

Analysis of site layout for
Sunlight And Daylight
Impact on neighbouring properties

DATE

OCTOBER 2023

ADDRESS

1-18 CENTRAL PARADE,
GUNNERSBURY LANE,
W3 8HL

Table of Contents

1. Introduction	3
2. Description of Proposed Development.....	3
3. Daylight and Sunlight Requirements	4
3.1. Regional Planning Policy	4
4. General.....	5
4.1. General Effects of New Development on Light to Neighbouring Windows	5
5. Criteria for Assessment of Daylight and Sunlight to Neighbouring Windows & Gardens	6
5.1. Daylight Assessment	6
5.2. Sunlight Assessment	7
5.3. Sunlight to Gardens.....	7
6. Daylight and Sunlight to Neighbouring Windows.....	8
7. Conclusion.....	12
References	12
Appendix A.....	13
Location Plan.....	13
Proposed Front Visualization	14
Proposed Rear Visualization	15
Appendix B	16
Figure 1: Rear Elevation of O'Day Court	16
Figure 2: 117 Gunnersbury Lane	17
Figure 3: Gunnersbury Court	18

1 - 18 Central Parade, Gunnersbury Lane, W3 8HL

Analysis of Site Layout with Regard to Daylight and Sunlight

1. Introduction

An application has been made for a development at the site known as 1-18 Central Parade, Acton, London, W3 8HL. The proposal outlines the erection of an upwards extension to the existing 3-storey mixed-use building in order to provide an additional twelve self-contained residential dwellings.

This daylight and sunlight assessment has been prepared to support the planning application for the proposed development.

The report assesses the proposal in regard to its effects on daylight and sunlight to the neighbouring windows. The report concludes that the proposal is acceptable and in accordance with the planning policy requirements in relation to daylight and sunlight for the assessed windows.

There is no existing specific National Planning Policy relating to the prospective impacts of developments on daylight and sunlight to their surrounding environment. However, the Building Research Establishment publication 'Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice' is the established National guidance to aid the developer to prevent or minimise the impact of a new development on the existing buildings and on the availability of daylight within the new proposals. The BRE guide has been revised and published a third edition in June 2022. It has been developed in conjunction with daylight and sunlight recommendations in the BS EN 17037:2018.

The 2022 document is referred to as the 'BRE Guide' in this report.

2. Description of Proposed Development

The development is situated at the junction between Bollo Lane and Gunnersbury Lane in the area of Acton, West London, and is located within the administrative boundaries of the Ealing Council.

The proposal is for the erection of two additional storeys to provide twelve flats.

The proposal is shown on the following floor plans by UPP Architects.

Location Plan	1-18CE-A-01-001
Block plans	1-18CE-A-01-002
Proposed Front Visualization	1-18CE-A-02-101
Proposed Rear Visualization	1-18CE-A-02-102
Proposed Ground Floor Plan	1-18CE-A-03-101
Proposed First Floor Plan	1-18CE-A-03-102
Proposed Second Floor Plan	1-18CE-A-03-103
Proposed Third Floor Plan	1-18CE-A-03-104
Proposed Fourth Floor Plan	1-18CE-A-03-105
Proposed Roof Plan	1-18CE-A-03-106
Proposed Section A-A'	1-18CE-A-05-101
Proposed Section B-B'	1-18CE-A-05-102

Proposed Elevation	1-18CE-A-06-101
Proposed Elevation	1-18CE-A-06-102
Proposed Elevation	1-18CE-A-06-103
Proposed Elevation	1-18CE-A-06-104
Proposed Street Visualization	1-18CE-A-02-103

take into account local circumstances; the need to optimise housing capacity; and scope for the character and form of an area to change over time.

1.3.46 The degree of harm on adjacent properties and the daylight targets within a proposed scheme should be assessed drawing on broadly comparable residential typologies within the area and of a similar nature across London. Decision makers should recognise that fully optimising housing potential on large sites may necessitate standards which depart from those presently experienced, but which still achieve satisfactory levels of residential amenity and avoid unacceptable.”

3. Daylight and Sunlight Requirements

3.1. Regional Planning Policy

The Mayor of London Supplementary Planning Guidance Housing (2016) makes recommendations that the BRE Guide should be applied sensitively to higher density development in London, particularly in central and urban areas.

“1.3.45 Policy 7.6Bd requires new development to avoid causing ‘unacceptable harm’ to the amenity of surrounding land and buildings, particularly in relation to privacy and overshadowing and where tall buildings are proposed. An appropriate degree of flexibility needs to be applied when using BRE guidelines to assess the daylight and sunlight impacts of new development on surrounding properties, as well as within new developments themselves. Guidelines should be applied sensitively to higher density development, especially in opportunity areas, town centres, large sites and accessible locations, where BRE advice suggests considering the use of alternative targets. This should

The SPG includes Standard 32 regarding direct sunlight

Standard 32 - All homes should provide for direct sunlight to enter at least one habitable room for part of the day. Living areas and kitchen dining spaces should preferably receive direct sunlight

“2.3.45 Daylight enhances residents’ enjoyment of an interior and reduces the energy needed to provide light for everyday activities, while controlled sunlight can help to meet part of the winter heating requirement. Sunlight is particularly desirable in living areas and kitchen dining spaces. The risk of overheating should be taken into account when designing for sunlight alongside the need to ensure appropriate levels of privacy. In

addition to the above standards, BRE good practice guidelines and methodology¹⁴⁶ can be used to assess the levels of daylight and sunlight achieved within new developments, taking into account guidance below and in Section 1.3.

2.3.46 Where direct sunlight cannot be achieved in line with Standard 32, developers should demonstrate how the daylight standards proposed within a scheme and individual units will achieve good amenity for residents. They should also demonstrate how the design has sought to optimise the amount of daylight and amenity available to residents, for example, through the design, colour and landscaping of surrounding buildings and spaces within a development.

2.3.47 BRE guidelines on assessing daylight and sunlight should be applied sensitively to higher density development in London, particularly in central and urban settings, recognising the London Plan's strategic approach to optimise housing output (Policy 3.4) and the need to accommodate additional housing supply in locations with good accessibility suitable for higher density development (Policy 3.3). Quantitative standards on daylight and sunlight should not be applied rigidly, without carefully considering the location and context and standards experienced in broadly comparable housing typologies in London."

4. General

4.1. General Effects of New Development on Light to Neighbouring Windows

Appendix A of this report is a site plan showing the development and its nearby buildings.

To the north side of the proposed development, is 115 Gunnersbury Lane, O'Day Court. O'Day Court has some rear and side windows facing the development all these windows are analysed in this report.

To the rear of O'Day Court is 117 Gunnersbury Lane. There are five windows on the elevation facing the proposed development, all these windows are analysed in this report.

On the south side of the proposed development is 1-25 Gunnersbury Court. There are many windows on its rear elevation facing the development. All these windows are analysed in this report.

The opposite side of Bollo Lane is the Acton Town underground station. There are no residential windows facing the development therefore no analysis is necessary.

On the other side of Gunnersbury Lane is Brook House. The ridge height of the proposed development above the middle point of the ground floor windows will be 14m. The angle subtended from the middle of the windows is 23 degrees above the horizontal. The BRE Guide states that there is no significant loss of light where buildings are below the 25-degree line and therefore no further analysis is necessary.

5. Criteria for Assessment of Daylight and Sunlight to Neighbouring Windows & Gardens

5.1. Daylight Assessment

The impacts of a development on daylight and sunlight to nearby buildings is considered using the Building Research Establishment (BRE) criteria. The principal measure of the impacts on daylight is the Vertical Sky Component (VSC) test.

The BRE Guide recommends that a room with 27% VSC or at least 80% of the former value will be adequately lit. In cases where rooms are lit by more than one window the average of their VSC should be taken.

“2.2.6 Any reduction in the total amount of skylight can be calculated by finding the VSC at the centre of each main window. In the case of a floor-to-ceiling window such as a patio door, a point 1.6 m above ground 15 (or balcony level for an upper storey) on the centre line of the window may be used. For a bay window, the centre window facing directly outwards can be taken as the main window. If a room has two or more windows of equal size, the mean of their VSCs may be taken. The reference point is in the external plane of the window wall. Windows to bathrooms, toilets, storerooms, circulation areas, and garages need not be analysed. The VSC can be found by using the skylight indicator (Figure A1 in Appendix A) or Waldram Diagram (Figure B1 in Appendix B), or appropriate computer software.

2.2.7 If this VSC is greater than 27% then enough skylight should still be reaching the window of the existing building. This value of VSC typically supplies enough daylight to a standard room when combined with a window of normal dimensions, with glass area around 10% or more of the floor area. Any reduction below this level should be kept to a minimum. If the VSC, with the new development in place, is both less than 27% and less than 0.80 times its former value, occupants of the existing building will notice the reduction in the amount of skylight. The area lit by the window is likely to appear gloomier, and electric lighting will be needed more of the time. In presenting results, ratios of VSC should be given to at least two decimal places (for example 0.79 or 0.81) or as the equivalent percentage loss (for example 21% or 19%).

2.2.8 If there would be a significant loss of light to the main window but the room also has one or more smaller windows, an overall VSC may be derived by weighting each VSC element in accordance with the proportion of the total glazing area represented by its window. For example, a room has a main window of area 2 m² whose VSC would drop from 24% to 18%, 0.75 times the value before. However, it also has a smaller window, area 1 m², for which the VSC would be unchanged at 30%. The area weighted VSC ‘before’ would be $(24 \times 2 + 30) / 3 = 26\%$. ‘After’ it would be $(18 \times 2 + 30) / 3 = 22\%$, 0.85 times the value ‘before’. Thus, loss of VSC to the room as a whole would meet the guideline. This method would

only be appropriate in situations where the windows light the same areas of the room. It should not be used in situations such as a through lounge more than 5m from window to window, where, for example, a loss of light to the front windows and front portion of the room may not be mitigated by daylight from the rear windows.”

5.2. Sunlight Assessment

The acceptable level of sunlight to adjoining properties is evaluated using BRE Guide Annual Probable Sunlight Hours (APSH) test. The acceptability criteria are greater than 25% for the whole year or more than 5% between 21st September and 21st March. Where a development causes reduction below these values, the reduction should not be greater than 20% of former value.

“3.2.6 If a room can receive more than one quarter of annual probable sunlight hours (APSH), including at least 5% of APSH in the winter months between 21 September and 21 March, then it should still receive enough sunlight. Also, if the overall annual loss of APSH is 4% or less, the loss of sunlight is small. The sunlight availability indicators (Figures A2, A3 and A4) in Appendix A can be used to check this.

3.2.7 Any reduction in sunlight access below these levels should be kept to a minimum. If the available sunlight hours are both less than the amount above and less than 0.80 times their former value, either over the whole year or just in the winter months (21

September to 21 March), and the overall annual loss is greater than 4% of APSH, then the occupants of the existing building will notice the loss of sunlight; the room may appear colder and less cheerful and pleasant. In presenting results, ratios of sunlight hours should be given to at least two decimal places (for example 0.79 or 0.81) or as the equivalent percentage loss (for example 21% or 19%).

3.2.8 Care needs to be taken in applying this guideline to rooms with multiple windows. Except where the windows are in opposite walls, the annual probable sunlight hours cannot simply be added together. If the calculation method used does not avoid double counting of sunlight through multiple windows, the annual probable sunlight hours for the best sunlit window should be taken. “

5.3. Sunlight to Gardens

The BRE Guide recommends for a garden to appear adequately sunlit throughout the year, at least half of a garden or amenity area should receive at least two hours of sunlight on 21 March. If as a result of new development an existing garden or amenity area does not meet the above, and the area that can receive two hours of sun on 21 March is less than 0.80 times its former value, then the loss of sunlight is likely to be noticeable.

“3.3.7 As a check, it is recommended that at least half of the amenity areas listed above should receive at least two hours of sunlight on 21 March. It is instructive to draw the ‘two hours sun contour’ that marks this area on plan,

because the use of specific parts of a site can be planned with sunlight in mind. This could include reserving the sunniest parts of the site for gardens and sitting out, while using the shadier areas for car parking (in summer, shade is often valued in car parks). (Figure 30). If a detailed calculation cannot be carried out, and the area is a simple shape, it is suggested that the centre of the area should receive at least two hours of sunlight on 21 March.

3.3.8 Locations that can and cannot receive two or more hours of sunlight on 21 March may be found using specialist software. The space is divided into a grid of points with a recommended spacing of 0.3 m or less, and the proportion of these points that can receive two hours of sunlight on March 21 is computed. It is possible to carry out a check for the centre of an area by using the sun path indicator, which has a line for 21 March (see Appendix A). Sunlight at an altitude of 10° or less does not count, because it is likely to be blocked by low-level planting anyway. In working out the total area to be considered, driveways and hard standing for cars should be left out. Around housing, front gardens that are relatively small and visible from public footpaths should be omitted; only the main back garden should be analysed. Each individual garden for each dwelling in a block should be considered separately.

3.3.11 The above guidance applies both to new gardens and amenity areas and to existing ones that are

affected by new developments. If an existing garden or outdoor space is already heavily obstructed, then any further loss of sunlight should be kept to a minimum. In this poorly sunlit case, if as a result of new development the area that can receive two hours of direct sunlight on 21 March is reduced to less than 0.80 times its former size, then this further loss of sunlight is significant. The garden or amenity area will tend to look more heavily overshadowed.”

6. Daylight and Sunlight to Neighbouring Windows

Figures 1-3 show the elevation of the neighbouring buildings that face towards the proposed development. The windows are numbered for reference.

The BRE Guide recommends that daylight is satisfactory provided the sky component is greater than 27% or 80% of its former value. For sunlight, the Guide recommends using the Annual Probable Sunlight Hours (APSH). The acceptability criteria are greater than 25% for the whole year and more than 5% between 21st September and 21st March. Where a development causes a reduction below these values, the reduction should not be greater than 20% of its former value. The BRE Guide recommends that north-facing windows be analysed for daylight only.

The vertical sky component (VSC) for windows is evaluated by the method described in Appendix B of the BRE Guide using the Waldram Sky availability indicator diagram.

Below is are two tables demonstrating the existing, proposed daylight and sunlight values

as well as the percentage of their former values.

Daylight

Building Name	Vertical Sky Component					Meets BRE Criteria
	Floor Name	Window Name	VSC Existing	VSC Proposed	Pr/Ex	
O'Day Court	Ground	W1	16.19	15.92	98%	YES
O'Day Court	Ground	W2	20.05	17.21	86%	YES
O'Day Court	Ground	W3	23.03	19.54	85%	YES
O'Day Court	First	W1	18.21	18.02	99%	YES
O'Day Court	First	W2	23.39	20.15	86%	YES
O'Day Court	First	W3	26.82	23.03	86%	YES
O'Day Court	Second	W1	19.94	19.81	99%	YES
O'Day Court	Second	W2	26.99	23.53	87%	YES
O'Day Court	Second	W3	30.04	26.53	88%	YES
O'Day Court	Third	W1	20.95	20.88	100%	YES
O'Day Court	Third	W2	27.78	25.25	91%	YES
O'Day Court	Third	W3	30.41	27.68	91%	YES
117 Gunnersbury Lane	First	W1	37.25	36.08	97%	YES
117 Gunnersbury Lane	Second	W2	39.18	38.54	98%	YES
117 Gunnersbury Lane	Third	W3	39.59	39.59	100%	YES
117 Gunnersbury Lane	Fourth	W4	39.62	39.62	100%	YES
117 Gunnersbury Lane	Fifth	W5	39.62	39.62	100%	YES
Gunnersbury Court	Ground	W1	23.64	19.95	84%	YES
Gunnersbury Court	Ground	W2	26.02	22.45	86%	YES
Gunnersbury Court	Ground	W3	29.03	26.52	91%	YES
Gunnersbury Court	Ground	W4	28.85	26.92	93%	YES
Gunnersbury Court	First	W1	28.02	23.04	82%	YES
Gunnersbury Court	First	W2	29.97	25.49	85%	YES
Gunnersbury Court	First	W3	31.53	29.23	93%	YES
Gunnersbury Court	First	W4	31.18	29.4	94%	YES
Gunnersbury Court	Second	W1	32.94	27.15	82%	YES
Gunnersbury Court	Second	W2	33.65	29.17	87%	YES
Gunnersbury Court	Second	W3	33.92	31.9	94%	YES
Gunnersbury Court	Second	W4	33.41	31.82	95%	YES

Gunnersbury Court	Third	W1	36.84	32.15	87%	YES
Gunnersbury Court	Third	W2	36.74	33.32	91%	YES
Gunnersbury Court	Third	W3	36.21	34.52	95%	YES
Gunnersbury Court	Third	W4	35.58	34.2	96%	YES
Gunnersbury Court	Fourth	W1	38.8	37.15	96%	YES
Gunnersbury Court	Fourth	W2	38.6	37.14	96%	YES
Gunnersbury Court	Fourth	W3	37.83	36.88	97%	YES
Gunnersbury Court	Fourth	W4	37.23	36.45	98%	YES
Gunnersbury Court	Fifth	W1	39.17	39.17	100%	YES
Gunnersbury Court	Fifth	W2	39.04	39.04	100%	YES
Gunnersbury Court	Fifth	W3	38.53	38.53	100%	YES
Gunnersbury Court	Fifth	W4	38.12	38.12	100%	YES

Sunlight

Building Name	Annual Probable Sunlight Hours									
	Floor Name	Window Name	Annual Ex	Annual Pr	Pr/Ex	Meets BRE Criteria	Winter Ex	Winter Pr	Pr/Ex	Meets BRE Criteria
117 Gunnersbury Lane	First	W1	49	47	North	YES	15	13	North	YES
117 Gunnersbury Lane	Second	W2	50	50	North	YES	15	15	North	YES
117 Gunnersbury Lane	Third	W3	50	50	North	YES	15	15	North	YES
117 Gunnersbury Lane	Fourth	W4	50	50	North	YES	15	15	North	YES
117 Gunnersbury Lane	Fifth	W5	50	50	North	YES	15	15	North	YES
Gunnersbury Court	Ground	W1	16	16	North	YES	2	2	North	YES
Gunnersbury Court	Ground	W2	14	13	North	YES	2	2	North	YES
Gunnersbury Court	Ground	W3	12	8	North	YES	2	2	North	YES
Gunnersbury Court	Ground	W4	12	8	North	YES	1	1	North	YES
Gunnersbury Court	First	W1	16	16	North	YES	2	2	North	YES

Gunnersbury Court	First	W2	14	14	North	YES	2	2	North	YES
Gunnersbury Court	First	W3	15	11	North	YES	2	2	North	YES
Gunnersbury Court	First	W4	15	13	North	YES	1	1	North	YES
Gunnersbury Court	Second	W1	19	19	North	YES	2	2	North	YES
Gunnersbury Court	Second	W2	18	15	North	YES	2	2	North	YES
Gunnersbury Court	Second	W3	17	13	North	YES	2	2	North	YES
Gunnersbury Court	Second	W4	19	17	North	YES	2	2	North	YES
Gunnersbury Court	Third	W1	20	19	North	YES	2	2	North	YES
Gunnersbury Court	Third	W2	20	17	North	YES	2	2	North	YES
Gunnersbury Court	Third	W3	20	19	North	YES	2	2	North	YES
Gunnersbury Court	Third	W4	20	19	North	YES	2	2	North	YES
Gunnersbury Court	Fourth	W1	21	21	North	YES	2	2	North	YES
Gunnersbury Court	Fourth	W2	21	20	North	YES	2	2	North	YES
Gunnersbury Court	Fourth	W3	21	21	North	YES	2	2	North	YES
Gunnersbury Court	Fourth	W4	21	21	North	YES	2	2	North	YES
Gunnersbury Court	Fifth	W1	21	21	North	YES	2	2	North	YES
Gunnersbury Court	Fifth	W2	21	21	North	YES	2	2	North	YES
Gunnersbury Court	Fifth	W3	21	21	North	YES	2	2	North	YES
Gunnersbury Court	Fifth	W4	21	21	North	YES	2	2	North	YES
O'Day Court	Ground	W1	33	29	88%	YES	9	5	56%	YES
O'Day Court	Ground	W2	49	42	86%	YES	16	12	75%	YES
O'Day Court	Ground	W3	52	43	83%	YES	16	13	81%	YES

O'Day Court	First	W1	35	34	97%	YES	11	10	91%	YES
O'Day Court	First	W2	55	49	89%	YES	19	16	84%	YES
O'Day Court	First	W3	56	48	86%	YES	18	14	78%	YES
O'Day Court	Second	W1	37	37	100%	YES	13	13	100%	YES
O'Day Court	Second	W2	55	51	93%	YES	21	18	86%	YES
O'Day Court	Second	W3	60	55	92%	YES	21	17	81%	YES
O'Day Court	Third	W1	35	35	100%	YES	14	14	100%	YES
O'Day Court	Third	W2	64	62	97%	YES	25	23	92%	YES
O'Day Court	Third	W3	67	66	99%	YES	25	24	96%	YES

As shown in the tables above, the reduction in daylight and sunlight to all neighbouring windows is better than the recommendations of the BRE Guide. They all remain above 80% of their former value.

7. Conclusion

The proposal for an upward two-storey extension to 1-18 Central Parade results in a small reduction of daylight and sunlight to the neighbouring windows.

The reduction of daylight and sunlight to the neighbouring windows will all be far below the

20% maximum recommended by the BRE Guide.

The analysis of daylight and sunlight in this report shows that the reduction of light to neighbouring windows will be in compliance with the recommendations of the Building Research Establishment publication 'Site Layout and Planning for Daylight and Sunlight, a Guide to Good Practice' 2022, the London Plan and the standard planning requirements.

Harry Morgan

16th October 2023

References

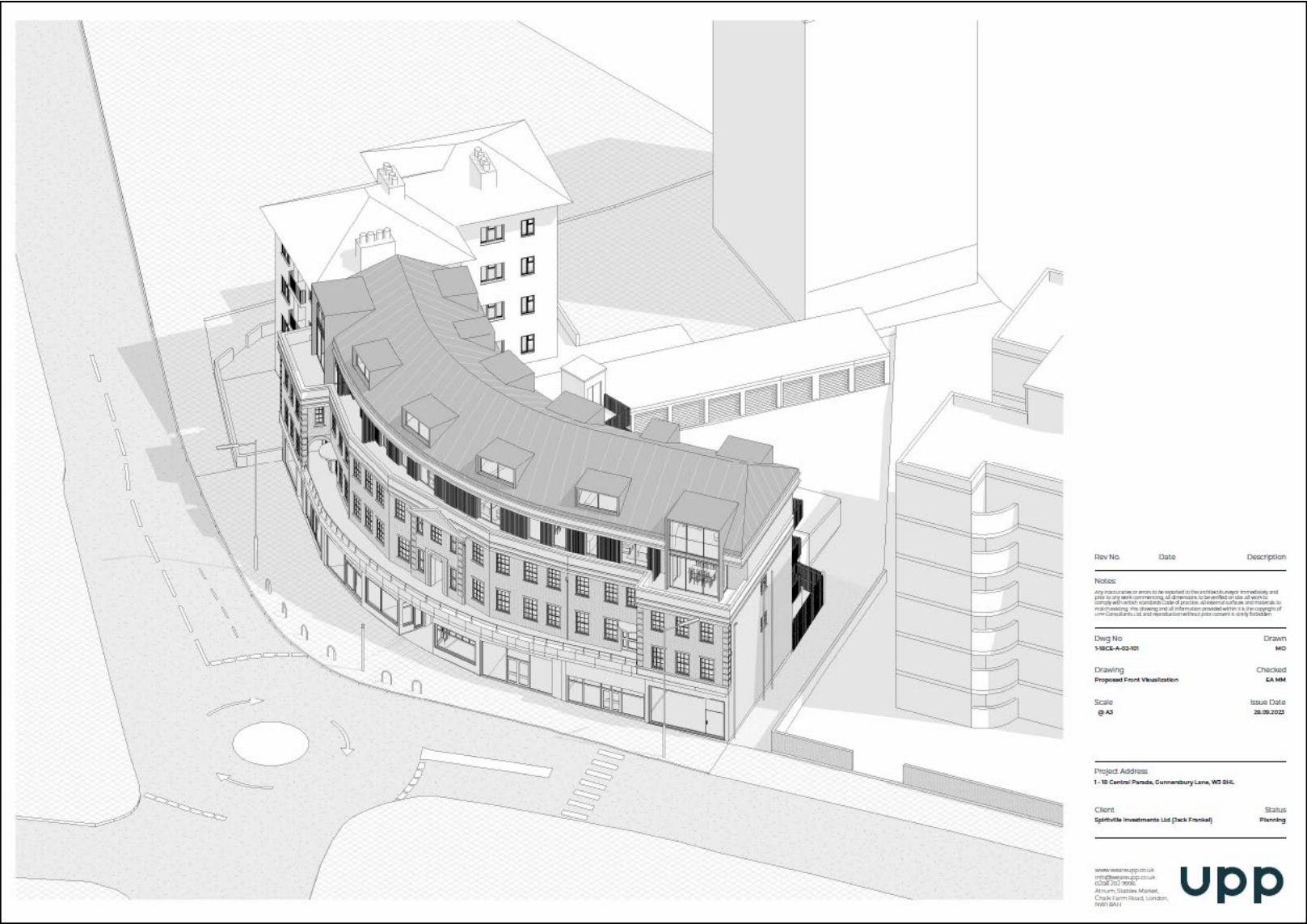
- i. Building Research Establishment publication 'Site layout and planning for daylight and sunlight, a guide to good practice' published in 2022.
- ii. The Mayor of London Supplementary Planning Guidance Housing (2016)

Appendix A

Location Plan



Proposed Front Visualization

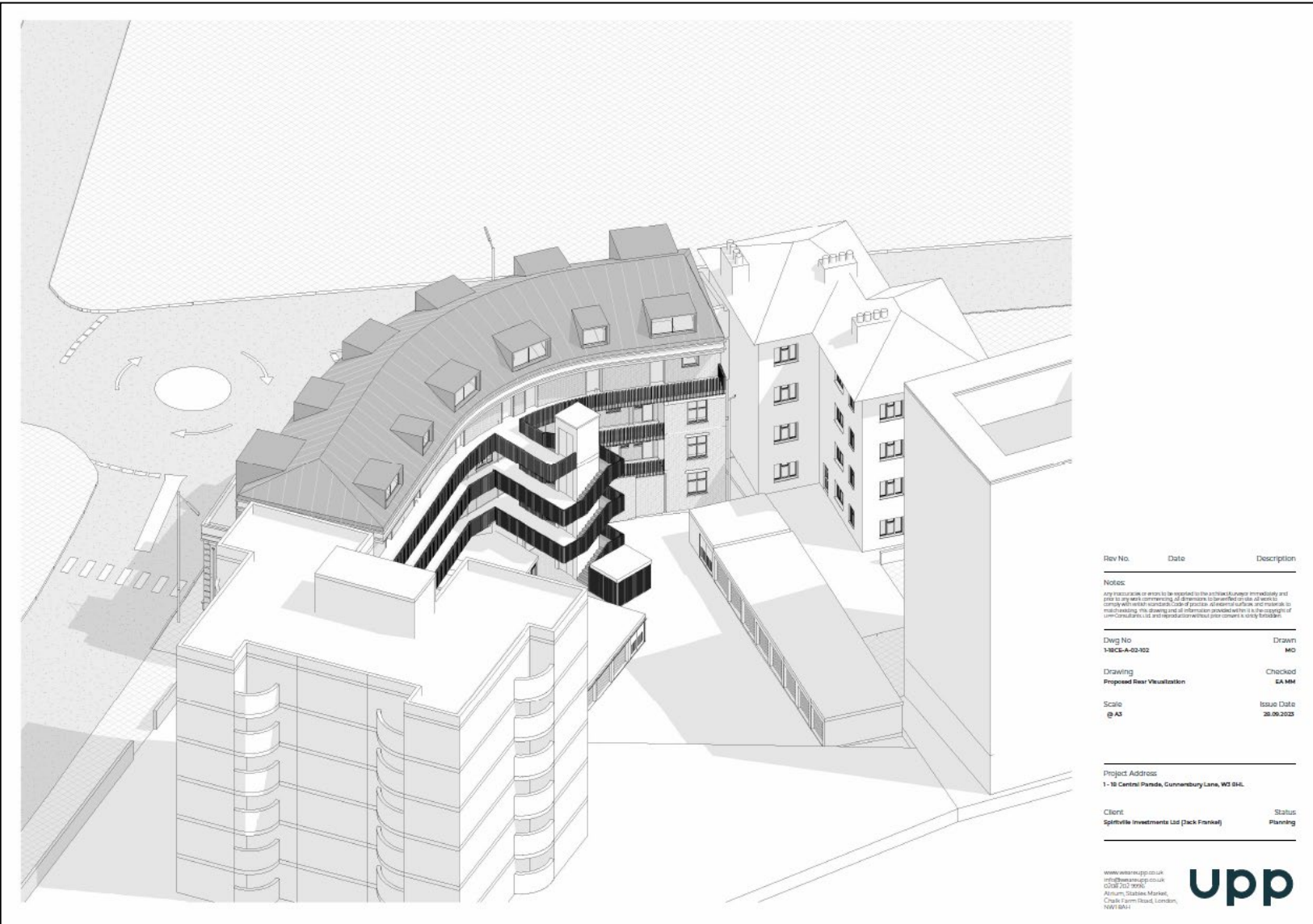


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Dwg No		Drawn
1-18CP-A-02-201		MO
Drawing		Checked
Proposed Front Visualization		EA MM
Scale		Issue Date
@ A3		28.06.2023
Project Address:		
1-18 Central Parade, Gunnersbury Lane, W3 8HL		
Client		Status
Spinnelle Investments Ltd (Jack Franklin)		Planning

www.upp.co.uk
info@upp.co.uk
0203 202 9990
Alnum, Station Market,
Chisleham Road, London,
NW1 5HJ



Proposed Rear Visualization



Appendix B

Figure 1: Rear Elevation of O'Day Court



Figure 2: 117 Gunnersbury Lane



Figure 3: Gunnersbury Court



MORGAN

light assessors

T:07933 877 780

[E:info@morganassessors.com](mailto:info@morganassessors.com)

[W:www.morganassessors.com](http://www.morganassessors.com)

[A:28 Lemsford Close London N15 6BY](#)

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