

Analysis of site layout for **Sunlight And Daylight**

DATE

March 2026

ADDRESS

Verotex House, 9 John
Street, Rochdale, OL16 2HS



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Verotex House, 9 John Street, Rochdale, OL16 2HS

Analysis of Site Layout with Regard to Daylight & Sunlight

1. Introduction

An application has been made for the conversion of the commercial space Class E at the basement level at Verotex House, 9 John Street, to residential use Class C3 under the terms of Part 3 Class MA of The Town and Country (General Permitted Development) (England) Order 2015 as amended.

Part 3 Class MA of the Order has the following conditions in respect to daylight:

MA.2.— (1) Development under Class MA is permitted subject to the following conditions.

(2) Before beginning development under Class MA, the developer must apply to the local planning authority for a determination as to whether the prior approval of the authority will be required as to—

(f) the provision of adequate natural light in all habitable rooms of the dwellinghouses.

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

The report assesses the proposals in regard to daylight and sunlight matters within habitable rooms in the proposed building and its effects on the nearby 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 rooms.

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 in 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 Verotex House, 9 John Street, in the town of Rochdale and is located within the administrative boundaries of the Rochdale Metropolitan Borough Council.

The proposal is to convert the basement commercial space to residential use to accommodate two studio flats.

This assessment is based on the following proposed plans provided by Gold Sketch Studios.

Site - Existing & Proposed	502
Existing Plans	002A

Existing Elevations	002B
Proposed Plans	003A
Proposed Elevations	003B

3. Daylight and Sunlight Requirements

3.1. General Permitted Development Guidance

Part 3 Class MA of the Order has the following conditions in respect to daylight.

MA.2.— (1) Development under Class MA is permitted subject to the following conditions.

(2) Before beginning development under Class MA, the developer must apply to the local planning authority for a determination as to whether the prior approval of the authority will be required as to—

(f) the provision of adequate natural light in all habitable rooms of the dwellinghouses

The meaning of adequate natural light in paragraph (f) is not further defined in the Order, but it is usually recognised in planning requirements of local authorities that the Building Research Establishment publication 'Site layout and planning for daylight and sunlight, a guide to good practice third edition' published in 2022 is used for guidance.

4. General

The outer envelope of the building is not being changed or extended. There will therefore be no adverse effect on any nearby buildings or gardens.

Daylight and sunlight in habitable rooms within the development are analysed in this report.

5. Daylight Methodology for Rooms within the Development

The recommendations for the adequacy of interior daylight are given in Appendix C of the BRE Guide. The Guide makes reference 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 tabletop 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.

5.1. Illuminance Method

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.

The UK National Annex gives specific minimum recommendations for habitable rooms in dwellings in the United Kingdom. The National Annex provides the UK guidance on minimum daylight provision in all UK dwellings. Habitable rooms are defined in Part 3, paragraph X of the GPDO as meaning any rooms used or intended to be used for sleeping or living, which are not solely used for cooking purposes.

The UK National Annex gives illuminance recommendations of:

- 100 lux in bedrooms
- 150 lux in living rooms
- 200 lux in kitchens with dining area

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. Areas that do not require daylight, such as bathrooms, stairwells, garages, and storage spaces, can be located in the most obstructed areas, like the internal corners of buildings.

5.2. Daylight Factor Method

This method involves the computation of the daylight factor at each calculation point on an assessment grid. The daylight factor is the illuminance at a point on the reference plane

in a space, divided by the illuminance on an unobstructed horizontal surface outdoors. The CIE standard overcast sky is used, and the ratio is usually expressed as a percentage.

Since the calculation uses an overcast sky model, the daylight factor is independent of orientation and location. For spaces with side windows, equivalent daylight factor targets to achieve a target illuminance over at least half of the daylight hours in a year are based on the formula:

$$D = \text{Target illuminance} / \text{Median external diffuse horizontal illuminance} \times 100 (\%)$$

where the median external diffuse horizontal illuminance ($E_{v,d, med}$) is the illuminance from the sky on an unobstructed horizontal surface achieved for half of the yearly daylight hours at a particular location.

The table below shows the daylight factor targets to be achieved over at least 50% of the assessment grid in domestic habitable rooms with vertical and/or inclined daylight apertures. The UK National Annex gives alternative target values for rooms with diffusing horizontal rooflights. The recommendations are met if the median of the daylight factors calculated in a room meets or exceeds the specific target for room type and location.

Target daylight factors (DT) to achieve over at least 50% of the assessment grid in UK domestic habitable rooms with vertical and/or inclined daylight apertures			
Location	DT for 100 lx (Bedroom)	DT for 150 lx (Living room)	DT for 200 lx (Kitchen)
St Peter (Jersey)	0.6%	0.9%	1.2%
London (Gatwick Airport)	0.7%	1.1%	1.4%
Birmingham	0.6%	0.9%	1.2%
Hemsby (Norfolk)	0.6%	0.9%	1.3%
Finningley (Yorkshire)	0.7%	1.0%	1.3%
Aughton (Lancashire)	0.7%	1.1%	1.4%
Belfast	0.7%	1.0%	1.4%
Leuchars (Fife)	0.7%	1.1%	1.4%
Oban	0.8%	1.1%	1.5%
Aberdeen	0.7%	1.1%	1.4%

6. Sunlight Methodology

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.”

7. Daylight & Sunlight to Rooms within the Proposed Flats

The BRE and BS EN 17037 guidance allows for two alternative methods to assess daylight within new dwellings.

For this report, we have assessed the proposed new accommodation to determine whether the internal spaces will be provided with adequate daylight by reference to Target Illuminance (ET) Factor. This method involves the computation of the illuminance level at each calculation point on an assessment grid.

All external factors relevant to this assessment have been taken into account.

The following reflectance, transmittance, and maintenance values have been used in the internal daylight calculations:

- Transmittance (T): 0.68
- Reflectance (R): 0.2 for floors, 0.7 for the walls & ceilings
- Maintenance Factor: 0.92

The proposed layout has been carefully designed to ensure the flats meet the standards. The flats have good-sized windows, allowing for daylight distribution that exceeds the target illumination level in over 50% of the area. The sunlight results show that the proposed living rooms will receive sunlight for at least 1.5 hours on March 21st.

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

8. Conclusion

There is no extension to the external envelope of the building, and there is therefore no reduction in daylight or sunlight to nearby buildings or gardens.

The proposed flats have good windows. Daylight and sunlight in all habitable rooms within the proposed flats are better than the recommendations of the Building Research Establishment publication 'Site Layout and Planning for Daylight and Sunlight, a Guide to Good Practice' published in 2022 and the standard planning requirements.

The requirement of the Permitted Development Order for adequate natural light is satisfied for this development.

Harry Morgan

27th March 2026

References:

- I. Building Research Establishment publication 'Site layout and planning for daylight and sunlight, a guide to good practice' published in 2022.
- II. General Permitted Development order part 3 class MA
- III. The Mayor of London Supplementary Planning Guidance Housing (2016)

Appendix A

Site Plan

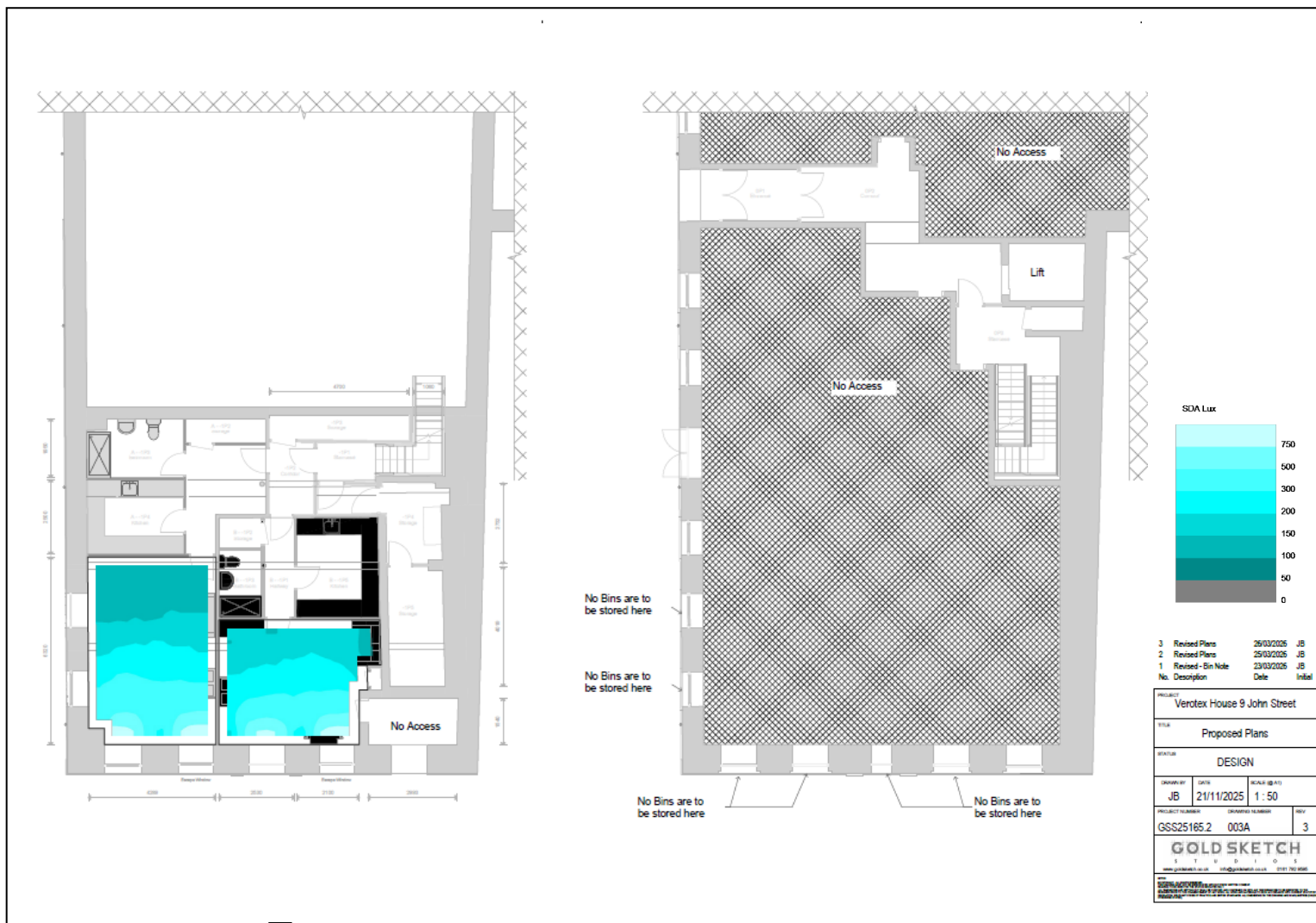


Proposed Elevations



Appendix B

Proposed Internal Illuminance Factor



Detailed Internal Daylight Results

Project Name: 9 John Street, Rochdale, OL16 2HS..
Project No.: 1
Report Title: SDA BS En17037 Analysis - Proposed Scheme
Date of Analysis:

										Criteria				
Floor Ref	Room Ref	Room Attribute	Property Type	Room Use	Room Area m2	Effective Area	Median Lux	Area Meeting Req Lux	% of Area Meeting Req Lux	Req Lux	Req % of Effective Area	Req % of Daylight Hours	Daylight Hours	Meets Criteria
B1														
Basement	R1	FlatA	Residential	LKD	26.92	20.90	207	10.73	51%	200	50%	50%	4380	YES
	R2	FlatB	Residential	LKD	21.19	15.76	236	10.24	65%	200	50%	50%	4380	YES

Detailed Sunlight Results

Project Name: 9 John Street, Rochdale, OL16 2HS..
Project No.: 1
Report Title: Sunlight Exposure Analysis - Proposed Scheme
Date:

Floor Ref	Room Ref	Room Attribute	Property Type	Room Use	Window Ref	Window Orientation	Proposed Sunlight Exposure (Hours)	Rating
Basement	R1	FlatA	Residential	LKD	W1	320°N	0	
					W2	320°N	0	
					W3	230°	5.5	
					W4	230°	5.5	
							5.5	High
Basement	R2	FlatB	Residential	LKD	W5	230°	5.5	
					W6	230°	5.4	
							5.5	High

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