

46 INVERNESS STREET

DAYLIGHT & SUNLIGHT REPORT

DIRECTOR: LIAM DUNFORD

DATE: FEBRUARY 2025

VERSION: V1

PROJECT: P3937

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Appendices

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1 Introduction

- 1.1 Point 2 Surveyors Ltd. have been instructed to assess the daylight and sunlight implications as a result of the redevelopment at 46 Inverness Street, London, NW1 7HB (“the Application Site” / “the Proposed Development”).
- 1.2 This report relates to the Burd Haward Architects Proposed Development received 08 January 2025 and provides detailed technical support regarding the potential impact on the daylight and sunlight amenity of two neighbouring receptors containing an element of residential accommodation. Internal daylight and sunlight levels to the proposed accommodation within the scheme itself are also assessed.
- 1.3 The Local Authority will be informed in this by the BRE document entitled ‘*Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice*’, 2022 (‘the BRE Guidelines’). The BRE Guidelines are the principal guidance in this area. They set out the methodology for measuring light and recommendations as to what are considered to be permitted or unobtrusive levels of change.
- 1.4 The BRE Guidelines are not mandatory, though decision-takers may consider the suitability of a Proposed Development for an Application Site within the context of BRE guidance. Consideration will be given to the urban context within which a scheme is located, and the daylight and sunlight to neighbouring residential properties will be one of several planning considerations which the local authority will weigh in the planning balance.

2 Sources of Information

2.1 In the process of compiling this report, the following sources of information have been used:

CADPLAN

Survey Info (received 08/01/25)

Z Mapping Ltd

3D CAD model of Site and surrounds

Burd Haward Architects

Proposed Info (received 08/01/25)

3 Methodology

- 3.1 It is usual to assess daylight and sunlight in relation to the guidelines set out in the BRE handbook. This document is most widely accepted by planning authorities as the means by which to judge the acceptability of a scheme. One of the primary sources for the BRE handbook is the more detailed guidance contained within 'British Standard *Daylight in buildings*, BS EN 17037'.
- 3.2 For neighbouring residential accommodation, the local authority will only be concerned with the impact to main habitable accommodation (i.e. living rooms, kitchens and bedrooms). All other ancillary uses including bathrooms, stairwells and storage areas can be omitted from analysis.
- 3.3 To determine whether a neighbouring existing building may be adversely affected, the initial test provided by the BRE is to establish if any part of the proposal subtends an angle of more than 25° from the lowest window serving the existing building. If this is the case then there may be an adverse effect, and more detailed calculations are required to quantify the extent of any impact.
- 3.4 The BRE guidelines provide two principal measures of daylight for assessing the impact on properties neighbouring a site, namely Vertical Sky Component (VSC) and No-Sky Line (NSL).
- 3.5 In terms of sunlight, we examine the BRE Annual Probable Sunlight Hours (APSH); and in relation to sunlight amenity to gardens and amenity spaces, we apply the quantitative BRE overshadowing guidance.
- 3.6 These measures of daylight and sunlight are discussed in the following paragraphs.

Diffuse Daylight

- 3.7 **Vertical Sky Component (VSC)** – VSC is a measure of the direct skylight reaching a point from an overcast sky. It is the ratio of the illuminance at a point on a given vertical plane to the illuminance at a point on a horizontal plane due to an unobstructed sky.
- 3.8 For existing buildings, the BRE guideline is based on the loss of VSC at a point at the centre of a window, on the outer plane of the wall.
- 3.9 The BRE guidelines state that if the VSC at the centre of a window is less than 27%, and it is less than 0.8 times its former value (i.e. the proportional reduction is greater than 20%), then the reduction in skylight will be noticeable, and the existing building may be adversely affected.
- 3.10 **No-Sky Line (NSL)** - NSL is a measure of the distribution of daylight within a room. It maps out the region within a room where light can penetrate directly from the sky, and therefore accounts for the size of and number of windows by simple geometry.

- 3.11 The BRE suggest that the area of the working plane within a room that can receive direct skylight should not be reduced to less than 0.8 times its former value (i.e. the proportional reduction in area should not be greater than 20%).

Sunlight

- 3.12 **Annual Probable Sunlight Hours (APSH)** - In relation to sunlight, the BRE recommends that the APSH received at a given window in the proposed case should be at least 25% of the total available, including at least 5% in winter.
- 3.13 Where the proposed values fall short of these, and the absolute loss is greater than 4%, then the proposed values should not be less than 0.8 times their previous value in each period (i.e. the proportional reductions should not be greater than 20%).
- 3.14 The BRE guidelines state that ‘...all main living rooms of dwellings, and conservatories, should be checked if they have a window facing within 90 degrees of due south. Kitchens and bedrooms are less important, although care should be taken not to block out too much sun’.
- 3.15 The APSH figures are calculated for each window, and where a room is served by more than one window the contribution of each is accounted for in the overall figures for the room. The acceptability criteria are applied to overall room-based figures.

Overshadowing (Sun on Ground)

- 3.16 Section 3.3 of the BRE guidelines describes the method of assessment of the availability of sunlight within garden/amenity spaces. This relates to the proportion of shading on March 21st.
- 3.17 The following types of open spaces to be assessed would normally include:
- Gardens, such as the main back garden of a house or communal garden including courtyard and roof terraces.
 - Parks and playing fields
 - Children’s playgrounds
 - Outdoor pools, marinas, and lakes
 - Sitting out areas and public squares
 - Nature reserves
- 3.18 The BRE criteria for gardens or amenity areas are as follows, ‘It is recommended that for it to appear adequately sunlit throughout the year, at least half of a garden or amenity space should receive at least two hours of sunlight on 21 March. If as a result of a new development an existing garden or amenity space does not meet the above, and the area which can receive two hours of sunlight on 21 march is less than 0.8 times its former value, then the loss of amenity is likely to be noticeable.’

Daylight within Proposed Developments

- 3.19 The 2011 BRE guidelines were revised in June 2022. In the 2022 revision of the BRE guidelines, a new Climate Based Daylight Modelling (“CBDM”) methodology replaces the Average Daylight Factor (“ADF”) methodology. The new methodology is more complex but has targets that are generally more difficult to achieve in an urban context.

Climate Based Daylight Modelling

- 3.20 The new CBDM methodology is based on the British Standard ‘Daylight in Buildings’ (BS EN17037). This contains advice and guidance on interior daylighting for all buildings across Europe but also has a UK National Annex which provides suggested targets for dwellings in the UK.
- 3.21 BS EN17037 supersedes BS 8206 Part 2 which was based on ADF and is no longer recommended.
- 3.22 The CBDM methodology is based on target illuminances from daylight. This is the Daylight Illuminance (‘DI’) to be achieved over half the area of the room (measured on a reference plane at tabletop level) for at least half of the daylight hours in a typical year. The calculations are based on weather data files which cover different regions of the UK. The calculations are done for each hour of the day for every day of the year. There are 8760 hours in the year, of which 4380 are daylight hours, and therefore the targets should be achieved for 2190 hours in the year. The methodology uses a more accurate sky model which simulates the movement of the sun throughout the day and accounts for the weather conditions at the time. As a result, CBDM accounts for the presence of sunlight and therefore the orientation of the rooms/windows is accounted for. A south facing room is likely to have access to higher levels of natural light than a north facing room and as a result, a north facing room would typically need larger windows to comply.
- 3.23 The UK National Annex provides illuminance recommendations of:
- 100 Lux in bedrooms;
 - 150 Lux in living rooms; and
 - 200 Lux in kitchens.
- 3.24 These are median illuminances to be achieved over 50% of the assessment grid for at least half of the daylight hours.
- 3.25 Where a room has a shared use, the highest target should apply. However, it also says that Local Authorities could use discretion here and that a living room target of 150 Lux could be used for combined living/kitchen/dining rooms if the kitchens are not treated as habitable spaces, as it may avoid small separate kitchens in the design.

Sunlight within Proposed Developments

- 3.26 For new buildings, the BRE Guidelines refer to BS EN 17037 which states that a space should receive a minimum of 1.5 hours of sunlight on a selected date between 1st February and 21st March with cloudless conditions. The BRE Guidelines suggests 21st March be used. For dwellings, at least one habitable room, preferably a main living room, should achieve at least this minimum criterion and that at least one main window faces within 90° of south. Whilst BS EN 17037 applies to all orientations, the BRE Guidelines state that if the room faces significantly north of due east or west, the criterion is unlikely to be met.

4 Standard Survey Limitations

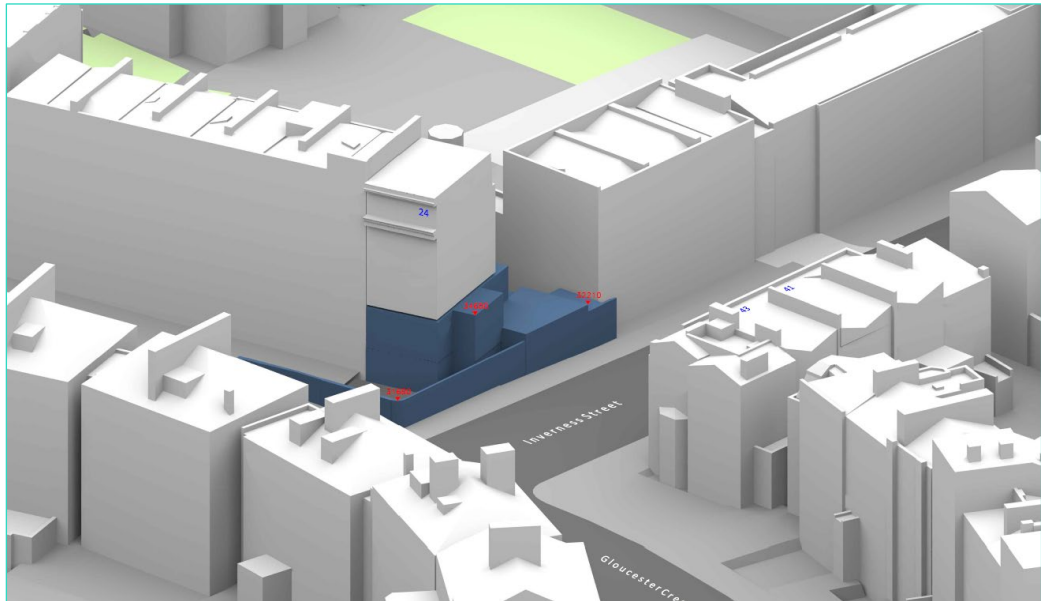
- 4.1 Although we have undertaken as detailed an inspection as possible, we are required by our professional indemnity insurers to notify you that our report is based upon the Standard Terms and Conditions provided along with our fee proposal. Our understanding of the existing massing, including the surrounding context was established from the sources of information detailed within Section 2.
- 4.2 In addition to our standard limitations the following limitations and assumptions also apply.
- Best estimates were made in establishing building use (residential or commercial) and room uses; generally, these were made from external observations and recourse to planning records where available.
 - Where floor plans of surrounding properties were not available, room depths have been assumed from external observations. Where no indicators of room depth were available a standard of 4m, 6m or 8m depths have been used.

5 Parameters and Assumptions

- 5.1 To calculate the various measures of daylight and sunlight it is necessary to construct a three-dimensional computer model. The model is then analysed using proprietary software to calculate the various metrics.
- 5.2 The 3D model was created to reproduce the massing of the buildings both on and surrounding the Application Site at a level of detail appropriate to the calculations performed. All heights in the model are in mm Above Ordnance Datum ("AOD").
- 5.3 In relation to the CBDM assessment of daylight and sunlight within the Proposed Development, the following assumptions and parameters have been used. The design team have specified light-coloured internal finishes and therefore, in accordance with paragraph C24 of Appendix C of the new BRE guidelines, the following Reflectance values have been used:
- Light pastel walls with a reflectance of 0.7;
 - Light wood veneer floors / cream carpets with a reflectance of 0.4;
 - White ceilings with a reflectance of 0.8; and
 - All external reflectance values are assumed at 0.2 as per the guidelines.
- 5.4 As per paragraph C28 of the BRE Guidelines, the room assessment grid area excludes a 300mm band around the perimeter of each room.
- 5.5 For windows, the following assumptions have been made:
- A transmittance factor of 0.8;
 - A maintenance factor of 8% has been allowed to account for the effect of dirt on the glass in an urban environment.
- 5.6 All buildings surrounding the site are assumed to have an overall reflectance of 0.2, in line with BRE guidance.

6 The Application Site

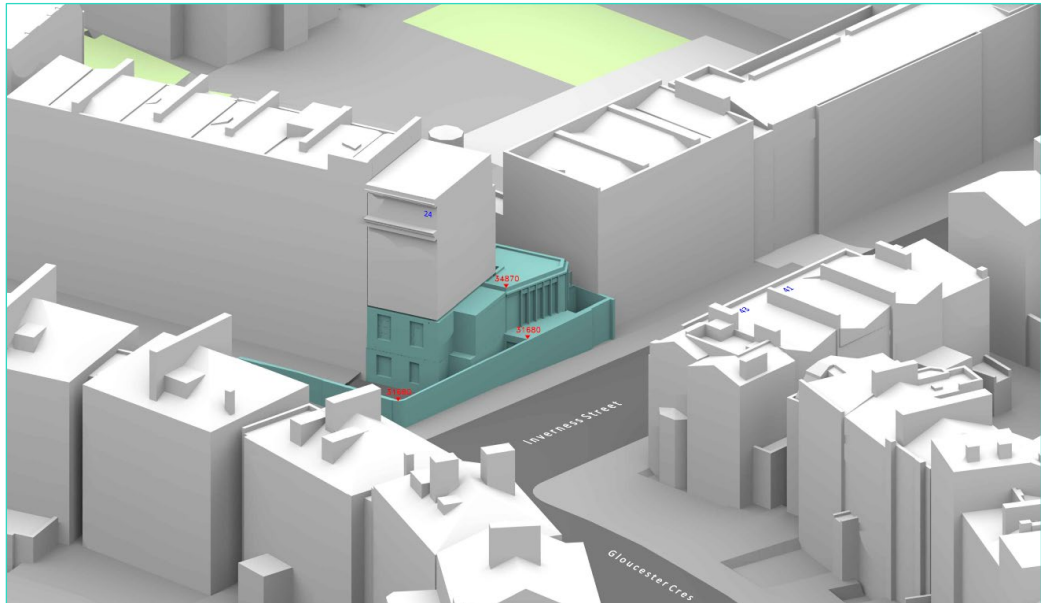
6.1 The Application Site is located on Inverness Street in the London Borough of Camden.



Drawing Number: P3937/02 – 3D View – Existing Building

6.2 Our understanding of the Application Site location and existing building(s) are illustrated in drawing numbers P3937/01-03, contained within Appendix 1.

7 The Proposed Development



Drawing Number: P3937/05 – 3D View – Proposed Scheme

- 7.1 Our understanding of the Proposed Development is illustrated in drawings P3937/04-06, contained within Appendix 1.

8 The Surrounding Properties

- 8.1 The local council tax registry (VOA) identifies that nos. 41 and 43 Inverness Street contain an element of residential accommodation and have been included within the scope of assessment due to their direct orientation to the Site.
- 8.2 The location of these properties can be seen illustrated on the extract below:



Identification Drawing ("the Plan")

- 8.3 Detailed results for each window/room assessed can be found contained within Appendix 2 and summarised in Section 9.

9 Assessment Results

41 Inverness Street

- 9.1 This residential property is situated south of the Site, comprising accommodation between the lower ground and second floor levels. Internal layouts have been obtained from online research and applied to the analysis model.

Daylight

- 9.2 All 7 windows and rooms will experience either no change or no noticeable change in VSC and NSL as a result of the proposed scheme.

Sunlight

- 9.3 No Site facing windows in this property are oriented within 90 degrees of due south and therefore none are relevant for assessment.
- 9.4 The overall impact to daylight amenity to this property is negligible with all alterations being within BRE guidance.

43 Inverness Street

- 9.5 This residential property is situated south of the Site, comprising accommodation between the lower ground and second floor levels. Internal layouts have been obtained from online research and applied to the analysis model.

Daylight

- 9.6 All 7 windows and rooms will experience either no change or no noticeable change in VSC and NSL as a result of the proposed scheme.

Sunlight

- 9.7 No Site facing windows in this property are oriented within 90 degrees of due south and therefore none are relevant for assessment.
- 9.8 The overall impact to daylight amenity to this property is negligible with all alterations being within BRE guidance.

10 Internal Daylight & Sunlight Assessment

- 10.1 Full and detailed analysis annotated upon floor layout plans are provided within Appendix 3 (see drawing reference P3937/CBDM/01). These show both the locations and configuration of the rooms which have been analysed, together with the distribution of daylight illuminance (Lux levels) that are achieved for 50% of daylight hours and the median daylight illuminance figure for each room.

Assessment

- 10.2 A total of seven habitable rooms have been assessed on the lower ground and upper ground floor levels, comprising four bedrooms, two kitchen diners and one living room.
- 10.3 At lower ground floor level, the kitchen diner exceeds the BRE recommended target median lux value, ensuring that this room benefits from excellent daylight distribution and penetration. One bedroom fronting onto Gloucester Crescent also exceeds the target daylight value.
- 10.4 One of the two remaining bedrooms at lower ground floor level falls only marginally short of the target value (100 lux) for a bedroom and the results demonstrate the daylight penetrates fully into the rear of this room. It is considered that this room will experience good levels of daylight. The remaining bedroom which faces into the rear courtyard area, will achieve 68 median lux. This room has a northerly orientation which naturally limits good lighting, however light is shown to penetrate into the centre of the room which is good for the lower ground floor location and northern orientation.
- 10.5 At upper ground floor level, the living room exceeds guidance and achieves excellent daylight to the entire room. The bedroom fronting Gloucester Crescent also exceeds guidance. The kitchen diner falls slightly short of the recommendations, although this room has a northerly orientation which naturally limits good daylighting. The results show that this room benefits from good distribution of light.
- 10.6 Overall, the internal daylight levels are considered to be excellent, particularly for an urban location. The layouts have been designed well to ensure that main living spaces are optimised in daylight terms.

Internal Sunlight Amenity

- 10.7 With reference to the attached table of internal sunlight results, contained within Appendix 3, both units experience good levels of internal sunlight, meeting the BRE guidance.

11 Overshadowing

- 11.1 The neighbouring rear garden to 25 Gloucester Crescent has been assessed to understand the potential for additional overshadowing as a result of the Proposed Development. The results can be seen illustrated in drawings P3937/SHA/07-08, contained within Appendix 2.
- 11.2 The drawings outline in green the area of amenity space that has been assessed. The areas shaded in yellow represent the areas that receive at least two hours or more of direct sunlight on 21st March and 21st June (Spring Equinox and Summer Solstice). The areas in grey receive less than 2 hours.
- 11.3 The overshadowing assessment shows that the garden will experience no change to direct sunlight received as a result of the Proposed Development.

12 Conclusion

- 12.1 In terms of impacts to neighbouring properties, the windows and rooms tested within nos. 41 and 43 Inverness Street all experience no noticeable change in daylight as a result of the proposed development.
- 12.2 The Proposed Development will result in no change the direct sun received in adjacent rear garden to 25 Gloucester Crescent.
- 12.3 The proposed accommodation within the site itself benefits from excellent daylighting and sunlight, with internal layouts designed well to optimise natural light.
- 12.4 We therefore conclude that the Proposed Development should be considered acceptable in daylight and sunlight terms and we fully support this application.

Appendix 1:

Drawings





Gloucester Cres

Inverness Street

24

43

41

Sources: CADPLAN
Survey Info (received 08/01/25)

Burd Haward Architects
Proposed Info (received 08/01/25)

Key:  Existing Buildings
 Proposed Scheme

Project: 46 Inverness street,
London

Title: Site plan
Existing Buildings

Scheme Confirmed: -

Date: -

Drawn By:
ST

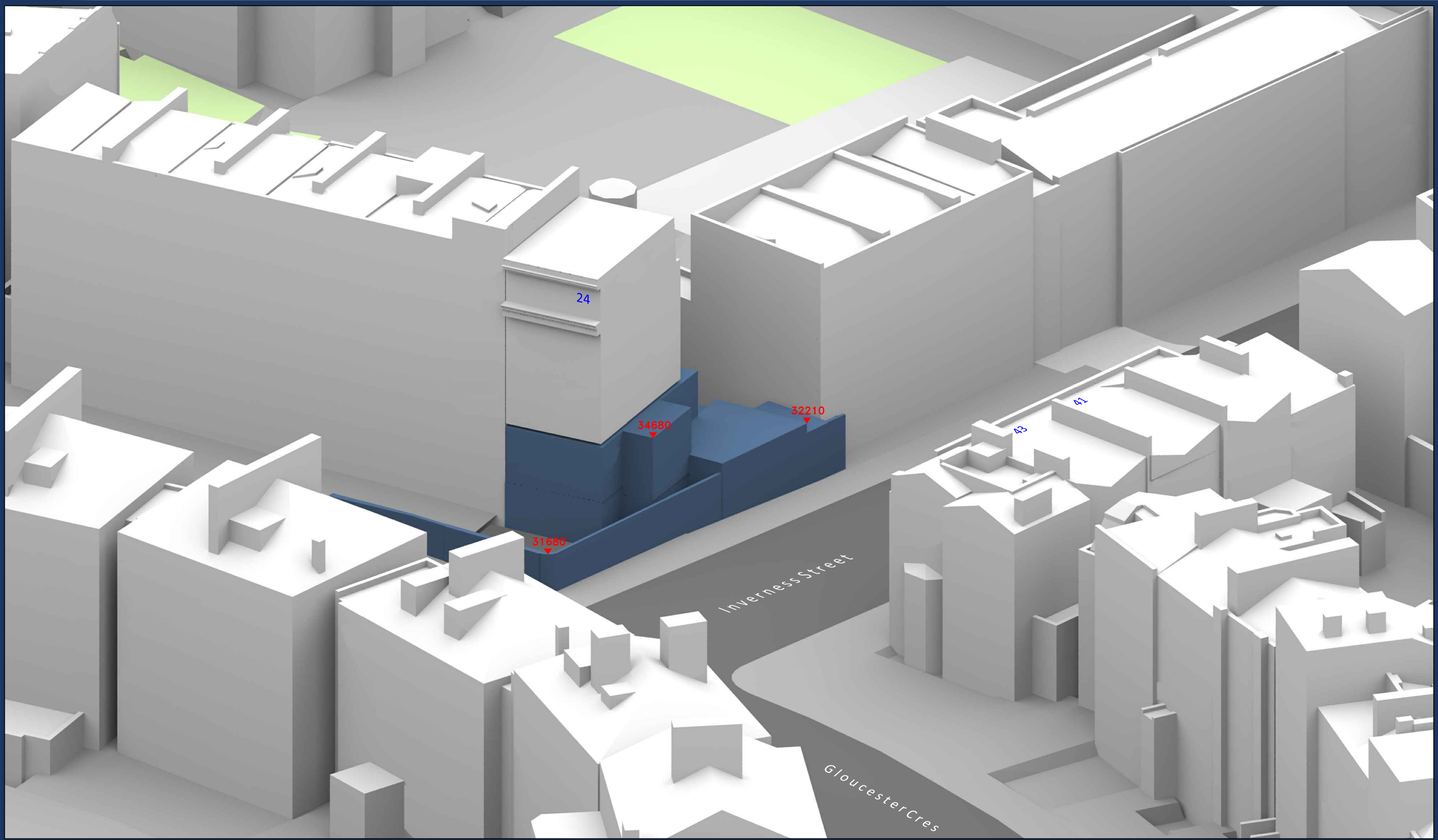
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Date:
Jan 25

Dwg No:
P3937/01

Rel:
01







Sources: CADPLAN
Survey Info (received 08/01/25)

ZMapping Limited
3D model (received 17/01/25)

Burd Haward Architects
Proposed Info (received 08/01/25)

Key:  Existing Buildings
 Proposed Scheme

All Heights in mm AOD

Project: 46 Inverness street,
London

Title: 3D view
Existing Buildings

Scheme Confirmed: -

Date: -

Drawn By: ST

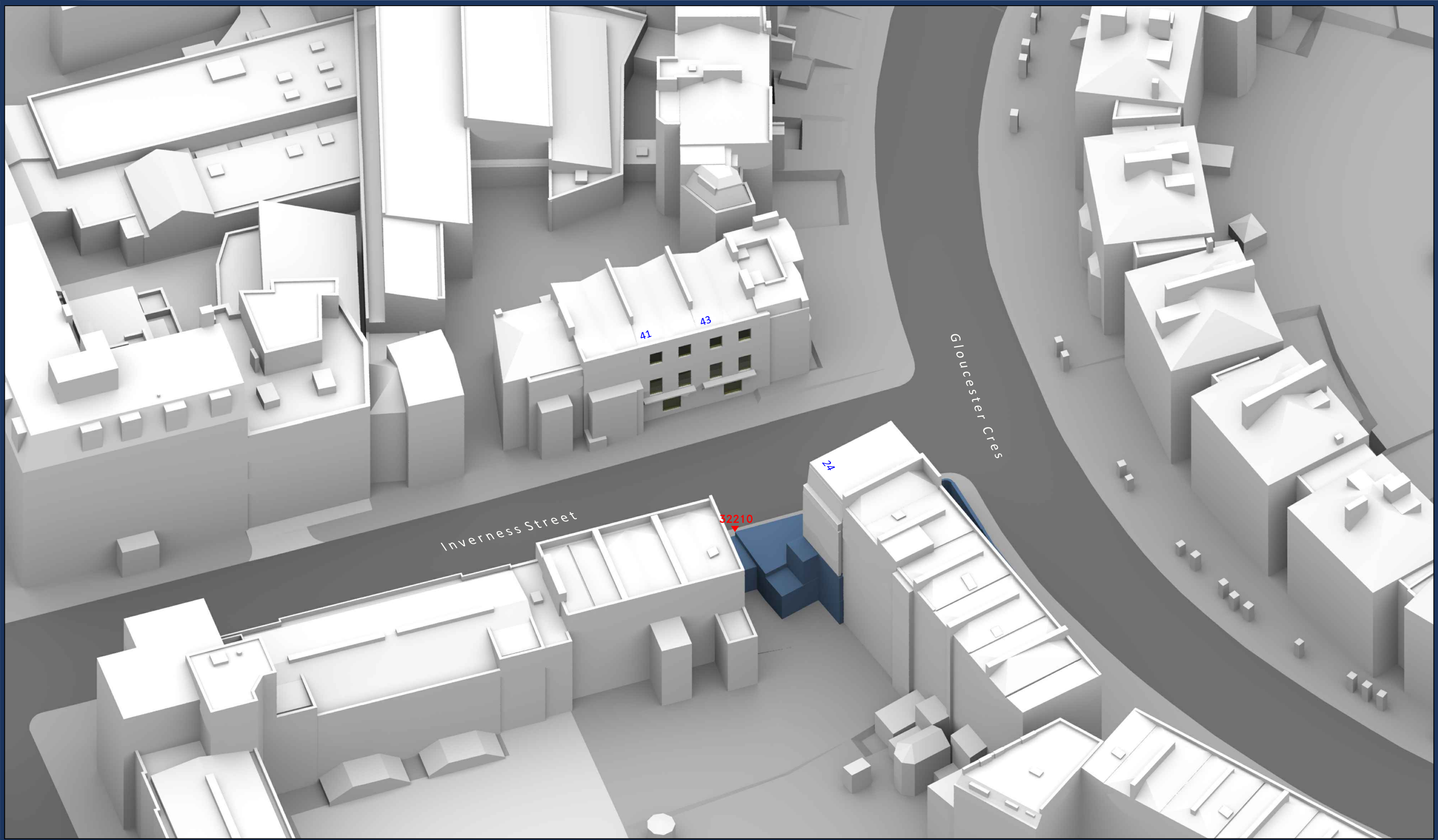
Scale: NTS@A3

Date: Jan 25

Dwg No: P3937/02

Rel: 01





Sources: CADPLAN
 Survey Info (received 08/01/25)

ZMapping Limited
 3D model (received 17/01/25)

Burd Haward Architects
 Proposed Info (received 08/01/25)

Key: Existing Buildings
 Proposed Scheme

All Heights in mm AOD

Project: 46 Inverness street,
 London

Title: 3D view
 Existing Buildings

Scheme Confirmed: -

Date: -

Drawn By: ST

Scale: NTS@A3

Date: Jan 25

Dwg No: P3937/03

Rel: 01





Gloucester Cres

Inverness Street

24

43

41

Sources: CADPLAN
Survey Info (received 08/01/25)

ZMapping Limited
3D model (received 17/01/25)

Burd Haward Architects
Proposed Info (received 08/01/25)

Key:  Existing Buildings
 Proposed Scheme

Project: 46 Inverness street,
London

Title: Site plan
Proposed Scheme 15/01/25

Scheme Confirmed: -

Date: -

Drawn By: ST

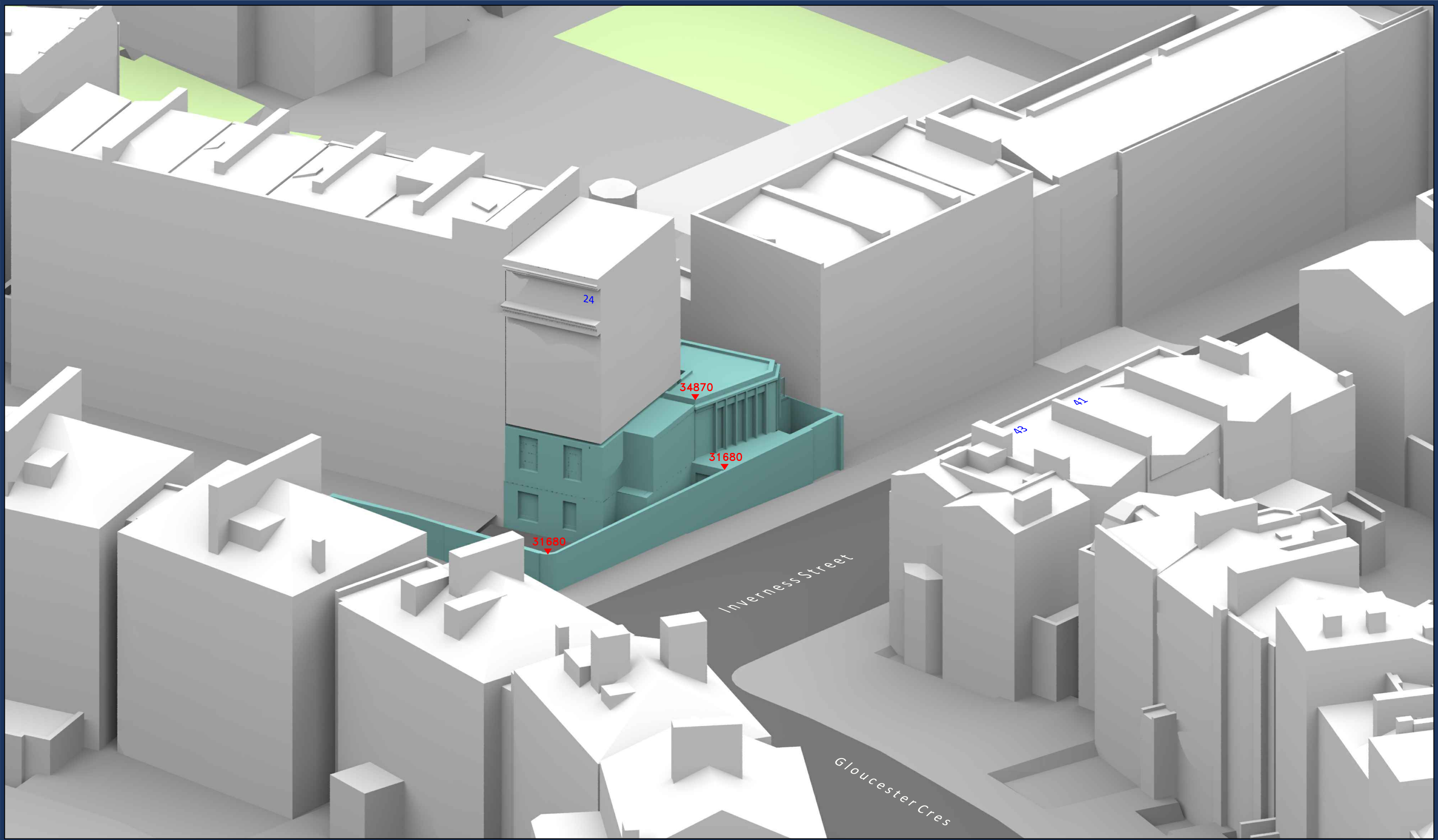
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Date: Jan 25

Dwg No: P3937/04

Rel: 01







Sources: CADPLAN
Survey Info (received 08/01/25)

ZMapping Limited
3D model (received 17/01/25)

Burd Haward Architects
Proposed Info (received 08/01/25)

Key:  Existing Buildings
 Proposed Scheme

All Heights in mm AOD

Project: 46 Inverness street,
London

Title: 3D view
Proposed Scheme 15/01/25

Scheme Confirmed: -

Date: -

Drawn By: ST

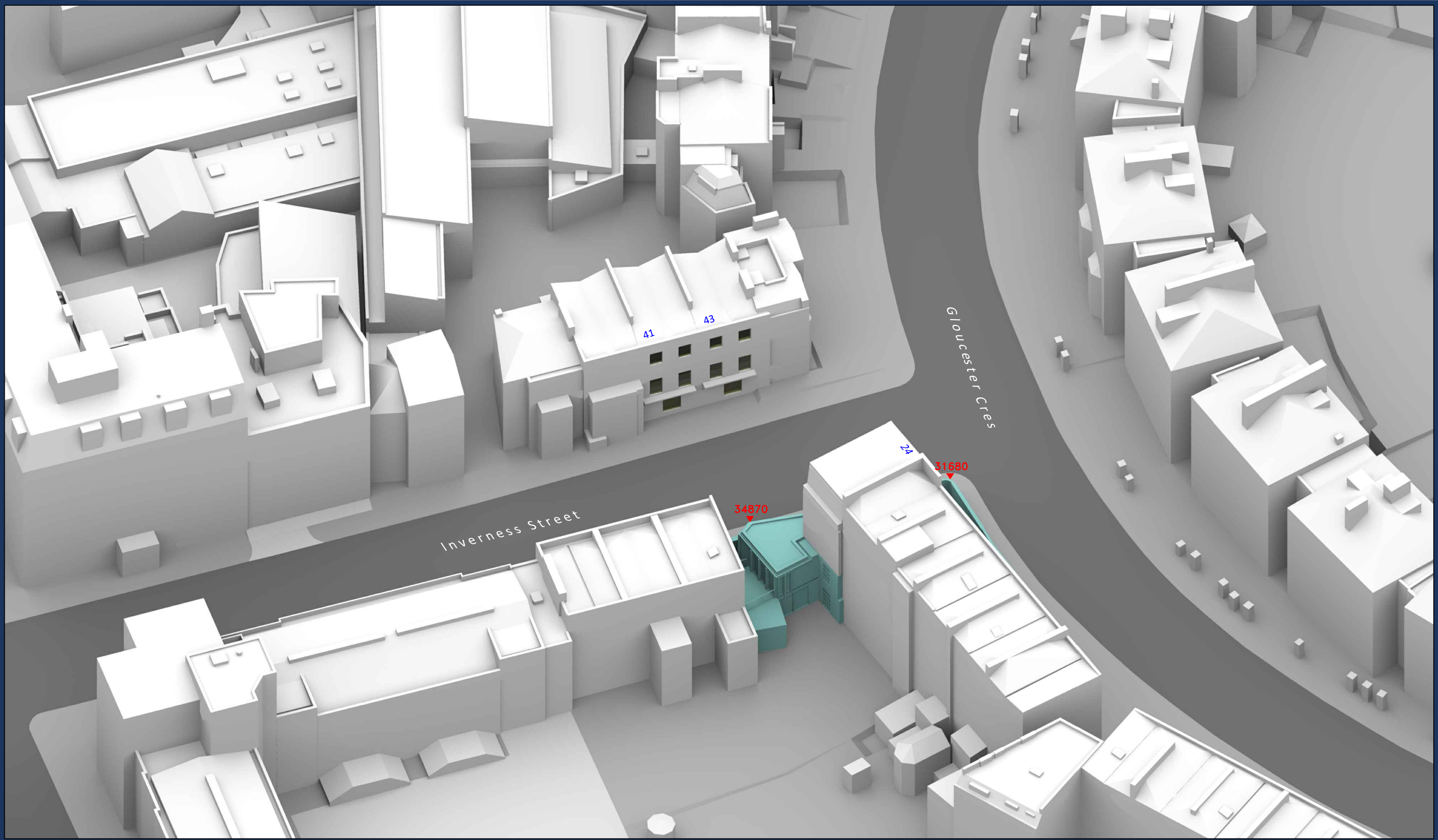
Scale: NTS@A3

Date: Jan 25

Dwg No: P3937/05

Rel: 01







Sources: CADPLAN
Survey Info (received 08/01/25)

ZMapping Limited
3D model (received 17/01/25)

Burd Haward Architects
Proposed Info (received 08/01/25)

Key:  Existing Buildings
 Proposed Scheme

All Heights in mm AOD

Project: 46 Inverness street,
London

Title: 3D view
Proposed Scheme 15/01/25

Scheme Confirmed: -

Date: -

Drawn By: ST

Scale: NTS@A3

Date: Jan 25

Dwg No: P3937/06

Rel: 01



Appendix 2:

Results – VSC, NSL & Overshadowing



Room	Room Use	Window	Existing VSC	Proposed VSC	Loss	%Loss
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43 INVERNESS STREET

R2/200	BASEMENT ROOM	W2/200	19.92	19.92	0.00	0.00
R2/201	LOBBY	W3/201	17.43	17.23	0.20	1.15
R3/201	LIVINGROOM	W4/201	23.88	23.56	0.32	1.34
R2/202	SITTINGROOM	W3/202	30.79	30.79	0.00	0.00
R2/202	SITTINGROOM	W4/202	30.76	30.76	0.00	0.00
R2/203	BEDROOM	W3/203	34.52	34.52	0.00	0.00
R2/203	BEDROOM	W4/203	34.36	34.36	0.00	0.00

41 INVERNESS STREET

R1/200	LKD	W1/200	19.48	19.48	0.00	0.00
R1/201	DINING	W2/201	23.25	23.01	0.24	1.03
R4/201	LOBBY	W1/201	12.38	12.34	0.04	0.32
R1/202	LIVINGROOM	W1/202	28.66	28.66	0.00	0.00
R1/202	LIVINGROOM	W2/202	30.63	30.62	0.01	0.03
R1/203	BEDROOM	W1/203	34.83	34.83	0.00	0.00
R1/203	BEDROOM	W2/203	34.68	34.68	0.00	0.00



Room	Room Use	Whole Room sq ft	Existing sq ft	Proposed sq ft	Loss sq ft	%Loss
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43 INVERNESS STREET

R2/200	BASEMENT ROOM	224.3	214.9	212.4	2.4	1.1
R2/201	LOBBY	23.4	0.0	0.0	0.0	0.0
R3/201	LIVINGROOM	206.0	199.9	199.9	0.0	0.0
R2/202	SITTINGROOM	224.3	219.0	219.0	0.0	0.0
R2/203	BEDROOM	257.3	250.7	250.7	0.0	0.0

41 INVERNESS STREET

R1/200	LKD	245.6	226.7	223.4	3.2	1.4
R1/201	DINING	165.1	148.5	148.5	0.0	0.0
R4/201	LOBBY	73.4	48.1	48.1	0.0	0.0
R1/202	LIVINGROOM	246.6	241.5	241.5	0.0	0.0
R1/203	BEDROOM	245.6	242.5	242.5	0.0	0.0



Existing

Proposed

Sources: CADPLAN
Survey Info (received 08/01/25)

ZMapping Limited
3D model (received 17/01/25)

Burd Haward Architects
Proposed Info (received 08/01/25)

Key:

- Area analysed
- Area with more than 2 hours of direct sunlight
- Area with less than 2 hours of direct sunlight

50% Percentage of area with more than 2 hours of direct sunlight

Project: 46 Inverness street, London

Title: BRE Sunlight 2hr Analysis
Existing vs Proposed Scheme 15/01/25
21st March

Scheme Confirmed: -

Date: -

Drawn By: ST

Scale: 1:250@A3

Date: Jan 25

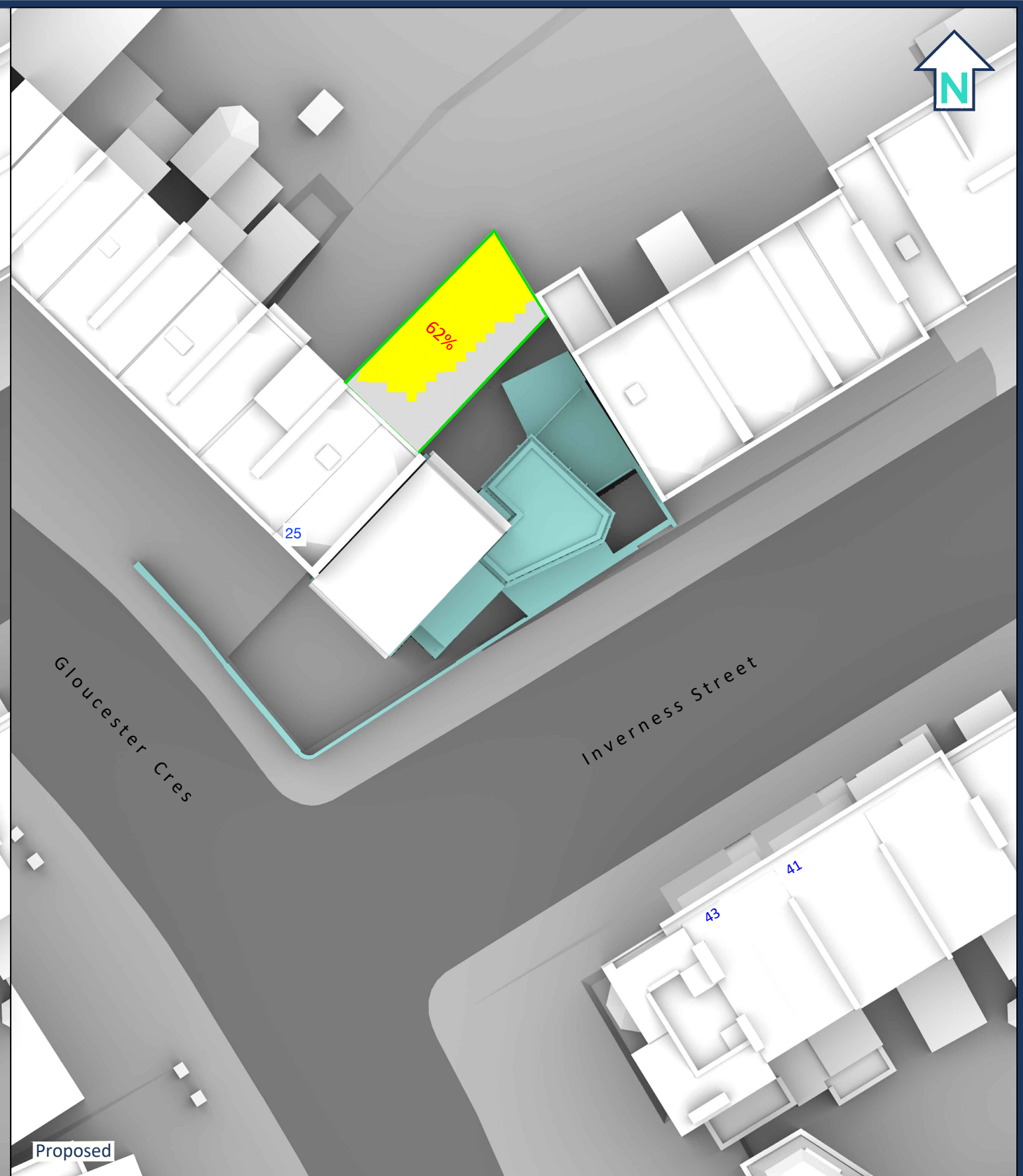
Dwg No: P3937/SHA/07

Rel: 01





Existing



Proposed

Sources: CADPLAN
Survey Info (received 08/01/25)

ZMapping Limited
3D model (received 17/01/25)

Burd Haward Architects
Proposed Info (received 08/01/25)

Key:

- Area analysed
- Area with more than 2 hours of direct sunlight
- Area with less than 2 hours of direct sunlight

50% Percentage of area with more than 2 hours of direct sunlight

Project: 46 Inverness street, London

Title: BRE Sunlight 2hr Analysis
Existing vs Proposed Scheme 15/01/25
21st June

Scheme Confirmed: -

Date: -

Drawn By: ST

Scale: 1:250@A3

Date: Jan 25

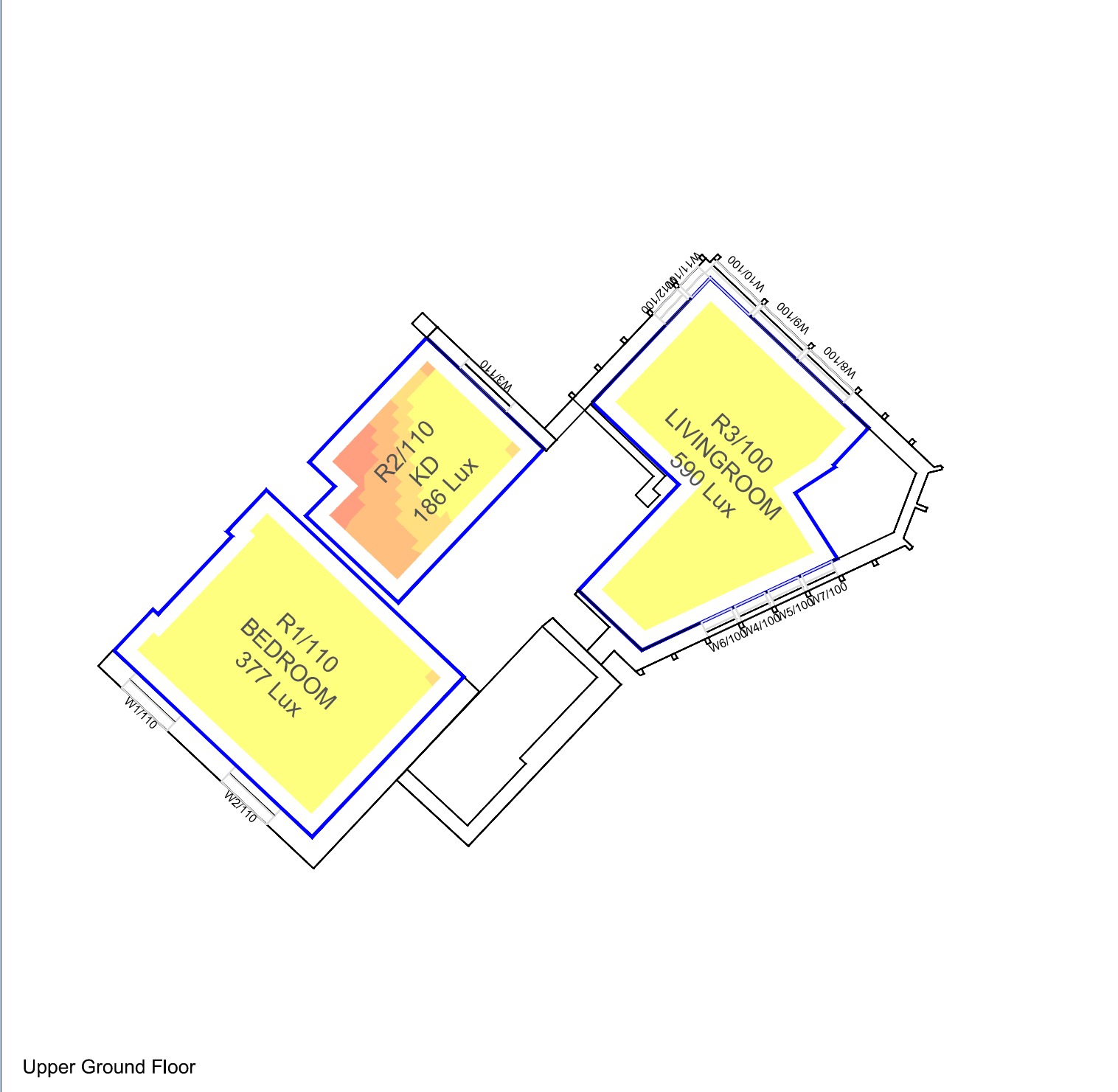
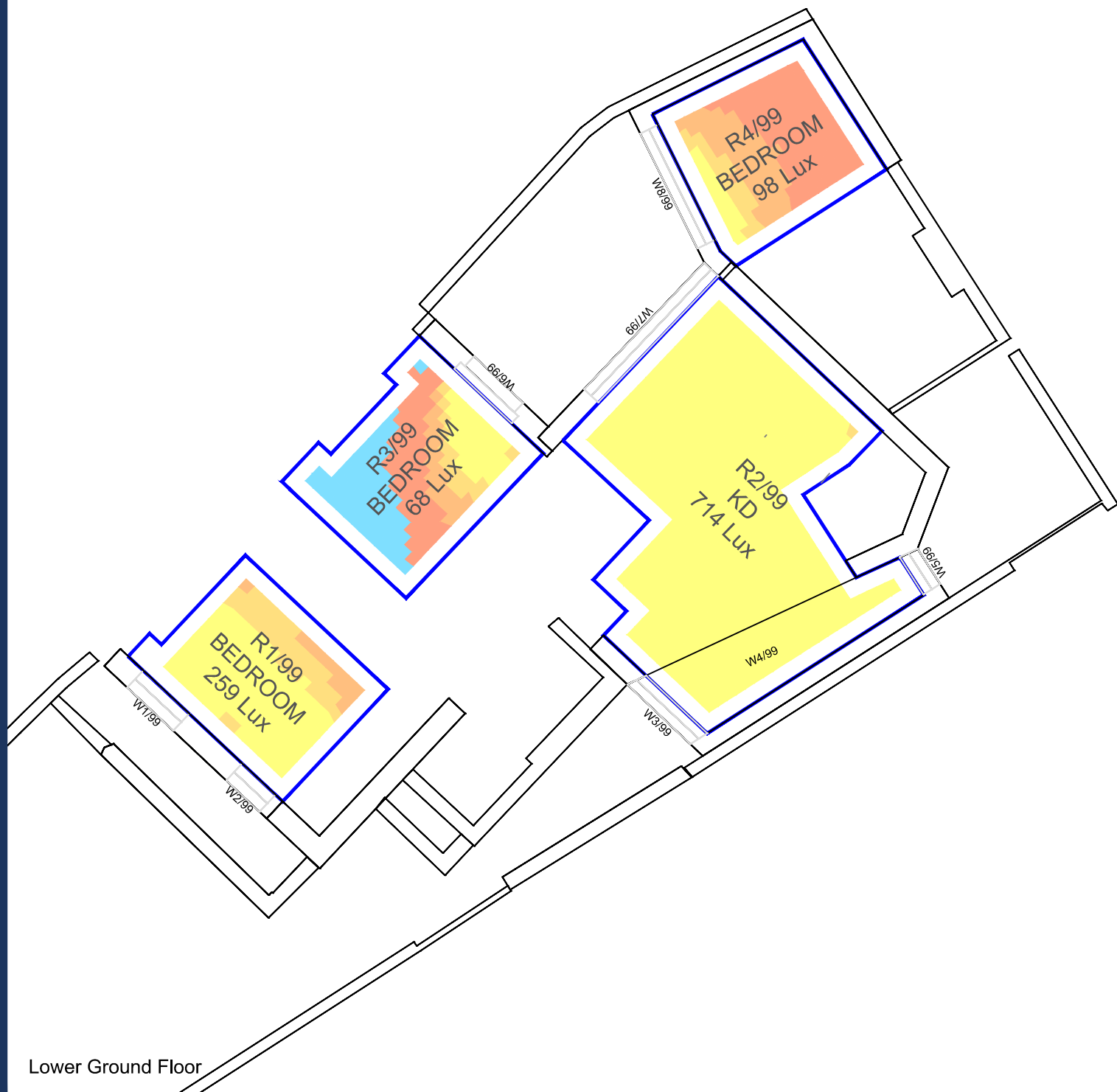
Dwg No: P3937/SHA/08

Rel: 01



Appendix 3:

Results – Internal Daylight &
Sunlight



Sources: Surveyor Name
Survey Info (received xx/xx/xx)
File Name

Architect Name
Proposed Info (received xx/xx/xx)
File Name

Key: Daylight Illuminance (achieved for 50% of daylight hours)	
<ul style="list-style-type: none"> ■ <50 Lux ■ >50 Lux ■ >100 Lux ■ >150 Lux ■ >200 Lux 	Median Illuminance (Lux) Levels shown for each room. Recommended Targets: Bedroom 100 Lux Living Room 150 Lux Kitchen 200 Lux
Scheme Confirmed: --	Date: 15/01/2025

Project: 46, Inverness street, London.

Drawn By: ST

Scale: 1:200@A3

Date: Jan 2025

Title: Climate Based Daylight Modelling (CBDM) Assessment
Median Illuminance (Lux) Levels

Proposed Scheme received 15/01/22

Dwg No: P3937/CBDM/01

Rel: 01



**46 INVERNESS STREET, LONDON
PROPOSED SCHEME 15/01/25**

SUNLIGHT EXPOSURE

Unit	Room	Room Use	Date	Sunlight Exposure (Hours)	Room Complies?	Unit Complies?
46 Inverness Street						
F1/99	R1/99	BEDROOM	21-Mar	4.0	✓	✓
	R2/99	KD	21-Mar	3.9	✓	
	R3/99	BEDROOM	21-Mar	0.0	✗	
	R4/99	BEDROOM	21-Mar	0.0	✗	
F1/100	R3/100	LIVINGROOM	11-Mar	4.5	✓	✓
F1/110	R1/110	BEDROOM	21-Mar	4.4	✓	✓
	R2/110	KD	21-Mar	0.0	✗	
					57.1%	100.0%