INTERNAL DAYLIGHT & SUNLIGHT ASSESSMENT

187-189 Rushey Green, SE6 4BP
| Blue Sky Surveyors

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Contents

1.0 Introduction

Blue Sky Surveyors have been appointed by Such Properties Ltd to undertake an assessment in order to understand the potential daylight & sunlight amenity that will be enjoyed by the proposed residential units created by the proposed conversion of the first and second floors on 187-189 Rushey Green, SE6 4BP.

Blue Sky Surveyors undertook a full technical analysis in order to understand the likely impact that the proposed project would have with respect to daylight and sunlight. This assessment was undertaken using 3-D laser scan data, 3-D computer modelling and specialist assessment software to run a simulation. Imagery of our assessment model can be seen in Appendix A.

When considering the results of our assessment, reference has been made to the BRE Report 209, Site Layout Planning for Daylight and Sunlight: A guide to good practice (third edition, 2022). A summary of the assessment methodology and key recommendations from the BRE Report for daylight & sunlight can be found in Section 2.

A plan view of the site along with imagery of the modelling in its existing and proposed conditions can be found in Appendix A.

2.0 BRE Assessment & Guidelines

For new rooms, the methods that are advised to be undertaken in the BRE Report 209, Site Layout Planning for Daylight and Sunlight: A guide to good practice (third edition, 2022) to understand the daylight amenity are the Daylight Factor Method and Illuminance method. Sunlight is assessed by looking at the sunlight hours enjoyed by a habitable room on the 21st March.

The below is extracted from BRE Report 209, Site Layout Planning for Daylight and Sunlight: A guide to good practice (third edition, 2022):

Daylight Factor

Ratio of total daylight illuminance at a reference point on the working plane within a space to outdoor illuminance on a horizontal plane due to an unobstructed CIE standard overcast sky. Thus a 1% D would mean that the indoor illuminance at that point in the space would be one hundredth the outdoor unobstructed horizontal illuminance.

Illuminance

A measure of the amount of light falling on a surface, usually measured in lux.

Illuminance method

The below is an extract from BRE Report 209, Site Layout Planning for Daylight and Sunlight: A guide to good practice (third edition, 2022):

This method involves using climatic data for the location of the site (via the use of an appropriate, typical or average year, weather file within the software) to calculate the illuminance from daylight at each point on an assessment grid on the reference plane at an at least hourly interval for a typical year.
C5 A target illuminance (ET) should be achieved across at least half of the reference plane in a daylit space for at least half of the daylight hours. Another target illuminance (ETM) should also be achieved across 95% of the reference plane for at least half of the daylight hours; this is the minimum target illuminance to be achieved towards the back of the room.

Sunlight Targets

In general a dwelling, or non-domestic building that has a particular requirement for sunlight, will appear reasonably sunlit provided:

at least one main window wall faces within 90° of due south and

a habitable room, preferably a main living room, can receive a total of at least 1.5 hours of sunlight on 21 March. This is assessed at the inside centre of the window(s); sunlight received by different windows can be added provided they occur at different times and sunlight hours are not double counted.

3.0 Information for Computer Modelling

To carry out the daylight & sunlight tests, we built a model which detailed 187-189 Rushey Green in its existing and proposed conditions; as well as nearby neighbouring properties (additional context massing). Imagery of the computer model can be found in Appendix A.

The modelling was based around the following information:

Existing Massing

Blue Sky Surveyors' 3D Scan Survey.

OS Map.

Blue Sky Surveyors' site photography.

Proposed Scheme

Studio Jayga Architects' proposal drawings:

"231109 - rushey green - 3 FLats Total.pdf"

(received 12/11/23).

Materials & Finishes

The assessment has been run on the basis of white paint for the walls and ceilings and light wood veneer colour flooring (or equivalent) will be used with an average reflectance of 0.7.

4.0 Results of the Assessment

Internal Daylight & Sunlight Amenity to the Proposed Units

Daylight Results Table

Room Type	BRE " SDA BS En17037 Analysis" Recommendation Achieved %?	Total Number of Rooms
Bedroom First R1	100%	
LKD First R2	66%	
Bedroom First R3	66%	
Bedroom First R4	51%	
LKD First R5	81%	
Bedroom First R6	100%	
Bedroom Second R1	100%	
LKD Second R2	100%	
Total Pass		8/8 (100%)

Sunlight Results Table

Room Type / Reference	Proposed Sunlight Exposure (Hours)	BRE Rating	Meets Target?
Bedroom First R1	3.2	Med	Yes
LKD First R2	4.1	High	Yes
Bedroom First R3	1.8	Min	Yes
Bedroom First R4	2.4	Min	Yes
LKD First R5	6.6	High	Yes
Bedroom First R6	3.9	Med	Yes
Bedroom Second R1	3.6	Med	Yes
LKD Second R2	6.6	High	Yes
Total Pass			8/8 (100%)

All rooms will meet the BRE recommendations for daylight & sunlight; furthermore, all LKDs will achieve high levels of sunlight.

5.0 Conclusion

We have undertaken a full daylight and sunlight computer assessment in order to determine the level of daylight & sunlight amenity that will be enjoyed by the residential units created by the proposed conversion works at 187-189 Rushey Green.

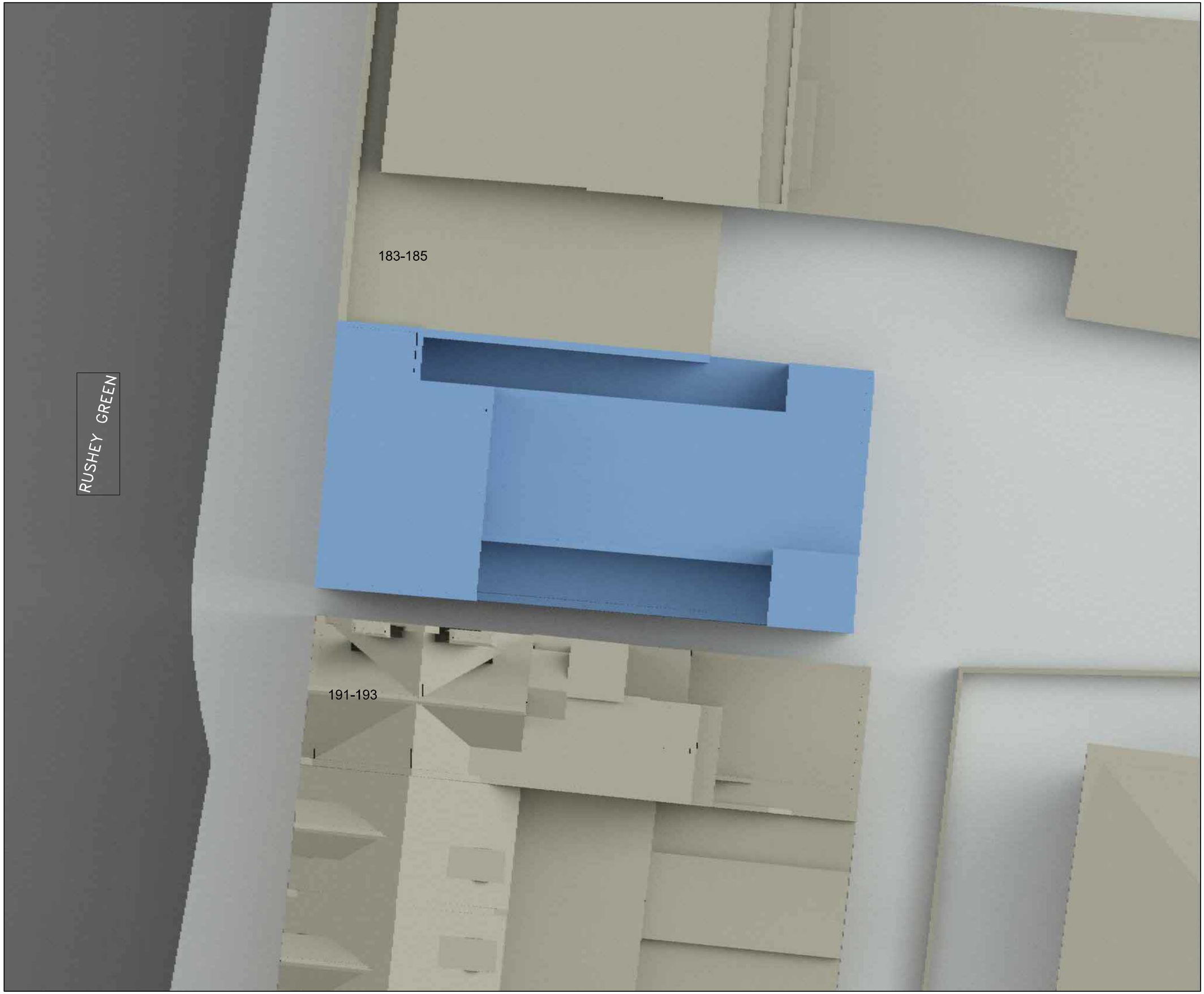
The assessment was undertaken in accordance with the BRE Report 209, Site Layout Planning for Daylight and Sunlight: A guide to good practice (third edition, 2022). We have used the recommendations within the BRE guide to determine whether the proposed units will enjoy sufficient daylight & sunlight amenity.

Our assessment has indicated that all of the habitable rooms will adhere to the BRE guidelines for internal daylight & sunlight levels.

Stevan Dillon

DIRECTOR - BLUE SKY SURVEYORS
23/11/2023

Appendix A – Plans & 3-D Views



Sources:

BLUE SKY SURVEYORS
3D LASER SCAN SURVEY DATA
SITE PHOTOGRAPHY

STUDIO JAYGA ARCHITECTS
PROPOSAL DRAWINGS
231109 - Rushey Green - 3 FLATS TOTAL.pdf
RECEIVED 12/11/23

KEY:

N

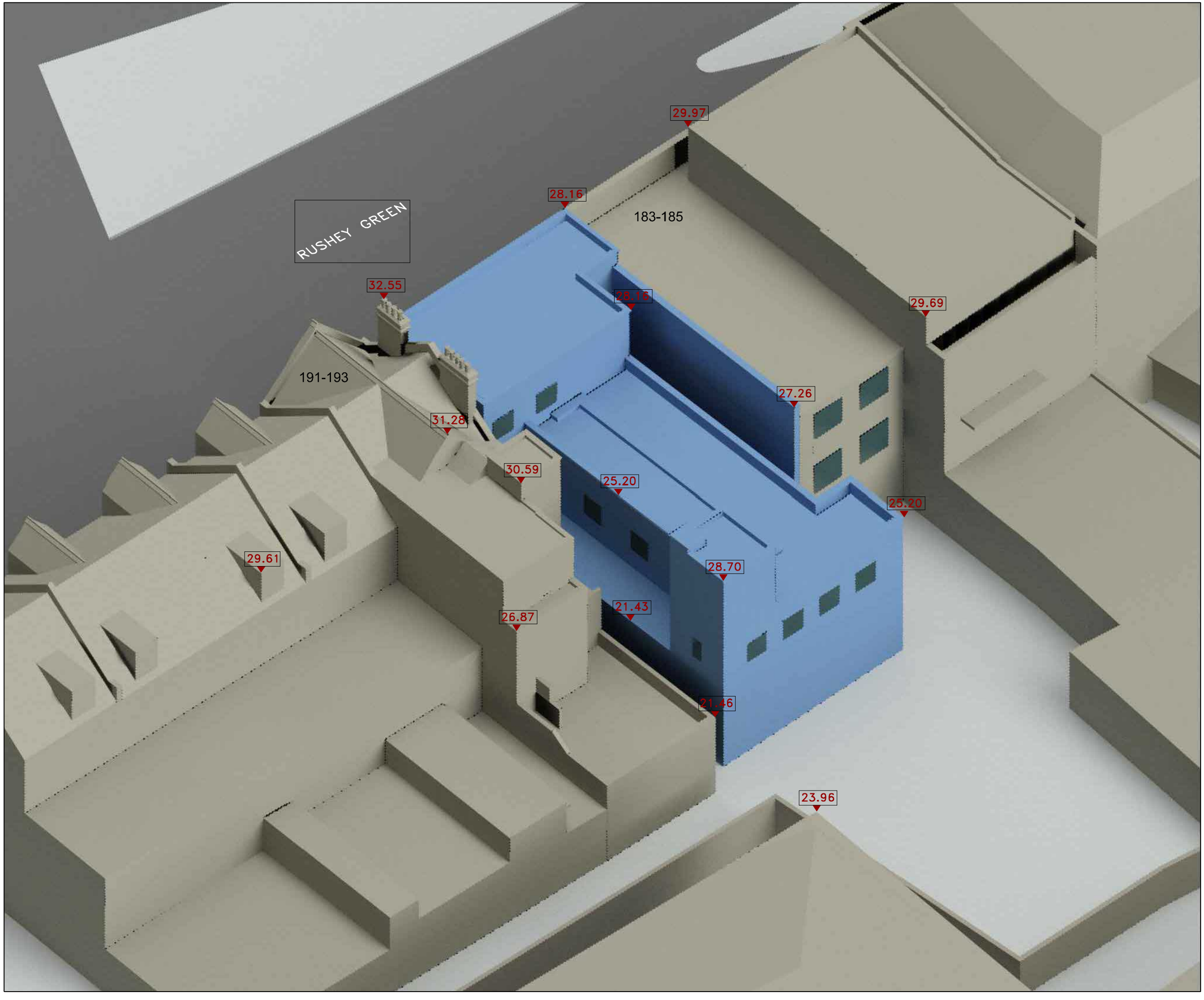
PROPOSED SCHEME IN BLUE

REV:	DETAILS:	DATE:
A	-	-

ADDRESS:
187-189 RUSHEY GREEN
LONDON SE6 4BD

TITLE:
SITE PLAN
STUDIO JAYGA ARCHITECTS
SCHEME RECEIVED 12/11/23

DRAWN:	DATE:
MG	20/11/23
DRAWING NO:	SCALE:
SDIL/ROL/273/01	1:200 @ A3



Sources:

BLUE SKY SURVEYORS
3D LASER SCAN SURVEY DATA
SITE PHOTOGRAPHY

STUDIO JAYGA ARCHITECTS
PROPOSAL DRAWINGS
231109 - Rushey Green - 3 FLATS TOTAL.pdf
RECEIVED 12/11/23

KEY:

HEIGHTS IN METRES AOD

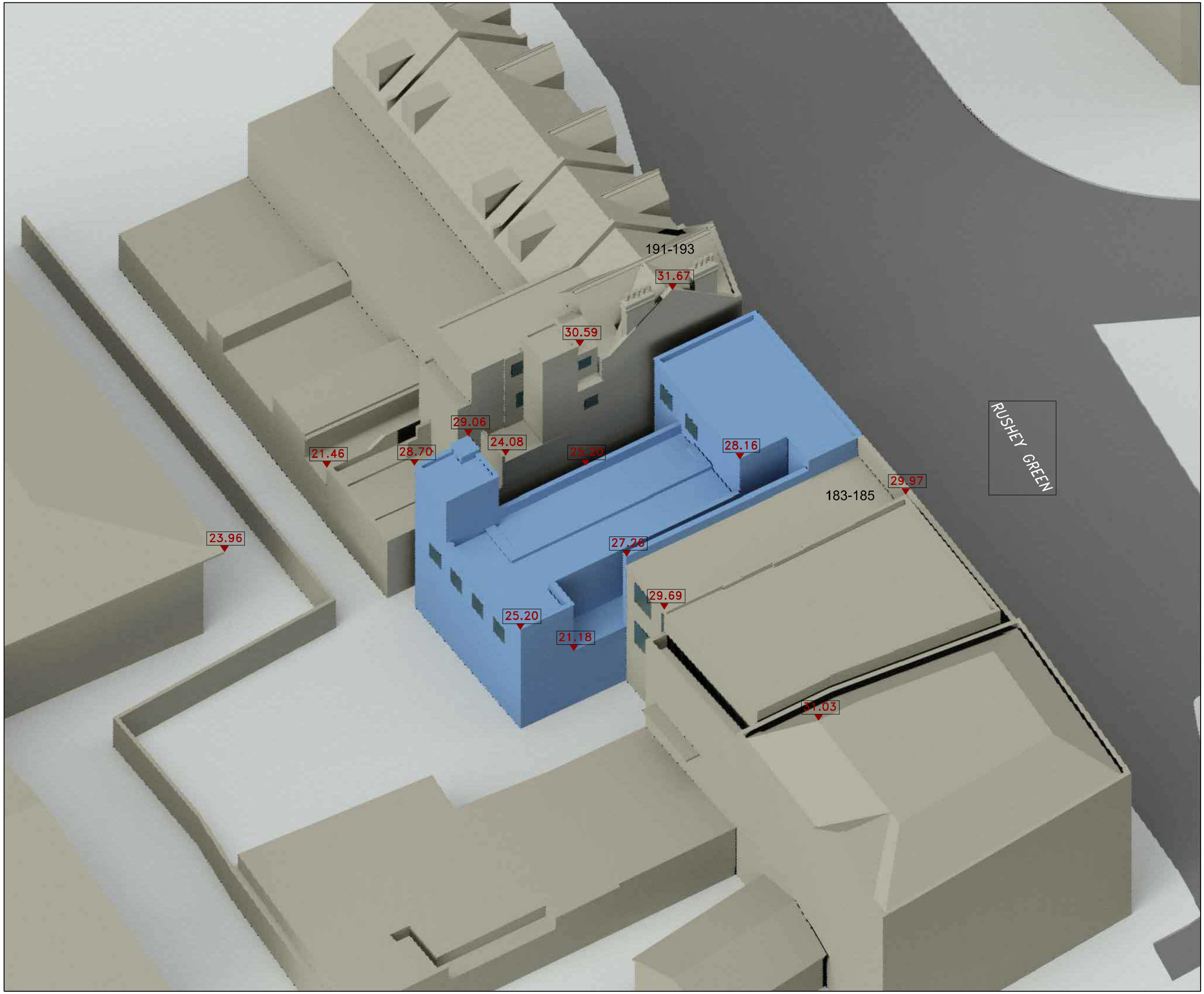
PROPOSED SCHEME IN BLUE

REV:	DETAILS:	DATE:
A	-	-

ADDRESS:
187-189 RUSHEY GREEN
LONDON SE6 4BD

TITLE:
3D VIEW
STUDIO JAYGA ARCHITECTS
SCHEME RECEIVED 12/11/23

DRAWN:	DATE:
MG	20/11/23
DRAWING NO:	SCALE:
SDIL/ROL/273/02	NTS



Sources:

BLUE SKY SURVEYORS
3D LASER SCAN SURVEY DATA
SITE PHOTOGRAPHY

STUDIO JAYGA ARCHITECTS
PROPOSAL DRAWINGS
231109 - Rushey Green - 3 FLATS TOTAL.pdf
RECEIVED 12/11/23

KEY:

HEIGHTS IN METRES AOD

PROPOSED SCHEME IN BLUE

REV:	DETAILS:	DATE:
A	-	-

ADDRESS:
187-189 RUSHEY GREEN
LONDON SE6 4BD

TITLE:
3D VIEW
STUDIO JAYGA ARCHITECTS
SCHEME RECEIVED 12/11/23

DRAWN:	DATE:
MG	20/11/23

DRAWING NO:	SCALE:
SDIL/ROL/273/03	NTS

Appendix B – Numeric Results & Contours

PROPOSED SCHEME
FIRST FLOOR
SCALE 1:100 @ A3

PROPOSED SCHEME
SECOND FLOOR
SCALE 1:100 @ A3

Sources:

BLUE SKY SURVEYORS
3D LASER SCAN SURVEY DATA
SITE PHOTOGRAPHY

STUDIO JAYGA ARCHITECTS
PROPOSAL DRAWINGS
231109 - Rushey Green - 3 FLATS TOTAL.pdf
RECEIVED 12/11/23

KEY:

REV:	DETAILS:	DATE:
A	-	-

ADDRESS:
187-189 RUSHEY GREEN
LONDON SE6 4BD

TITLE:
SPATIAL DAYLIGHT AUTONOMY

DRAWN:	DATE:
MG	20/11/23

DRAWING NO:	SCALE:
SDIL/ROL/273/05	1:100 @ A3

Project Name: 187-189 Rushey Green, SE6 4BP_M05_SelfTest
Project No.:
Report Title: SDA BS En17037 Analysis - Proposed Scheme
Date of Analysis: 20/11/2023

										Criteria				
Floor Ref	Room Ref	Room Attribute	Property Type	Room Use	Room Area m2	Effective Area	Median Lux	Area Meeting Req Lux	% of Area Meeting Req Lux	Req Lux	Req % of Effective Area	Req % of Daylight Hours	Daylight Hours	Meets Criteria
Proposed Scheme														
First	R1		Residential	Bedroom	8.09	5.01	575	5.01	100%	100	50%	50%	4380	YES
	R2		Residential	LKD	32.87	25.65	254	17.02	66%	200	50%	50%	4380	YES
	R3		Residential	Bedroom	11.13	6.97	113	4.63	66%	100	50%	50%	4380	YES
	R4		Residential	Bedroom	11.47	7.75	100	3.99	51%	100	50%	50%	4380	YES
	R5		Residential	LKD	35.87	27.42	350	22.27	81%	200	50%	50%	4380	YES
	R6		Residential	Bedroom	10.99	7.36	678	7.36	100%	100	50%	50%	4380	YES
Second	R1		Residential	Bedroom	10.67	7.09	524	7.09	100%	100	50%	50%	4380	YES
	R2		Residential	LKD	26.66	20.40	468	20.40	100%	200	50%	50%	4380	YES

Project Name: 187-189 Rushey Green, SE6 4BP_M05_SelfTest
Project No.:
Report Title: Sunlight Exposure Analysis - Proposed Scheme
Date: 20/11/2023

Floor Ref	Room Ref	Room Attribute	Property Type	Room Use	Window Ref	Window Orientation	Proposed Sunlight Exposure (Hours)	Rating
Proposed Scheme								
First	R1		Residential	Bedroom	W1	275°N	3.2	
							3.2	Medium
First	R2		Residential	LKD	W2	275°N	3.2	
					W3	95°	0.9	
							4.1	High
First	R3		Residential	Bedroom	W4	185°	1.1	
					W5	185°	1.8	
							1.8	Minimum
First	R4		Residential	Bedroom	W6	185°	2.4	
							2.4	Minimum
First	R5		Residential	LKD	W7	185°	2	
					W8	185°	4.4	
					W9	95°	3.9	
					W10	95°	3.9	
							6.6	High
First	R6		Residential	Bedroom	W11	95°	3.9	
					W12	95°	3.9	
							3.9	Medium
Second	R1		Residential	Bedroom	W1	275°N	3.6	
							3.6	Medium
Second	R2		Residential	LKD	W2	275°N	3.6	
					W3	95°	0.9	
					W4	95°	2.7	
							6.6	High