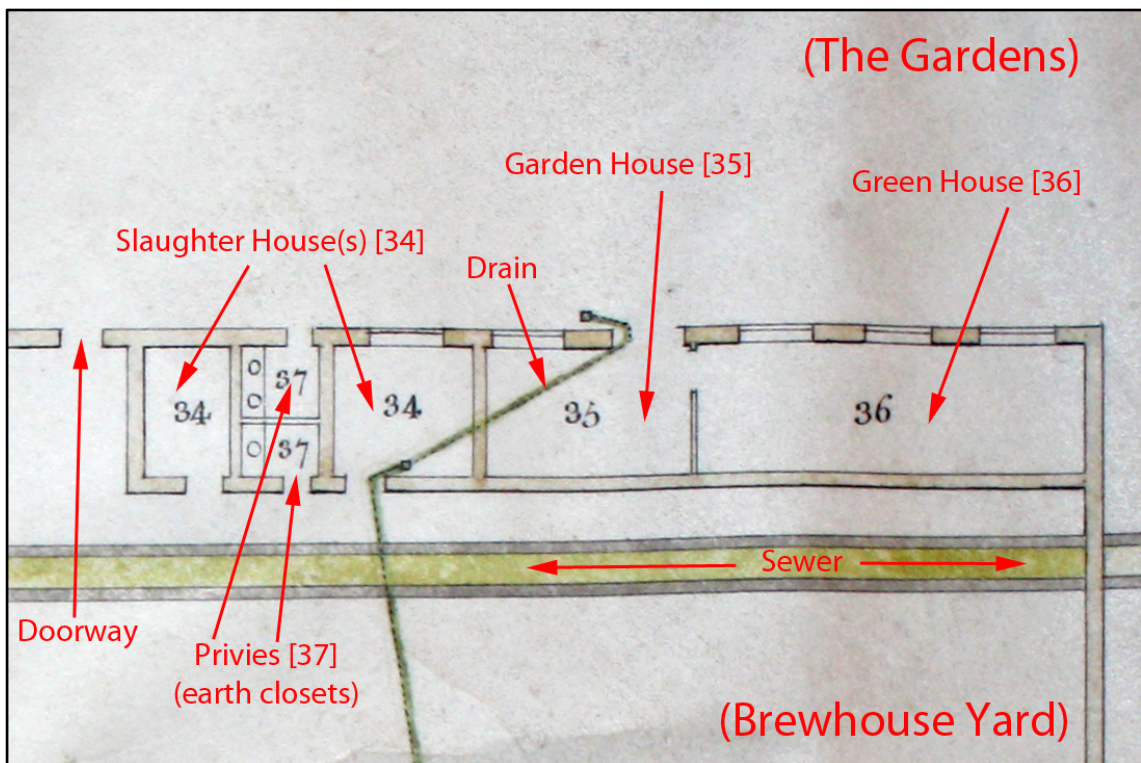
Appendix I.2: Painting of Kedleston Hall from the southwest by George Cuijt, c.1780

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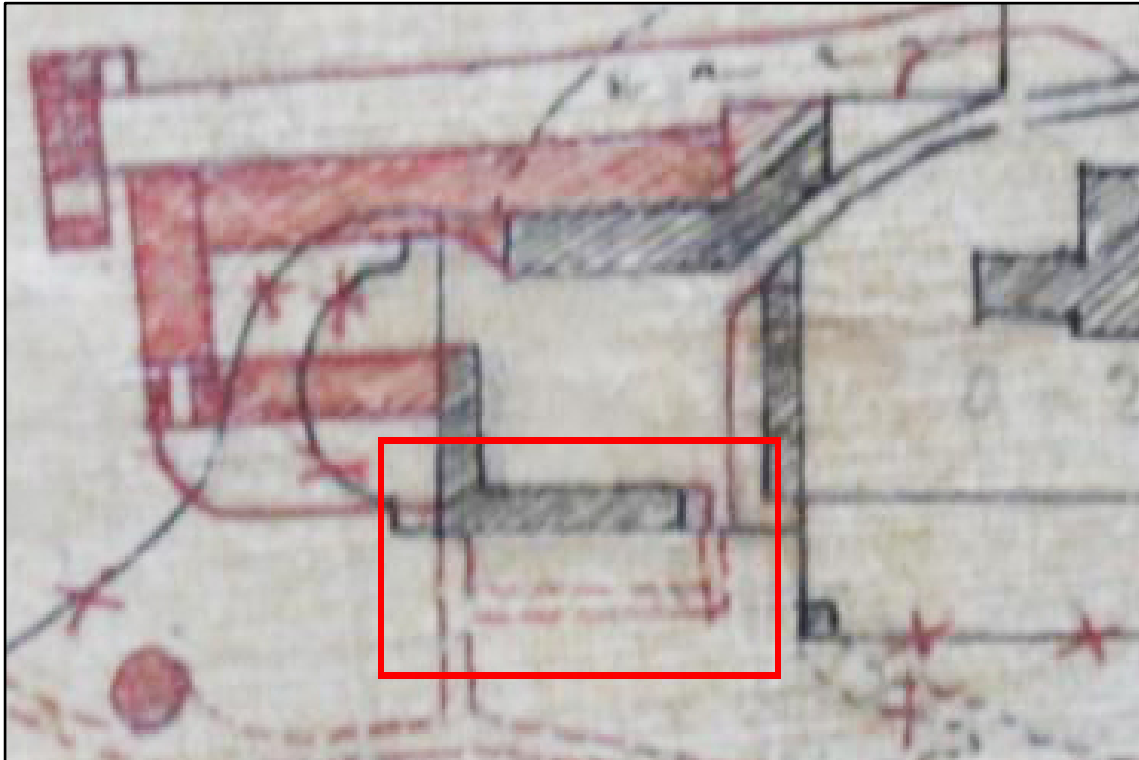
Appendix I.3: Samuel Wyatt drainage plan of the Broomhouse Yard, 1766

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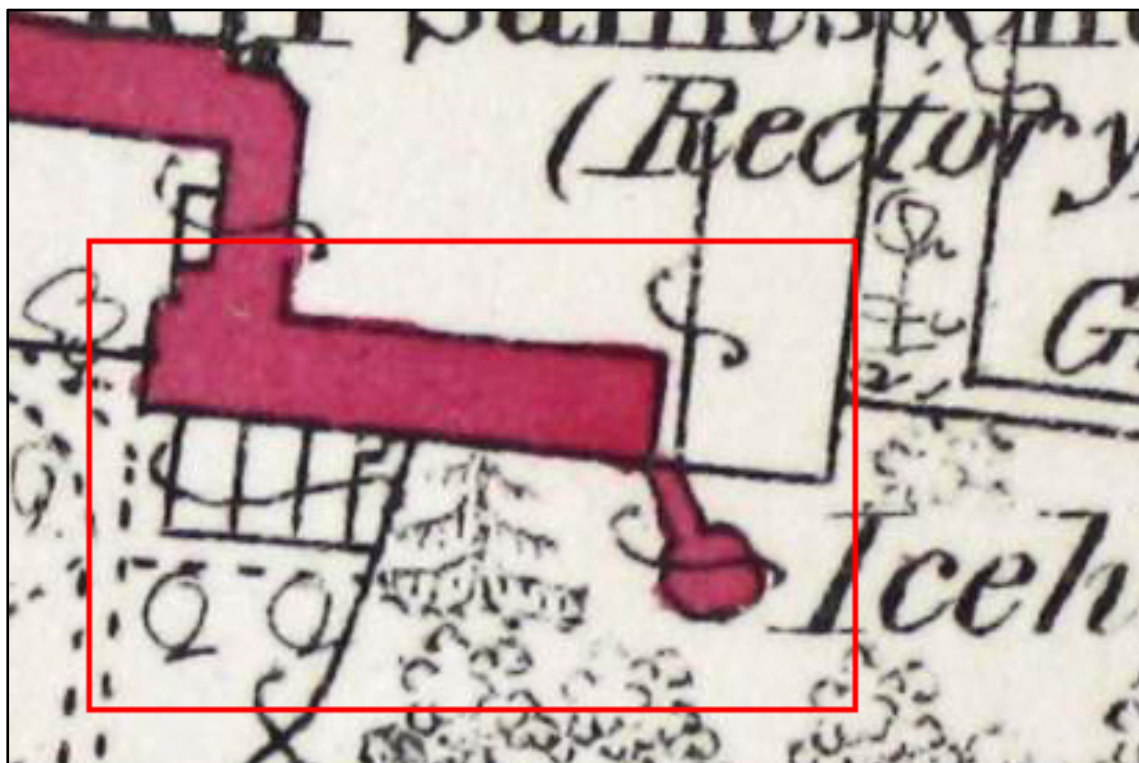
Appendix I.4: Annotated extract from Samuel Wyatt drainage plan of the Broomhouse Yard, 1766

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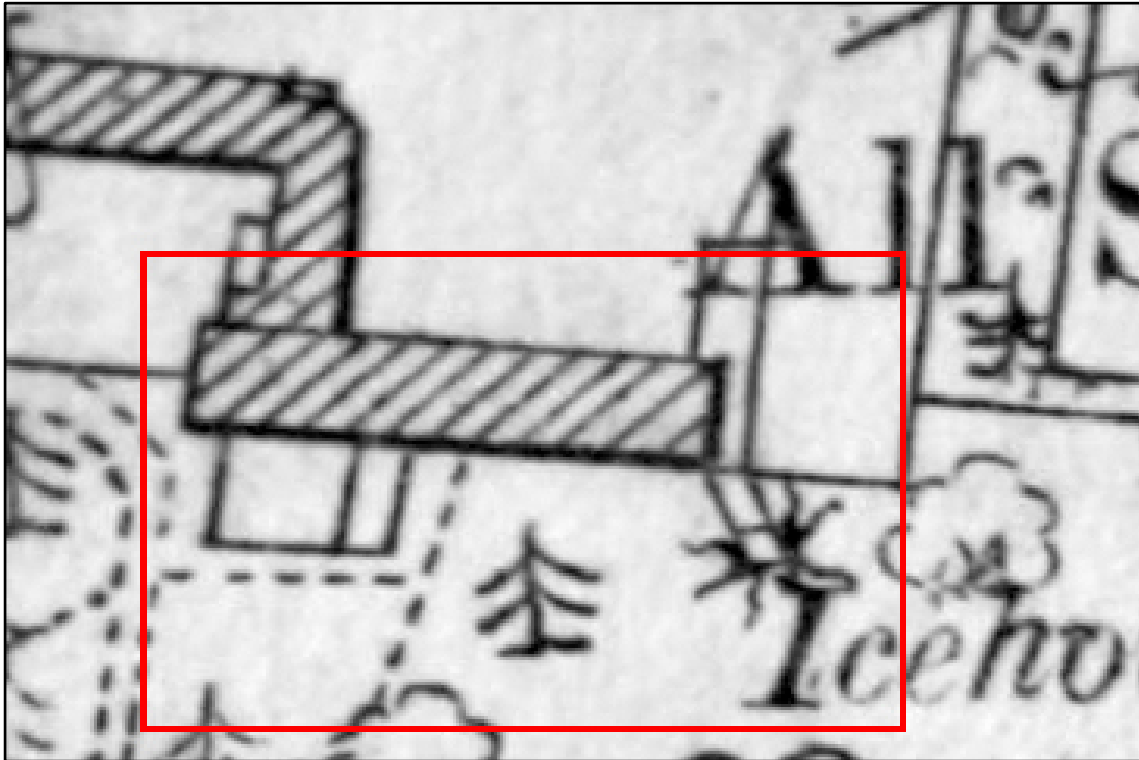
Appendix I.5: Extract from revised Ingham plan of Kedleston Hall, mid-19th century (site marked in red)

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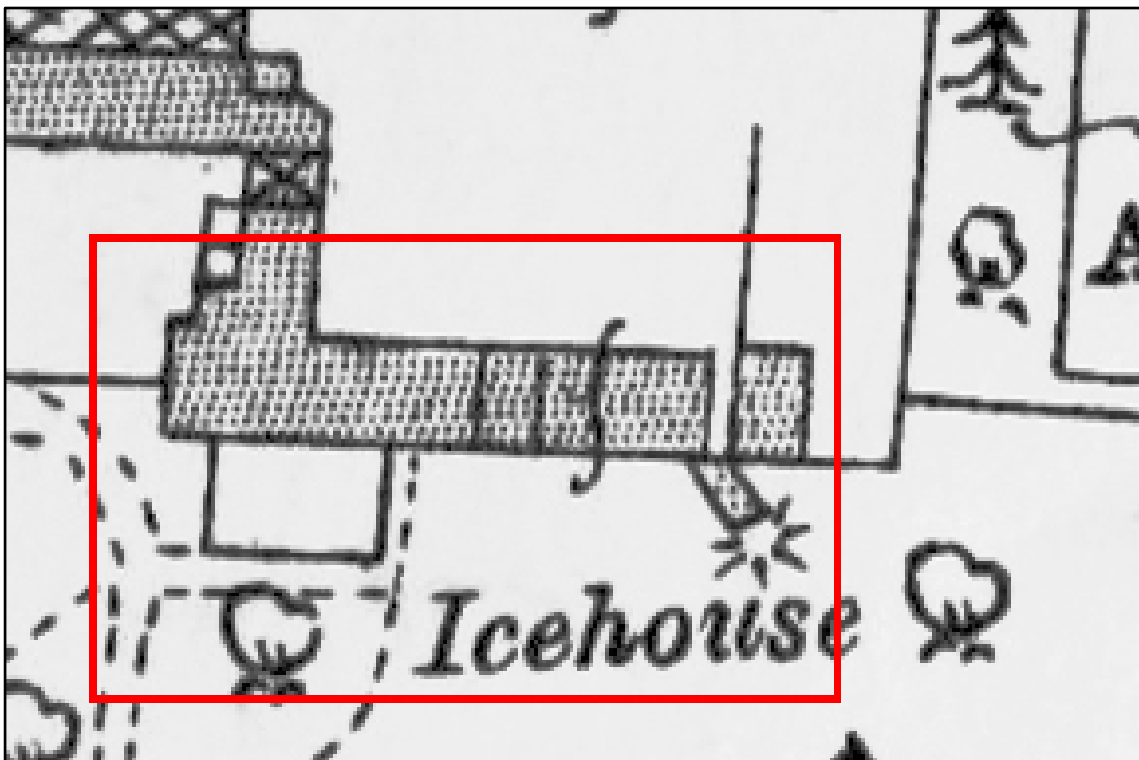
Appendix I.6: Extract from 1st edition Ordnance Survey map 1881 (site marked in red)

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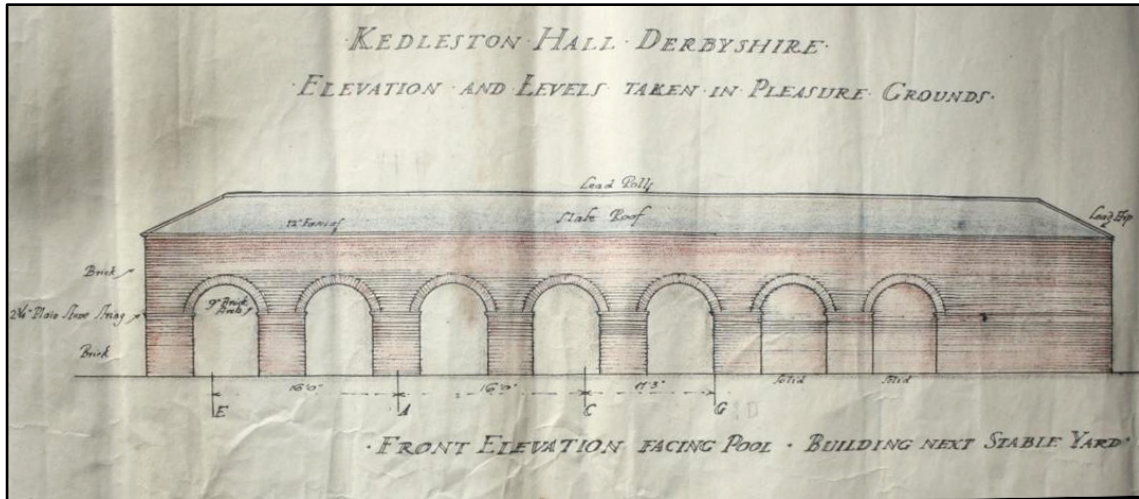
Appendix I.7: Extract from 2nd edition Ordnance Survey map 1901 (site marked in red)

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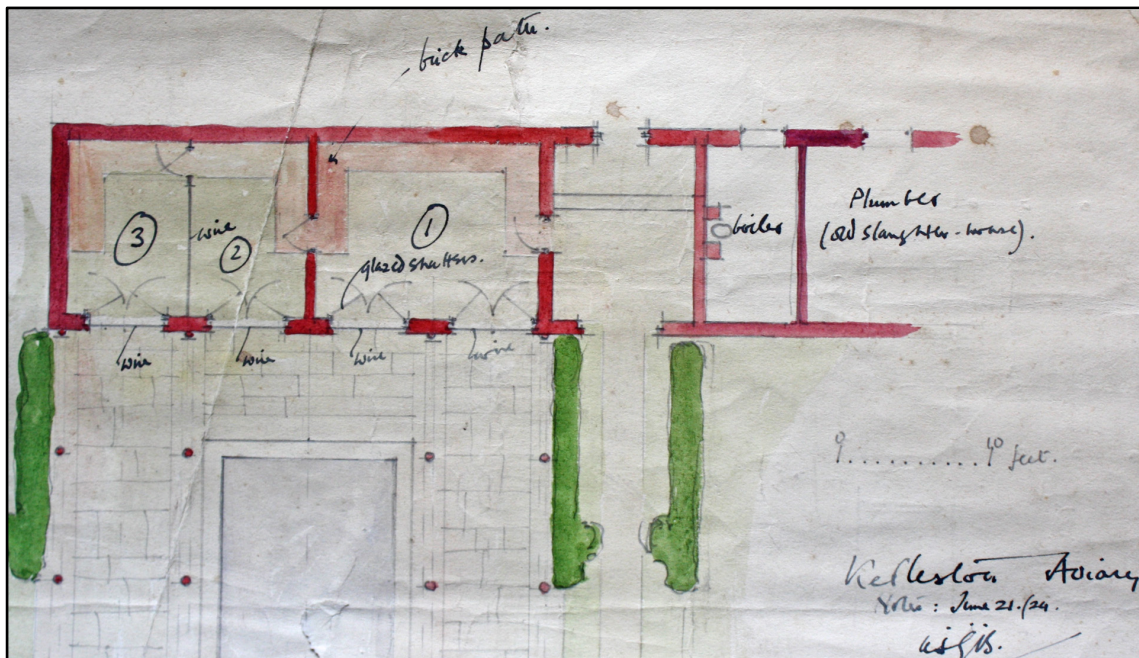
Appendix I.8: Extract from 1914 Ordnance Survey map (site marked in red)

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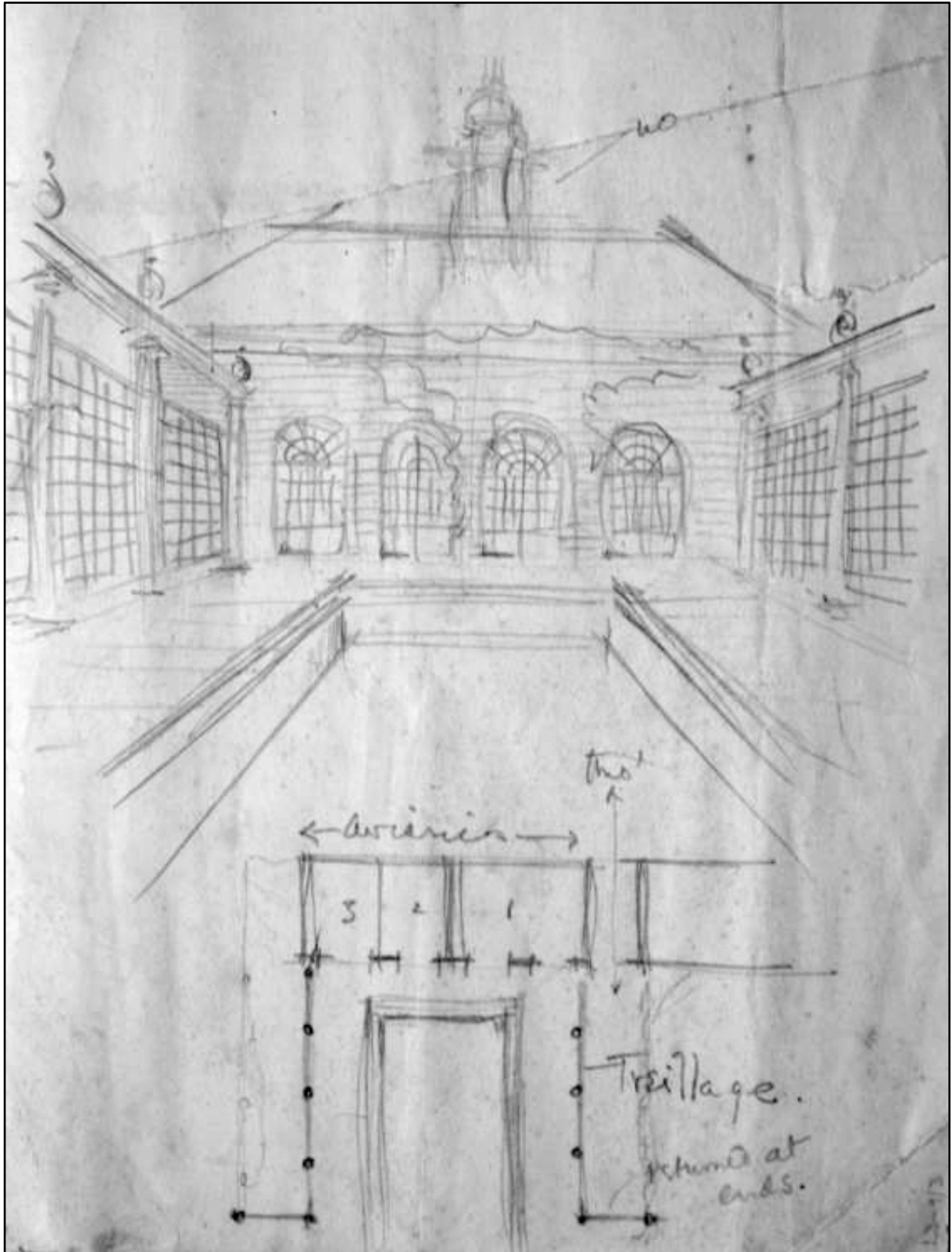
Appendix I.9: Elevation drawing of the south façade of the South Range, c.1910-20

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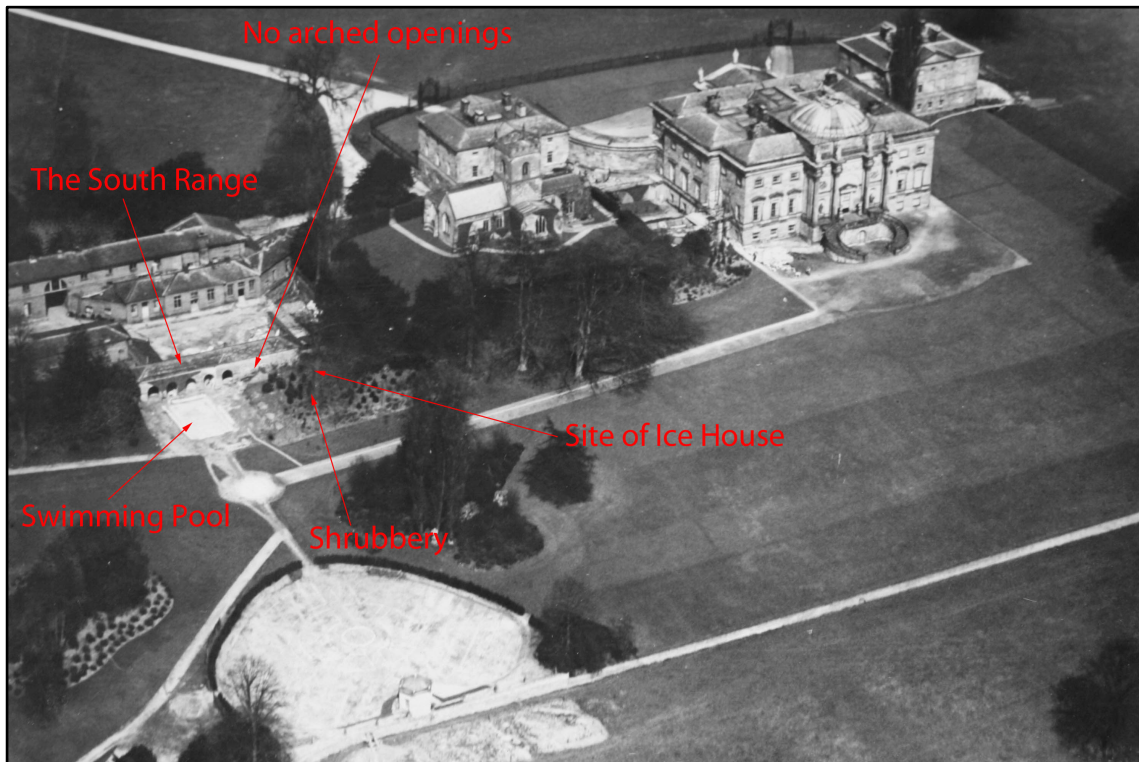
Appendix I.10: Plan of the 'Kedleston Aviary' (the South Range) by Butler, 21st June 1924

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Appendix I.11: Pencil drawing of proposed changes to the South Range, c.1920s

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Appendix 1.13: Annotated aerial photograph from the southwest of Kedleston Hall, c.1930

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Appendix 1.14: Enlargement of aerial photograph from the southwest of Kedleston Hall, c.1930

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Appendix I.15: Extract from a War Department plan of the Broomhouse Courtyard, c.1942 (site boundary outlined in red)

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Appendix 2:
Site Photographs



Appendix 2.1: General view of south façade of South Range, looking north (2m scale).



Appendix 2.2: Detail of arched openings A3 and A3 (1m/2m scale).



Appendix 2.3: General view of south façade of South Range, looking northeast (2m scale).



Appendix 2.4: General view of south façade of South Range, looking northwest (2m scale).



Appendix 2.5: General view of northwest corner of the South Range, looking southeast.



Appendix 2.6: General view of earth mound covering Ice House, looking west (1m scale).



Appendix 2.7: Detail of false window **W5** in east elevation; note lack of lintel detail (1m scale).



Appendix 2.8: Detail of entrance to Ice House; note bricked up joist holes at top of wall (2m scale).



Appendix 2.9: General view of north elevation and stone boundary wall, looking south across Brewhouse Yard (2m scale).



Appendix 2.10: General view of north elevation, looking south across Brewhouse Yard (2m scale).



Appendix 2.11: Detail of blocked doorways **D6** and **D7** on north elevation; note bricked up openings (2m scale).



Appendix 2.12: General view of doorway and high level window on laundry on opposite side of Brewhouse Yard.



Appendix 2.13: General view of D2 and blocked D5 on north elevation – door open (2m scale).



Appendix 2.14: General view of D2 and blocked D5 on north elevation – door closed (2m scale).



Appendix 2.15: Detail of rubbed brick detailing of arch with thin joints on south facade (2m scale).



Appendix 2.16: Detail of wheel struck pointing in lime mortar on south façade.



Appendix 2.17: Detail of ridge on hip of southeast corner of roof.



Appendix 2.18: Detail of timber mouldings at eaves level of south façade; note modern gutter fixing.



Appendix 2.19: Detail of surviving *in-situ* gutter bracket with V-profile at southeast end of south facade (20cm scale).



Appendix 2.20: Detail of fixing hole for former gutter bracket on soffit board of south facade.



Appendix 2.21: General looking east of G1 (2m scale).



Appendix 2.22: General looking west of G1 (2m scale).



Appendix 2.23: General view of internal south elevation of **G1**, looking southwest (2m scale).



Appendix 2.24: Detail of arcade openings and pier between **A3** and **A4** in **G1**; note sawn off timber (2m scale).



Appendix 2.25: General view of rear blind wall of GI, looking northwest (2m scale).



Appendix 2.26: General view of rear blind wall of GI, looking northeast (2m scale).



Appendix 2.27: Detail of cement repair to jamb of **A2**, looking east (20cm scale).



Appendix 2.28: Detail of southwest corner of **G1**; note inserted timber above arches (1m/2m scale).



Appendix 2.29: Detail of cupboard with metal door between **A2** and **A3** in **G1** (20cm scale).



Appendix 2.30: Detail of cupboard interior with metal door between **A2** and **A3** in **G1** (20cm scale).



Appendix 2.31: Detail of sawn off timber in walling between A3 and A4 in G1; note how timber is integral to wall beam.



Appendix 2.32: Detail of paving continuing beneath brick jamb of A2, in A1; note cement repair (20cm scale).



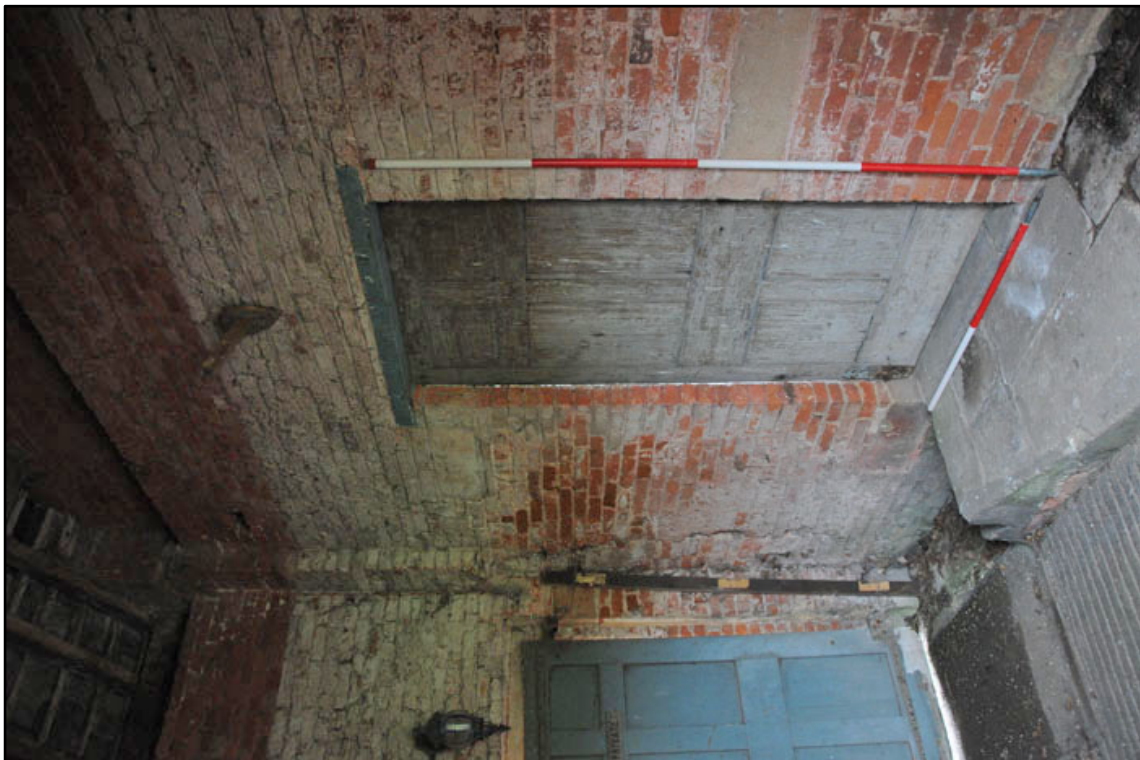
Appendix 2.33: General view of roof structure in GI; note dark coloured, unpainted timbers.



Appendix 2.34: Detail of corner tie in northwest corner of GI; note bricked up upper section of walling.



Appendix 2.35: General view of northeast corner of G2 and inserted doorway to Brewhouse Yard (1m/2m scale)



Appendix 2.36: General view of northeast corner of G2; note upper section of chimney stack (1m/2m scale).



Appendix 2.37: General view of south wall of G2; note exposed timber wall-plate (1 m/2m scale).



Appendix 2.38: General view of west wall of G2 (1 m/2m scale).



Appendix 2.39: General view of southeast corner of G2; note blocked arch and vertical joint in brickwork (1 m/2m scale).



Appendix 2.40: General view of inserted concrete ramp in G2, looking south (1m scale).



Appendix 2.41: Detail of truss T4 in in G2, looking west; note lath and plaster scars on underside of tie-beam.



Appendix 2.42: Detail of roof structure in G2, looking north; note surviving exposed section of wall-plate.



Appendix 2.43: Detail of plaster continuing behind inserted west wall of G2 (10cm scale).



Appendix 2.44: Detail of plaster continuing behind inserted east wall of G2 (10cm scale).



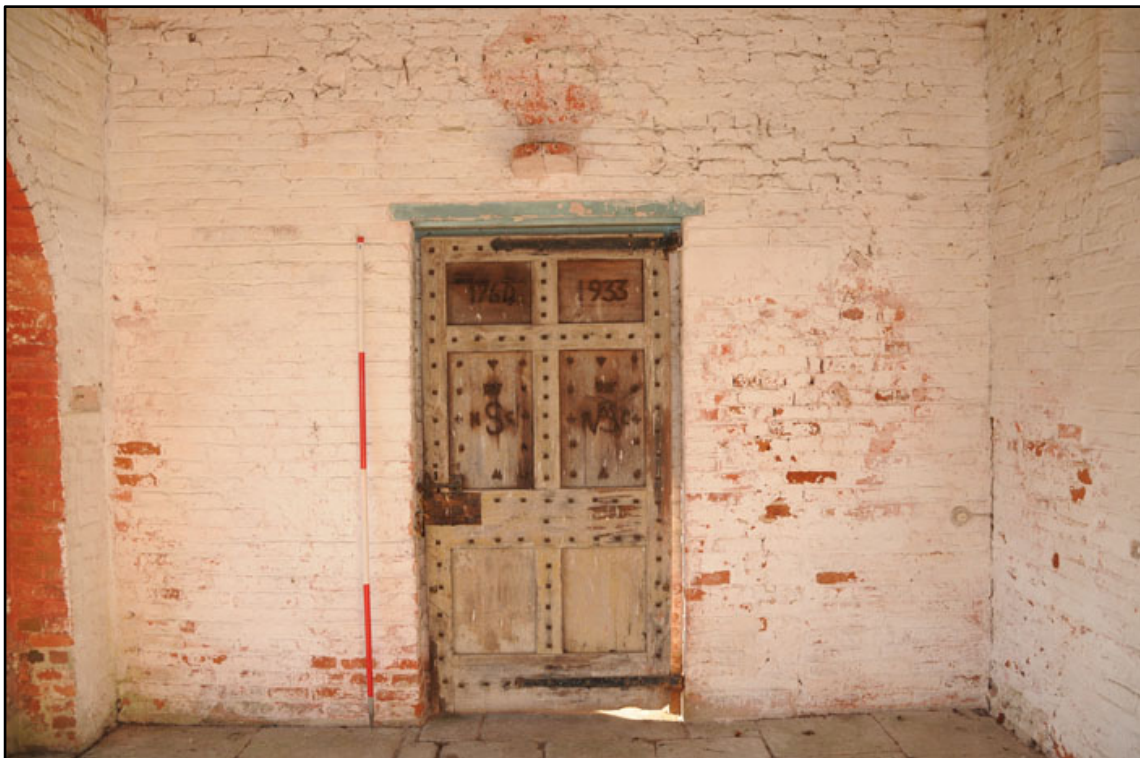
Appendix 2.45: General view of G3 looking west (2m scale).



Appendix 2.46: General view of G3 looking west. (2m scale).



Appendix 2.47: General view of north wall of G3, looking east; note blocked in windows (2m scale).



Appendix 2.48: Detail of D4 in west elevation of G3 (2m scale).



Appendix 2.49: General view of Drain and sockets in paving along north wall of G3 (2m scale).



Appendix 2.50: Detail of external drain adjacent to A6 (20cm scale).



Appendix 2.51: Detail northwest corner of G3; note vertical joint to the right of ranging pole (1m/3m scale).



Appendix 2.52: Detail of roof construction at west end of **G3**; note junction of painted and unpainted roof timbers.



Appendix 2.53: Detail of roof construction at west end of **G3**; note former sloping timbers from removed hip roof.



Appendix 2.54: Detail of sawn off corner tie adjacent to T6 in north wall of G3; note replaced tie beam.



Appendix 2.55: Detail of sawn off corner tie adjacent to T6 in south wall of G3; note replaced tie beam



Appendix 2.56: General view of roof construction in G3, looking west.



Appendix 2.57: General view of roof construction between T6 and T7 in G3; note painted timbers.



Appendix 2.58: Detail of underside of truss **T5** in **G3**; note lath and plaster scars from removed ceiling.



Appendix 2.59: Detail of inserted timber ledge above **D4** in **G3** (20cm scale).



Appendix 2.60: Detail of site of former fixing bracket on underside of T7 in G3..



Appendix 2.61: Detail of metal staple and truss construction on underside of T7 in G3.



Appendix 2.62: General view of external face of DI (1m scale).



Appendix 2.63: General view of internal face of DI (1m scale).



Appendix 2.64: General view of D3 in G1, looking east (1m/2m scale).



Appendix 2.65: General view of D4 in G3, looking west (2m scale).



Appendix 2.66: Detail of stud decoration on door **D3** in **G1**; note alteration in design (10cm scale).



Appendix 2.67: Detail of stud decoration on external door **D4** (10cm scale).



Appendix 2.68: Detail of stud decoration on door **D4** in **G3** (10cm scale).



Appendix 2.69: Detail of stud decoration on door **D4** in **G3**; note alteration in design (10cm scale).



Appendix 2.70: General view of interior of Ice House G5, looking southeast (2m scale).



Appendix 2.71: General view looking along entrance passage G4 into Ice House, looking northwest (2m scale).



Appendix 2.72: Detail of entrance into Ice House; note that the ceiling arch is below that of the exterior doorway (2m scale).