LINCOLN'S INN : STONE BUILDINGS

LIGHTNING PROTECTION

PLANNING, HERITAGE AND DESIGN AND ACCESS STATEMENT

APRIL 2024

TABLE OF CONTENTS

1.0 INTRODUCTION

1.1 Montagu Evans LLP have been instructed by the Honourable Society of Lincoln's Inn (the 'Applicant') to prepare this report as part of the pre-application consultation with HE in the light of the buildings' high-grade listing, Lincoln's Inn, WC2A 3TG (the 'Building'). The works include the following:

Installation of Lightning Protection System to enhance the safety of Stone buildings and ensure their longevity.

1.2 The Buildings, including numbers 1-11 Stone Buildings, are located in the London Borough of Camden ('LBC' or the 'Council'). They are included within the Bloomsbury Conservation Area, designated in 1968 by the London Borough of Camden.

1.3 In accordance with the Historic England Lightning Protection Guidelines Ingleton Wood and Hussar Lightning Protection conducted a Lightning Protection Risk Assessment Summary at the request of the Honourable Society of Lincoln's Inn. As will be detailed further below, the report concluded that a protection system is necessary.

1.4 The Buildings were listed Grade I in two separate entries, Numbers 1-7 (List No. 1379318) and Numbers 8-11 (List No. 1379319). The terraces were constructed between 1775 and 1780 to the designs of Sir Robert Taylor. The list description for the building is located at **Appendix 1**.

1.5 The site boundary is identified within the aerial photograph provided at **Figure 2**.

PURPOSE OF THE REPORT

1.6 By virtue of paragraph 200 of the NPPF (2023), applicants for development proposals which influence the historic environment are required to describe the significance of the identified assets so that the impact of the proposals may be understood. The level of detail should be proportionate to the asset's importance and no more than sufficient to understand the potential impact of the proposal on its significance. This report fulfils this requirement by presenting a historic and architectural appraisal of the property, as well as an assessment of the contribution made by the property to the significance of the Bloomsbury Area within which it falls.

1.7 In forming a judgement on the heritage significance of the identified heritage assets, including their setting, due regard has been paid to the relevant Historic England guidance, in particular, the guidance provided in 'Historic Environment Good Practice Planning Advice Note 2: Managing Significance in Decision-Taking in the Historic Environment' (GPA2) (2015).

1.8 The assessment is qualitative, describing the effects of the development within the context of planning policy and best practice guidance. Narrative text is necessary because such assessment is not a strict quantitative process, and some considerations will depend on professional judgment.

The proposals are intended to improve the safety and longevity of the Stone Buildings. The risk assessment demonstrates the need for a lighting protection system, without which, the outcome of a strike could result in loss of human life and loss of historic fabric. In an effort mitigate potential harm to the historic fabric and building aesthetic, several options were considered as set out in this report.

1.9 The Site encompasses the complete range of Stone buildings, numbers 1-11. These structures are key components of the larger Lincoln's Inn, with the Great Hall located to the southwest, Lincoln's Inn Private Gardens to the east, and Old Square to the south, creating a harmonious architectural ensemble.

1.10 The Inn is positioned east of Lincoln's Inn Fields, bordered by Newman's Row to the west and Chancery Lane to the east. The northern boundary is marked by the rear of buildings along High Holborn, while Carey Street defines the southern border.

1.11 The whole of the Inn is located within the Bloomsbury Conservation Area and under the jurisdiction of the Local Borough Council (LBC), the Buildings, including the complete expanse of Lincoln's Inn, contribute to the rich historical tapestry of this area. To the south lies Westminster's Strand Conservation Area, and to the east, the City of London's Chancery Lane Conservation Area.

1.12 The Honourable Society of Lincoln's Inn has been evolving and expanding since its foundation in 1422.

1.13 The four Inns of Court – Lincoln's Inn, Inner Temple, Middle Temple and Gray's Inn - are professional societies of barristers. All barristers who practise in England and Wales, and all students intending to becoming barristers must belong to one, illustrating the longstanding and rich history of the Inn.

1.14 The Inns also provide professional accommodation for their members, dining and meeting facilities and places of worship. There is office space associated with the administration and management of the Inn itself. The Inn is a self-contained collegiate-type precinct. Many of the buildings are of historic interest – indeed the Inns collectively are the custodians of a significant number of nationally significant buildings. The heritage and architecture of the Inns attract many visitors, both tourists and those who live or work in the vicinity. Lincoln's Inn is open for public enjoyment every day. It is a quiet, pleasant green refuge.

Figure 1.1 Aerial of the Site (Outlined in red)

2.0 STATEMENT OF SIGNIFICANCE

SITE DESCRIPTION

2.1 The proposal looks at the lighting protection for the whole of the Stone Buildings. As seen in Figure 1.1, the buildings include Stone Buildings 1-11. These buildings are located west of Chancery Lane and East of the Lincolns Inn Fields, they form a U shape with Stone Buildings Road down the centre.

2.2 As mentioned in Section 1.0, Numbers 8 and 9 Stone Buildings are two terraces constructed between 1775 and 1780. The building scheme were designed by Sir Robert Taylor as chambers.

2.3 The Grade I listed buildings were constructed to the designs of Sir Robert Taylor, who was a notable architect. Taylor designed several public buildings of special interest including London Bridge (1758-62); The Bank of England (1766-88); and, The Guildhall, Salisbury (1788-95, built with some alterations after death).

2.4 The full Historic England List Entry is included at Appendix 1.

HERITAGE STATEMENT

2.5 Section 16 (for listed building consent) of the 1990 Act states that, when determining applications, the local planning authority or the Secretary of State, 'shall have special regard to the desirability of preserving the building or its setting of any features of special architectural or historic interest which it possesses.'

2.6 In accordance with the development plan policies set out in Section 4.0 and paragraph 194 of the NPPF, we describe the significance of relevant heritage assets, in a level of detail sufficient to understand the potential impact of the proposals on the significance of the relevant heritage assets.

2.7 This section provides a description of the significance of the heritage assets affected by the proposed development. Stone Buildings is an important heritage asset whose importance is highlighted by the high listing grade. The complex was designed by Robert Taylor in the late 18th century and had reached its current built form around the middle of the 19th century when Philip Hardwick completed Stone Building no. 7.

SUMMARY OF SIGNIFICANCE

2.8 The Glossary of the NPPF provides a definition of significance. Here, the 'heritage interest' of an asset may be archaeological, architectural, artistic or historic. Significance derives not only from the physical presence of the building, but also from its setting. The NPPF describes significance as:

> *'The value of a heritage asset to this and future generations because of its heritage interest. That interest may be archaeological, architectural, artistic or historic. Significance derives not only from a heritage asset's physical presence but also from its setting."*

2.9 In forming a judgement on the significance of the property and its contribution to the character and appearance of the Conservation Area, due regard has been paid to the relevant Historic England guidance prepared in Conservation Principles (2008). This document aims to prompt thought about significance through a consideration of the values that might be ascribed to a place and proposes four broad groups intended to guide comprehensive assessment of those values. The categories of evidential, historical, aesthetic, and communal value, which encompass distinctive yet interrelated aspects of significance such as associative, illustrative, design, social and spiritual value, provide a useful framework for assessing and understanding significance.

2.10 The following table shows how the heritage values identified in Conservation Principles could be considered to relate to those identified in the NPPF:

English Heritage Conservation Principles (2008)	***National Planning Policy Framework (2023)***
Evidential value	**Archaeological interest**
Historical value (illustrative, associational)	**Historic interest**
Aesthetic value (fortuitous, design, artistic)	**Architectural and artistic interest**
Communal value (commemorative, symbolic, social, spiritual)	**Not explicit, but could be interpreted as the value of a heritage asset to this and future generations**

Conservation principles

2.11 Given the limited impact of the Proposed Development, the statement of significance concentrates on the heritage assets which are directly affected by the Proposed Development, i.e. the Stone Buildings and the Bloomsbury Conservation Area.

STONE BUILDINGS

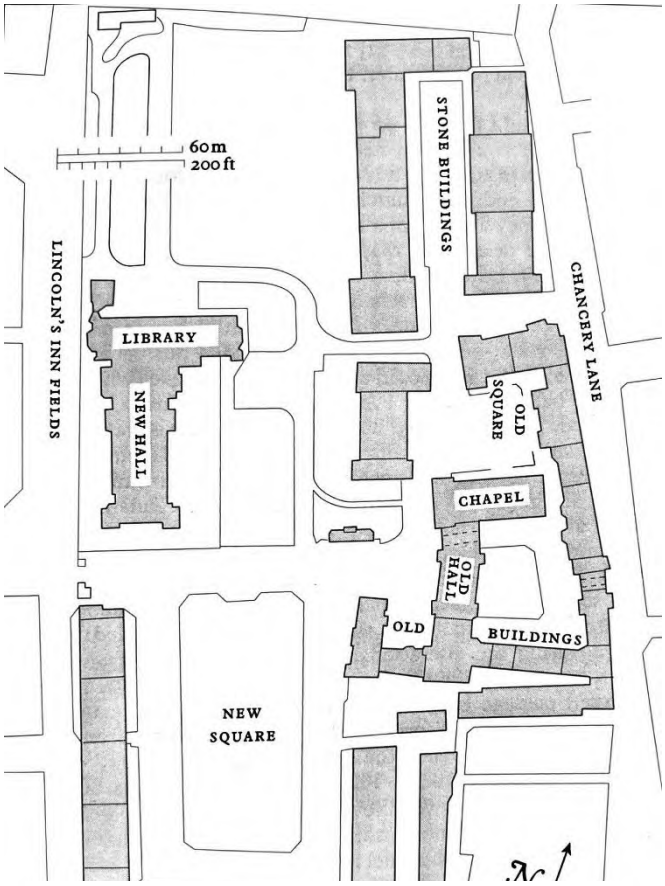


Figure 2.0: Lincolns Inn Plan Source: Pevsner (1998)

2.12 In the 1770s Lincoln's Inn initiated a design competition to redevelop the whole of Lincoln's Inn. The Inn selected Sir Robert Taylor to design the Stone Buildings. They were constructed between 1775 and 1780. This was the only portion of the masterplan by Taylor to be erected and the Buildings were used as chambers and to provide a new space for the library and offices for the Court of Chancery. The buildings were constructed using Portland stone dressings, string course and copings, hence their name. The roof is formed of two shallow slate-covered roof areas with a central flat section covered by asphalt.

2.13 The Black Books of Lincoln's Inn (Vol. 5: 1846 to 1914) states:

'The Stone Buildings were the joint enterprise of the Society and the Officers of the King's Court of Chancery, with the approbation of the Lord Chancellor. Those Officers were the Six Clerks and the Sworn Clerks, and also the Registers, the Clerks of Enrolments and the Accountants General, and their deputies, whose function was to keep the records, decrees, orders and books of account relating to the business of the Court.

By an Act of 1774 provision was made for rebuilding the office of the Six Clerks and erecting offices for the Register and Accountant General, and by August of that year Sir Robert Taylor's ground plan and drawing of the elevation of the building had been approved by the Council, the Accountant General, the Registers of the Court of Chancery and the Lord Chancellor. Thomas Clarke, the Society's bricklayer, was directed to proceed with the construction of a 'basement storey' for seven sets of chambers on the garden side, beginning at the South end, but leaving space for a hall then intended to be built on the site of what is now No. 7 Stone Buildings. The sites for the offices of the Accountant General at the North end on the Chancery Lane side, and of the Registers of the Court at the South end (now numbered 11, 9 and 8) were purchase out of public funds, and the buildings were not put up by the Society. This also happened to the Office of the Six Clerks, who negotiated independently, and bought the site in the middle (now No. 10).'

2.14 The variation in procuring the sites would explain the slight variation in external appearance. Nos. 8, 9 and 11 are yellow stock brick with stone basements and dressings, which contrast with No. 10 which has a rusticated stone ground floor, ashlar first floor and attic.

2.15 The application Building forms a further composite to the north, in conjunction with Nos. 8, 9 and 10. One elevation is presented to Stone Buildings Street within Lincoln's Inn and a further to Chancery Lane. The composition of each is not symmetrical as with the grand palace, although a balance is achieved by virtue of repetition of detail and, in particular, the yellow stock brick Nos, 8, 9 and 11 framing the central No.10 formed of rusticated stone and ashlar. The Buildings' exterior itself is detailed to a high standard, including a central square-headed door to the Stone Buildings frontage with elaborate Nico lantern bracketed over and round-headed fanlight, in shallow round-headed recess.

2.16 The interior fixtures and fittings of the Buildings have been altered in some areas where changes are proposed. The plan form appears, however, to follow what may have been the Sir Robert Taylor designs, although it is noted that the original plans have not been located in the archives searched to date.

2.17 The Buildings have historic value as a notable design of a public building by Sir Robert Taylor. The classical design is an excellent example of Taylor's work, although it is noted that the original plans may have been drafted by John Leach whilst a clerk in Taylor's office, who afterwards became a student of Lincoln's Inn.

2.18 As a whole Stone Buildings formed an important part in the historic development of Lincoln's Inn, comprising chambers and a new space for the library and offices for the Court of Chancery. It is noted that, amongst those to use the chambers, was William Pitt the Younger, although Pitt's chambers were at No. 4.

2.19 The interrelationship between the buildings of Lincoln's Inn, including the application Buildings, provide evidential value of the development of the Inns of Court and the overarching development of the legal system within the UK.

2.20 In addition to the above, the Inn has communal value by virtue of the meaning of the place to its barristers and its status as an institution within the wider community.

2.21 The Black Books of Lincoln's Inn confirms that "*all the new buildings appear to have been finished before 1780 except Nos. 1 and 2*". No. 7 was completed by Philip Hardwick in 1845 as accommodation for the Masters of the Court of the Exchequer. Hardwick was a notable architect, who worked on a variety of well-known projects including the Euston Arch (1839).

2.22 The Building remained in use by the Accountant General and/or the Registers of the Court, until: In 1880 the business of the offices of the Accountant General, the Registrars in Chancery, the Clerks of the Records and Writs and the Clerk of the Enrolments was transferred to the Royal Courts of Justice, and the site of those offices was vested in the Trustees of the Real Estate of the Society on December 20th, 1881.

2.23 The Pevsner (1998) guide refers to Nos.1-11 as a whole and states:

> *'The main front is to the W, stone-faced (hence the name) and with angle pavilions emphasised by attached giant columns and pediments. The long middle part is entirely plain. The S end of this range has pilasters. The oblong back court is completely regular. The S end of the W range again has attached columns, to make*

a point-de-vue for those coming from Chancery Lane through the gate facing this pavilion. The shorter E range has a stone-faced centre with arched principal windows, but the ends and sides are brick. The narrow N end of this court or close is a part of the composition of the W range; at its E end, one bay flanked by pilasters. Obviously some change of plan was made here. The S end of the W range was added by Philip Hardwick in 1842-5 to Taylor's original design.'

2.24 As mentioned, the design of the buildings came late in Taylor's career, who died in 1788. Taylor is an architect of note, having designed buildings of special architectural and historic interest, including London Bridge (1758-62); The Bank of England (1766-88); and, The Guildhall, Salisbury (1788-95, built with some alterations after death).

2.25 Further illustrating his success, Robert Taylor had been appointed surveyor to the Bank of England in 1764; in March 1769 he joined the office of works, succeeding William Chambers in the post of one of the two architects of the works; in 1777 he became a member of the board of works with the title of master carpenter; in 1780 he was promoted master mason and deputy surveyor, again to Chambers; in 1788 he became surveyor to Greenwich Hospital, and he was also surveyor to Lincoln's Inn and the Foundling Hospital.

2.26 Stone Buildings have particular aesthetic value. The principal elevations form a collective grand palace with the rear overlooking the Lincoln's Inn Private Garden. From these gardens the rear façade of the Stone Buildings is visible, making alterations increasingly sensitive.

2.27 As illustrated by their adjacency to the Private Gardens, the setting of Stone Buildings is an integral part of its heritage value. The direct setting of the heritage assets is enclosed by other low-rise historic developments, creating a distinct character to the area. From Stone buildings, there is a direct sight line to the Lincolns Inn Chapel (Grade I). As mentioned, directly to the east are the Lincoln's Inn Private Gardens. From these gardens the rear façade of the Stone Buildings is visible, making alterations increasingly sensitive. The gardens are significant as they illustrate the town planning features of the Bloomsbury CA. The overall setting is largely intact, providing tangible evidence of the area's rich and densely layered history.

BLOOMSBURY CONSERVATION AREA

2.28 The Stone Buildings are located in the Bloomsbury Conservation Area which was designated in 1968 by the London Borough of Camden. It is renowned for its historic and architectural significance, characterized by a mix of Georgian and Victorian townhouses, garden squares, and institutional buildings. The CA encompasses a network of well-preserved streets, such as Bedford Square and Russell Square, showcasing architectural styles from the 18th and 19th centuries.

2.29 The Conservation Area Audit and Management Strategy was adopted on the 18 April 2011 and identifies both Nos. 1-7 and 8-11 in sub-area 9: Lincoln's Inn Fields/Inns of Court/High Holborn. With reference to the Building the Audit states:

> *'The lawyers' chamber buildings vary in date from the 16th to 20th centuries. They have relatively plain classically-influenced elevations, relieved by horizontal banding, and punctured by regular rows of sash windows and pedimented doorcases. The finest examples include the grade I listed, late 18th century Stone Buildings, and the grade I listed 15th century Old Hall and gateway and the 16th century chambers of Old Buildings which are the earliest surviving buildings on the site. There are 19th century chambers in Old Square which adhere to a neo Tudor architectural idiom, and the grade II* listed New Hall, which dates from the 1840s.'*

LINCOLN'S INN FIELDS

2.30 West of the Stone Buildings is Lincoln's Inn Fields (Grade II), the largest public square in London. The buildings which line the square are largely listed grade II apart from the Sir John Soanes Museum (Grade I) and The Royal College of Surgeons (Grade I).

PLANNING HISTORY

2.31 Number 4, 7, 9, 10, and 11 Stone Buildings have undergone a series of planning consents from 2013-2018. The permissions included a range of internal and external works including the erection of a lift (number 11), removal of partition walls (number 7), and the enlargement of existing access enclosure (number 11). All the planning permissions and listed building consents were granted.

3.0 PROPOSALS

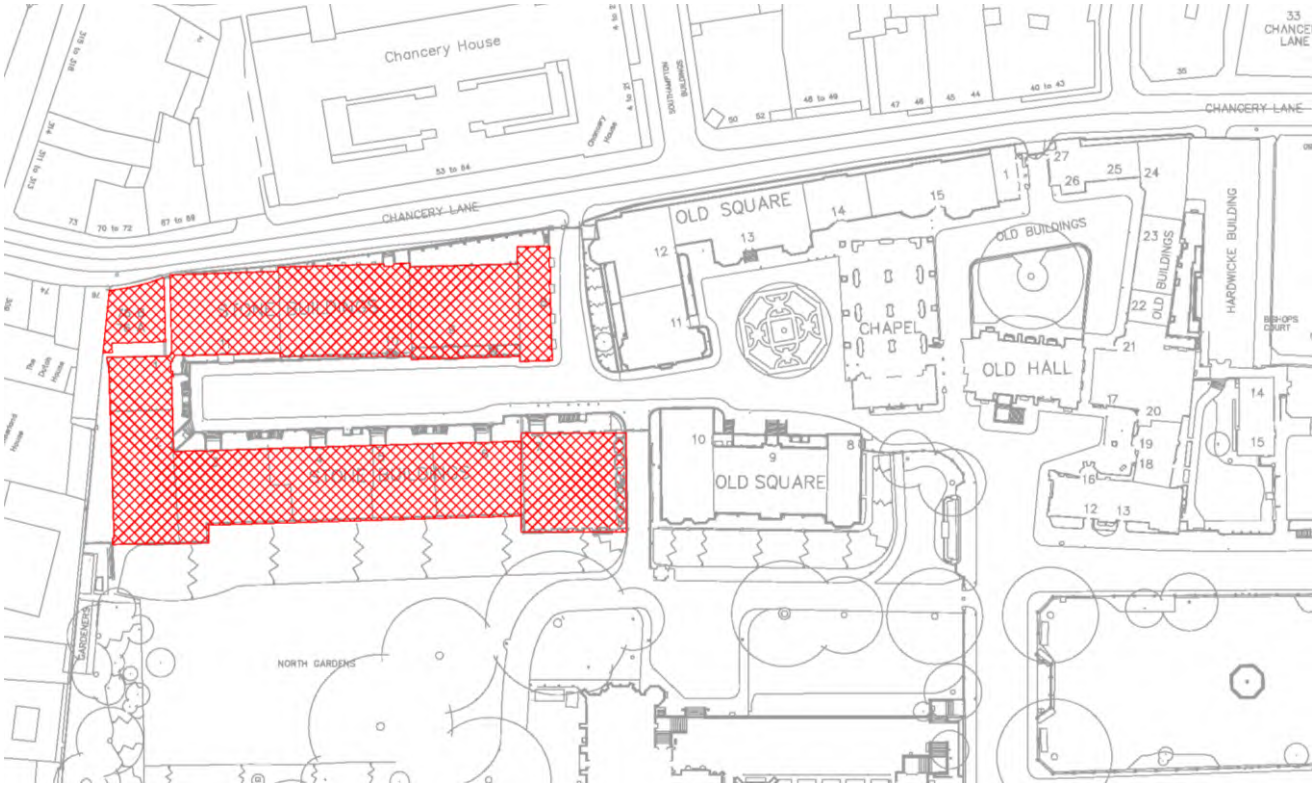


Figure 3.0 – Area of Lightning Works Source: Ingleton Wood

3.1 In March of 2023 a Lightning Protection Risk Assessment was carried out by Hussar Lightning Protection to determine the protection need for the whole of the Stone Buildings. The assessment established that a level 2 protection system is required with level 2 transient voltage surge suppression installed to all incoming supply lines. This is necessary to reduce risks to a tolerable level.

3.2 The Lightning Protection Risk Assessment summary states:

> *The risks that have been considered within the assessment, consist of risk of losses to human life and risk of loss of service to public. Detailed explanations of both can be found within the risk assessment document. When calculating the requirement of lightning protection, geographic data is obtained from a ground flash density map to calculate the number of thunderstorm days expected in a year, from which it has been determined that a number of 6 thunderstorm days per year are expected for the location of Stone Buildings. This data along with the building geometry, position and height in relation to surrounding buildings and environment, is used for the basis of the calculation.'*

3.3 The risk assessment then considered different installation options to determine the most appropriate approach. The following options are as described:

'Option 1 looked at the traditional method of installation with down conductors to the external facades of the buildings. All be it this method would not require the HVI masts, there was a considerable increase in the number of down conductors required.

Option 2 introduced the HVI masts and in doing so decreased the number of required down conductors to the external facades of the building.

Both options were presented to the Inn for consideration, and it was concluded that Option 2 was the least intrusive and would most likely be the preferred option to progress. This is on the basis that the reduced number of down conductors on the elevations of the building would be less impactful on its special interest.'

3.4 Following the assessment, it was determined that Option Two will provide the least impact to the historic fabric as it reduces the required number of down conductors on the elevation. The option requires the installation of 25 HVI masts, placed strategically. It was found that this option would create the least impact to the special interest of the buildings by preserving the elevation.

3.5 The proposed work would be conducted in a series of phases beginning with numbers 8 and 9.

3.6 The full risk assessment by Hussar and drawings of the proposal by Ingleton Wood are included at Appendix 2.

JUSTIFICATION FOR PROPOSALS

3.7 As mentioned at section 1.16, the Risk assessment revealed that if the lightning protection system is not put in place, the damage could result in loss of human life, loss of services to the public, loss of cultural value and loss of economic value. Each is possible with both indirect and direct lightning strikes.

3.8 As per HE guidance, the conductors are placed to follow the natural form of the building, making the fixings less visible. When looking at the drawings, located in Appendix 2, the conductors have been placed to comfortably follow the building design, placed at the building corners, behind columns or drainpipes, and between brickwork.

3.9 We contacted HE to request a pre-application advice meeting, and were informed it would not be necessary for HE participation at this stage. The letter is included at Appendix 3.

3.10 Option two, which was selected, implements HVI masts, but reduces the number of down conductors. As a result, there are fewer down conductors, leading to a greater preservation of the building facade. Where down conductors are required, they will be strategically placed to follow the buildings form. It is believed this option will have less of a visual impact.

4.0 LEGISLATION AND PLANNING POLICY

4.1 The applicable legislative framework to this assessment includes the following:

- The Town and Country Planning Act 1990;
- The Planning and Compulsory Purchase Act 2004;
- The Planning (Listed Buildings and Conservation Areas) Act 1990 ("the 1990 Act");

4.2 Legislation relating to the protection of the historic environment is set out in the Planning (Listed Buildings and Conservation Areas) Act 1990. This requires local planning authorities to have special regard to the desirability of preserving the special interest of listed buildings, conservation areas and their settings.

4.3 The Stone Buildings are a statutorily listed buildings and are located in the Bloomsbury Conservation Area.

4.4 With respect to this application, the applicable statutory provisions are:

Section 16(2) which regards listed building consent for any works; and

Section 66(1) the determination of applications.

Section 72 preserving and enhancing conservation areas.

4.5 In considering whether to grant listed building consent for any works Section 16 (Decision on application for listed building consent) requires that the local planning authority or the Secretary of State have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses.

4.6 Section 66 (general duty as respects listed buildings in exercise of planning functions) of the 1990 Act, requires that when determining applications, the local planning authority, or the Secretary of State," *shall have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses."*

4.7 Having regard to the above, the statutory provision is satisfied if development proposals preserve a listed building and/or the setting of a listed building. The meaning of preservation in this context is taken to be the avoidance of harm.

DEVELOPMENT PLAN

4.8 Section 70(2) of the Town and Country Planning Act 1990 and Section 38(6) of the Planning and Compulsory Purchase Act 2004 state that planning applications must be determined in accordance with the adopted Statutory

Development Plan unless material considerations indicate otherwise. The currently adopted Statutory Development Plan for the Site is formed from the following documents:

LONDON PLAN

4.9 Policy 7.8: Heritage Assets and Archaeology states *"development affecting heritage assets and their settings should conserve their significance, by being sympathetic to their form, scale, materials and architectural detail".*

CAMDEN LOCAL PLAN (2017)

4.10 Policy D2 (Heritage) outlines the Council's approach to designated and non-designated heritage assets and their settings. Regarding conservation areas, the policy states that the Council will:

> *e. requires that development within conservation areas preserves or, where possible, enhances the character or appearance of the area;*
>
> *f. resists the total or substantial demolition of an unlisted building that makes a positive contribution to the character or appearance of a conservation area;*
>
> *g. resist development outside of a conservation area that causes harm to the character or appearance of the conservation area; and*
>
> *h. preserve trees and garden spaces which contribute to the character and appearance of a conservation area or which provide a setting for Camden's architectural heritage."*

MATERIAL CONSIDERATIONS

- National Planning Policy Framework (NPPF) (2023);
- Historic England, Historic Environment Good Practice Advice in Planning Note 2: Managing Significance in Decision Taking in the Historic Environment (2015);
- Historic England, Historic Environment Good Practice Advice in Planning Note 3: The Setting of Heritage Assets (2017);
- Historic England, Lightning Protection. Design and Installation for Historic Buildings (2019)
- Historic England, Energy Efficiency and Historic Buildings Solar Electric (Photovoltaics) (2010); and
- Bloomsbury Conservation Area Appraisal and Management Strategy (2022).

The 2019 Historic England Lightning Protection guide provides the following advice (attached at Appendix 5):

- Policy 2.1: The HE guidelines states that 'Before installing or upgrading a lightning protection system, a qualified consultant or installer should carry out a risk assessment. This is a lengthy calculation and computer software is needed. Owners, custodians or denomination representatives can help by collating as much of the necessary information as possible. This will assist assessors in determining the appropriate level of protection.'
- Policy 2.5: Every lightning conductor system is a visual and material intrusion to some extent. In the case of an historic building, the consulting engineer should work with the architect or building surveyor to minimise impacts. The placement of the fixings should work with the natural features of the building and be fixed close to the corners.

- Policy 2.6: Permissions and Consent. The HE guidelines stated that before installing a lightning protection system it is important to check whether any consents, i.e. listed building consent or planning permission, is required.

- Policy 3.2: Policy 3.2 stated that above-ground conductors should be made out of aluminium or copper. The guidelines states that "*Copper, the more traditional material, is less likely to deteriorate, and thus has a longer life, though it can be vulnerable to theft".*

5.0 ASSESSMENT AND CONCLUSION

5.1 The buildings are listed Grade I and therefore the proposals need to be sensitive, and harm mitigated where possible, and any harm arising to be outweighed by planning benefits. However, without the lightning protection works, as demonstrated by the risk assessment the buildings run the risk of a catastrophic loss of heritage due to fire and potential loss of life. undertaking the necessary works in a sensitive manner will help to preserve the buildings' historic and architectural significance for future generation.

5.2 The Lightning Risk assessment, conducted in March 2023, concluded that there is a specific need for lightning protection at Stone Buildings. The assessment, carried out in accordance with the relevant British Standard and good practice guidance determined a '*level 2 lightning protection system was required with level 2 transient voltage surge suppression installed to all incoming supply lines in order to reduce the risks to a tolerable level*.' While the selected system utilises roof level HVI masts, this reduces the volume of down conductors needed on the building, and therefore interventions in the building by the fixings, and reduces visual impact on the facades.

5.3 As per HE guidance, the conductors are placed to follow the natural form of the building, making the fixings less visible. As illustrated on the drawings accompanying the submission, located in Appendix 2, the conductors have been placed to comfortably follow the building design. The conductors have been strategically placed at the building corners, behind columns or drainpipes, and between brickwork joints.

5.4 The conductors will be covered in a grey polyethylene sheathing. The colour of sheathing will help to minimize the visual impact of the lightning system and will reduce staining of the historic fabric due to oxidation.

5.5 Although there will be some visual effect from the conductors, they have been carefully located to provide the requisite protection with the least harm to the buildings. Details of fixings are provided with this submission for further discussion.

5.6 Rooftop HVIs are necessary as an alternative to significant quantities of down conductors. These are attached with a simple fixing to areas of lesser sensitivity. While the HVIs will be visible from ground level, their slender nature and spacing on the building will reduce and mitigate their overall impact.

5.7 The proposals respond to a specific and identified need for the lightning protection will protect a significant asset within the Inn's precinct. The lightning protection system significantly reduces risks associated with lightning strike, including loss of human life, public services, economic value, and cultural heritage. As per the NPPF (section 207 d.), the proposal is capable of outweighing any minor adverse harmful effects on the appearance of the building

CONCLUSION

5.8 This assessment considers the application proposals in the context of national and local planning policy relating to new design and development which affects heritage assets.

5.9 As set out above, the proposals are barely visible from the public spaces within the Bloomsbury Conversation Area and will at least preserve its character and appearance. They therefore meet the statutory objective of Section 72 (1) of the Planning (LBCA) Act 1990.

5.10 The proposed works at the Stone Buildings would barely be noticeable overall from any of the public spaces at Lincoln's Inn and not affect the settings of the adjacent listed buildings.

5.11 We consider that the proposals would conserve the significance of the listed buildings and the character and appearance of the Bloomsbury Conservation Area, complying with relevant development plan policies.

5.12 We therefore consider that the proposed development meets the statutory provisions of Sections 16, 66 and 72 of the Planning (Listed Buildings and Conservation Areas) Act 1990, and complies with the requirements of the NPPF, as well as the relevant Development Plan policies.

5.13 In summary, the application proposals will fully comply with the relevant national and local planning policy guidance and will serve to preserve the setting of the listed building and wider conservation area setting.

7.0 APPENDICES

1.0 – HE LIST ENTRY NUMBERS 1-7 AND 8-11

2.0 – LIGHTNING RISK ASSESSMENT AND PROPOSAL

3.0 – HE RESPONSE FOR PRE-APP REQUEST

APPENDIX 1.0

HE LIST ENTRIES, 1-7 AND 8-11 STONE BUILDINGS

NUMBERS 1-7 AND ATTACHED RAILINGS AND LAMP HOLDER

Official list entry

Heritage Category: **Listed Building**

Grade: **I**

List Entry Number: **1379318**

Date first listed: **24-Oct-1951**

List Entry Name: **NUMBERS 1-7 AND ATTACHED RAILINGS AND LAMP HOLDER**

Statutory Address 1: **NUMBERS 1-7 AND ATTACHED RAILINGS AND LAMP HOLDER, 1-7, STONE BUILDINGS**

This List entry helps identify the building designated at this address for its special architectural or historic interest.

Unless the List entry states otherwise, it includes both the structure itself and any object or structure fixed to it (whether inside or outside) as well as any object or structure within the curtilage of the building.

For these purposes, to be included within the curtilage of the building, the object or structure must have formed part of the land since before 1st July 1948.

Understanding list entries *(https://historicengland.org.uk/listing/the-list/understanding-list-entries/)*

Corrections and minor amendments *(https://historicengland.org.uk/listing/the-list/minor-amendments/)*

Location

Statutory Address: **NUMBERS 1-7 AND ATTACHED RAILINGS AND LAMP HOLDER, 1-7, STONE BUILDINGS**

The building or site itself may lie within the boundary of more than one authority.

County: **Greater London Authority**

District: **Camden (London Borough)**

Parish: **Non Civil Parish**

National Grid Reference: **TQ 30946 81527**

Details

CAMDEN

TQ3081NE LINCOLN'S INN 798-1/101/1026 (North side) 24/10/51 Nos.1-7 (consec) Stone Buildings and attached railings and lamp-holder

GV I

7 chambers. 1780 (Nos 1 & 2) and 1775 (Nos 3-6) by Sir Robert Taylor. 1845 (No.7) by P Hardwick. Stone in Classical style. Nos 1 & 2 form the north end of the street, Nos 3-7 the east side with No.7 forming a pavilion at the end of the row. 3 storeys. Nos 1 and 2, 3 windows each. Nos 3-6 (east elevation), 23 windows in all. No.7, 5 windows. Basements in brick below stone band at ground floor. Rusticated ground floor with arched openings of keys and voussoirs with impost bands. Windows in shallow ashlar recesses. Doors in shallow stuccoed recesses. Continuous plain band at 1st floor level. Continuous sill band to 1st floor. No.1 with paired Corinthian pilasters above entrance. No.7 with 6 engaged Corinthian columns. Modillion cornice with balustrade above. South elevation (No.7) with pilasters, coupled at flanks. West elevation (facing lawns) similar to east but with symmetrical facade of 21 windows between pedimented end projections of 5 windows and 1 window on internal return. Wall sundial dated 1794. INTERIORS: not inspected. SUBSIDIARY FEATURES: attached cast-iron railings to areas. No.3 with lamp-holder.

Listing NGR: TQ3093981538

Legacy

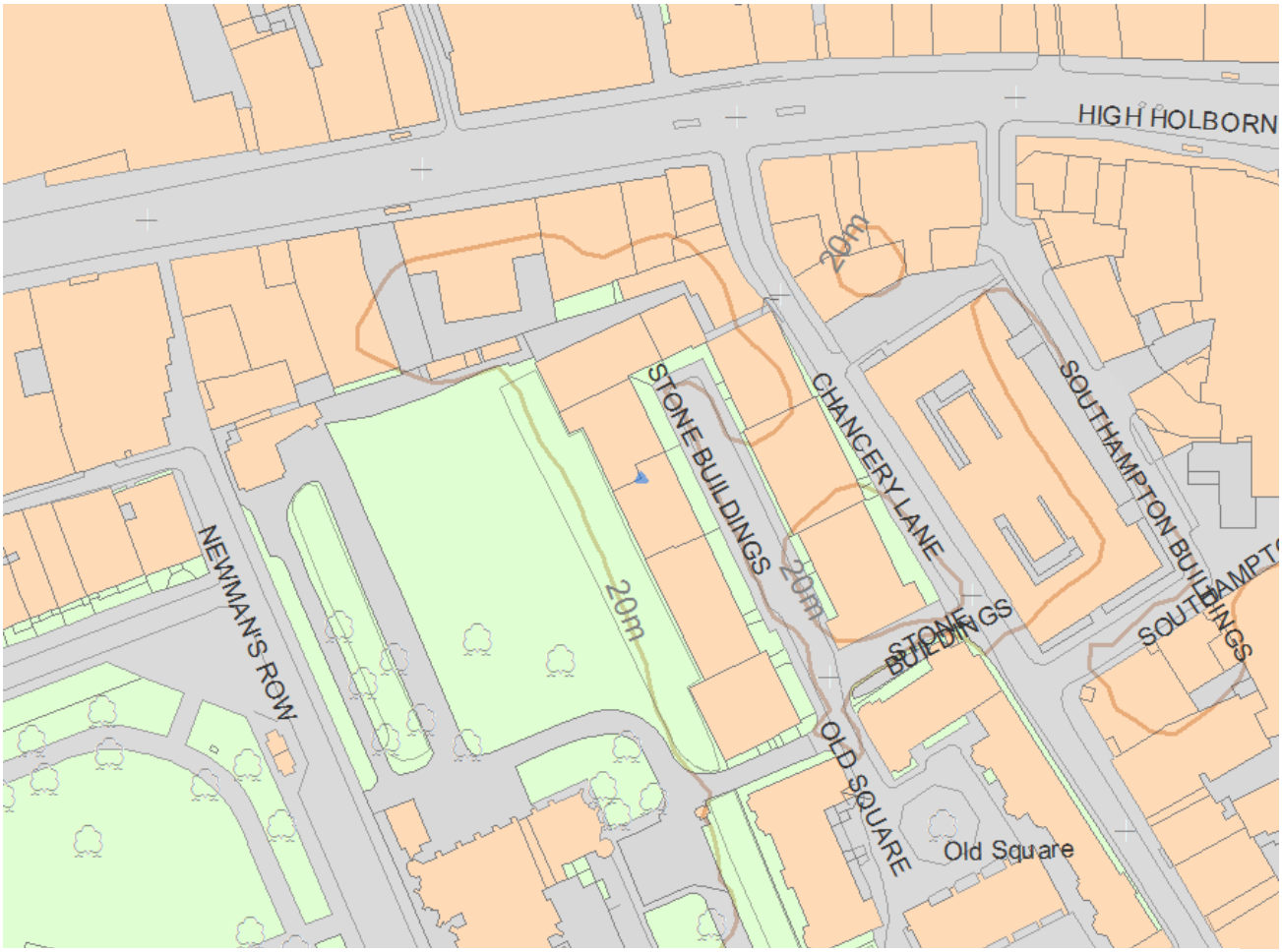
The contents of this record have been generated from a legacy data system.

Legacy System number: **478696**

Legacy System: **LBS**

Legal

This building is listed under the Planning (Listed Buildings and Conservation Areas) Act 1990 as amended for its special architectural or historic interest.



Map

NUMBERS 8-11 AND ATTACHED RAILINGS AND GATES

Official list entry

Heritage Category: **Listed Building**

Grade: **I**

List Entry Number: **1379319**

Date first listed: **24-Oct-1951**

List Entry Name: **NUMBERS 8-11 AND ATTACHED RAILINGS AND GATES**

Statutory Address 1: **NUMBERS 8-11 AND ATTACHED RAILINGS AND GATES, 8-11, STONE BUILDINGS**

This List entry helps identify the building designated at this address for its special architectural or historic interest.

Unless the List entry states otherwise, it includes both the structure itself and any object or structure fixed to it (whether inside or outside) as well as any object or structure within the curtilage of the building.

For these purposes, to be included within the curtilage of the building, the object or structure must have formed part of the land since before 1st July 1948.

Understanding list entries *(https://historicengland.org.uk/listing/the-list/understanding-list-entries/)*

Corrections and minor amendments *(https://historicengland.org.uk/listing/the-list/minor-amendments/)*

Location

Statutory Address: **NUMBERS 8-11 AND ATTACHED RAILINGS AND GATES, 8-11, STONE BUILDINGS**

The building or site itself may lie within the boundary of more than one authority.

County: **Greater London Authority**

District: **Camden (London Borough)**

Parish: **Non Civil Parish**

National Grid Reference: **TQ 30987 81531**

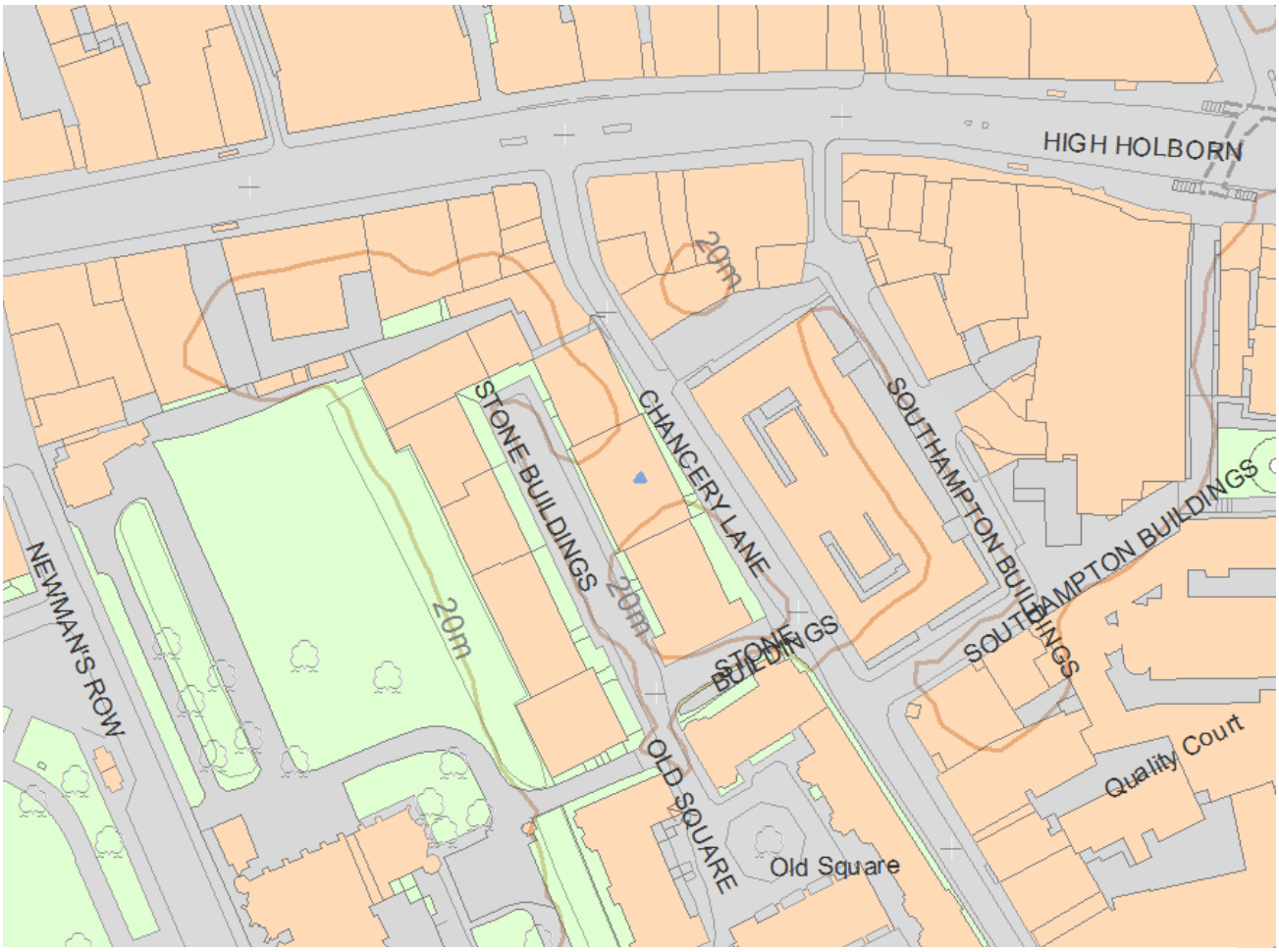
Details

CAMDEN

TQ3081NE LINCOLN'S INN 798-1/101/1028 (North side) 24/10/51 Nos.8-11 (consec) Stone Buildings & attached railings & gates

GV I

Terraced chambers and Inns of Court Territorial HQ (No.10). 1775-1780. By Sir Robert Taylor. No.10, rusticated stone ground floor, ashlar 1st floor & attic. Nos 8, 9 & 11, yellow stock brick with stone basements and dressings. EXTERIOR: No.10: 2 storeys, basement and attic. 7 windows. Round-headed entrance and round-headed windows to ground and 1st floor, those on ground floor being in shallow round-headed ashlar recesses. Recessed rectangular attic windows, horizontally pivoted. Plain impost bands to ground floor windows, plain band at 1st floor level and fluted springing bands to 1st floor windows which are flanked by shallow niches. Dentil cornice and blocking course. No.11: flanking No.10 to the left. 3 storeys and basement. 7 windows. Square-headed door with elaborate Nico lantern bracketed over and round-headed fanlight, in shallow round-headed recess. Gauged flat arches to recessed sash windows, those on the ground floor in shallow round-headed recesses with plain impost bands. Plain stone band at 2nd floor level. Stone mutule cornice and blocking course. No.9: flanking No.10 to the right. 3 storeys and basement. 7 windows. Similar to No.11 but the entrance door has a pilastered and pedimented case under a plain stone band with fanlight over. No.8: formed by a 1-window projection to No.9 with a right-hand return of 5 windows. Similar to Nos 9 & 11. East elevation to Chantry Lane is similar in character. Nos 8, 9 and 11 with good, original lead rainwater pipes and heads with lion masks and dated 1775. INTERIORS: not inspected. SUBSIDIARY FEATURES: cast-iron railings in front of Nos 9 and 11. Cast-iron railings with torch flambe finials along Chancery Lane frontage with cast-iron entrance gates at south end dating to 1845. No.10 was listed



Map

This map is for quick reference purposes only and may not be to scale. This copy shows the entry on 09-Jan-2024 at 10:33:11.

End of official list entry

APPENDIX 2.0

LIGHTNING RISK ASSESSMENT AND PROPOSAL

0m 10m 20m 30m 40m

Scale 1:500

Notes:-

1. Do not scale this drawing (printed or electronic versions).
2. This drawing indicates design intent only and shall not be used as a working drawing or installation drawing. The contractor shall be responsible for producing his own fully coordinated working drawings.
3. Contractors must check all dimensions on site prior to ordering materials or commencing work. Any discrepancies must be reported to the engineer immediately.
4. This drawing is copyright and is for use on this site only.
5. All structural & architectural elements, where indicated, have been imported from the engineers drawings and reference should be made to the individual structural / architectural drawings for exact dimensions.
6. This drawing should be read in conjunction with all relevant consultants, specialist sub-contractors, supply chain drawings and specifications for exact setting out, size and type of component.
7. Discrepancies and/or ambiguities within this drawing, between it and information given elsewhere, must be reported immediately to Ingleton Wood for clarification before proceeding.
8. All works to be carried out in accordance with the latest British Standards/Codes of Practice/Building Regulations unless specifically directed otherwise in the specification.
9. Responsibility for the reproduction of this drawing in paper form, or if issued in electronic format, lies with the recipient to check that all information has been replicated in full and is correct when compared to the original paper or electronic image.
10. Graphical representations of equipment on this drawing have been co-ordinated, but are approximations only. Please refer to specifications and / or details for actual sizes and or specific contractor construction information.
11. All builders work associated with the mechanical and electrical services installation must be included for.
12. Contractor to review site Asbestos register prior to commencing works.
13. The position of all equipment shown is indicative only. Final positions to be determined & indicated on working drawings.

N

Legend

Hatch indicates area of Lightning Protection works

P02	Information Issue	26.03.24	NH	PK
P01	Information Issue	11.05.23	NH	PK
Rev	Description	Date	Chk	Apr

Project No:	Scale @ A1:	Drawn By:
502705	1:500	KS

Ingleton Wood

Property and Construction Consultants

Issuing office: Colchester
t: 01206 224270
www.ingletonwood.co.uk

Vision, form and function

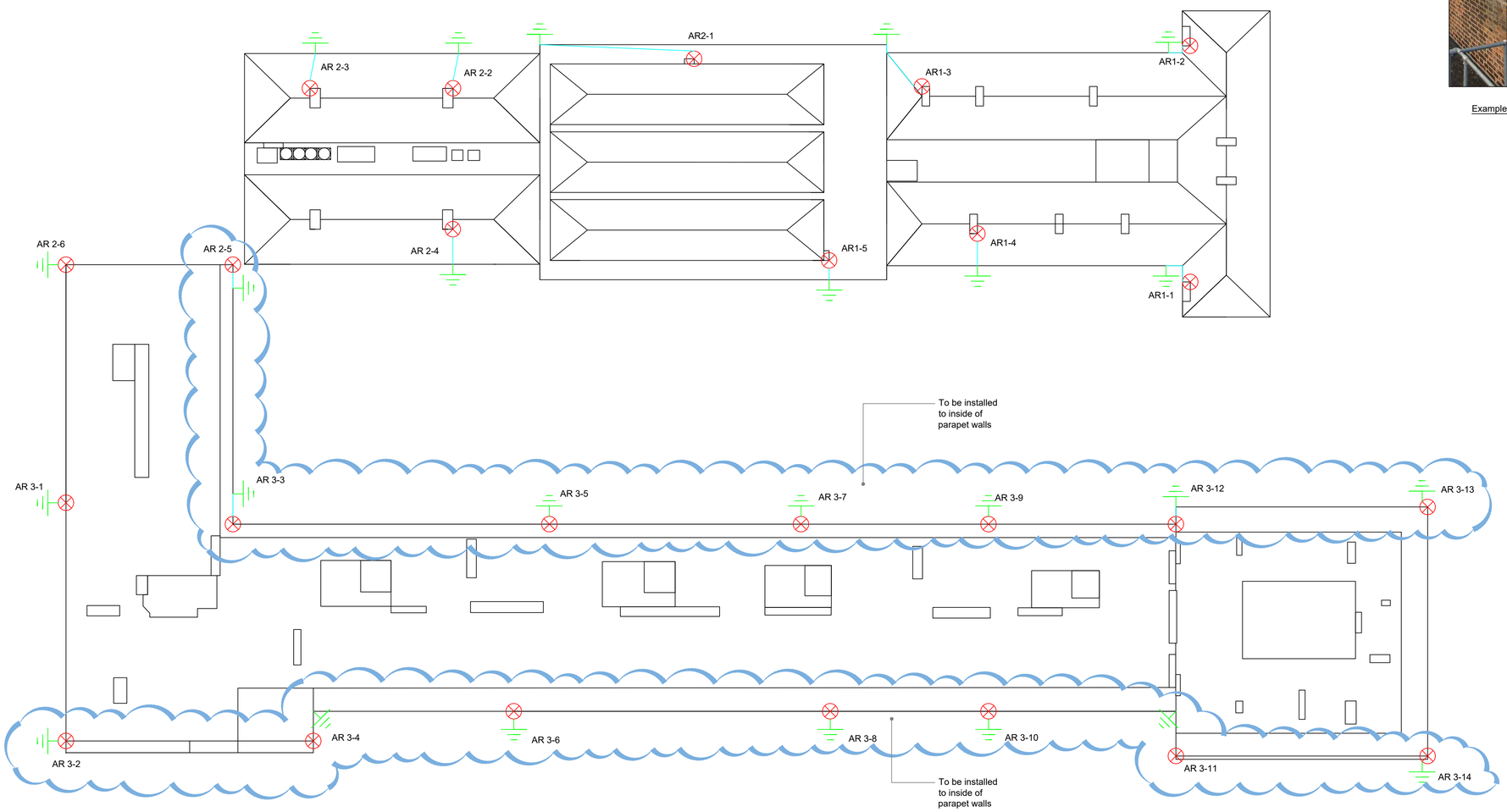
Project:
HSLI Stone Building
Lightning Protection System
Stone Buildings
London WC2A 3TL

Client:
Honourable Society of Lincoln's Inn

Title:
Area of Lightning Protection - Site Plan

Drawing Number:
HSLISB-IWD-XX-XX-DR-E-5100

Status:	Purpose of Issue:	Revision:
S2	Information	P02



N

0m 4m 8m 12m 16m

Scale 1:200

Example of HVI Mast

Notes:-

1. Do not scale this drawing (printed or electronic versions).
2. This drawing indicates design intent only and shall not be used as a working drawing or installation drawing. The contractor shall be responsible for producing his own fully coordinated working drawings.
3. Contractors must check all dimensions on site prior to ordering materials or commencing work. Any discrepancies must be reported to the engineer immediately.
4. This drawing is copyright and is for use on this site only.
5. All structural & architectural elements, where indicated, have been imported from the engineers drawings and reference should be made to the individual structural / architectural drawings for exact dimensions.
6. This drawing should be read in conjunction with all relevant consultants, specialist sub-contractors, supply chain drawings and specifications for exact setting out, size and type of component.
7. Discrepancies and/or ambiguities within this drawing, between it and information given elsewhere, must be reported immediately to Ingleton Wood for clarification before proceeding.
8. All works to be carried out in accordance with the latest British Standards/Codes of Practice/Building Regulations unless specifically directed otherwise in the specification.
9. Responsibility for the reproduction of this drawing in paper form, or if issued in electronic format, lies with the recipient to check that all information has been replicated in full and is correct when compared to the original paper or electronic image.
10. Graphical representations of equipment on this drawing have been co-ordinated, but are approximations only. Please refer to specifications and / or details for actual sizes and or specific contractor construction information.
11. All builders work associated with the mechanical and electrical services installation must be included for.
12. Contractor to review site Asbestos register prior to commencing works.
13. The position of all equipment shown is indicative only. Final positions to be determined & indicated on working drawings.

Drawing Notes:

1. Spacing between the masts will reflect the level of lightning protection,which has been calculated with a result of level 2 and the calculated penetration distance calculation from BS EN 62305.
2. Touch potential hazards can achieve tolerable levels if the surface layer is not less than 100KΩ. Which is generally achieved with a 50mm thick asphalt layer. Complying with clause 8.2 in BS EN 62305
3. To fully complete to BS EN 62305 surge protection is to be installed
4. AR1-1 to AR1-5 are required for Phase 1 works
5. AR2-1 to AR2-6 are required for Phase 2 works
6. AR3-1 to AR3-14 are required for Phase 3 works

Legend

- HVI Masts secured to concrete wall via 2No. Brackets with a height of 5m above the top bracket.
- Down Conductor (HVI conductors) and Earth positions complete with inspection pit and 2400mm (minimum earth electrode length)
- HVI Conductor secured to roof surface at 1000mm centres.

Rev	Description	Date	Chk	Apr
P02	Information Issue	26.03.24	NH	PK
P01	Information Issue	11.05.23	NH	PK

Project No:	Scale @ A1:	Drawn By:
502705	1:200	KS

Ingleton Wood
Property and Construction Consultants
Issuing office: Colchester
t: 01206 224209
www.ingletonwood.co.uk

Vision, form and function

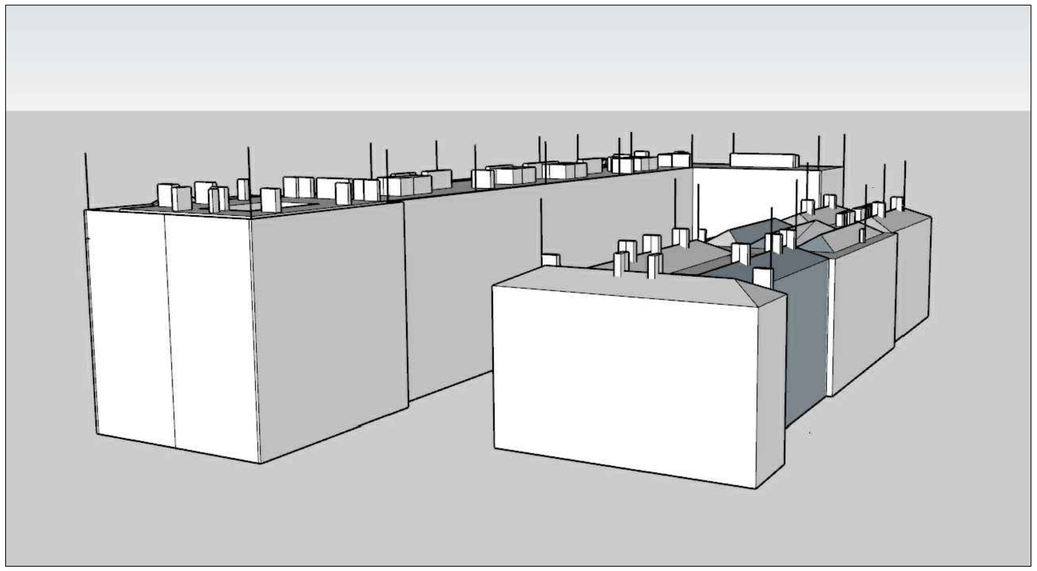
Project:
HSLI Stone Building
Lightning Protection System
Stone Buildings
London WC2A 3TL

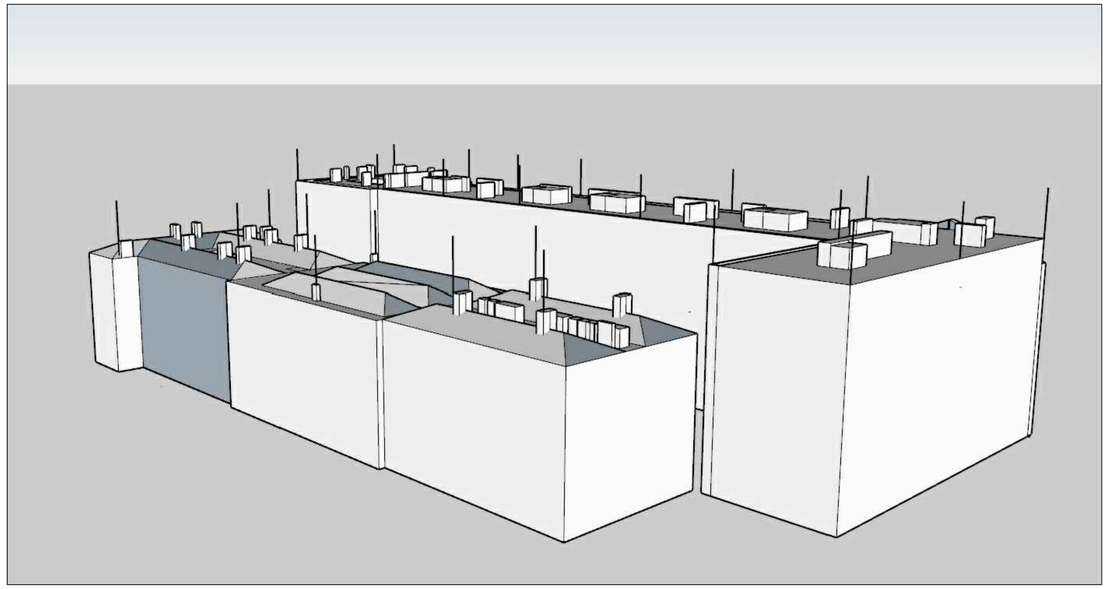
Client:
Honourable Society of Lincoln's Inn

Title:
Lightning Protection

Drawing Number:
HSLISB-IWD-01-XX-DR-E-5800

Status:	Purpose of Issue:	Revision:
S2	Information	P02



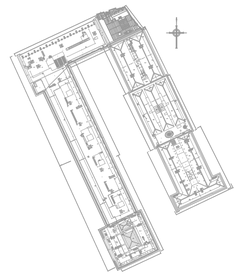


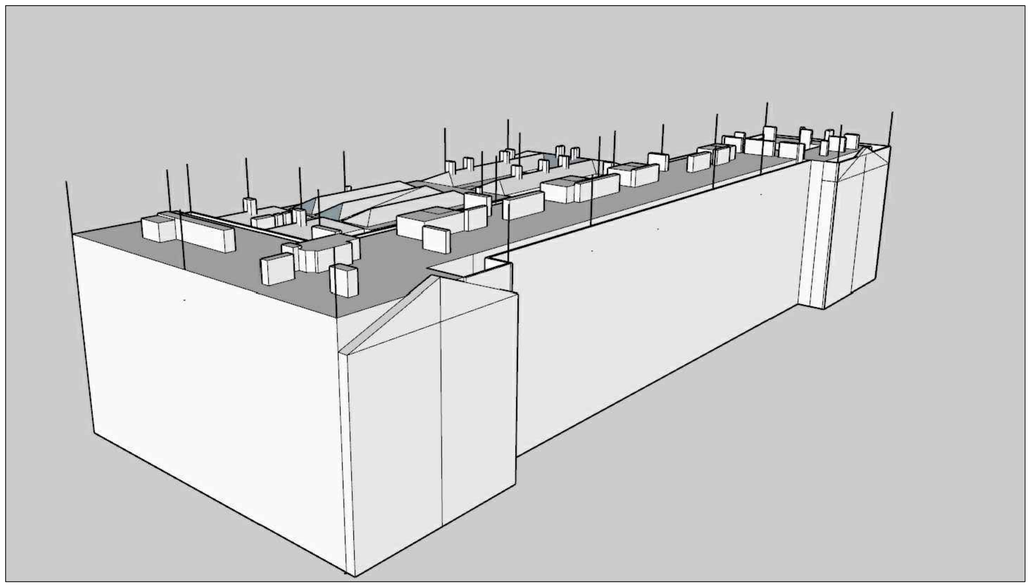
Notes:-

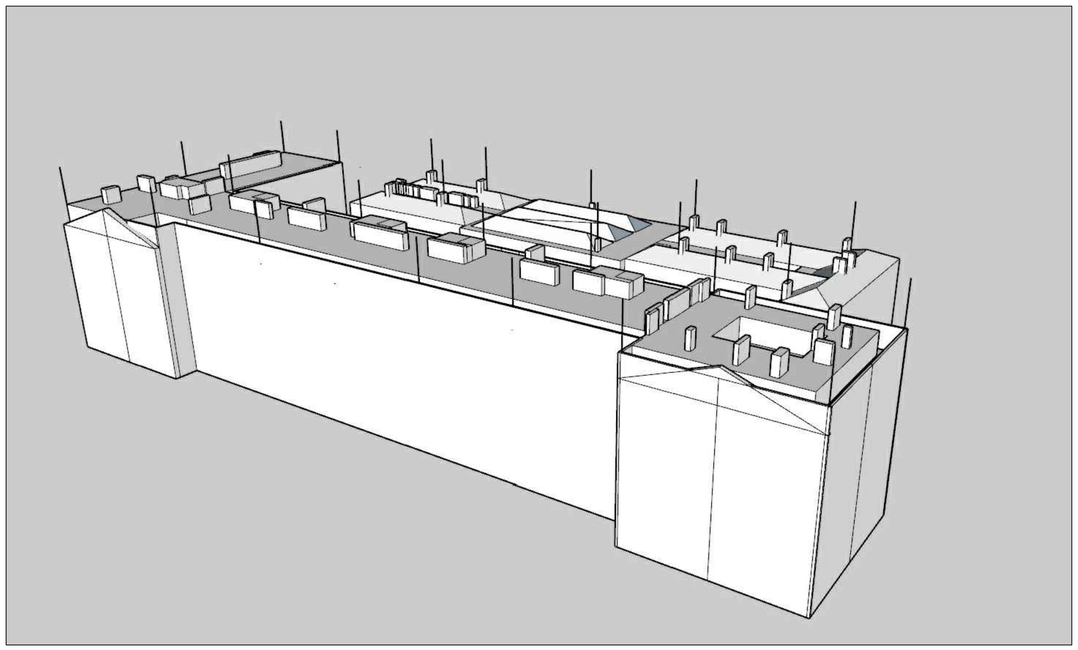
1. Do not scale this drawing (printed or electronic versions).
2. This drawing indicates design intent only and shall not be used as a working drawing or installation drawing. The contractor shall be responsible for producing his own fully coordinated working drawings.
3. Contractors must check all dimensions on site prior to ordering materials or commencing work. Any discrepancies must be reported to the engineer immediately.
4. This drawing is copyright and is for use on this site only.
5. All structural & architectural elements, where indicated, have been imported from the engineers drawings and reference should be made to the individual structural / architectural drawings for exact dimensions.
6. This drawing should be read in conjunction with all relevant consultants, specialist sub-contractors, supply chain drawings and specifications for exact setting out, size and type of component.
7. Discrepancies and/or ambiguities within this drawing, between it and information given elsewhere, must be reported immediately to Ingleton Wood for clarification before proceeding.
8. All works to be carried out in accordance with the latest British Standards/Codes of Practice/Building Regulations unless specifically directed otherwise in the specification.
9. Responsibility for the reproduction of this drawing in paper form, or if issued in electronic format, lies with the recipient to check that all information has been replicated in full and is correct when compared to the original paper or electronic image.
10. Graphical representations of equipment on this drawing have been co-ordinated, but are approximations only. Please refer to specifications and / or details for actual sizes and or specific contractor construction information.
11. All builders work associated with the mechanical and electrical services installation must be included for.
12. Contractor to review site Aabestos register prior to commencing works.
13. The position of all equipment shown is indicative only. Final positions to be determined & indicated on working drawings.

Drawing Notes:

1. Spacing between the masts will reflect the level of lightning protection,which has been calculated with a result of level 2 and the calculated penetration distance calculation from BS EN 62305.
2. Touch potential hazards can achieve tolerable levels if the surface layer is not less than 100KΩ. Which is generally achieved with a 50mm thick asphalt layer. Complying with clause 8.2 in BS EN 62305
3. To fully complete to BS EN 62305 surge protection is to be installed
4. AR1-1 to AR1-5 are required for Phase 1 works
5. AR2-1 to AR2-6 are required for Phase 2 works
6. AR3-1 to AR3-14 are required for Phase 3 works







P02	Information Issue		26.03.24	NH	PK
P01	Information Issue		11.05.23	NH	PK
Rev	Description		Date	Chk	Apr
Project No: 502705		Scale @ A1: NTS		Drawn By: KS	

Ingleton Wood

Property and Construction Consultants

Issuing office: Colchester
T: 01206 224270
www.ingletonwood.co.uk

Vision, form and function

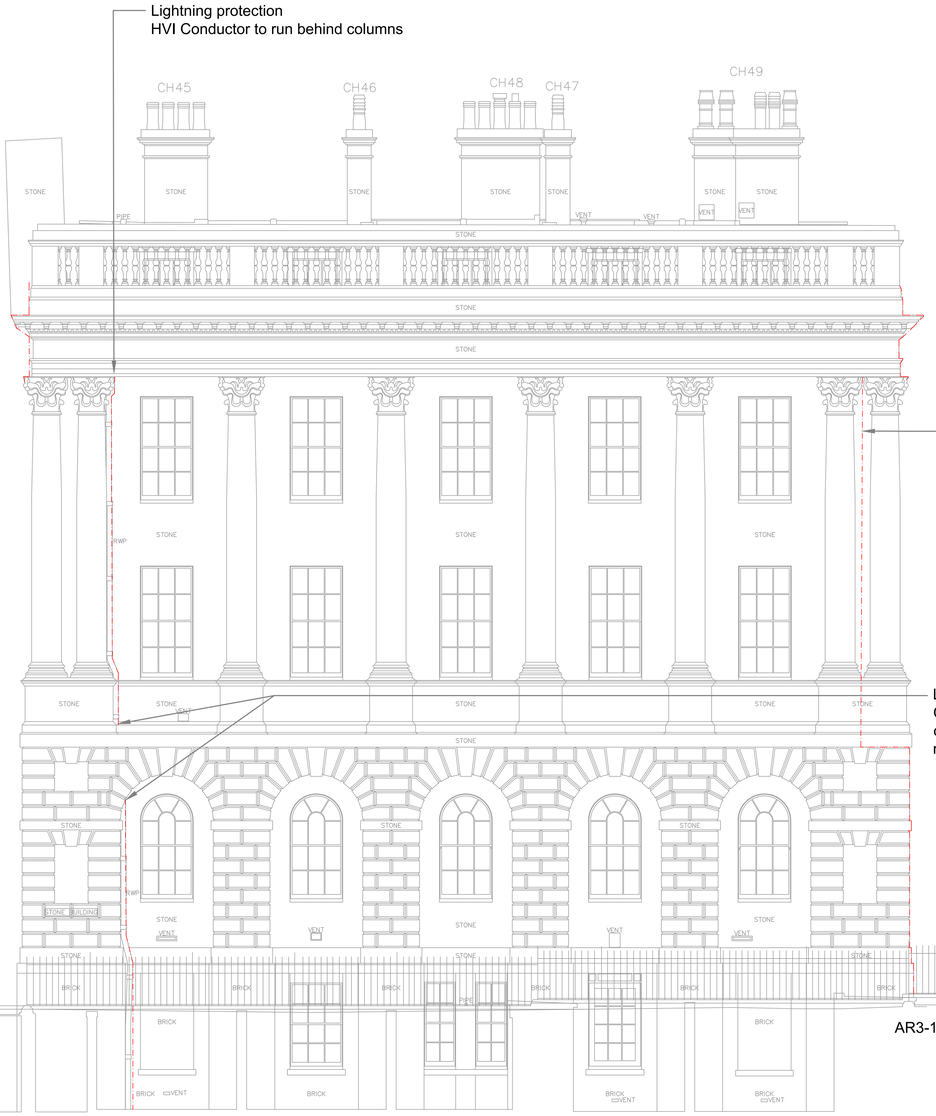
Project:
HSLI Stone Building
Lightning Protection System
Stone Buildings
London WC2A 3TL

Client:
Honourable Society of Lincoln's Inn

Title:
ISO HVI Locations

Drawing Number:
HSLISB-IWD-01-XX-DR-E-5802

Status:	Purpose of Issue:	Revision:
S2	Information	P02



DATUM=17.00m

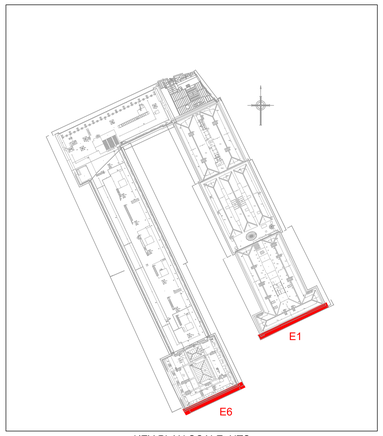
ELEVATION 6

Legend:

Lighting protection HVI Conductor

DATUM=17.00m

ELEVATION 1



KEY PLAN SCALE: NTS

Notes:-

1. Do not scale this drawing (printed or electronic versions).
2. This drawing indicates design intent only and shall not be used as a working drawing or installation drawing. The contractor shall be responsible for producing his own fully coordinated working drawings.
3. Contractors must check all dimensions on site prior to ordering materials or commencing work. Any discrepancies must be reported to the engineer immediately.
4. This drawing is copyright and is for use on this site only.
5. All structural & architectural elements, where indicated, have been imported from the engineers drawings and reference should be made to the individual structural / architectural drawings for exact dimensions.
6. This drawing should be read in conjunction with all relevant consultants, specialist sub-contractors, supply chain drawings and specifications for exact setting out, size and type of component.
7. Discrepancies and/or ambiguities within this drawing, between it and information given elsewhere, must be reported immediately to Ingleton Wood for clarification before proceeding.
8. All works to be carried out in accordance with the latest British Standards/Codes of Practice/Building Regulations unless specifically directed otherwise in the specification.
9. Responsibility for the reproduction of this drawing in paper form, or if issued in electronic format, lies with the recipient to check that all information has been replicated in full and is correct when compared to the original paper or electronic image.
10. Graphical representations of equipment on this drawing have been co-ordinated, but are approximations only. Please refer to specifications and / or details for actual sizes and or specific contractor construction information.
11. All builders work associated with the mechanical and electrical services installation must be included for.
12. Contractor to review site Asbestos register prior to commencing works.
13. All power and control wiring associated with the mechanical services installation must be included for.
14. The position of all equipment shown is indicative only. Final positions to be determined & indicated on working drawings.
15. Refer to presence detector installation instructions for wiring, switch type & final position.
16. Refer to mechanical drawings for extract fan details.
17. Refer to mechanical layout drawings for positions of outlets to mechanical plant.
18. Cable containment (if indicated) is shown as indicative only. Contractor to determine cable containment routes and sizes to suit the installation.

Note:-

- HVI conductor shall be painted to match the existing stonework/paint
- Where HVI conductors are installed behind/adjacent RWP's these shall be coloured black

Rev	Description	Date	Chk	Apr
P01	Information Issue	11.05.23	NH	PK

Project No: 502705 | Scale @ A0: 1:50 | Drawn By: JP

Ingleton Wood

Property and Construction Consultants

Issuing office: Colchester
T: 01206 324251
www.ingletonwood.co.uk

Vision, form and function

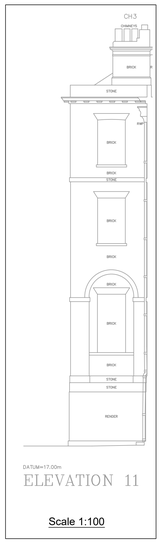
Project:
HSLI Stone Building
Lightning Protection System
Stone Buildings
London WC2A 3TL

Client:
Honourable Society of Lincoln's Inn

Title:
Lightning Protection
Elevation 1 & 6

Drawing Number:
HSLISB-IWD-XX-XX-DR-E-5810

Status	Purpose of Issue	Revision
S2	Information	P01



DATUM=17.00m

ELEVATION 11

Scale 1:100

AR1-2

AR1-3

DATUM=17.00m

ELEVATION 2A

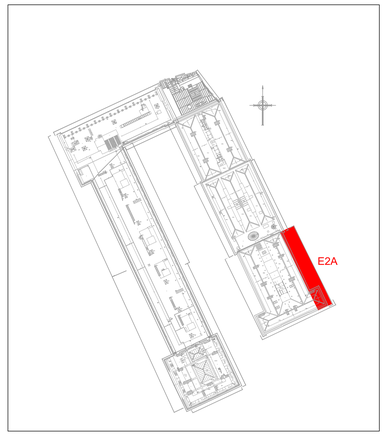
Scale 1:50

Legend:

Lighting protection
HVI Conductor

Drawing Notes:

Lightning protection to run behind rain water pipes and drain pipes.



KEY PLAN SCALE: NTS

Notes:-

1. Do not scale this drawing (printed or electronic versions).
2. This drawing indicates design intent only and shall not be used as a working drawing or installation drawing. The contractor shall be responsible for producing his own fully coordinated working drawings.
3. Contractors must check all dimensions on site prior to ordering materials or commencing work. Any discrepancies must be reported to the engineer immediately.
4. This drawing is copyright and is for use on this site only.
5. All structural & architectural elements, where indicated, have been imported from the engineers drawings and reference should be made to the individual structural / architectural drawings for exact dimensions.
6. This drawing should be read in conjunction with all relevant consultants, specialist sub-contractors, supply chain drawings and specifications for exact setting out, size and type of component.
7. Discrepancies and/or ambiguities within this drawing, between it and information given elsewhere, must be reported immediately to Ingleton Wood for clarification before proceeding.
8. All works to be carried out in accordance with the latest British Standards/Codes of Practice/Building Regulations unless specifically directed otherwise in the specification.
9. Responsibility for the reproduction of this drawing in paper form, or if issued in electronic format, lies with the recipient to check that all information has been replicated in full and is correct when compared to the original paper or electronic image.
10. Graphical representations of equipment on this drawing have been co-ordinated, but are approximations only. Please refer to specifications and / or details for actual sizes and or specific contractor construction information.
11. All builders work associated with the mechanical and electrical services installation must be included for.
12. Contractor to review site Asbestos register prior to commencing works.
13. All power and control wiring associated with the mechanical services installation must be included for.
14. The position of all equipment shown is indicative only. Final positions to be determined & indicated on working drawings.
15. Refer to presence detector installation instructions for wiring, switch type & final position.
16. Refer to mechanical drawings for extract fan details.
17. Refer to mechanical layout drawings for positions of outlets to mechanical plant.
18. Cable containment (if indicated) is shown as indicative only. Contractor to determine cable containment routes and sizes to suit the installation.

Note:-

- HVI conductor shall be painted to match the existing stonework/paint
- Where HVI conductors are installed behind/adjacent RWP's these shall be coloured black

Rev	Description	Date	Chk	Apr
P01	Information Issue	11.05.23	NH	PK

Project No:	Scale @ A0:	Drawn By:
502705	1:50/1:100	JP

Ingleton Wood

Property and Construction Consultants

Issuing office: Colchester
T: 01206 234270
www.ingletonwood.co.uk

Vision, form and function

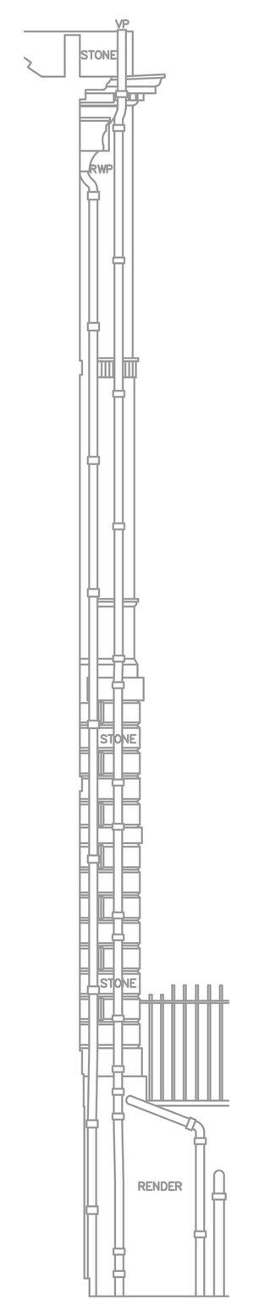
Project:
HSLI Stone Building
Lightning Protection System
Stone Buildings
London WC2A 3TL

Client:
Honourable Society of Lincoln's Inn

Title:
Lightning Protection
Elevation 2A

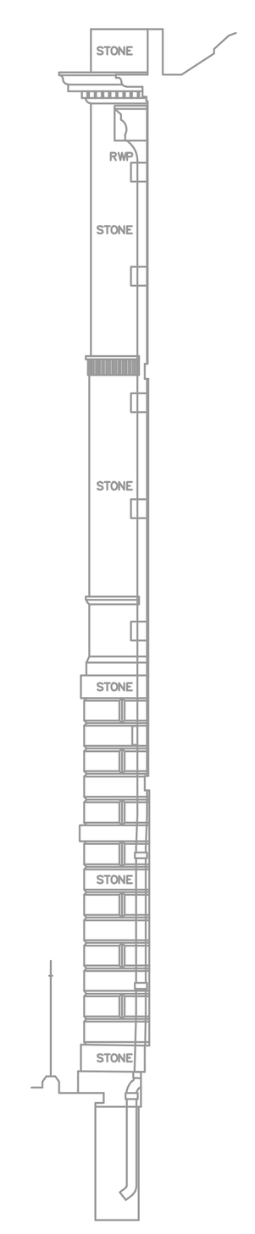
Drawing Number:
HSLISB-IWD-XX-XX-DR-E-5811

Status:	Purpose of Issue:	Revision:
S2	Information	P01



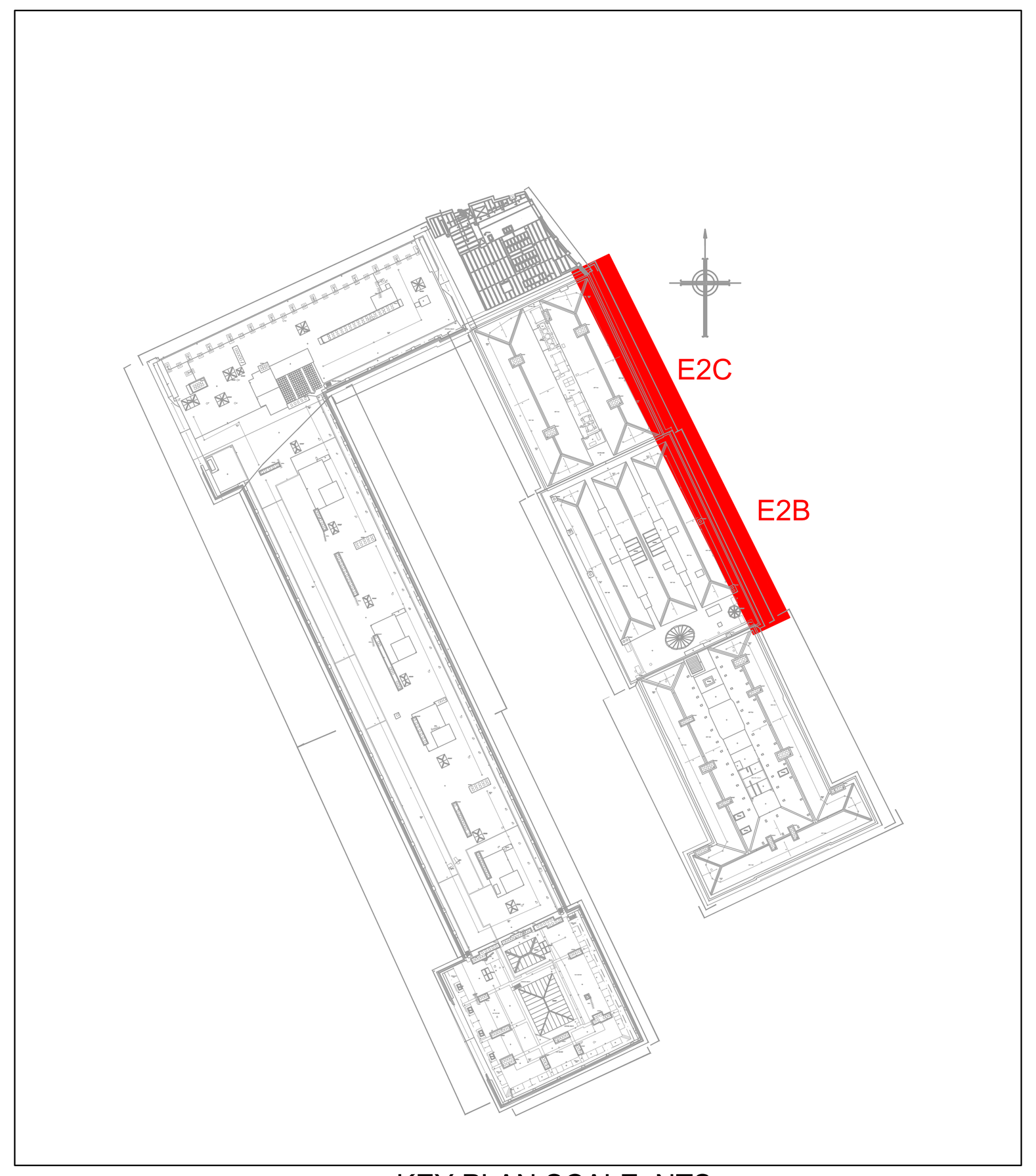
DATUM=17.00m
ELEVATION 14

Scale 1:100



DATUM=17.00m
ELEVATION 18

Scale 1:100



KEY PLAN SCALE: NTS

Notes:-

1. Do not scale this drawing (printed or electronic versions).
2. This drawing indicates design intent only and shall not be used as a working drawing or installation drawing. The contractor shall be responsible for producing his own fully coordinated working drawings.
3. Contractors must check all dimensions on site prior to ordering materials or commencing work. Any discrepancies must be reported to the engineer immediately.
4. This drawing is copyright and is for use on this site only.
5. All structural & architectural elements, where indicated, have been imported from the engineers drawings and reference should be made to the individual structural / architectural drawings for exact dimensions.
6. This drawing should be read in conjunction with all relevant consultants, specialist sub-contractors, supply chain drawings and specifications for exact setting out, size and type of component.
7. Discrepancies and/or ambiguities within this drawing, between it and information given elsewhere, must be reported immediately to Ingleton Wood for clarification before proceeding.
8. All works to be carried out in accordance with the latest British Standards/Codes of Practice/Building Regulations unless specifically directed otherwise in the specification.
9. Responsibility for the reproduction of this drawing in paper form, or if issued in electronic format, lies with the recipient to check that all information has been replicated in full and is correct when compared to the original paper or electronic image.
10. Graphical representations of equipment on this drawing have been co-ordinated, but are approximations only. Please refer to specifications and / or details for actual sizes and or specific contractor construction information.
11. All builders work associated with the mechanical and electrical services installation must be included for.
12. Contractor to review site Asbestos register prior to commencing works.
13. All power and control wiring associated with the mechanical services installation must be included for.
14. The position of all equipment shown is indicative only. Final positions to be determined & indicated on working drawings.
15. Refer to presence detector installation instructions for wiring, switch type & final position.
16. Refer to mechanical drawings for extract fan details.
17. Refer to mechanical layout drawings for positions of outlets to mechanical plant.
18. Cable containment (if indicated) is shown as indicative only. Contractor to determine cable containment routes and sizes to suit the installation.

Note:-

- HVI conductor shall be painted to match the existing stonework/paint
- Where HVI conductors are installed behind/adjacent RWP's these shall be coloured black

DATUM=17.00m
ELEVATION 2B

Scale 1:50

DATUM=17.00m
ELEVATION 2C

Legend:

Lighting protection HVI Conductor — — · — · —

Drawing Notes:

Lightning protection to run behind rain water pipes and drain pipes.

Rev	Description	Date	Chk	Apr
P01	Information Issue	11.05.23	NH	PK

Project No: 502705 | Scale @ A0: 1:50 | Drawn By: JP

Ingleton Wood
Property and Construction Consultants
Issuing office: Colchester
T: 01206 224270
www.ingletonwood.co.uk
Vision, form and function

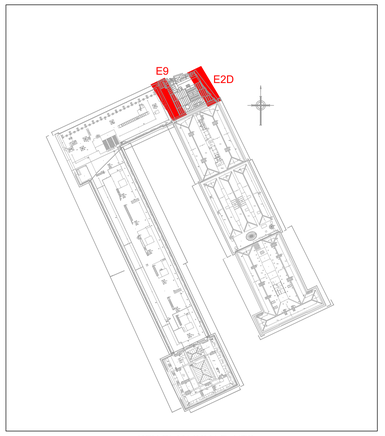
Project:
HSLI Stone Building
Lightning Protection System
Stone Buildings
London WC2A 3TL

Client:
Honourable Society of Lincoln's Inn

Title:
Lightning Protection
Elevation 2B & 2C

Drawing Number:
HSLISB-IWD-XX-XX-DR-E-5812

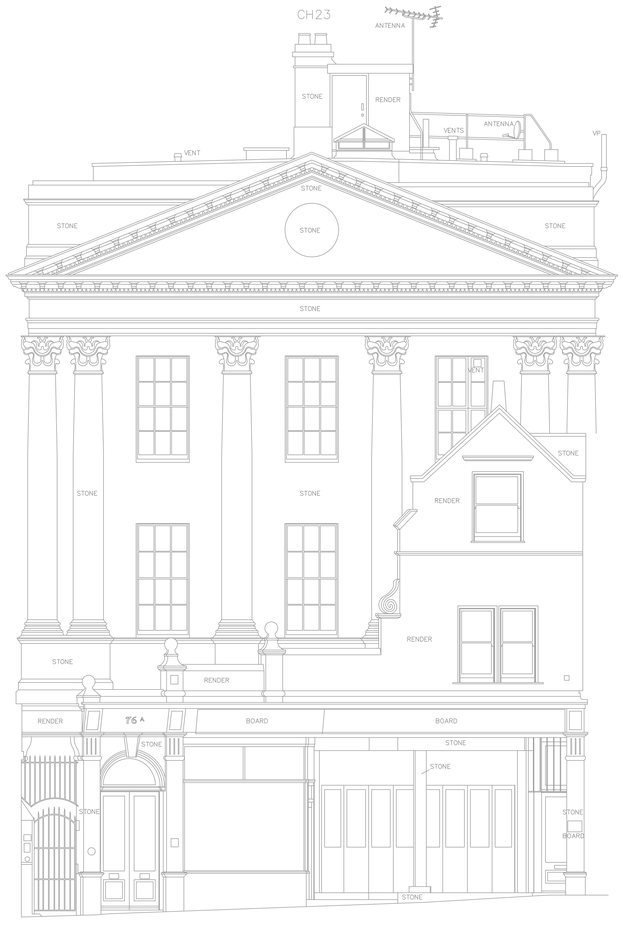
Status: S2 | Purpose of Issue: Information | Revision: P01



KEY PLAN SCALE: NTS

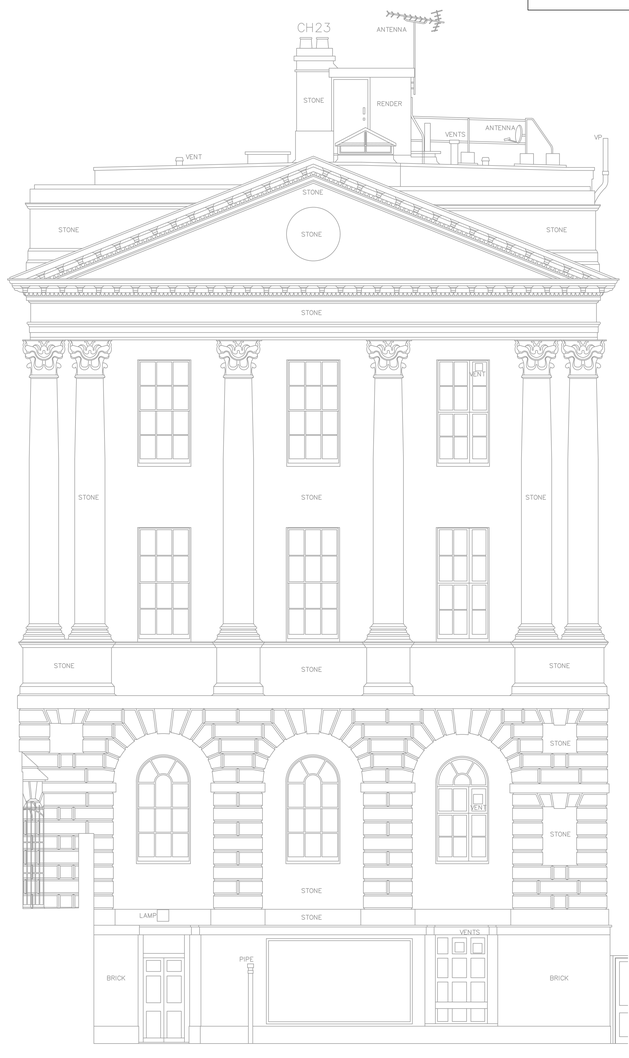
Notes :

1. Do not scale this drawing (printed or electronic versions).
2. This drawing indicates design intent only and shall not be used as a working drawing or installation drawing. The contractor shall be responsible for producing his own fully coordinated working drawings.
3. Contractors must check all dimensions on site prior to ordering materials or commencing work. Any discrepancies must be reported to the engineer immediately.
4. This drawing is copyright and is for use on this site only.
5. All structural & architectural elements, where indicated, have been imported from the engineers drawings and reference should be made to the individual structural / architectural drawings for exact dimensions.
6. This drawing should be read in conjunction with all relevant consultants, specialist sub-contractors, supply chain drawings and specifications for exact setting out, size and type of component.
7. Discrepancies and/or ambiguities within this drawing, between it and information given elsewhere, must be reported immediately to Ingleton Wood for clarification before proceeding.
8. All works to be carried out in accordance with the latest British Standards/Codes of Practice/Building Regulations unless specifically directed otherwise in the specification.
9. Responsibility for the reproduction of this drawing in paper form, or if issued in electronic format, lies with the recipient to check that all information has been replicated in full and is correct when compared to the original paper or electronic image.
10. Graphical representations of equipment on this drawing have been co-ordinated, but are approximations only. Please refer to specifications and / or details for actual sizes and or specific contractor construction information.
11. All builders work associated with the mechanical and electrical services installation must be included for.
12. Contractor to review site Asbestos register prior to commencing works.
13. All power and control wiring associated with the mechanical services installation must be included for.
14. The position of all equipment shown is indicative only. Final positions to be determined & indicated on working drawings.
15. Refer to presence detector installation instructions for wiring, switch type & final position.
16. Refer to mechanical drawings for extract fan details.
17. Refer to mechanical layout drawings for positions of outlets to mechanical plant.
18. Cable containment (if indicated) is shown as indicative only. Contractor to determine cable containment routes and sizes to suit the installation.



DATUM=17.00m

ELEVATION 2D



DATUM=17.00m

ELEVATION 9

Rev	Description	Date	Chk	Apr
P01	Information Issue	11.05.23	NH	PK

Project No:	Scale @ A0:	Drawn By:
502705	1:50	JP

Ingleton Wood

Property and Construction Consultants

Issuing office: Colchester
t: 01206 224270
www.ingletonwood.co.uk

Vision, form and function

Project:
HSLI Stone Building
Lightning Protection System
Stone Buildings
London WC2A 3TL

Client:
Honourable Society of Lincoln's Inn

Title:
Lightning Protection
Elevation 2D & E9

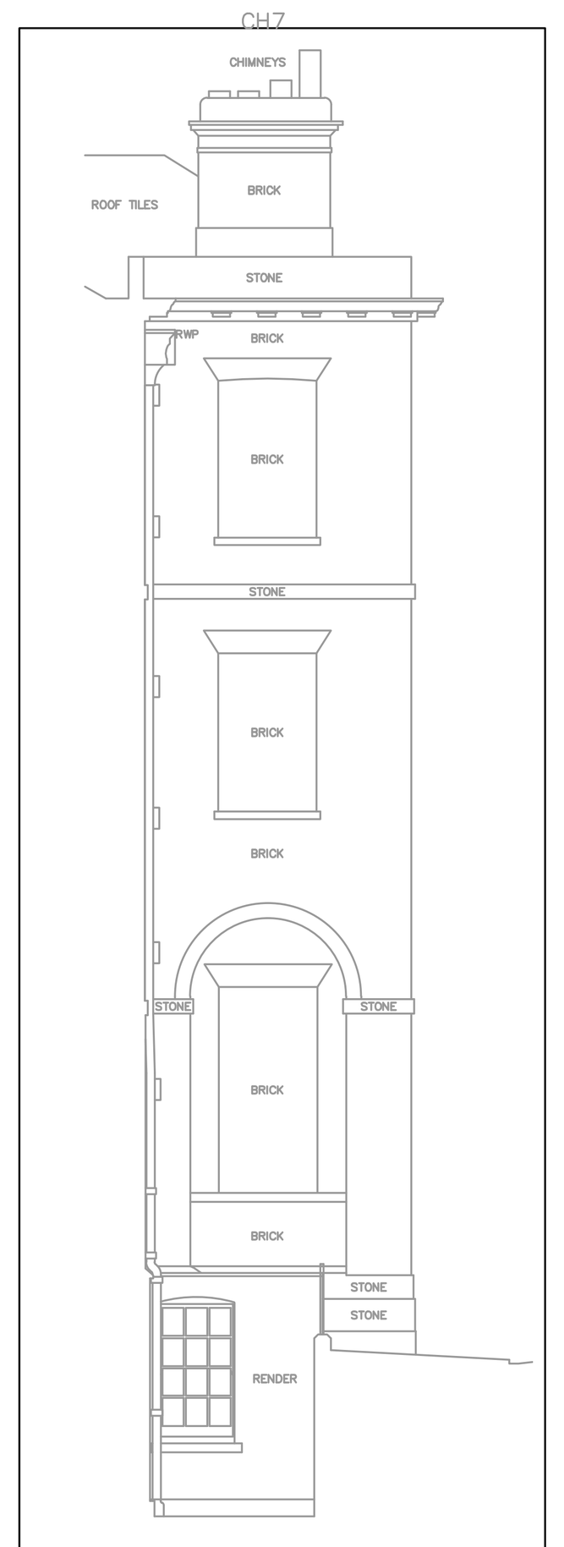
Drawing Number:
HSLISB-IWD-XX-XX-DR-E-5813

Status:	Purpose of Issue:	Revision:
S2	Information	P01

DATUM=17.00m

ELEVATION 3A

Scale 1:50



DATUM=17.00m

ELEVATION 12

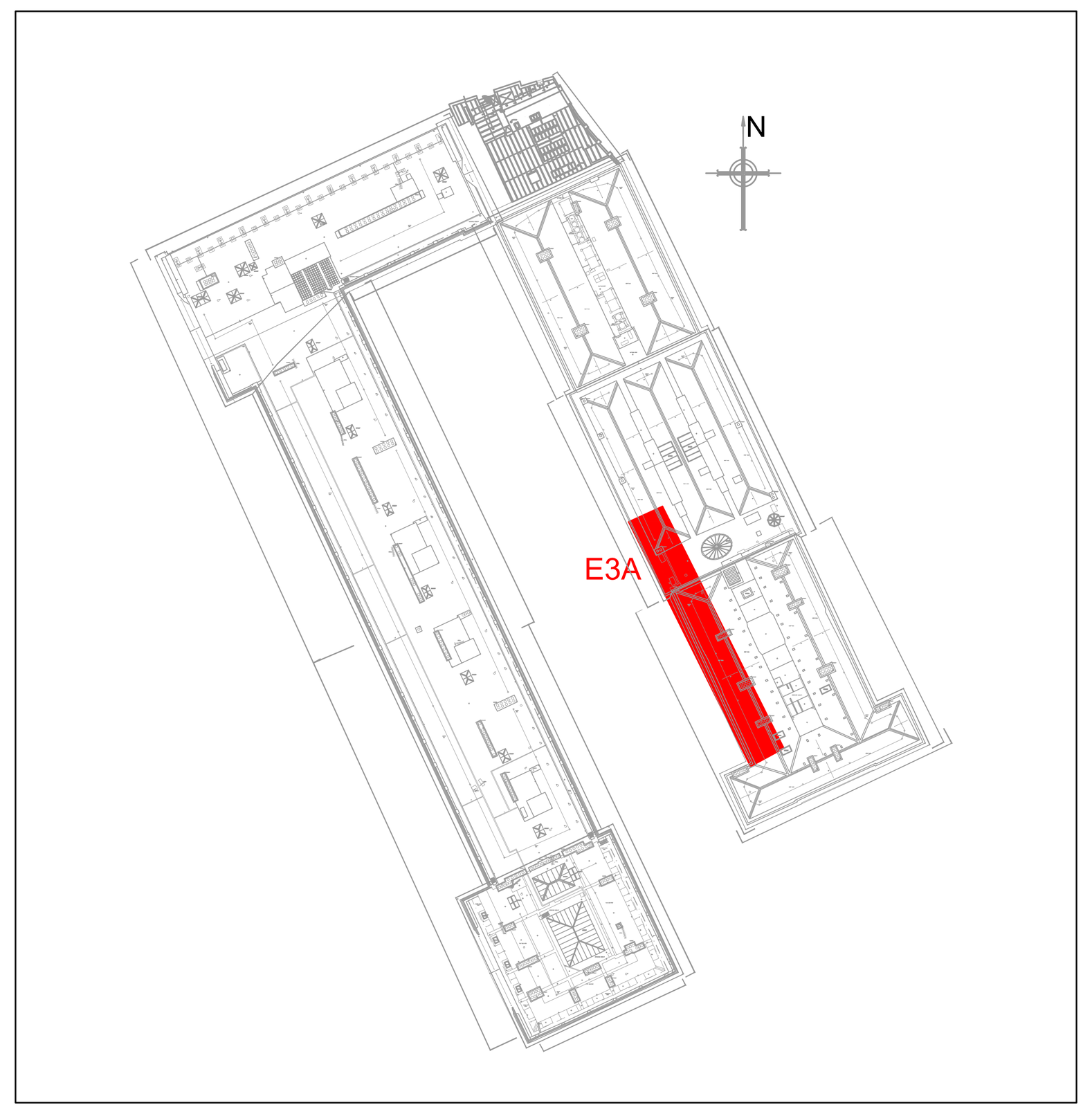
Scale 1:100

0m 1m 2m 3m 4m

Scale 1:50

0m 2m 4m 6m 8m

Scale 1:100



KEY PLAN SCALE: NTS

Notes:-

1. Do not scale this drawing (printed or electronic versions).
2. This drawing indicates design intent only and shall not be used as a working drawing or installation drawing. The contractor shall be responsible for producing his own fully coordinated working drawings.
3. Contractors must check all dimensions on site prior to ordering materials or commencing work. Any discrepancies must be reported to the engineer immediately.
4. This drawing is copyright and is for use on this site only.
5. All structural & architectural elements, where indicated, have been imported from the engineers drawings and reference should be made to the individual structural / architectural drawings for exact dimensions.
6. This drawing should be read in conjunction with all relevant consultants, specialist sub-contractors, supply chain drawings and specifications for exact setting out, size and type of component.
7. Discrepancies and/or ambiguities within this drawing, between it and information given elsewhere, must be reported immediately to Ingleton Wood for clarification before proceeding.
8. All works to be carried out in accordance with the latest British Standards/Codes of Practice/Building Regulations unless specifically directed otherwise in the specification.
9. Responsibility for the reproduction of this drawing in paper form, or if issued in electronic format, lies with the recipient to check that all information has been replicated in full and is correct when compared to the original paper or electronic image.
10. Graphical representations of equipment on this drawing have been co-ordinated, but are approximations only. Please refer to specifications and / or details for actual sizes and or specific contractor construction information.
11. All builders work associated with the mechanical and electrical services installation must be included for.
12. Contractor to review site Asbestos register prior to commencing works.
13. All power and control wiring associated with the mechanical services installation must be included for.
14. The position of all equipment shown is indicative only. Final positions to be determined & indicated on working drawings.
15. Refer to presence detector installation instructions for wiring, switch type & final position.
16. Refer to mechanical drawings for extract fan details.
17. Refer to mechanical layout drawings for positions of outlets to mechanical plant.
18. Cable containment (if indicated) is shown as indicative only. Contractor to determine cable containment routes and sizes to suit the installation.

Note:-

- HVI conductor shall be painted to match the existing stonework/paint
- Where HVI conductors are installed behind/adjacent RWP's these shall be coloured black

Legend:

Lighting protection HVI Conductor

Drawing Notes:

Lightning protection to run behind rain water pipes and drain pipes.

Rev	Description	Date	Chk	Apr
P02	Scale Bar Added	01.02.24	NH	PK
P01	Information Issue	11.05.23	NH	PK

Project No: 502705 | Scale @ A0: 1:50/1:100 | Drawn By: JP

Ingleton Wood
Property and Construction Consultants
Issuing office: Colchester
T: 01206 224270
www.ingletonwood.co.uk
Vision, form and function

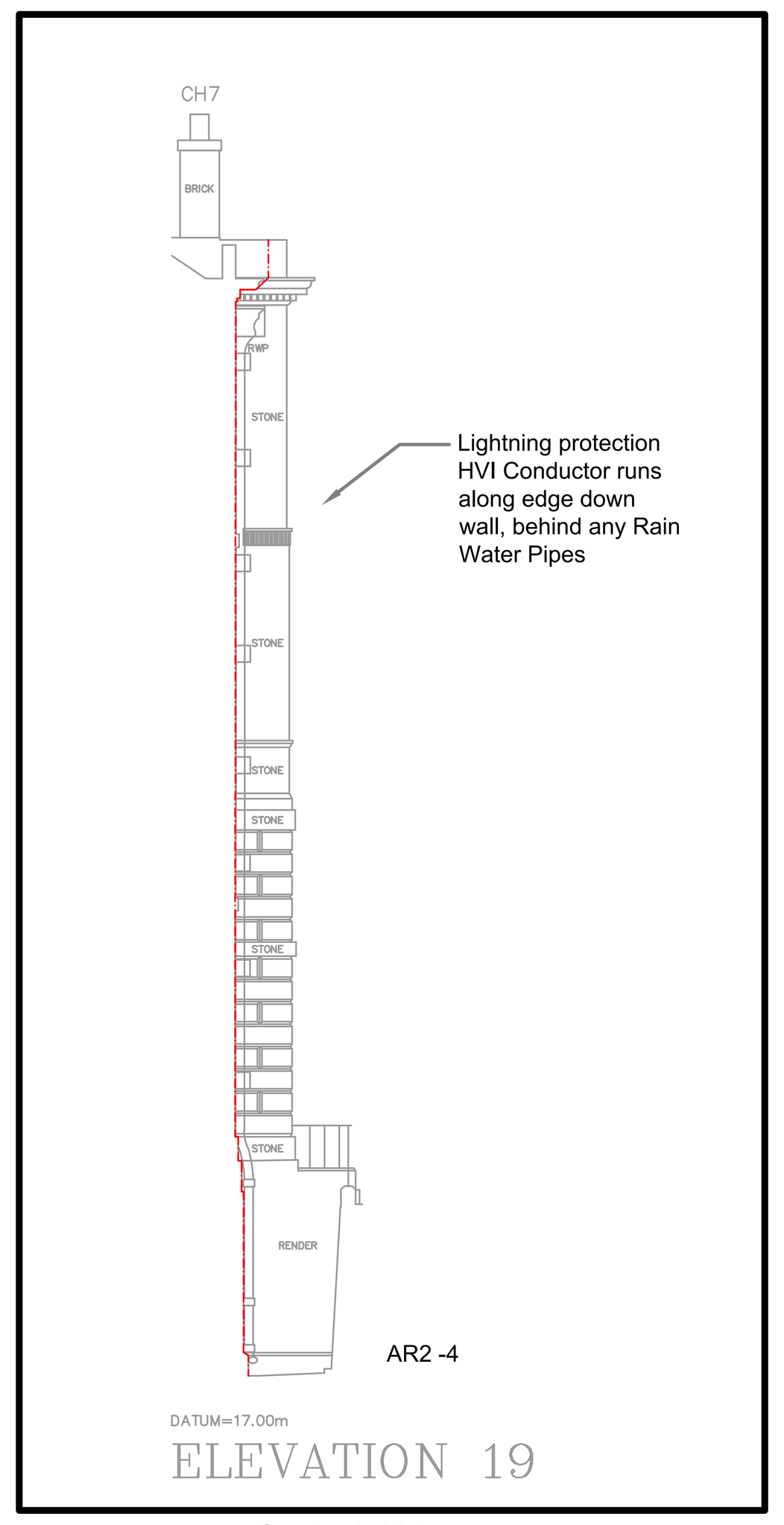
Project:
HSLI Stone Building
Lightning Protection System
Stone Buildings
London WC2A 3TL

Client:
Honourable Society of Lincoln's Inn

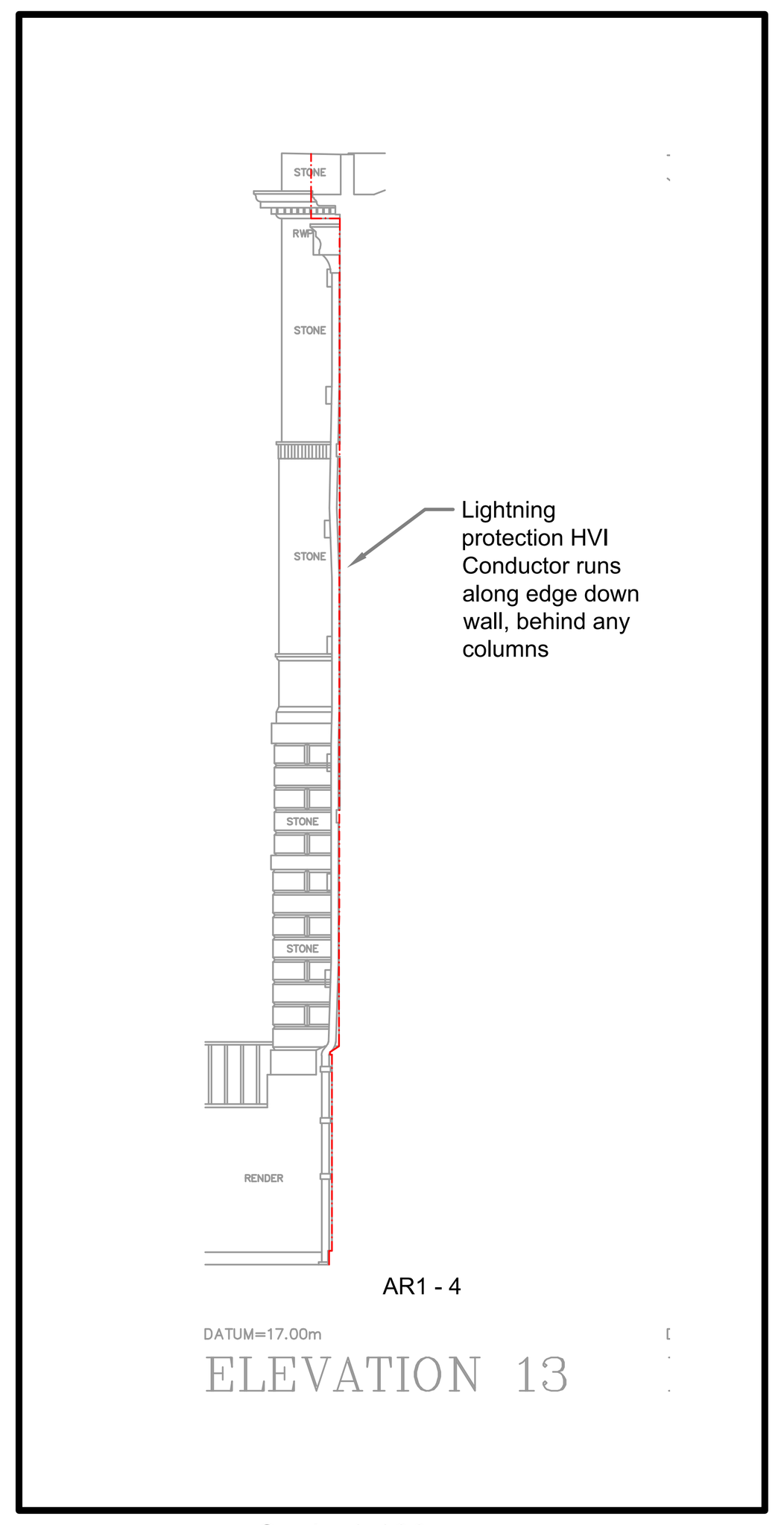
Title:
Lightning Protection
Elevation E3A

Drawing Number:
HSLISB-IWD-XX-XX-DR-E-5821

Status: S2 | Purpose of Issue: Information | Revision: P02



Scale 1:100



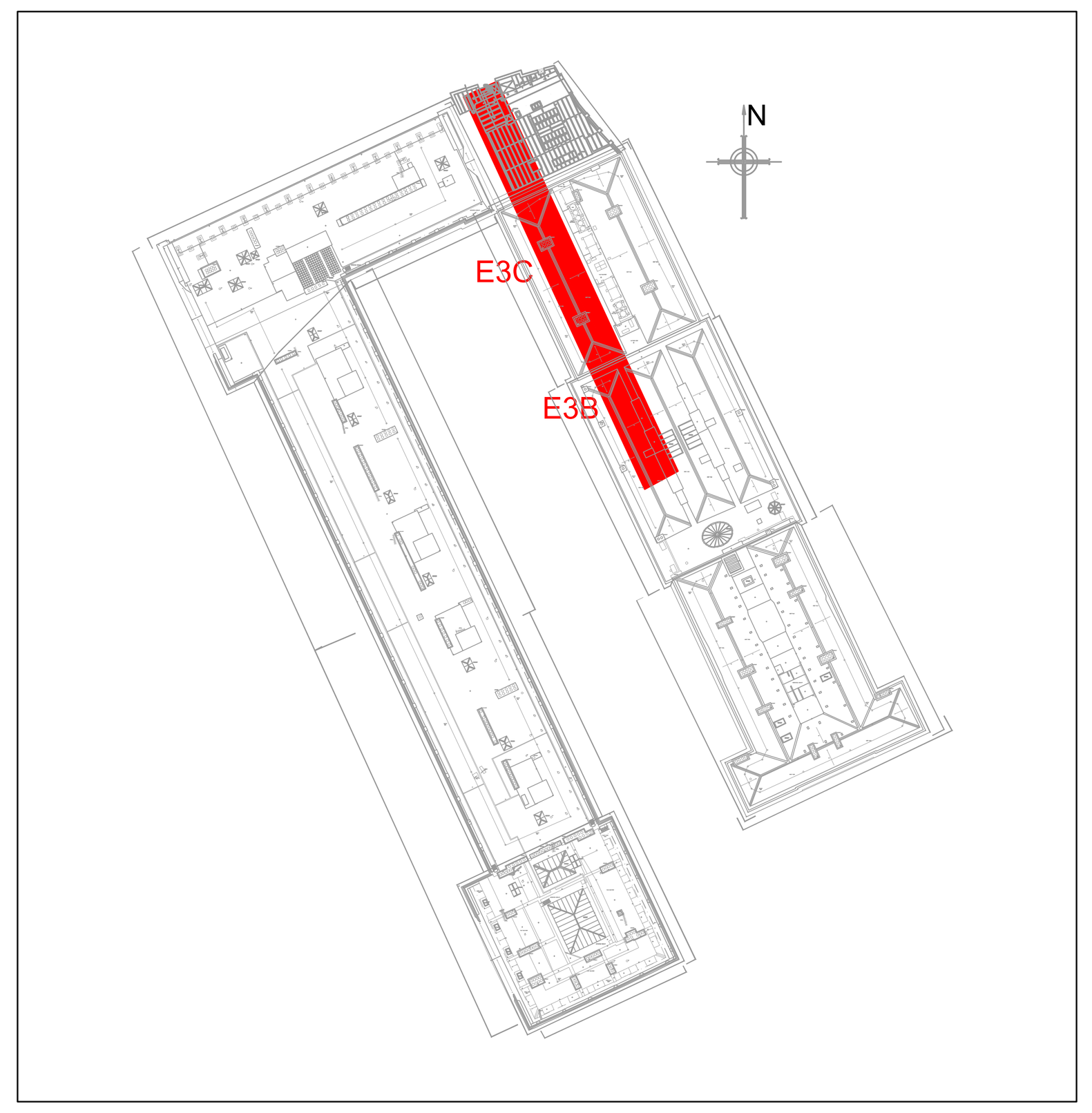
Scale 1:100

0m 1m 2m 3m 4m

Scale 1:50

0m 2m 4m 6m 8m

Scale 1:100



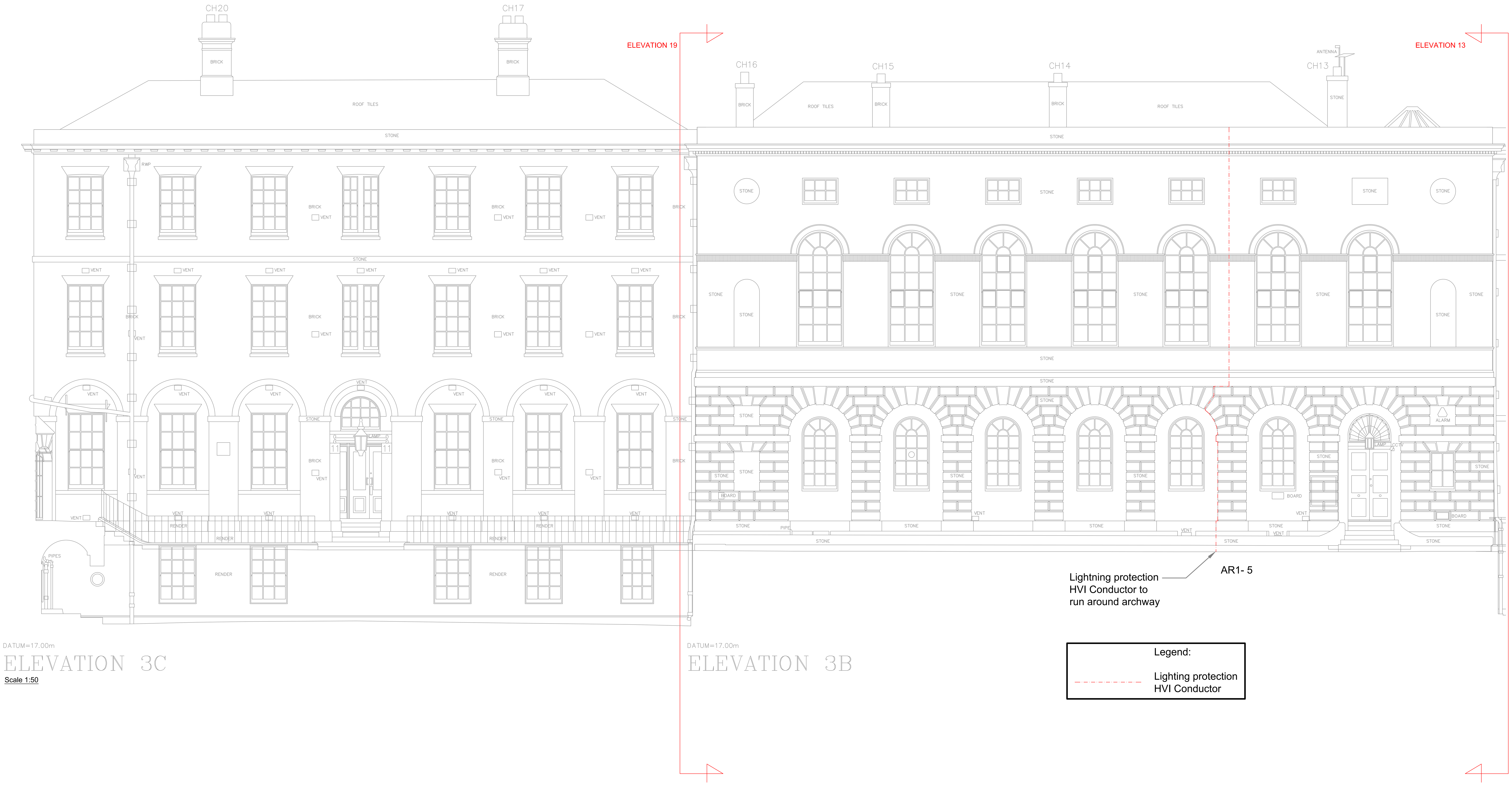
KEY PLAN SCALE: NTS

Notes:-

1. Do not scale this drawing (printed or electronic versions).
2. This drawing indicates design intent only and shall not be used as a working drawing or installation drawing. The contractor shall be responsible for producing his own fully coordinated working drawings.
3. Contractors must check all dimensions on site prior to ordering materials or commencing work. Any discrepancies must be reported to the engineer immediately.
4. This drawing is copyright and is for use on this site only.
5. All structural & architectural elements, where indicated, have been imported from the engineers drawings and reference should be made to the individual structural / architectural drawings for exact dimensions.
6. This drawing should be read in conjunction with all relevant consultants, specialist sub-contractors, supply chain drawings and specifications for exact setting out, size and type of component.
7. Discrepancies and/or ambiguities within this drawing, between it and information given elsewhere, must be reported immediately to Ingleton Wood for clarification before proceeding.
8. All works to be carried out in accordance with the latest British Standards/Codes of Practice/Building Regulations unless specifically directed otherwise in the specification.
9. Responsibility for the reproduction of this drawing in paper form, or if issued in electronic format, lies with the recipient to check that all information has been replicated in full and is correct when compared to the original paper or electronic image.
10. Graphical representations of equipment on this drawing have been co-ordinated, but are approximations only. Please refer to specifications and / or details for actual sizes and or specific contractor construction information.
11. All builders work associated with the mechanical and electrical services installation must be included for.
12. Contractor to review site Asbestos register prior to commencing works.
13. All power and control wiring associated with the mechanical services installation must be included for.
14. The position of all equipment shown is indicative only. Final positions to be determined & indicated on working drawings.
15. Refer to presence detector installation instructions for wiring, switch type & final position.
16. Refer to mechanical drawings for extract fan details.
17. Refer to mechanical layout drawings for positions of outlets to mechanical plant.
18. Cable containment (if indicated) is shown as indicative only. Contractor to determine cable containment routes and sizes to suit the installation.

Note:-

- HVI conductor shall be painted to match the existing stonework/paint
- Where HVI conductors are installed behind/adjacent RWP's these shall be coloured black



Scale 1:50

Legend:

Lighting protection HVI Conductor

Rev	Description	Date	Chk	Apr
P02	Scale Bar Added	01.02.24	NH	PK
P01	Information Issue	11.05.23	NH	PK

Project No: 502705 | Scale @ A0: 1:50/1:100 | Drawn By: JP

Ingleton Wood
Property and Construction Consultants
Issuing office: Colchester
T: 01206 224270
www.ingletonwood.co.uk
Vision, form and function

Project:
HSLI Stone Building
Lightning Protection System
Stone Buildings
London WC2A 3TL

Client:
Honourable Society of Lincoln's Inn

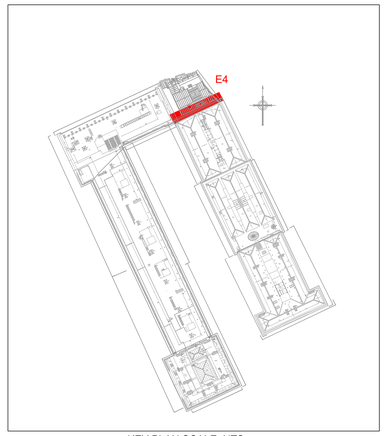
Title:
Lightning Protection
Elevation E3C & E3B

Drawing Number:
HSLISB-IWD-XX-XX-DR-E-5820

Status: S2 | Purpose of Issue: Information | Revision: P02

DATUM=17.00m

ELEVATION 4



KEY PLAN SCALE: NTS

All dimensions are to be checked and verified on-site by the Main Contractor prior to commencement; any discrepancies are to be reported to the Contract Administrator.

This drawing is to be read in conjunction with all other relevant drawings and specifications

Do Not Scale

Notes :

1. Do not scale this drawing (printed or electronic versions).
2. This drawing indicates design intent only and shall not be used as a working drawing or installation drawing. The contractor shall be responsible for producing his own fully coordinated working drawings.
3. Contractors must check all dimensions on site prior to ordering materials or commencing work. Any discrepancies must be reported to the engineer immediately.
4. This drawing is copyright and is for use on this site only.
5. All structural & architectural elements, where indicated, have been imported from the engineers drawings and reference should be made to the individual structural / architectural drawings for exact dimensions.
6. This drawing should be read in conjunction with all relevant consultants, specialist sub-contractors, supply chain drawings and specifications for exact setting out, size and type of component.
7. Discrepancies and/or ambiguities within this drawing, between it and information given elsewhere, must be reported immediately to Ingleton Wood for clarification before proceeding.
8. All works to be carried out in accordance with the latest British Standards/Codes of Practice/Building Regulations unless specifically directed otherwise in the specification.
9. Responsibility for the reproduction of this drawing in paper form, or if issued in electronic format, lies with the recipient to check that all information has been replicated in full and is correct when compared to the original paper or electronic image.
10. Graphical representations of equipment on this drawing have been co-ordinated, but are approximations only. Please refer to specifications and / or details for actual sizes and or specific contractor construction information.
11. All builders work associated with the mechanical and electrical services installation must be included for.
12. Contractor to review site Asbestos register prior to commencing works.
13. All power and control wiring associated with the mechanical services installation must be included for.
14. The position of all equipment shown is indicative only. Final positions to be determined & indicated on working drawings.
15. Refer to presence detector installation instructions for wiring, switch type & final position.
16. Refer to mechanical drawings for extract fan details.
17. Refer to mechanical layout drawings for positions of outlets to mechanical plant.
18. Cable containment (if indicated) is shown as indicative only. Contractor to determine cable containment routes and sizes to suit the installation.

Rev	Description	Date	Chk	Apr
P01	Information Issue	11.05.23	NH	PK

Project No:	Scale @ A2:	Drawn By:
502705	1:50	JP

Ingleton Wood
Property and Construction Consultants
Issuing office: Colchester
T: 01206 234570
www.ingletonwood.co.uk

Vision, form and function

Project:
HSLI Stone Building
Lightning Protection System
Stone Buildings
London WC2A 3TL

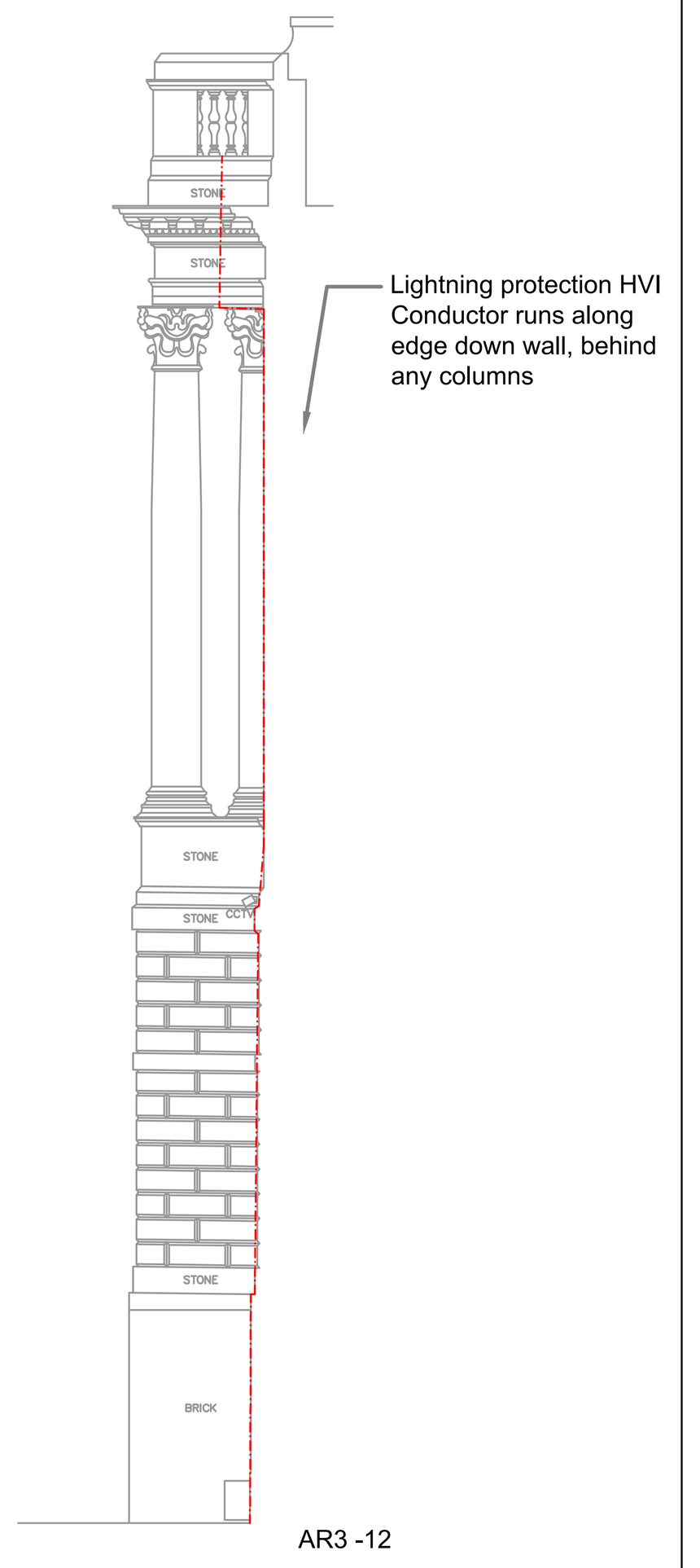
Client:
Honourable Society of Lincoln's Inn

Title:
Lightning Protection
Elevation E4

Drawing Number:
HSLISB-IWD-XX-XX-DR-E-5814

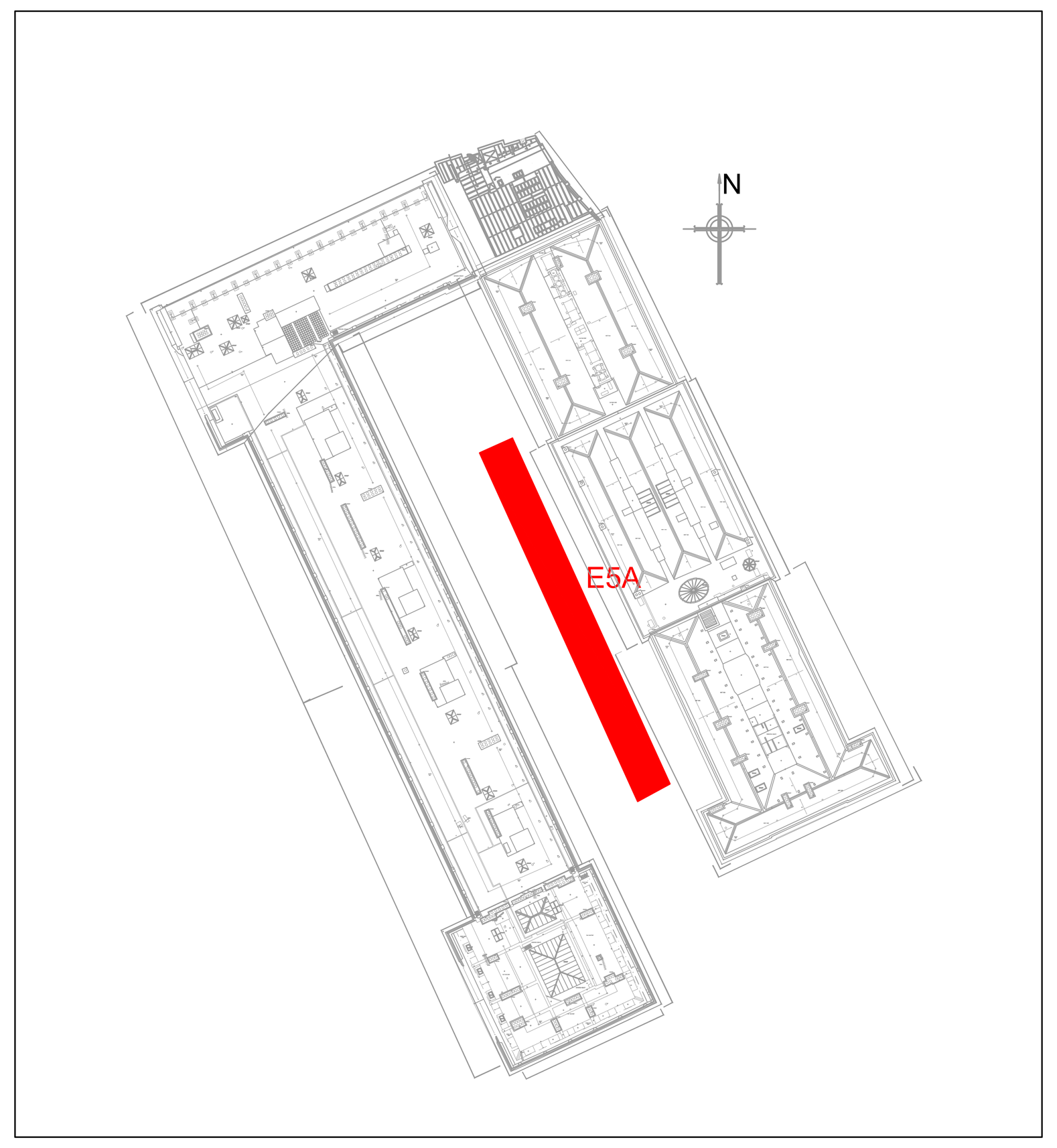
Status:	Purpose of Issue:	Revision:
S2	Information	P01

0m 1m 2m 3m 4m
Scale 1:50
0m 2m 4m 6m 8m
Scale 1:100



ELEVATION 15

Scale 1:100



KEY PLAN SCALE: NTS

Notes:-

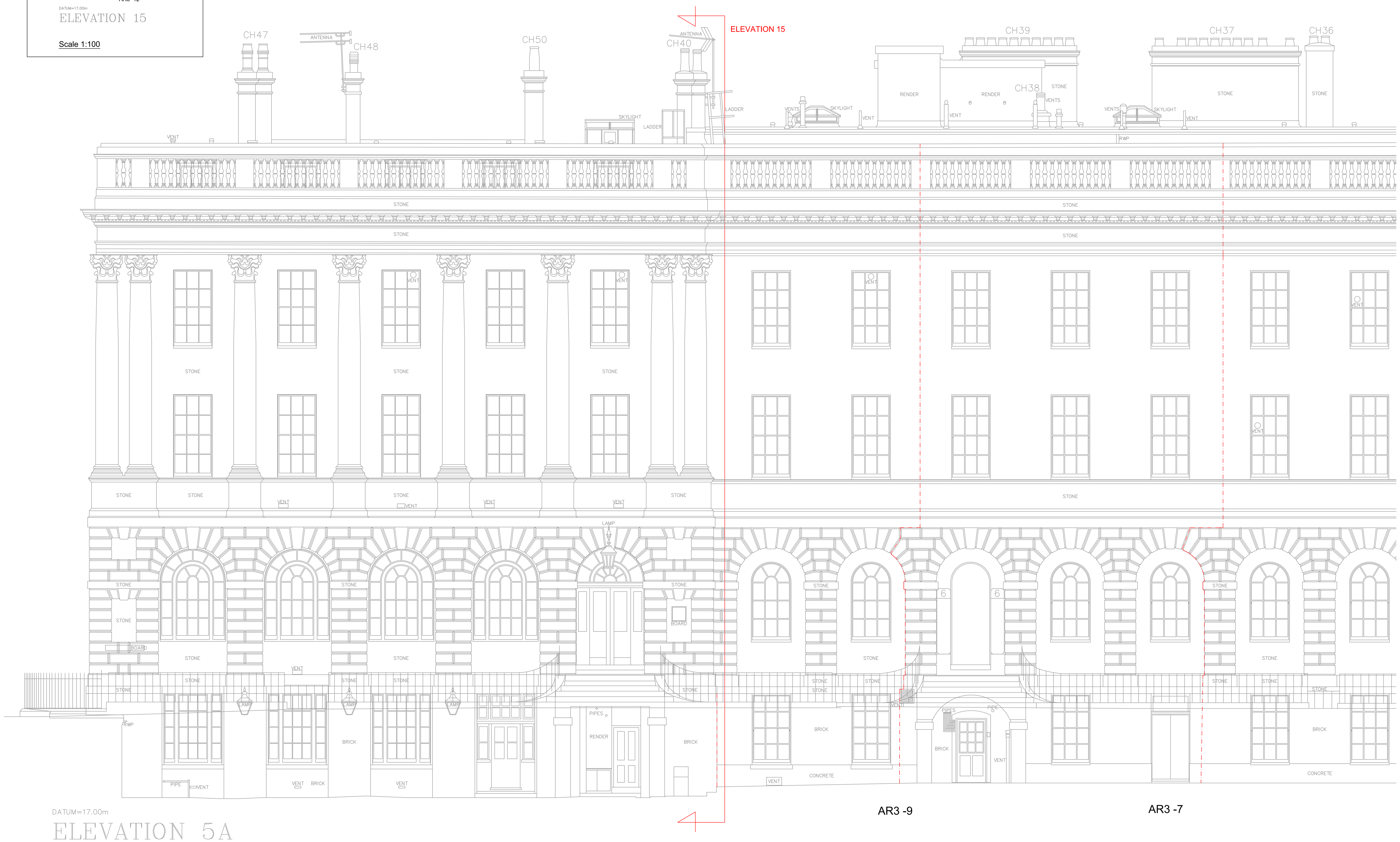
1. Do not scale this drawing (printed or electronic versions).
2. This drawing indicates design intent only and shall not be used as a working drawing or installation drawing. The contractor shall be responsible for producing his own fully coordinated working drawings.
3. Contractors must check all dimensions on site prior to ordering materials or commencing work. Any discrepancies must be reported to the engineer immediately.
4. This drawing is copyright and is for use on this site only.
5. All structural & architectural elements, where indicated, have been imported from the engineers drawings and reference should be made to the individual structural / architectural drawings for exact dimensions.
6. This drawing should be read in conjunction with all relevant consultants, specialist sub-contractors, supply chain drawings and specifications for exact setting out, size and type of component.
7. Discrepancies and/or ambiguities within this drawing, between it and information given elsewhere, must be reported immediately to Ingleton Wood for clarification before proceeding.
8. All works to be carried out in accordance with the latest British Standards/Codes of Practice/Building Regulations unless specifically directed otherwise in the specification.
9. Responsibility for the reproduction of this drawing in paper form, or if issued in electronic format, lies with the recipient to check that all information has been replicated in full and is correct when compared to the original paper or electronic image.
10. Graphical representations of equipment on this drawing have been co-ordinated, but are approximations only. Please refer to specifications and / or details for actual sizes and or specific contractor construction information.
11. All builders work associated with the mechanical and electrical services installation must be included for.
12. Contractor to review site Asbestos register prior to commencing works.
13. All power and control wiring associated with the mechanical services installation must be included for.
14. The position of all equipment shown is indicative only. Final positions to be determined & indicated on working drawings.
15. Refer to presence detector installation instructions for wiring, switch type & final position.
16. Refer to mechanical drawings for extract fan details.
17. Refer to mechanical layout drawings for positions of outlets to mechanical plant.
18. Cable containment (if indicated) is shown as indicative only. Contractor to determine cable containment routes and sizes to suit the installation.

Legend:

Lighting protection HVI Conductor

Note:-

- HVI conductor shall be painted to match the existing stonework/paint
- Where HVI conductors are installed behind/adjacent RWP's these shall be coloured black



ELEVATION 5A

Scale 1:50

Rev	Description	Date	Chk	Apr
P02	Scale Bar Added	01.02.24	NH	PK
P01	Information Issue	11.05.23	NH	PK

Project No: 502705
Scale @ A0: 1:50/1:100
Drawn By: JP

Ingleton Wood
Property and Construction Consultants
Issuing office: Colchester
T: 01206 224270
www.ingletonwood.co.uk
Vision, form and function

Project:
HSLI Stone Building
Lightning Protection System
Stone Buildings
London WC2A 3TL

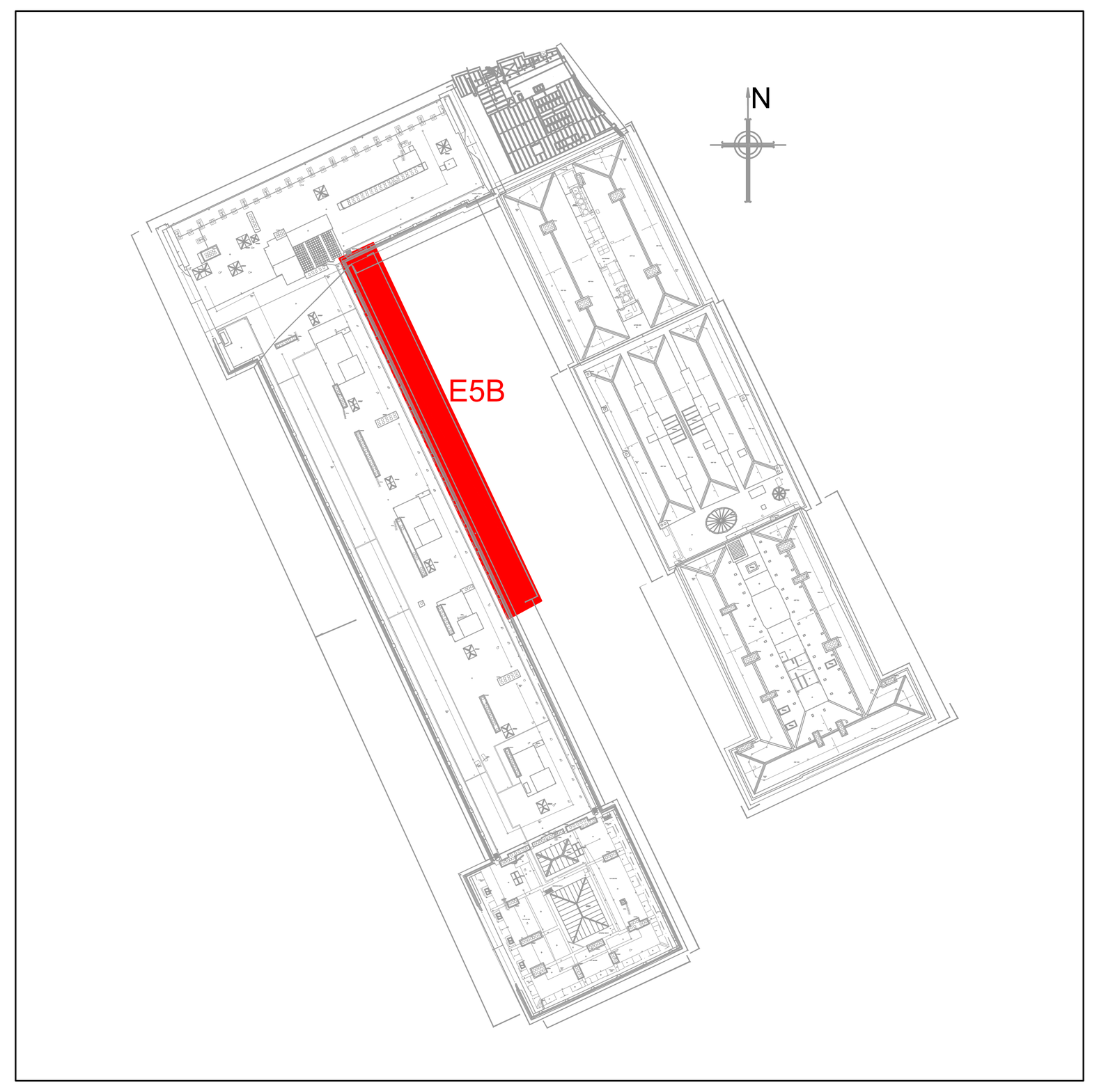
Client:
Honourable Society of Lincoln's Inn

Title:
Lightning Protection
Elevation E5A

Drawing Number:
HSLISB-IWD-XX-XX-DR-E-5818

Status: S2
Purpose of Issue: Information
Revision: P02

0m 1m 2m 3m 4m
Scale 1:50



KEY PLAN SCALE: NTS

Notes:-

1. Do not scale this drawing (printed or electronic versions).
2. This drawing indicates design intent only and shall not be used as a working drawing or installation drawing. The contractor shall be responsible for producing his own fully coordinated working drawings.
3. Contractors must check all dimensions on site prior to ordering materials or commencing work. Any discrepancies must be reported to the engineer immediately.
4. This drawing is copyright and is for use on this site only.
5. All structural & architectural elements, where indicated, have been imported from the engineers drawings and reference should be made to the individual structural / architectural drawings for exact dimensions.
6. This drawing should be read in conjunction with all relevant consultants, specialist sub-contractors, supply chain drawings and specifications for exact setting out, size and type of component.
7. Discrepancies and/or ambiguities within this drawing, between it and information given elsewhere, must be reported immediately to Ingleton Wood for clarification before proceeding.
8. All works to be carried out in accordance with the latest British Standards/Codes of Practice/Building Regulations unless specifically directed otherwise in the specification.
9. Responsibility for the reproduction of this drawing in paper form, or if issued in electronic format, lies with the recipient to check that all information has been replicated in full and is correct when compared to the original paper or electronic image.
10. Graphical representations of equipment on this drawing have been co-ordinated, but are approximations only. Please refer to specifications and / or details for actual sizes and or specific contractor construction information.
11. All builders work associated with the mechanical and electrical services installation must be included for.
12. Contractor to review site Asbestos register prior to commencing works.
13. All power and control wiring associated with the mechanical services installation must be included for.
14. The position of all equipment shown is indicative only. Final positions to be determined & indicated on working drawings.
15. Refer to presence detector installation instructions for wiring, switch type & final position.
16. Refer to mechanical drawings for extract fan details.
17. Refer to mechanical layout drawings for positions of outlets to mechanical plant.
18. Cable containment (if indicated) is shown as indicative only. Contractor to determine cable containment routes and sizes to suit the installation.

Note:-

- HVI conductor shall be painted to match the existing stonework/paint
- Where HVI conductors are installed behind/adjacent RWP's these shall be coloured black

ELEVATION 5B

Legend:

Lighting protection HVI Conductor

Rev	Description	Date	Chk	Apr
P02	Scale Bar Added	01.02.24	NH	PK
P01	Information Issue	11.05.23	NH	PK

Project No:	Scale @ A0:	Drawn By:
502705	1:50	JP

Ingleton Wood
Property and Construction Consultants
Issuing office: Colchester
T: 01206 224270
www.ingletonwood.co.uk
Vision, form and function

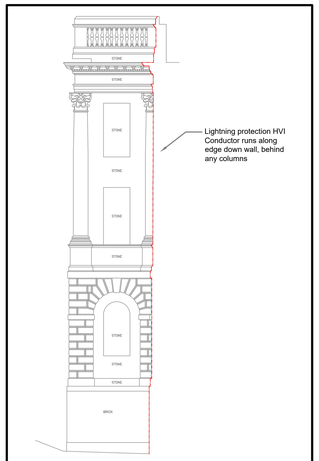
Project:
HSLI Stone Building
Lightning Protection System
Stone Buildings
London WC2A 3TL

Client:
Honourable Society of Lincoln's Inn

Title:
Lightning Protection
Elevation E5B

Drawing Number:
HSLISB-IWD-XX-XX-DR-E-5819

Status:	Purpose of Issue:	Revision:
S2	Information	P02



ELEVATION 17

Scale 1:100

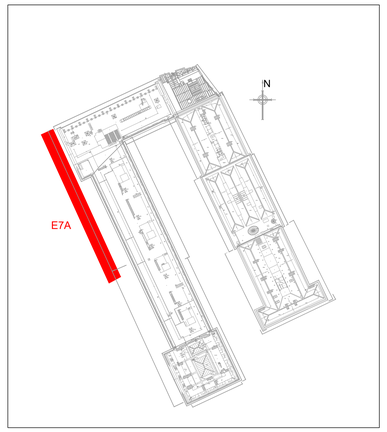
Legend:

Lighting protection HVI Conductor

HVI Mast

Lightning protection HVI Conductor to run between brickwork to lay flush with wall

0m 1m 2m 3m 4m
Scale 1:50
0m 2m 4m 6m 8m
Scalle 1:100



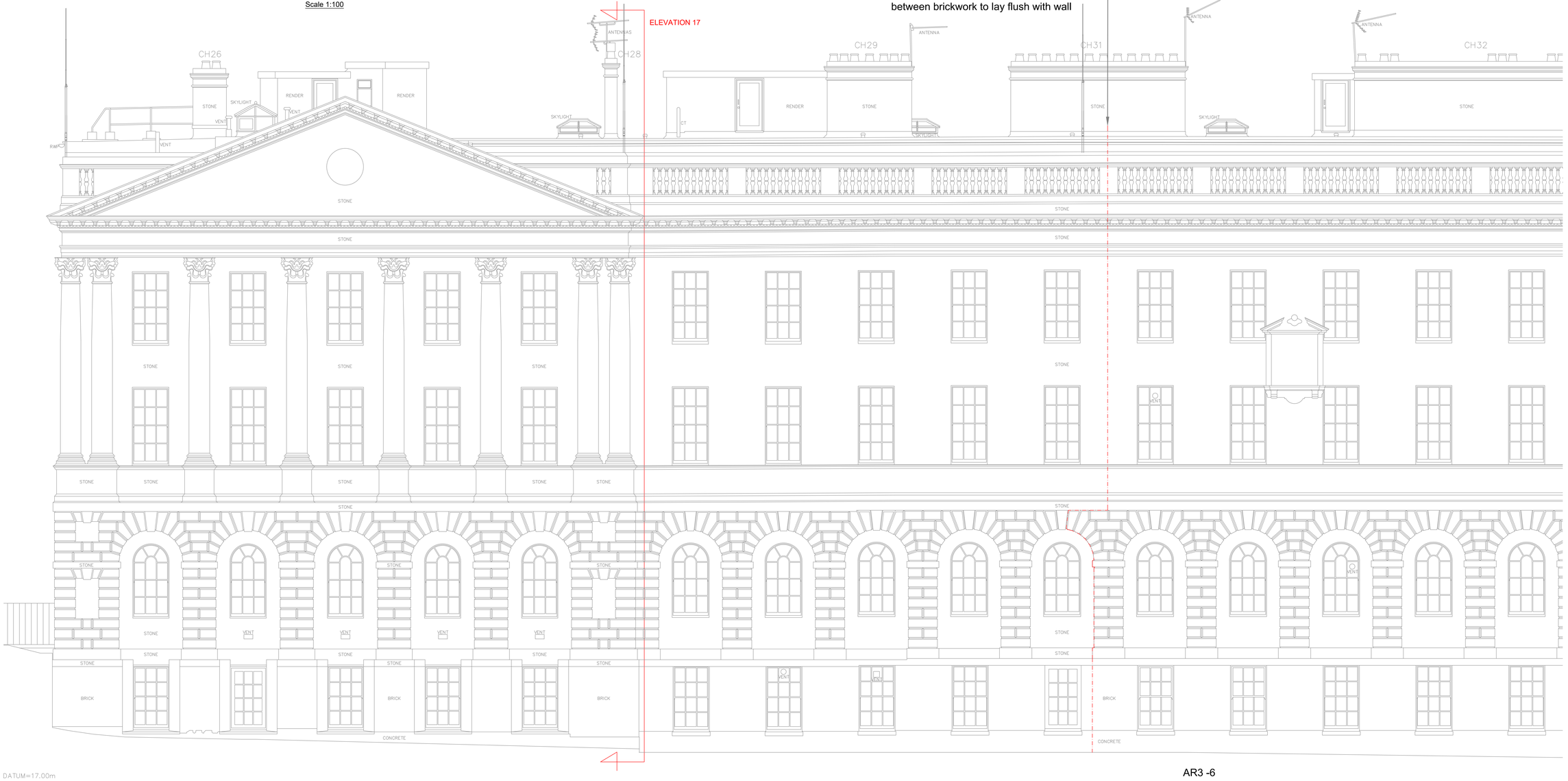
KEY PLAN SCALE: NTS

Notes:-

1. Do not scale this drawing (printed or electronic versions).
2. This drawing indicates design intent only and shall not be used as a working drawing or installation drawing. The contractor shall be responsible for producing his own fully coordinated working drawings.
3. Contractors must check all dimensions on site prior to ordering materials or commencing work. Any discrepancies must be reported to the engineer immediately.
4. This drawing is copyright and is for use on this site only.
5. All structural & architectural elements, where indicated, have been imported from the engineers drawings and reference should be made to the individual structural / architectural drawings for exact dimensions.
6. This drawing should be read in conjunction with all relevant consultants, specialist sub-contractors, supply chain drawings and specifications for exact setting out, size and type of component.
7. Discrepancies and/or ambiguities within this drawing, between it and information given elsewhere, must be reported immediately to Ingleton Wood for clarification before proceeding.
8. All works to be carried out in accordance with the latest British Standards/Codes of Practice/Building Regulations unless specifically directed otherwise in the specification.
9. Responsibility for the reproduction of this drawing in paper form, or if issued in electronic format, lies with the recipient to check that all information has been replicated in full and is correct when compared to the original paper or electronic image.
10. Graphical representations of equipment on this drawing have been co-ordinated, but are approximations only. Please refer to specifications and / or details for actual sizes and or specific contractor construction information.
11. All builders work associated with the mechanical and electrical services installation must be included for.
12. Contractor to review site Asbestos register prior to commencing works.
13. All power and control wiring associated with the mechanical services installation must be included for.
14. The position of all equipment shown is indicative only. Final positions to be determined & indicated on working drawings.
15. Refer to presence detector installation instructions for wiring, switch type & final position.
16. Refer to mechanical drawings for extract fan details.
17. Refer to mechanical layout drawings for positions of outlets to mechanical plant.
18. Cable containment (if indicated) is shown as indicative only. Contractor to determine cable containment routes and sizes to suit the installation.

Note:-

- HVI conductor shall be painted to match the existing stonework/paint
- Where HVI conductors are installed behind/adjacent RWP's these shall be coloured black
- HVI Masts are shown for illustrative purposes only and do not reflect actual appearance from ground level



DATUM=17.00m

ELEVATION 7A

Scale 1:50

AR3 -6

P02	Scale Bar Added	01.02.24	NH	PK
P01	Information Issue	11.08.23	NH	PK
Rev	Description	Date	Chk	Apr

Project No: 502705	Scale @ A0: 1:50/1:100	Drawn By: JP

Ingleton Wood

Property and Construction Consultants

Issuing office: Colchester
T: 01206 234270
www.ingletonwood.co.uk

Vision, form and function

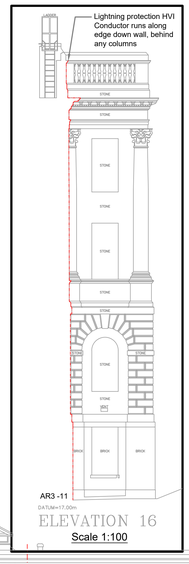
Project:
HSLI Stone Building
Lightning Protection System
Stone Buildings
London WC2A 3TL

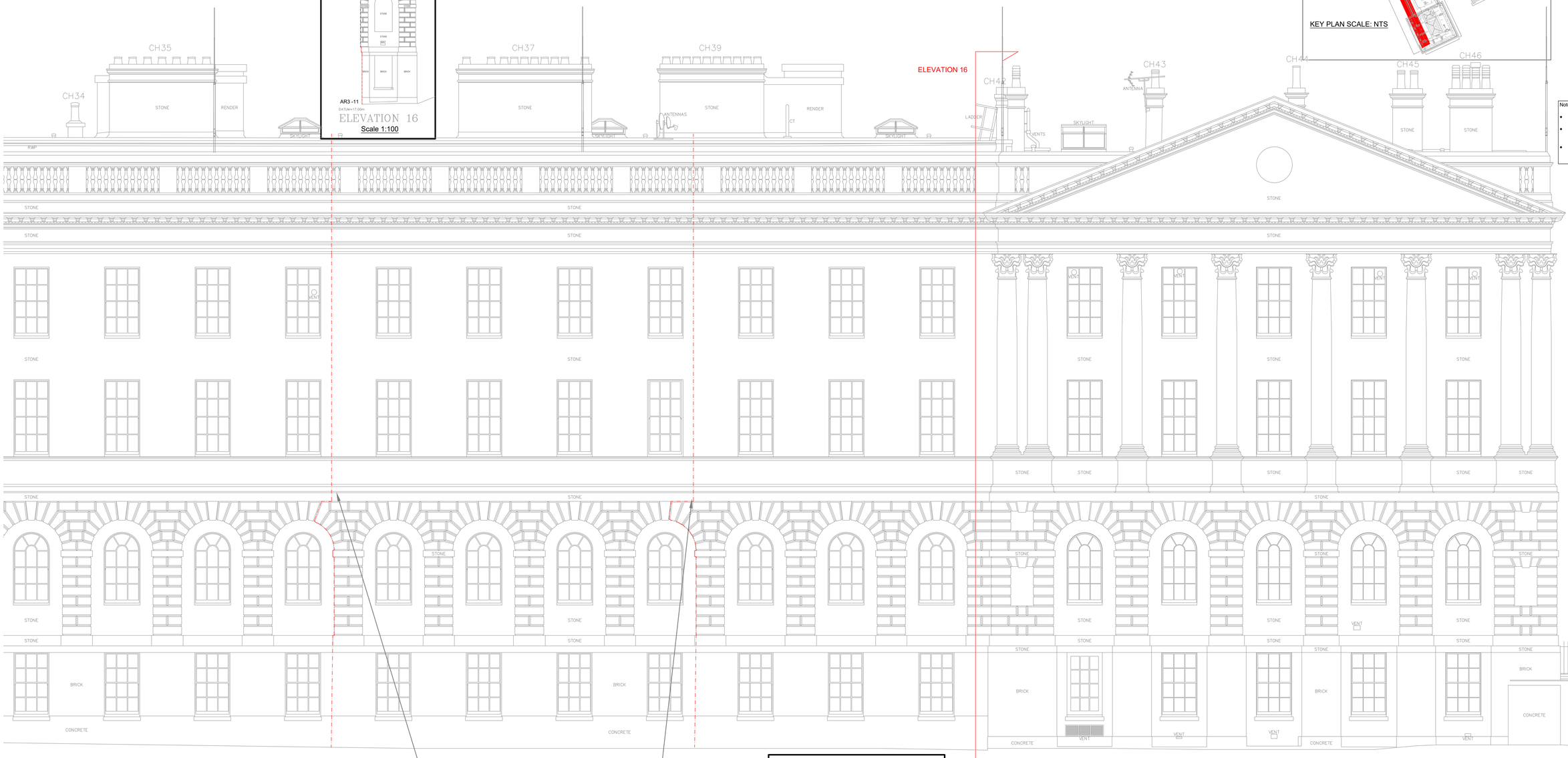
Client:
Honourable Society of Lincoln's Inn

Title:
Lightning Protection
Elevation E7A

Drawing Number:
HSLISB-IWD-XX-XX-DR-E-5816

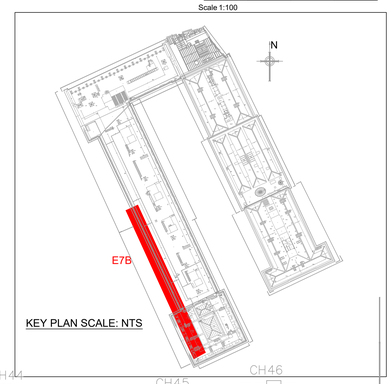
Status:	Purpose of Issue:	Revision:
S2	Information	P02





ELEVATION 7B

Scale 1:50



KEY PLAN SCALE: NTS

0m 1m 2m 3m 4m
Scale 1:50
0m 2m 4m 6m 8m
Scale 1:100

Notes:-

1. Do not scale this drawing (printed or electronic versions).
2. This drawing indicates design intent only and shall not be used as a working drawing or installation drawing. The contractor shall be responsible for producing his own fully coordinated working drawings.
3. Contractors must check all dimensions on site prior to ordering materials or commencing work. Any discrepancies must be reported to the engineer immediately.
4. This drawing is copyright and is for use on this site only.
5. All structural & architectural elements, where indicated, have been imported from the engineers drawings and reference should be made to the individual structural / architectural drawings for exact dimensions.
6. This drawing should be read in conjunction with all relevant consultants, specialist sub-contractors, supply chain drawings and specifications for exact setting out, size and type of component.
7. Discrepancies and/or ambiguities within this drawing, between it and information given elsewhere, must be reported immediately to Ingleton Wood for clarification before proceeding.
8. All works to be carried out in accordance with the latest British Standards/Codes of Practice/Building Regulations unless specifically directed otherwise in the specification.
9. Responsibility for the reproduction of this drawing in paper form, or if issued in electronic format, lies with the recipient to check that all information has been replicated in full and is correct when compared to the original paper or electronic image.
10. Graphical representations of equipment on this drawing have been co-ordinated, but are approximations only. Please refer to specifications and / or details for actual sizes and or specific contractor construction information.
11. All builders work associated with the mechanical and electrical services installation must be included for.
12. Contractor to review site Asbestos register prior to commencing works.
13. All power and control wiring associated with the mechanical services installation must be included for.
14. The position of all equipment shown is indicative only. Final positions to be determined & indicated on working drawings.
15. Refer to presence detector installation instructions for wiring, switch type & final position.
16. Refer to mechanical drawings for extract fan details.
17. Refer to mechanical layout drawings for positions of outlets to mechanical plant.
18. Cable containment (if indicated) is shown as indicative only. Contractor to determine cable containment routes and sizes to suit the installation.

Note:-

- HVI conductor shall be painted to match the existing stonework/paint
- Where HVI conductors are installed behind/adjacent RWP's these shall be coloured black
- HVI Masts are shown for illustrative purposes only and do not reflect actual appearance from ground level

Legend:

Lighting protection HVI Conductor

HVI Mast

Rev	Description	Date	Chk	Apr
P02	Scale Bar Added	01.02.24	NH	PK
P01	Information Issue	11.08.23	NH	PK

Project No: 502705 | Scale @ A0: 1:50/1:100 | Drawn By: JP

Ingleton Wood — Property and Construction Consultants
Issuing office: Colchester
T: 01206 234570
www.ingletonwood.co.uk
Vision, form and function

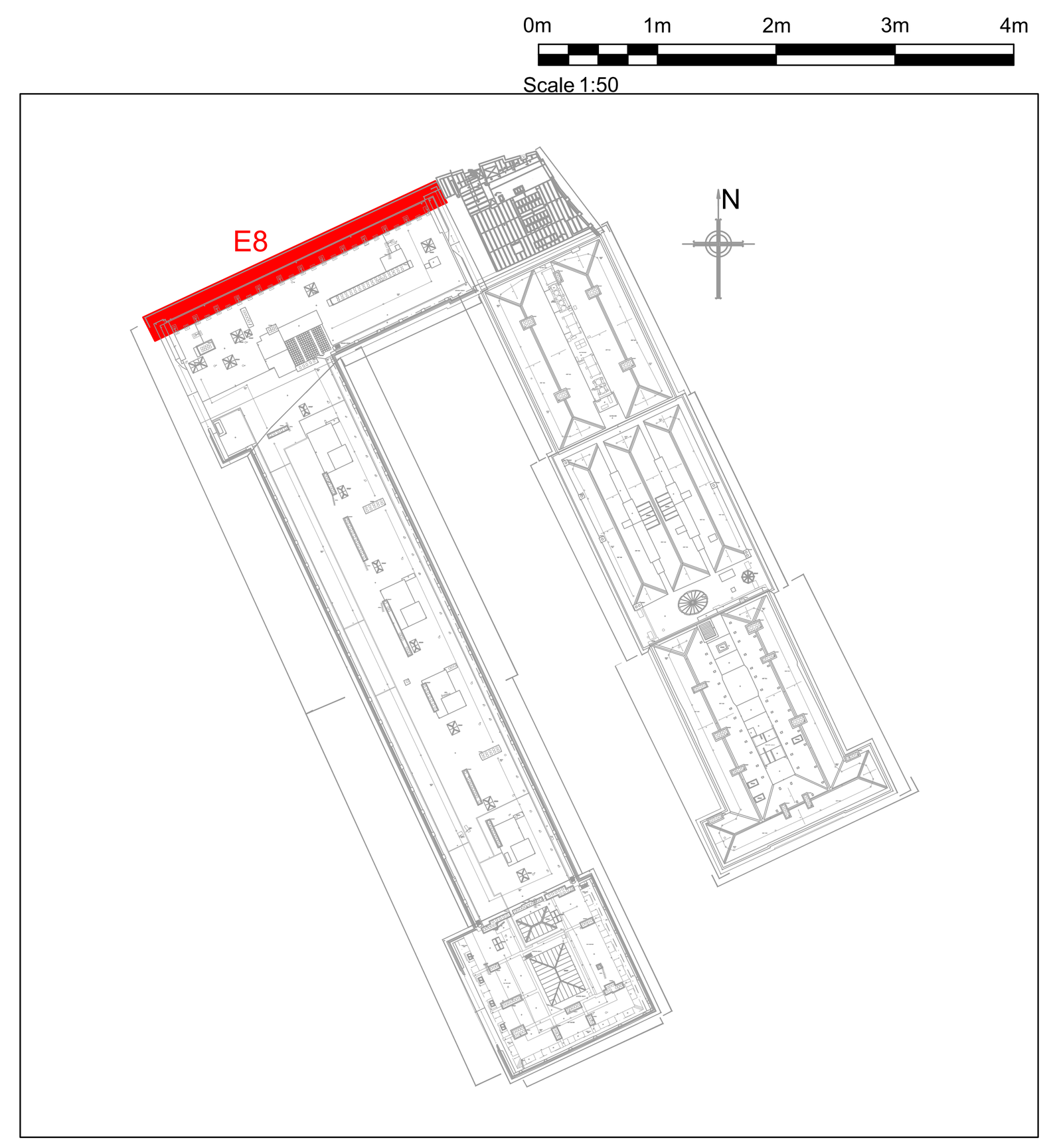
Project:
HSLI Stone Building
Lightning Protection System
Stone Buildings
London WC2A 3TL

Client:
Honourable Society of Lincoln's Inn

Title:
Lightning Protection
Elevation E7B

Drawing Number:
HSLISB-IWD-XX-XX-DR-E-5817

Status:	Purpose of Issue:	Revision:
S2	Information	P02



KEY PLAN SCALE: NTS

Notes:-

1. Do not scale this drawing (printed or electronic versions).
2. This drawing indicates design intent only and shall not be used as a working drawing or installation drawing. The contractor shall be responsible for producing his own fully coordinated working drawings.
3. Contractors must check all dimensions on site prior to ordering materials or commencing work. Any discrepancies must be reported to the engineer immediately.
4. This drawing is copyright and is for use on this site only.
5. All structural & architectural elements, where indicated, have been imported from the engineers drawings and reference should be made to the individual structural / architectural drawings for exact dimensions.
6. This drawing should be read in conjunction with all relevant consultants, specialist sub-contractors, supply chain drawings and specifications for exact setting out, size and type of component.
7. Discrepancies and/or ambiguities within this drawing, between it and information given elsewhere, must be reported immediately to Ingleton Wood for clarification before proceeding.
8. All works to be carried out in accordance with the latest British Standards/Codes of Practice/Building Regulations unless specifically directed otherwise in the specification.
9. Responsibility for the reproduction of this drawing in paper form, or if issued in electronic format, lies with the recipient to check that all information has been replicated in full and is correct when compared to the original paper or electronic image.
10. Graphical representations of equipment on this drawing have been co-ordinated, but are approximations only. Please refer to specifications and / or details for actual sizes and or specific contractor construction information.
11. All builders work associated with the mechanical and electrical services installation must be included for.
12. Contractor to review site Asbestos register prior to commencing works.
13. All power and control wiring associated with the mechanical services installation must be included for.
14. The position of all equipment shown is indicative only. Final positions to be determined & indicated on working drawings.
15. Refer to presence detector installation instructions for wiring, switch type & final position.
16. Refer to mechanical drawings for extract fan details.
17. Refer to mechanical layout drawings for positions of outlets to mechanical plant.
18. Cable containment (if indicated) is shown as indicative only. Contractor to determine cable containment routes and sizes to suit the installation.

Note:-

- HVI conductor shall be painted to match the existing stonework/paint
- Where HVI conductors are installed behind/adjacent RWP's these shall be coloured black

DATUM=17.00m

ELEVATION 8

Legend:

Lightning protection HVI Conductor

Drawing Notes:

Lightning protection to run behind rain water pipes and drain pipes.

Rev	Description	Date	Chk	Apr
P02	Scale Bar Added	01.02.24	NH	PK
P01	Information Issue	11.05.23	NH	PK

Project No:	Scale @ A0:	Drawn By:
502705	1:50	JP

Ingleton Wood

Property and Construction Consultants

Issuing office: Colchester
T: 01206 224270
www.ingletonwood.co.uk

Vision, form and function

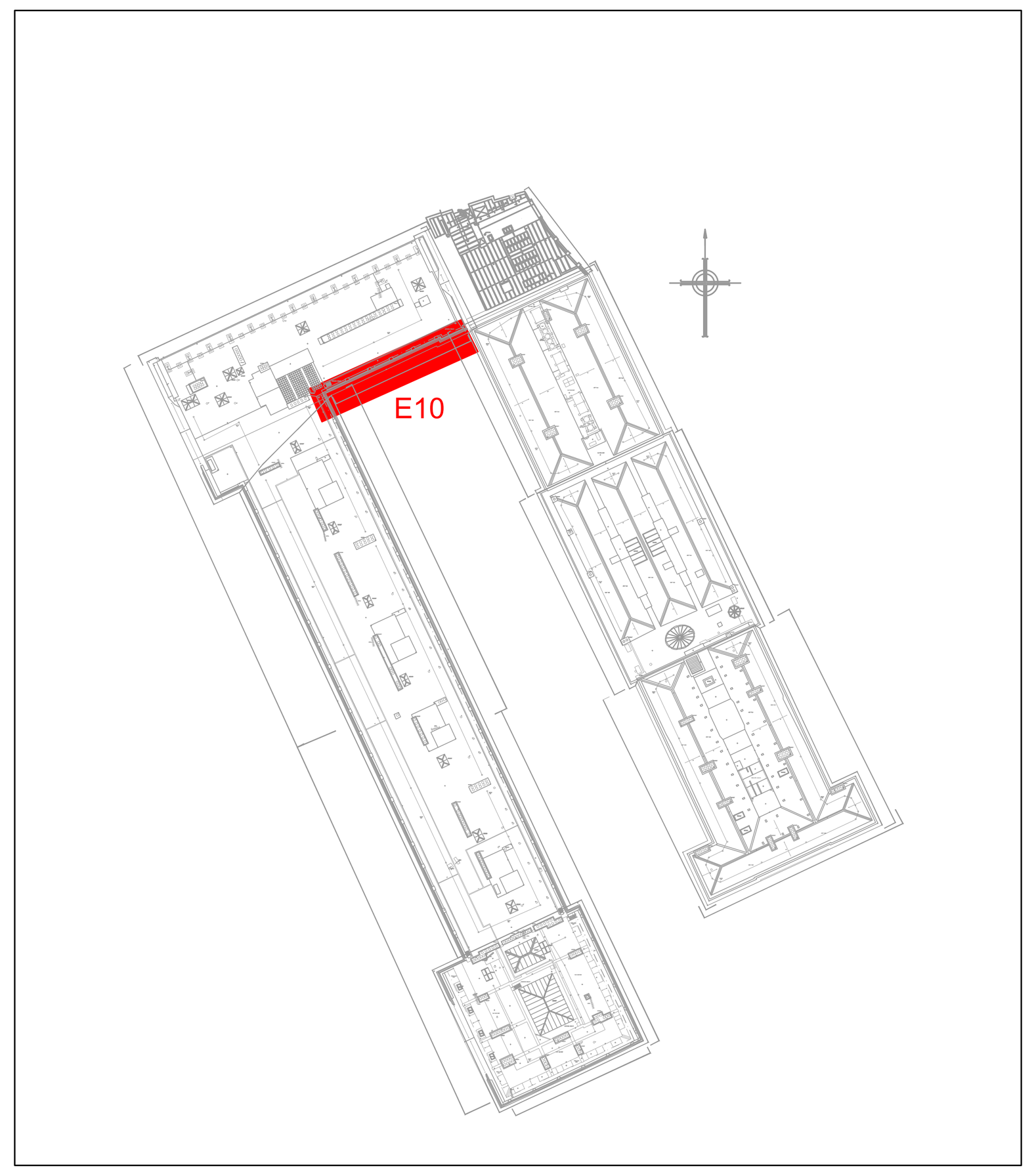
Project:
HSLI Stone Building
Lightning Protection System
Stone Buildings
London WC2A 3TL

Client:
Honourable Society of Lincoln's Inn

Title:
Lightning Protection
Elevation E8

Drawing Number:
HSLISB-IWD-XX-XX-DR-E-5815

Status:	Purpose of Issue:	Revision:
S2	Information	P02



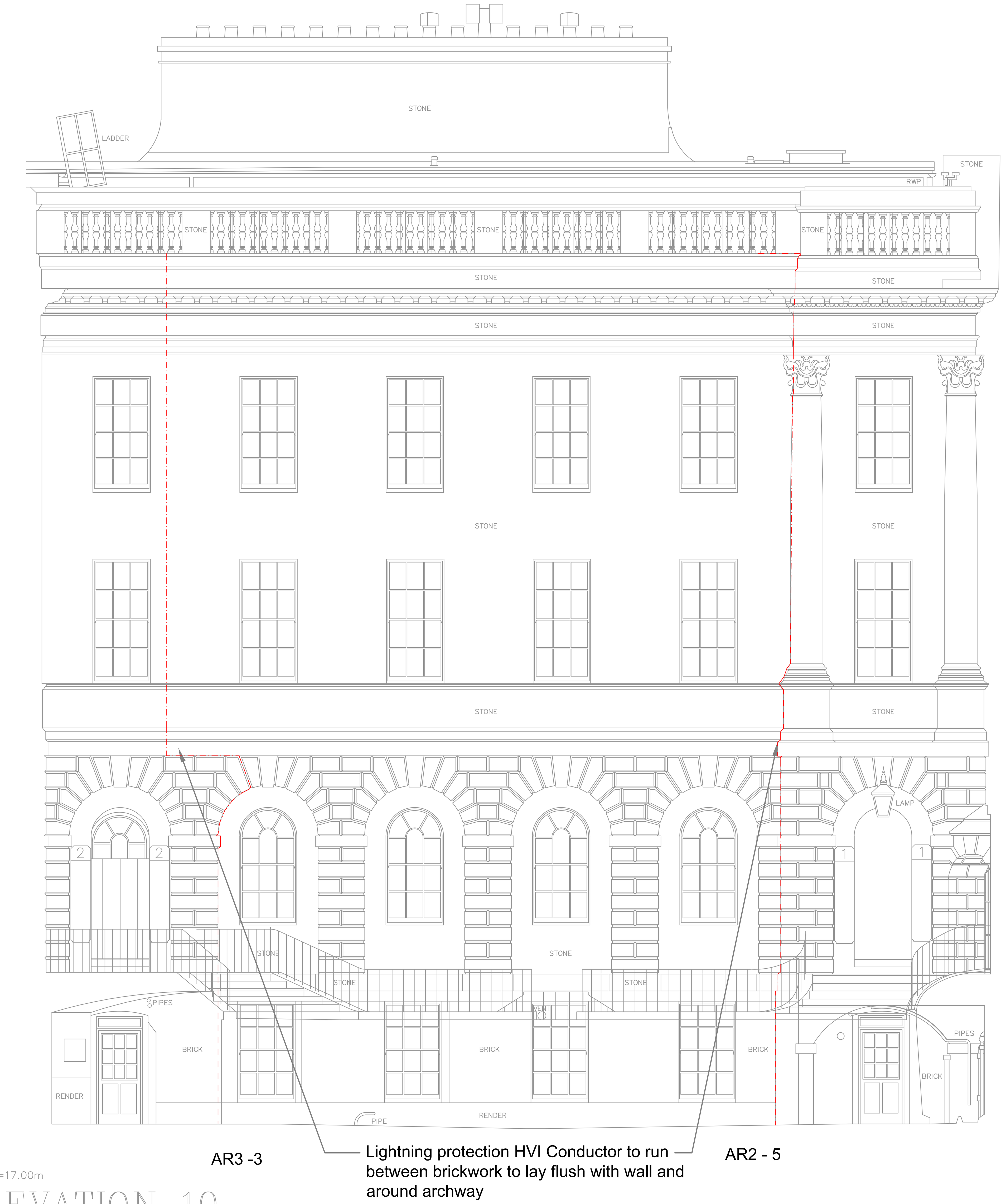
KEY PLAN SCALE: NTS

Notes:-

1. Do not scale this drawing (printed or electronic versions).
2. This drawing indicates design intent only and shall not be used as a working drawing or installation drawing. The contractor shall be responsible for producing his own fully coordinated working drawings.
3. Contractors must check all dimensions on site prior to ordering materials or commencing work. Any discrepancies must be reported to the engineer immediately.
4. This drawing is copyright and is for use on this site only.
5. All structural & architectural elements, where indicated, have been imported from the engineers drawings and reference should be made to the individual structural / architectural drawings for exact dimensions.
6. This drawing should be read in conjunction with all relevant consultants, specialist sub-contractors, supply chain drawings and specifications for exact setting out, size and type of component.
7. Discrepancies and/or ambiguities within this drawing, between it and information given elsewhere, must be reported immediately to Ingleton Wood for clarification before proceeding.
8. All works to be carried out in accordance with the latest British Standards/Codes of Practice/Building Regulations unless specifically directed otherwise in the specification.
9. Responsibility for the reproduction of this drawing in paper form, or if issued in electronic format, lies with the recipient to check that all information has been replicated in full and is correct when compared to the original paper or electronic image.
10. Graphical representations of equipment on this drawing have been co-ordinated, but are approximations only. Please refer to specifications and / or details for actual sizes and or specific contractor construction information.
11. All builders work associated with the mechanical and electrical services installation must be included for.
12. Contractor to review site Asbestos register prior to commencing works.
13. All power and control wiring associated with the mechanical services installation must be included for.
14. The position of all equipment shown is indicative only. Final positions to be determined & indicated on working drawings.
15. Refer to presence detector installation instructions for wiring, switch type & final position.
16. Refer to mechanical drawings for extract fan details.
17. Refer to mechanical layout drawings for positions of outlets to mechanical plant.
18. Cable containment (if indicated) is shown as indicative only. Contractor to determine cable containment routes and sizes to suit the installation.

Note:-

- HVI conductor shall be painted to match the existing stonework/paint
- Where HVI conductors are installed behind/adjacent RWP's these shall be coloured black



DATUM=17.00m

ELEVATION 10

Legend:

Lighting protection HVI Conductor

Rev	Description	Date	Chk	Apr
P01	Information Issue	11.05.23	NH	PK

Project No: 502705 | Scale @ A0: 1:50 | Drawn By: JP

Ingleton Wood
Property and Construction Consultants
Issuing office: Colchester
T: 01206 224270
www.ingletonwood.co.uk
Vision, form and function

Project:
HSLI Stone Building
Lightning Protection System
Stone Buildings
London WC2A 3TL

Client:
Honourable Society of Lincoln's Inn

Title:
Lightning Protection
Elevation E10

Drawing Number:
HSLISB-IWD-XX-XX-DR-E-5822

Status: S2 | Purpose of Issue: Information | Revision: P01

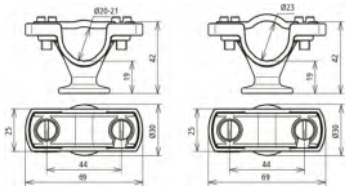
HVI LO 75 23 L... GR M (819 132)

Figure without obligation

Type Part No.	HVI LO 75 23 L... GR M 819 132
Material of conductor	Cu
Material of insulation	PE
Material of sheath	PE
Colour of conductor	grey
Colour RAL	similar to 7035
Cross section of core (stranded)	19 mm²
Lightning current carrying capability (class / I_{imp})	H1 / 150 kA
Equivalent separation distance s (in air)	≤ 75 cm
Diameter Ø conductor	23 mm
Coating characteristics	UV-stabilised and weather-resistant
Minimum order length	6 m
Max. order length	60 m
Standard	DIN IEC/TS 62561-8 (VDE V 0185-561-8)
Weight	3,78 kg
Customs tariff number (Comb. Nomenclature EU)	85446010
GTIN	4013364223172
PU	1 pc(s)

LH ZS 20 H19 IGM8 GR PA (275 220)

Type Part No.	LH ZS 20 H19 IGM8 GR PA 275 220
Material of conductor holder	PA
Conductor support Rd	20-21mm
Female thread	M8
Fixing hole	6.5mm
Screw	M6 x 13mm
Standard	DIN IEC/TS 62561-8 (VDE V 0185-561-8)
Weight	17.99 g
Customs tariff number (Comb. Nomenclature VAE)	39269097
GTIN	4013364103450
PU	25 Stk



Document Issue Register			Date of Issue		
Doc Nr:	502705-IWD-XX-XX-SH-Z-0001	Year :	23	23	**2**
Status	S2	Month :	03	05	**06**
Project:	HSLI Stone Building Lightning Protection System	Day :	31	11	**19**
Client:	Honourable Society of Lincoln's Inn	Issued By :	NH	NH	**NH**

Distribution		Format		
HSLI	Philip Ives	E	E	
HSLI	Henry Skinner			**E**

Format key
E = Email
H = Hardcopy
U = Upload to Document Portal
W = WeTransfer

File Ref			Description	Status / Purpose of Issue		
				S2 Information	S2 Information	**S2 Information**
~~HSLISB - IWD - 01 - XX - DR - E -~~		~~5800~~	~~Lightning Protection Option 01~~	~~P01~~		
~~HSLISB - IWD - 02 - XX - DR - E -~~		~~5801~~	~~Lightning Protection Option 02~~	~~P01~~		
~~HSLISB - IWD - 01 - XX - DR - E -~~		~~5802~~	~~ISO HVI Locations Option 01~~	~~P01~~		
HSLISB - IWD - XX - XX - DR - E -		5100	Area of Lightning Protection - Site Plan			**P01**
HSLISB - IWD - 01 - XX - DR - E -		5800	Lightning Protection		P01	**P01**
HSLISB - IWD - 01 - XX - DR - E -		5802	ISO HVI Locations		P01	**P01**
HSLISB - IWD - XX - XX - DR - E -		5810	Elevations-Elev 1 & 6		P01	**P01**
HSLISB - IWD - XX - XX - DR - E -		5811	Elevations-Elev 2A		P01	**P01**
HSLISB - IWD - XX - XX - DR - E -		5812	Elevations-Elev 2B & 2C		P01	**P01**
HSLISB - IWD - XX - XX - DR - E -		5813	Elevations-Elev 2D & E9		P01	**P01**
HSLISB - IWD - XX - XX - DR - E -		5814	Elevations-Elev E4		P01	**P01**
HSLISB - IWD - XX - XX - DR - E -		5815	Elevations-Elev E8		P01	**P01**
HSLISB - IWD - XX - XX - DR - E -		5816	Elevations-Elev E7A		P01	**P01**
HSLISB - IWD - XX - XX - DR - E -		5817	Elevations-Elev E7B		P01	**P01**
HSLISB - IWD - XX - XX - DR - E -		5818	Elevations-Elev E5A		P01	**P01**
HSLISB - IWD - XX - XX - DR - E -		5819	Elevations-Elev E5B		P01	**P01**
HSLISB - IWD - XX - XX - DR - E -		5820	Elevations-Elev E3C & E3B		P01	**P01**
HSLISB - IWD - XX - XX - DR - E -		5821	Elevations-Elev E3A		P01	**P01**
HSLISB - IWD - XX - XX - DR - E -		5822	Elevations-Elev E10		P01	**P01**

Ingleton Wood

Billericay
Cambridge
Colchester
London
Norwich
Nottingham
Oxford

www.ingletonwood.co.uk

HSLI STONE BUILDINGS – LIGHTNING PROTECTION SYSTEM

Honourable Society of Lincolns Inn
Job No: 502705

Lightning Protection Risk Assessment Summary

Author:	NH
Date:	1st December 2023
Status:	Planning
Revision:	01

Summary

Ingleton Wood were asked to carry out a risk assessment to determine the level of lightning protection required to Stone Buildings at The Honourable Society of Lincoln's Inn.

The below must be read in conjunction with the risk assessment document and is written to give an overview of the procedure and results obtained from the risk analysis software.

The lightning protection risk assessment has been carried out in line with the relevant international standards IEC 62305-2:2010-12 and considering the country specific annexes for BS EN 62305-2:2012.

The risks that have been considered within the assessment, consist of risk of losses to human life and risk of loss of service to public. Detailed explanations of both can be found within the risk assessment document. When calculating the requirement of lightning protection, geographic data is obtained from a ground flash density map to calculate the number of thunderstorm days expected in a year, from which it has been determined that a number of 6 thunderstorm days per year are expected for the location of Stone Buildings. This data along with the building geometry, position and height in relation to surrounding buildings and environment, is used for the basis of the calculation.

The calculation then looks at the incoming supply lines such as power and telecoms and the potential risks of indirect and direct strikes to these.

Once this information has been inputted, the software looks at the risks to human life and service to the public and calculates the risk as a percentage without any form of lightning protection. As mitigation measures are then added, the risks are gradually reduced until such point as they reach a tolerable risk level. This in turn determines the level of lightning protection required. This can be seen within the risk assessment document under section 7.2.

The risk assessment determined that a level 2 lightning protection system was required with level 2 transient voltage surge suppression installed to all incoming supply lines in order to reduce the risks to a tolerable level.

Following the risk assessment, two options were considered for the installation method/type to achieve the required protection level. These options consisted of:

Option 1

Option 1 looked at the traditional method of installation with down conductors to the external facades of the buildings. All be it this method would not require the HVI masts, there was a considerable increase in the number of down conductors required.

Option 2

Option 2 introduced the HVI masts and in doing so decreased the number of required down conductors to the external facades of the building.

Both options were presented to the Inn for consideration, and it was concluded that Option 2 was the least intrusive and would most likely be the preferred option to progress. This is on the basis that the reduced number of down conductors on the elevations of the building would be less impactful on its special interest.

Date: 02/03/2023 **Project No.: 03/036**

Lightning Protection
Risk Management

Created according to international standard:
IEC 62305-2:2010-12

Considering the country-specific annexes for:
BS EN 62305-2:2012

**Summary of measures for
reducing damage caused by lightning effects,
resulting from the risk management
concerning the following project:**

Project / object description:

Lincoln's Inn Field - Stone Building
Stone Buildings
WC2A 3TG London
UK

Customer / principal:

Ingleton Wood

874 The Crescent, Highwoods
CO4 9YQ Colchester
UK

Risk assessment by:

Lewis Knowler
Director
07875974420
Hussar Lightning Protection Ltd
Lewis@hussarlightningprotection.com

NOTES

The risk assessment has indicated that a level 2 lightning protection system is required for this structure, design options will be provided for discussion before a final design proposal is issued.

The risk assessment has also indicted that surge protection is required on all current carrying incoming and outgoing cables, along with the protection of any critical or essential panels and boards.

Contents

1. Abbreviations

a	Amortisation rate
a_t	Amortisation period
c_a	Value of animals in a zone in currency
c_b	Value of a zone of the structure in currency
c_c	Value of the contents of a zone in currency
c_s	Value of the systems in a zone (including their activities) in currency
c_t	Total value of the structure in currency
C_D;C_{DJ}	Location factor
C_L	Annual costs of the total loss without protection measures
C_{PM}	Annual costs of the selected protection measures
C_{RL}	Annual costs of the residual loss
EB	Lightning equipotential bonding
H	Height of the structure
H_P	Highest point of the structure
i	Interest rate
K_{S1}	Factor relevant to the shielding effectiveness of a structure (external spatial shielding)
K_{S1W}	Mesh size of the shielding of a structure
K_{S2}	Factor relevant to the shielding effectiveness of a structure (external spatial shielding)
K_{S2W}	Mesh size of the shielding within a structure
L1	Loss of human life
L2	Loss of service to the public
L3	Loss of cultural heritage
L4	Loss of economic value
L	Length of the structure
LEMP	Lightning electromagnetic impulse
LP	Lightning protection (consisting of a lightning protection system (LPS) and LEMP protection measures)
LPL	Lightning protection level
LPS	Lightning protection system
LPZ	Lightning protection zone (zone where the lightning electromagnetic environment is defined)
m	Maintenance rates
N_D	Frequency of dangerous events caused by lightning strikes to a structure
N_G	Ground flash density
P_B	Probability that a lightning strike to a structure causes physical damage
P_{EB}	Lightning equipotential bonding
P_{SPD}	Coordinated SPD system
R	Risk
R_1	Risk of loss of human life in a structure
R_2	Risk of loss of service to the public
R_3	Risk of loss of cultural heritage
R_4	Risk of loss of economical value in a structure
R_A	Risk component (injury to living beings - Lightning strike to the structure)
R_B	Risk component (physical damage to a structure - Lightning strike to the structure)
R_C	Risk component (failure of internal systems - Lightning strike to the structure)

R_M	Risk component (failure of internal systems - Lightning strike near the structure)
R_U	Risk component (injury to living beings - Lightning strike to a connected supply line)
R_V	Risk component (physical damage to a structure - Lightning strike to a connected supply line)
R_W	Risk component (failure of internal systems - Lightning strike to a connected supply line)
R_Z	Risk component (failure of internal systems - Lightning strike near the connected supply line)
R_T	Tolerable risk (maximum value of the risk which can be tolerated for the structure to be protected)
r_f	Reduction factor considering the fire risk in a structure
r_p	Reduction factor considering the measures to reduce the consequences of a fire
S_M	Annual savings
SPD	Surge protection device
SPM	LEMP protection measures (measures to reduce the risk of failure of electrical and electronic equipment due to LEMP)
t_{ex}	Duration of the presence of a dangerous explosive atmosphere
W	Width of the structure
Z	Zones of a structure

2. Normative basics

The BS EN 62305 standard series consists of the following parts:

- BS EN 62305-1:2011 - "Protection against lightning - Part 1: General principles“

- BS EN 62305-2:2012 - "Protection against lightning - Part 2: Risk management"

- BS EN 62305-3:2011 - "Protection against lightning - Part 3: Physical damage to structures and life hazard“

- BS EN 62305-4:2011 - "Protection against lightning - Part 4: Electrical and electronic systems within structures“

3. Risk and sources of damage

In order to avoid damage resulting from a lightning strike, specific protection measures must be taken for the objects to be protected. The risk management described in the BS EN 62305-2:2012 standard includes a risk analysis which allows to determine the lightning protection requirements of a structure. The aim of the risk management is to reduce the risk to an acceptable level by taking protection measures.

To determine the prevailing risk, the relevant object must be connsidered without any protection measures (actual condition). Risks that may be caused as a result of direct / indirect lightning strikes to the structure and supply lines are referred to as risk R. The risk defines the possible annual loss. Risks that must be assessed for a structure could be:

- Risk R_1: risk of loss of human life;
- Risk R_2: risk of loss of services to the public;
- Risk R_3: risk of loss of cultural heritage;
- Risk R_4: risk of loss of economic value;

All risks or the individual risks must be assessed depending on the type of consideration. Every risk is defined with a tolerable risk in form of a numerical value. To achieve a tolerable risk, technically and

economically sound protection measures are defined e.g. external lightning protection measures according to BS EN 62305-3:2011 and SPD measures according to BS EN 62305-4:2011.

To be able to determine the risk focus more exactly, the risks are considered in detail. Every risk consists of a sum of risk components.

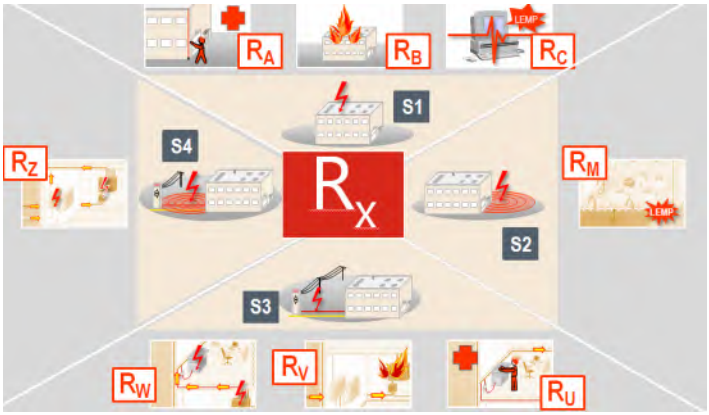
- $R_1 = R_A + R_B + R_C + R_M + R_U + R_V + R_W + R_Z$
- $R_2 = R_B + R_C + R_M + R_V + R_W + R_Z$
- $R_3 = R_B + R_V$
- $R_4 = R_A + R_B + R_C + R_M + R_U + R_V + R_W + R_Z$

Every risk component describes a certain danger and thus a possible loss. The loss resulting from lightning effects is defined as follows:

- L1 = Loss of human life
- L2 = Loss of service to the public
- L3 = Loss of cultural heritage
- L4 = Loss of economic value

The possible loss is assigned to the risk components as follows:

The risk components are differentiated according to the sources of damage.



Source of damage S1: Risk components based on lightning strikes to the structure

R_A Component which refers to injury of living beings caused by an electric shock resulting from touch and step voltage within the structure and up to 3 m around the down conductors outside the structure. Type of damage L1 may occur for agricultural buildings and type of damage L4 with possible loss of animals.

R_B Component which refers to physical damage caused by dangerous sparking within the structure resulting in fire and explosion. Even the environment can be at risk. All types of damage can occur (L1, L2, L3, L4).

R_C Component which refers to the failure of internal systems caused by LEMP. Types of damage L2 and L4 can occur in all cases and type of damage L1 in case of structures with a risk of explosion and hospitals or other structures in which the failure of internal systems

can be lead to loss of human life.

Source of damage S2: Risk components for a structure as a result of lightning strikes near the structure

R_M Component which refers to the failure of internal systems caused by LEMP. Types of damage L2 and L4 can occur in all cases and type of damage L1 in case of structures with a risk of explosion and hospitals or other structures in which the failure of internal systems can be lead to loss of human life.

Source of damage S3: Risk components for a structure as a result of lighting strikes to the incoming supply line

R_U Component which refers to injury of living beings caused by an electric shock resulting from touch voltage within the structure. Type of damage L1 may occur for agriculture facilities and type of damage L4 with possible loss of animals.

R_V Component which refers to physical damage caused by the lightning current injected into the structure by means of or along the supply line (fire or explosion due to dangerous sparking between the external installation and the metal parts, typically at the point where the supply line enters the structure). All types of damage (L1, L2, L3, L4) can occur.

R_W Component which refers to the failure of internal systems caused by overvoltages injected into the structure by means of incoming supply lines. Types of damage L2 and L4 can occur in all cases and type of damage L1 in case of structures with a risk of explosion and hospitals or other structures in which the failure of internal systems can be lead to loss of human life.

Source of damage S4: Risk components for a structure as a result of lighting strikes near the incoming supply line

R_Z Component which refers to the failure of internal systems caused by overvoltages injected into the structure by means of incoming supply lines. Types of damage L2 and L4 can occur in all cases and type of damage L1 in case of structures with a risk of explosion and hospitals or other structures in which the failure of internal systems can be lead to loss of human life.

The risk components allow to analyse the risks and measures to avoid possible loss can be taken.

The following risk analysis according to BS EN 62305-2:2012 for the project Lincoln's Inn Field - Stone Building - object Object shows the necessity of protection measures. The risk potential for the structure is determined and, if necessary, measures to reduce the risk have to be taken. The result of the risk analysis not only specifies the class of LPS, but also provides a complete protection concept including the necessary LEMP protection measures.

As a result, an economically reasonable selection of protection measures suitable for the properties and use of the structure is ensured.

4. Project data

4.1 Selection of risks to be considered

Due to the type and use of the structure, object Object, the following risks were selected and considered:

Risk R_1:	Risk of losses of human life;	R_T: 1.00E-05
Risk R_2:	Risk of loss of service to the public;	R_T: 1.00E-04

The tolerable risks R_T were defined by selecting the risks.

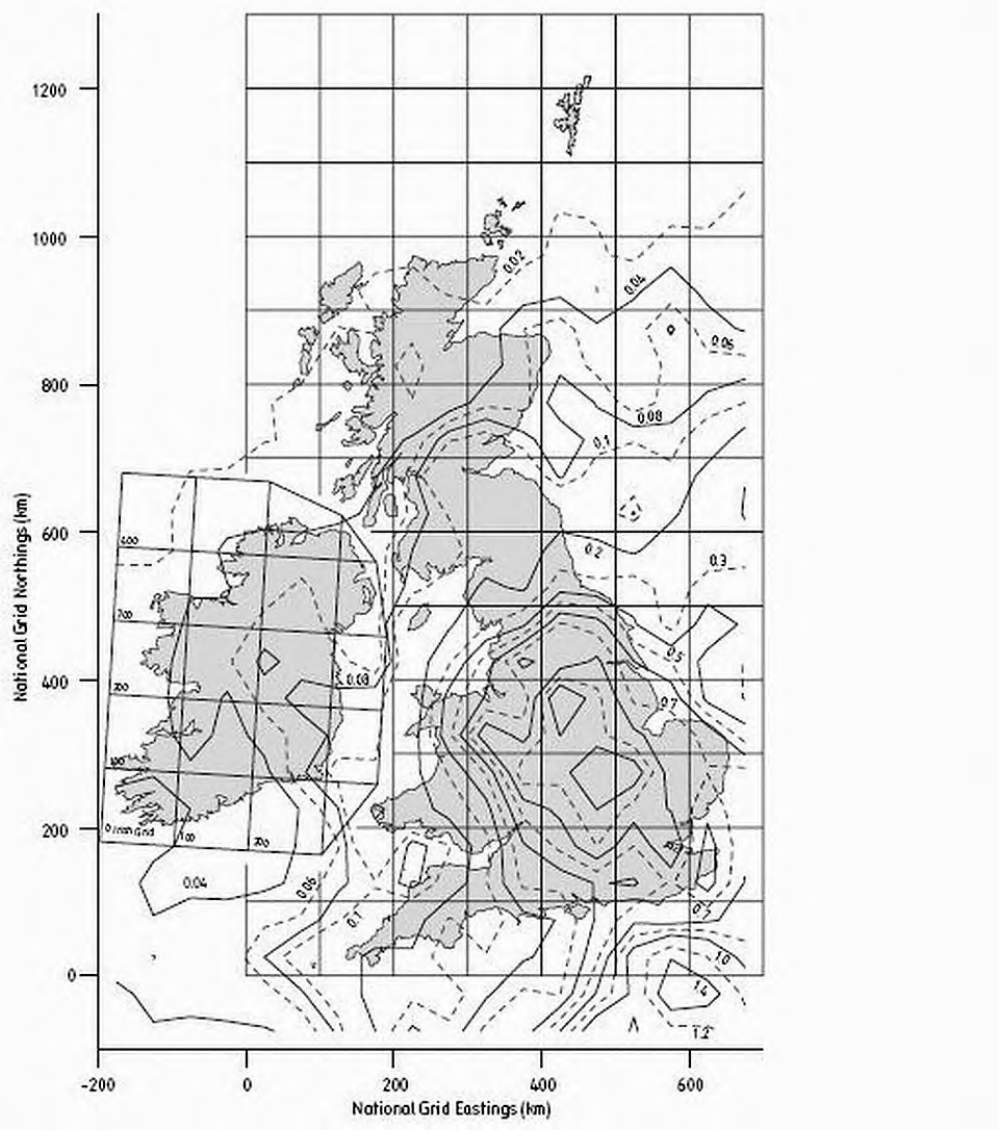
The standard specifies the tolerable risk for the risks R_1, R_2 and R_3 . No tolerable risk is defined for risk R_4. To this end, it is considered whether the protection measures make economical sense with regard to the value of the structure.

The aim of a risk analysis is to reduce the risk to a acceptable level RT by an economically sound selection of protection measures.

4.2 Geographic and building parameters

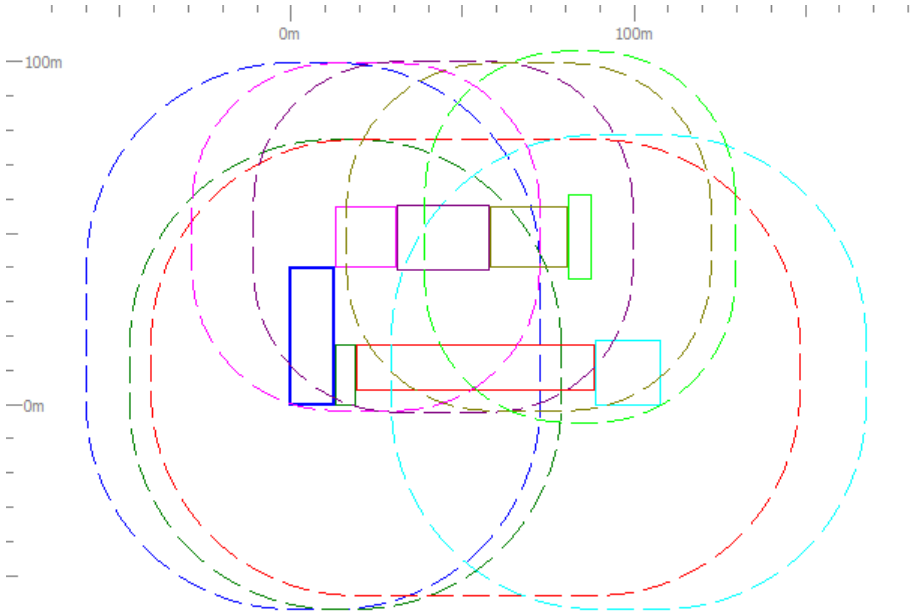
The ground flash density Ng is the basis for a risk analysis according to BS EN 62305-2:2012. It defines the number of direct lightning strikes in 1 / year / km². A value of 0.60 lightning strikes / year / km² was determined for the location of the object Object by means of the ground flash density map. As a result, there is a calculated number of 6.00 of thunderstorm days per year for the location of the project.

The ground flash density was taken from the following map:



Ground flash density (Ng) km²/year for the British Isles.
Permission to reproduce extracts from BS EN 62305:2006 is granted by BSI. Users of BS EN 62305-2 are recommended to use the latest updated flash density maps when undertaking the procedure for the evaluation of risk due to lightning flashes to earth set out in the standard.
British standards can be obtained in PDF format from the BSI online shop: http://www.bsi-global.com/en/shop/ or as hardcopy by contacting BSI customer services:
Tel: +44 (0)20 8996 9001,
E-mail: cservices@bsi-global.comn

The dimensions of the building are decisive for the risk of a direct strike. The collection areas for direct / indirect lightning strikes are determined based on it's dimensions.
This results in a calculated collection area for direct lightning strikes of 32,452.00 m² and for indirect lightning strikes (near the structure) of 947,884.00 m².



The environment surrounding the structure is an important factor for determining the number of direct / indirect lightning strikes. It was defined as follows for the building Object:
Relative location C_{db}: 0.50

If the ground flash density is referred to the size and the environment of the structure, a frequency of direct strikes Nd to the structure of 0.0097 strikes / year and indirect strikes near the structure of 0.5687 strikes / year is to be expected.

4.3 Division of the structure into lightning protection zones/zones

The structure Object was not divided into lightning protection zones / zones.

L1tz – Time during which persons are present in the zone.:	8,760 hours/year
L1nz – Number of persons in the zone:	0 persons

5. Supply lines

All incoming and outgoing supply lines of the structure to be considered must be taken into account in the risk analysis. Conductive pipes do not have to be considered if they are connected to the main earthing busbar of the structure. If this is not the case, the risk of incoming pipes should be considered in the risk analysis (observe that equipotential bonding is required!).

The following supply lines were considered for the structure Object in the risk analysis:

- Powercables
- Telecoms

5.1 Powercables

Installation factor:	Buried

Type of conductor:	Power supply line
Environment:	Urban with tall buildings higher than 20 m
Connection of the conductor:	No special conditions
Transformer:	LV power supply, telecommunication or data line
Conductor shielding:	External: Aerial or unshielded buried cable

The conductor length outside the structure up to the next node is 1,000.00 m.

Based on this, the following collection areas were determined for the supply line:
- Collection area for direct lightning strikes to a supply line: 40,000.00 m²
- Collection area for indirect lightning strikes near a supply line: 4,000,000.00 m²

The dielectric strength of the electrical equipment which is connected with the Powercables is 1.5 kV < Uw <= 2.5 kV

The conductors in the building are installed via Unshielded cable – no routing precaution in order to avoid loops.

5.2 Telecoms

Installation factor:	Buried
Type of conductor:	Power supply line
Environment:	Urban with tall buildings higher than 20 m
Connection of the conductor:	No special conditions
Transformer:	LV power supply, telecommunication or data line
Conductor shielding:	External: Aerial or unshielded buried cable

The conductor length outside the structure up to the next node is 1,000.00 m.

Based on this, the following collection areas were determined for the supply line:
- Collection area for direct lightning strikes to a supply line: 40,000.00 m²
- Collection area for indirect lightning strikes near a supply line: 4,000,000.00 m²

The dielectric strength of the electrical equipment which is connected with the Telecoms is 1.0 kV < Uw <= 1.5 kV

The conductors in the building are installed via Unshielded cable – no routing precaution in order to avoid loops.

6. Properties of the structure

6.1 Risk of fire

The risk of fire is one of the most important criteria for determining whether an LPS (lightning protection system) must be installed. The risk of fire is classified according to the specific fire load. The fire load should be determined by a fire safety expert or defined after consultation with the proprietor of the building and his / her insurance company. A distinction is made according to the following criteria:

- None
- Low (specific fire load in the building less than 400 MJ/m²)
- Ordinary (specific fire load in the building between 400 MJ/m² and 800 MJ/m²)
- High (specific fire load in the building greater than 800 MJ/m²)
- Explosion: zone 2 / 22
- Explosion: zone 1 / 21
- Explosion: zone 0 / 20

The risk of fire in a structure is an important factor for determining the required protection measures. The risk of fire for the structure Object was defined as follows:

- Normal risk of fire

6.2 Measures to reduce the consequences of a fire

The following measures were selected to reduce the consequences of a fire:

- Automatic fire extinguishing system/fire alarm system

6.3 Special hazards in the building for persons

Due to the number of persons, the possible risk of panic for the structure Object was defined as follows:

- Difficulty of evacuation (e.g. structures with immobile persons, hospitals)

6.4 External spatial shielding

Spatial shielding attenuates the magnetic field within a structure caused by lightning strikes to or near the object and reduces internal surges.
This can be achieved by an intermeshed equipotential bonding network in which all conductive parts of the structure and the internal systems are integrated. Consequently, the external / internal spatial shield is only a part of a shielded building structure. It must be observed that metal coverings and claddings are connected to one another and conductively to the equipotential bonding of the building. In this context, the relevant normative requirements must be observed.

Covering of the structure Object:

- No shielding

7. Risk assessment

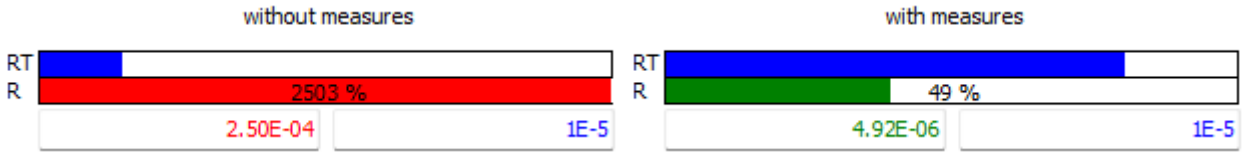
As described in 4.1, the following risks according to 7.were assessed. The blue bar shows the tolerable

risk value and the green / red bar shows the risk determined.

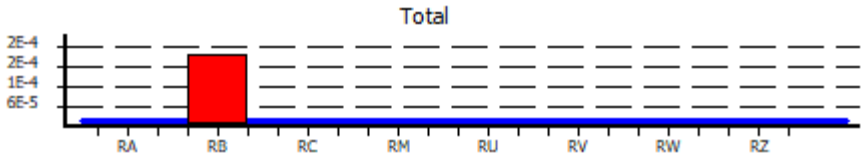
7.1 Risk R1, Human life

The following risk was determined for persons outside and inside the structure Object:

Tolerable risk R_T:	1.00E-05
Calculated risk R1 (unprotected):	2.50E-04
Calculated risk R1 (protected):	4.92E-06



The risk R1 consists of following risk components:

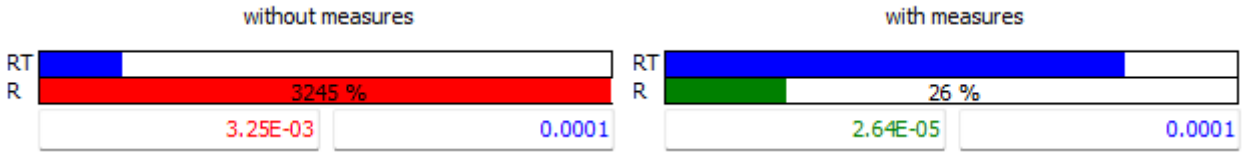


To reduce the risk, it is necessary to take measures as described in 7.

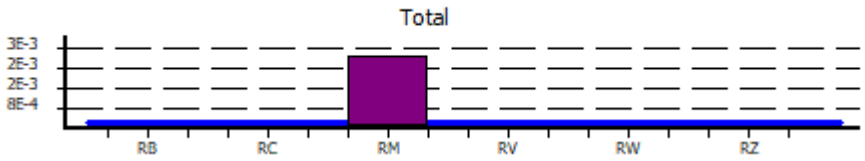
7.2 Risk R2, Service to the public

The risk R2, failure of services to the public, was determined for the structure Object as follows:

Tolerable risk R_T:	1.00E-04
Calculated risk R2 (unprotected):	3.25E-03
Calculated risk R2 (protected):	2.64E-05



The risk R2 consists of following risk components:



To reduce the risk, it is necessary to take measures as described in 7.

7.3 Selection of protection measures

The risk was reduced to an acceptable level by selecting the following protection measures.

This selection of protection measures is part of the risk management for the object Object and is only valid in connection with this object.

Measures With protection/target state:

Area		Measures	Factor
	pB:	Lightning protection system (LPS) Class of LPS II	5.000E-02
	pEB:	Lightning equipotential bonding Improved equipotential bonding for LPL II	2.000E-03
	rp:	Fire precautions Automatic fire extinguishing system/fire alarm system	2.000E-01
		Powercables:	
	pSPD:	Coordinated SPD system SPD according to LPL II	2.000E-02
		Telecoms:	
	pSPD:	Coordinated SPD system Improved SPD protection according to LPL II	2.000E-03

8. Legal obligation

The risk analysis performed refers to the information provided by the operator and/or proprietor of the building or expert which has been assumed, assessed or defined on site. Please note that this information must be verified after assessment.

The procedure of the DEHNsupport software for calculating the risks is based on the BS EN 62305-2:2012 standard.

Please note that all assumptions, documents, illustrations, drawings, dimensions, parameters and results are not legally binding for the person performing the risk analysis.

02/03/2023	
Place, date	Stamp, signature

9. General information

9.1 Components of the external lightning protection system

Lightning protection components used for the construction of the external lightning protection system must comply with the mechanical and electrical requirements defined in the BS EN 62561-x standard series. This standard series is for example divided into following parts:

- BS EN 62561-1:2012	Requirements for connection components
- BS EN 62561-2:2012	Requirements for conductors and earth electrodes
- BS EN 62561-3:2012	Requirements for isolating spark gaps
- BS EN 62561-4:2011	Requirements for conductor fasteners
- BS EN 62561-5:2011	Requirements for electrode inspection housings and earth electrode seals

9.1.1 BS EN 62561-1:2012 Requirements for connection components

The requirements for connection components such as clamps are defined in BS EN 62561-1. For the installer of lightning protection systems this means that the connection components are to be selected for the load (H or N) to be expected at the place of installation. Therefore, a clamp for load H (100 kA) is to be used e.g. for an air-termination rod (100% lightning current) and a clamp for load N (50 kA) e.g. for a mesh or an earth entry (lightning current already distributed). The suitability for these applications must be proven by the manufacturer.

9.1.2 BS EN 62561-2:2012 Requirements for conductors and earth electrodes

The BS EN 62561-2 specifies concrete requirements for conductors, such as air-termination and down conductors as well as earth electrodes. These are defined as follows:

- Mechanical properties (minimum tensile strength and elongation),
- Electrical properties (maximum resistivity) and
- Corrosion protection properties (artificial aging).

The BS EN 62561-2 standard also specifies the requirements for earth electrodes and earth rods. In this context, the material, geometry, minimum dimensions as well as the mechanical and electrical properties are important. These normative requirements are relevant product features, which must be documented in the manufacturers' documents and product datasheets.

9.1.3 BS EN 62561-3:2012 Requirements for isolating spark gaps

Isolating spark gaps can be used to galvanically isolate an earth-termination system.BS EN 62561-3 specifies that isolating spark gaps must be dimensioned in such a way that the components, if installed according to the manufacturer's instructions, are reliable, durable and safe for persons and nearby installations.

9.1.4 BS EN 62561-4:2011 Requirements for conductor fasteners

The BS EN 62561-4 standard specifies the requirements and tests for metal and non-metal conductor fasteners used with air-termination and down conductors.

9.1.5 BS EN 62561-5:2011 Requirements for electrode inspection housings and earth electrode seals

All earth electrode inspection housings and earth electrode seals must be designed in such a way that they are reliable and safe for persons and the environment when used as intended. BS EN 62561-5 specifies the requirements and tests for earth electrode inspection housings (e.g. pressure load) and for earth electrode seals (e.g. leak test).

10. Definition

Coordinated SPD system
SPDs properly selected, coordinated and installed to form a system intended to reduce failures of electrical and electronic systems.

Isolating interfaces
Devices which are capable of reducing conducted surges on lines entering the LPZ. These include isolation transformers with earthed screen between windings, metal-free fibre optic cables and opto-isolators. Insulation withstand characteristics of these devices are suitable for this application intrinsically or via SPD.

LEMP (lightning electromagnetic impulse)
All electromagnetic effects of lightning current via resistive, inductive and capacitive coupling, which create surges and electromagnetic fields.

LP (lightning protection)
Complete system for protection of structures against lightning, including their internal systems and contents, as well as persons, in general consisting of an LPS and SPM.

LPL (lightning protection level)
Number related to a set of lightning current parameters values relevant to the probability that the associated maximum and minimum design values will not be exceeded in naturally occurring lightning.

LPS (lightning protection system)
Complete system used to reduce physical damage due to lightning flashes to a structure.

EB (lightning equipotential bonding)
Bonding to LPS of separated metallic parts, by direct conductive connections or via surge protective devices, to reduce potential differences caused by lightning current.

SPD (surge protection device)
Device intended to limit transient overvoltages and divert surge currents; contains at least one non-linear component.

Node
Point on a line from which onward surge propagation can be assumed to be neglected. Examples of nodes are a point on a power line branch distribution at an HV / LV transformer or on a power substation, a telecommunication exchange or an equipment (e.g. multiplexer or xDSL equipment) on a telecommunication line.

Physical damage
Damage to a structure (or to its contents) due to mechanical, thermal, chemical or explosive effects of lightning.

Injury to living beings
Permanent injuries, including loss of life, to people or to animals by electric shock due to touch and step voltages caused by lightning.

Risk R
Value of probable average annual loss (humans and goods) due to lightning, relative to the total value (humans and goods) of the structure to be protected.

Zone of a structure ZS
Part of a structure with homogeneous characteristics where only one set of parameters is involved in

assessment of a risk component.

LPZ (lightning protection zone)
Zone where the lightning electromagnetic environment is defined. The zone boundaries of an LPZ are not necessarily physical boundaries (e.g. walls, floor and ceiling).

Magnetic shield
Closed, metallic, grid-like or continuous screen enveloping the structure to be protected, or part of it, used to reduce failures of electrical and electronic systems.

Lightning protective cable
Special cable with increased dielectric strength and whose metallic sheath is in continuous contact with the soil either directly or by use of conducting plastic covering.

Lightning protective cable duct
Cable duct of low resistivity in contact with the soil (concrete with interconnected structural steel reinforcements or metallic duct).

APPENDIX 3.0

HE RESPONSE FOR PRE-APP ADVICE

Historic England

Ms Sophie Kenworthy
Montagu Evans LLP
70 St Mary Axe
London
EC3A 8BE

Direct Dial: 020 7973 3520

Our ref: PA01200515

18 January 2024

Dear Ms Kenworthy

Request for Pre-application Advice

1-11 STONE BUILDINGS, LINCOLN'S INN

Thank you for contacting us on 17 January 2024 seeking our pre-application advice on proposals for the above site.

Having reviewed the information provided by you, we conclude that this proposal would lead to an application for which Historic England would be a statutory consultee. It is not possible or necessary for us to engage with every proposal that affects the historic environment at pre-application stage. In this instance we do not consider it necessary for us to participate in pre-application discussions. If, as the scheme develops, there are material changes to the proposals which would affect the historic environment, please consult us again.

It may be appropriate to seek the advice of the local planning authority and/or the relevant amenity societies on your proposals.

If you have questions regarding any of the above, please do contact me.

Yours sincerely

Kate Tatlow
Business Officer
E-mail: kate.tatlow@historicengland.org.uk

1-11 STONE BUILDINGS, LINCOLN'S INN
Request for Pre-application Advice

Information Provided
Proposal drawings

Historic England

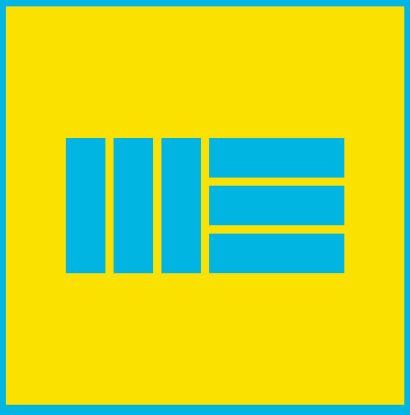
Lightning Protection Risk Assessment
Lightning Protection Planning, Heritage and Design and Access statement

4TH FLOOR, CANNON BRIDGE HOUSE, 25 DOWGATE HILL, LONDON EC4R 2YA

Telephone 020 7973 3700
HistoricEngland.org.uk

MONTAGU EVANS

70 ST MARY AXE
LONDON
EC3A 8BE



WWW.MONTAGU-EVANS.CO.UK

London | Edinburgh | Glasgow | Manchester