

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

DATE

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ADDRESS

146 HIGH ROAD,
LONDON
N15 6JN, UK



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146 High Road, London N15 6JN

Analysis of Site Layout with Regard to Daylight and Sunlight

1. Introduction

An application has been made for the erection of an additional floor and internal alterations to the rear of 146 High Road, to contain a three-bedroom maisonette.

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

The report assesses the proposal in regards to its effects on daylight and sunlight to the neighbouring buildings. 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 on 146 High Road in South Tottenham, North London and is located within the administrative boundaries of the London Borough of Haringay.

The existing building consists of three-storeys, whilst the rear two storeys.

The proposal is to add additional storey to the rear to contain a three-bedroom maisonette.

The proposal is shown on the following floorplans by Redwoods Architects.

Existing Drawings Floor Plans	E01
Existing Drawings Floor Plans	E02
Existing Drawings Elevations	E03
Existing Drawings Elevations	E04
Existing Drawings Sections	E05
Proposed Drawings Floor Plans	P01
Proposed Drawings Floor Plans	P02
Proposed Drawings Elevations	P04
Proposed Drawings Sections	P05

3. Daylight and Sunlight Requirements

3.2. 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 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.

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.

3.3. Local Planning Policy

Haringey Development Management DPD Adopted July 2017 provides guidance on the requirements for daylight and sunlight.

Policy DM1 D states:

Development proposals must ensure a high standard of privacy and amenity for the development's users and

neighbours. The Council will support proposals that

(a) Provide appropriate sunlight, daylight and open aspects (including private amenity space where required) to all parts of the development and adjacent buildings and land;

(b) Provide an appropriate amount of privacy to their residents and neighbouring properties to avoid overlooking and loss of privacy detrimental to the amenity of neighbouring residents and the residents of the development;

Further Guidance is given in the accompanying Paragraphs 2.9 and 2.10 that state:

2.9 The Council recognises that amenity can be compromised in a number of ways through development such as detrimental loss of daylight and sunlight to existing and adjacent occupiers; loss of privacy and outlook due to the proximity and design of developments; harmful noise, odour, vibration and air pollution from existing and proposed developments (typically commercial activities and other activities such as rail); developments with the potential to endanger highway safety; and cause detrimental micro-climate effects. Buildings should therefore be compatible with their local environment and conditions.

2.10 The design and layout of buildings must enable sufficient sunlight and daylight to penetrate into and between

buildings and ensure that adjoining land or properties are protected from unacceptable overshadowing. The Building Research Establishment (BRE) provides guidance on site layout planning to achieve good sun-lighting and day-lighting (BRE Site Layout Planning for Daylight and Sunlight: a guide to good practice).

4. General

Page 12 of this report is a site plan showing the development and its nearby buildings.

The proposed development is on the corner of High Road and Crowland Road.

To the north, 148 High Road is a three-storey building with many windows facing the proposed development. All these windows are analysed in this report.

The house to the east side of the development, 2 Crowland Road, has 2 windows facing the development. These windows are analysed in this report.

To the south side of the development, is the rear elevations of 146 and 144 High Road. All these windows are analysed in this report.

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

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 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. “

6. Daylight and Sunlight to Windows of 148 High Road

Figure 1 is a picture of the south elevation of number 148 High Road that faces the 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.

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.

Daylight

	Vertical Sky Component					
	Window	Existing	Proposed	Loss	% Former Value	Pass/Fail BRE Test
148 High Road	W148/1	26.26	24.72	1.54	6%	Pass
	W148/2	26.88	24.80	2.08	8%	Pass
	W148/3	27.56	25.22	2.35	9%	Pass
	W148/4	28.45	26.00	2.44	9%	Pass
	W148/5	31.46	29.28	2.18	7%	Pass
	W148/6	33.73	32.22	1.51	4%	Pass
	W148/7	35.06	34.15	0.91	3%	Pass
	W148/8	32.13	30.74	1.39	4%	Pass
	W148/9	32.51	30.86	1.64	5%	Pass
	W148/10	33.15	31.15	2.00	6%	Pass
	W148/11	33.95	31.65	2.31	7%	Pass
	W148/12	34.71	32.32	2.40	7%	Pass
	W148/13	37.75	37.75	0.00	0%	Pass
	W148/14	37.92	37.92	0.00	0%	Pass

	W148/15	38.20	38.20	0.00	0%	Pass
	W148/16	38.52	38.52	0.00	0%	Pass
	W148/17	38.78	38.78	0.00	0%	Pass

As shown in the table above, there will be a very minor reduction of daylight to the neighbouring windows of 148 High Road. All the windows will remain above the 27% Vertical Sky Component or 80% their former value and therefore are fully compliant with the BRE recommendations.

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 its former value. The BRE Guide recommends that north facing windows are analysed for daylight only.

For Sunlight the Guide recommends using the Annual Probable Sunlight Hours (APSH). The

	Annual Probable Sunlight Hours							
		Existing		Proposed		APSH % Former Value	WPSH % Former Value	Pass/Fail BRE Test
	Window	APSH	WPSH	APSH	WPSH			
148 High Road	W148/1	70	13	68	11	3%	15%	Pass
	W148/2	71	14	68	11	4%	21%	Pass
	W148/3	72	15	69	12	4%	20%	Pass
	W148/4	73	16	68	11	7%	31%	Pass
	W148/5	78	21	76	19	3%	10%	Pass
	W148/6	79	22	76	19	4%	14%	Pass
	W148/7	82	25	81	24	1%	4%	Pass
	W148/8	79	22	78	21	1%	5%	Pass
	W148/9	81	24	79	22	2%	8%	Pass
	W148/10	81	24	79	22	2%	8%	Pass
	W148/11	82	25	79	22	4%	12%	Pass
	W148/12	84	27	80	23	5%	15%	Pass
	W148/13	87	30	87	30	0%	0%	Pass

	W148/14	87	30	87	30	0%	0%	Pass
	W148/15	87	30	87	30	0%	0%	Pass
	W148/16	87	30	87	30	0%	0%	Pass
	W148/17	87	30	87	30	0%	0%	Pass

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

7. Daylight and Sunlight to Windows of 2 Crowland Road & 144-146 High Road

Figure 2 is a picture of the west elevation of 2 Crowland Road that faces towards the development. Figure 3 is the rear elevation of 144-146 High Road. All the windows are numbered for reference.

Below are the tables showing the reduction of daylight and sunlight to these neighbouring windows.

Daylight

	Vertical Sky Component					
	Window	Existing	Proposed	Loss	% Former Value	Pass/Fail BRE Test
146 High Road	W146/1	32.03	29.28	2.75	9%	Pass
	W146/2	39.59	39.59	0.00	0%	Pass
	W146/3	39.58	39.58	0.00	0%	Pass
	W146/4	39.58	39.58	0.00	0%	Pass
144 High Road	W144/1	39.52	39.43	0.09	0%	Pass
	W144/2	39.62	39.62	0.00	0%	Pass
	W144/3	30.91	29.92	0.99	3%	Pass
	W144/4	19.96	17.59	2.37	12%	Pass
	W144/5	25.68	22.81	2.86	11%	Pass
2 Crowland Road	W2/1	36.53	34.57	1.96	5%	Pass
	W2/2	32.31	31.81	0.51	2%	Pass

Sunlight

	Annual Probable Sunlight Hours							Pass/Fail BRE Test
		Existing		Proposed		APSH % Former Value	WPSH % Former Value	
	Window	APSH	WPSH	APSH	WPSH			
146 High Road	W146/1	51	16	50	16	2%	0%	Pass
	W146/2	58	18	58	18	0%	0%	Pass
	W146/3	58	18	58	18	0%	0%	Pass
	W146/4	58	18	58	18	0%	0%	Pass
144 High Road	W144/1	59	19	59	19	0%	0%	Pass
	W144/2	59	19	59	19	0%	0%	Pass
	W144/3	43	4	43	4	0%	0%	Pass
	W144/4	North		North		North		Pass
	W144/5	North		North		North		Pass
2 Crowland Road	W2/1	51	15	49	15	4%	0%	Pass
	W2/2	46	16	46	16	0%	0%	Pass

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

8. Conclusion

The proposal for an erection of an additional floor to the rear of 146 High Road, will result in a minimal reduction of daylight and sunlight to some neighbouring windows.

The reduction of daylight and sunlight to the neighbouring properties, will all be far below the 20% maximum recommended by the BRE Guide, therefore considered insignificant.

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 Planning Requirements of the London Boroughs, the BRE Guide, and the Mayors Plan for London.

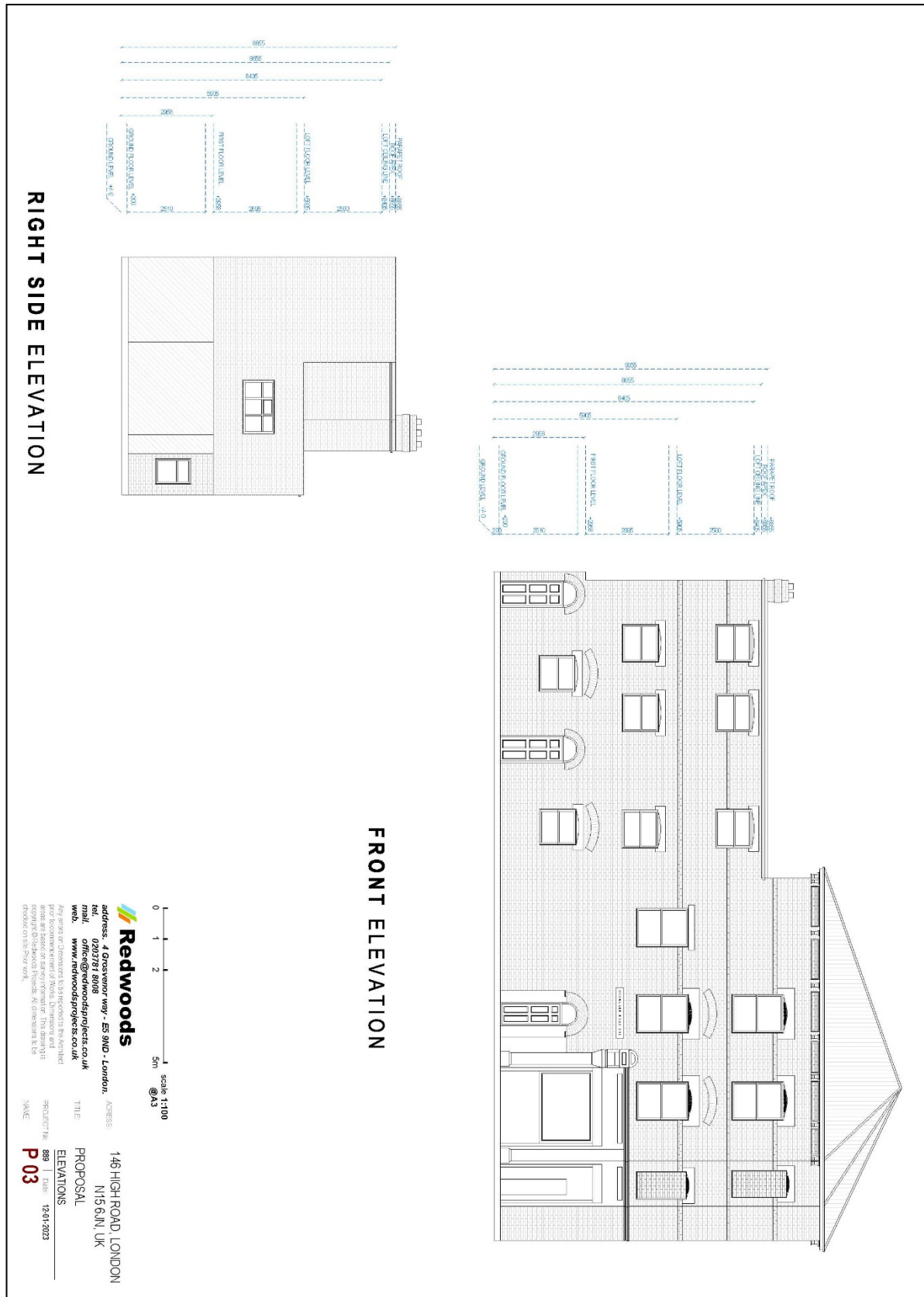
Harry Morgan

30th January 2023

Location Plan



Proposed Elevations



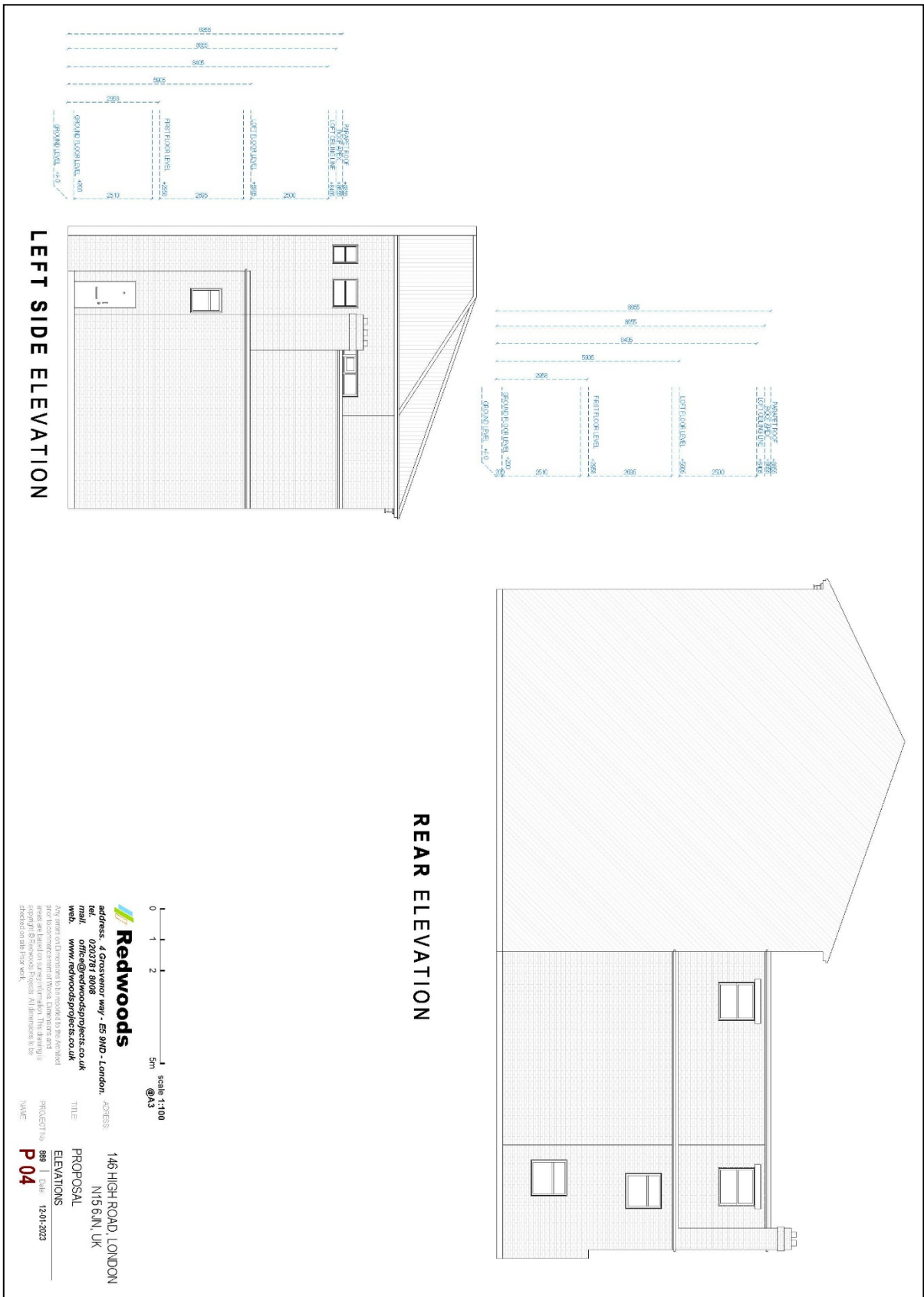


Figure 1: South Elevation to 148 High Road



Figure 2: West Elevation of 2 Crowland Road



Figure 3: Rear Elevation of 144-146 High Road



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