

Fitzjohn's Avenue, NW3

Prepared for the London Borough of Camden

Daylight, Sunlight and Overshadowing Assessment

A detailed planning application, submitted on behalf of PegasusLife to provide specialist living accommodation for older people



PegasusLife

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1. Introduction

JLL and EB7 have been instructed to assess the daylight and sunlight implications of the proposed new development at 79 Fitzjohns Avenue, London NW3.

The methodology and criteria used for these assessments is provided by the Building Research Establishments guidance 'Site layout planning for daylight and sunlight: a guide to good practice' (BRE, 2011) and the BS8206-2:2008.

2. Policy and guidance

2.1 Site layout planning for daylight and sunlight: a guide to good practice, BRE 2011

This document is based on guidance produced by Her Majesty's Stationary Office (HMSO) on daylight and sunlight in the built environment and is now the accepted methodology used by local authorities for assessing daylight and sunlight in relation to new developments. It provides methods for the calculation of daylight and sunlight to existing surrounding properties.

There are three methods for calculating daylight, the Vertical Sky Component (VSC), the No-Sky Line Contour (NSC) and the Average Daylight Factor (ADF). The BRE guidance states that for internal analysis of daylight it is appropriate to assess ADF. For sunlight, the Annual Probable Sunlight Hours (APSH) method is used.

The ADF method calculates the average illuminance within a room as a proportion of the illuminance available to an unobstructed point outdoors under a sky of known luminance and luminance distribution. This is the most detailed of the daylight calculations and considers the physical nature of the room behind the window, including; window transmittance, and surface reflectivity.

For sunlight the APSH test calculates the percentage of statistically probable hours of sunlight received by each window in both the summer and winter months. March 21st through to September 21st is considered to be the summer period while September 21st to March 21st is considered the winter period. For properties surrounding a new development only those windows orientated within 90° of due south and which overlook the site of the proposal are relevant for assessment.

The opening paragraphs of the BRE guidelines state: -

"The guide is intended for building designers and their clients, consultants and planning officials. The advice given here is not mandatory and the document 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 because natural lighting is only one of many factors in site layout design. In special circumstances the developer or planning authority may wish to use different target values. For example, in a historic city centre a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings".

It is considered important to note that in high density areas, achieving good levels of daylight and sunlight in accordance with the BRE guidelines, can conflict with other beneficial design factors.

2.2 Lighting for buildings - Part 2: Code of Practice for daylighting (BS 8206-2:2008)

This document deals with the assessment methodology for internal daylight and sunlight. It suggests that ADF be used to assess internal daylight and APSH to assess internal sunlight. The methodologies for these assessments are the same as those discussed in the BRE guidance.

3. Assumptions

A three dimensional CAD model of the current scheme proposal has been supplied by the architect. This has been incorporated into a 3d model, built by ourselves to include the existing building on the site and the pertinent surrounding properties, based upon a measured survey provided by a third party. Site photographs and ordinance survey information have been used to supplement this survey information where required.

It is important to note that where survey information has not been supplied, the precise position of the surrounding property elevations has been estimated based upon brick counts from site photographs.

Where it has not been possible to gain access to the surrounding properties, details of the internal layouts and floor level heights have been estimated from the external appearance of the building, and the locations of windows. Unless known or otherwise appropriate the depths of rooms have been assumed at 4.27m or half the building depth if this is more appropriate.

4. Sources of information

4.1 Sergison Bates Architects

141208 volume daylight studies SBa.3ds

141208 volume daylight studies SBa

Received 09/12/2014

4.2 ACAD Mapping Ltd Surveyors

M952-Arthur-NW3-Fitzjohn's Avenue-revision.dwg

M952-Arthur-NW3-Fitzjohn's Avenue.dwg

M952-Arthur-NW3-Fitzjohn's Avenue-Elevations.dwg

Received 12/05/2014

4.3 eb7/JLL

Site Photographs

Ordnance Survey

5. The site, proposal and surrounding buildings

The site of the development is located on the north western corner of the junction between Fitzjohns Avenue and Prince Arthur Road. The existing building is an affordable housing block built in the 1960's. It has a seven storey block element fronting Fitzjohns Avenue and a four storey element fronting Prince Arthur Road. The proposal is for the complete redevelopment of the site to provide specialist living accommodation for older people.

The surrounding properties are all in residential use, those with windows directly overlooking the proposal have been included within our assessments. These are:

- 77 Fitzjohns Avenue
- 81 Fitzjohns Avenue
- 104-110 Fitzjohns Avenue
- Henderson Court, 102 Fitzjohns Avenue
- 1 & 3 Ellerdale Road
- 1, 2, 3 & 4 Prince Arthur Road
- The Lodge, 16 Prince Arthur Road

Drawings of the existing, proposed and surrounding buildings in context are shown upon drawings JLL1317-01, 02, 13 & 14 within appendix A.

6. Results

Full results of the daylight and sunlight assessments are attached within appendix B. These can be cross referenced with the drawings in appendix A.

6.1 77 Fitzjohns Avenue

This property is located to the south east of the development on the opposite side of Prince Arthur Road. There are six windows in the north facing elevation that overlook the development and have been included within our assessments.

Daylight

The results of our VSC and NSC assessments have shown that all of the windows and rooms of main habitable use retain levels of daylight in excess of the criteria given within the BRE guide.

Sunlight

None of the windows within this property, which overlook the site of the proposal, face within 90 degrees of due south and therefore none are relevant for sunlight assessment following the methodology of the BRE guide.

6.2 81 Fitzjohns Avenue

This property is located to the north of the development and directly abuts the northern boundary of the site. It has been converted into multiple apartments, each of which have their main habitable windows facing east onto Fitzjohns Avenue or west across the rear garden. There are 11 windows in the flank elevation of this property which directly overlook the development. These windows can be seen on the window map drawing included within the appendices.

Windows W1 & W2 at lower ground floor and W5 at ground are very small windows that face into the existing car park of Arthur West House. We therefore assume that these windows serve ancillary space and are not relevant for assessment. Windows W7 at first and W4 & W5 at second floor serve rooms, which are connected to soil vent pipes, which we assume are WC's, and are similarly not relevant for assessment.

Daylight

There are, therefore, 5 windows which would appear to serve habitable rooms within this flank elevation and are relevant for daylight assessment. Windows W5 at first floor, W2 at second and W1 at third serve rooms, which are also served by windows in the main rear elevation. Each of these rooms retain very good levels of both NSC and ADF showing that the rooms will remain well daylight following the development.

Windows W6 at first floor and W6 at second are the only windows serving habitable space that receive reductions in daylight, beyond what the BRE suggest, and are not mitigated by other windows in the main elevations. Both of these windows receive very little daylight in their current condition with VSC values of just 7.5 and 10.3, where the BRE suggests 27 as a target.

Although these windows receive percentage reductions in excess of the 20% recommended by the BRE guide (at 35% and 26% respectively), the actual amount of daylight that is reduced is very small and is unlikely to be perceptible to occupants.

All of the windows within this flank elevation are highly constrained in their current condition, meaning that any further reduction in daylight or sunlight will necessarily lead to a large percentage reduction. The main habitable spaces have windows in the front and rear facades, which remain largely unaffected by the proposal. We therefore feel that the impact to this property is minor and should be considered compliant with the intentions of the BRE guide.

Sunlight

The BRE guide states that the main expectation for sunlight in dwellings is to the main living room and that kitchens and bedrooms are less important. The living rooms are served by bay windows in the main front and rear elevations of the property, facing north east and south west.

The windows in the front elevation face north east (not within 90 degrees of due south) and are therefore not relevant for sunlight assessment. The windows in the south west facing elevation retain good levels of sunlight in excess of the BRE targets.

6.3 104-110 Fitzjohns Avenue

This is a row of five storey houses on the eastern side of Fitzjohns Avenue directly opposite the proposed development. Each house has windows within its front elevation, which overlook the proposed development and have been included within our assessments.

Daylight

The results of our VSC and NSC assessments have shown that all of the windows and rooms of main habitable use retain levels of daylight in excess of the criteria given within the BRE guide.

Sunlight

None of the windows within this property, which overlook the site of the proposal, face within 90 degrees of due south and therefore none are relevant for sunlight assessment following the methodology of the BRE guide.

6.4 Henderson Court, 102 Fitzjohns Avenue

This is a four storey block of apartments located to the east of the development on the opposite side of Fitzjohns Avenue. None of the windows within these apartments directly overlook the proposed development, but some windows have an oblique view and have therefore been included within the assessments.

Daylight

The results of our VSC and NSC assessments have shown that all of the windows and rooms of main habitable use retain levels of daylight in excess of the criteria given within the BRE guide.

Sunlight

None of the windows within this property, which overlook the site of the proposal, face within 90 degrees of due south and therefore none are relevant for sunlight assessment following the methodology of the BRE guide.

6.5 1 & 3 Ellerdale Road

These two five-storey houses are located to the north of the development fronting Ellerdale Road. We assume that they have each been divided into multiple residential apartments. Each house

has south facing windows in its rear façade that overlook the proposed development and have been included within our assessments.

Daylight

The results of our VSC assessments have shown that all but 3 of the 27 windows retain levels in excess of the BRE target criteria. These 3 windows are located at basement and ground floor and receive reductions in VSC of between 22% and 26% as a result of the development. However, each of the rooms served by these 3 windows are also served by other windows, which provide additional daylight.

The NSC results for each of these 3 rooms show that each will continue to receive direct skylight to more than 85% of the room area and that the level of reduction in each case will be less than 9%. Of the daylight currently received. Similarly, the ADF results show that each room will continue to receive an ADF in excess of 2%, which is suitable for any type of room.

As such the impact to these properties is considered minor and would not constitute a material deviation from the BRE criteria.

Sunlight

All of the windows within these properties will continue to receive levels of sunlight in excess of the BRE target criteria following the development.

6.6 1, 2, 3 & 4 Prince Arthur Road

This is a row of four detached house on the southern side of Prince Arthur Road opposite the proposed development. These properties have windows in their front elevations on Prince Arthur Road that overlook the development and have been included within our assessments.

Daylight

The results of our VSC and NSC assessments have shown that all of the windows and rooms of main habitable use retain levels of daylight in excess of the criteria given within the BRE guide.

Sunlight

None of the windows within this property, which overlook the site of the proposal, face within 90 degrees of due south and therefore none are relevant for sunlight assessment following the methodology of the BRE guide.

6.7 The Lodge, 16 Prince Arthur Road

This property is located on the northern side of Prince Arthur Road and directly abuts the southern boundary of the site. This property has its main windows facing south over Prince Arthur Road or north across its rear garden.

There are two windows in the flank elevation of the property, at first and second floors, which overlook the development. These windows are set at different heights from the rest of the windows in the property and would therefore seem to serve a stairway. These are not considered to be main habitable rooms and are not relevant for assessment

The property does have a conservatory to the rear of the house with windows that overlook the development. This room has been considered.

Daylight

The results of our VSC assessment have shown that 3 of the 7 pieces of glazing, which form the conservatory, will receive reductions in excess of 20%. These range between 77% and 80%. The remaining, north west facing, glazing receives very little reduction in VSC at between 8% and 15%.

Both the NSC and ADF assessments, which calculate the amount of daylight that is received across the whole room, show that the room will retain very good levels of daylight. The NSC test shows that the entire room will continue to receive direct skylight following the development. The ADF assessment shows that the room will retain an ADF of 5.9%, which is well in excess of the 1.5% the BRE suggests for a living room.

Sunlight

None of the windows within this property, which overlook the site of the proposal, face within 90 degrees of due south and therefore none are relevant for sunlight assessment following the methodology of the BRE guide.

7. Conclusions

The quality of daylight and sunlight amenity within the surrounding residential properties have been assessed using the VSC, NSC, ADF and APSH assessments as recommended within the BRE document 'Site layout planning for daylight and sunlight' and the British Standard Document BS8206 part 2.

The results of these assessments have shown that the impact of the proposal has been kept to a minimum with the vast majority of neighbouring properties retaining levels of daylight and sunlight in excess of the criteria suggested within the BRE guide.

There are some very localised instances, within the flank elevation of 81 Fitzjohns Avenue, where windows will receive reductions in daylight that are technically in excess of the BRE criteria. These windows are so acutely constrained in their current condition that any further reduction in daylight, however small, will lead to a breach of the criteria. The main habitable rooms within this property will continue to receive good levels of daylight and sunlight and as such the impact of the development should be considered minor and in accordance with the intentions of the BRE guide.

8. References

Site layout planning for daylight and sunlight, BRE, 2011

Lighting for buildings - Part 2: Code of Practice for daylighting (BS 8206-2:2008)

9. Attestation

We the undersigned, confirm that this Daylight & Sunlight Assessment is a true and accurate record of the proposed development known as Arthur West House as at 17 December 2014.

Signed:

Date:

On behalf of the JLL

Appendix A – Drawings of the existing and proposed buildings



Sources of Information
Sergison Bates architects
141208 volume daylight studies SBA.dwg
Received 09/12/2014

Survey drawings
M952-Arthur-NW3-Fitzjohn's Avenue-revision.dwg
M952-Arthur-NW3-Fitzjohn's Avenue.dwg
M952-Arthur-NW3-Fitzjohn's Avenue-Elevations.dwg
Received 12/09/2014

JLL/EB7 Consulting Ltd
Site Photographs
Ordinance Survey



Project	Arthur West House London			
Drawing	Plan view of existing scheme			
Date	11/12/2014	Scale	NTS	
Drawn By	YH	Checked By	IT	
Drawing No.	1317		01	08

Sources of Information

Sergison Bates architects
141208 volume daylight studies S8a.dwg
Received 09/12/2014

Survey drawings
M952-Arthur-NW3-Fitzjohn's Avenue-revision.dwg
M952-Arthur-NW3-Fitzjohn's Avenue.dwg
M952-Arthur-NW3-Fitzjohn's Avenue-Elevations.dwg
Received 12/05/2014

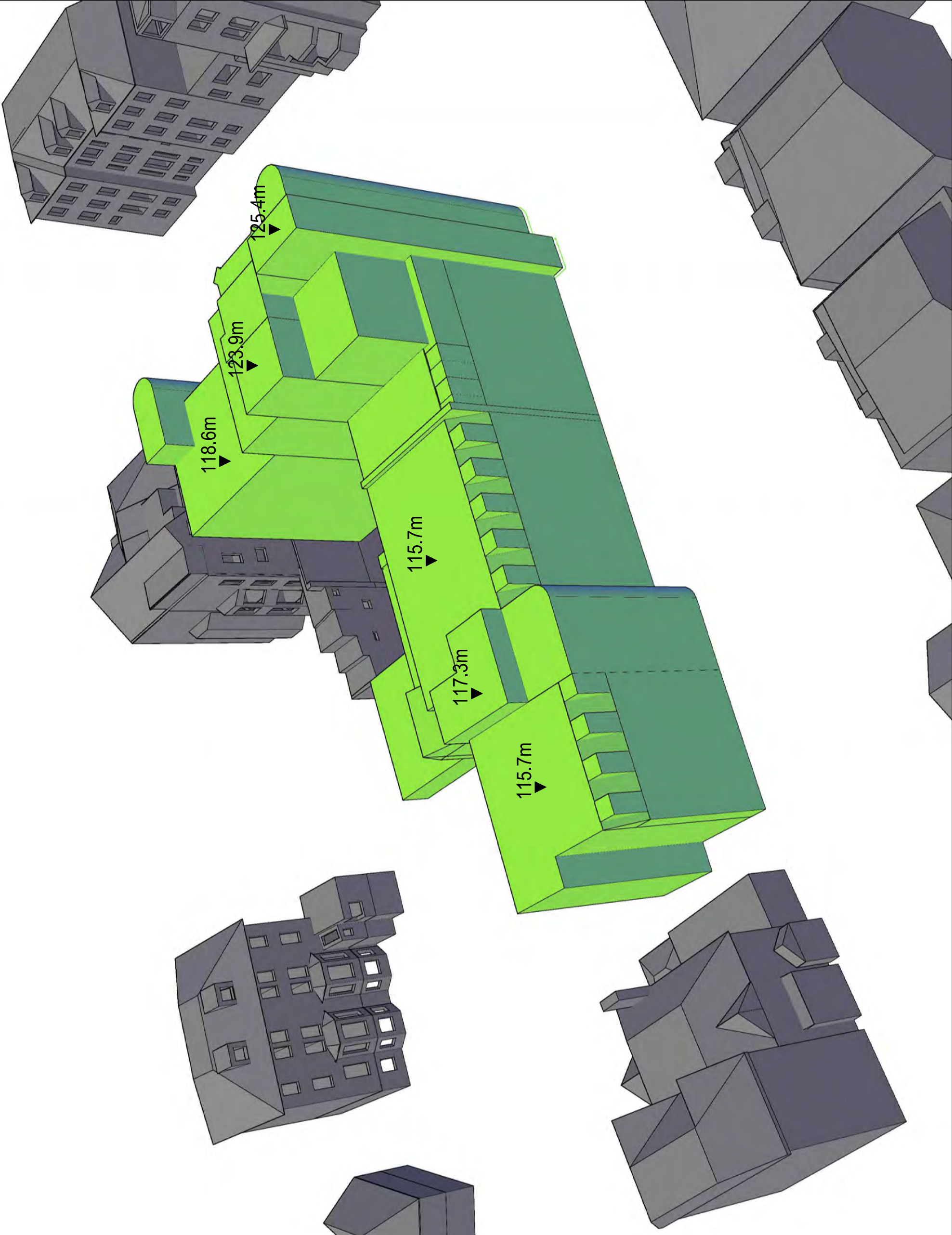
JLL/EB7 Consulting Ltd
Site Photographs
Ordnance Survey



Project Arthur West House
London

Drawing 3D View of existing scheme

Date	11/12/2014	Scale	NTS
Drawn By	YH	Checked By	IT
Drawing No.	1317		02
Rev.			08





Sources of Information
Sergison Bates architects
141208 volume daylight studies SBA.dwg
Received 09/12/2014

Survey drawings
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M952-Arthur-NW3-Fitzjohn's Avenue.dwg
M952-Arthur-NW3-Fitzjohn's Avenue-Elevations.dwg
Received 12/09/2014

JLL/EB7 Consulting Ltd
Site Photographs
Ordinance Survey



Project	Arthur West House London			
Drawing	Plan view of proposed scheme			
Date	11/12/2014	Scale	NTS	
Drawn By	YH	Checked By	IT	
Drawing No.	1317		13	08

Sources of Information

Sergison Bates architects
141208 volume daylight studies S8a.dwg
Received 09/12/2014

Survey drawings
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M952-Arthur-NW3-Fitzjohn's Avenue.dwg
M952-Arthur-NW3-Fitzjohn's Avenue-Elevations.dwg
Received 12/05/2014

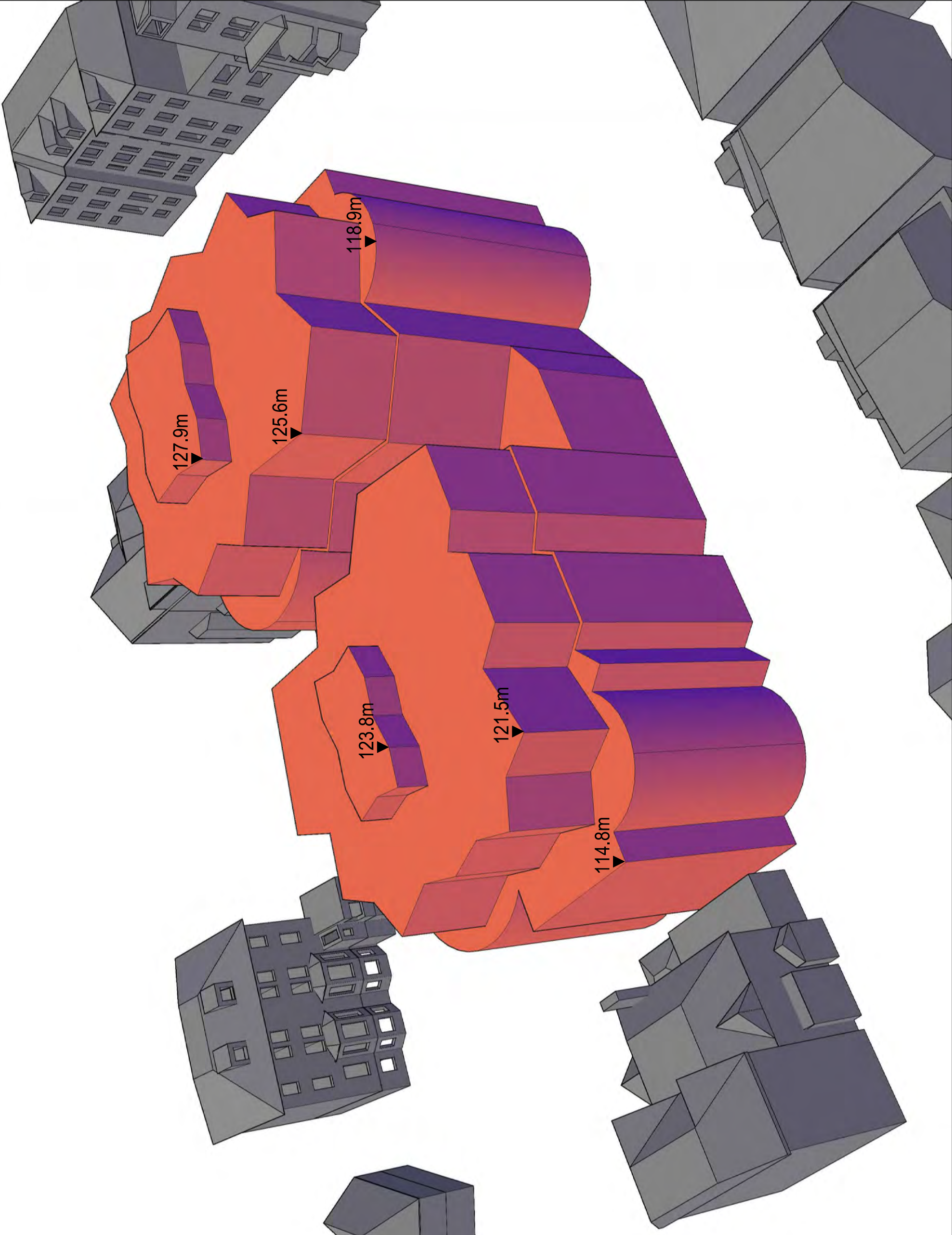
JLL/EB7 Consulting Ltd
Site Photographs
Ordnance Survey

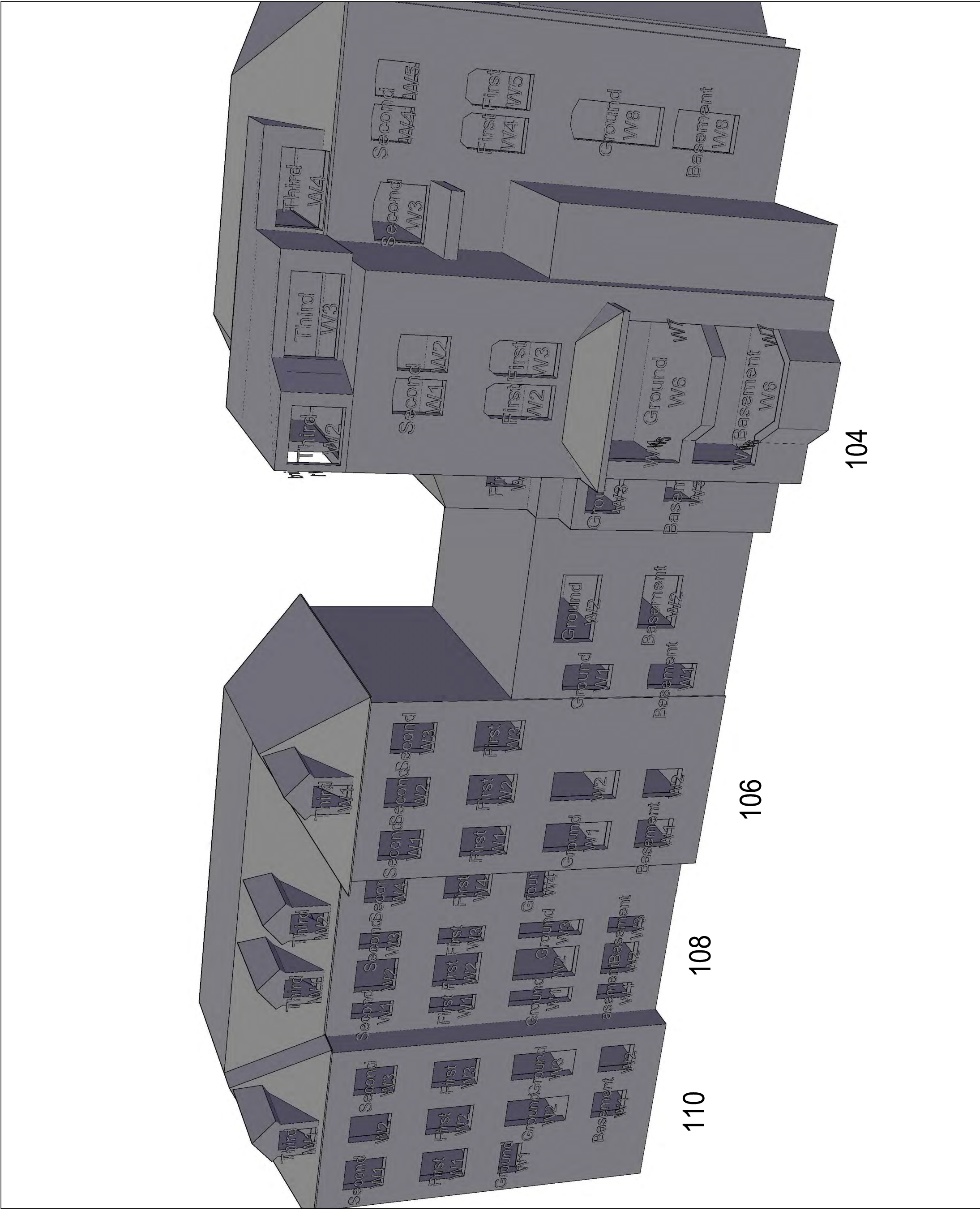


Project Arthur West House
London

Drawing 3D View of proposed scheme

Date	11/12/2014	Scale	NTS
Drawn By	YH	Checked By	IT
Drawing No.	1317		14
Rev.			08





Sources of Information

Sergison Bates architects
141118_SBa_3D_model.dwg
Received 18/11/2014

Survey drawings
M952-Arthur-NW3-Fitzjohn's Avenue-revision.dwg
M952-Arthur-NW3-Fitzjohn's Avenue.dwg
M952-Arthur-NW3-Fitzjohn's Avenue-Elevations.dwg
Received 12/05/2014

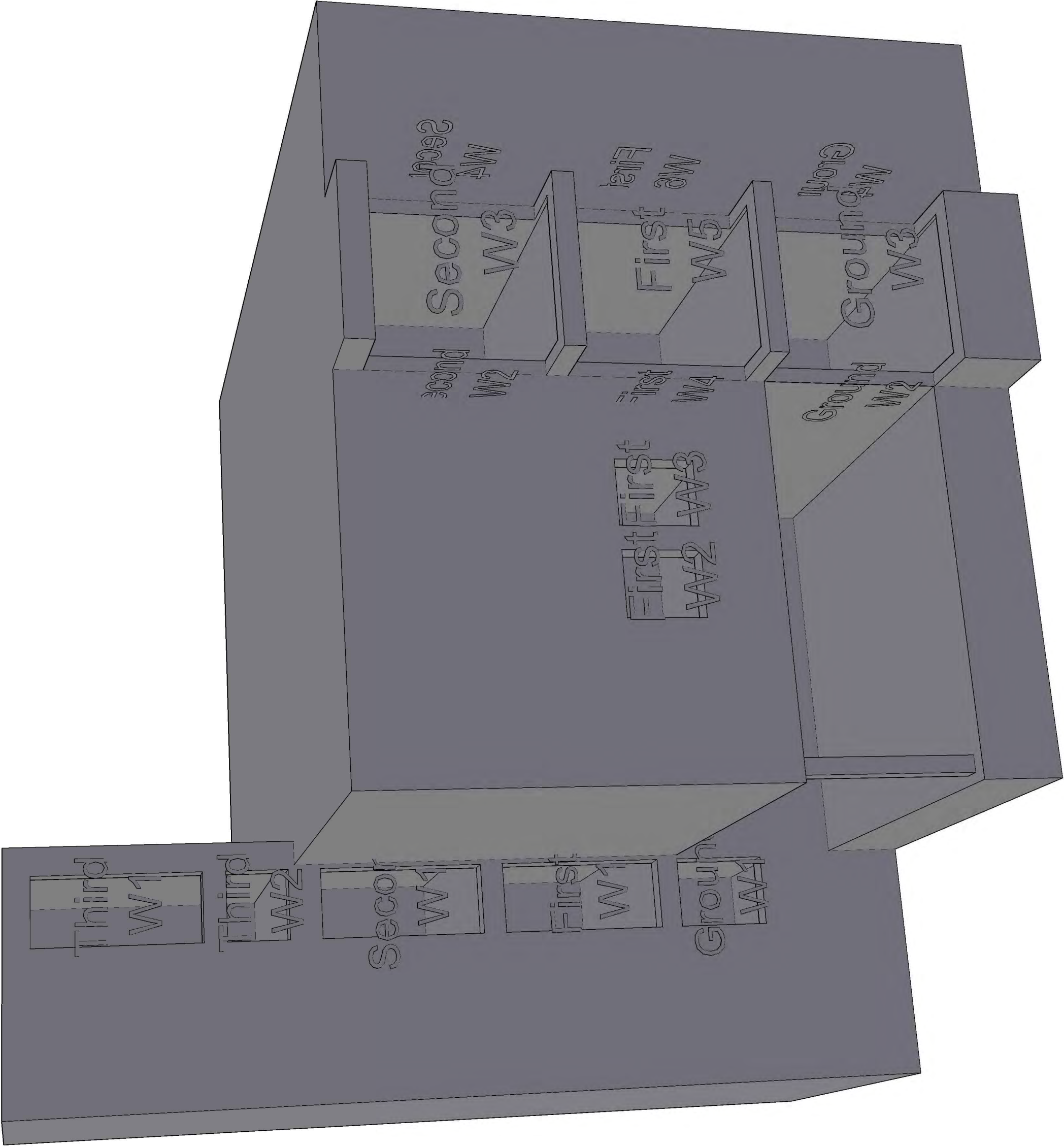
JLLJEB7 Consulting Ltd
Site Photographs
Ordinance Survey



Project
Arthur West House
London

Drawing
Window Map
104 - 110 Fitzjohns Avenue

Date	26/11/2014	Scale	NTS
Drawn By	PS	Checked By	IT
Drawing No.	1317	WM01	07





77 Fitzjohns Avenue

1 Prince Arthur Road

Sources of Information

Sergison Bates architects
141118_SBa_3D_model.dwg
Received 18/11/2014

Survey drawings
M952-Arthur-NW3-Fitzjohn's Avenue-revision.dwg
M952-Arthur-NW3-Fitzjohn's Avenue.dwg
M952-Arthur-NW3-Fitzjohn's Avenue-Elevations.dwg
Received 12/05/2014

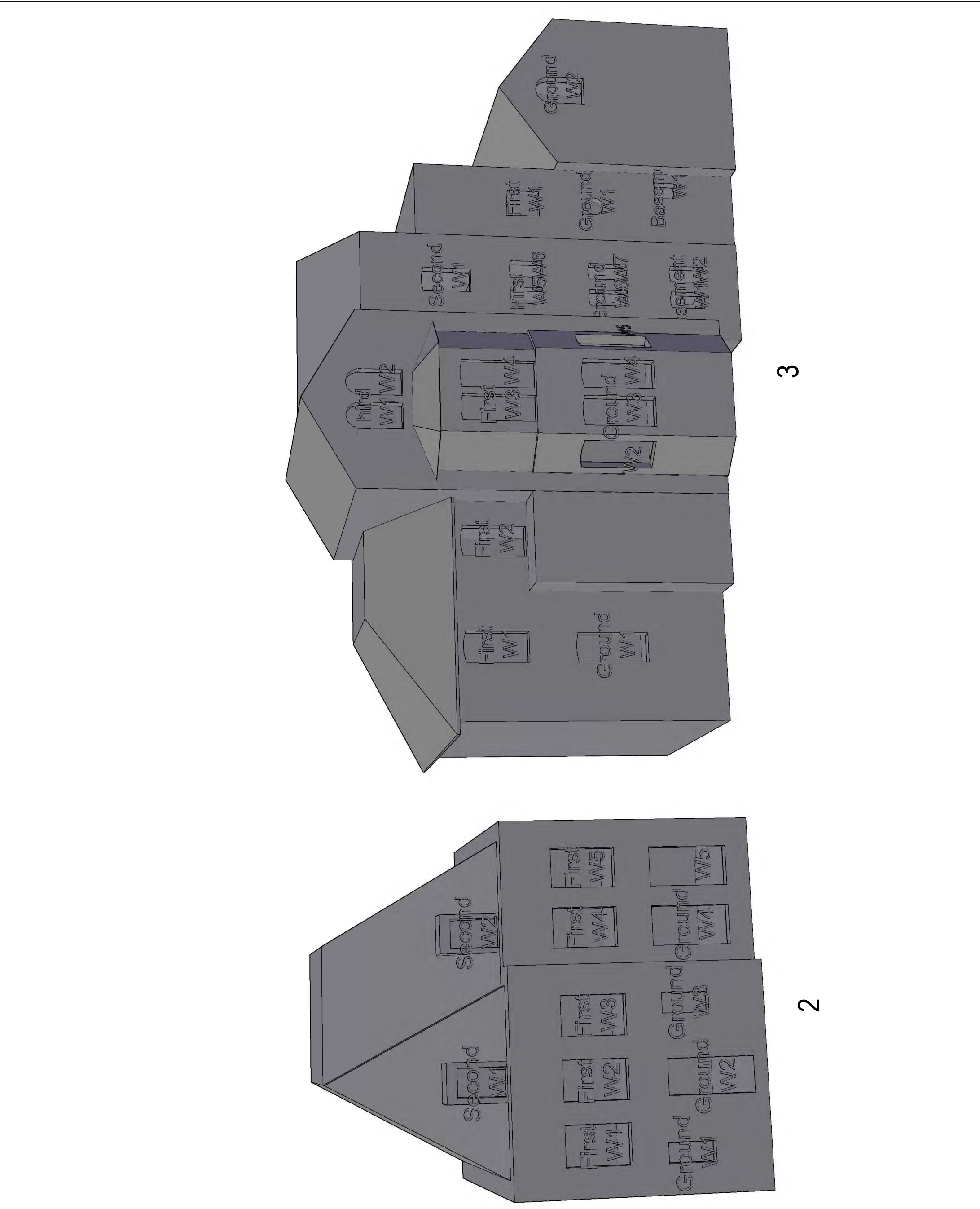
JLL/JEB7 Consulting Ltd
Site Photographs
Ordinance Survey



Project
Arthur West House
London

Drawing
Window Map
77 Fitzjohns Avenue
1 Prince Arthur Road

Date	26/11/2014	Scale	NTS
Drawn By	PS	Checked By	IT
Drawing No.			
	1317	WM03	07



2

3

Sources of Information

Sergison Bates architects
141118_SBa_3D_model.dwg
Received 18/11/2014

Survey drawings

M952-Arthur-NW3-Fitzjohn's Avenue-revision.dwg
M952-Arthur-NW3-Fitzjohn's Avenue.dwg
M952-Arthur-NW3-Fitzjohn's Avenue-Elevations.dwg
Received 12/05/2014

JLL/JEB7 Consulting Ltd

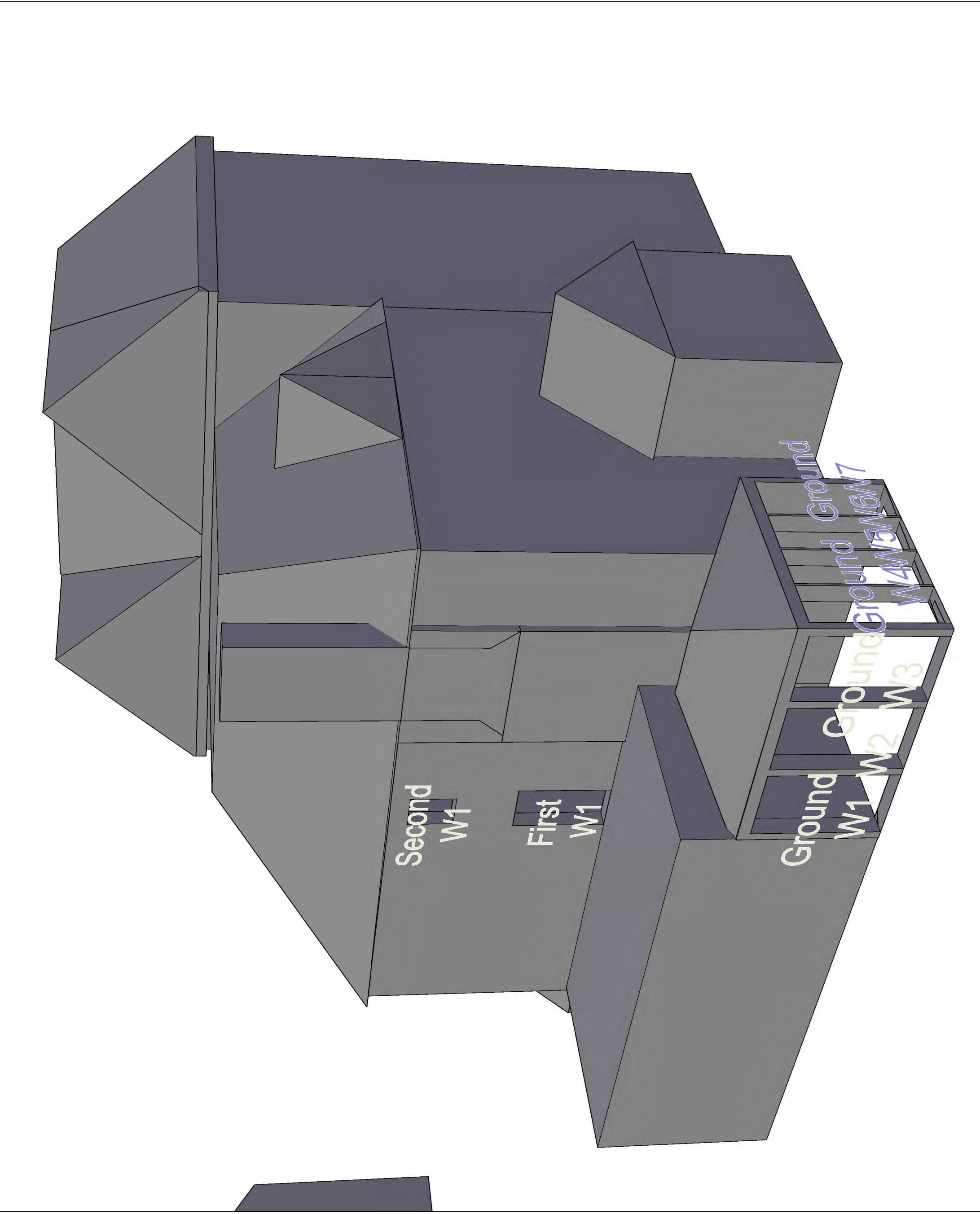
Site Photographs
Ordnance Survey



Project
Arthur West House
London

Drawing
Window Map
2 & 3 Prince Arthur Road

Date	26/11/2014	Scale	NTS
Drawn By	PS	Checked By	IT
Drawing No.	1317	WM04	07



Sources of Information

Sergison Bates architects
141118_SBa_3D_model.dwg
Received 18/11/2014

Survey drawings
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M952-Arthur-NW3-Fitzjohn's Avenue.dwg
M952-Arthur-NW3-Fitzjohn's Avenue-Elevations.dwg
Received 12/05/2014

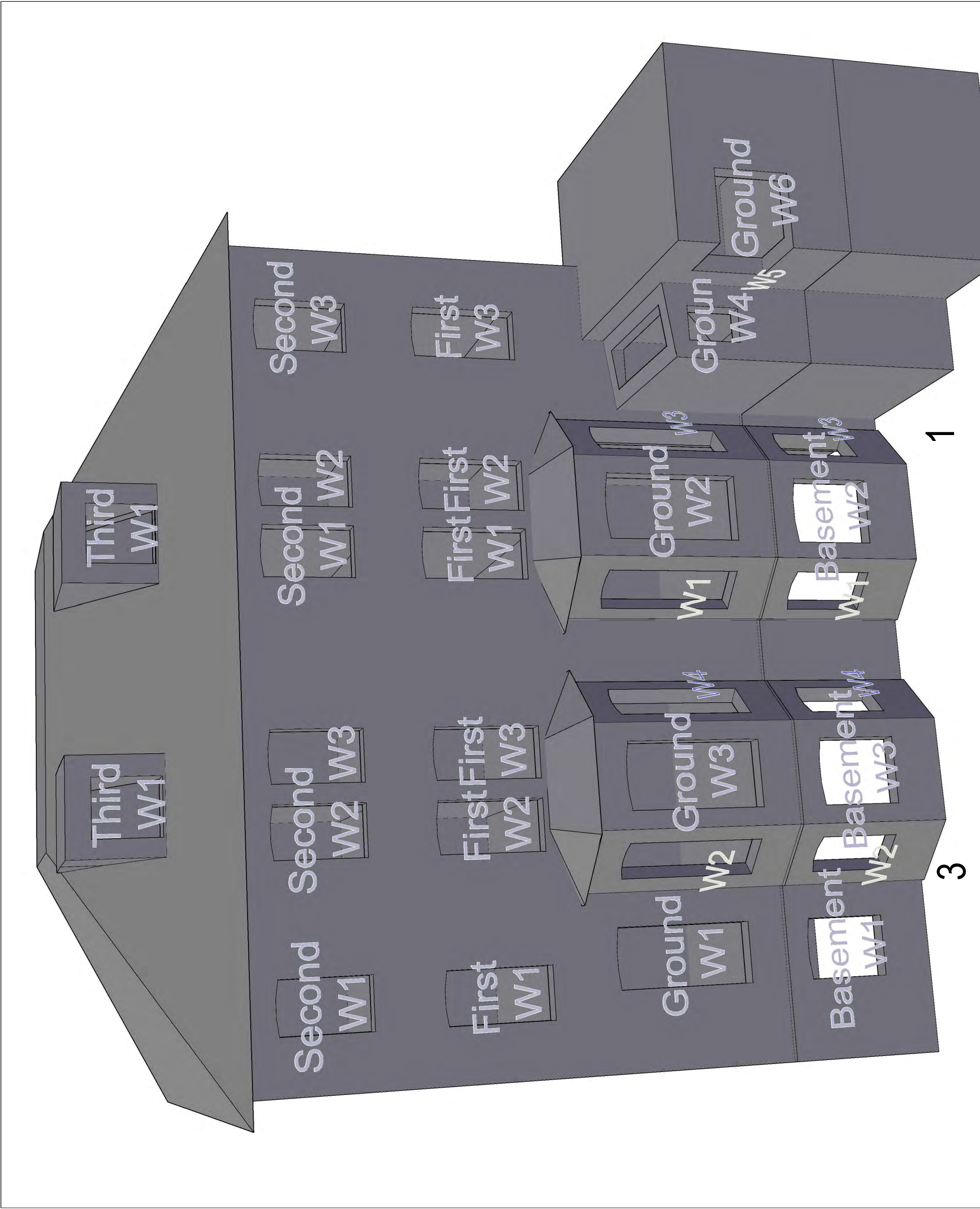
JLL/JEB7 Consulting Ltd
Site Photographs
Ordnance Survey



Project
Arthur West House
London

Drawing
Window Map
The Lodge

Date	26/11/2014	Scale	NTS
Drawn By	PS	Checked By	IT
Drawing No.			
	1317	WM05	07



Sources of Information

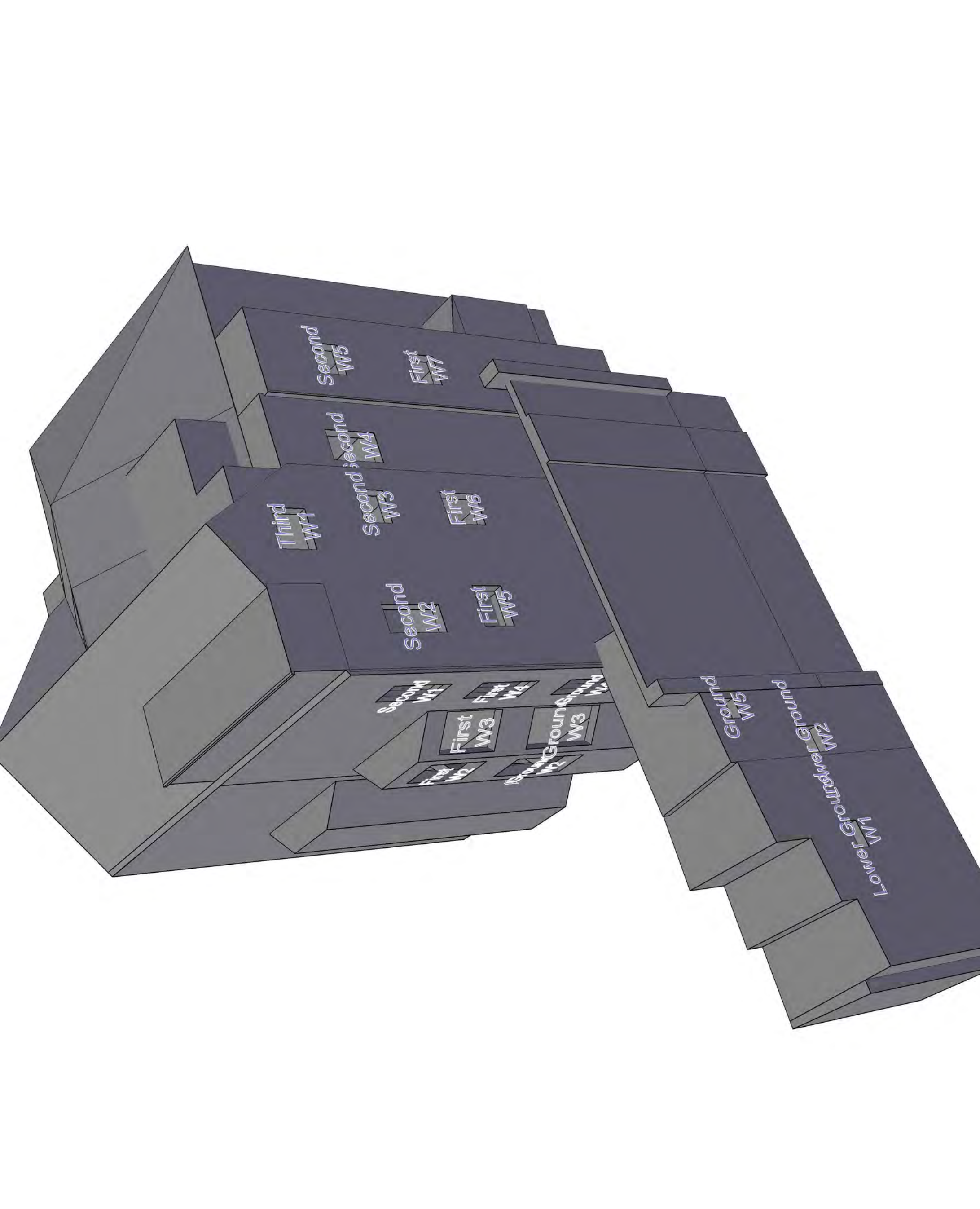
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M952-Arthur-NW3-Fitzjohn's Avenue-Elevations.dwg
Received 12/05/2014

JLL/EB7 Consulting Ltd
Site Photographs
Ordinance Survey



Project	Arthur West House London		
Drawing	Window Map 1 & 3 Ellerdale Road		
Date	26/11/2014	Scale	NTS
Drawn By	PS	Checked By	IT
Drawing No.			
	1317	WM06	07



Sources of Information Sergison Bates architects 141118_SBa_3D_model.dwg Received 18/11/2014 Survey drawings M952-Arthur-NW3-Fitzjohn's Avenue-revision.dwg M952-Arthur-NW3-Fitzjohn's Avenue.dwg M952-Arthur-NW3-Fitzjohn's Avenue-Elevations.dwg Received 12/05/2014 JLL/EB7 Consulting Ltd Site Photographs Ordnance Survey				JLL		Project Arthur West House London	Drawing Window Map 81 Fitzjohns Avenue		Date 26/11/2014 Scale NTS	Drawn By PS Checked By IT	Drawing No. 1317 Rev. 07
											WM07

Appendix B – Detailed daylight and sunlight results

Address	Room	Window	Room Use	Existing VSC	Proposed VSC	Loss	Room Area	Existing NSC	Proposed NSC	Loss	Loss	Existing ADF Window	Proposed ADF Window	Loss	Loss	Existing APSH Total	Proposed APSH Total	Total Loss	Winter Loss
77 Fitzjohns Avenue																			
Ground	R1	W1-L W1-U	Habitable	28.9	26.4	2.4	8.4	105.5	92.5	13.0	12.3	0.1 1.9	0.1 1.8	0.1	6.3	N/A	N/A	N/A	N/A
Ground	R2	W2	Habitable	28.2	25.5	2.6	9.4	107.3	109.9	-2.6	-2.4	1.5	1.4	0.1	7.0	N/A	N/A	N/A	N/A
Ground	R3	W3	Habitable	29.0	26.0	3.0	10.4	192.0	185.7	6.4	3.3	2.4	2.2	0.2	7.7	N/A	N/A	N/A	N/A
First	R1	W1-L W1-U	Habitable	31.4	28.9	2.5	8.1	114.7	100.9	13.9	12.1	0.0 2.4	0.0 2.2	0.2	6.4	N/A	N/A	N/A	N/A
First	R2	W2-L W2-U	Stairway	30.8	28.0	2.8	9.2	131.5	131.5	0.0	0.0	0.2 4.0	0.1 3.7	0.3	7.1	N/A	N/A	N/A	N/A
First	R3	W3-L W3-U	Habitable	31.4	28.3	3.2	10.1	184.7	171.5	13.2	7.2	0.0 1.7	0.0 1.5	0.1	7.9	N/A	N/A	N/A	N/A
81 Fitzjohns Avenue																			
Lower Ground	R1	W1	Ancillary	16.1	3.6	12.5	77.7	12.5	1.2	11.3	90.5	0.2	0.0	0.0	0.2	41	16	3	66.7
Lower Ground	R2	W2-L W2-U	Ancillary	14.8	2.3	12.5	84.8	19.9	1.6	18.3	91.9	0.0 0.5	0.0 0.1	0.4	82.4	37	11	2	77.8
Ground	R1	W1-L W1-U W2-L W2-U W3-L W3-U	Living room	28.5	28.4	0.1	0.3					0.0 2.4 0.0 2.7 0.0 2.5	0.0 2.4 0.0 2.9 0.0 1.9			N/A	N/A	N/A	N/A
Ground	R2	W4	Habitable	33.2	28.6	4.6	13.8	68.0	65.8	0.0	0.0	3.2	2.9	0.3	10.1	62	42	8	57.9
Ground	R3	W5	Ancillary	17.3	2.3	15.0	86.6	13.1	0.6	12.5	95.1	0.4	0.1	0.4	87.9	45	13	3	80.0
First	R1	W1-L W1-U W2-L W2-U W3-L W3-U	Living room	31.1	31.0	0.1	0.2					0.0 2.0 0.0 2.4 0.0 2.1	0.0 2.0 0.0 2.2 0.0 1.6			N/A	N/A	N/A	N/A
First	R2	W4-L W4-U W5	Habitable	36.3	31.3	5.0	13.8	68.0	66.6	0.4	0.6	0.0 3.2 1.3	0.0 2.8 0.6			68	47	11	54.2
First	R3	W6	Habitable	7.5	4.9	2.6	35.2	15.4	9.5	5.9	38.5	0.5	0.3	0.2	30.6	22	10	7	30.0
First	R4	W7	WC	5.2	5.6	-0.4	-8.3	95.0	7.1	-0.4	-6.5	0.3	0.3	0.0	-5.6	13	4	11	25.0
Second	R1	W1-L W1-U W2-L W2-U	Habitable	38.9	34.4	4.5	11.5					0.1 2.4 0.0 0.0	0.1 2.2 0.0 0.0			68	50	12	50.0
Second	R2	W3	Habitable	10.3	7.6	2.7	26.2	16.3	11.9	4.3	26.5	0.4	0.3	0.3	22.1	28	20	7	41.7
Second	R3	W4-L W4-U	WC	7.6	7.0	0.6	8.0	98.7	16.3	2.5	13.2	0.0 0.7	0.0 0.7	0.0	4.1	14	10	1	75.0
Second	R4	W5	WC	7.4	9.0	-1.7	-22.4	95.0	15.3	-3.2	-26.8	0.4	0.4	0.4	-18.1	20	4	3	25.0
Third	R1	W1-L W1-U W2	Habitable	21.2	13.6	7.6	35.9					0.0 0.9 1.1	0.0 0.7 1.1	0.2	9.2	48	27	8	42.9
104 Fitzjohns Avenue																			
Basement	R1	W1	Habitable	28.5	26.7	1.9	6.5	83.6	69.1	13.0	15.9	1.9	1.8	0.1	4.8	49	46	9	18.2

Address	Room	Window	Room Use	Existing VSC	Proposed VSC	Loss	Loss	Room Area	Existing NSC	Proposed NSC	Loss	Loss	Existing ADF Window	Existing ADF Total	Proposed ADF Window	Proposed ADF Total	Loss	Loss	Existing APSH Total	Winter	Proposed APSH Total	Winter	Total Loss	Winter Loss	
Basement	R2	W2	Habitable	28.0	26.0	2.0	7.1	189.8	176.2	157.7	18.5	10.5	1.9	1.9	1.8	1.8	0.1	5.2	44	10	40	8	9.1	20.0	
Basement	R3	W3	Hallway	20.0	17.7	2.3	11.7	90.8	72.8	46.9	25.8	35.5	0.9	0.9	0.8	0.8	0.1	7.8	26	1	23	1	11.5	0.0	
Basement	R4	W4	Habitable	24.8	22.6	2.3	9.1						0.9		0.9				38	9	35	10	7.9	-11.1	
	W5			26.4	24.8	1.6	6.0						1.8		1.7				N/A	N/A	N/A	N/A	N/A	N/A	
	W6			27.5	25.3	2.2	8.1						3.1		2.9				55	15	50	17	9.1	-13.3	
	W7			28.5	27.8	0.7	2.5	213.4	212.5	212.5	0.0	0.0	1.9	7.7	1.9	7.4	0.3	4.5	59	20	54	20	8.5	0.0	
Basement	R5	W8	Habitable	22.5	21.7	0.8	3.6	208.0	177.8	160.2	17.7	9.9	1.6	1.6	1.5	1.5	0.0	2.3	52	19	50	19	3.8	0.0	
Ground	R1	W1	Habitable	31.2	29.2	2.0	6.3	83.6	82.1	75.3	6.8	8.3	2.1	2.1	2.0	2.0	0.1	4.9	52	13	50	11	3.8	15.4	
Ground	R2	W2-L W2-U	Habitable	30.7	28.7	2.1	6.7	189.8	187.0	175.2	11.7	6.3	0.0	2.3	2.2	0.0	2.2	0.1	5.2	47	12	45	10	4.3	16.7
Ground	R3	W3	Hallway	22.9	20.8	2.1	9.2	90.8	83.4	54.5	29.0	34.7	1.4	1.4	1.3	1.3	0.1	6.4	30	1	27	1	10.0	0.0	
Ground	R4	W4-L W4-U W5-L W5-U W6-L W6-U W7-L W7-U	Habitable	20.7	18.2	2.4	11.8						0.1		0.1				39	14	36	14	7.7	0.0	
				22.3	20.6	1.7	7.7						0.7		0.6				N/A	N/A	N/A	N/A	N/A	N/A	
				30.0	27.5	2.5	8.2						1.3		1.3				57	16	54	17	5.3	-6.3	
				27.1	26.3	0.8	3.0	213.4	212.5	212.5	0.0	0.0	3.1		2.9				61	20	57	20	6.6	0.0	
													0.1		0.1				20	20	57	20	6.6	0.0	
Ground	R5	W8-L W8-U	Habitable	25.3	24.4	0.9	3.5	208.0	188.4	188.4	0.0	0.0	0.1	1.8	1.7	1.8	0.0	2.3	52	19	52	20	0.0	-5.3	
First	R1	W1-L W1-U	Hallway	22.2	20.3	1.9	8.4	90.8	73.2	40.9	32.3	44.1	0.0	0.7	0.6	0.6	0.0	5.8	27	3	24	1	11.1	66.7	
First	R2	W2-L W2-U W3-L W3-U	Habitable	35.0	32.6	2.4	6.8						0.0		0.0				64	20	61	18	4.7	10.0	
				34.9	32.7	2.3	6.5	245.1	237.5	237.5	0.0	0.0	1.6		1.5				64	20	61	18	4.7	10.0	
First	R3	W4 W5	Habitable	29.4	28.1	1.3	4.4	208.0	201.9	201.9	0.0	0.0	1.6	3.2	1.6	3.1	0.1	3.1	58	22	56	21	3.4	4.5	
				31.7	30.5	1.2	3.7						1.7		1.6				63	22	61	21	3.2	4.5	
Second	R1	W1-L W1-U W2-L W2-U	Habitable	37.5	35.5	2.1	5.5						0.0		0.0				66	22	63	19	4.5	13.6	
				37.5	35.5	2.0	5.3	245.1	237.5	237.5	0.0	0.0	1.2	2.4	1.1	2.3	0.1	5.1	66	22	63	19	4.5	13.6	
Second	R2	W3-L W3-U	Habitable	22.4	22.0	0.4	1.9	101.3	100.4	100.4	0.0	0.0	0.1	2.2	0.1	2.1	0.0	1.2	49	21	49	21	0.0	0.0	
Second	R3	W4 W5	Habitable	32.0	30.9	1.1	3.5	208.0	201.2	201.2	0.0	0.0	1.0	2.1	1.0	2.0	0.1	2.7	55	22	53	20	3.6	9.1	
				34.1	33.0	1.0	3.0						1.1		1.0				60	23	58	21	3.3	8.7	
Third	R1	W1-L W1-U W2-L W2-U W3-L W3-U	Habitable	39.6	39.5	0.1	0.3						0.1		0.1				N/A	N/A	N/A	N/A	N/A	N/A	
				38.9	37.5	1.5	3.8						1.6		1.6				68	24	66	22	2.9	8.3	
				36.8	35.5	1.3	3.4	201.1	200.0	200.0	0.0	0.0	0.2		0.2				66	24	64	22	3.0	8.3	
Third	R2	W4-L W4-U	Habitable	32.1	31.4	0.7	2.2	127.2	126.4	126.4	0.0	0.0	0.2	2.2	0.2	2.1	0.0	1.6	61	24	59	22	3.3	8.3	
106 Fitzjohns Avenue																									
Basement	R1	W1-L W1-U	Unknown	30.4	28.8	1.6	5.4	89.3	81.1	75.9	5.2	6.4	0.0	1.7	1.6	1.6	0.1	4.2	53	12	50	9	5.7	25.0	
Basement	R2	W2-L W2-U	Unknown	29.8	28.1	1.7	5.7	86.0	74.8	68.1	6.7	8.9	0.0	1.7	1.6	1.6	0.1	4.4	53	11	49	8	7.5	27.3	
Ground	R1	W1-L W1-U	Unknown	32.6	31.0	1.7	5.1	89.3	88.2	86.9	1.3	1.5	0.2	2.3	0.1	2.2	0.1	4.1	56	14	54	12	3.6	14.3	

Address	Room	Window	Room Use	Existing VSC	Proposed VSC	Loss	Room Area	Existing NSC	Proposed NSC	Loss	Loss	Existing ADF Window	Existing ADF Total	Proposed ADF Window	Proposed ADF Total	Loss	Loss	Existing APSH Total	Existing APSH Winter	Proposed APSH Total	Proposed APSH Winter	Total Loss	Winter Loss
Ground	R2	W2-L W2-U	Unknown	32.1	30.4	1.8	5.5	84.8	82.8	2.0	2.4	0.2 2.2	2.3	0.1 2.1	2.2	0.1	4.4	55	13	52	10	5.5	23.1
First	R1	W1-L W1-U	Unknown	35.1	33.5	1.6	4.6	88.2	88.2	0.0	0.0	0.0 2.4	2.4	0.0 2.3	2.3	0.1	4.0	60	18	57	15	5.0	16.7
First	R2	W2-L W2-U	Unknown	34.7	33.0	1.7	4.9	86.0	84.6	0.2	0.3	0.0 2.4	2.5	0.0 2.3	2.4	0.1	4.3	58	16	56	14	3.4	12.5
First	R3	W3-L W3-U	Unknown	34.3	32.5	1.8	5.3	87.8	85.3	1.4	1.6	0.0 2.4	2.4	0.0 2.3	2.3	0.1	4.5	59	17	56	14	5.1	17.6
Second	R1	W1	Unknown	36.2	34.7	1.5	4.1	89.3	87.7	0.0	0.0	2.3	2.3	2.2	2.2	0.1	3.7	60	21	58	19	3.3	9.5
Second	R2	W2	Unknown	35.9	34.3	1.6	4.3	86.0	84.4	0.0	0.0	2.3	2.3	2.2	2.2	0.1	3.9	61	22	57	18	6.6	18.2
Second	R3	W3	Unknown	35.7	34.1	1.7	4.6	87.8	86.2	0.0	0.0	2.2	2.2	2.2	2.2	0.1	4.1	63	22	59	18	6.3	18.2
Third	R1	W1-L W1-U	Unknown	38.6	37.3	1.3	3.4	272.3	133.0	126.7	6.4	0.0 0.7	0.7	0.7	0.0 0.6	0.7	3.3	68	24	66	22	2.9	8.3
108 Fitzjohns Avenue																							
Basement	R1	W1-L W1-U	Unknown	26.2	25.1	1.1	4.2	68.4	61.2	0.9	1.4	0.0 0.9	0.9	0.0 0.9	0.9	0.0	3.1	52	14	50	12	3.8	14.3
Basement	R2	W2-L W2-U	Unknown	30.2	29.0	1.2	3.8	74.7	71.6	0.0	0.0	0.0 2.1	2.1	0.0 2.0	2.1	0.1	3.0	52	12	51	11	1.9	8.3
Basement	R3	W3-L W3-U	Unknown	30.3	29.1	1.2	4.0	58.9	54.7	0.0	0.0	0.0 1.1	1.1	0.0 1.1	1.1	0.0	3.2	49	11	47	9	4.1	18.2
Ground	R1	W1-L W1-U	Unknown	28.0	26.9	1.1	4.1	68.4	66.4	0.0	0.0	0.1 1.2	1.3	0.1 1.2	1.3	0.0	3.1	53	15	52	14	1.9	6.7
Ground	R2	W2-L W2-U	Unknown	32.0	30.8	1.2	3.8	74.7	73.9	0.0	0.0	0.2 2.8	3.0	0.2 2.7	2.9	0.1	3.0	53	13	52	12	1.9	7.7
Ground	R3	W3-L W3-U	Unknown	32.2	30.9	1.3	4.0	58.9	57.7	0.0	0.0	0.1 1.5	1.6	0.1 1.4	1.5	0.1	3.2	50	12	50	12	0.0	0.0
Ground	R4	W4	Unknown	28.4	27.0	1.5	5.2	93.8	86.2	0.0	0.0	1.0	1.0	1.0	1.0	0.0	3.8	35	5	35	5	0.0	0.0
First	R1	W1-L W1-U	Unknown	29.9	28.8	1.1	3.7	68.4	66.5	0.0	0.0	0.0 1.3	1.3	0.0 1.2	1.2	0.0	2.9	57	19	55	17	3.5	10.5
First	R2	W2-L W2-U	Unknown	34.0	32.8	1.2	3.5	74.7	73.9	0.0	0.0	0.0 2.9	2.9	0.0 2.8	2.8	0.1	3.0	58	18	55	15	5.2	16.7
First	R3	W3-L W3-U	Unknown	34.2	33.0	1.3	3.7	58.9	57.7	0.0	0.0	0.0 1.5	1.5	0.0 1.5	1.5	0.0	3.1	56	18	52	14	7.1	22.2
First	R4	W4-L W4-U	Unknown	29.9	28.4	1.5	4.9	93.8	91.8	0.0	0.0	0.0 1.6	1.7	0.0 1.6	1.6	0.1	3.6	39	9	36	6	7.7	33.3
Second	R1	W1	Unknown	30.5	29.4	1.1	3.4	68.4	66.3	0.0	0.0	1.3	1.3	1.2	1.2	0.0	2.7	59	22	57	20	3.4	9.1
Second	R2	W2	Unknown	35.2	34.1	1.1	3.1	74.7	73.5	0.0	0.0	2.9	2.9	2.8	2.8	0.1	2.8	62	22	60	20	3.2	9.1
Second	R3	W3	Unknown	35.5	34.4	1.2	3.3	58.9	57.5	0.0	0.0	1.6	1.6	1.5	1.5	0.0	2.9	60	20	58	18	3.3	10.0
Second	R4	W4	Unknown	30.5	29.2	1.3	4.4	93.8	91.6	0.0	0.0	1.6	1.6	1.6	1.6	0.1	3.3	40	11	39	10	2.5	9.1
Third	R1	W1-L W1-U	Unknown	38.8	37.8	0.9	2.4	147.6	108.2	98.7	9.5	0.0 1.0	1.0	1.0	0.0 1.0	1.0	2.4	68	24	67	23	1.5	4.2
Third	R2	W2-L W2-U	Unknown	38.7	37.7	1.0	2.7	157.3	123.2	121.4	1.8	0.0 1.0	1.0	1.0	0.0 1.0	1.0	2.7	68	24	67	23	1.5	4.2
110 Fitzjohns Avenue																							

Address	Room	Window	Room Use	Existing VSC	Proposed VSC	Loss	Room Area	Existing NSC	Proposed NSC	Loss	Loss	Existing ADF Window	Proposed ADF Window	Loss	Loss	Existing APSH Total	Proposed APSH Total	Total Loss	Winter Loss
Basement	R1	W1-L W1-U	Unknown	32.8	31.9	0.9	2.9	77.1	74.8	2.3	2.9	0.0 1.7	0.0 1.7	0.0	0.0	60	59	1.7	5.9
	R2	W2-L W2-U	Unknown	32.5	31.4	1.0	3.2	82.1	82.1	0.0	0.0	0.0 1.6	0.0 1.6	0.0	0.0	61	60	1.6	5.6
Ground	R1	W1	Unknown	35.2	34.4	0.9	2.5	86.6	86.6	0.0	0.0	1.3	1.3	0.0	0.0	65	63	3.1	9.5
	R2	W2-L W2-U	Unknown	34.5	33.5	1.0	2.9	84.4	83.3	0.0	0.0	0.2 2.4	0.2 2.3	0.1	0.1	64	62	3.1	10.0
Ground	R3	W3-L W3-U	Unknown	34.2	33.2	1.1	3.2	89.0	87.7	0.0	0.0	0.2 2.3	0.2 2.2	0.1	0.1	63	61	3.2	10.0
	R1	W1-L W1-U	Unknown	36.6	35.7	0.9	2.4	93.4	92.4	0.0	0.0	0.0 2.5	0.0 2.5	0.1	0.1	65	62	4.6	13.0
First	R2	W2-L W2-U	Unknown	36.3	35.4	1.0	2.7	84.4	83.3	0.0	0.0	0.0 2.3	0.0 2.3	0.1	0.1	66	63	4.5	13.0
	R3	W3-L W3-U	Unknown	36.1	35.1	1.1	3.0	89.0	87.7	0.0	0.0	0.0 2.2	0.0 2.2	0.1	0.1	66	63	4.5	13.6
Second	R1	W1	Unknown	37.1	36.3	0.8	2.3	93.4	92.2	0.0	0.0	2.6	2.6	0.1	0.1	64	63	1.6	4.2
	R2	W2	Unknown	36.9	36.0	0.9	2.5	84.4	83.1	0.0	0.0	2.4	2.4	0.1	0.1	64	63	1.6	4.2
Second	R3	W3	Unknown	36.9	35.9	1.0	2.7	89.0	87.6	0.0	0.0	2.4	2.3	0.1	0.1	66	64	3.0	8.3
	R1	W1-L W1-U	Unknown	39.1	38.2	0.8	2.1	276.0	131.2	10.1	7.2	0.0 0.7	0.0 0.7	0.0	0.0	68	68	0.0	0.0
Henderson Court																			
Ground	R1	W1	Unknown	19.6	19.0	0.6	3.2	161.1	130.5	0.0	0.0	0.8	0.8	0.0	0.0	23	4	4.3	0.0
	R2	W2-L W2-U	Unknown	18.8	18.2	0.5	2.8					0.1 1.4	0.1 1.3			N/A	N/A	N/A	N/A
Ground	R2	W3-L W3-U		36.2	35.6	0.6	1.7					0.4 5.4	0.4 5.3			63	62	1.6	0.0
	R2	W4-L W4-U		23.2	23.2	0.0	0.0	94.2	93.5	0.0	0.0	0.1 1.6	0.1 1.6	0.1	0.1	54	54	0.0	0.0
First	R1	W1-L W1-U	Unknown	20.1	19.5	0.6	3.0	161.1	87.9	0.0	0.0	0.1 1.0	0.1 1.0	0.0	0.0	26	24	7.7	20.0
	R2	W2 W3	Unknown	36.8 36.1	36.2 35.4	0.6 0.6	1.7 1.7	224.2	215.2	0.0	0.0	0.7 0.7	0.7 0.7	0.0	0.0	63 57	60 54	4.8 5.3	4.3 5.0
First	R3	W4-L W4-U	Unknown	19.3	18.8	0.5	2.6					0.1 1.4	0.1 1.4			N/A	N/A	N/A	N/A
	R3	W5-L W5-U		37.4	36.8	0.6	1.6					0.4 5.6	0.4 5.5			66	65	1.5	0.0
Second	R3	W6-L W6-U		23.4	23.4	0.0	0.0	94.2	93.5	0.0	0.0	0.1 1.6	0.1 1.6	0.1	0.1	54	54	0.0	0.0
	R1	W1-L W1-U	Unknown	23.8	23.3	0.6	2.3	161.1	142.4	0.0	0.0	0.1 1.1	0.1 1.1	0.0	0.0	30	29	3.3	20.0
Second	R2	W2-L W2-U	Unknown	22.7	22.2	0.5	2.1					0.1 1.6	0.1 1.5			N/A	N/A	N/A	N/A
	R2	W3-L W3-U		38.4	37.8	0.6	1.5					0.4 5.6	0.4 5.5			67	67	0.0	0.0
Third	R2	W4-L W4-U		25.3	25.3	0.0	0.0	94.2	93.5	0.0	0.0	0.1 1.7	0.1 1.7	0.1	0.1	56	56	0.0	0.0
	R1	W1 W2-L W2-U	Unknown	39.0 38.5	38.6 38.0	0.4 0.5	1.0 1.3	151.9	147.4	0.0	0.0	2.6 0.1 0.0	2.5 0.1 0.0	0.0	0.0	69 69	69 68	0.0 1.4	0.0 0.0
1 Ellerdale Road																			



Address	Room	Window	Room Use	Existing VSC	Proposed VSC	Loss	Loss	Room Area	Existing NSC	Proposed NSC	Loss	Loss	Existing ADF Window	Existing ADF Total	Proposed ADF Window	Proposed ADF Total	Loss	Loss	Existing APSH Total	Proposed APSH Total	Existing Total	Proposed Total	Winter Loss	Winter Loss						
Basement	R1	W1	Unknown	26.2	24.0	2.2	8.5	229.3	208.5	195.3	13.2	6.4	0.7	0.7	0.9	0.3	1.9	0.2	10.9	51	16	45	15	11.8	6.3					
	R1	W2		27.3	22.5	4.8	17.5		1.1	0.3	0.9	0.2	61	21	54	20	11.5	4.8	30	11	25	8	16.7	27.3						
	R1	W3		8.4	6.2	2.2	26.3																							
Ground	R1	W1-L	Unknown	27.8	25.9	1.9	7.0	229.3	228.2	223.6	4.6	2.0	0.0	0.0	0.0	0.0	0.0	0.4	10.2	59	22	53	19	10.2	13.6					
	R1	W1-U		31.3	26.4	4.9	15.6						1.1	1.0	1.1	0.0	68	24	59	21	13.2	12.5	46	15	36	11	21.7	26.7		
	R1	W2-L		21.5	17.8	3.7	17.3						1.8	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Ground	R2	W3-L	Unknown	21.5	17.8	3.7	17.3	229.3	228.2	223.6	4.6	2.0	0.0	0.0	0.0	0.0	0.0	0.4	10.2	46	15	36	11	21.7	26.7					
	R2	W4		24.9	21.2	3.7	14.7						1.1	1.1	1.0	1.0	1.0	0.1	10.5	56	22	51	19	8.9	13.6					
	R3	W5		25.8	25.5	0.3	1.0						1.3	1.2	2.5	0.3	9.3	55	21	52	18	5.5	14.3	72	25	65	21	9.7	16.0	
Ground	R3	W6	Unknown	29.9	23.3	6.6	21.9	132.4	127.7	116.4	11.3	8.9	1.5	2.8	1.3	2.5	0.3	9.3	55	21	52	18	5.5	14.3						
	R1	W1-L		33.8	29.5	4.3	12.6						0.1	1.6	1.4	1.5	0.2	10.3	70	26	63	21	10.0	19.2						
	R1	W1-U		0.1	1.4	1.4	1.4						0.1	9.5	71	26	64	23	9.9	11.5										
First	R2	W2-L	Unknown	33.6	29.2	4.4	13.1	90.0	87.9	78.6	9.4	10.6	0.1	1.8	1.5	1.6	0.2	10.7	71	25	65	22	8.5	12.0						
	R2	W2-U		1.7	0.2	10.7	70						26	63	21	10.0	19.2													
	R3	W3-L		0.1	1.5	1.5	1.4						0.2	11.5	71	26	64	23	9.9	11.5										
Second	R1	W1-L	Unknown	33.2	29.3	3.8	11.5	106.7	103.2	85.1	18.1	17.5	0.1	1.4	1.3	1.3	0.1	9.5	70	26	65	24	7.1	7.7						
	R2	W1-U		0.1	1.4	1.4	0.1						9.5	71	26	64	23	9.9	11.5											
	R2	W2-L		0.1	1.5	1.6	1.4						0.2	9.8	70	26	65	24	7.1	7.7										
Second	R3	W3-L	Unknown	32.8	28.5	4.4	13.2	90.0	87.9	82.3	5.6	6.4	0.1	1.6	1.4	1.4	0.2	9.8	69	25	60	20	13.0	20.0						
	R3	W3-U		0.1	1.3	1.4	1.2						0.1	10.7	77	27	72	25	6.5	7.4										
	R1	W1		37.7	34.6	3.1	8.2						1.1	1.1	1.0	1.0	0.1	7.7												
3 Ellerdale Road																														
Basement	R1	W1	Unknown	29.7	25.7	4.0	13.3	115.8	108.5	93.3	15.2	14.0	1.6	1.6	1.5	1.5	0.2	9.8	62	18	55	17	11.3	5.6						
	R2	W2		28.9	27.3	1.5	5.3						0.7	0.7	0.7	18	55	16	11.3	11.1										
	R2	W3		30.6	25.9	4.7	15.5						1.1	1.0	2.2	0.3	10.2	59	16	49	15	16.9	6.3							
	R2	W4		20.2	15.3	4.9	24.3						0.6	0.5	0.5	0.3	10.2	38	8	29	7	23.7	12.5							
Ground	R1	W1-L	Unknown	31.3	27.9	3.4	10.8	115.8	113.0	111.8	1.2	1.0	0.0	2.6	2.4	2.4	0.2	8.2	69	23	62	21	10.1	8.7						
	R1	W1-U		0.0	0.0	0.0	0.0						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Ground	R2	W2-L	Unknown	31.1	29.8	1.3	4.2	231.5	230.5	227.9	2.6	1.1	0.0	2.6	2.4	2.4	0.2	8.2	67	22	60	19	10.4	13.6						
	R2	W2-U		1.2	0.0	0.0	0.0						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
	R2	W3-L		32.0	27.8	4.2	13.1						1.1	1.0	2.2	0.3	10.2	69	24	59	21	14.5	12.5	74	25	67	22	9.5	12.0	
	R2	W3-U		0.0	0.0	0.0	0.0						1.8	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Ground	R2	W4-L	Unknown	22.9	18.4	4.5	19.8	231.5	230.5	227.9	2.6	1.1	0.0	4.0	0.8	3.6	0.3	8.7	43	12	34	9	20.9	25.0						
	R2	W4-U		0.0	0.0	0.0	0.0						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	R1	W1-L		34.7	31.6	3.1	9.0						0.1	1.6	1.4	1.5	0.1	7.6	74	25	68	24	8.1	4.0	74	25	68	24	8.1	4.0
	R1	W1-U		1.5	1.6	1.4	1.5						0.1	7.6	74	25	68	24	8.1	4.0	74	25	68	24	8.1	4.0	74	25	68	24
First	R2	W2-L	Unknown	34.3	30.8	3.6	10.4	90.7	88.6	75.7	12.9	14.6	0.1	1.8	1.6	1.7	0.2	8.6	74	25	67	22	9.5	12.0						
	R2	W2-U		1.7	0.2	8.6	73						25	65	21	11.0	16.0													
	R3	W3-L		0.1	1.6	1.4	1.5						0.1	9.1	73	25	65	21	11.0	16.0										
Second	R1	W1-L	Unknown	34.0	31.2	2.8	8.2	115.8	112.8	111.7	1.1	1.0	0.1	1.4	1.2	1.3	0.1	6.9	72	27	67	25	6.9	7.4						
	R1	W1-U		1.3	0.1	6.9	72						27	67	25	6.9	7.4													
	R2	W2-L		0.1	1.5	1.4	1.5						0.1	7.9	71	26	65	24	8.5	7.7										
Second	R2	W2-U	Unknown	33.6	30.5	3.2	9.5	90.7	88.6	81.2	7.4	8.4	0.1	1.6	1.4	1.5	0.1	7.9	71	26	65	24	8.5	7.7						
	R2	W2-U		1.5	0.1	7.9	71						26	65	24	8.5	7.7													
	R3	W3-L		0.1	1.4	1.3	1.3						0.1	8.3	71	26	64	23	9.9	11.5										

Address	Room	Window	Room Use	Existing VSC	Proposed VSC	Loss	Loss	Room Area	Existing NSC	Proposed NSC	Loss	Loss	Existing ADF Window	Existing ADF Total	Proposed ADF Window	Proposed ADF Total	Loss	Loss	Existing APSH Total	Proposed APSH Total	Total Loss	Winter Loss			
Third	R1	W1	Unknown	37.9	35.3	2.7	7.0	206.6	161.6	149.6	11.9	7.4	1.1	1.1	1.0	1.0	0.1	6.6	78	28	75	26	3.8	7.1	
1 Prince Arthur Road																									
Ground	R1	W1	Unknown	27.0	23.1	3.9	14.5	91.1	83.7	66.6	17.1	20.4	0.7	0.7	0.6	0.6	0.1	11.1	N/A	N/A	N/A	N/A	N/A		
Ground	R2	W2-L W2-U	Unknown	28.7	24.4	4.3	14.8	96.6	95.4	84.3	11.1	11.6	0.1	1.9	0.1	1.7	1.8	0.2	11.0	N/A	N/A	N/A	N/A	N/A	
Ground	R3	W3	Unknown	27.0	22.6	4.4	16.3	87.5	82.9	64.2	18.7	22.6	0.7	0.7	0.6	0.6	0.1	12.5	N/A	N/A	N/A	N/A	N/A	N/A	
Ground	R4	W4-L W4-U	Unknown	27.1	22.7	4.4	16.2	83.9	82.9	77.6	5.3	6.4	0.0	2.8	0.0	2.4	2.5	0.3	11.7	N/A	N/A	N/A	N/A	N/A	N/A
Ground	R5	W5-L W5-U	Unknown	29.6	25.2	4.4	15.0	87.4	86.2	80.0	6.2	7.2	0.1	2.9	0.0	2.6	2.7	0.3	11.2	N/A	N/A	N/A	N/A	N/A	N/A
First	R1	W1-L W1-U	Unknown	32.3	28.3	4.1	12.6	91.1	89.9	87.8	2.0	2.3	0.0	2.5	0.0	2.3	2.3	0.3	10.0	N/A	N/A	N/A	N/A	N/A	N/A
First	R2	W2-L W2-U	Unknown	32.5	28.3	4.3	13.1	85.7	84.6	82.2	2.4	2.8	0.0	2.6	0.0	2.3	2.4	0.3	10.5	N/A	N/A	N/A	N/A	N/A	N/A
First	R3	W3-L W3-U	Unknown	32.7	28.3	4.4	13.5	87.5	86.1	83.4	2.7	3.1	0.0	2.6	0.0	2.3	2.3	0.3	10.8	N/A	N/A	N/A	N/A	N/A	N/A
First	R4	W4-L W4-U	Unknown	30.4	26.0	4.4	14.5	83.9	82.9	79.9	3.0	3.6	0.0	2.5	0.0	2.2	2.2	0.3	11.1	N/A	N/A	N/A	N/A	N/A	N/A
First	R5	W5-L W5-U	Unknown	32.9	28.5	4.5	13.5	87.4	86.2	82.0	4.2	4.9	0.0	2.6	0.0	2.3	2.4	0.3	10.8	N/A	N/A	N/A	N/A	N/A	N/A
Second	R1	W1	Unknown	35.6	31.8	3.9	10.8	79.7	77.6	77.1	0.5	0.7	2.2	2.2	2.0	2.0	0.2	9.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Second	R2	W2	Unknown	36.1	32.1	3.9	10.9	77.9	75.9	75.9	0.0	0.0	2.3	2.3	2.1	2.1	0.2	9.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2 Prince Arthur Road																									
Ground	R1	W1	Unknown	31.3	26.9	4.4	14.0	92.1	87.9	64.0	23.9	27.2	0.9	0.9	0.8	0.8	0.1	11.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ground	R2	W2-L W2-U	Unknown	31.0	26.7	4.3	13.9	77.7	76.9	54.7	22.2	28.9	0.2	2.4	0.2	2.1	2.3	0.3	10.8	N/A	N/A	N/A	N/A	N/A	N/A
Ground	R3	W3	Unknown	32.0	27.7	4.2	13.2	90.5	86.3	64.5	21.9	25.3	1.0	1.0	0.9	0.9	0.1	10.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ground	R4	W4-L W4-U	Unknown	29.4	25.5	3.9	13.3	87.1	86.0	72.4	13.6	15.8	0.1	2.5	0.1	2.2	2.3	0.3	10.1	N/A	N/A	N/A	N/A	N/A	N/A
Ground	R5	W5-L W5-U	Unknown	31.8	28.0	3.8	11.9	87.7	86.6	73.0	13.7	15.8	0.1	2.7	0.1	2.4	2.6	0.3	9.2	N/A	N/A	N/A	N/A	N/A	N/A
First	R1	W1-L W1-U	Unknown	34.0	29.7	4.3	12.6	92.1	91.0	83.9	7.1	7.8	0.1	2.6	0.0	2.3	2.3	0.3	10.3	N/A	N/A	N/A	N/A	N/A	N/A
First	R2	W2-L W2-U	Unknown	34.2	30.0	4.2	12.3	77.7	77.0	71.3	5.7	7.4	0.1	2.8	0.1	2.5	2.6	0.3	10.2	N/A	N/A	N/A	N/A	N/A	N/A
First	R3	W3-L W3-U	Unknown	34.4	30.3	4.1	11.9	90.5	89.3	83.2	6.1	6.9	0.1	2.6	0.0	2.3	2.4	0.3	9.9	N/A	N/A	N/A	N/A	N/A	N/A
First	R4	W4-L W4-U	Unknown	32.2	28.5	3.7	11.6	87.1	86.0	84.2	1.8	2.1	0.1	2.5	0.0	2.3	2.3	0.2	9.4	N/A	N/A	N/A	N/A	N/A	N/A
First	R5	W5-L W5-U	Unknown	34.6	31.0	3.6	10.3	87.7	86.6	84.7	1.9	2.2	0.1	2.7	0.1	2.4	2.5	0.2	8.7	N/A	N/A	N/A	N/A	N/A	N/A
Second	R1	W1	Unknown	36.9	33.3	3.6	9.8	77.7	76.3	76.3	0.0	0.0	1.8	1.8	1.7	1.7	1.7	0.2	8.8	N/A	N/A	N/A	N/A	N/A	N/A
Second	R2	W2	Unknown	37.2	34.0	3.2	8.5	87.1	85.5	85.5	0.0	0.0	1.7	1.7	1.6	1.6	1.6	0.1	7.8	N/A	N/A	N/A	N/A	N/A	N/A
3 Prince Arthur Road																									

Address		Room	Window	Room Use	Existing VSC	Proposed VSC	Loss	Loss	Room Area	Existing NSC	Proposed NSC	Loss	Loss	Existing ADF Window	Proposed ADF Window	Proposed ADF Total	Loss	Loss	Existing ADF Total	Existing APSH Total	Proposed APSH Total	Winter	Total	Winter	Loss																																																																																																																																																																																																													
Basement	R1	W1	W2	Unknown	29.9	28.2	1.6	5.5	123.1	119.6	119.6	0.0	0.0	0.6	0.5	1.1	1.1	0.0	4.1	N/A	N/A	N/A	N/A	N/A	N/A																																																																																																																																																																																																													
					31.7	29.9	1.7	5.5		119.6	119.6	0.0	0.0	0.6	0.6					N/A	N/A	N/A	N/A	N/A	N/A																																																																																																																																																																																																													
	Ground	R1	W1	Unknown	31.5	28.7	2.8	8.7	170.4	162.1	162.1	0.0	0.0	1.7	1.6	1.6	1.6	0.1	6.9	N/A	N/A	N/A	N/A	N/A	N/A																																																																																																																																																																																																													
					30.6	28.1	2.5	8.2		195.0	194.2	194.2	0.0	0.0	1.6	1.5				N/A	N/A	N/A	N/A	N/A	N/A																																																																																																																																																																																																													
					35.3	33.1	2.2	6.1							1.8	1.7				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A																																																																																																																																																																																																										
Ground	R2	W2	W3	W4	W5	Unknown	34.5	34.0	0.5	1.5	195.0	194.2	194.2	0.0	0.0	1.7	1.7	6.9	6.6	0.3	4.5	30	6	0.0	0.0																																																																																																																																																																																																													
							31.4	29.8	1.6	5.1						0.7	0.6	N/A				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A																																																																																																																																																																																																				
	33.4	31.7	1.7	5.1	0.7	0.7	1.4	1.3	1.3	0.1	4.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A																																																																																																																																																																																																																
	First	R1	W1	W2	Unknown	33.3	30.9	2.4	7.3	170.4	163.2	163.2	0.0	0.0	1.7	1.6	1.6	1.6	0.1	6.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A																																																																																																																																																																																																											
						29.4	27.3	2.1	7.2		128.8	124.2	124.2	0.0	0.0	1.8	1.7				1.7	0.1	5.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A																																																																																																																																																																																																							
First		R3	W3	W4	Unknown	37.2	35.1	2.0	5.5	195.0	193.8	193.8	0.0	0.0	1.7	1.6	3.4	3.2	0.2	5.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A																																																																																																																																																																																																											
						37.2	35.3	1.9	5.2		193.8	193.8	0.0	0.0	1.7	1.6	3.2				0.2	5.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A																																																																																																																																																																																																								
						32.9	31.3	1.5	4.6		0.6	0.6	N/A	N/A	N/A	N/A	N/A				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A																																																																																																																																																																																																						
First	R4	W4	W6	Unknown	35.2	33.6	1.6	4.5	123.1	119.6	119.6	0.0	0.0	0.6	0.6	1.1	1.1	0.0	3.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A																																																																																																																																																																																																												
					32.9	31.3	1.5	4.6		0.6	0.6	N/A	N/A	N/A	N/A	N/A				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A																																																																																																																																																																																																							
	Second	R1	W1-L	W1-U	Unknown	35.9	34.5	1.4	3.9	123.1	118.5	118.5	0.0	0.0	0.0	0.0	1.0	1.0	0.0	3.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A																																																																																																																																																																																																											
						39.1	37.6	1.5	3.7		199.3	199.3	0.0	0.0	1.2	1.1	2.3				0.1	3.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A																																																																																																																																																																																																						
						39.1	37.7	1.4	3.5		208.8	199.3	199.3	0.0	0.0	1.2	1.1				2.4	2.3	0.1	3.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A																																																																																																																																																																																																				
4 Prince Arthur Road																																																																																																																																																																																																																																						
Basement	R1	W1	Unknown	28.2	26.7	1.5	5.3	112.1	83.9	83.9	0.0	0.0	0.4	0.4	0.4	0.4	0.0	4.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A																																																																																																																																																																																																													
				33.8	32.3	1.5	4.4		112.1	0.0	0.0	0.0	0.0	0.3	0.3				0.3	0.0	4.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A																																																																																																																																																																																																									
	Ground	R1	W1	Unknown	37.0	35.7	1.3	3.4	203.5	191.6	191.6	0.0	0.0	1.1	1.1	1.1	1.1	0.0	3.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A																																																																																																																																																																																																												
					36.7	35.3	1.4	3.8		102.8	0.2	0.2	0.0	0.0	0.1	0.1				0.7	0.7	0.0	3.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A																																																																																																																																																																																																							
					36.7	35.3	1.4	3.8		102.8	0.2	0.2	0.0	0.0	0.1	0.1				0.7	0.7	0.0	3.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A																																																																																																																																																																																																					
The Lodge																																																																																																																																																																																																																																						
Ground	R1	W1-L	W1-U	Conservatory	12.5	2.6	9.9	79.6	124.6	123.9	123.9	0.0	0.0	0.1	0.0	0.0	0.0	5.9	2.7	31.4	N/A	N/A	N/A	N/A	N/A	N/A																																																																																																																																																																																																												
					17.1	3.3	13.9	80.9		52.1	35.7	16.4	31.4	1.0	0.8						0.8	0.2	21.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A																																																																																																																																																																																																					
	Ground	R1	W2-L	W2-U	W3-L	W3-U	W4-L	W4-U	W5-L	W5-U	W6-L	W6-U	W7-L	W7-U	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0