

MANOR LODGE, RICKMANSWORTH ROAD, NORTHWOOD LONDON BOROUGH OF HILLINGDON

DAYLIGHT AND SUNLIGHT REPORT

DIRECTOR: LIAM DUNFORD

APPLICANT: MERCHANT LAND INVESTMENTS LIMITED

DATE: FEBRUARY 2025

VERSION: 2

PROJECT: P3210

Point 2 Surveyors Limited,
17 Slingsby Place,
London, WC2E 9AB

0207 836 5828
point2.co.uk



Contents

1	Introduction	3
2	Sources of Information	4
3	Assessment Methodology & Application of Guidance	5
4	Parameters and Assumptions	8
5	The Application Site	9
6	The Proposed Development	10
7	The Surrounding Properties.....	11
8	Assessment Results.....	12
9	Conclusion.....	14

Appendices

Appendix 1: Existing & Proposed Drawings

Appendix 2: Technical Analysis

Appendix 3: Window Maps

1 Introduction

- 1.1 Point 2 Surveyors Ltd. have been instructed to assess to the daylight and sunlight implications as a result of the redevelopment of Manor Lodge, Rickmansworth Road, Northwood, HA6 2QT ("the Application Site" / "the Proposed Development"), within the London Borough of Hillingdon.
- 1.2 This report relates to Seabrook Architects Proposed Development and provides detailed technical support regarding the potential impact on the daylight and sunlight amenity of two neighbouring receptors containing residential accommodation.
- 1.3 The Local Planning Authority will be informed in this by the BRE document entitled *Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice 2022* (BRE Guidelines)¹. The BRE Guidelines are the principal guidance in this area. They set out the methodology for measuring light and recommend actions 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 scheme for a site using the BRE guidance. Consideration will be given to the urban context within which a scheme is located, and daylight and sunlight will be one of several planning considerations which the local authority will weigh in the planning balance.

¹ Building Research Establishment 'Site Layout Planning for Daylight and Sunlight' – A Guide to Good Practice, 3rd Edition, 2022 (BRE Guidelines)

2 Sources of Information

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

ZMapping Ltd.

Photogrammetry Model (received 23/11/22)
Manor Lodge_231122_Solids XY@NE.dwg

Point 2 Surveyors Ltd.

Site Photography

Seabrook Architects

Proposed Scheme Information (received 04/02/25)
5819 - Manor Lodge 27 January 2025.rvt

3 Assessment Methodology & Application of Guidance

- 3.1 It is common practice to assess daylight and sunlight by reference to the guidelines set out in the 2022 Building Research Establishment (“BRE”) Report ‘Site layout planning for daylight and sunlight - A guide to good practice’ by Paul Littlefair (the “BRE Guidelines”). This document is widely accepted by planning authorities as the means by which to consider the effect of development on the daylight and sunlight enjoyed by neighbouring buildings. It is also used to assess daylight and sunlight within new development.
- 3.2 The BRE Guidelines is a document that is applied across the country. Due to its national application, the framework for designers, practitioners, and planning officials to refer to is a ‘one size fits all’ approach to the assessment of daylight and sunlight. Theoretically, the methodology and subsequent technical specification offered by the BRE Guidelines is applicable to all manner of built environments, ranging from villages to dense city centres, to areas where significant regeneration is taking place. Notwithstanding the stark disparity between these environments, the suggested target daylight and sunlight values remain consistent despite a suburban setting having very little in common with inner urban locations.
- 3.3 The BRE Guidelines repeatedly emphasise to the user, whether that be designers, consultants or planning officials to apply the guidelines in a manner that is appropriate for a particular situation. For example, in the introductory summary it states:

*“This guide is a comprehensive revision of the 2011 edition of site layout planning for daylight and sunlight. **It is purely advisory and the numerical target values within it may be varied to meet the needs of the development and its location.** Appendix F explains how this can be done in a logical way while retaining consistency with the British Standard Recommendations on interior lighting.”*

- 3.4 In Section 1: Introduction, at paragraph 1.6 it states:

*“the guide is intended for building designers and their clients, consultants and planning officials. **The advice given here is not mandatory** and the guide should not be seen as an instrument of planning policy; its aim is to help rather than constrain the designer. **Although it gives numerical guidelines, these should be interpreted flexibly** since natural lighting is only one of the many factors in site layout design. **In special circumstances the developer or planning authority may wish to use different target values.** For example, in historic city centres **or in an area with modern high-rise buildings, a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings.**”*
- 3.5 At paragraph 2.2.3 (Existing Buildings), it states:

"Note that the numerical values given here are purely advisory. Different criteria may be used based on the requirement for daylighting viewed against other site layout constraints. Another important issue is whether the existing building is itself a good neighbour, standing a reasonable distance from the boundary and taking no more than its fair share of light. Appendix F gives further guidance"

3.6 In Appendix F it states at section F1:

"Sections 2.1 and 2.2 and 2.3 give numerical target values in assessing how much light from the sky is blocked by obstructing buildings. These values are purely advisory and different targets may be used on special requirements of the proposed development or its location."

3.7 It is clear that the numerical advice offered by the BRE is not mandatory and that a practical application of the target values is required as natural lighting is only one of many factors that should be considered. Where appropriate, the BRE Guidelines promote the use of alternative target values to those discussed in the main body of the document.

3.8 In relation to the properties surrounding a site, usually the local planning authority will only be concerned with the impact to main habitable accommodation (i.e. living rooms, bedrooms and kitchens) within residential properties. Non-habitable rooms such as bathrooms and hallways have not been considered within this report.

3.9 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.

3.10 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").

3.11 In relation to 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.

3.12 These measures of daylight and sunlight are discussed in the following paragraphs -

Diffuse Daylight

3.13 **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.

3.14 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.

- 3.15 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.
- 3.16 Where there are multiple windows serving a room, an overall VSC can be derived by weighting the VSC for each window in accordance with its window area. This method should not be used where the windows are more than 5m apart.
- 3.17 **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. It may be used where the room layouts are known.
- 3.18 The BRE suggests that the area of the working plane (set at 850mm above the floor) 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%).
- 3.19 NSL is notable that Appendix F does not recommend the use of NSL where alternative urban daylight targets are used, paragraph F6 says:

“In assessing the loss of light to an existing building, the VSC is generally recommended as the appropriate parameter to use. This is because the VSC depends only on obstruction, and is therefore a measure of the daylit environment as a whole.”

Sunlight

- 3.20 **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.
- 3.21 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%).
- 3.22 The BRE guidelines state that:

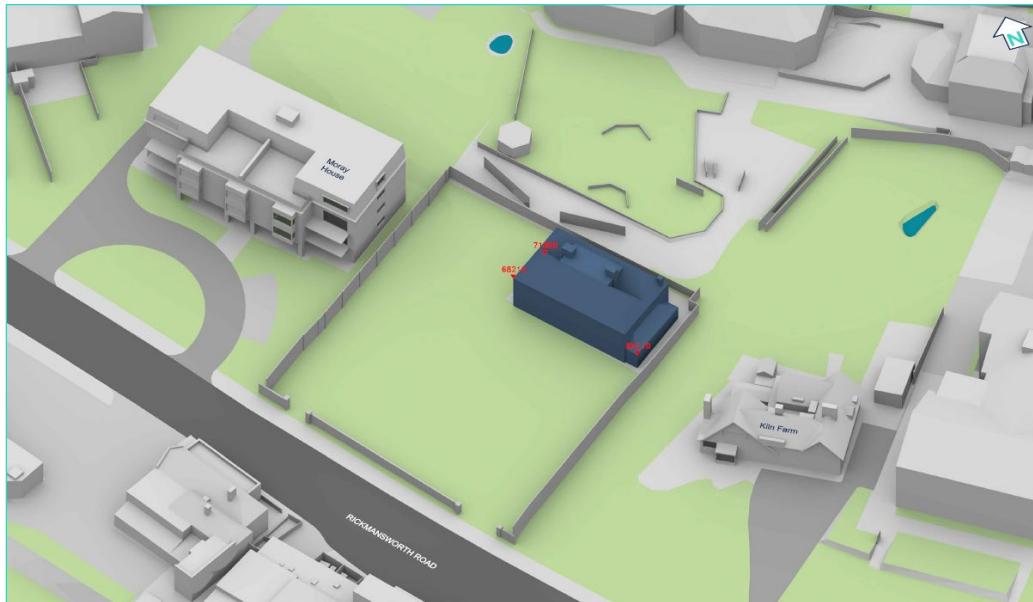
“...all main living rooms of dwellings, and conservatories, should be checked if they have a window facing within 90 degrees of due south. Kitchens and bedrooms are less important, although care should be taken not to block out too much sun. Normally loss of sunlight need not be analysed to kitchens and bedrooms....”
- 3.23 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.

4 Parameters and Assumptions

- 4.1 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 measures of daylight and sunlight associated with the two identified receptors.
- 4.2 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").
- 4.3 In assessing the impact of a new development on neighbouring properties, it is usual to only consider main habitable spaces (i.e. bedrooms, living rooms and kitchens) within residential properties that contain a site-facing window. In accordance with BRE and British Standard guidance, VSC and APSH values have been calculated at the window centre, on the outside wall face.
- 4.4 Best estimates were made in establishing building use (residential or commercial) and room uses; generally, these were made from external observation, VOA searches and recourse to planning records where available. Where floor plan information could not be obtained, reasonable assumptions have been made as to the internal configuration of the rooms behind the fenestration. Unless the building form suggests otherwise, rooms have generally been assumed as 4.2 meters deep or half the depth of the building.

5 The Application Site

5.1 The Application Site is in the London Borough of Hillingdon.



Drawing Number: P3210/02 – 3D View – Existing Building

5.2 Our understanding of the Application Site location and existing building(s) that occupy the Application Site are illustrated in drawing numbers P3210/01-03, contained within Appendix 1.

6 The Proposed Development

6.1 The Proposed Development: Demolition of the existing structures and creation of 6 residential units together with alterations to existing access points, associated parking and landscaping.



Drawing Number: P3210/08 – 3D View – Proposed Development

6.2 Our understanding of the Proposed Development is illustrated in drawing numbers P3210/07-09 contained within Appendix 1.

7 The Surrounding Properties

7.1 The local council tax registry (“VOA”) has identified the following two properties as containing residential accommodation. Due to their proximity to the Application Site, the impact the Proposed Development has upon the daylight and sunlight amenity of their habitable rooms (bedrooms, living rooms and kitchens) has been assessed:

1. Moray House; and
2. Kiln Farm.

7.2 The location of these properties can be seen illustrated in the drawings contained within Appendix 1, and on the extract below:



Identification Drawing (“the Plan”)

7.3 Detailed results for each window and associated room assessed can be found in Appendix 2 and are summarised in Section 8.

8 Assessment Results

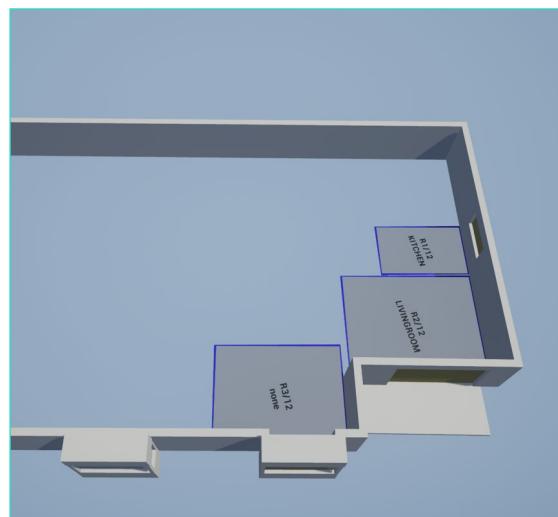
- 8.1 A total of 21 windows, serving 12 Site-facing habitable rooms have been assessed across two properties.
- 8.2 A copy of the results of analyses and window maps are enclosed at Appendices 2 and 3 to assist the reader.

Kiln Farm

- 8.3 This property is located south-east of the Application Site and comprises residential accommodation on the ground and first floors. Internal floor layouts have been assumed for this property in line with industry standard assumptions, i.e. 4m room depth for residential uses.
- 8.4 All windows and rooms assessed in this property experience fully BRE compliant alterations in daylight and sunlight against the VSC, NSL and APSH criteria. On this basis, occupants will not experience a noticeable change in light levels as a result of the Proposed Development.

Moray House

- 8.5 This property is located to the north-west of the Application Site and comprises a block of flats with residential accommodation between the ground and third floor levels. Partial internal layouts have been obtained for this property from online public records and have been replicated throughout the building. The internal layouts modelled on each floor are shown in Extract 01:



Extract 01 - Internal Layouts Tested within Moray House

8.6 All windows and rooms assessed in this property experience fully BRE compliant alterations in daylight and sunlight against the VSC, NSL and APSH criteria. On this basis, occupants will not experience a noticeable change in light levels as a result of the Proposed Development.

9 Conclusion

- 9.1 All windows and rooms assessed meet the BRE recommendations and therefore occupants of neighbouring accommodation will not experience a noticeable change in daylight and sunlight as a result of the Proposed Development.
- 9.2 It is concluded that the effects of the Proposed Development in relation to daylight and sunlight amenity should be considered acceptable.

Appendix 1:

Existing & Proposed Drawings



Sources: Zmapping
3D Model (received 23/11/22)
Manor Lodge_231122_Solids XY@NE.dwg

Point 2
Site Photos

Seabrook Architects
Proposed Scheme 25/01/23
5819 - Manor Lodge 24.01.23.rvt
5819 - Manor Lodge 24.01.23.dwg

Key:
Existing Buildings
Proposed Scheme

Project: Manor Lodge, Rickmansworth Road
Northwood

Title: Plan Site
Existing Buildings

Scheme Confirmed:

Date:

Drawn By:

A2

Scale:

1:500@A3

Date:

Jan 23

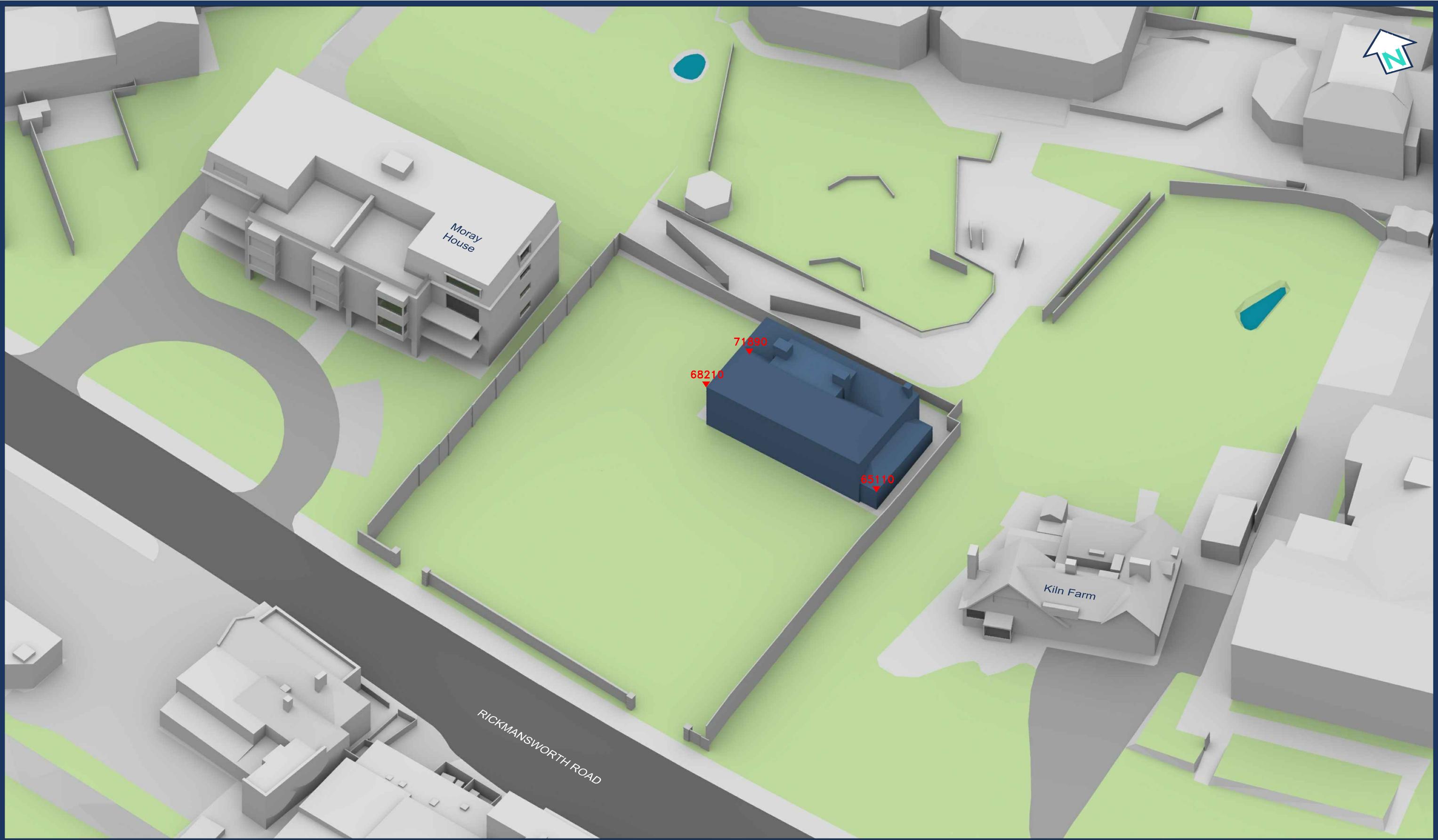
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P3210/01

Rel:

01





Sources: Zmapping
3D Model (received 23/11/22)
Manor Lodge_231122_Solids XY@NE.dwg

Point 2
Site Photos

Seabrook Architects
Proposed Scheme 25/01/23
5819 - Manor Lodge 24.01.23.rvt
5819 - Manor Lodge 24.01.23.dwg

Key:
Existing Buildings
Proposed Scheme

All Heights in mm AOD

Project: Manor Lodge, Rickmansworth Road
Northwood

Title: 3D View
Existing Buildings

Scheme Confirmed:

Date:

Drawn By:

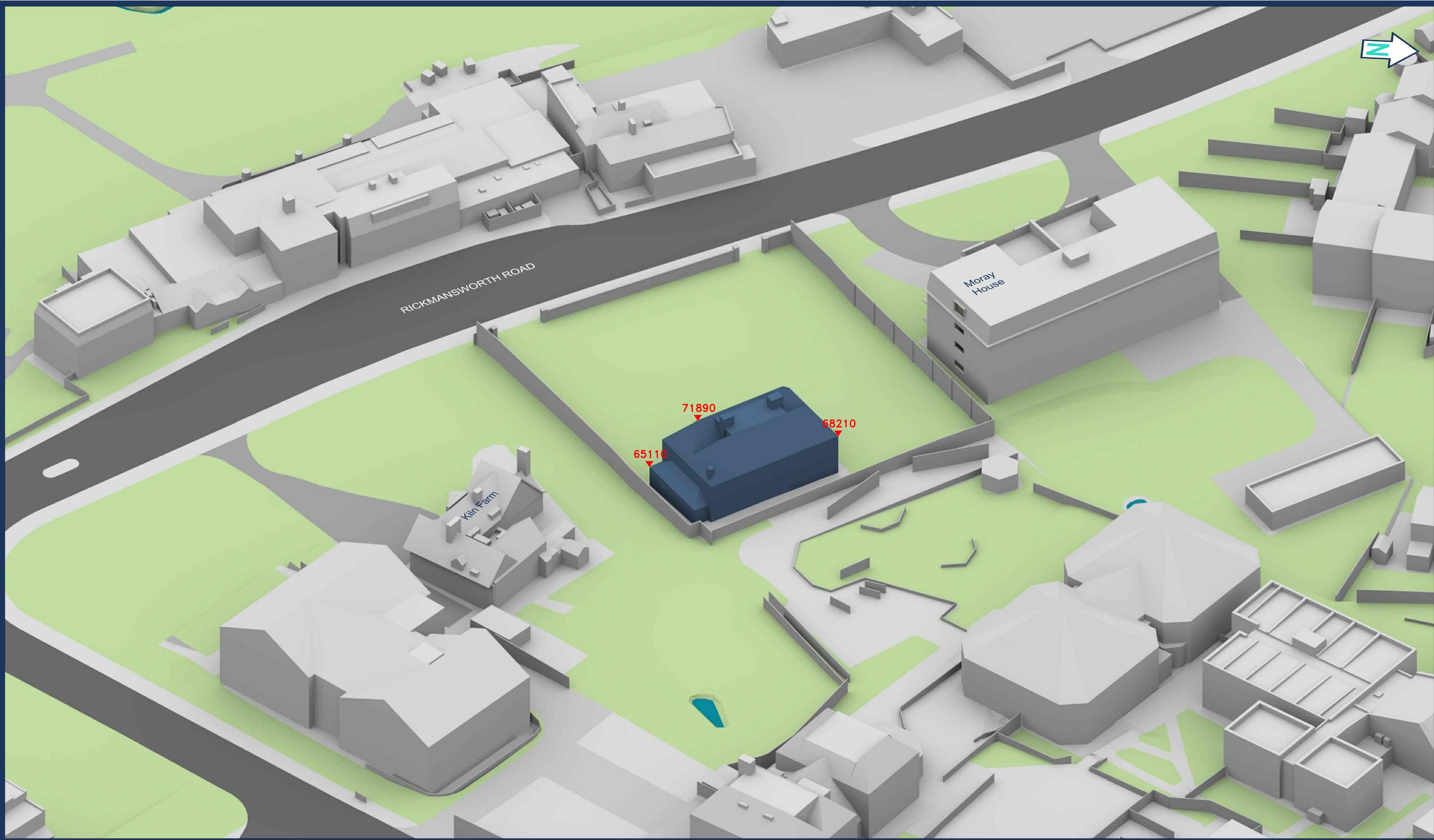
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Date:
Jan 23

Dwg No:
P3210/02

Rel:
01





Sources: Zmapping
3D Model (received 23/11/22)
Manor Lodge_231122_Solids XY@NE.dwg

Point 2
Site Photos

Seabrook Architects
Proposed Scheme 25/01/23
5819 - Manor Lodge 24.01.23.rvt
5819 - Manor Lodge 24.01.23.dwg

Key:
Existing Buildings
Proposed Scheme

All Heights in mm AOD

Project: Manor Lodge, Rickmansworth Road
Northwood

Title: 3D View
Existing Buildings

Scheme Confirmed:

Date:

Drawn By:

Scale:
NTS@A3

Date:
Jan 23

Dwg No:
P3210/03

Rel:
01





Sources: Zmapping
3D Model (received 23/11/22)
Manor Lodge_231122_Solids XY@NE.dwg

Point 2
Site Photos

Proposed Scheme 04/02/25
5819 - Manor Lodge 27 January 2025.rvt

Key: Existing Buildings
 Proposed Scheme

Project: Manor Lodge, Rickmansworth Road
Northwood

Title: Plan Site
Proposed Scheme 04/02/25

Scheme Confirmed:

Date:

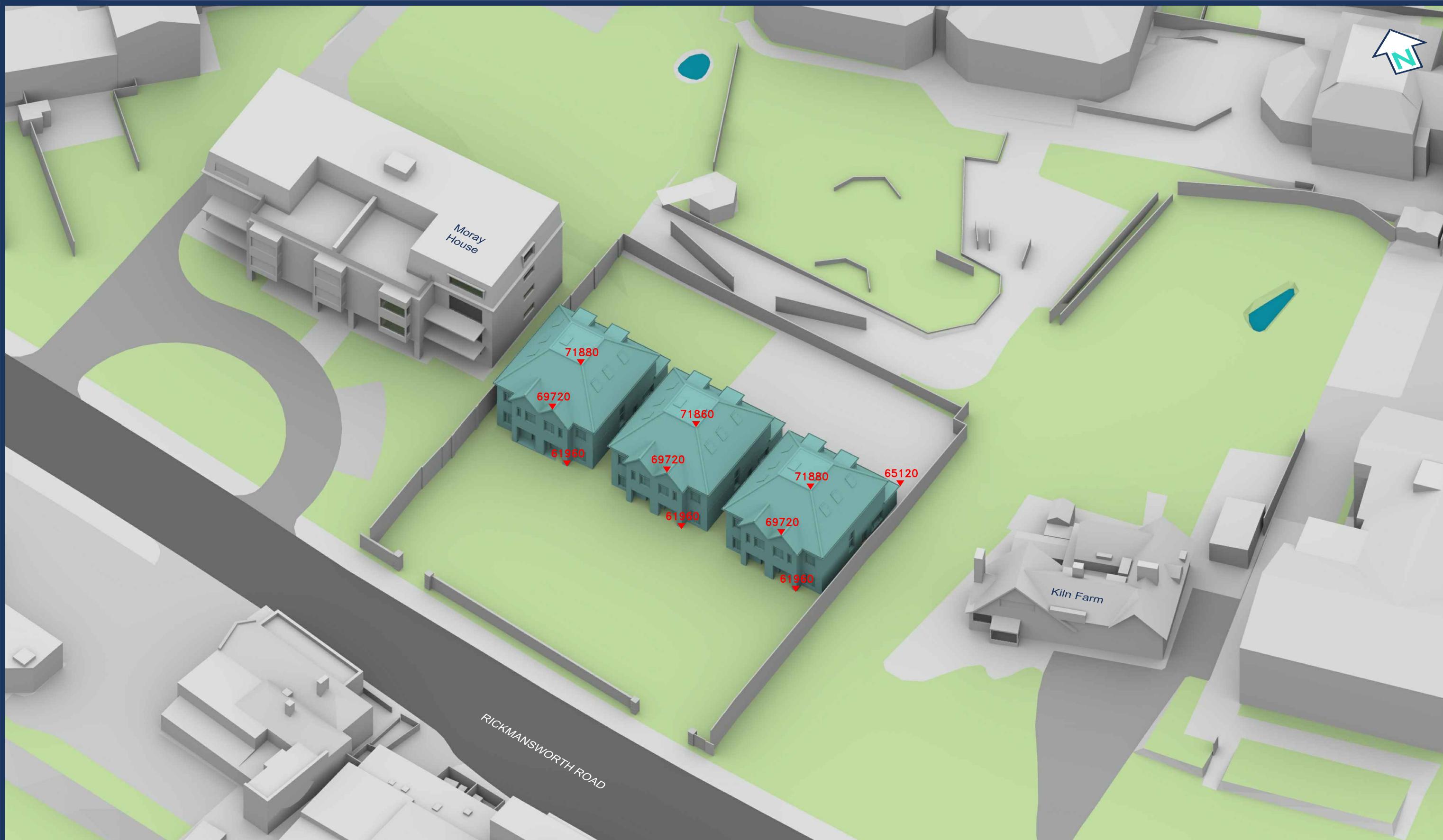
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Scale:
1:500@A3

Date:
Feb 25

Dwg No:
P3210/02

Rel:
02



Sources: Zmapping
3D Model (received 23/11/22)
Manor Lodge_231122_Solids XY@NE.dwg

Point 2
Site Photos

Proposed Scheme 04/02/25
5819 - Manor Lodge 27 January 2025.rvt

Key: Existing Buildings
Proposed Scheme

All Heights in mm AOD

Project: Manor Lodge, Rickmansworth Road
Northwood

Title: 3D View
Proposed Scheme 04/02/25

Scheme Confirmed:

Date:

Drawn By:

Scale: NTS@A3
BW

Date: Feb 25

Dwg No: P3210/02

Rel: 02





Sources: Zmapping
3D Model (received 23/11/22)
Manor Lodge_231122_Solids XY@NE.dwg

Point 2
Site Photos

Proposed Scheme 04/02/25
5819 - Manor Lodge 27 January 2025.rvt

Key: Existing Buildings
Proposed Scheme

All Heights in mm AOD

Project: Manor Lodge, Rickmansworth Road
Northwood

Title: 3D View
Proposed Scheme 04/02/25

Scheme Confirmed:

Date:

Drawn By:

Scale: NTS@A3
BW

Date: Feb 25

Dwg No: P3210/09

Rel: 02

POINT

Appendix 2:

Technical Analysis



DAYLIGHT ANALYSIS
MANOR LODGE, RICKMANSWORTH ROAD, NORTHWOOD
EXISTING VS PROPOSED SCHEME 04/02/25

DAYLIGHT

Room	Room Use	Window	Existing VSC	Proposed VSC	Loss	%Loss
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Moray House, Rickmansworth Road

R1/10	KITCHEN	W1/10	25.57	20.53	5.04	19.71
R2/10	LIVINGROOM	W2/10	9.63	9.15	0.48	4.98
R3/10		W3/10	4.35	4.31	0.04	0.92
R1/11	KITCHEN	W1/11	37.11	31.14	5.97	16.09
R2/11	LIVINGROOM	W2/11	17.90	16.29	1.61	8.99
R3/11		W3/11	26.42	23.90	2.52	9.54
R3/11		W4/11	39.25	39.17	0.08	0.20
R3/11		W5/11	18.83	18.83	0.00	0.00
R1/12	KITCHEN	W1/12	37.58	34.94	2.64	7.03
R2/12	LIVINGROOM	W2/12	36.48	35.91	0.57	1.56
R3/12		W3/12	28.21	26.97	1.24	4.40
R3/12		W4/12	39.57	39.55	0.02	0.05
R3/12		W5/12	22.64	22.64	0.00	0.00
R1/13	KITCHEN	W1/13	38.63	38.41	0.22	0.57
R2/13	LIVINGROOM	W2/13	39.26	39.25	0.01	0.03
R2/13	LIVINGROOM	W3/13	31.45	31.45	0.00	0.00

Kiln Farm, Rickmansworth Road

R1/20		W1/20	27.73	25.35	2.38	8.58
R1/20		W2/20	34.92	34.92	0.00	0.00
R1/20		W3/20	22.06	21.46	0.60	2.72
R1/20		W4/20	38.21	38.21	0.00	0.00
R1/20		W5/20	19.72	19.72	0.00	0.00



NSL ANALYSIS
MANOR LODGE, RICKMANSWORTH ROAD, NORTHWOOD
EXISTING VS PROPOSED SCHEME 04/02/25

NSL

Room	Room Use	Whole Room sq ft	Existing sq ft	Proposed sq ft	Loss sq ft	%Loss
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Moray House, Rickmansworth Road

R1/10	KITCHEN	122.3	96.0	95.5	0.5	0.5
R2/10	LIVINGROOM	331.8	322.4	308.1	14.4	4.5
R3/10		171.9	157.7	156.6	1.1	0.7
R1/11	KITCHEN	122.3	119.1	119.1	0.0	0.0
R2/11	LIVINGROOM	331.8	326.5	319.8	6.7	2.1
R3/11		286.9	280.7	280.7	0.0	0.0
R1/12	KITCHEN	122.3	119.1	119.1	0.0	0.0
R2/12	LIVINGROOM	331.8	327.8	327.7	0.1	0.0
R3/12		286.9	280.7	280.7	0.0	0.0
R1/13	KITCHEN	123.0	119.6	119.6	0.0	0.0
R2/13	LIVINGROOM	490.4	482.3	482.3	0.0	0.0

Kiln Farm, Rickmansworth Road

R1/20		272.4	272.4	272.4	0.0	0.0
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SUNLIGHT ANALYSIS

MANOR LODGE, RICKMANSWORTH ROAD, NORTHWOOD

EXISTING VS PROPOSED SCHEME 04/02/25

Room	Window	Room Use	APSH											
			Window				Winter %Loss	Annual %Loss	Room				Winter %Loss	Annual %Loss
			Existing		Proposed				Winter	Annual	Winter	Annual		
Room	Window	Room Use	Winter APSH	Annual APSH										
Moray House, Rickmansworth Road														
R1/10	W1/10	KITCHEN	15	62	7	52	53.3	16.1	15	62	7	52	53.3	16.1
R2/10	W2/10	LIVINGROOM	13	17	9	13	30.8	23.5	13	17	9	13	30.8	23.5
R3/10	W3/10		3	4	3	4	0.0	0.0	3	4	3	4	0.0	0.0
R1/11	W1/11	KITCHEN	27	76	18	67	33.3	11.8	27	76	18	67	33.3	11.8
R2/11	W2/11	LIVINGROOM	21	32	15	26	28.6	18.8	21	32	15	26	28.6	18.8
R3/11	W3/11		25	59	23	57	8.0	3.4						
R3/11	W4/11		25	69	25	69	0.0	0.0						
R3/11	W5/11		2	21	2	21	0.0	0.0	27	80	26	79	3.7	1.3
R1/12	W1/12	KITCHEN	27	73	26	72	3.7	1.4	27	73	26	72	3.7	1.4
R2/12	W2/12	LIVINGROOM	25	65	23	63	8.0	3.1	25	65	23	63	8.0	3.1
R3/12	W3/12		25	60	25	60	0.0	0.0						



SUNLIGHT ANALYSIS

MANOR LODGE, RICKMANSWORTH ROAD, NORTHWOOD
EXISTING VS PROPOSED SCHEME 04/02/25

APSH

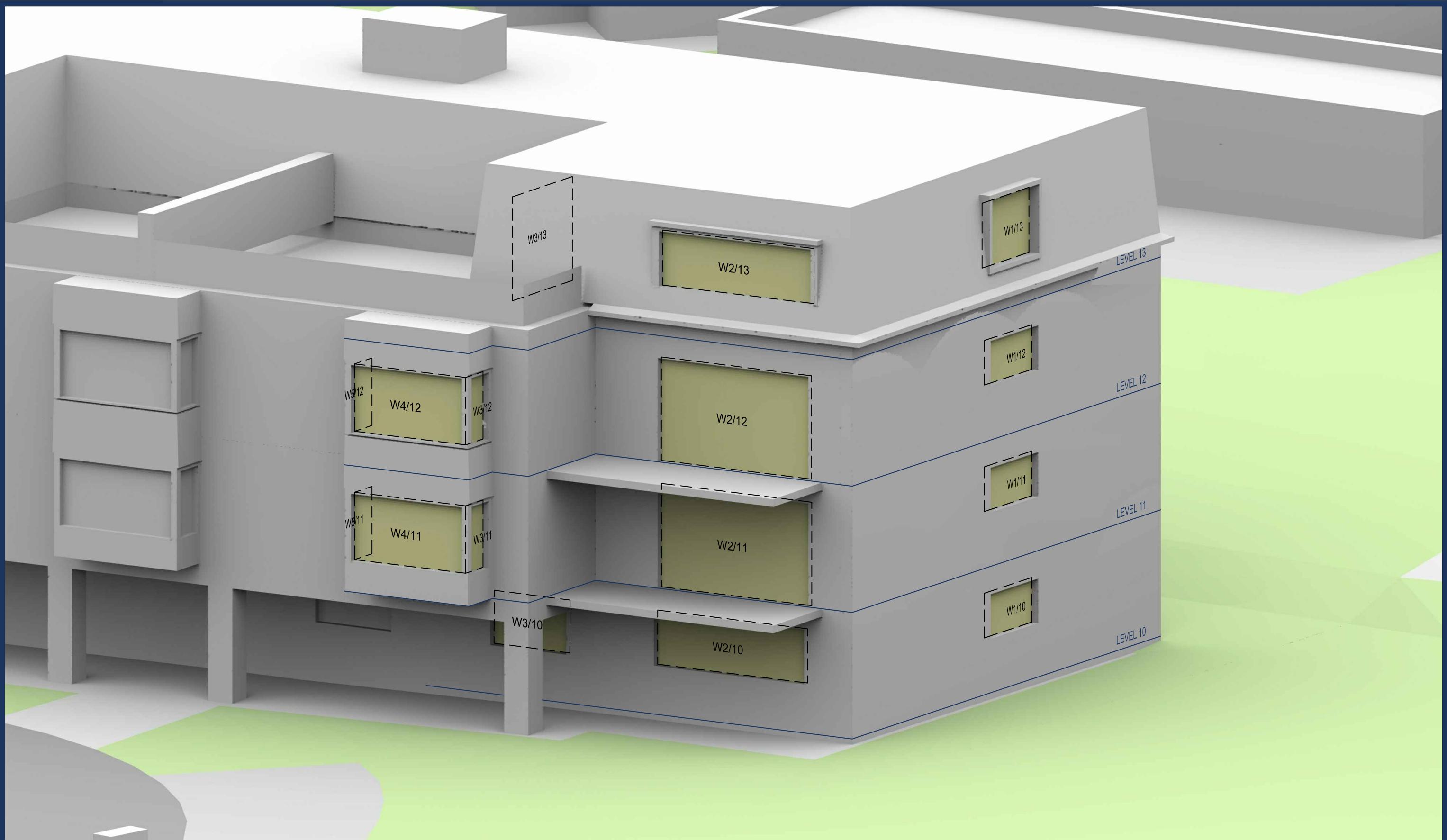
Room	Window	Room Use	Window				Winter %Loss	Annual %Loss	Room				Winter %Loss	Annual %Loss				
			Existing		Proposed				Existing		Proposed							
			Winter APSH	Annual APSH	Winter APSH	Annual APSH			Winter APSH	Annual APSH	Winter APSH	Annual APSH						
R3/12	W4/12		25	69	25	69	0.0	0.0										
R3/12	W5/12		2	21	2	21	0.0	0.0	27	81	27	81	0.0	0.0				
R1/13	W1/13	KITCHEN	26	74	26	74	0.0	0.0	26	74	26	74	0.0	0.0				
R2/13	W2/13	LIVINGROOM	25	67	25	67	0.0	0.0										
R2/13	W3/13	LIVINGROOM	2	21	2	21	0.0	0.0	25	67	25	67	0.0	0.0				

Kiln Farm, Rickmansworth Road

R1/20	W1/20		5	22	5	21	0.0	4.5						
R1/20	W2/20		22	71	22	71	0.0	0.0						
R1/20	W3/20		5	30	5	30	0.0	0.0						
R1/20	W4/20		26	77	26	77	0.0	0.0						
R1/20	W5/20		20	48	20	48	0.0	0.0	27	80	27	80	0.0	0.0

Appendix 3:

Window Maps



Sources: Zmapping
3D Model (received 23/11/22)
Manor Lodge_231122_Solids XY@NE.dwg

Point 2
Site Photos

Seabrook Architects
Proposed Scheme 25/01/23
5819 - Manor Lodge 24.01.23.rvt
5819 - Manor Lodge 24.01.23.dwg

Key:

Project: Manor Lodge, Rickmansworth Road
Northwood

Title: Window Locations
Moray House, Rickmansworth Road

Scheme Confirmed:

Date:

Drawn By:

Scale:
NTS@A3

Date:
Jan 23

Dwg No:
P3210/2/01

Rel:
01



Sources: Zmapping 3D Model (received 23/11/22) Manor Lodge_231122_Solids XY@NE.dwg	Key:	Project: Manor Lodge, Rickmansworth Road Northwood	Title: Window Locations Kiln Farm, Rickmansworth Road
Point 2 Site Photos			
Seabrook Architects Proposed Scheme 25/01/23 5819 - Manor Lodge 24.01.23.rvt 5819 - Manor Lodge 24.01.23.dwg			
Scheme Confirmed:	Date:	Drawn By: A@	Scale: NTS@A3
		Date: Jan 23	Dwg No: P3210/2/02
			Rel: 01

