

St Columba's Close, Gravesend

Daylight and Sunlight Report

26 October 2022

Gravesend Borough Council

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St Columba's Close, Gravesend

DAYLIGHT AND SUNLIGHT REPORT

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EXECUTIVE SUMMARY

- This is a report into the impact of the proposed development at St Columba's Close on the daylight and sunlight to surrounding residential properties, amenity spaces, and internally to the scheme itself. This analysis has been based upon scheme drawings and a 3D context model of the site and surrounding properties provided by BPTW and site photography.
- The analysis has been carried out in accordance with the methodologies contained in the Building Research Establishment's *Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice* (2022) (the "BRE Guidelines"), which is used by the local authority to determine the acceptability of a proposal in terms of its effect on neighbouring daylight and sunlight amenity.
- The analysis shows that the proposed development will not have a noticeable impact on the majority of the surrounding properties' daylight and sunlight and they will remain well daylit and sunlit with the scheme in place. In the two isolated instances where there may be noticeable impacts on habitable rooms in the surrounding properties, the impacted windows are secondary windows serving kitchens which have a main window that will retain a high level of VSC above the BRE Guidelines' recommended 27% target value. As such, these rooms will remain well daylit with the proposed scheme in place and, therefore, the impacts are considered acceptable in our view.
- Internally, across the site, 87% of rooms will meet their target illuminance values for daylight and 100% of dwellings will have at least one room which meets for sunlight exposure. Further rooms would also likely meet their target daylight value if not for the provision of balconies as private amenity space. These balconies provide excellent additional sources of amenity however, there is inevitably a trade-off with providing high levels of daylight to the rooms below as the balcony acts to obstruct light from the top part of the sky. Overall, in our opinion, the results demonstrate a good level of daylight and sunlight across the scheme and future residents will have good amenity within their homes.
- The surrounding amenity areas assessed (e.g. neighbouring properties' gardens) will all continue to receive in excess of 2 hours of sunlight on 21 March and therefore meet the BRE Guidelines target values for overshadowing.
- The proposed amenity spaces within the scheme will be well sunlit, with more than 50% of their areas receiving at least 2 hours of sunlight on 21 March.



1 INTRODUCTION

Waldrams have been instructed to provide daylight and sunlight analysis for the proposed development of the site at St Columba's Close, Gravesend. This analysis is based upon scheme drawings and a 3D context model of the site and surrounding properties provided by BPTW and site photography.

The analysis has been carried out in accordance with the methodologies contained in the BRE Guidelines which is used by the local authority to determine the acceptability of a proposal in terms of its effect on neighbouring daylight and sunlight amenity.

The existing site can be seen on drawings 2747-03-01 to -03-03 with the proposal on drawings 2747-03-04 to -03-06, all in Appendix 1. The numerical results of the quantitative daylight and sunlight analysis can be found in Appendix 2. The numerical results of the quantitative internal daylight and sunlight analysis can be found in Appendix 3. The sunlight amenity results can be found in Appendix 4 and window maps can be found in Appendix 5.

2 SUMMARY OF HOW DAYLIGHT AND SUNLIGHT ARE CONSIDERED FOR PLANNING

2.1 INTRODUCTION TO THE BRE GUIDELINES

Daylight and sunlight are planning considerations. The main reference used by local planning authorities to determine the acceptability of proposals in terms of their internal daylight and sunlight and the impact on daylight and sunlight to the surrounding properties is the Building Research Establishment (BRE) Guidelines, used in conjunction with British Standard *Daylight in Buildings*, BS EN 17037. The BRE Guidelines provide scientific, objective methods for establishing the acceptability of daylight and sunlight internal to the scheme and the surrounding properties. In practice, it is principally the main habitable rooms internal to the scheme and within the surrounding residential properties that are sensitive in terms of daylight and sunlight. This report therefore predominantly focuses on the internal daylight and sunlight and the change in daylight and sunlight to habitable rooms in the surrounding residential properties.

The BRE Guidelines specify that the daylight and sunlight results be considered flexibly and in the context of the site. Clearly, there would be a higher expectation for daylight and sunlight in a rural or suburban environment than in a dense city centre location. The important factor in all cases is that the levels of daylight and sunlight are appropriate, taking into account all the planning policy requirements of the site. The BRE Guidelines acknowledge this in the introduction where they state in paragraph 1.6:

"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 because 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."

The numerical figures should not be rigidly applied, but instead used as part of the overall evaluation of the daylight and sunlight to the surroundings in context of the site, its existing massing, and the need for regeneration and local planning policy guidance for the site. In particular, existing local precedents or recent planning consents may provide a good indication as to appropriate levels in the vicinity.

2.2 DAYLIGHT AND SUNLIGHT CRITERIA TO SURROUNDING RESIDENTIAL PROPERTY

Daylight

According to the BRE Guidelines, a surrounding existing building to a proposed scheme will retain the potential for good interior daylighting if the scheme subtends less than 25 degrees from the horizontal as measured from the lowest habitable windows in the neighbouring windows. If this is not achieved, then good daylighting to the neighbouring properties is still achieved if the Vertical Sky Component (VSC) is in excess of 27% or is reduced by less than 20% from its existing level and if the area of the room that can see the sky at desk height (known as the daylight distribution or no sky contour) is reduced by less than 20% of its existing area. The BRE Guidelines state this in paragraph 2.2.23 as:

"If any part of a new building or extension, measured in a vertical section perpendicular to a main window wall of an existing building, from the centre of the lowest window, subtends an angle of more than 25° to the horizontal, then the diffuse daylighting of the existing building may be adversely affected. This will be the case if either:

- The VSC measured at the centre of an existing main window is less than 27%, and less than 0.8 times its former value*
- The area of the working plane in a room which can receive direct skylight is reduced to less than 0.8 times its former value."*

The BRE Guidelines state in paragraph 2.2.2:

"Bathrooms, toilets, storerooms, circulation areas and garages need not be analysed."

Sunlight

The test for sunlight to the neighbouring properties is calculated for each living room with



a main window facing within 90° of due south. Bedrooms and kitchens are considered by the BRE Guidelines as less important for sunlight. The BRE Guidelines state that any south facing window may potentially receive up to 1486 hours of sunlight per year on average, representing 100% of the annual probable sunlight hours (APSH).

The BRE Guidelines state in paragraph 3.2.13 that:

"If a living room of an existing dwelling has a main window facing within 90° of due south, and any part of a new development subtends an angle of more than 25° to the horizontal measured from the centre of the window in a vertical section perpendicular to the window, then the sunlighting of the existing dwelling may be adversely affected. This will be the case if the centre of the window:

- receives less than 25% of annual probable sunlight hours and less than 0.80 times its former annual value; or less than 5% of annual probable sunlight hours between 21 September and 21 March and less than 0.80 times its former value during that period;*
- and also has a reduction in sunlight received over the whole year greater than 4% of annual probable sunlight hours."*

Following the BRE Guidelines recommendations, VSC and APSH are measured from a point on the outer window wall.

2.3 ALTERNATIVE TARGET VALUES AND APPLYING A FLEXIBLE APPROACH

The BRE Guidelines recommend that in certain development locations alternative baselines or lower target values may be used (c.f. Appendix F of the BRE Guidelines for Daylight & Sunlight). Paragraph F1 states:

"These values [those set out in the BRE Guidelines] are purely advisory and different targets may be used based on the special requirements of the proposed development or its location. Such alternative targets may be generated from the layout dimensions of existing development, or they may be derived from considering the internal layout and daylight needs of the proposed development itself."

Indeed, in paragraph 2.2.3 of the BRE Guidelines it states:

"Note that numerical values given here are purely advisory. Different criteria may be used based on the requirements for daylighting in an area 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 more than its fair share of light. Appendix F



gives further guidance."

Applying flexibility when considering the BRE Guidelines in planning terms is also supported by the National Planning Policy Framework (NPPF) (July 2021) which states in paragraph 125:

"Where there is an existing or anticipated shortage of land for meeting identified housing needs, it is especially important that planning policies and decisions avoid homes being built at low densities, and ensure that developments make optimal use of the potential of each site. In these circumstances:

...

(c) local planning authorities should refuse applications which they consider fail to make efficient use of land, taking into account the policies in this Framework. In this context, when considering applications for housing, authorities should take a flexible approach in applying policies or guidance relating to daylight and sunlight, where they would otherwise inhibit making efficient use of a site (as long as the resulting scheme would provide acceptable living standards)."

It is important to note that the BRE Guidelines merely state that occupants may "notice" reductions of more than 20% and do not talk about acceptability. Planning appeal decisions and investigations carried out by the Inspectorate in recent years have made it clear that, in assessing daylight and sunlight impacts, the context of the site is key in understanding whether occupants in surrounding properties will be left with appropriate levels of amenity and whether or not reductions are acceptable. For instance, where the resulting levels of daylight and sunlight are comparable to those of other local residents, changes (i.e. reductions) can be considered acceptable and contextually appropriate. It is also important to remember that residential amenity should be balanced against the advantages of living in such a location (such as close links to transport, amenities, employment, services etc.).

In considering planning policy, it is important therefore to establish whether the impact of a proposed development on the daylighting and sunlight conditions of surrounding property to the development:

- 1) would or would not result in a "material deterioration" of those conditions; and
- 2) whether such deterioration would be considered acceptable or not given the context of the site.

The BRE Guidelines are those that assess the impact of a proposed development and



whether or not there is likely to be a “material deterioration”.

2.4 INTERNAL DAYLIGHT & SUNLIGHT CRITERIA FOR NEW BUILDS

The BRE Guidelines set out their interior daylight recommendations in Appendix C of their document. They refer to the British Standard *Daylight in Buildings* BS EN17037 and its UK National Annex which sets out two criteria for assessing interior daylight. One is based on target illuminances from daylight to be achieved over specified fractions of the reference plane (a plane at table top height covering the room) for at least half of the daylight hours in a typical year. The other, alternative, method is based on calculating the daylight factors achieved over specified fractions of the reference plane.

Illuminance Method (Daylight)

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.

Residential Rooms in UK Dwellings

The UK National Annex gives specific minimum recommendations for habitable rooms in dwellings in the United Kingdom. The National Annex therefore provides the UK guidance on minimum daylight provision in all UK dwellings.

The UK National Annex gives illuminance recommendations of:

- 100 lux in bedrooms
- 150 lux in living rooms
- 200 lux in kitchens.

These are the median illuminances, to be exceeded over at least 50% of the assessment points in the room for at least half of the daylight hours. The recommended levels over 95% of a reference plane need not apply to dwellings in the UK.

The BRE Guidelines state in paragraph C17 that:

“Where a room has a shared use, the highest target should apply. For example in a bed sitting room in student accommodation, the value for a living room should be used if students would often spend time in their rooms during the day. Local authorities could use discretion here. For example, the target for a living room could be used for a combined living/dining/kitchen area if the kitchens are not treated as habitable spaces, as it may avoid small separate kitchens in a design.”



Sunlight

For internal sunlight, the BRE Guidelines state in paragraph 3.1.15:

"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."*

2.5 METHOD USED FOR CALCULATING THE DAYLIGHT AND SUNLIGHT RESULTS

The analysis provided in this report utilizes state-of-the-art software to calculate in three dimensions the daylight and sunlight following the methods specified in the BRE Guidelines. A three dimensional computer model has been provided by BPTW for the existing site in context of the immediate surrounding properties based upon mapping and measured survey information of the site and surrounding properties.

Drawings of the existing and proposed building in context of the surrounding properties are shown in Appendix 1.

2.5.1 SURROUNDING PROPERTIES

Daylight and sunlight levels comparing the existing and proposed daylight (VSC and daylight distribution) and sunlight (APSH) situation are then calculated for the surrounding properties. These results are provided in Appendix 2.

2.5.2 INTERNAL RESIDENTIAL ROOMS

Daylight and sunlight levels for the proposed daylight (Target Illuminance and Daylight Factor) and sunlight internally to the scheme are then calculated. These results are provided in Appendix 3.

2.6 METHOD FOR ANALYSING ACCEPTABLE SUNLIGHT AMENITY TO THE OPEN AMENITY SPACES WITHIN AND SURROUNDING THE PROPOSED SCHEME

The BRE Guidelines state that for an amenity space to appear adequately sunlit throughout the year, at least half of the amenity area should receive at least two hours of sunlight on 21st March. If as a result of new development an existing amenity area does not meet the above, it should retain at least 80% of its former value with the proposal in



place. If a detailed calculation cannot be carried out and the area is a simple shape, the BRE Guidelines suggest that the centre area of each amenity space should receive at least 2 hours of sunlight on March 21st.

REFERENCES:

BRE Guidelines (BR 209): *Site layout planning for daylight and sunlight: a guide to good practice* (2022).

These Guidelines provide the basis of the analysis described in this report. Please refer to this document for a detailed description as to the approach, methodology, and implementation of the numerical analysis used in this report. A summary of the approach and methods recommended by the BRE Guidelines is included in Section 2 above of this report.

3 ASSUMPTIONS USED IN THE ANALYSIS

Uses of the surrounding properties have been based on external appearance to determine whether they are residential or commercial use. Where this is ambiguous, we have researched the Council Tax records for the property, which if listed would indicate residential use.

It is important to note that, in some cases, the window positions in the surrounding property elevations has been estimated based on brick counts from site photographs. The floor levels for the surrounding buildings are assumed unless otherwise indicated.

We have obtained information for the following properties from the local planning portal and/or estate agency listings:

- 43 St Columba's Close (room layouts)
- 13 St Patrick's Gardens (room layouts)
- 42 to 53 St Patrick's Gardens (flat locations but not room layouts)

We have not been able to obtain layouts or gain access internally to any of the remaining surrounding properties and so details of the internal layouts and floor level heights have been assumed 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 for residential properties and 6m for commercial properties, or half the building depth if this is less than these dimensions.

All property addresses are taken from the Land Registry MapSearch website and we advise that these are checked by your solicitor prior to any action being taken based on this report.

The following reflectance, transmittance, maintenance and framing values have been



used in the internal daylight calculations:

- Transmittance (T): 0.68
- Reflectance (R): 0.4 for floors, 0.8 for ceilings, and 0.7 for walls
- Maintenance Factor: 0.92
- Framing Factor: 0.6

BS EN 17037 section B.3.1 states that, "the recommended values of reflectance for the major interior surfaces would be in the following ranges: ceiling 0.7 to 0.9; interior walls 0.5 to 0.8; floor 0.2 to 0.4." Paragraph C24 of the BRE Guidelines meanwhile states, "Where surface finishes have been specified or measured on site, they can be used in the calculations with appropriate factors for maintenance and furniture. To allow for these factors, maximum reflectances for white painted surfaces in the calculations should not exceed 0.8 indoors, and 0.6 outdoors. Maximum reflectances for light pastel walls should not exceed 0.7 in the calculations, and maximum reflectances for light wood floors should not exceed 0.4."

We understand that the applicant intends to use white painted ceilings, light painted walls, and light wood floors and have therefore used the corresponding values.

4 SOURCES OF INFORMATION USED IN THE REPORT

BPTW

St Columbas Close_290121_Mesh XY@NE

St Columbas Close_290121_Solids XY@NE

St Columbas Close_300121 XY@00(RVT View)(With Site)

ID Overview

ID Topview

16204_Elevation Survey_Final

16204_Services_Final

16204_Topographic_Final

Received 08.06.21

SCC-BPTW-04-00-DR-A-0201

SCC-BPTW-04-00-DR-A-0202

SCC-BPTW-04-00-DR-A-0203

SCC-BPTW-04-00-DR-A-0205

SCC-BPTW-04-00-DR-A-0210

SCC-BPTW-04-01-DR-A-0211

SCC-BPTW-04-02-DR-A-0212

SCC-BPTW-04-03-DR-A-0213



SCC-BPTW-04-04-DR-A-0214
SCC-BPTW-04-05-DR-A-0215
SCC-BPTW-19-00-DR-A-1010
SCC-BPTW-19-ZZ-DR-A-1011
SCC-BPTW-19-03-DR-A-1012
SCC-BPTW-20-00-DR-A-1020
SCC-BPTW-20-ZZ-DR-A-1021
SCC-BPTW-21-00-DR-A-1030
SCC-BPTW-21-01-DR-A-1031
SCC-BPTW-21-02-DR-A-1032
SCC-BPTW-21-03-DR-A-1033
SCC-BPTW-21-04-DR-A-1034
SCC-BPTW-21-05-DR-A-1035
SCC-BPTW-22-00-DR-A-1040
SCC-BPTW-22-01-DR-A-1041
SCC-BPTW-22-02-DR-A-1042
SCC-BPTW-22-03-DR-A-1043
SCC-BPTW-23-ZZ-DR-A-1051
SCC-BPTW-24-ZZ-DR-A-1061
SCC-BPTW-19-ZZ-DR-A-2011
SCC-BPTW-19-ZZ-DR-A-2012
SCC-BPTW-20-ZZ-DR-A-2021
SCC-BPTW-20-ZZ-DR-A-2022
SCC-BPTW-21-ZZ-DR-A-2031
SCC-BPTW-21-ZZ-DR-A-2032
SCC-BPTW-22-ZZ-DR-A-2041
SCC-BPTW-22-ZZ-DR-A-2042
SCC-BPTW-23-ZZ-DR-A-2051
SCC-BPTW-24-ZZ-DR-A-2061
SCC-BPTW-19-ZZ-DR-A-2211
SCC-BPTW-20-ZZ-DR-A-2221
SCC-BPTW-21-ZZ-DR-A-2231
SCC-BPTW-22-ZZ-DR-A-2241
SCC-BPTW-04-ZZ-DR-A-2071
SCC-BPTW-04-ZZ-DR-A-2072
SCC-BPTW-04-ZZ-DR-A-2073
SCC-BPTW-04-ZZ-DR-A-2074
SCC-BPTW-04-ZZ-DR-A-2251



SCC-BPTW-04-ZZ-DR-A-2252

SCC-BPTW-04-ZZ-DR-A-2253

SCC-BPTW-04-XX-SH-A-0811

SCC-BPTW-XX-XX-SA-A-0101

SCC-BPTW-XX-XX-DO-A-0650

Received 25.10.22

Local planning portal or local estate agencies

13 St Patrick's Gardens

6958_GRA190509_FLP_03_0000

6958_GRA190509_FLP_04_0000

43 St Columba's Close

6958_GRA150090_FLP_00_0000_max_600x600

6958_GRA150090_FLP_01_0000_max_600x600

42 to 53 St Patrick's Gardens

St. Pats Grds 42 - 53 1st

St. Pats Grds 42 - 53 2nd

St. Pats Grds 42 - 53 Grd

Obtained/Received 04.04.22



Photo 1: Existing site

5 DAYLIGHT & SUNLIGHT ANALYSIS

The existing site is shown on drawings 2747-03-01 to -03-03 in Appendix 1 whilst the proposed scheme is shown on drawings 2747-03-04 to -03-06. The existing site in its current condition is shown in photo 1 above with the site boundary outlined in red.

In terms of daylight and sunlight, the following properties in the table below were analysed due to their proximity to the development site given the height and massing of the proposal.

The table below demonstrates that the following properties meet the target values as set out in the BRE Guidelines for daylight (in terms of VSC and daylight distribution) and sunlight (in terms of APSH) and therefore, are not commented on further:

- 150, 152, and 156 Valley Drive
- 179 and 181 Valley Drive
- 26 St Columba's Close
- 84 and 86 St Dunstan's Drive

Within the following properties, the only windows/rooms which experience reductions of more than 20% are circulation or other non-habitable spaces (as set out in paragraph 2.2.2 of the BRE Guidelines) which do not require further assessment. As such, these properties are also deemed to meet the BRE Guidelines target values for daylight and



sunlight and are not commented on further

- 24 to 35 St Patrick's Gardens
- 154 and 158 Valley Drive
- 43 St Columba's Close

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Property	Vertical Sky Component				No Sky Line					Annual Probable Sunlight Hours		
	Windows tested	Windows satisfying BRE criteria	Windows not satisfying BRE criteria (reduction)			Rooms tested	Rooms satisfying BRE criteria	Rooms not satisfying BRE criteria (reduction)			South facing windows tested	Windows satisfying BRE criteria
			20-29.9%	30-39.9%	>40%			20-29.9%	30-39.9%	>40%		
13 to 23 St Patricks Gardens	28	27	1			25	25				3	3
24 to 35 St Patricks Gardens	39	39				30	30				0	n/a
42 to 44 St Patricks Gardens	12	11	1			9	9				0	n/a
150 Valley Drive	7	7				5	5				7	7
152 Valley Drive	3	3				3	3				3	3
154 Valley Drive	3	3				3	3				3	3
156 Valley Drive	3	3				3	3				3	3
158 Valley Drive	3	3				3	3				3	3
179 Valley Drive	4	4				4	4				4	4



Property	Vertical Sky Component				No Sky Line				Annual Probable Sunlight Hours		
	Windows tested	Windows satisfying BRE criteria	Windows not satisfying BRE criteria (reduction)			Rooms tested	Rooms satisfying BRE criteria	Rooms not satisfying BRE criteria (reduction)			
			20-29.9%	30-39.9%	>40%			20-29.9%	30-39.9%	>40%	
181 Valley Drive	4	4				4	4			4	4
26 St Columba's Close*	6	6				4	4			6	6
43 St Columba's Close	5	5				2	2			4	4
84 St Dunstan's Drive	4	4				4	4			0	n/a
86 St Dunstan's Drive	4	4				4	4			0	n/a

*all windows and rooms facing the development site within this property are non-habitable.



Photo 2: 13 to 23 St Patrick's Gardens

13 TO 23 ST PATRICK'S GARDENS

This residential block of flats is outlined in red in photo 2 above. We have obtained layouts for flat 13 and extrapolated those across the block where appropriate based on window positionings.

RESULTS

We have analysed 28 windows as likely serving habitable rooms, of which 27 meet the VSC target values as set out in the BRE Guidelines. The one remaining window, W2 on the second floor, we understand to be a secondary window serving the kitchen in flat 15. This window retains 79% of its existing level of VSC with the proposed scheme in place. This kitchen has a main window (W1) which exceeds the VSC target values with the proposed scheme in place.

All rooms analysed meet the NSL target values.

All south facing windows analysed meet the APSH target values.

COMMENTARY

In our opinion, the daylight and sunlight impact on this property should be considered acceptable. The impacted window (W2) is a secondary window serving a kitchen that has a main window (W1) which is unimpacted by the proposed development as it faces



away from the scheme. As per paragraph 2.2.6, the VSC assessment is predominantly concerned with the impact to the "main" window serving a room. As the room will also retain 100% of its existing level of NSL, this further indicates that it will remain well daylit.

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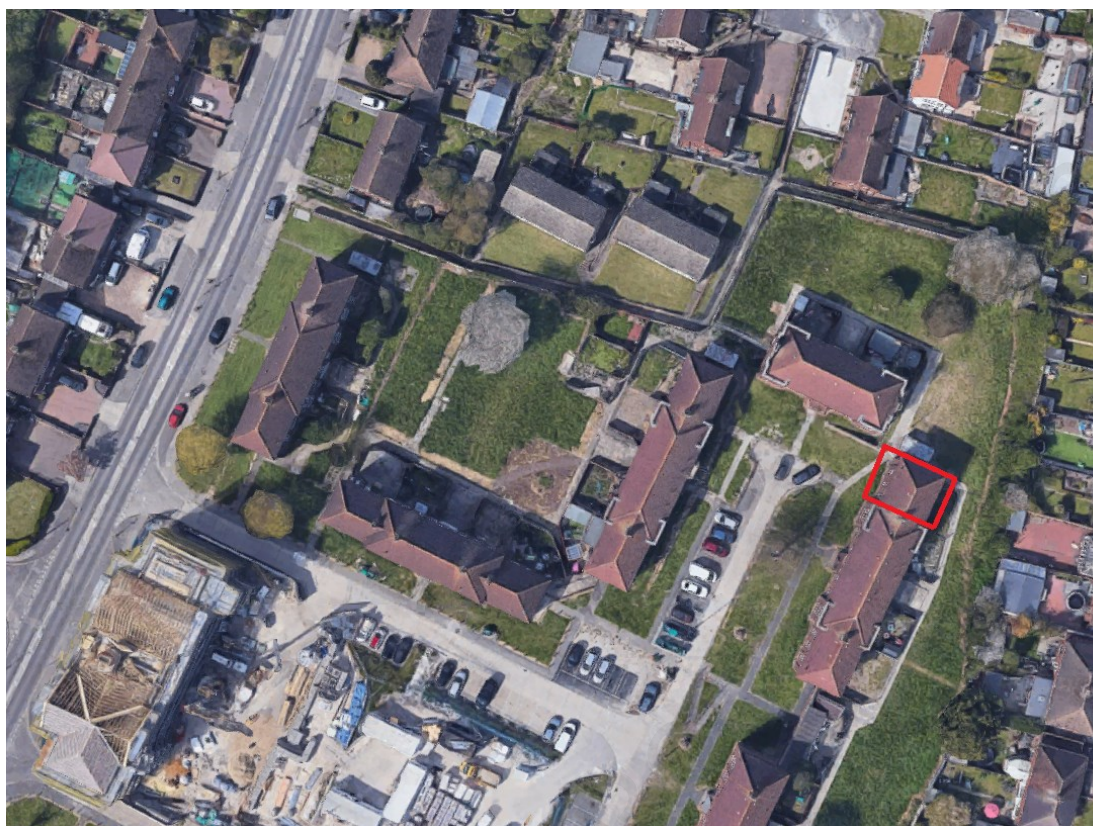


Photo 3: 42 to 44 St Patrick's Gardens

42 TO 44 ST PATRICK'S GARDENS

These flats can be seen outlined in photo 3 above.

RESULTS

We have analysed 12 windows as likely serving habitable rooms, of which 11 meet the VSC target values as set out in the BRE Guidelines. The one remaining window, W4 on the ground floor, we understand to be a secondary window serving the kitchen in flat 42. This window retains 73% of its existing level of VSC with the proposed scheme in place. This kitchen has a main window (W5) which exceeds the VSC target values with the proposed scheme in place.

All rooms analysed meet the NSL target values.

None of the windows analysed serving these flats face within 90 degrees of due south and do not therefore require assessment for sunlight.

COMMENTARY

In our opinion, the daylight and sunlight impact on this property should be considered acceptable. The impacted window (W4) is a secondary window serving a kitchen that has a main window (W5) which retains 33% VSC in absolute terms with the proposed scheme in place (above the 27% VSC target value). As per paragraph 2.2.6, the VSC



assessment is predominantly concerned with the impact to the “main” window serving a room. As the room will also retain 99% of its existing level of NSL, this further indicates that it will remain well daylit.

Gravesham Borough Council



6 INTERNAL DAYLIGHT & SUNLIGHT ANALYSIS

The results of the internal daylight and sunlight analysis are included in Appendix 3.

For internal daylight, the UK National Annex to BS EN 17037 gives the following target illuminance recommendations:

- 100 lux in bedrooms
- 150 lux in living rooms
- 200 lux in kitchens.

These are the median illuminances, to be exceeded over at least 50% of the assessment points in the room for at least half of the daylight hours.

As per paragraph C17 of the BRE Guidelines, the target for a combined living/dining/kitchen room has been set to that of a living room in cases where the kitchens have been added to the main living space in order to avoid small separate kitchens in the design. In these cases, the primary use of the room is as a living room and the kitchen area is there solely for food preparation etc.

For internal sunlight, the BRE Guidelines state that a dwelling will appear reasonably sunlit provided that 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.

RESULTS

In daylight terms, across the site, 120 out of 143 (87%) rooms analysed will meet the target illuminance levels.

In sunlight terms, across the site, all dwellings (100%) will meet the sunlight exposure target in that at least one habitable room will receive a total of at least 1.5 hours of sunlight on 21 March.

COMMENTARY

In our view, the scheme will be well daylit and sunlit overall with 87% of rooms meeting their daylight targets and 100% of units meeting for sunlight. Where rooms do not meet their daylight targets, this is predominantly due to the presence of an overhanging balcony. Balconies are highly desirable and provide a good source of alternative amenity for future occupiers, however, there is inevitably a trade-off with providing high levels of daylight to the rooms below as the balcony acts to obstruct light from the top part of the sky. Overall, in our opinion, the results demonstrate a good level of daylight and sunlight across the scheme and future residents will have good amenity within their homes.



7 SUNLIGHT AMENITY (OVERSHADOWING)

We have assessed the level of sunlight to the outdoor amenity spaces (i.e. gardens) within the surrounding properties and within the proposed development. The results of the analysis to surrounding amenity spaces can be found on drawing 2747-03-18, while the sunlight amenity results within the proposed development can be seen on drawing 2747-03-19 in Appendix 4. The BRE Guidelines recommend that an outdoor amenity space receives at least 2 hours of sunlight on March 21st to at least 50% of its area in the proposed situation or retains at least 80% of its former value with the proposal in place.

RESULTS

The analysis demonstrates that all surrounding amenity spaces analysed will meet the target values for sunlight amenity as they will continue to receive at least 2 hours of sunlight on March 21st to at least 50% of their areas.

Internally, the amenity spaces will also meet the sunlight amenity target values in that all areas will receive at least 2 hours of sunlight on March 21st to at least 50% of their area.



8 CONCLUSIONS

This is a report into the impact of the proposed development at St Columba's Close on the daylight and sunlight to surrounding residential properties, amenity spaces, and internally to the scheme itself. This analysis has been based upon scheme drawings and a 3D context model of the site and surrounding properties provided by BPTW and site photography.

The analysis has been carried out in accordance with the methodologies contained in the BRE Guidelines, which is used by the local authority to determine the acceptability of a proposal in terms of its effect on neighbouring daylight and sunlight amenity.

The analysis shows that the proposed development will not have a noticeable impact on the daylight and sunlight of the majority of the surrounding properties and they will remain well daylit and sunlit with the scheme in place. In the two isolated instances where there may be noticeable impacts on habitable rooms in the surrounding properties, the impacted windows are secondary windows serving kitchens which have a main window that will retain a high level of VSC above the BRE Guidelines' recommended 27% target value. As such, these rooms will remain well daylit with the proposed scheme in place and, therefore, the impacts are considered acceptable in our view.

Internally, across the site, 87% of rooms will meet their target illuminance values for daylight and 100% of dwellings will have at least one room which meets for sunlight exposure. Further rooms would also likely meet their target daylight value if not for the provision of balconies as private amenity space. These balconies provide excellent additional sources of amenity however, there is inevitably a trade-off with providing high levels of daylight to the rooms below as the balcony acts to obstruct light from the top part of the sky. Overall, in our opinion, the results demonstrate a good level of daylight and sunlight across the scheme and future residents will have good amenity within their homes.

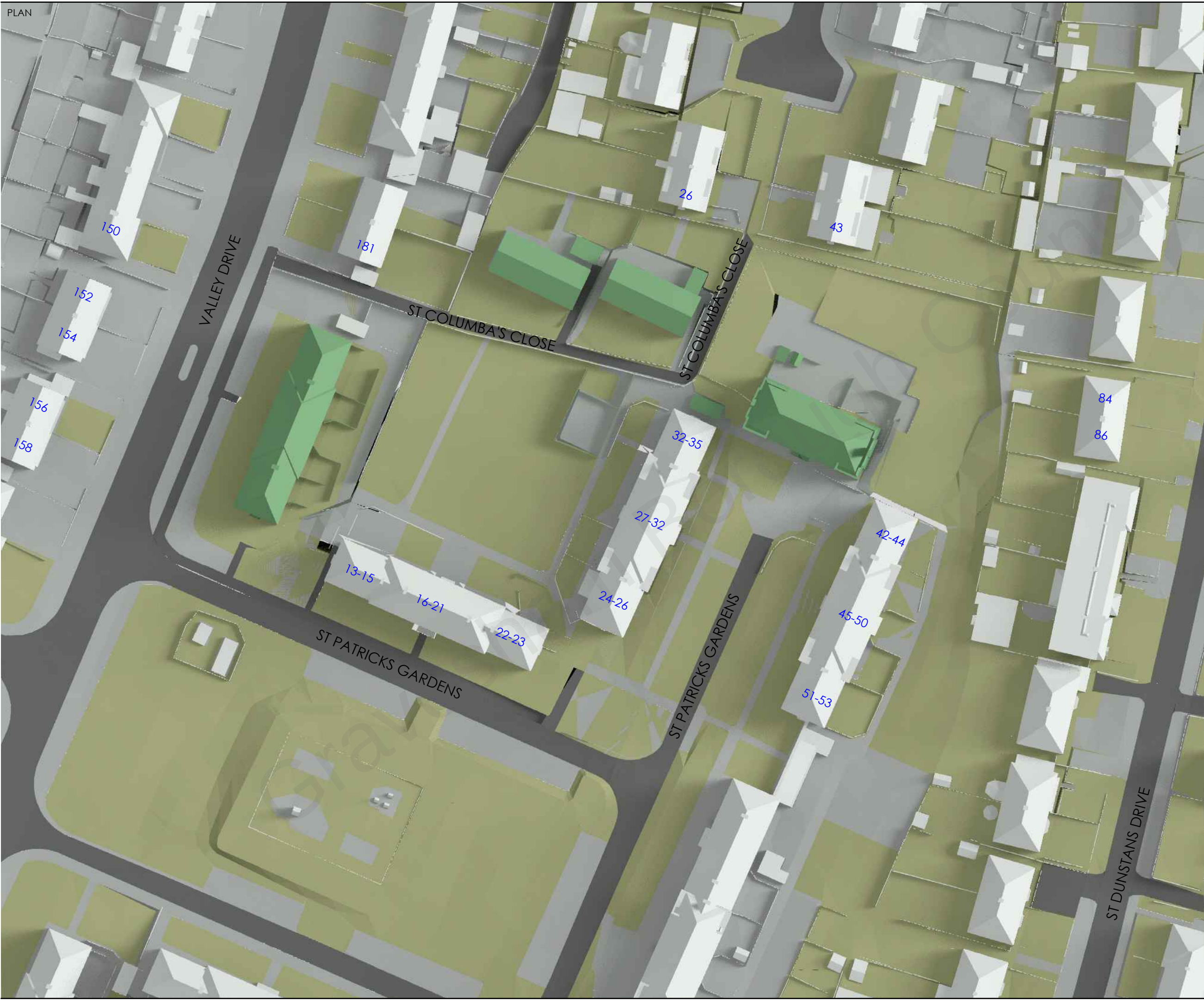
The surrounding amenity areas assessed (e.g. neighbouring properties' gardens) will all continue to receive in excess of two hours of sunlight on 21 March and therefore meet the BRE Guidelines target values for overshadowing.

The proposed amenity spaces within the scheme will be well sunlit, with more than 50% of their areas receiving at least two hours of sunlight on 21 March.

Gravesham Borough Council

APPENDIX 1

Drawings



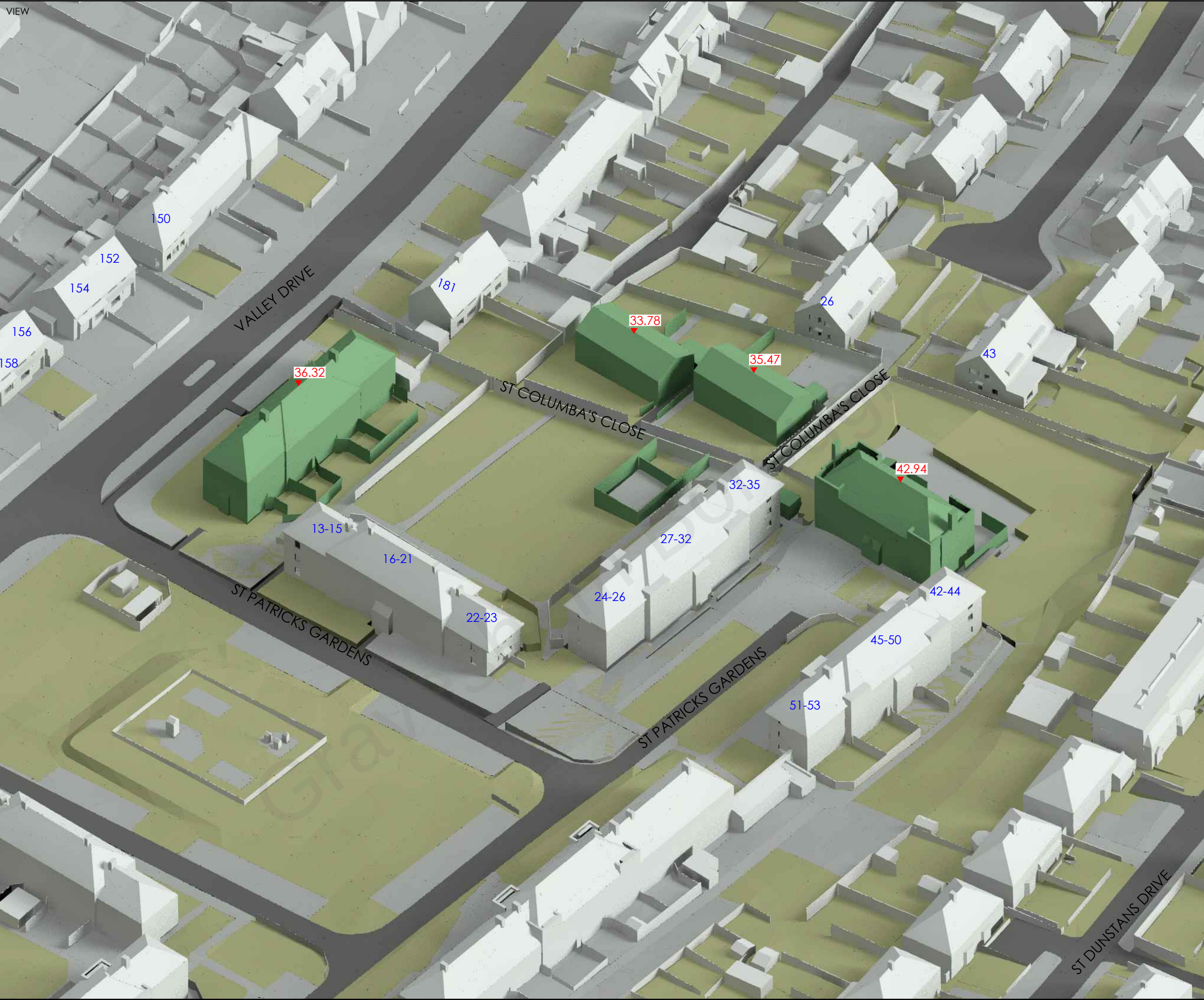
- SOURCES OF INFORMATION:**
- BPTW
IRO5 (RECEIVED 30.10.2022)
 - WALDRAMS LTD
REL_02
 - SITE PHOTOGRAPHS
 - SURROUNDING PROPERTY INFORMATION

NOTES:

EXISTING BUILDING SHOWN IN GREEN



PROJECT ST COLUMBA'S CLOSE GRAVESEND DA12	
DRAWING PLAN VIEW EXISTING CONDITION	
SCALE @ A3 1:600	DATE 17.10.2022
MODELLED BY FC	DRAWN BY FC
PROJECT No. 2747	REL No.- DWG No. 03-01



SOURCES OF INFORMATION:

BPTW
IRO5 (RECEIVED 30.10.2022)

WALDRAMS LTD
REL_02

SITE PHOTOGRAPHS

SURROUNDING PROPERTY INFORMATION

NOTES:

EXISTING BUILDING SHOWN IN GREEN

AOD HEIGHTS SHOWN IN METRES



PROJECT
ST COLUMBA'S CLOSE
GRAVESEND DA12

DRAWING
3D VIEW
EXISTING CONDITION

SCALE @ A3
NTS

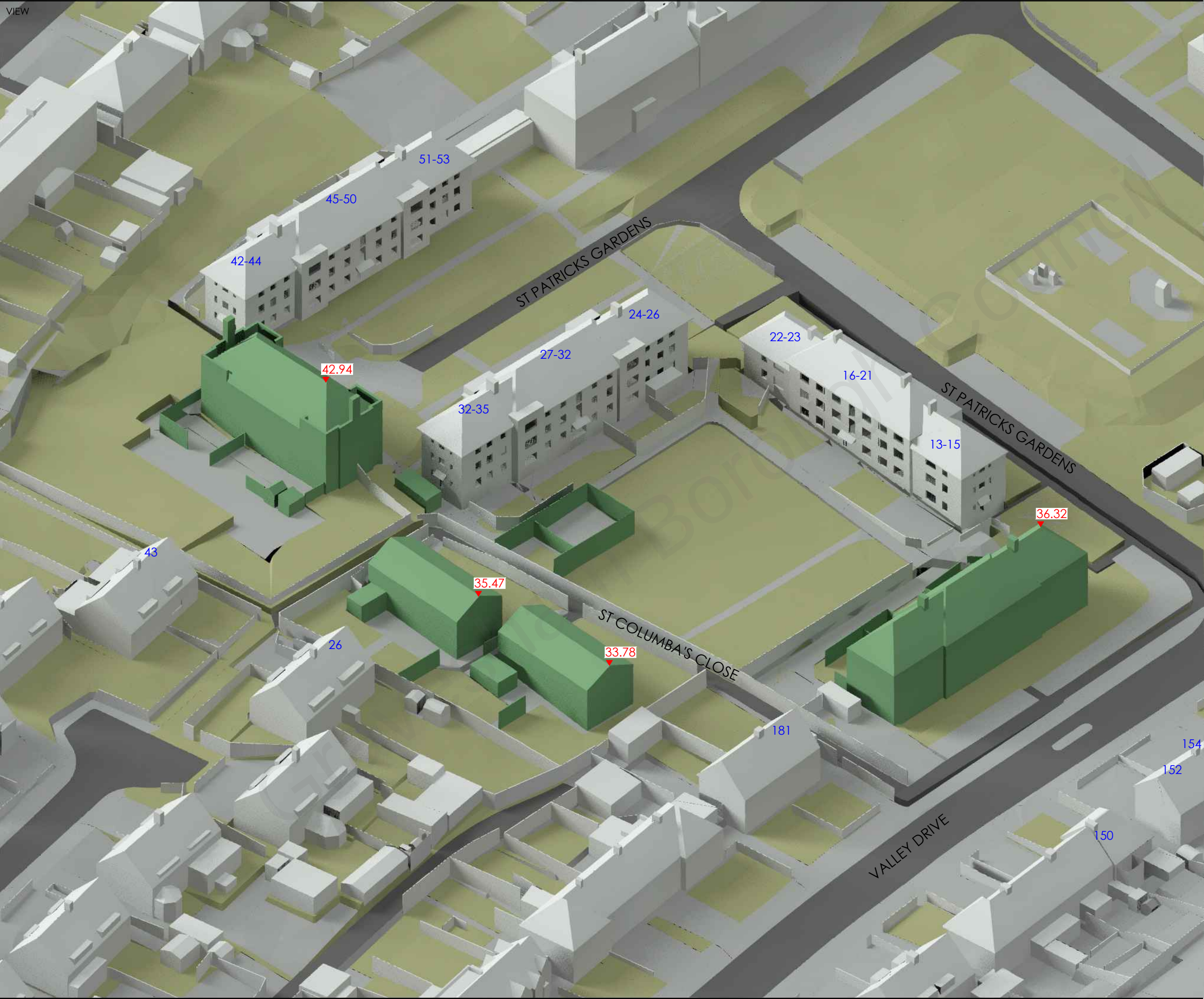
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MODELLED BY
FC

DRAWN BY
FC

PROJECT No.
2747

REL No.- DWG No.
03-01



SOURCES OF INFORMATION:

BPTW
IRO5 (RECEIVED 30.10.2022)

WALDRAMS LTD
REL_02

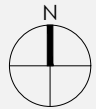
SITE PHOTOGRAPHS

SURROUNDING PROPERTY INFORMATION

NOTES:

EXISTING BUILDING SHOWN IN GREEN

AOD HEIGHTS SHOWN IN METRES



PROJECT
ST COLUMBA'S CLOSE
GRAVESEND DA12

DRAWING
3D VIEW
EXISTING CONDITION

SCALE @ A3
NTS

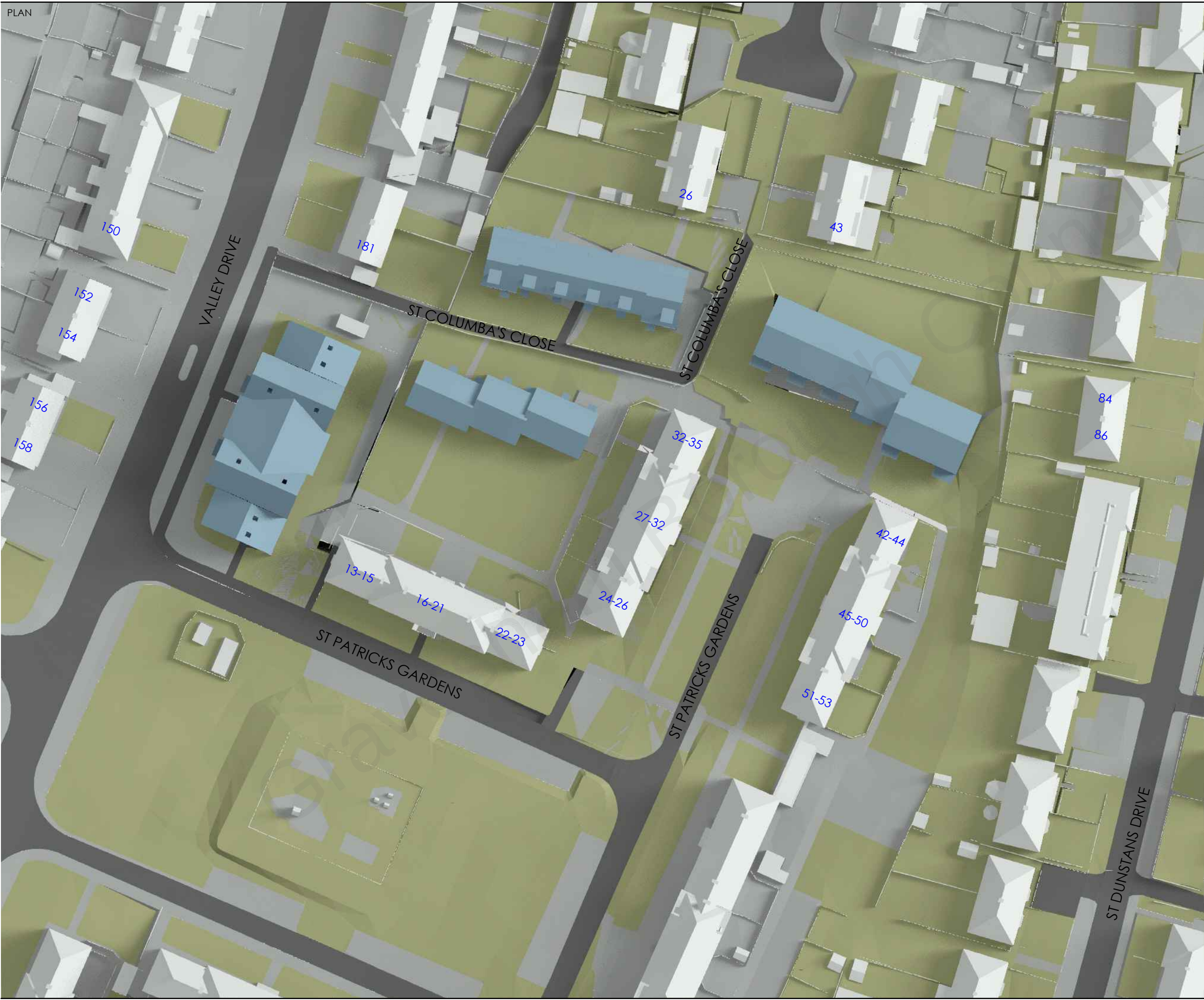
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MODELLED BY
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DRAWN BY
FC

PROJECT No.
2747

REL No.- DWG No.
03-03



SOURCES OF INFORMATION:

BPTW
IRO5 (RECEIVED 30.10.2022)

WALDRAMS LTD
REL_02

SITE PHOTOGRAPHS

SURROUNDING PROPERTY INFORMATION

NOTES:

PROPOSED BUILDING SHOWN IN BLUE



PROJECT
ST COLUMBA'S CLOSE
GRAVESEND DA12

DRAWING
PLAN VIEW
PROPOSED SCHEME

SCALE @ A3
1:600

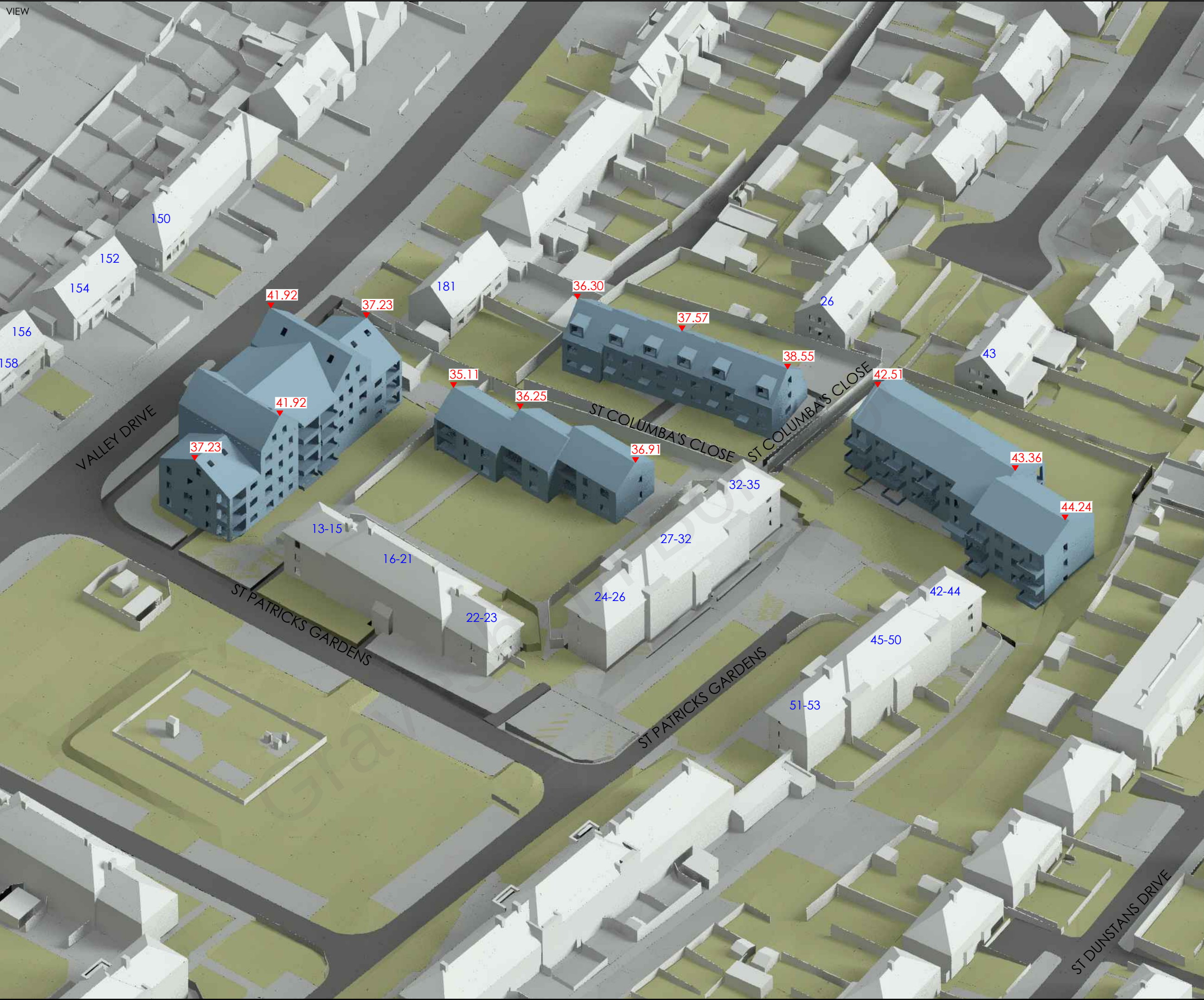
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MODELLED BY
FC

DRAWN BY
FC

PROJECT No.
2747

REL No.- DWG No.
03-04



SOURCES OF INFORMATION:

BPTW
IRO5 (RECEIVED 30.10.2022)

WALDRAMS LTD
REL_02

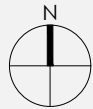
SITE PHOTOGRAPHS

SURROUNDING PROPERTY INFORMATION

NOTES:

PROPOSED BUILDING SHOWN IN BLUE

AOD HEIGHTS SHOWN IN METRES



PROJECT
ST COLUMBA'S CLOSE
GRAVESEND DA12

DRAWING
3D VIEW
PROPOSED SCHEME

SCALE @ A3
NTS

DATE
17.10.2022

MODELLED BY
FC

DRAWN BY
FC

PROJECT No.
2747

REL No.- DWG No.
03-05



SOURCES OF INFORMATION:

BPTW
IRO5 (RECEIVED 30.10.2022)

WALDRAMS LTD
REL_02

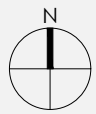
SITE PHOTOGRAPHS

SURROUNDING PROPERTY INFORMATION

NOTES:

PROPOSED BUILDING SHOWN IN BLUE

AOD HEIGHTS SHOWN IN METRES



PROJECT ST COLUMBA'S CLOSE GRAVESEND DA12	
DRAWING 3D VIEW PROPOSED SCHEME	
SCALE @ A3 NTS	DATE 17.10.2022
MODELLED BY FC	DRAWN BY FC
PROJECT No. 2747	REL No.- DWG No. 03-06

Gravesham Borough Council

APPENDIX 2

Daylight & Sunlight Results

Daylight_Sunlight Analysis Table
Surroundings

					Vertical Sky Component			No Skyline				Annual Probable Sunlight Hours					
Address/Floor	Room Ref	Property Type	Room Usage	Window Ref	Existing VSC %	Proposed VSC %	Ratio Proposed /Existing VSC	Room Area m ²	Existing NSC %	Proposed NSC %	Ratio Proposed /Existing NSC	Existing Sunlight Annual%	Proposed Sunlight Annual%	Ratio Proposed /Existing Annual	Existing Sunlight Winter%	Proposed Sunlight Winter%	Ratio Proposed /Existing Winter
13 to 15 St Patricks Gardens																	
Ground	R1	Residential	Kitchen	W1	35.86	35.86	1.00	9.53	96.15	95.99	1.00	79	79	1.00	27	27	1.00
Ground	R1	Residential	Kitchen	W2	28.92	23.24	0.80	9.53	96.15	95.99	1.00	36	33	North	9	9	North
Ground	R2	Residential	Stairwell	W3	25	16.93	0.68	6.40	85.90	79.93	0.93	33	28	North	8	8	North
Ground	R2	Residential	Stairwell	W4	27.74	19.2	0.69	6.40	85.90	79.93	0.93	14	9	North	4	4	North
Ground	R3	Residential	Bedroom	W5	33.67	29.06	0.86	3.00	99.53	99.52	1.00	12	11	North	0	0	North
Ground	R4	Residential	LD	W6	33.86	29.58	0.87	13.99	97.11	87.47	0.90	10	9	North	0	0	North
First	R1	Residential	Kitchen	W1	36.73	36.73	1.00	9.53	96.37	96.16	1.00	79	79	1.00	27	27	1.00
First	R1	Residential	Kitchen	W2	34.87	28.53	0.82	9.53	96.37	96.16	1.00	36	34	North	9	9	North
First	R2	Residential	Stairwell	W3	34.6	27.46	0.79	6.40	86.25	86.25	1.00	35	32	North	9	9	North
First	R2	Residential	Stairwell	W4	34.14	26.34	0.77	6.40	86.25	86.25	1.00	32	28	North	8	8	North
First	R3	Residential	Bedroom	W5	35.24	31.49	0.89	3.00	99.71	99.71	1.00	12	11	North	0	0	North
First	R4	Residential	LD	W6	35.31	31.96	0.91	13.99	97.59	93.74	0.96	11	10	North	0	0	North
Second	R1	Residential	Kitchen	W1	37.54	37.54	1.00	9.53	96.33	96.16	1.00	80	80	1.00	27	27	1.00
Second	R1	Residential	Kitchen	W2	23.27	18.41	0.79	9.53	96.33	96.16	1.00	19	18	North	6	6	North
Second	R2	Residential	Stairwell	W3	23.15	17.6	0.76	6.40	79.80	79.80	1.00	19	18	North	6	6	North
Second	R2	Residential	Stairwell	W4	23.01	16.77	0.73	6.40	79.80	79.80	1.00	19	18	North	6	6	North
Second	R3	Residential	Bedroom	W5	28.01	25.37	0.91	3.00	99.39	99.28	1.00	7	6	North	0	0	North
Second	R4	Residential	LD	W6	28.09	25.77	0.92	13.99	97.05	93.22	0.96	6	5	North	0	0	North
16 to 21 St Patricks Gardens																	
Ground	R1	Residential	Bedroom	W1	35.1	31.63	0.90	13.89	99.17	99.14	1.00	13	12	North	1	1	North
Ground	R2	Residential	Bathroom	W2	35.07	31.71	0.90	3.07	99.81	99.81	1.00	12	11	North	1	1	North
Ground	R3	Residential	WC	W3	35.03	31.7	0.90	2.00	88.67	88.67	1.00	10	10	North	1	1	North
Ground	R4	Residential	Kitchen	W4	34.78	31.54	0.91	6.22	99.04	99.04	1.00	7	7	North	0	0	North
Ground	R5	Residential	Stairwell	W5	25.65	22.5	0.88	12.35	90.43	83.56	0.92	9	9	North	1	1	North
Ground	R6	Residential	Kitchen	W6	32.87	30.13	0.92	6.22	99.04	99.04	1.00	10	10	North	1	1	North
Ground	R7	Residential	WC	W7	33.98	31.33	0.92	2.00	87.02	87.02	1.00	10	10	North	1	1	North
Ground	R8	Residential	Bathroom	W8	33.85	31.26	0.92	3.43	99.37	99.36	1.00	10	10	North	1	1	North
Ground	R9	Residential	Bedroom	W9	33.29	30.9	0.93	14.09	98.33	98.31	1.00	10	10	North	1	1	North
First	R1	Residential	Bedroom	W1	36.42	33.92	0.93	13.89	99.21	99.20	1.00	14	13	North	1	1	North
First	R2	Residential	Bathroom	W2	36.35	33.96	0.93	3.07	99.81	99.81	1.00	13	12	North	1	1	North
First	R3	Residential	WC	W3	36.31	33.96	0.94	2.00	89.08	89.08	1.00	13	12	North	1	1	North
First	R4	Residential	Kitchen	W4	36.2	33.93	0.94	6.22	99.04	99.04	1.00	13	12	North	1	1	North
First	R5	Residential	Stairwell	W5	35.91	33.68	0.94	12.35	99.10	99.10	1.00	13	12	North	1	1	North
First	R6	Residential	Kitchen	W6	35.73	33.71	0.94	6.22	99.57	99.57	1.00	11	11	North	1	1	North
First	R7	Residential	WC	W7	35.49	33.58	0.95	2.00	86.61	86.61	1.00	11	10	North	1	1	North
First	R8	Residential	Bathroom	W8	35.36	33.51	0.95	3.43	99.37	99.36	1.00	11	10	North	1	1	North
First	R9	Residential	Bedroom	W9	34.95	33.23	0.95	14.09	98.34	98.32	1.00	11	11	North	1	1	North
Second	R1	Residential	Bedroom	W1	31.52	30.03	0.95	13.89	99.14	99.09	1.00	9	8	North	0	0	North
Second	R2	Residential	Bathroom	W2	31.48	30.13	0.96	3.07	99.80	99.80	1.00	10	8	North	0	0	North

Daylight_Sunlight Analysis Table
Surroundings

					Vertical Sky Component			No Skyline				Annual Probable Sunlight Hours					
Address/Floor	Room Ref	Property Type	Room Usage	Window Ref	Existing VSC %	Proposed VSC %	Ratio Proposed /Existing VSC	Room Area m ²	Existing NSC %	Proposed NSC %	Ratio Proposed /Existing NSC	Existing Sunlight Annual%	Proposed Sunlight Annual%	Ratio Proposed /Existing Annual	Existing Sunlight Winter%	Proposed Sunlight Winter%	Ratio Proposed /Existing Winter
Second	R3	Residential	WC	W3	31.45	30.14	0.96	2.00	88.64	88.64	1.00	9	8	North	0	0	North
Second	R4	Residential	Kitchen	W4	31.34	30.11	0.96	6.22	99.03	99.03	1.00	9	8	North	0	0	North
Second	R5	Residential	Stairwell	W5	34.31	32.98	0.96	12.35	99.03	99.03	1.00	10	10	North	0	0	North
Second	R6	Residential	Kitchen	W6	30.99	29.91	0.97	6.22	99.55	99.55	1.00	8	8	North	0	0	North
Second	R7	Residential	WC	W7	30.85	29.83	0.97	2.00	86.99	86.99	1.00	7	7	North	0	0	North
Second	R8	Residential	Bathroom	W8	30.77	29.77	0.97	3.43	99.34	99.33	1.00	7	7	North	0	0	North
Second	R9	Residential	Bedroom	W9	30.45	29.51	0.97	14.09	98.23	98.18	1.00	7	7	North	1	1	North
22 to 23 St Patricks Gardens																	
Ground	R1	Residential	LD	W1	32.16	30.46	0.95	12.46	0.00	0.00	1.00	8	8	North	1	1	North
Ground	R2	Residential	Bedroom	W2	31.3	29.7	0.95	3.00	98.67	98.67	1.00	10	10	North	1	1	North
First	R1	Residential	LD	W1	25.47	24.34	0.96	12.46	0.00	0.00	1.00	0	0	North	0	0	North
First	R2	Residential	Bedroom	W2	24.72	23.64	0.96	3.00	98.69	98.69	1.00	0	0	North	0	0	North
24 to 26 St Patricks Gardens																	
Ground	R1	Residential	Bedroom	W1	13.19	13.19	1.00	8.54	97.87	97.87	1.00	16	16	North	3	3	North
Ground	R2	Residential	Bedroom	W2	15.49	15.49	1.00	8.89	97.94	97.94	1.00	21	21	North	6	6	North
Ground	R3	Residential	Kitchen	W3	29.03	28.46	0.98	9.80	93.99	93.99	1.00	31	30	North	6	6	North
First	R1	Residential	Bedroom	W1	31.95	30.99	0.97	8.54	97.70	97.70	1.00	30	30	North	5	5	North
First	R2	Residential	Bedroom	W2	35.53	34.35	0.97	8.89	97.95	97.95	1.00	31	31	North	6	6	North
First	R3	Residential	Kitchen	W3	35.73	34.6	0.97	9.80	94.10	94.10	1.00	32	32	North	6	6	North
Second	R1	Residential	Bedroom	W1	24.77	24.32	0.98	8.54	97.81	97.81	1.00	21	21	North	6	6	North
Second	R2	Residential	Bedroom	W2	26.8	26.29	0.98	8.89	97.87	97.87	1.00	21	21	North	6	6	North
Second	R3	Residential	Kitchen	W3	26.88	26.37	0.98	9.80	93.82	93.81	1.00	22	22	North	7	7	North
27 to 32 St Patricks Gardens																	
Ground	R1	Residential	Bedroom	W1	37.03	31.46	0.85	17.59	99.47	97.12	0.98	33	30	North	6	6	North
Ground	R2	Residential	LD	W2	35.28	30.71	0.87	20.80	98.40	98.40	1.00	30	29	North	5	5	North
Ground	R2	Residential	LD	W3	35.84	31.92	0.89	20.80	98.40	98.40	1.00	26	25	North	1	1	North
Ground	R3	Residential	Hall	W4	14.79	11.75	0.79	3.48	67.31	67.26	1.00	12	11	North	3	3	North
Ground	R4	Residential	LD	W5	35.51	32.52	0.92	20.84	98.52	98.51	1.00	29	29	North	4	4	North
Ground	R4	Residential	LD	W6	34.71	32.07	0.92	20.84	98.52	98.51	1.00	21	20	North	1	1	North
Ground	R5	Residential	Bedroom	W7	35.83	33.51	0.94	17.59	99.45	99.45	1.00	32	31	North	5	5	North
First	R1	Residential	Bedroom	W1	38.44	35.73	0.93	17.59	99.40	99.40	1.00	35	34	North	8	8	North
First	R2	Residential	LD	W2	36.29	34.03	0.94	20.80	98.41	98.41	1.00	30	30	North	5	5	North
First	R2	Residential	LD	W3	37.44	35.23	0.94	20.80	98.41	98.41	1.00	30	30	North	5	5	North
First	R3	Residential	Hall	W4	37.35	35.16	0.94	4.93	96.32	96.32	1.00	30	30	North	5	5	North
First	R4	Residential	LD	W5	37.2	35.33	0.95	20.84	98.49	98.49	1.00	30	30	North	5	5	North
First	R4	Residential	LD	W6	35.87	34.18	0.95	20.84	98.49	98.49	1.00	22	22	North	2	2	North
First	R5	Residential	Bedroom	W7	37.57	36.06	0.96	17.59	99.43	99.42	1.00	34	34	North	7	7	North
Second	R1	Residential	Bedroom	W1	39.23	38.56	0.98	17.57	99.44	99.44	1.00	36	36	North	9	9	North
Second	R2	Residential	LD	W2	27.13	26.5	0.98	20.80	98.38	98.38	1.00	22	22	North	7	7	North
Second	R2	Residential	LD	W3	27.53	26.83	0.97	20.80	98.38	98.38	1.00	22	22	North	7	7	North
Second	R3	Residential	Hall	W4	33.56	32.66	0.97	4.93	96.45	96.45	1.00	25	25	North	6	6	North
Second	R4	Residential	LD	W5	27.41	26.75	0.98	20.84	98.48	98.47	1.00	22	22	North	7	7	North

Daylight_Sunlight Analysis Table
Surroundings

					Vertical Sky Component			No Skyline				Annual Probable Sunlight Hours					
Address/Floor	Room Ref	Property Type	Room Usage	Window Ref	Existing VSC %	Proposed VSC %	Ratio Proposed /Existing VSC	Room Area m ²	Existing NSC %	Proposed NSC %	Ratio Proposed /Existing NSC	Existing Sunlight Annual%	Proposed Sunlight Annual%	Ratio Proposed /Existing Annual	Existing Sunlight Winter%	Proposed Sunlight Winter%	Ratio Proposed /Existing Winter
Second	R4	Residential	LD	W6	26.94	26.32	0.98	20.84	98.48	98.47	1.00	19	19	North	4	4	North
Second	R5	Residential	Bedroom	W7	38.81	38.22	0.98	17.59	99.44	99.44	1.00	35	35	North	8	8	North
33 to 35 St Patricks Gardens																	
Ground	R1	Residential	Stairwell	W1	26.54	27.79	1.05	5.83	88.50	88.51	1.00	5	12	North	0	0	North
Ground	R1	Residential	Stairwell	W2	18.55	22.11	1.19	5.83	88.50	88.51	1.00	5	12	North	0	0	North
Ground	R2	Residential	Kitchen	W3	31.46	28.76	0.91	9.42	90.88	92.43	1.02	1	1	North	0	0	North
Ground	R2	Residential	Kitchen	W4	36.26	32.92	0.91	9.42	90.88	92.43	1.02	30	27	North	5	4	North
Ground	R3	Residential	Bedroom	W5	35.84	32.17	0.90	9.27	94.02	93.99	1.00	26	22	North	4	4	North
Ground	R4	Residential	Bedroom	W6	32.36	28.17	0.87	8.18	98.18	98.17	1.00	16	10	North	2	2	North
First	R1	Residential	Stairwell	W1	31.6	32.37	1.02	6.12	87.51	87.51	1.00	8	15	North	1	1	North
First	R1	Residential	Stairwell	W2	33.05	32.58	0.99	6.12	87.51	87.51	1.00	6	13	North	1	1	North
First	R2	Residential	Kitchen	W3	34.15	32.84	0.96	9.42	94.99	95.33	1.00	5	12	North	1	1	North
First	R2	Residential	Kitchen	W4	37.52	35.58	0.95	9.42	94.99	95.33	1.00	30	30	North	5	5	North
First	R3	Residential	Bedroom	W5	37.03	35.14	0.95	9.29	70.71	70.70	1.00	27	26	North	4	4	North
First	R4	Residential	Bedroom	W6	33.34	31.27	0.94	8.16	0.00	0.00	1.00	16	15	North	2	2	North
Second	R1	Residential	Stairwell	W1	20.12	20.33	1.01	6.13	82.37	82.37	1.00	0	4	North	0	0	North
Second	R1	Residential	Stairwell	W2	21.1	20.56	0.97	6.13	82.37	82.37	1.00	0	4	North	0	0	North
Second	R2	Residential	Kitchen	W3	21.82	20.8	0.95	9.42	93.14	93.14	1.00	2	5	North	0	0	North
Second	R2	Residential	Kitchen	W4	27.67	26.87	0.97	9.42	93.14	93.14	1.00	21	21	North	6	6	North
Second	R3	Residential	Bedroom	W5	27.5	26.75	0.97	9.27	97.98	97.96	1.00	20	20	North	5	5	North
Second	R4	Residential	Bedroom	W6	25.42	24.71	0.97	8.18	98.28	98.27	1.00	16	16	North	2	2	North
42 to 44 St Patrics Gardens																	
Ground	R1	Residential	Stairwell	W2	31.98	21.29	0.67	5.83	85.04	83.89	0.99	14	14	North	0	0	North
Ground	R1	Residential	Stairwell	W3	24.54	14.91	0.61	5.83	85.04	83.89	0.99	14	14	North	0	0	North
Ground	R2	Residential	Kitchen	W4	28.84	21.04	0.73	9.42	96.19	95.68	0.99	4	4	North	0	0	North
Ground	R2	Residential	Kitchen	W5	29.14	33.67	1.16	9.42	96.19	95.68	0.99	29	29	North	5	5	North
Ground	R3	Residential	Bedroom	W6	29.98	33.33	1.11	9.26	97.47	98.07	1.01	24	24	North	4	4	North
Ground	R4	Residential	Bedroom	W7	27.11	29.52	1.09	8.18	98.02	98.30	1.00	14	14	North	2	2	North
First	R1	Residential	Stairwell	W2	34.74	27.8	0.80	6.11	87.13	87.43	1.00	17	17	North	1	1	North
First	R1	Residential	Stairwell	W3	34.1	27.51	0.81	6.11	87.13	87.43	1.00	15	15	North	1	1	North
First	R2	Residential	Kitchen	W4	33.15	27.56	0.83	9.43	96.05	95.50	0.99	14	13	North	1	1	North
First	R2	Residential	Kitchen	W5	32.55	35.42	1.09	9.43	96.05	95.50	0.99	31	31	North	6	6	North
First	R3	Residential	Bedroom	W6	32.93	35.05	1.06	9.26	66.60	66.62	1.00	28	28	North	5	5	North
First	R4	Residential	Bedroom	W7	29.6	31.21	1.05	8.18	67.15	67.19	1.00	16	16	North	2	2	North
Second	R1	Residential	Stairwell	W2	22.25	17.65	0.79	5.83	81.53	81.67	1.00	5	5	North	0	0	North
Second	R1	Residential	Stairwell	W3	21.94	17.48	0.80	5.83	81.53	81.67	1.00	5	5	North	0	0	North
Second	R2	Residential	Kitchen	W4	21.51	17.48	0.81	9.78	93.22	93.22	1.00	6	5	North	0	0	North
Second	R2	Residential	Kitchen	W5	25.23	26.55	1.05	9.78	93.22	93.22	1.00	21	21	North	6	6	North
Second	R3	Residential	Bedroom	W6	25.41	26.48	1.04	9.26	97.63	97.70	1.00	20	20	North	5	5	North
Second	R4	Residential	Bedroom	W7	23.52	24.35	1.04	8.18	98.06	98.26	1.00	16	16	North	2	2	North
150 Valley Dr																	
Ground	R1	Residential	Unknown	W1	21.79	20.7	0.95	6.13	99.89	99.89	1.00	56	51	0.91	15	10	0.67

Daylight_Sunlight Analysis Table
Surroundings

					Vertical Sky Component			No Skyline				Annual Probable Sunlight Hours					
Address/Floor	Room Ref	Property Type	Room Usage	Window Ref	Existing VSC %	Proposed VSC %	Ratio Proposed /Existing VSC	Room Area m ²	Existing NSC %	Proposed NSC %	Ratio Proposed /Existing NSC	Existing Sunlight Annual%	Proposed Sunlight Annual%	Ratio Proposed /Existing Annual	Existing Sunlight Winter%	Proposed Sunlight Winter%	Ratio Proposed /Existing Winter
Ground	R1	Residential	Unknown	W2	33.82	31.86	0.94	6.13	99.89	99.89	1.00	56	50	0.89	18	12	0.67
Ground	R2	Residential	Unknown	W3	33.83	32.04	0.95	14.96	99.59	99.59	1.00	56	52	0.93	19	15	0.79
Ground	R2	Residential	Unknown	W4	33.95	32.32	0.95	14.96	99.59	99.59	1.00	56	52	0.93	19	15	0.79
First	R1	Residential	Unknown	W1	20.66	18.86	0.91	6.13	98.65	98.65	1.00	33	30	0.91	11	8	0.73
First	R2	Residential	Unknown	W2	20.68	19.04	0.92	5.88	98.63	98.63	1.00	33	31	0.94	11	9	0.82
First	R3	Residential	Unknown	W3	20.76	19.27	0.93	5.82	98.62	98.62	1.00	33	31	0.94	11	9	0.82
152 Valley Dr																	
Ground	R1	Residential	Unknown	W1	33.19	30.03	0.90	8.71	99.59	99.59	1.00	56	52	0.93	18	15	0.83
Ground	R2	Residential	Hallway	W2	23.42	20.48	0.87	8.71	80.73	74.27	0.92	37	35	0.95	8	6	0.75
First	R1	Residential	Unknown	W1	24.29	21.54	0.89	8.71	99.48	98.09	0.99	39	36	0.92	13	11	0.85
First	R2	Residential	Unknown	W2	24.36	21.73	0.89	8.88	93.89	88.68	0.94	39	37	0.95	13	11	0.85
154 Valley Dr																	
Ground	R1	Residential	Hallway	W1	18.79	15.56	0.83	8.71	60.61	47.40	0.78	36	31	0.86	12	10	0.83
Ground	R2	Residential	Unknown	W2	33.15	29.8	0.90	8.71	99.64	99.64	1.00	56	51	0.91	18	15	0.83
First	R1	Residential	Unknown	W1	24.22	21.33	0.88	8.88	93.87	88.70	0.94	39	36	0.92	13	12	0.92
First	R2	Residential	Unknown	W2	24.24	21.36	0.88	8.71	99.49	98.35	0.99	39	36	0.92	13	12	0.92
156 Valley Dr																	
Ground	R1	Residential	Unknown	W1	33.64	30.97	0.92	8.71	99.59	99.59	1.00	55	49	0.89	18	17	0.94
Ground	R2	Residential	Hallway	W2	23.72	20.95	0.88	8.71	77.56	71.92	0.93	36	29	0.81	8	7	0.88
First	R1	Residential	Unknown	W1	24.48	22.2	0.91	8.71	99.52	98.54	0.99	40	35	0.88	14	13	0.93
First	R2	Residential	Unknown	W2	24.46	22.02	0.90	8.88	93.89	92.62	0.99	40	35	0.88	14	12	0.86
158 Valley Dr																	
Ground	R1	Residential	Hallway	W1	23.37	21.33	0.91	8.71	75.25	55.79	0.74	44	40	0.91	15	15	1.00
Ground	R2	Residential	Unknown	W2	33.77	31.42	0.93	8.71	99.70	99.70	1.00	56	49	0.88	18	17	0.94
First	R1	Residential	Unknown	W1	24.59	22.77	0.93	8.88	93.88	89.30	0.95	40	39	0.98	14	14	1.00
First	R2	Residential	Unknown	W2	24.54	22.52	0.92	8.71	99.49	99.49	1.00	40	36	0.90	14	13	0.93
179 Valley Dr																	
Ground	R1	Residential	Unknown	W1	23.94	23.07	0.96	8.71	99.61	99.23	1.00	36	36	1.00	5	5	1.00
Ground	R2	Residential	Unknown	W2	29.37	28.27	0.96	8.88	97.70	97.70	1.00	48	47	0.98	11	10	0.91
First	R1	Residential	Unknown	W1	22.51	20.99	0.93	8.71	99.50	99.50	1.00	35	34	0.97	11	10	0.91
First	R2	Residential	Unknown	W2	22.66	21.36	0.94	8.88	97.65	97.65	1.00	35	35	1.00	10	10	1.00
181 Valley Dr																	
Ground	R1	Residential	Unknown	W1	30.23	27.9	0.92	8.88	97.80	97.80	1.00	53	45	0.85	17	13	0.76
Ground	R2	Residential	Unknown	W2	26.85	24.44	0.91	8.71	99.70	99.70	1.00	50	46	0.92	18	15	0.83
First	R1	Residential	Unknown	W1	22.5	20.68	0.92	8.88	97.81	97.81	1.00	36	34	0.94	11	11	1.00
First	R2	Residential	Unknown	W2	22.4	20.66	0.92	8.71	99.46	99.46	1.00	36	32	0.89	11	9	0.82
26 St Columbas Close																	
Ground	R1	Residential	Bathroom	W1	30.49	26	0.85	5.78	76.44	70.33	0.92	68	63	0.93	20	15	0.75
Ground	R2	Residential	Hall	W2	25.93	21.71	0.84	9.48	84.05	84.00	1.00	75	69	0.92	19	13	0.68
Ground	R2	Residential	Hall	W3	28.14	25.17	0.89	9.48	84.05	84.00	1.00	71	67	0.94	16	12	0.75
First	R1	Residential	Hall	W2	35.1	31.27	0.89	9.68	91.97	91.97	1.00	85	78	0.92	28	21	0.75
First	R1	Residential	Hall	W3	34.85	31.08	0.89	9.68	91.97	91.97	1.00	83	76	0.92	26	19	0.73

Daylight_Sunlight Analysis Table
Surroundings

					Vertical Sky Component			No Skyline				Annual Probable Sunlight Hours					
Address/Floor	Room Ref	Property Type	Room Usage	Window Ref	Existing VSC %	Proposed VSC %	Ratio Proposed /Existing VSC	Room Area m ²	Existing NSC %	Proposed NSC %	Ratio Proposed /Existing NSC	Existing Sunlight Annual%	Proposed Sunlight Annual%	Ratio Proposed /Existing Annual	Existing Sunlight Winter%	Proposed Sunlight Winter%	Ratio Proposed /Existing Winter
First	R2	Residential	Bathroom	W1	34.99	30.97	0.89	5.64	87.09	81.47	0.94	85	79	0.93	28	22	0.79
43 St Columbas Close																	
Ground	R1	Residential	LKD	W1	27.47	26.82	0.98	53.98	57.20	57.17	1.00	51	47	0.92	16	12	0.75
Ground	R1	Residential	LKD	W2	32.97	32.17	0.98	53.98	57.20	57.17	1.00	55	50	0.91	16	11	0.69
Ground	R1	Residential	LKD	W3	36.31	35.68	0.98	53.98	57.20	57.17	1.00	38	35	North	10	7	North
Ground	R2	Residential	Bathroom	W4	31.81	25.24	0.79	5.79	95.68	92.25	0.96	75	66	0.88	21	12	0.57
Ground	R3	Residential	Circulation	W5	27.6	20.94	0.76	9.48	82.54	78.85	0.96	78	68	0.87	22	12	0.55
Ground	R3	Residential	Circulation	W6	32.86	26.11	0.79	9.48	82.54	78.85	0.96	76	66	0.87	25	15	0.60
First	R1	Residential	Circulation	W2	35.27	29.97	0.85	9.68	91.97	91.97	1.00	85	76	0.89	28	19	0.68
First	R1	Residential	Circulation	W3	35.28	30.11	0.85	9.68	91.97	91.97	1.00	85	76	0.89	28	19	0.68
First	R2	Residential	Bedroom	W1	35.07	29.47	0.84	5.64	87.16	87.15	1.00	85	75	0.88	28	18	0.64
84 St Dunstan's Dr																	
Ground	R1	Residential	Unknown	W1	34.54	32.41	0.94	8.88	95.89	95.89	1.00	39	36	North	10	9	North
Ground	R2	Residential	Unknown	W2	30.78	29.51	0.96	8.71	98.58	98.58	1.00	28	28	North	0	0	North
First	R1	Residential	Unknown	W1	26.85	25.28	0.94	8.88	95.66	95.66	1.00	25	23	North	6	4	North
First	R2	Residential	Unknown	W2	26.74	25.02	0.94	8.71	98.46	98.46	1.00	25	23	North	6	4	North
86 St Dunstan's Dr																	
Ground	R1	Residential	Unknown	W1	31.12	28.34	0.91	8.71	98.68	98.68	1.00	38	35	North	9	9	North
Ground	R2	Residential	Unknown	W2	34.49	31.49	0.91	8.88	95.65	95.65	1.00	39	35	North	8	8	North
First	R1	Residential	Unknown	W1	26.6	24.65	0.93	8.71	98.50	98.50	1.00	25	23	North	6	5	North
First	R2	Residential	Unknown	W2	26.51	24.37	0.92	8.88	95.53	95.53	1.00	25	23	North	6	6	North

APPENDIX 3

Internal Daylight & Sunlight Results

SOURCES OF INFORMATION:

BPTW
IR07 (RECEIVED 24.10.2022)
IR08 (RECEIVED 25.10.2022)

WALDRAMS LTD
REL_03

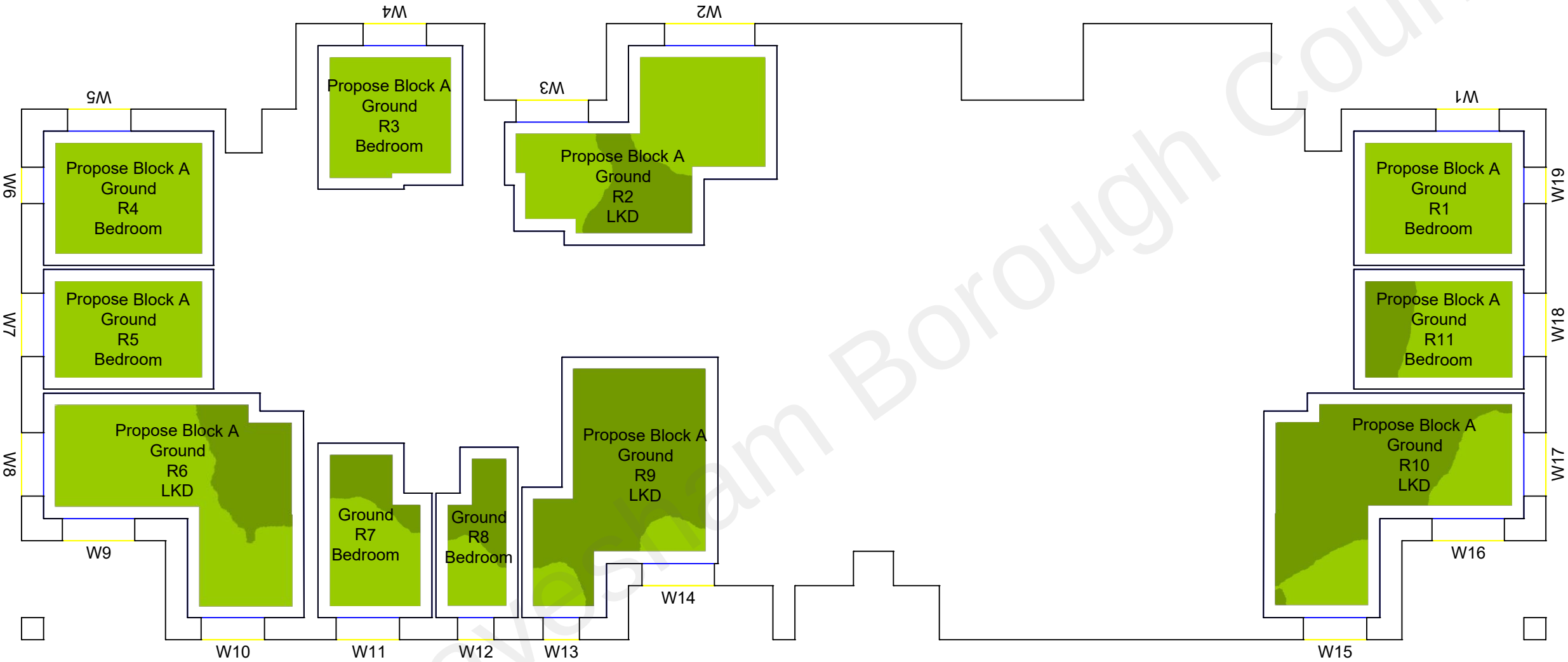
SITE PHOTOGRAPHS

SURROUNDING PROPERTY INFORMATION

NOTES:

SDA % OF HOURS

- LESS THAN 50
- MORE THAN 50



PROJECT
ST COLUMBA'S CLOSE
GRAVESEND DA12

DRAWING
SPATIAL DAYLIGHT AUTONOMY
BLOCK A

SCALE @ A3 1:120	DATE 26.10.2022
----------------------------	---------------------------

MODELLED BY VR	DRAWN BY VR
--------------------------	-----------------------

PROJECT No. 2747	REL No.- DWG No. 04-01
----------------------------	----------------------------------

SOURCES OF INFORMATION:

BPTW
IR07 (RECEIVED 24.10.2022)
IR08 (RECEIVED 25.10.2022)

WALDRAMS LTD
REL_03

SITE PHOTOGRAPHS

SURROUNDING PROPERTY INFORMATION

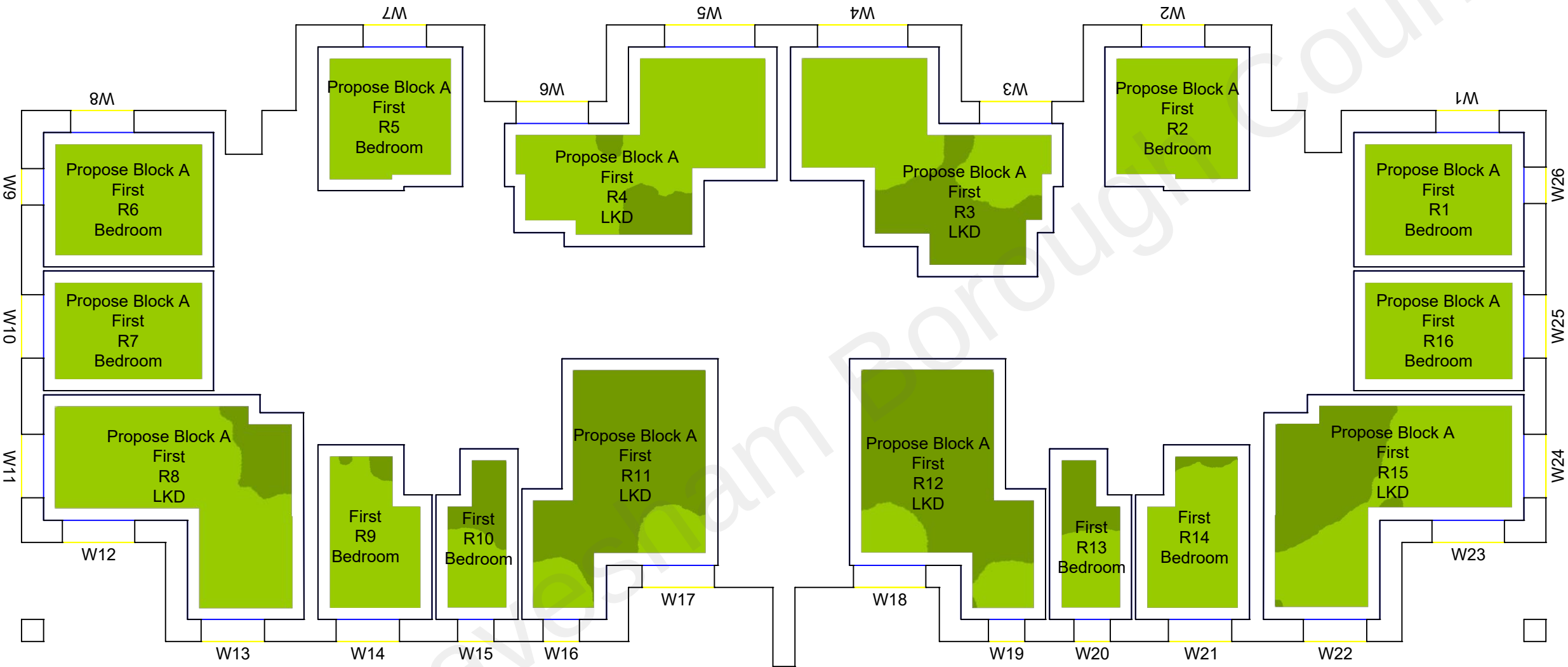
NOTES:

SDA % OF HOURS

LESS THAN 50

MORE THAN 50





PROJECT ST COLUMBA'S CLOSE GRAVESEND DA12	
DRAWING SPATIAL DAYLIGHT AUTONOMY BLOCK A	
SCALE @ A3 1:120	DATE 26.10.2022
MODELLED BY VR	DRAWN BY VR
PROJECT No. 2747	REL No.- DWG No. 04-02

SOURCES OF INFORMATION:

BPTW
IR07 (RECEIVED 24.10.2022)
IR08 (RECEIVED 25.10.2022)

WALDRAMS LTD
REL_03

SITE PHOTOGRAPHS

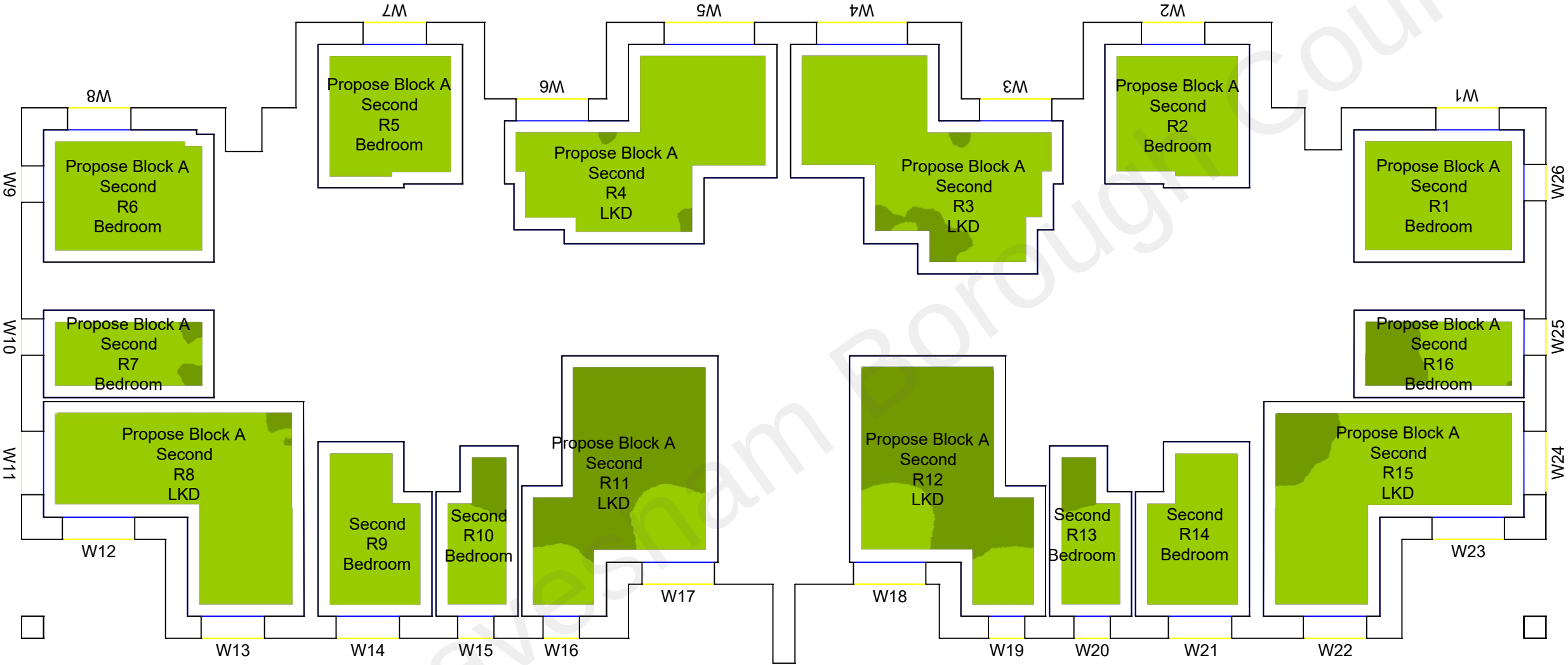
SURROUNDING PROPERTY INFORMATION

NOTES:

SDA % OF HOURS

LESS THAN 50

MORE THAN 50



PROJECT ST COLUMBA'S CLOSE GRAVESEND DA12	
DRAWING SPATIAL DAYLIGHT AUTONOMY BLOCK A	
SCALE @ A3 1:120	DATE 26.10.2022
MODELLED BY VR	DRAWN BY VR
PROJECT No. 2747	REL No.- DWG No. 04-03

SOURCES OF INFORMATION:

BPTW
IR07 (RECEIVED 24.10.2022)
IR08 (RECEIVED 25.10.2022)

WALDRAMS LTD
REL_03

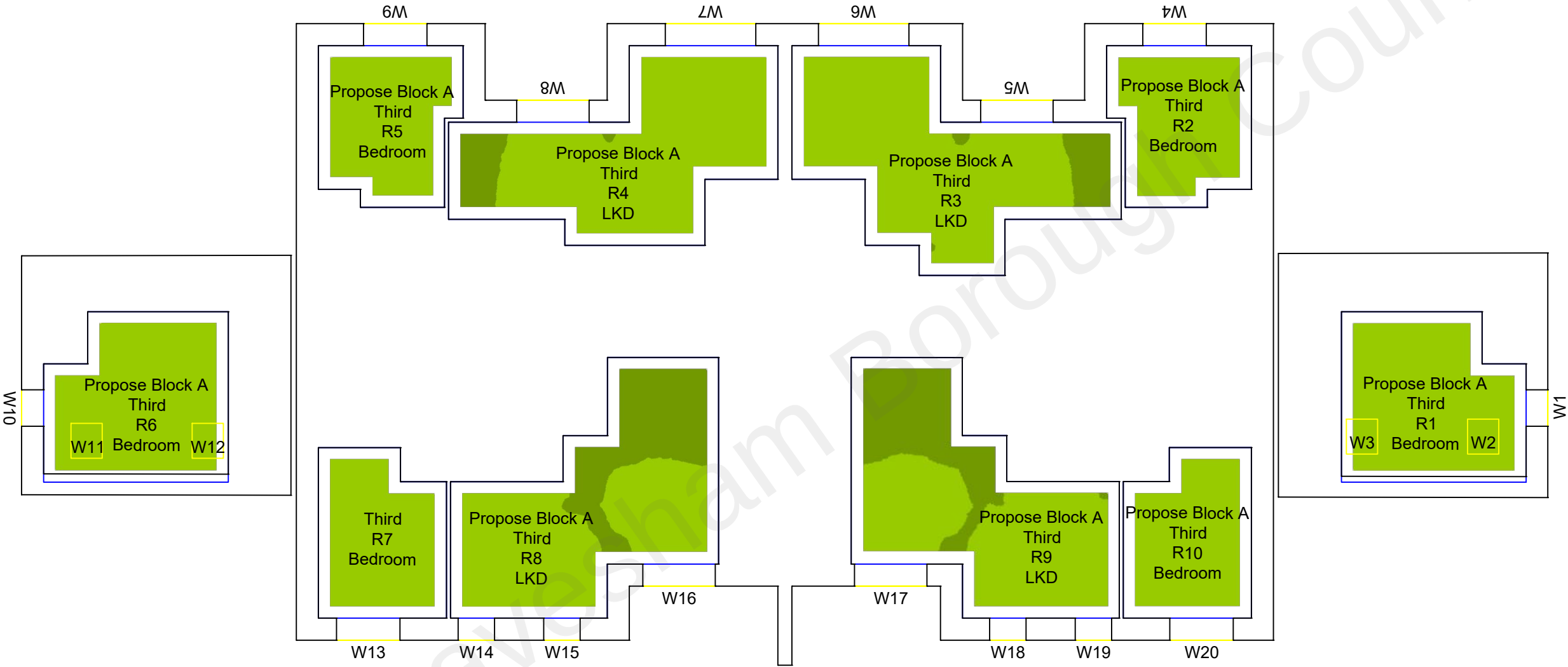
SITE PHOTOGRAPHS

SURROUNDING PROPERTY INFORMATION

NOTES:

SDA % OF HOURS

- LESS THAN 50
- MORE THAN 50



PROJECT
ST COLUMBA'S CLOSE
GRAVESEND DA12

DRAWING
SPATIAL DAYLIGHT AUTONOMY
BLOCK A

SCALE @ A3
1:120

DATE
26.10.2022

MODELLED BY
VR

DRAWN BY
VR

PROJECT No.
2747

REL No.- DWG No.
04-04

SOURCES OF INFORMATION:

BPTW
IR07 (RECEIVED 24.10.2022)
IR08 (RECEIVED 25.10.2022)

WALDRAMS LTD
REL_03

SITE PHOTOGRAPHS

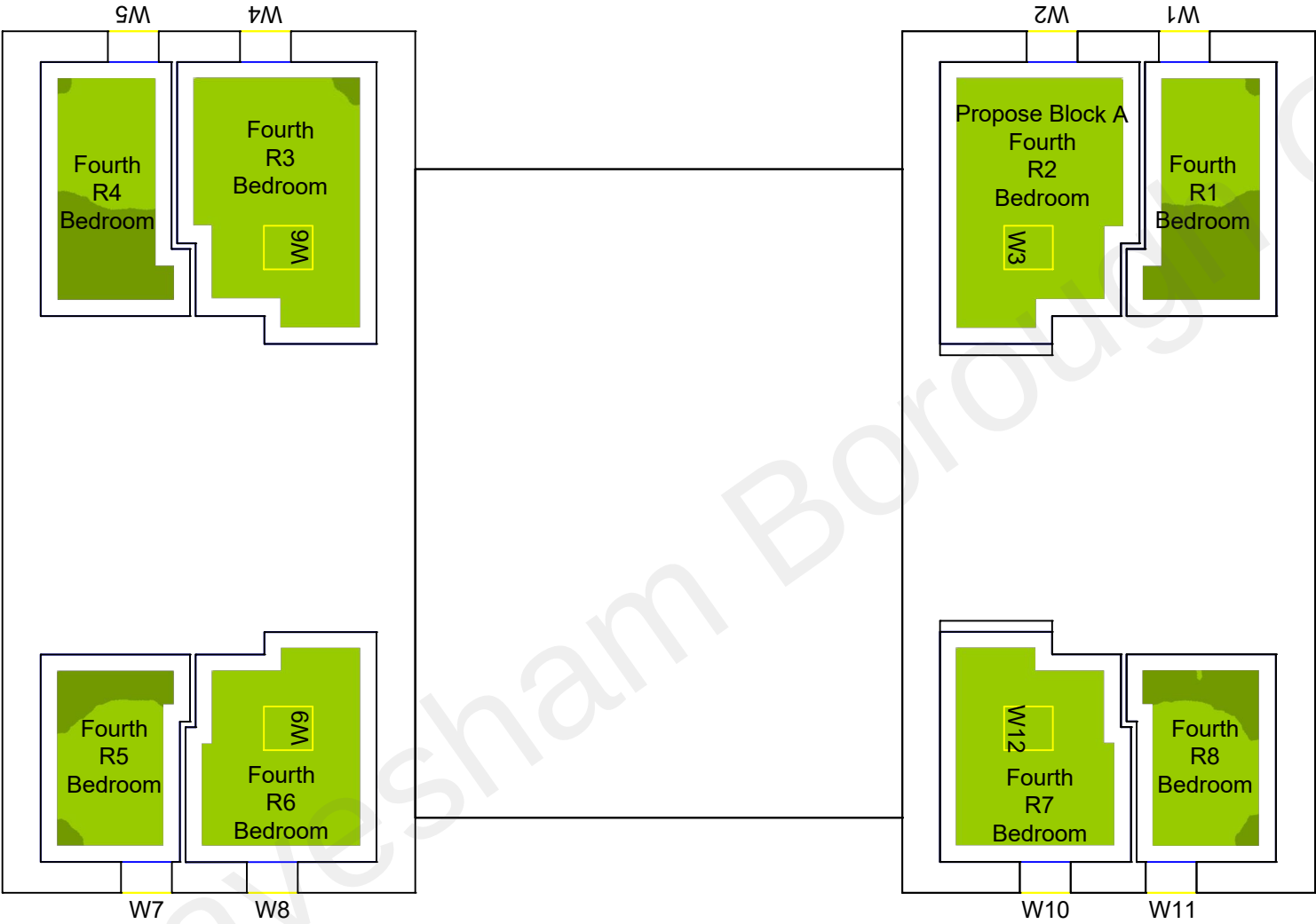
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NOTES:

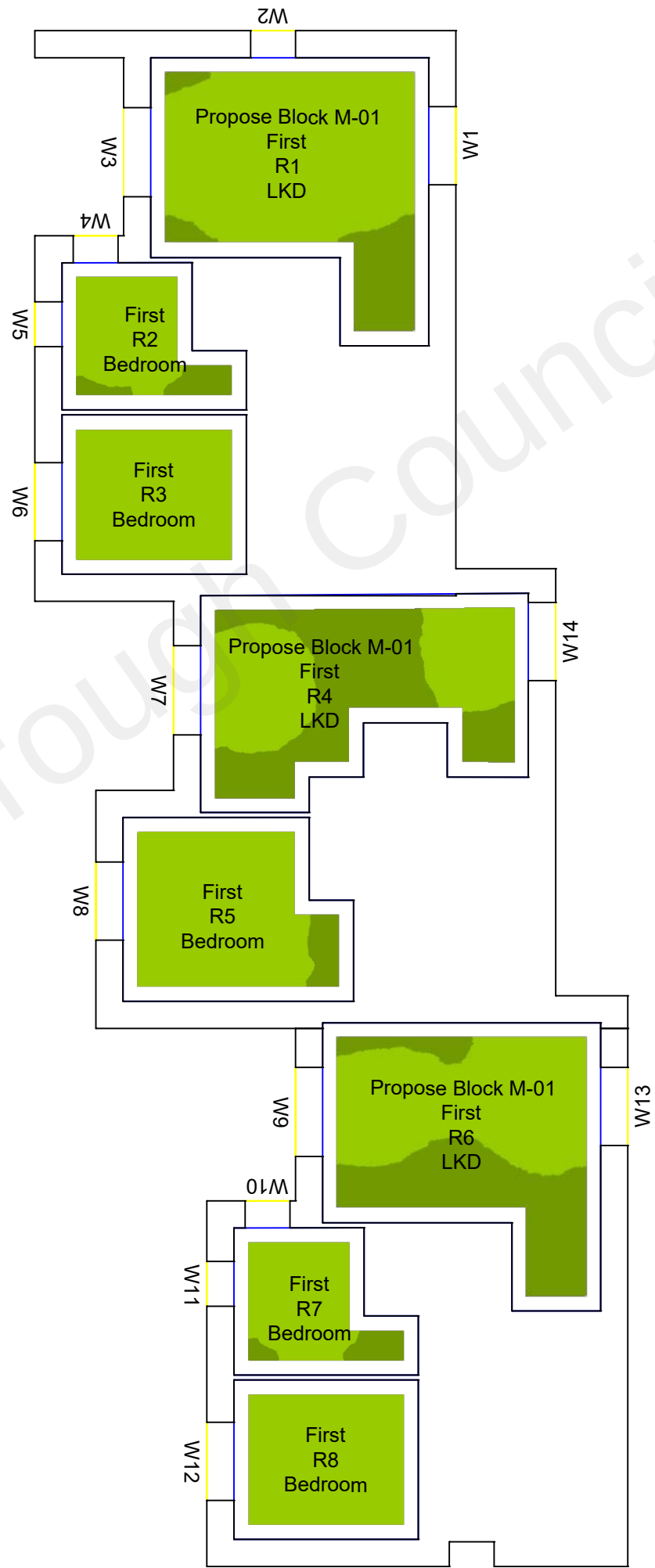
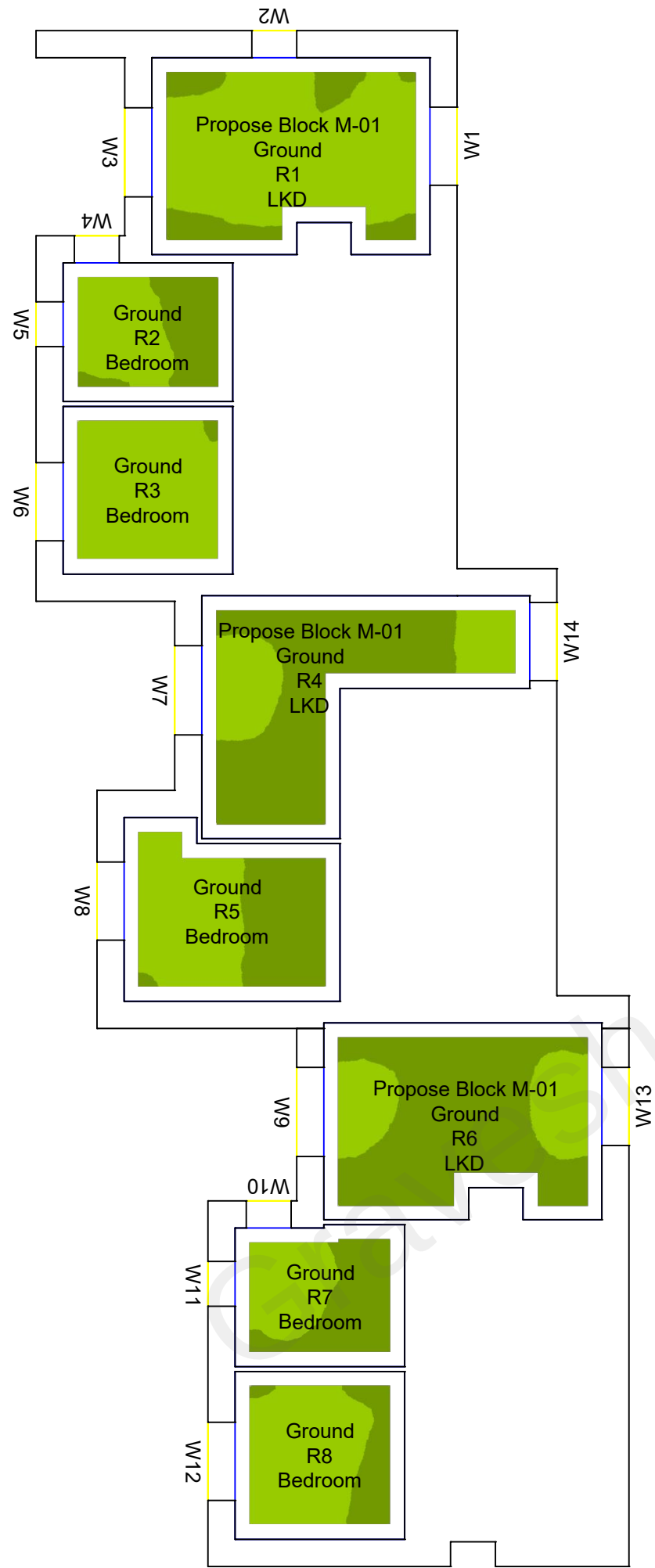
SDA % OF HOURS

LESS THAN 50

MORE THAN 50



PROJECT ST COLUMBA'S CLOSE GRAVESEND DA12	
DRAWING SPATIAL DAYLIGHT AUTONOMY BLOCK A	
SCALE @ A3 1:120	DATE 26.10.2022
MODELLED BY VR	DRAWN BY VR
PROJECT No. 2747	REL No.- DWG No. 04-05



SOURCES OF INFORMATION:

BPTW
IR07 (RECEIVED 24.10.2022)
IR08 (RECEIVED 25.10.2022)

WALDRAMS LTD
REL_03

SITE PHOTOGRAPHS

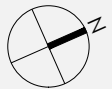
SURROUNDING PROPERTY INFORMATION

NOTES:

SDA % OF HOURS

LESS THAN 50

MORE THAN 50



PROJECT
ST COLUMBA'S CLOSE
GRAVESEND DA12

DRAWING
SPATIAL DAYLIGHT AUTONOMY
BLOCK M 01

SCALE @ A3
1:120

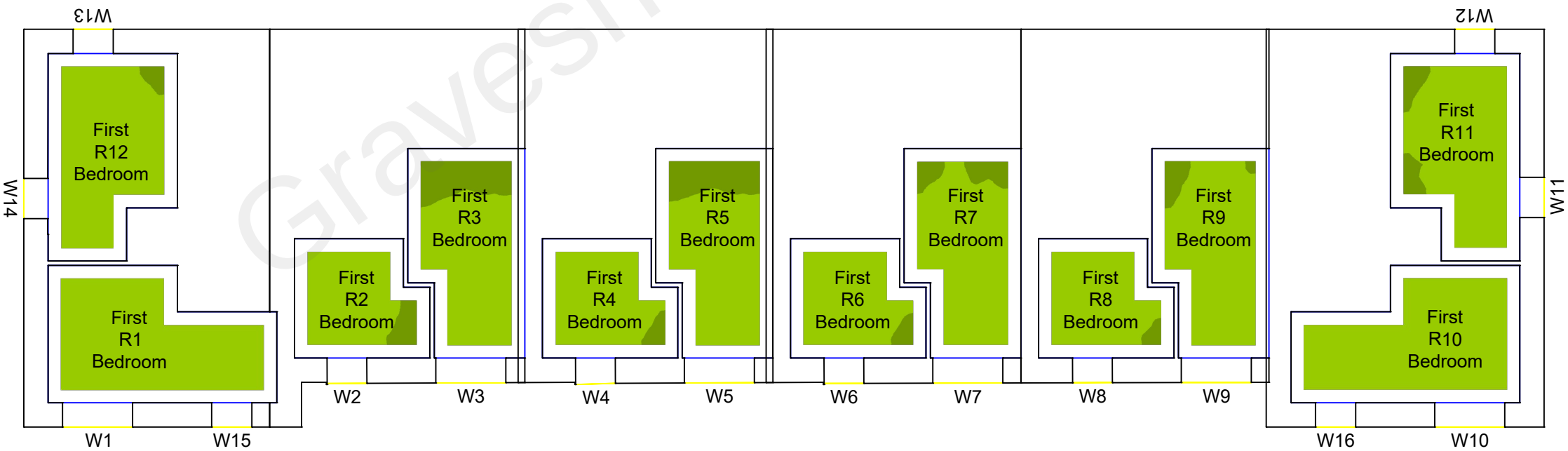
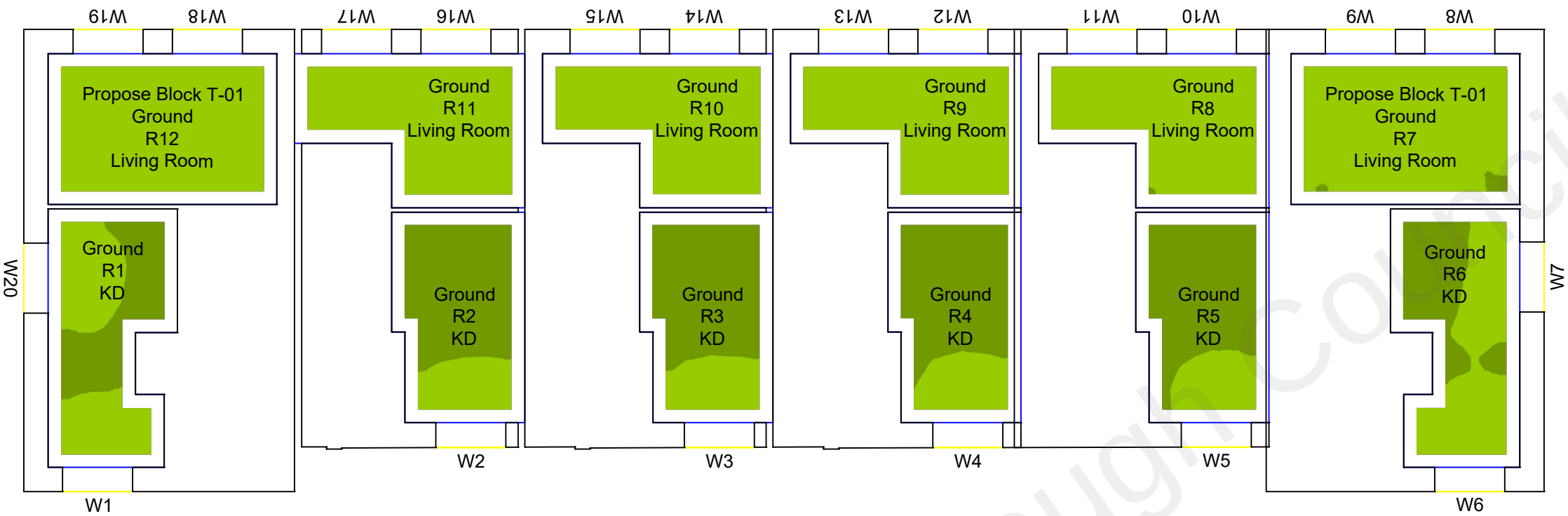
DATE
26.10.2022

MODELLED BY
VR

DRAWN BY
VR

PROJECT No.
2747

REL No.- DWG No.
04-06



SOURCES OF INFORMATION:

BPTW
IR07 (RECEIVED 24.10.2022)
IR08 (RECEIVED 25.10.2022)

WALDRAMS LTD
REL_03

SITE PHOTOGRAPHS

SURROUNDING PROPERTY INFORMATION

NOTES:

SDA % OF HOURS

- LESS THAN 50
- MORE THAN 50



PROJECT
ST COLUMBA'S CLOSE
GRAVESEND DA12

DRAWING
SPATIAL DAYLIGHT AUTONOMY
BLOCK T-01

SCALE @ A3
1:120

DATE
26.10.2022

MODELLED BY
VR

DRAWN BY
VR

PROJECT No.
2747

REL No. - DWG No.
04-07



SOURCES OF INFORMATION:

BPTW
IR07 (RECEIVED 24.10.2022)
IR08 (RECEIVED 25.10.2022)

WALDRAMS LTD
REL_03

SITE PHOTOGRAPHS

SURROUNDING PROPERTY INFORMATION

NOTES:

SDA % OF HOURS

 LESS THAN 50

 MORE THAN 50



PROJECT
ST COLUMBA'S CLOSE
GRAVESEND DA12

DRAWING
SPATIAL DAYLIGHT AUTONOMY
BLOCK T-01

SCALE @ A3
1:120

DATE
26.10.2022

MODELLED BY
VR

DRAWN BY
VR

PROJECT No.
2747

REL No.- DWG No.
04-08

SOURCES OF INFORMATION:

BPTW
IR07 (RECEIVED 24.10.2022)
IR08 (RECEIVED 25.10.2022)

WALDRAMS LTD
REL_03

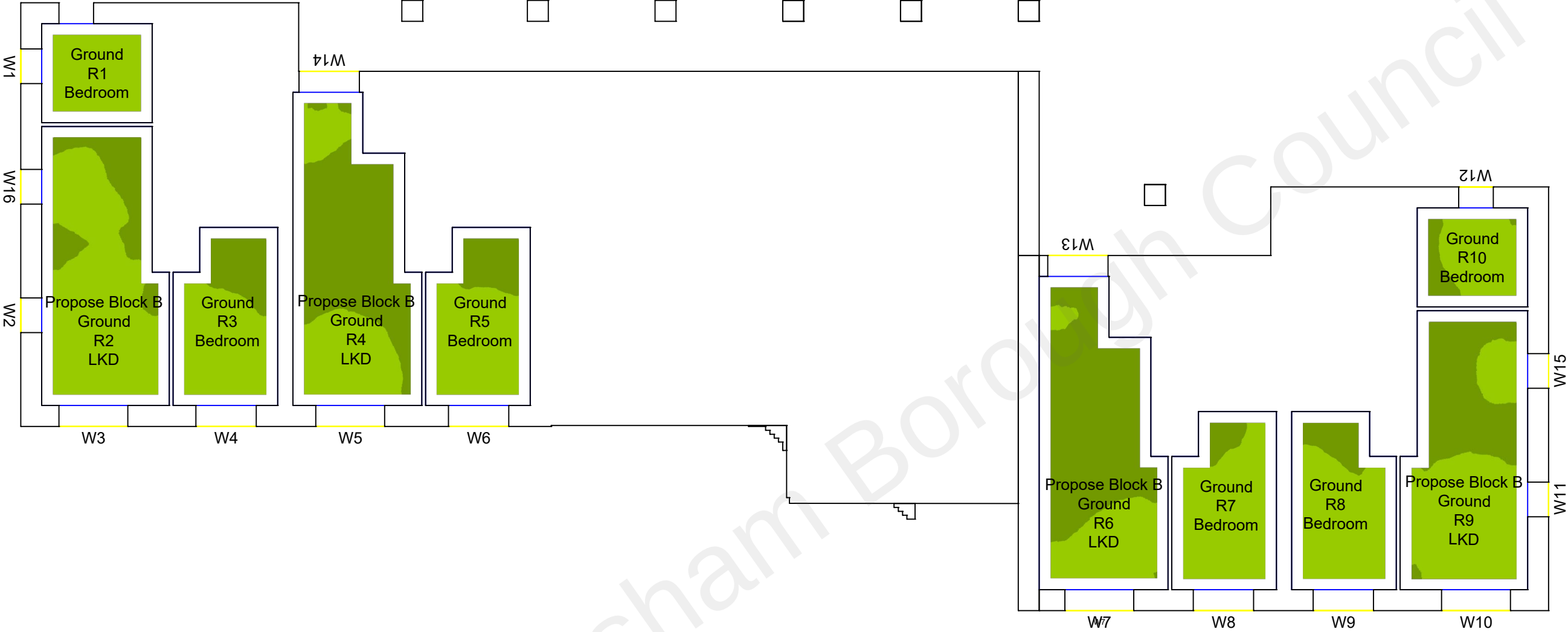
SITE PHOTOGRAPHS

SURROUNDING PROPERTY INFORMATION

NOTES:

SDA % OF HOURS

- LESS THAN 50
- MORE THAN 50



PROJECT
ST COLUMBA'S CLOSE
GRAVESEND DA12

DRAWING
SPATIAL DAYLIGHT AUTONOMY
BLOCK B

SCALE @ A3
1:120

DATE
26.10.2022

MODELLED BY
VR

DRAWN BY
VR

PROJECT No.
2747

REL No.- DWG No.
04-09

SOURCES OF INFORMATION:

BPTW
IR07 (RECEIVED 24.10.2022)
IR08 (RECEIVED 25.10.2022)

WALDRAMS LTD
REL_03

SITE PHOTOGRAPHS

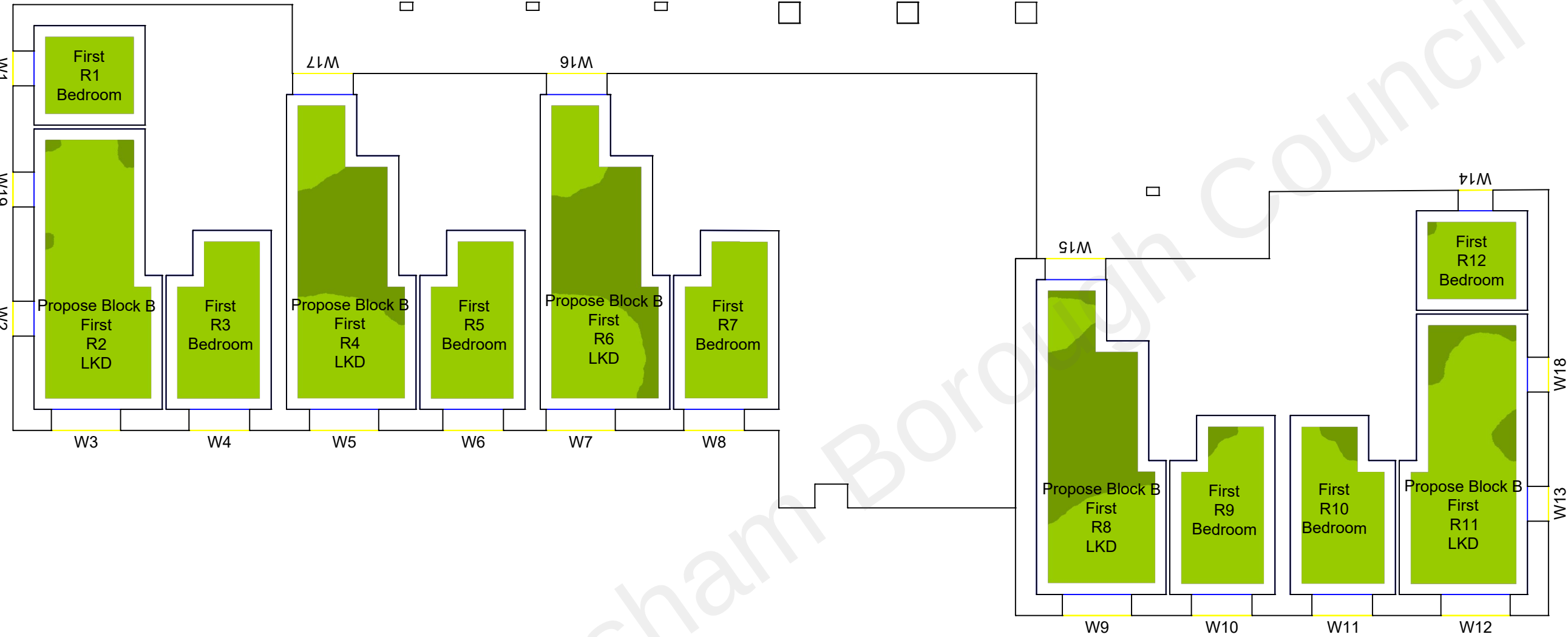
SURROUNDING PROPERTY INFORMATION

NOTES:

SDA % OF HOURS

LESS THAN 50

MORE THAN 50



PROJECT
ST COLUMBA'S CLOSE
GRAVESEND DA12

DRAWING
SPATIAL DAYLIGHT AUTONOMY
BLOCK B

SCALE @ A3 1:120	DATE 26.10.2022
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MODELLED BY VR	DRAWN BY VR
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PROJECT No. 2747	REL No.- DWG No. 04-10
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SOURCES OF INFORMATION:

BPTW
IR07 (RECEIVED 24.10.2022)
IR08 (RECEIVED 25.10.2022)

WALDRAMS LTD
REL_03

SITE PHOTOGRAPHS

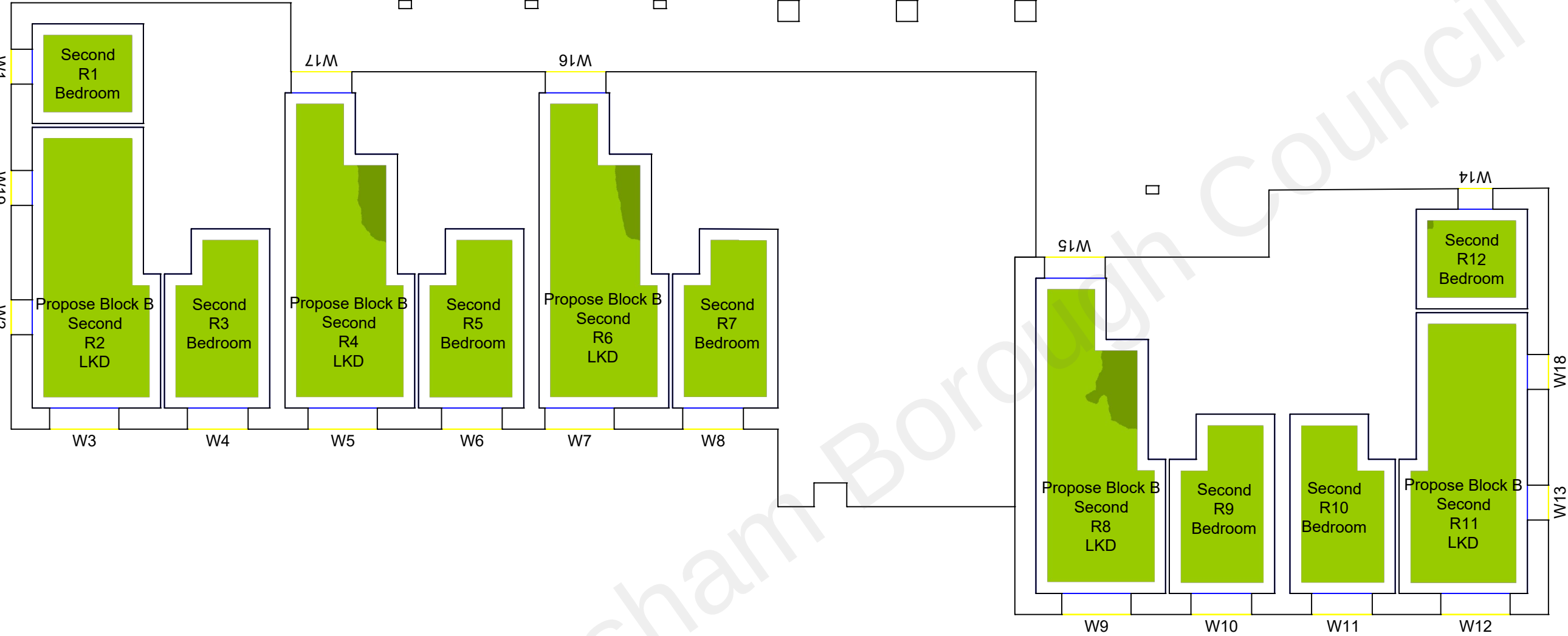
SURROUNDING PROPERTY INFORMATION

NOTES:

SDA % OF HOURS

LESS THAN 50

MORE THAN 50



PROJECT ST COLUMBA'S CLOSE GRAVESEND DA12	
DRAWING SPATIAL DAYLIGHT AUTONOMY BLOCK B	
SCALE @ A3 1:120	DATE 26.10.2022
MODELLED BY VR	DRAWN BY VR
PROJECT No. 2747	REL No.- DWG No. 04-11

								Criteria			
Floor Ref	Room Ref	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
Propose Block A											
Ground	R1	Bedroom	14.28	10.07	222	10.07	100%	100	50%	50%	4380
	R2	LKD	24.27	17.55	196	13.00	74%	150	50%	50%	4380
	R3	Bedroom	12.83	8.87	190	8.87	100%	100	50%	50%	4380
	R4	Bedroom	14.27	10.07	279	10.07	100%	100	50%	50%	4380
	R5	Bedroom	12.72	8.73	244	8.73	100%	100	50%	50%	4380
	R6	LKD	27.12	20.21	200	14.63	72%	150	50%	50%	4380
	R7	Bedroom	11.56	7.59	127	5.28	70%	100	50%	50%	4380
	R8	Bedroom	8.05	4.62	90	2.12	46%	100	50%	50%	4380
	R9	LKD	24.90	18.41	63	2.42	13%	150	50%	50%	4380
	R10	LKD	27.13	20.22	101	6.20	31%	150	50%	50%	4380
	R11	Bedroom	12.72	8.73	139	6.13	70%	100	50%	50%	4380
First	R1	Bedroom	14.28	10.07	256	10.07	100%	100	50%	50%	4380
	R2	Bedroom	12.83	8.87	221	8.87	100%	100	50%	50%	4380
	R3	LKD	26.80	19.63	182	12.65	64%	150	50%	50%	4380
	R4	LKD	24.27	17.55	210	15.37	88%	150	50%	50%	4380
	R5	Bedroom	12.83	8.87	220	8.87	100%	100	50%	50%	4380
	R6	Bedroom	14.27	10.07	330	10.07	100%	100	50%	50%	4380
	R7	Bedroom	12.72	8.73	273	8.73	100%	100	50%	50%	4380
	R8	LKD	27.12	20.21	236	17.67	87%	150	50%	50%	4380
	R9	Bedroom	11.56	7.59	173	7.26	96%	100	50%	50%	4380
	R10	Bedroom	8.05	4.62	114	2.61	57%	100	50%	50%	4380
	R11	LKD	24.90	18.41	80	3.43	19%	150	50%	50%	4380
	R12	LKD	24.90	18.41	80	3.52	19%	150	50%	50%	4380
	R13	Bedroom	8.05	4.62	123	2.86	62%	100	50%	50%	4380
	R14	Bedroom	11.56	7.59	183	7.18	95%	100	50%	50%	4380
	R15	LKD	27.13	20.22	171	12.58	62%	150	50%	50%	4380
	R16	Bedroom	12.72	8.73	189	8.73	100%	100	50%	50%	4380
Second	R1	Bedroom	14.08	9.90	301	9.90	100%	100	50%	50%	4380
	R2	Bedroom	12.83	8.87	254	8.87	100%	100	50%	50%	4380
	R3	LKD	26.80	19.63	204	18.00	92%	150	50%	50%	4380
	R4	LKD	24.27	17.55	243	17.32	99%	150	50%	50%	4380
	R5	Bedroom	12.83	8.87	252	8.87	100%	100	50%	50%	4380
	R6	Bedroom	14.06	9.88	380	9.88	100%	100	50%	50%	4380
	R7	Bedroom	9.32	5.81	153	5.22	90%	100	50%	50%	4380
	R8	LKD	26.01	19.25	283	18.90	98%	150	50%	50%	4380
	R9	Bedroom	11.56	7.59	238	7.59	100%	100	50%	50%	4380
	R10	Bedroom	8.05	4.62	152	3.50	76%	100	50%	50%	4380
	R11	LKD	24.90	18.41	103	4.82	26%	150	50%	50%	4380
	R12	LKD	24.90	18.41	106	4.99	27%	150	50%	50%	4380
	R13	Bedroom	8.05	4.62	153	3.50	76%	100	50%	50%	4380
	R14	Bedroom	11.56	7.59	239	7.59	100%	100	50%	50%	4380
	R15	LKD	26.01	19.24	226	16.97	88%	150	50%	50%	4380
	R16	Bedroom	9.30	5.79	114	3.34	58%	100	50%	50%	4380
Third	R1	Bedroom	18.21	13.24	262	13.24	100%	100	50%	50%	4380
	R2	Bedroom	13.07	8.84	196	8.84	100%	100	50%	50%	4380
	R3	LKD	29.12	21.10	227	19.17	91%	150	50%	50%	4380
	R4	LKD	27.53	19.96	249	18.17	91%	150	50%	50%	4380
	R5	Bedroom	13.10	8.86	195	8.86	100%	100	50%	50%	4380
	R6	Bedroom	18.21	13.24	350	13.24	100%	100	50%	50%	4380
	R7	Bedroom	12.65	8.54	240	8.54	100%	100	50%	50%	4380
	R8	LKD	28.96	21.40	169	14.21	66%	150	50%	50%	4380
	R9	LKD	28.97	21.41	170	14.69	69%	150	50%	50%	4380
	R10	Bedroom	12.66	8.55	231	8.55	100%	100	50%	50%	4380
Fourth	R1	Bedroom	11.07	7.09	105	3.77	53%	100	50%	50%	4380
	R2	Bedroom	16.76	11.96	249	11.96	100%	100	50%	50%	4380
	R3	Bedroom	16.76	11.96	192	11.69	98%	100	50%	50%	4380
	R4	Bedroom	11.02	7.05	106	3.67	52%	100	50%	50%	4380
	R5	Bedroom	9.45	5.98	119	4.31	72%	100	50%	50%	4380
	R6	Bedroom	13.24	9.08	232	9.08	100%	100	50%	50%	4380
	R7	Bedroom	13.25	9.09	321	9.09	100%	100	50%	50%	4380
	R8	Bedroom	9.46	5.99	123	4.32	72%	100	50%	50%	4380
Propose Block B											
Ground	R1	Bedroom	7.55	4.60	457	4.60	100%	100	50%	50%	4380
	R2	LKD	22.84	16.79	189	13.23	79%	150	50%	50%	4380
	R3	Bedroom	12.04	7.94	138	5.69	72%	100	50%	50%	4380
	R4	LKD	23.97	17.36	123	6.27	36%	150	50%	50%	4380
	R5	Bedroom	12.04	7.94	145	6.08	77%	100	50%	50%	4380
	R6	LKD	23.97	17.36	112	4.90	28%	150	50%	50%	4380
	R7	Bedroom	12.04	7.94	162	7.26	91%	100	50%	50%	4380
	R8	Bedroom	12.04	7.94	152	6.64	84%	100	50%	50%	4380
	R9	LKD	22.84	16.80	164	10.05	60%	150	50%	50%	4380
	R10	Bedroom	7.55	4.60	120	3.70	80%	100	50%	50%	4380
First	R1	Bedroom	7.55	4.61	164	4.61	100%	100	50%	50%	4380
	R2	LKD	22.84	16.79	237	16.34	97%	150	50%	50%	4380
	R3	Bedroom	12.04	7.94	235	7.94	100%	100	50%	50%	4380
	R4	LKD	23.97	17.36	155	9.27	53%	150	50%	50%	4380
	R5	Bedroom	12.04	7.94	234	7.94	100%	100	50%	50%	4380
	R6	LKD	23.97	17.36	147	8.67	50%	150	50%	50%	4380
	R7	Bedroom	12.03	7.94	208	7.94	100%	100	50%	50%	4380
	R8	LKD	23.97	17.36	135	7.50	43%	150	50%	50%	4380
	R9	Bedroom	12.04	7.94	191	7.62	96%	100	50%	50%	4380
	R10	Bedroom	12.04	7.94	183	7.39	93%	100	50%	50%	4380
	R11	LKD	22.84	16.80	230	14.96	89%	150	50%	50%	4380
	R12	Bedroom	7.55	4.60	145	4.52	98%	100	50%	50%	4380
Second	R1	Bedroom	7.55	4.61	175	4.61	100%	100	50%	50%	4380
	R2	LKD	22.84	16.79	328	16.79	100%	150	50%	50%	4380
	R3	Bedroom	12.04	7.94	274	7.94	100%	100	50%	50%	4380
	R4	LKD	23.97	17.36	218	16.18	93%	150	50%	50%	4380
	R5	Bedroom	12.04	7.94	273	7.94	100%	100	50%	50%	4380
	R6	LKD	23.97	17.36	217	16.42	95%	150	50%	50%	4380
	R7	Bedroom	12.03	7.94	240	7.94	100%	100	50%	50%	4380
	R8	LKD	23.97	17.36	204	15.64	90%	150	50%	50%	4380
	R9	Bedroom	12.04	7.94	274	7.94	100%	100	50%	50%	4380
	R10	Bedroom	12.04	7.94	274	7.94	100%	100	50%	50%	4380
	R11	LKD	22.84	16.80	355	16.80	100%	150	50%	50%	4380
	R12	Bedroom	7.55	4.60	160	4.52	98%	100	50%	50%	4380
Propose Block M-01											
Ground	R1	LKD	21.80	15.99	202	13.30	83%	150	50%	50%	4380

								Criteria			
Floor Ref	Room Ref	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
	R2	Bedroom	9.67	6.28	109	3.53	56%	100	50%	50%	4380
	R3	Bedroom	11.70	7.96	190	7.80	98%	100	50%	50%	4380
	R4	LKD	21.05	14.46	102	3.97	27%	150	50%	50%	4380
	R5	Bedroom	14.79	10.28	111	5.63	55%	100	50%	50%	4380
	R6	LKD	21.80	15.99	103	4.27	27%	150	50%	50%	4380
	R7	Bedroom	9.79	6.35	93	2.99	47%	100	50%	50%	4380
	R8	Bedroom	11.70	7.96	150	6.05	76%	100	50%	50%	4380
First	R1	LKD	26.09	19.56	230	16.13	82%	150	50%	50%	4380
	R2	Bedroom	9.20	5.53	133	4.50	81%	100	50%	50%	4380
	R3	Bedroom	12.09	8.27	228	8.27	100%	100	50%	50%	4380
	R4	LKD	24.33	17.39	143	8.27	48%	150	50%	50%	4380
	R5	Bedroom	15.93	11.25	188	10.40	92%	100	50%	50%	4380
	R6	LKD	26.09	19.56	157	11.39	58%	150	50%	50%	4380
	R7	Bedroom	9.20	5.53	149	4.67	85%	100	50%	50%	4380
	R8	Bedroom	12.09	8.27	247	8.27	100%	100	50%	50%	4380
Propose Block T-01											
Ground	R1	KD	15.30	10.00	215	5.82	58%	200	50%	50%	4380
	R2	KD	13.74	9.43	73	2.42	26%	200	50%	50%	4380
	R3	KD	13.74	9.43	76	2.42	26%	200	50%	50%	4380
	R4	KD	13.73	9.42	93	2.42	26%	200	50%	50%	4380
	R5	KD	13.74	9.43	88	2.25	24%	200	50%	50%	4380
	R6	KD	15.30	10.00	224	6.13	61%	200	50%	50%	4380
	R7	Living Room	17.67	12.87	240	12.55	98%	150	50%	50%	4380
	R8	Living Room	14.99	10.12	300	10.07	99%	150	50%	50%	4380
	R9	Living Room	14.99	10.12	324	10.12	100%	150	50%	50%	4380
	R10	Living Room	14.99	10.12	336	10.12	100%	150	50%	50%	4380
	R11	Living Room	14.99	10.12	341	10.12	100%	150	50%	50%	4380
	R12	Living Room	17.67	12.87	297	12.87	100%	150	50%	50%	4380
First	R1	Bedroom	13.73	9.12	264	9.12	100%	100	50%	50%	4380
	R2	Bedroom	7.62	4.52	143	4.00	88%	100	50%	50%	4380
	R3	Bedroom	11.53	7.46	152	5.75	77%	100	50%	50%	4380
	R4	Bedroom	7.62	4.52	160	4.24	94%	100	50%	50%	4380
	R5	Bedroom	11.53	7.46	151	5.92	79%	100	50%	50%	4380
	R6	Bedroom	7.62	4.52	162	4.26	94%	100	50%	50%	4380
	R7	Bedroom	11.52	7.45	158	6.77	91%	100	50%	50%	4380
	R8	Bedroom	7.62	4.52	167	4.25	94%	100	50%	50%	4380
	R9	Bedroom	11.53	7.46	159	6.87	92%	100	50%	50%	4380
	R10	Bedroom	13.73	9.12	298	9.12	100%	100	50%	50%	4380
	R11	Bedroom	12.35	8.14	148	7.40	91%	100	50%	50%	4380
	R12	Bedroom	12.35	8.14	196	7.89	97%	100	50%	50%	4380
Second	R1	Bedroom	7.92	4.55	125	4.18	92%	100	50%	50%	4380
	R2	Bedroom	8.42	4.95	379	4.95	100%	100	50%	50%	4380
	R3	Bedroom	16.78	11.32	341	11.32	100%	100	50%	50%	4380
	R4	Bedroom	16.77	11.31	349	11.31	100%	100	50%	50%	4380
	R5	Bedroom	16.78	11.32	342	11.32	100%	100	50%	50%	4380
	R6	Bedroom	16.78	11.32	346	11.32	100%	100	50%	50%	4380
	R7	Bedroom	8.44	4.97	385	4.97	100%	100	50%	50%	4380
	R8	Bedroom	7.93	4.56	84	1.83	40%	100	50%	50%	4380

Floor Ref	Room Ref	Property Type	Room Use	Window Ref	Window Orientation	Proposed Sunlight Exposure (Hours)
Propose Block A						
Ground	R2	Residential	LKD	W2	294°N	2
				W3	294°N	0
Ground	R3	Residential	Bedroom	W4	294°N	2
						1.3
Ground	R4	Residential	Bedroom	W5	294°N	1.3
				W6	204°	4.6
Ground	R5	Residential	Bedroom	W7	204°	5.6
						6.5
Ground	R6	Residential	LKD	W8	204°	6.5
				W9	114°	0.4
				W10	114°	1.5
Ground	R7	Residential	Bedroom	W11	114°	7.3
						1.9
Ground	R8	Residential	Bedroom	W12	114°	1.9
						1.5
Ground	R9	Residential	LKD	W13	114°	1.5
				W14	114°	2.9
Ground	R1	Residential	Bedroom	W1	294°N	2
				W19	24°N	3
Ground	R10	Residential	LKD	W15	294°N	1.3
				W16	114°	0
				W17	114°	1.3
Ground	R11	Residential	Bedroom	W18	24°N	3.3
						0
First	R2	Residential	Bedroom	W2	294°N	0
						1.3
First	R3	Residential	LKD	W3	294°N	2
				W4	294°N	2
First	R4	Residential	LKD	W5	294°N	1.9
				W6	294°N	0
First	R5	Residential	Bedroom	W7	294°N	1.9
						1.3
First	R6	Residential	Bedroom	W8	294°N	1.3
				W9	204°	4.6
First	R7	Residential	Bedroom	W10	204°	5.6
						6.5
First	R8	Residential	LKD	W11	204°	6.5
				W12	114°	0.7
				W13	114°	2.2
First	R9	Residential	Bedroom	W14	114°	8.3
						3.2
First	R10	Residential	Bedroom	W15	114°	3.2
						3.3
First	R11	Residential	LKD	W16	114°	3.3
				W17	114°	3.4
First	R12	Residential	LKD	W18	114°	2.2
				W19	114°	3.4
First	R13	Residential	Bedroom	W20	114°	3.4
						3.4
First	R14	Residential	Bedroom	W21	114°	4.2
						4.2
First	R1	Residential	Bedroom	W1	294°N	1.3
				W26	24°N	0
First	R15	Residential	LKD	W22	294°N	1.3
				W23	114°	3.4
				W24	114°	0.9
First	R16	Residential	Bedroom	W25	24°N	0
						3.4
Second	R2	Residential	Bedroom	W2	294°N	0
						1.3
Second	R3	Residential	LKD	W3	294°N	2
				W4	294°N	2
Second	R4	Residential	LKD	W5	294°N	1.9

Floor Ref	Room Ref	Property Type	Room Use	Window Ref	Window Orientation	Proposed Sunlight Exposure (Hours)
Second	R5	Residential	Bedroom	W6	294°N	0
						1.9
				W7	294°N	1.3
						1.3
Second	R6	Residential	Bedroom	W8	294°N	1.3
				W9	204°	4.6
						5.6
Second	R7	Residential	Bedroom	W10	204°	4.6
						4.6
Second	R8	Residential	LKD	W11	204°	6.5
				W12	114°	0.9
				W13	114°	4.1
						9.5
Third	R6	Residential	Bedroom	W10	204°	4.6
				W11	114° Inc	1.5
				W12	114° Inc	1.5
						6.2
Second	R9	Residential	Bedroom	W14	114°	4.2
						4.2
Second	R10	Residential	Bedroom	W15	114°	3.4
						3.4
Second	R11	Residential	LKD	W16	114°	3.4
				W17	114°	2.2
						3.4
Second	R12	Residential	LKD	W18	114°	2
				W19	114°	3.4
						3.4
Second	R13	Residential	Bedroom	W20	114°	3.4
						3.4
Second	R14	Residential	Bedroom	W21	114°	4.2
						4.2
Second	R1	Residential	Bedroom	W1	294°N	1.3
				W26	24°N	0
						1.3
Second	R15	Residential	LKD	W22	114°	4.1
				W23	114°	1.5
				W24	24°N	0
						4.1
Second	R16	Residential	Bedroom	W25	24°N	0
						0
Third	R1	Residential	Bedroom	W1	24°N	0
				W2	114° Inc	1.5
				W3	114° Inc	1.5
						1.5
Third	R2	Residential	Bedroom	W4	294°N	1.3
						1.3
Third	R3	Residential	LKD	W5	294°N	0
				W6	294°N	2
						2
Fourth	R1	Residential	Bedroom	W1	294°N	0.1
						0.1
Fourth	R2	Residential	Bedroom	W2	294°N	0.1
				W3	204° Inc	4.8
						4.9
Third	R4	Residential	LKD	W7	294°N	2
				W8	294°N	0
						2
Third	R5	Residential	Bedroom	W9	294°N	1.3
						1.3
Fourth	R3	Residential	Bedroom	W4	294°N	0.1
				W6	24°N Inc	0
						0.1
Fourth	R4	Residential	Bedroom	W5	294°N	0.1
						0.1
Third	R7	Residential	Bedroom	W13	114°	4.2
						4.2
Third	R8	Residential	LKD	W14	114°	3.4
				W15	114°	3.4
				W16	114°	3
						3.4
Fourth	R5	Residential	Bedroom	W7	114°	3.4
						3.4
Fourth	R6	Residential	Bedroom	W8	114°	3.4
				W9	24°N Inc	0
						3.4
Third	R9	Residential	LKD	W17	114°	2.5
				W18	114°	3.4
				W19	114°	3.4
						3.4
Third	R10	Residential	Bedroom	W20	114°	4.2
						4.2

Floor Ref	Room Ref	Property Type	Room Use	Window Ref	Window Orientation	Proposed Sunlight Exposure (Hours)
Fourth	R7	Residential	Bedroom	W10	114°	3.4
				W12	204° Inc	4.8
						8.2
Fourth	R8	Residential	Bedroom	W11	114°	3.4
						3.4

Propose Block B

Ground	R1	Residential	Bedroom	W1	294°N	0.10
Ground	R2	Residential	LKD	W2	294°N	0.10
				W3	204°	3.20
				W16	294°N	0.10
						3.20
Ground	R3	Residential	Bedroom	W4	204°	5.40
						5.40
Ground	R4	Residential	LKD	W5	204°	3.60
Ground	R5	Residential	Bedroom	W14	24°N	0.00
						3.60
				W6	204°	4.20
						4.20
Ground	R6	Residential	LKD	W7	204°	3.90
Ground	R7	Residential	Bedroom	W13	24°N	0.00
						3.90
				W8	204°	6.50
						6.50
Ground	R8	Residential	Bedroom	W9	204°	4.00
Ground	R9	Residential	LKD	W10	204°	1.50
				W11	114°	2.00
				W15	114°	1.90
						3.20
Ground	R10	Residential	Bedroom	W12	24°N	0.00
First	R1	Residential	Bedroom	W1	294°N	0.10
						0.10
						0.10
						0.10
First	R2	Residential	LKD	W2	294°N	0.10
				W3	204°	3.20
				W19	294°N	0.10
						3.20
First	R3	Residential	Bedroom	W4	204°	5.40
						5.40
First	R4	Residential	LKD	W5	204°	3.80
First	R5	Residential	Bedroom	W17	24°N	0.00
						3.80
				W6	204°	5.00
						5.00
First	R6	Residential	LKD	W7	204°	3.70
First	R7	Residential	Bedroom	W16	24°N	0.00
						3.70
				W8	204°	5.30
						5.30
First	R8	Residential	LKD	W9	204°	3.90
First	R9	Residential	Bedroom	W15	24°N	0.00
						3.90
				W10	204°	6.50
						6.50
First	R10	Residential	Bedroom	W11	204°	5.30
First	R11	Residential	LKD	W12	204°	5.30
				W13	114°	3.40
				W18	114°	2.80
						2.90
First	R12	Residential	Bedroom	W14	23°N	5.90
						0.00
Second	R1	Residential	Bedroom	W1	294°N	0.10
Second	R2	Residential	LKD	W2	294°N	0.10
				W3	204°	6.70
				W19	294°N	0.10
						6.70
Second	R3	Residential	Bedroom	W4	204°	6.50
						6.50
Second	R4	Residential	LKD	W5	204°	6.70
Second	R5	Residential	Bedroom	W17	24°N	0.00
						6.70
				W6	204°	6.50
						6.50
Second	R6	Residential	LKD	W7	204°	6.70
				W16	24°N	0.00
						6.70

Floor Ref	Room Ref	Property Type	Room Use	Window Ref	Window Orientation	Proposed Sunlight Exposure (Hours)
Second	R7	Residential	Bedroom	W8	204°	5.60
Second	R8	Residential	LKD	W9	204°	6.70
				W15	24°N	0.00
Second	R9	Residential	Bedroom	W10	204°	6.70
						6.50
Second	R10	Residential	Bedroom	W11	204°	6.50
Second	R11	Residential	LKD	W12	204°	6.50
				W13	114°	6.70
				W18	114°	3.40
						3.40
Second	R12	Residential	Bedroom	W14	24°N	9.50
						0.00
						0.00

Propose Block M-01

Ground	R1	Residential	LKD	W1	24°N	0.00
				W2	294°N	0.00
				W3	204°	1.20
						1.20
Ground	R2	Residential	Bedroom	W4	294°N	0.00
				W5	204°	4.30
						4.30
Ground	R3	Residential	Bedroom	W6	204°	5.50
						5.50
Ground	R4	Residential	LKD	W7	204°	1.90
				W14	24°N	0.00
						1.90
Ground	R5	Residential	Bedroom	W8	204°	6.00
						6.00
Ground	R6	Residential	LKD	W9	204°	0.70
				W13	24°N	0.00
						0.70
Ground	R7	Residential	Bedroom	W10	294°N	0.00
				W11	204°	4.60
						4.60
Ground	R8	Residential	Bedroom	W12	204°	6.50
						6.50
First	R1	Residential	LKD	W1	24°N	0.00
				W2	294°N	0.00
				W3	204°	1.50
						1.50
First	R2	Residential	Bedroom	W4	294°N	0.00
				W5	204°	4.40
						4.40
First	R3	Residential	Bedroom	W6	204°	5.60
						5.60
First	R4	Residential	LKD	W7	204°	1.80
				W14	24°N	0.00
						1.80
First	R5	Residential	Bedroom	W8	204°	6.20
						6.20
First	R6	Residential	LKD	W9	204°	0.80
				W13	24°N	0.00
						0.80
First	R7	Residential	Bedroom	W10	294°N	0.10
				W11	204°	4.60
						4.60
First	R8	Residential	Bedroom	W12	204°	6.50
						6.50

Propose Block T-01

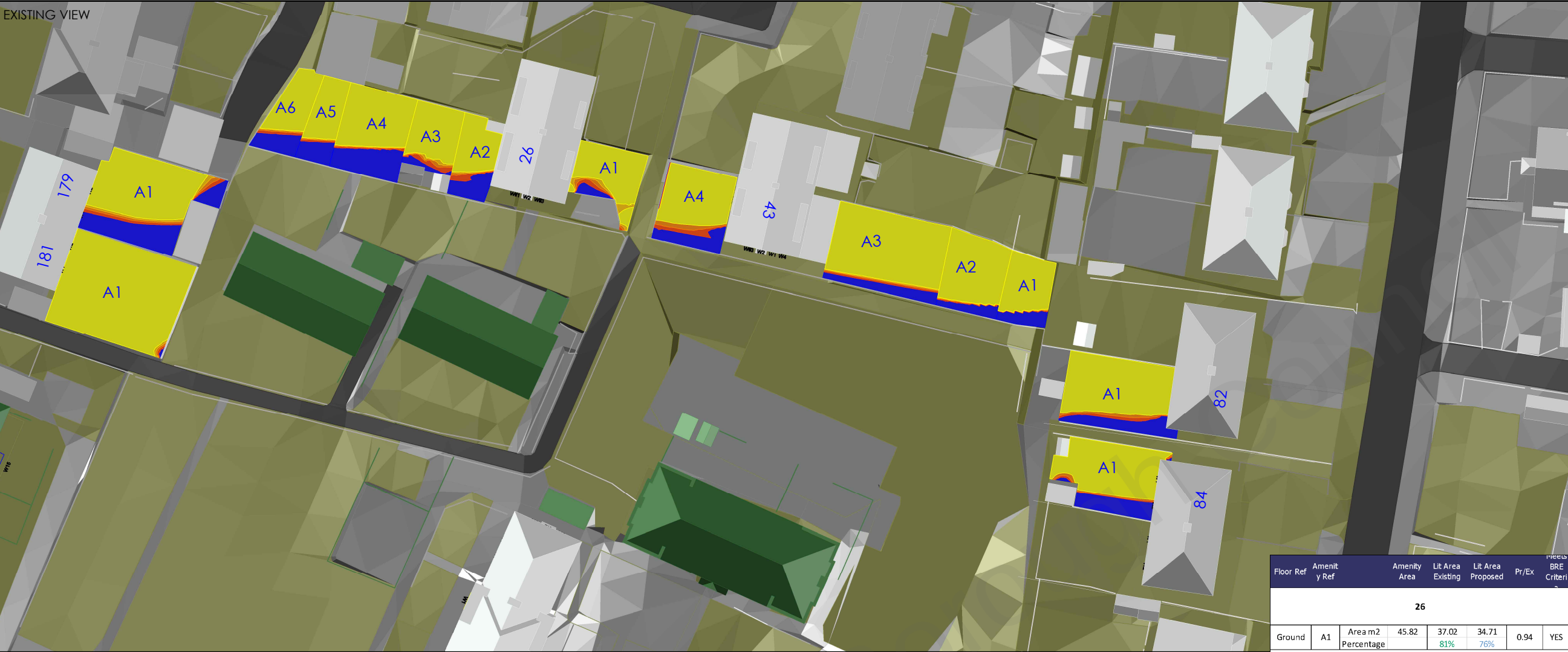
Ground	R1	Residential	KD	W1	193°	6.4
				W20	283°N	2.1
						7.1
Ground	R2	Residential	KD	W2	193°	5.9
						5.9
Ground	R3	Residential	KD	W3	193°	5.9
						5.9
Ground	R4	Residential	KD	W4	193°	5.9
						5.9
Ground	R5	Residential	KD	W5	193°	4.8
						4.8
Ground	R6	Residential	KD	W6	193°	6.1
				W7	103°	2
						6.9
Ground	R7	Residential	Living Room	W8	13°N	0
				W9	13°N	0

Floor Ref	Room Ref	Property Type	Room Use	Window Ref	Window Orientation	Proposed Sunlight Exposure (Hours)
Ground	R8	Residential	Living Room	W10	13°N	0
					13°N	0
					13°N	0
Ground	R9	Residential	Living Room	W12	13°N	0
					13°N	0
					13°N	0
Ground	R10	Residential	Living Room	W14	13°N	0
					13°N	0
					13°N	0
Ground	R11	Residential	Living Room	W16	13°N	0
					13°N	0
					13°N	0
Ground	R12	Residential	Living Room	W18	13°N	0
					13°N	0
					13°N	0
First	R1	Residential	Living Room	W1	193°	6.5
					193°	4.4
					193°	6.5
First	R2	Residential	Living Room	W2	192°	4
					192°	4
					192°	4
First	R3	Residential	Living Room	W3	193°	6.5
					193°	6.5
					193°	6.5
First	R4	Residential	Living Room	W4	191°	4.4
					191°	4.4
					191°	4.4
First	R5	Residential	Living Room	W5	192°	6.5
					192°	6.5
					192°	6.5
First	R6	Residential	Living Room	W6	193°	4.3
					193°	4.3
					193°	4.3
First	R7	Residential	Living Room	W7	193°	6.5
					193°	6.5
					193°	6.5
First	R8	Residential	Living Room	W8	192°	4.4
					192°	4.4
					192°	4.4
First	R9	Residential	Living Room	W9	193°	5.4
					193°	5.4
					193°	5.4
First	R10	Residential	Living Room	W10	193°	6.5
					193°	4.4
					193°	6.5
First	R11	Residential	Living Room	W11	103°	1.1
					13°N	0
					13°N	1.1
First	R12	Residential	Living Room	W13	13°N	0
					283°N	1
					283°N	1
Second	R1	Residential	Living Room	W1	283°N	1
					283°N	1
					283°N	1
Second	R2	Residential	Living Room	W2	193°	6.5
					193°	6.5
					193°	6.5
Second	R3	Residential	Living Room	W3	193°	6.5
					13°N Inc	0
					13°N Inc	6.5
Second	R4	Residential	Living Room	W4	193°	6.6
					13°N Inc	0
					13°N Inc	6.6
Second	R5	Residential	Living Room	W5	193°	6.5
					13°N Inc	0
					13°N Inc	6.5
Second	R6	Residential	Living Room	W6	193°	6.4
					13°N Inc	0
					13°N Inc	6.4
Second	R7	Residential	Living Room	W7	193°	6.5
					193°	6.5
					193°	6.5
Second	R8	Residential	Living Room	W8	103°	1.7
					103°	1.7
					103°	1.7

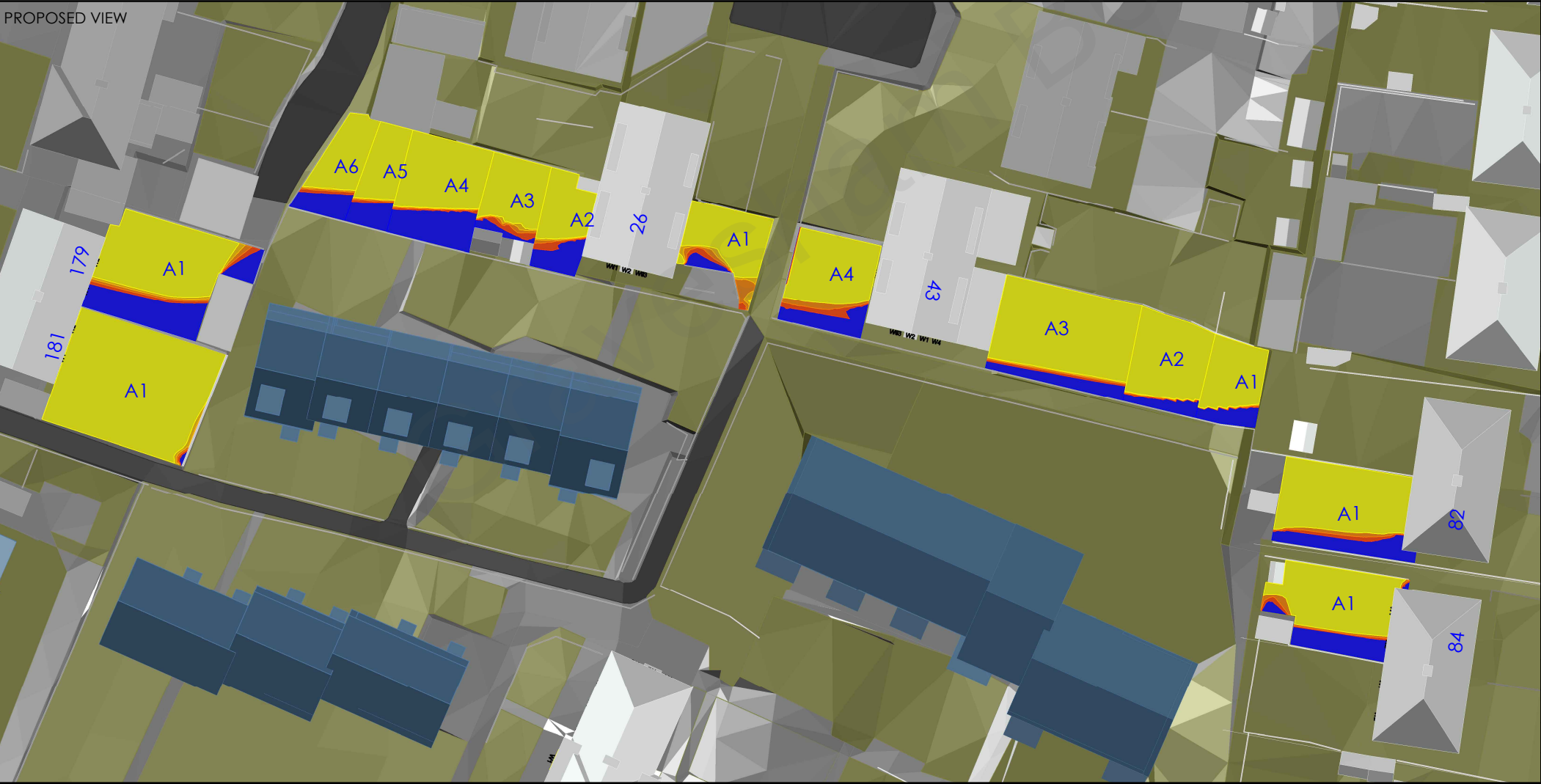
APPENDIX 4

Sunlight Amenity Results

EXISTING VIEW



PROPOSED VIEW



Floor Ref	Amenity y Ref		Amenity Area	Lit Area Existing	Lit Area Proposed	Pr/Ex	Meets BRE Criteria
26							
Ground	A1	Area m2	45.82	37.02	34.71	0.94	YES
		Percentage		81%	76%		
82							
Ground	A1	Area m2	99.15	72.02	71.45	0.99	YES
		Percentage		73%	72%		
84							
Ground	A1	Area m2	84.06	60.07	57.62	0.96	YES
		Percentage		71%	69%		
43							
Ground	A1	Area m2	38.76	30.74	30.53	0.99	YES
		Percentage		79%	79%		
179							
Ground	A1	Area m2	110.28	68.85	67.55	0.98	YES
		Percentage		62%	61%		
181							
Ground	A1	Area m2	144.62	143.22	142.09	0.99	YES
		Percentage		99%	98%		
26							
Ground	A2	Area m2	37.52	24.49	24.49	1.00	YES
		Percentage		65%	65%		
43							
Ground	A2	Area m2	56.70	49.06	49.06	1.00	YES
		Percentage		87%	87%		
26							
Ground	A3	Area m2	38.58	31.45	31.45	1.00	YES
		Percentage		82%	82%		
43							
Ground	A3	Area m2	108.55	92.01	92.01	1.00	YES
		Percentage		85%	85%		
26							
Ground	A4	Area m2	71.00	47.09	47.09	1.00	YES
		Percentage		66%	66%		
43							
Ground	A4	Area m2	64.44	45.08	44.98	1.00	YES
		Percentage		70%	70%		
26							
Ground	A5	Area m2	32.58	22.78	22.78	1.00	YES
		Percentage		70%	70%		
Ground	A6	Area m2	38.26	26.19	26.19	1.00	YES
		Percentage		68%	68%		

SOURCES OF INFORMATION:

BPTW
IR05 (RECEIVED 30.10.2022)

WALDRAMS LTD
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SITE PHOTOGRAPHS

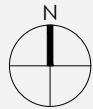
SURROUNDING PROPERTY INFORMATION

NOTES:

EXISTING SCENARIO SHOWN IN GREEN

PROPOSED SCENARIO SHOWN IN BLUE

- MORE THAN 2 HOURS OF SUN
- 1.5 TO 2 HOURS OF SUN
- 1 TO 1.5 HOURS OF SUN
- 0.5 TO 1 HOURS OF SUN
- LESS THAN 0.5 HOURS OF SUN



PROJECT
ST COLUMBA'S CLOSE
GRAVESEND DA12

DRAWING
AMENITY ANALYSIS
EXISTING VS PROPOSED SCENARIO

SCALE @ A3
1:500

DATE
17.10.2022

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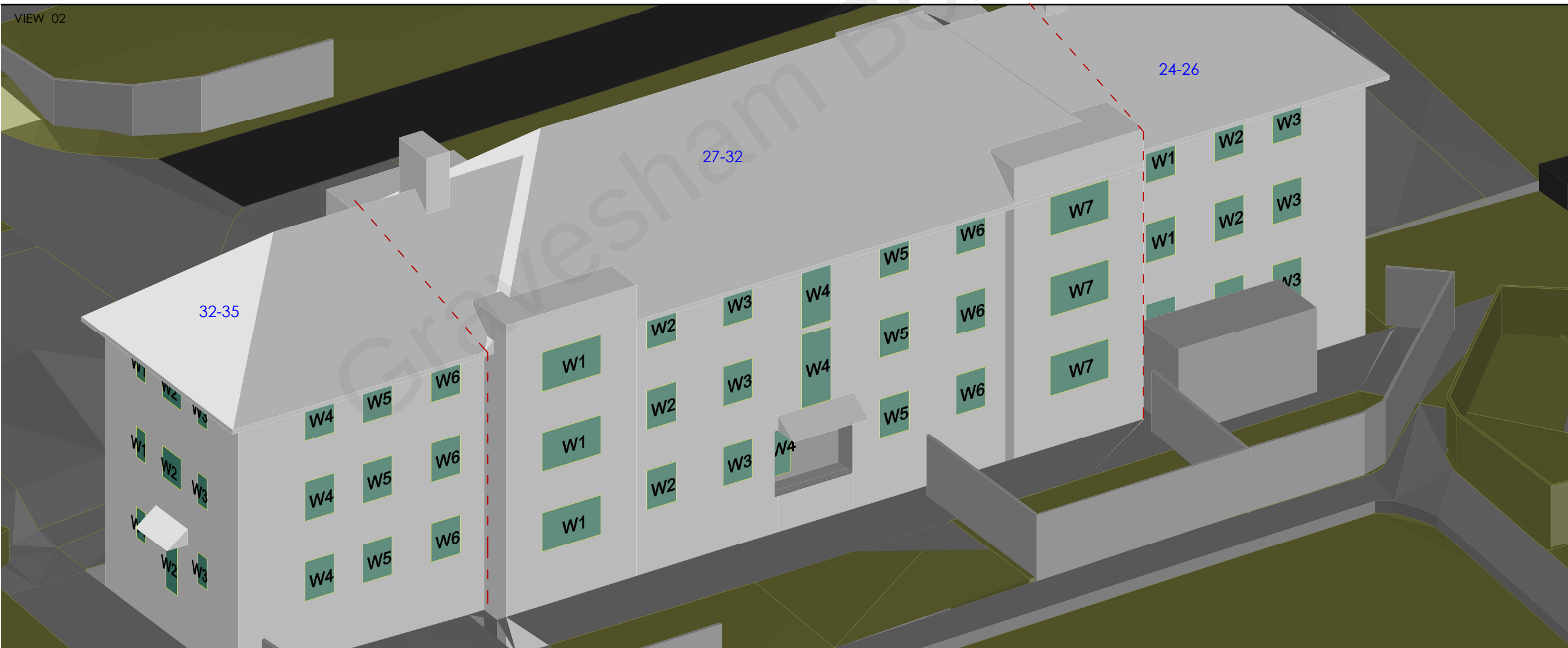
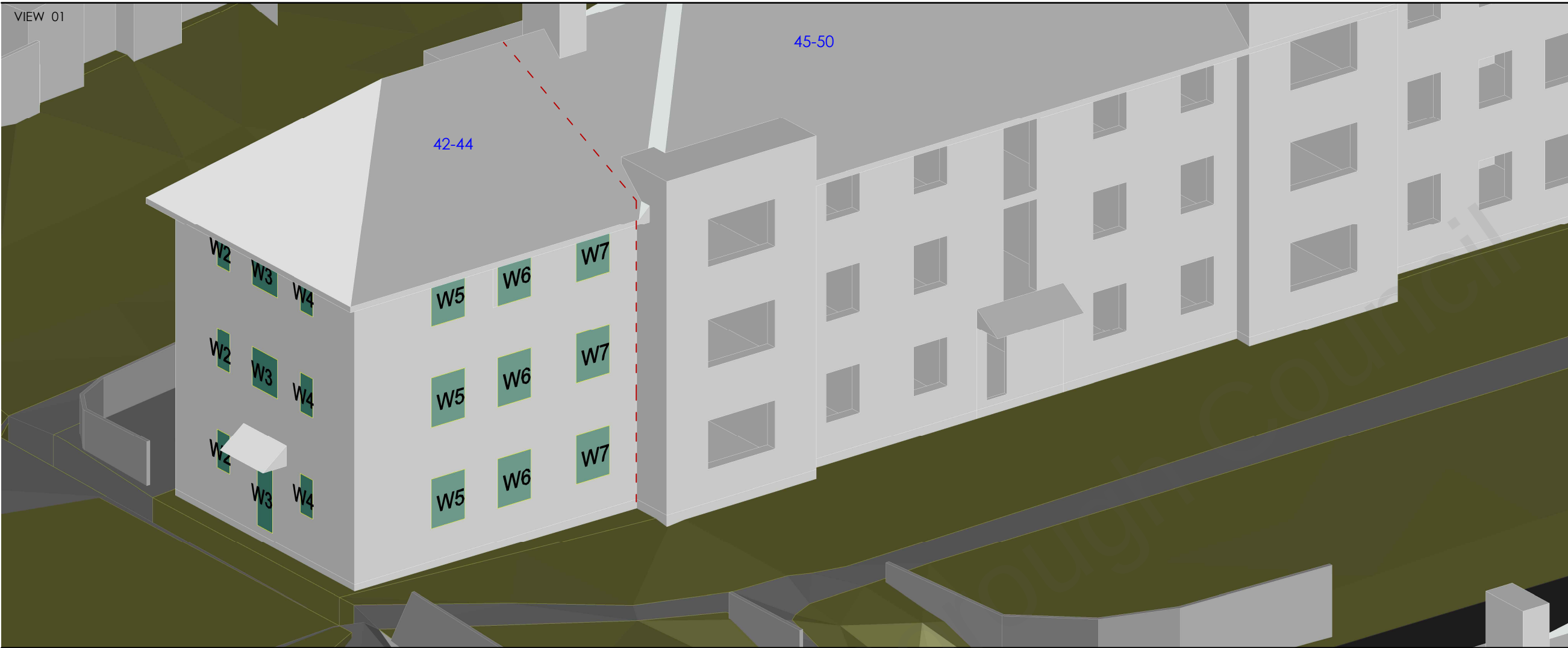
PROJECT No.
2747

REL No.- DWG No.
03-18

REL No.- DWG No.
03-19

APPENDIX 5

Window Maps



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SITE PHOTOGRAPHS

SURROUNDING PROPERTY INFORMATION



PROJECT
ST COLUMBA'S CLOSE
GRAVESEND DA12

DRAWING
WINDOW MAPS

SCALE @ A3
NTS

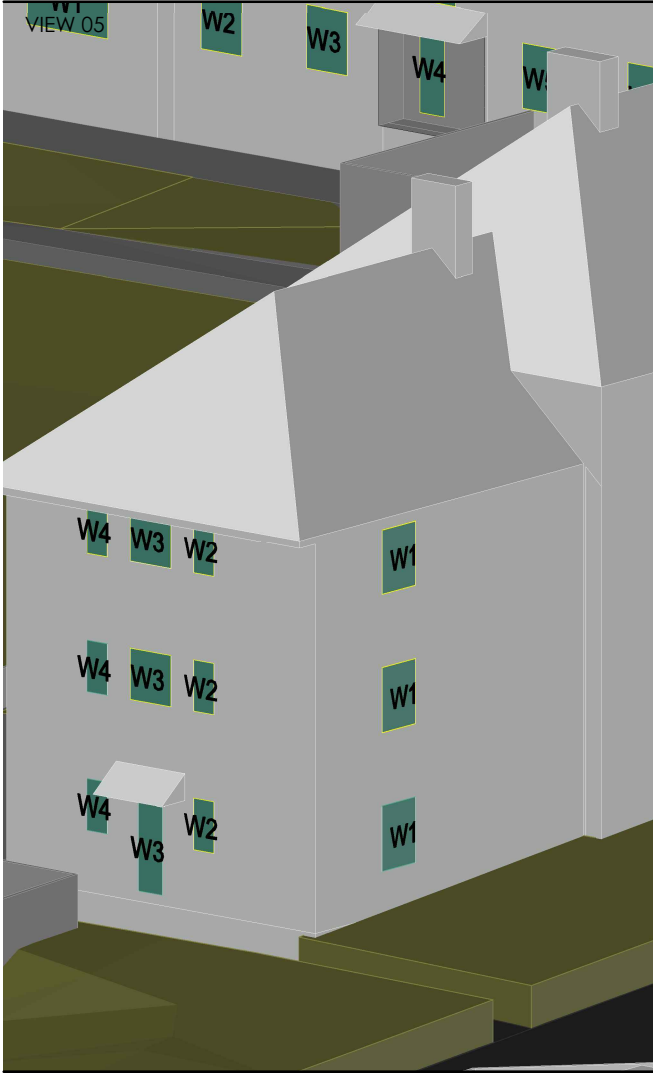
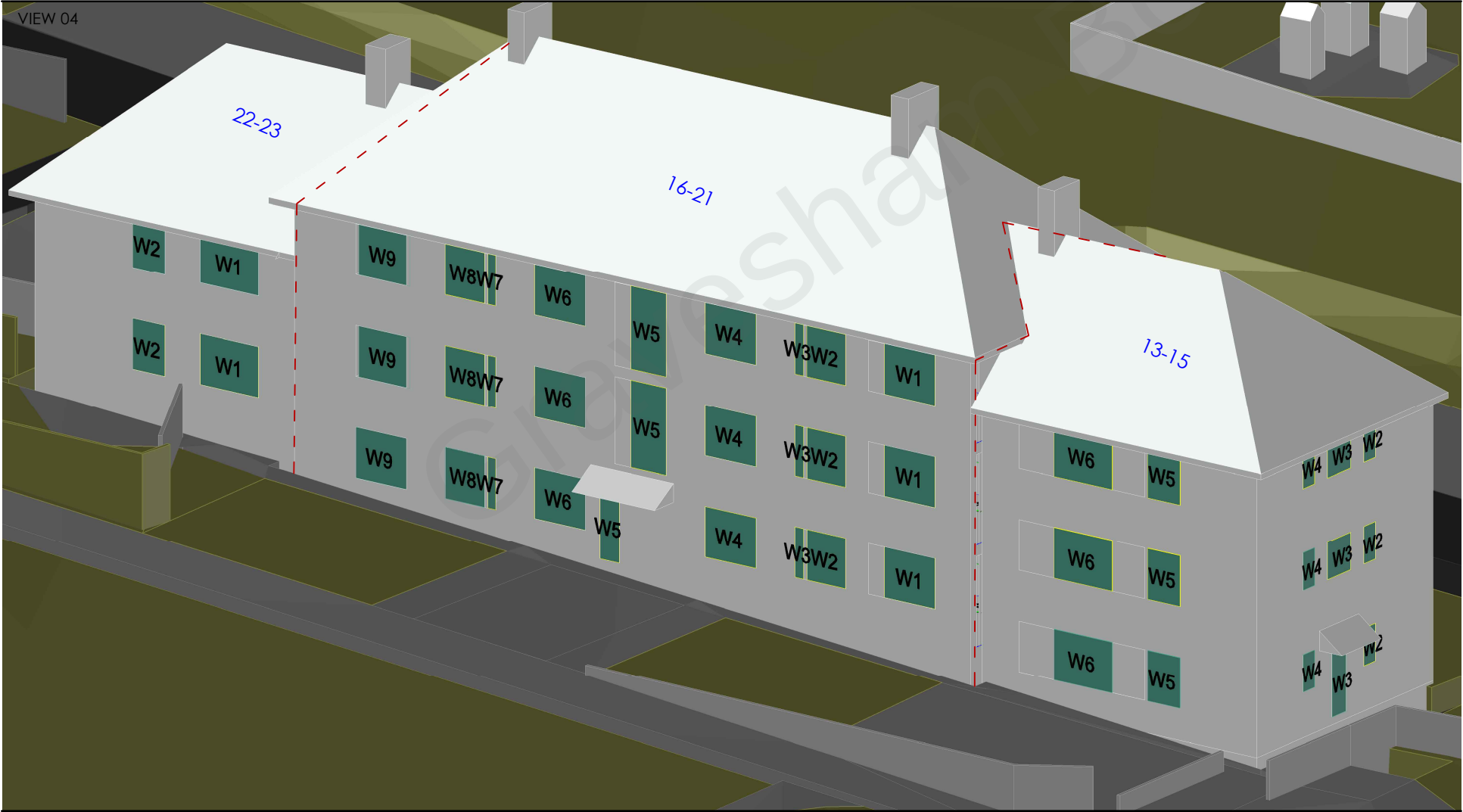
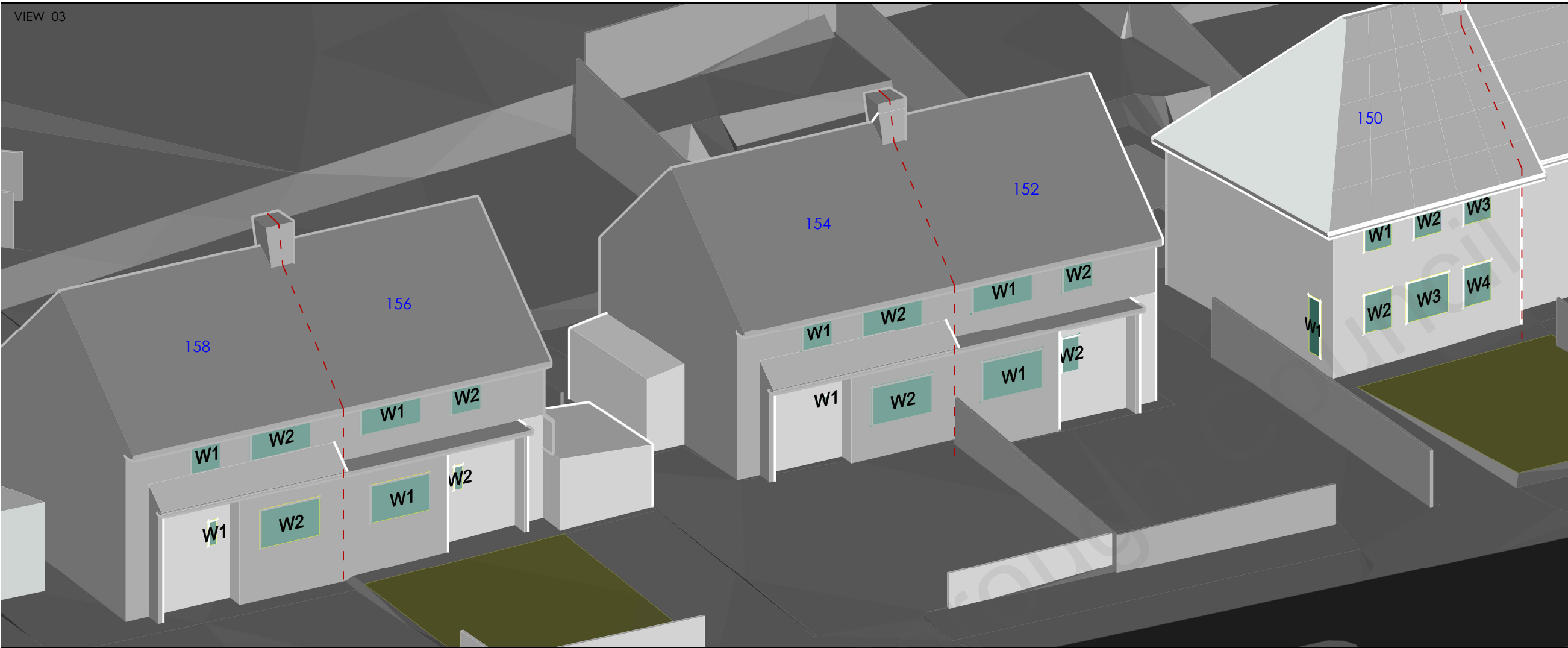
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DRAWING
WINDOW MAPS

SCALE @ A3
NTS

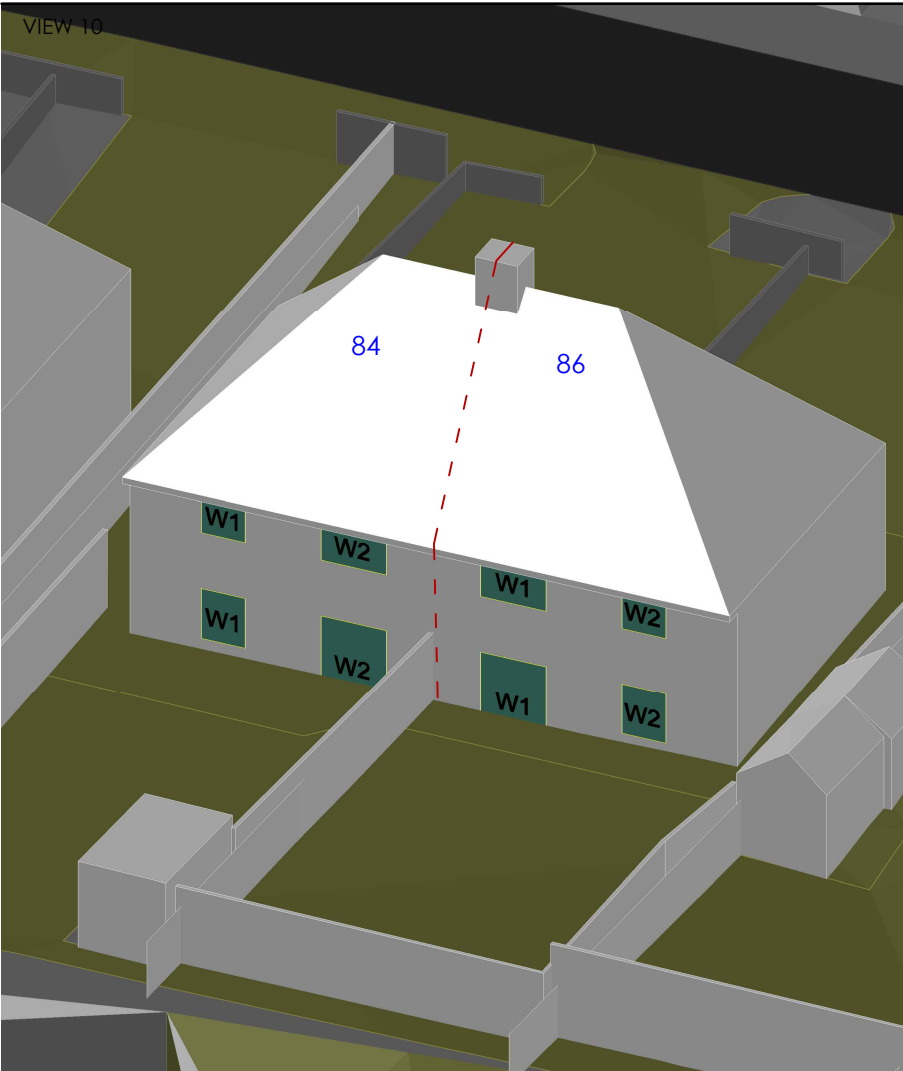
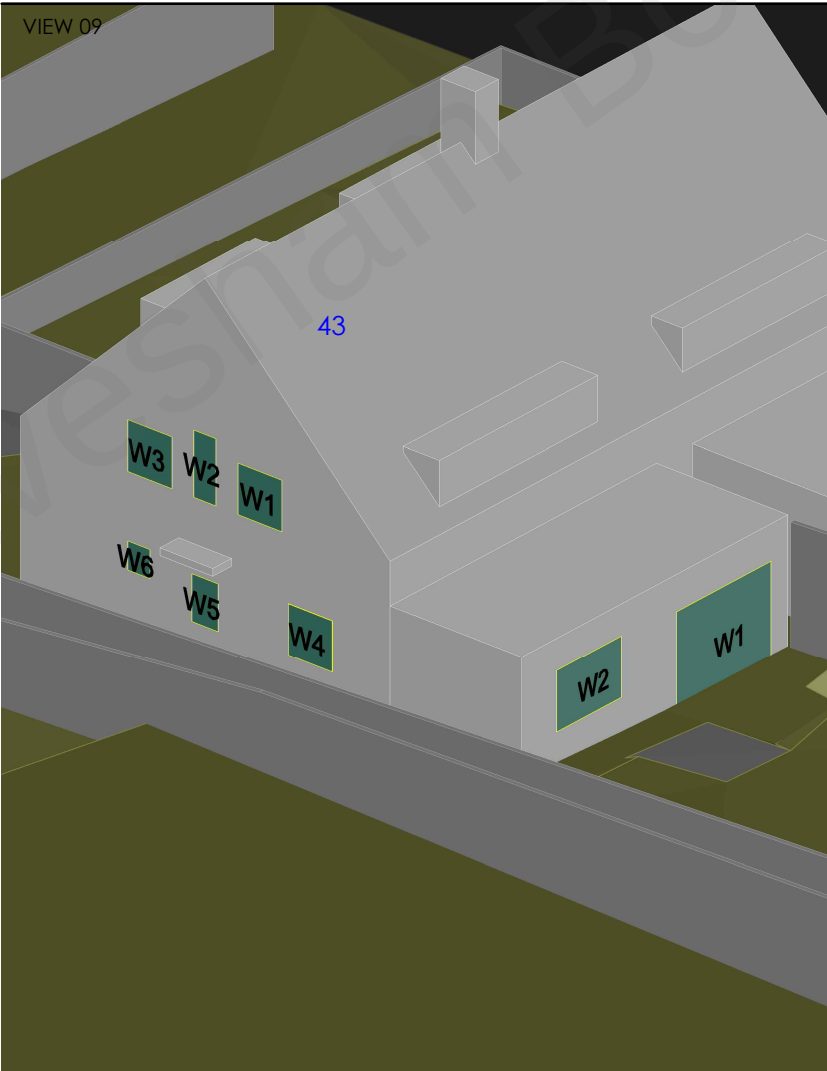
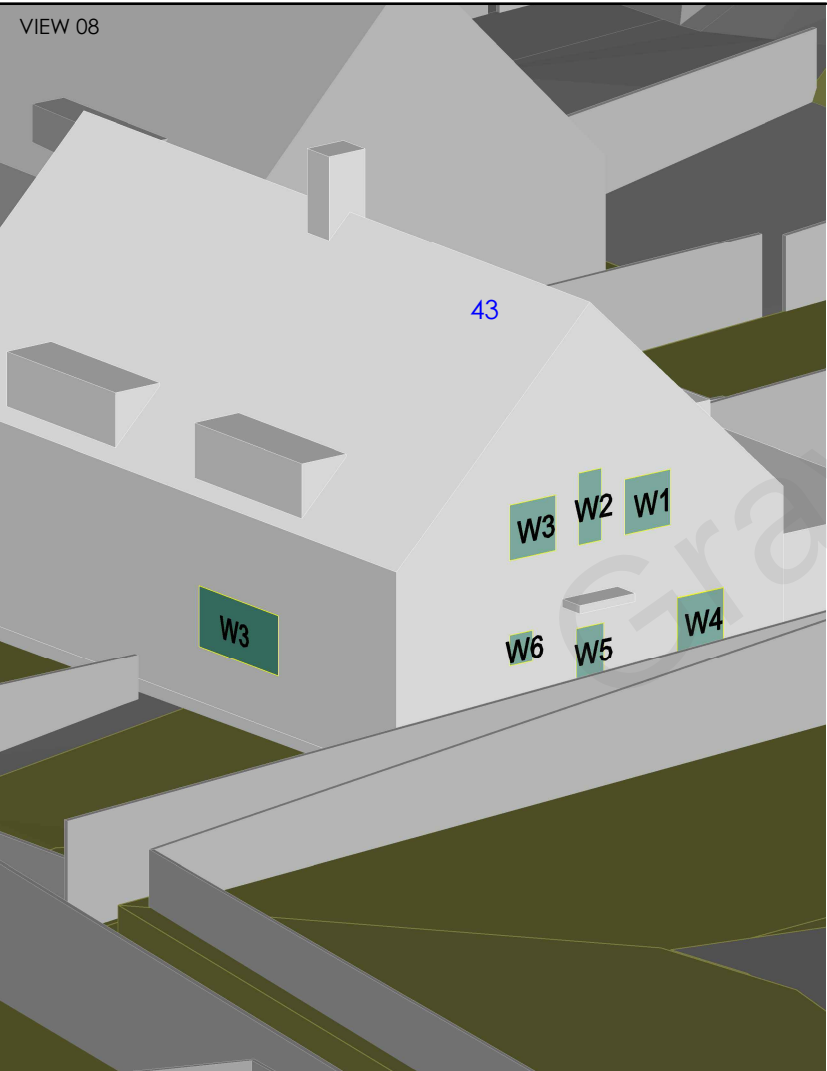
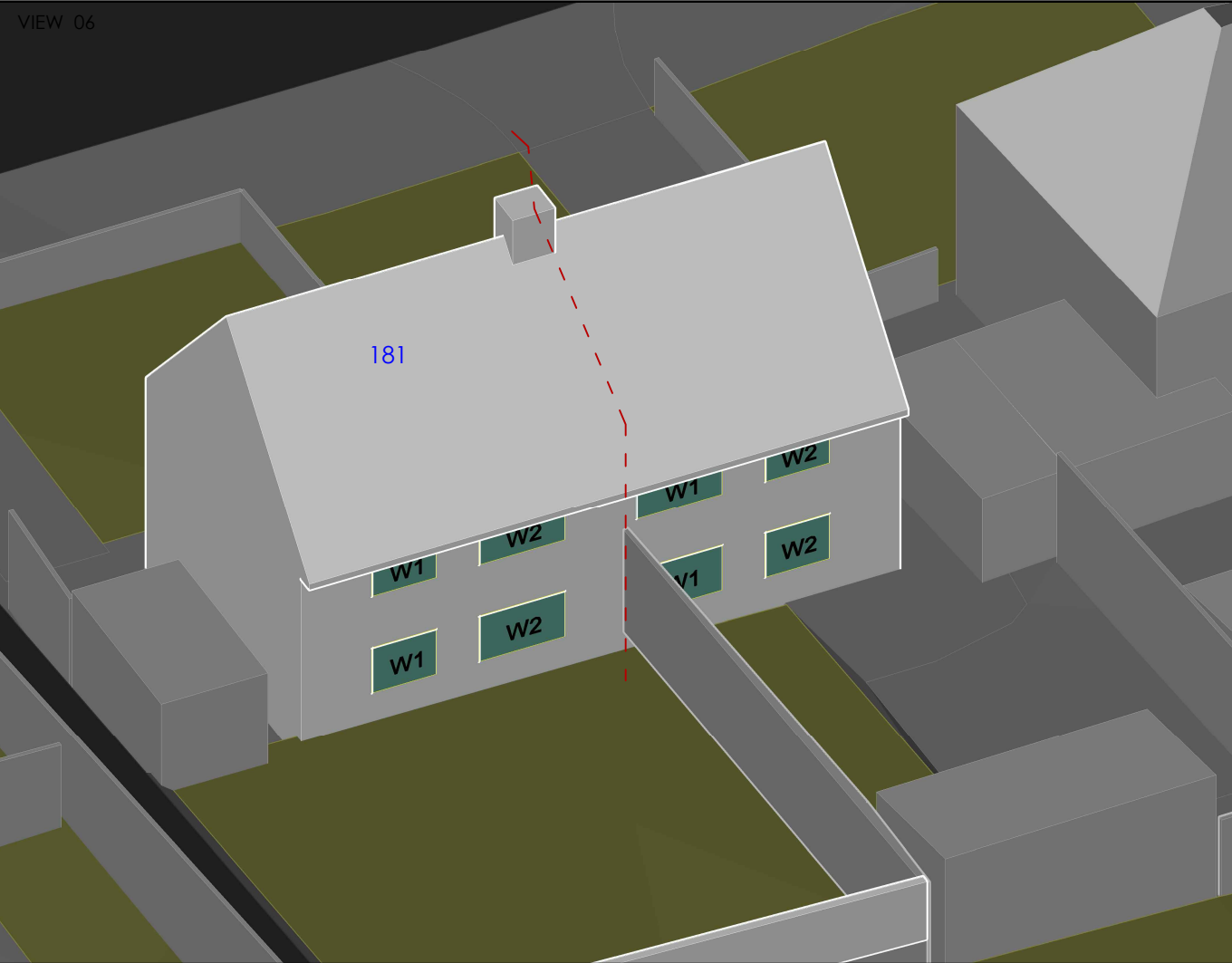
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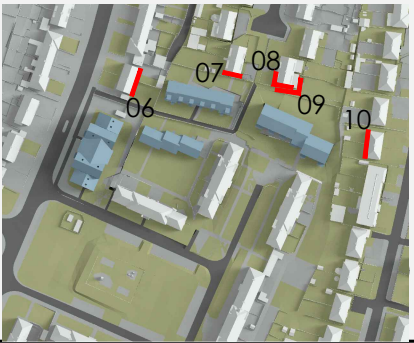
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DRAWING
WINDOW MAPS

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17.10.2022

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03-22

Gravesham Borough Council

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