waldrams

Lincs Gateway, Spalding

Daylight and Sunlight Report

13 July 2023

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Lincs Gateway, Spalding

DAYLIGHT AND SUNLIGHT REPORT

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EXECUTIVE SUMMARY

- This is a report into the impact of the proposed development at Lincs Gateway, Spalding on the daylight and sunlight to 57 & 59 Fen End Lane and their rear gardens. This analysis has been based upon scheme drawings provided by UMC Architects and site imagery.
- 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) (known as 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 both properties at 57 & 59 Fen End Lane and their rear gardens all remain well daylit and sunlit with the proposed scheme at Lincs Gateway in place. As such, there is no reason to refuse this proposal planning consent on the grounds of daylight, sunlight or overshadowing impacts to these properties.

1 INTRODUCTION

Waldrams have been instructed to provide daylight and sunlight analysis for the proposed development of the site at Lincs Gateway, Spalding. This analysis is based upon scheme drawings by UMC Architects, a topographical survey of the site and site imagery.

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 sunlight amenity results can be found in Appendix 2.

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 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 and overshadowing.

2.2 DAYLIGHT AND SUNLIGHT CRITERIA TO SURROUNDING PROPERTIES

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:

> *"The guidelines given here are intended for use for rooms in adjoining dwellings where daylight is required, including living rooms, kitchens, and bedrooms. Windows to bathrooms, toilets, storerooms, circulation areas, and garages need not be analysed. The guidelines may also be applied to any existing non-domestic building where the occupants have a reasonable expectation of daylight; this would normally include schools, hospitals, hotels and hostels, small workshops, and some offices."*

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 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 accurate computer model has been created for the existing site in context of the immediate surrounding properties, based upon architect's drawings, a [photogrammetric] survey of the site and surrounding properties, site imagery and surrounding property information. The results generated are then reviewed against the BRE Guidelines' target values.

2.4 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. We have also researched the Council Tax records for the property, which if listed would indicate residential use.

It is important to note that, in some cases and where no additional information is available, the window positions in the surrounding property elevations have been estimated based on brick counts from site photographs. The floor levels for the surrounding buildings are assumed unless otherwise indicated.

We have not been able to obtain layouts or gain access internally to any of the 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.

4 SOURCES OF INFORMATION USED IN THE REPORT

UMC Architects

22119-UMC-ZZZZ-SI-M2-A-0010-P03

22119-UMC-ZZZZ-ZZ-M3-A-0003-P01 2017

Received 27/6/23

Waldrams Chartered Surveyors

Site Photographs



Image 1: Aerial view of site

5 DAYLIGHT & SUNLIGHT ANALYSIS

The existing site in its current condition is shown in image 1 above.

As stated in section 2.2 above, a property will remain appropriate daylit and sunlit in a proposal falls underneath a 25° line emanating from the lowest window in that property that faces the proposed development. As such, this test has been applied to the properties at 57 & 59 Fen End Lane and the results of the test shown on drawing 3202-01-02 in Appendix 1. This shows that the proposal comfortably fits below the 25° line emanating from both properties and so both properties will remain well daylit and sunlit with the proposed scheme in place.

6 SUNLIGHT AMENITY (OVERSHADOWING)

We have assessed the level of sunlight to the outdoor amenity spaces (i.e. gardens) to the rear gardens at 57 & 59 Fen End Lane i.e. the nearest rear gardens to the proposed scheme. The overshadowing results can be found in Appendix 2.

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 both gardens experience no change in their area that receives at least two hours of sunlight on March 21st with the proposal in place and so meet the BRE Guidelines' recommendations for overshadowing.

7 CONCLUSIONS

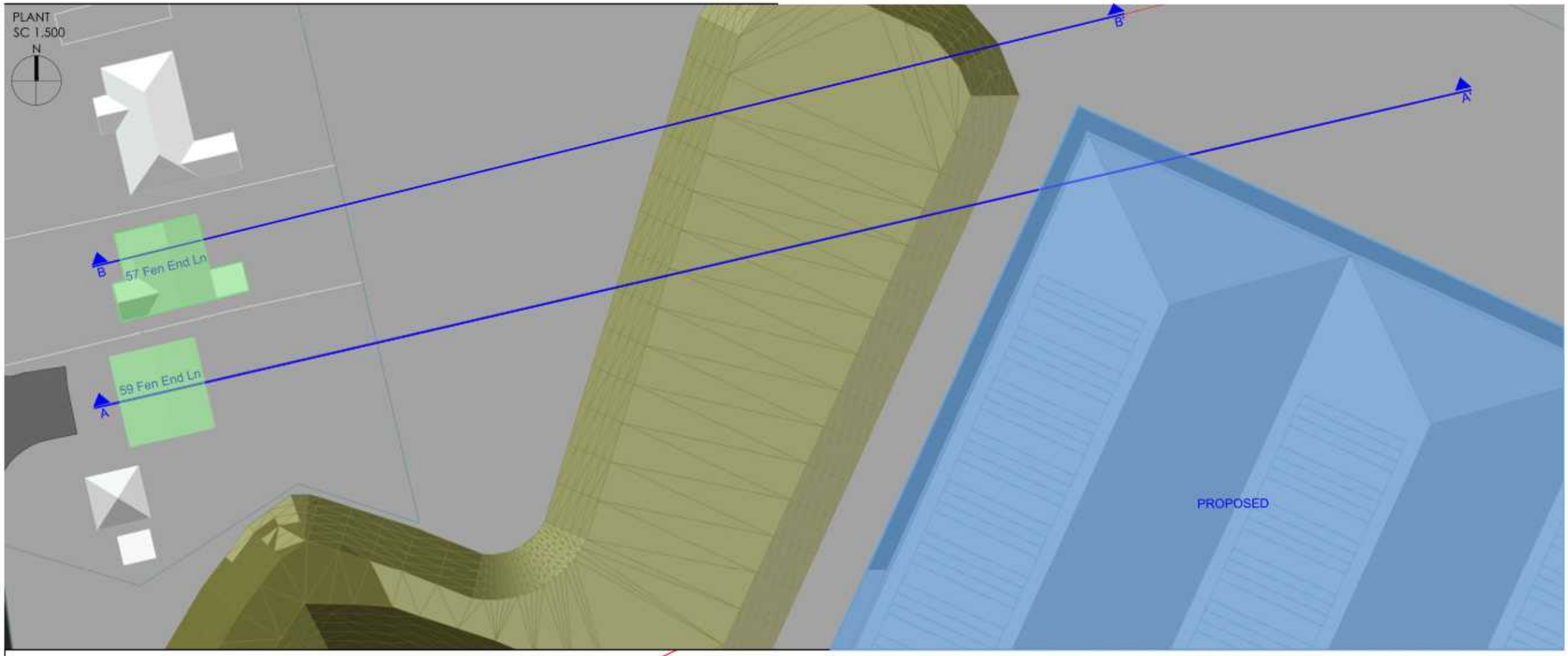
This is a report into the impact of the proposed development at Lincs Gateway, Spalding on the daylight and sunlight to surrounding residential properties, amenity spaces, and internally to the scheme itself. This analysis has been based upon scheme drawings provided by UMC Architects and site imagery.

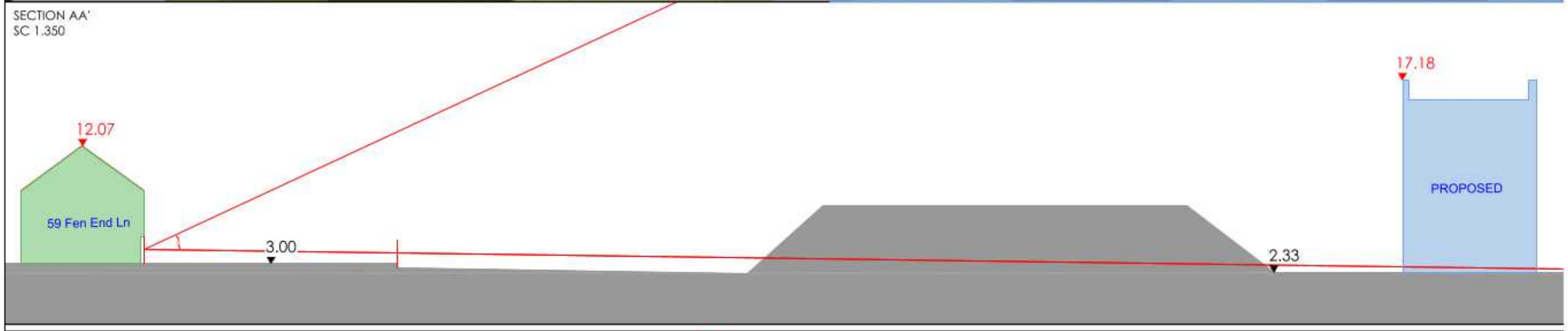
The analysis has been carried out in accordance with the methodologies contained in the BRE Guidelines, which is used by the local authority to determine the acceptability of a proposal in terms of its effect on neighbouring daylight and sunlight amenity.

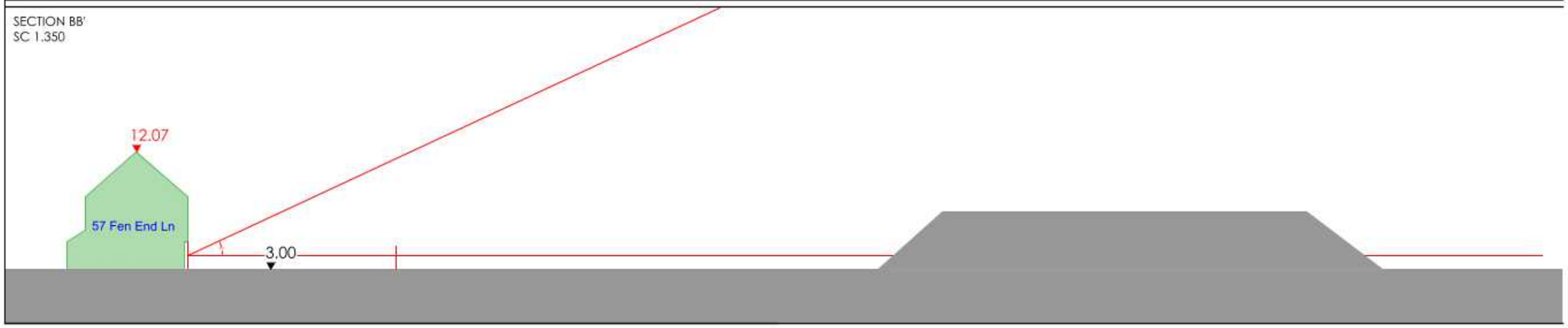
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APPENDIX 1

Drawings







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SOURCES OF INFORMATION:

UMC ARCHITECTS
IR02 (RECEIVED 27.06.2023)

NOTES:

HEIGHTS SHOWN ABOVE ORDNANCE DATUM

PROJECT
PROJECT
CITY FIRST POSTCODE PART

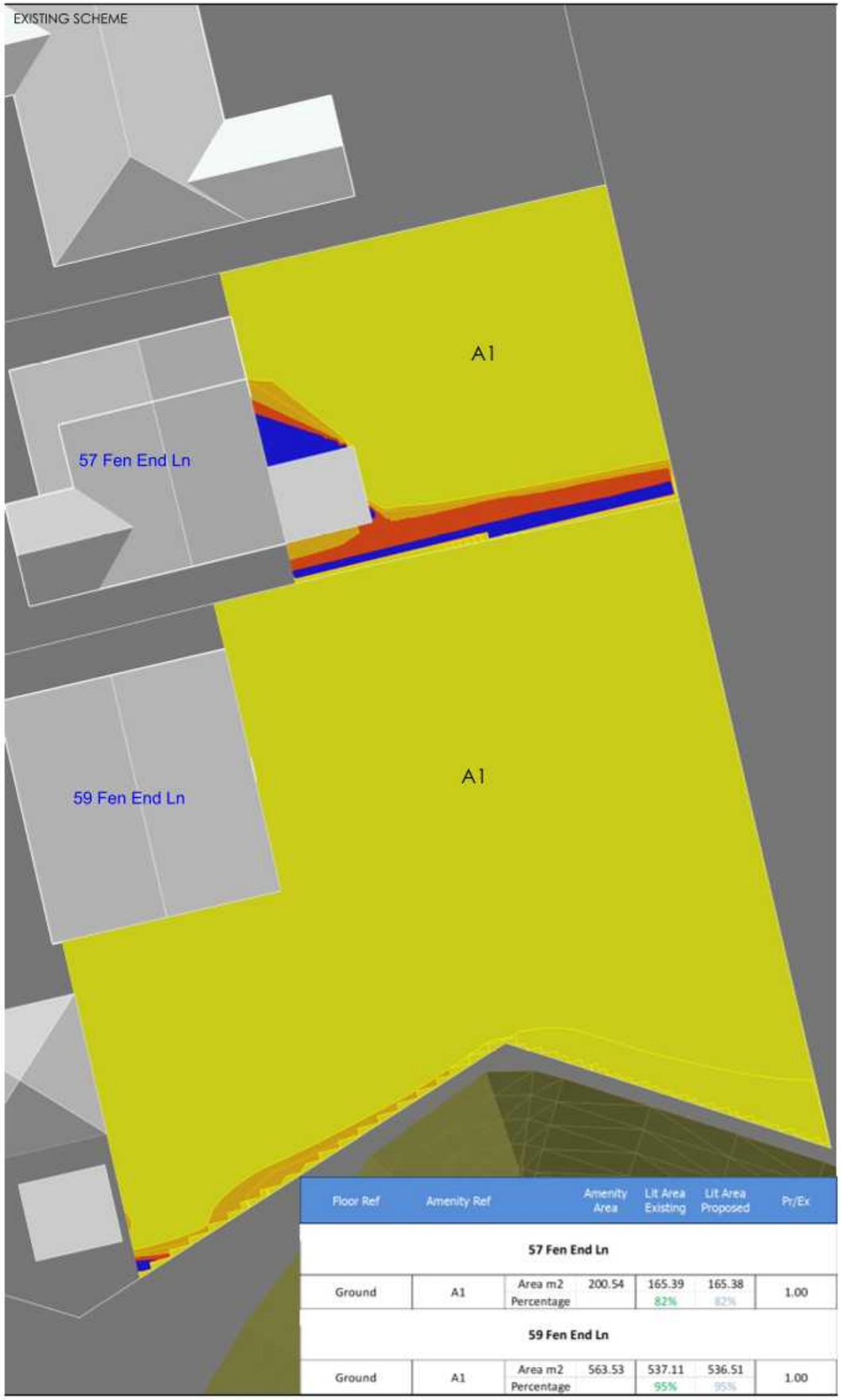
DRAWING
SECTIONS

SCALE @ A3	DATE
NTS	12.07.2023
MODELLED BY	**DRAWN BY**
EF	EF
PROJECT No.	**REL No.- DWG No.**
3202	01-02

APPENDIX 2

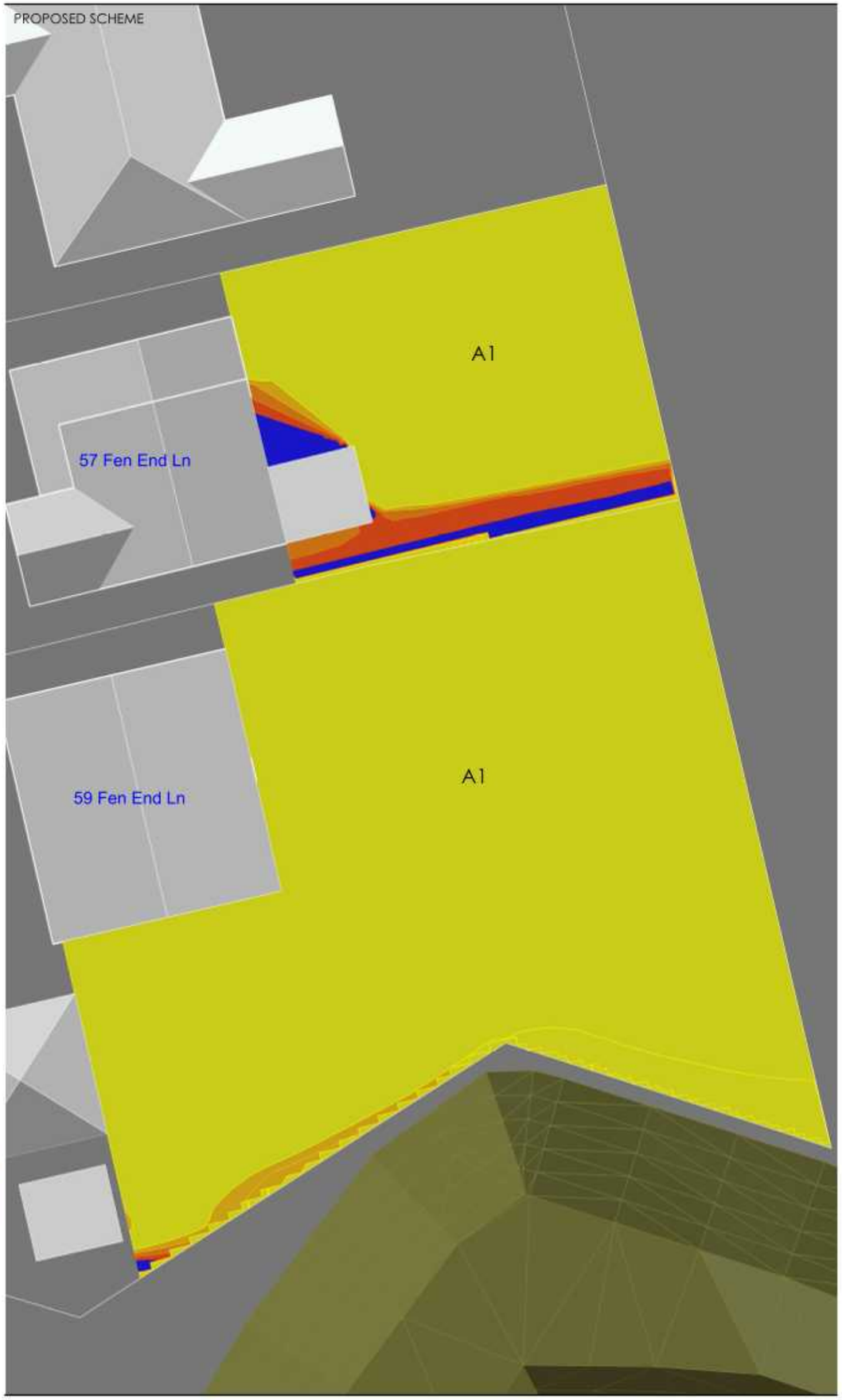
Sunlight Amenity (Overshadowing) Results

EXISTING SCHEME



Floor Ref	Amenity Ref		Amenity Area	Lit Area Existing	Lit Area Proposed	Pr/Ex
57 Fen End Ln						
Ground	A1	Area m2	200.54	165.39	165.38	1.00
		Percentage		82%	82%	
59 Fen End Ln						
Ground	A1	Area m2	563.53	537.11	536.51	1.00
		Percentage		95%	95%	

PROPOSED SCHEME



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SOURCES OF INFORMATION:

UMC ARCHITECTS
IR02 (RECEIVED 27.06.2023)

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

N

PROJECT
PROJECT
CITY FIRST POSTCODE PART

DRAWING
AMENITY ANALYSIS
EXISTING VS PROPOSED SCENARIO

SCALE @ A3
1:200

DATE
12.07.2023

MODELLED BY
EF

DRAWN BY
EF

PROJECT No.
3202

REL No.- DWG No.
01-01

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