

RIGHT OF LIGHT
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Chartered Surveyors

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Daylight and Sunlight
14 Coastal Road, East Preston,
Littlehampton BN16 1SJ

4 August 2017



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DAYLIGHT AND SUNLIGHT STUDY
14 Coastal Road, East Preston Littlehampton BN16 1SJ

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1 EXECUTIVE SUMMARY

1.1 Overview

- 1.1.1 Right of Light Consulting has been commissioned by Rupert Clarke to undertake a daylight and sunlight study of the proposed development at 14 Coastal Road, East Preston Littlehampton BN16 1SJ.
- 1.1.2 The aim of the study is to assess the impact of the development on the light receivable by the neighbouring properties at 12 and 16 Coastal Road. The study is based on the various numerical tests laid down in the Building Research Establishment (BRE) guide 'Site Layout Planning for Daylight and Sunlight: a guide to good practice' by P J Littlefair 2011.
- 1.1.3 The window key in Appendix 1 identifies the windows analysed in this study. Appendix 2 gives the numerical results of the various daylight and sunlight tests. The results confirm that all neighbouring windows pass the BRE diffuse daylight and direct sunlight tests. The development also satisfies the BRE overshadowing to gardens and open spaces requirements.
- 1.1.4 In summary, the proposed development will have a low impact on the light receivable by its neighbouring properties. Right of Light Consulting confirms that the development design satisfies all of the requirements set out in the BRE guide 'Site Layout Planning for Daylight and Sunlight'.

2 INFORMATION SOURCES

2.1 Documents Considered

2.1.1 This report is based on drawings:

WAMM Consulting

1717 PL1-01	Site Location Plans	Rev A
1717 PL1-02	Existing Block Plans	Rev A
1714 PL1-03	Existing Plans and Elevations	Rev A
1714 PL1-04	Proposed Site plan	Rev D
1714 PL1-05	Proposed Ground Floor Plan	Rev D
1714 PL1-06	Proposed First Floor Plan	Rev D
1714 PL1-07	Proposed Second Floor Plan	Rev D
1714 PL1-08	Existing Roof Plan	Rev B
1714 PL1-09	Proposed East and South Elevation	Rev C
1714 PL1-10	Proposed West and North Elevation	Rev C
1714 PL1-11	Proposed Site Plan, Existing And Proposed Street scene	Rev B
1714 PL1-12	Proposed Sections	Rev A

Cad map Services and Surveying

17696	Topographical Survey	Rev –
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3 METHODOLOGY OF THE STUDY

3.1 BRE Guide : Site Layout Planning for Daylight and Sunlight

- 3.1.1 The study is based on the various numerical tests laid down in the Building Research Establishment (BRE) guide 'Site Layout Planning for Daylight and Sunlight: a guide to good practice' by P J Littlefair 2011. In general, the BRE tests are based on the requirements of the British Standard, BS 8206 Part 2.
- 3.1.2 The standards set out in the BRE guide are intended to be used flexibly. The following statement is quoted directly from the BRE guide:
- 3.1.3 "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, since natural lighting is only one of many factors in site layout design."

3.2 Daylight to Windows

- 3.2.1 Diffuse daylight is the light received from the sun which has been diffused through the sky. Even on a cloudy day, when the sun is not visible, a room will continue to be lit with light from the sky. This is diffuse daylight.

Diffuse daylight calculations should be undertaken to all rooms where daylight is required, including living rooms, kitchens and bedrooms. Usually, if a kitchen is less than 13m², it is considered to be a non-habitable room and the daylight tests need not be applied. The BRE guide states that windows to bathrooms, toilets, storerooms, circulation areas and garages need not be analysed.

- 3.2.2 The BRE guide contains two tests which measure diffuse daylight:

3.2.3 Test 1 Vertical Sky Component

The percentage of the sky visible from the centre of a window is known as the Vertical Sky Component. Diffuse daylight may be adversely affected if after a development the Vertical Sky Component is both less than 27% and less than 0.8 times its former value.

3.2.4 Test 2 Daylight Distribution

The BRE guide states that where room layouts are known, the impact on the daylighting distribution can be found by plotting the 'no sky line' in each of the main rooms. The no sky line is a line which separates areas of the working plane that do and do not have a direct view of the sky. Daylight may be adversely affected if, after the development, 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.

3.3 Sunlight availability to Windows

3.3.1 The BRE sunlight tests should be applied to all main living rooms and conservatories which have a window which faces within 90 degrees of due south. The guide states that kitchens and bedrooms are less important, although care should be taken not to block too much sunlight.

3.3.2 The BRE guide states that sunlight availability may be adversely affected if the centre of the window:

- receives less than 25% of annual probable sunlight hours, or less than 5% of annual probable sunlight hours between 21 September and 21 March and
- receives less than 0.8 times its former sunlight hours during either period and
- has a reduction in sunlight received over the whole year greater than 4% of annual probable sunlight hours.

3.4 Overshadowing to Gardens and Open Spaces

3.4.1 The availability of sunlight should be checked for all open spaces where sunlight is required. This would normally include:

- Gardens, usually the main back garden of a house
- Parks and playing fields
- Children's playgrounds
- Outdoor swimming pools and paddling pools
- Sitting out areas, such as those between non-domestic buildings and in public squares
- Focal points for views such as a group of monuments or fountains.

3.4.2 The BRE guide recommends that at least 50% of the area of each amenity space listed above 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 which can receive two hours of sunlight on 21 March is less than 0.8 times its former value, then the loss of light is likely to be noticeable.

4 RESULTS OF THE STUDY

4.1 Windows & Amenity Areas Considered

- 4.1.1 Appendix 1 provides a plan and photographs to indicate the positions of the windows and gardens analysed in this study.

4.2 Numerical Results

- 4.2.1 Appendix 2 lists the detailed numerical daylight and sunlight test results. The results are interpreted below.

4.3 Daylight to Windows

- 4.3.1 All main habitable room windows pass the Vertical Sky Component test and all rooms pass the Daylight Distribution test. The proposed development therefore satisfies the BRE daylight requirements.

4.4 Sunlight to Windows

- 4.4.1 All windows which face within 90 degrees of due south have been tested for direct sunlight. All windows pass both the total annual sunlight hours test and the winter sunlight hours test (annual probable sunlight hours between 21 September and 21 March). The proposed development therefore satisfies the BRE direct sunlight to windows requirements.

4.5 Overshadowing to Gardens and Open Spaces

- 4.5.1 The proposed development will not create any new areas which receive less than two hours of sunlight on 21 March. The before/after ratios are 1 (no loss) and the proposed development therefore passes the BRE overshadowing to gardens and open spaces test.

4.6 Conclusion

- 4.6.1 The proposed development will have a low impact on the light receivable by its neighbouring properties. Right of Light Consulting confirms that the development design satisfies all of the requirements set out in the BRE guide 'Site Layout Planning for Daylight and Sunlight'.

5 CLARIFICATIONS

5.1 General

- 5.1.1 The report provided is solely for the use of the client and no liability to anyone else is accepted.
- 5.1.2 We have undertaken the survey following the guidelines of the RICS publication “Surveying Safely”.
- 5.1.3 We have used our best endeavours to ensure all relevant windows within the neighbouring properties have been identified.
- 5.1.4 Where limited access is available, assumptions will have been made.
- 5.1.5 We have adopted the conventional approach of assessing all habitable rooms within domestic properties.
- 5.1.6 This report is based upon and subject to the scope of work set out in Right of Light Consulting’s quotation and standard terms and conditions.
- 5.1.7 Right of Light Consulting have endeavoured to include in the report those matters, which they have knowledge of or of which they have been made aware, that might adversely affect the validity of the opinion given.

5.2 Project Specific

- 5.2.1 None.

APPENDICES

APPENDIX 1

WINDOW & GARDEN KEY

Window & Garden Key

Key

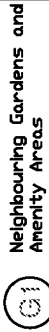
Window 1 ● Window reference



Development site



Neighbouring Properties



Neighbouring Gardens and Amenity Areas

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Littlehampton BN16 1SJ

Drawing Title: Appendix 1 - Neighbouring Windows

Scale: Do not scale

Drawing No: 1 of 1

Date: Details of revision

Rev: Details of revision

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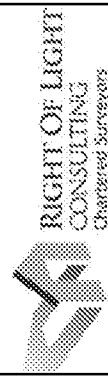
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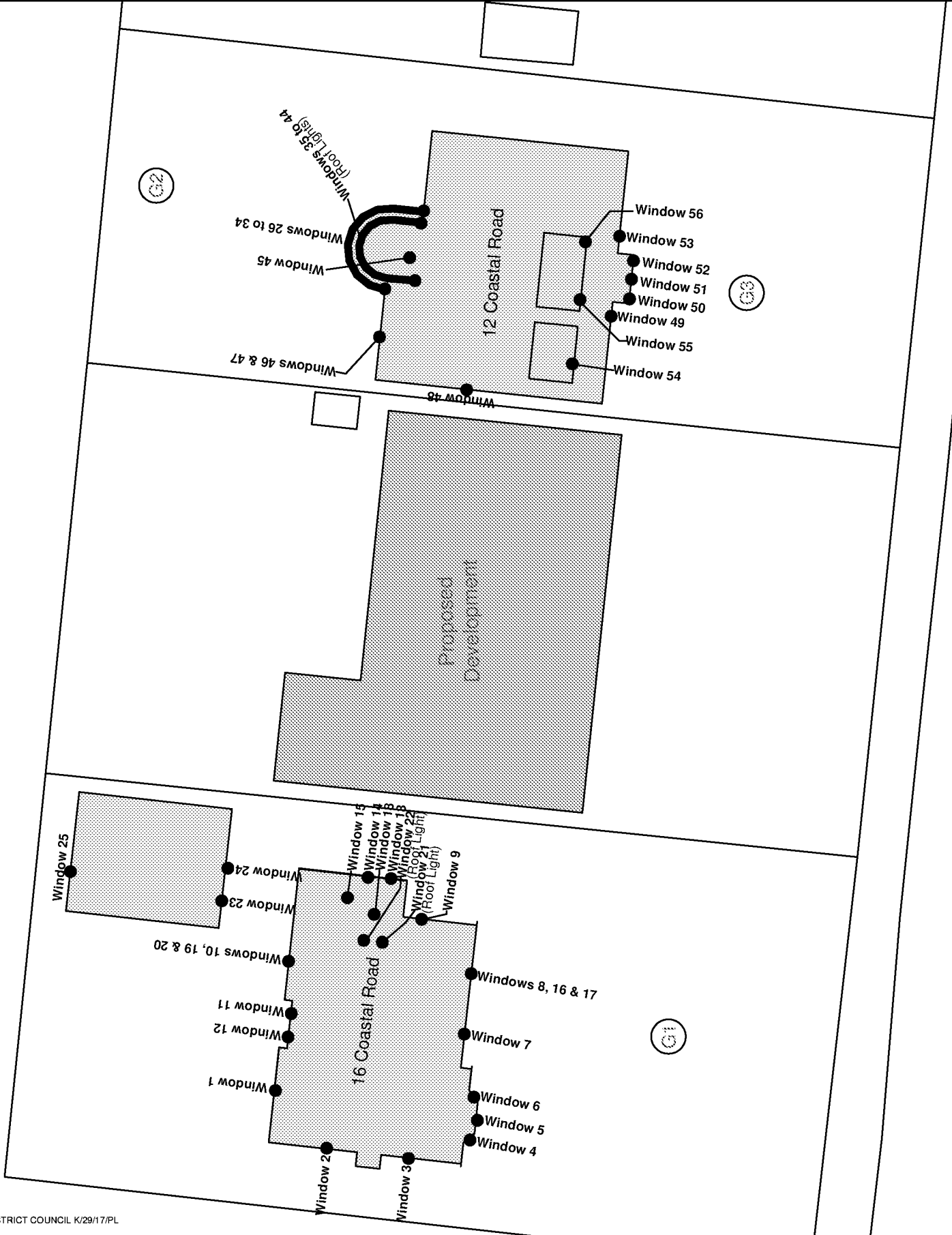


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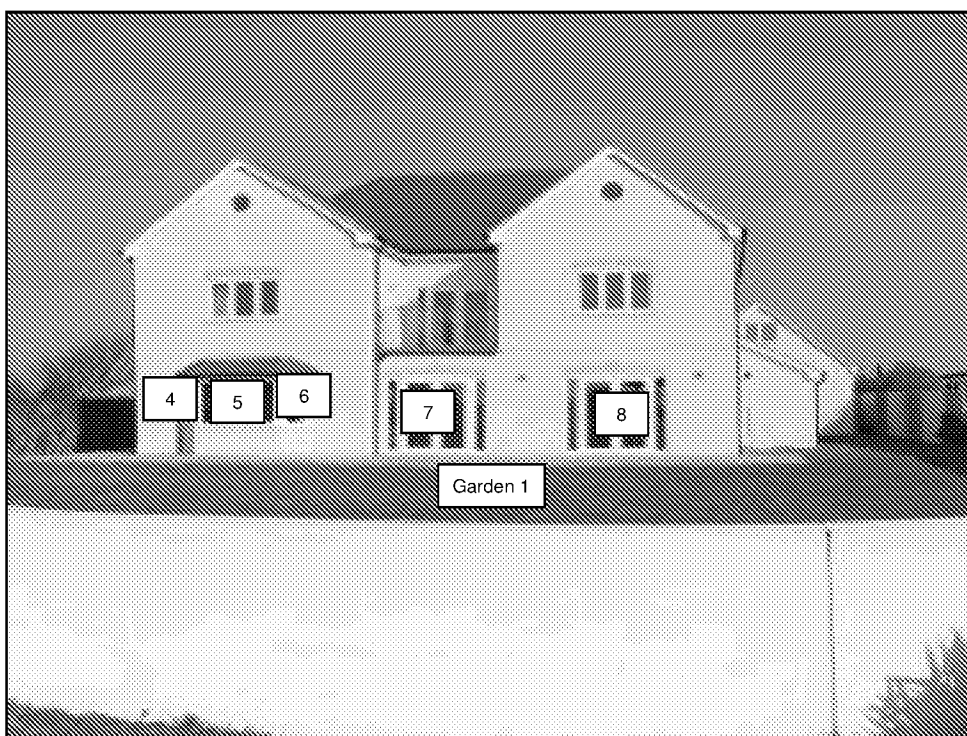
enquiries@right-of-light.co.uk
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Neighbouring Windows



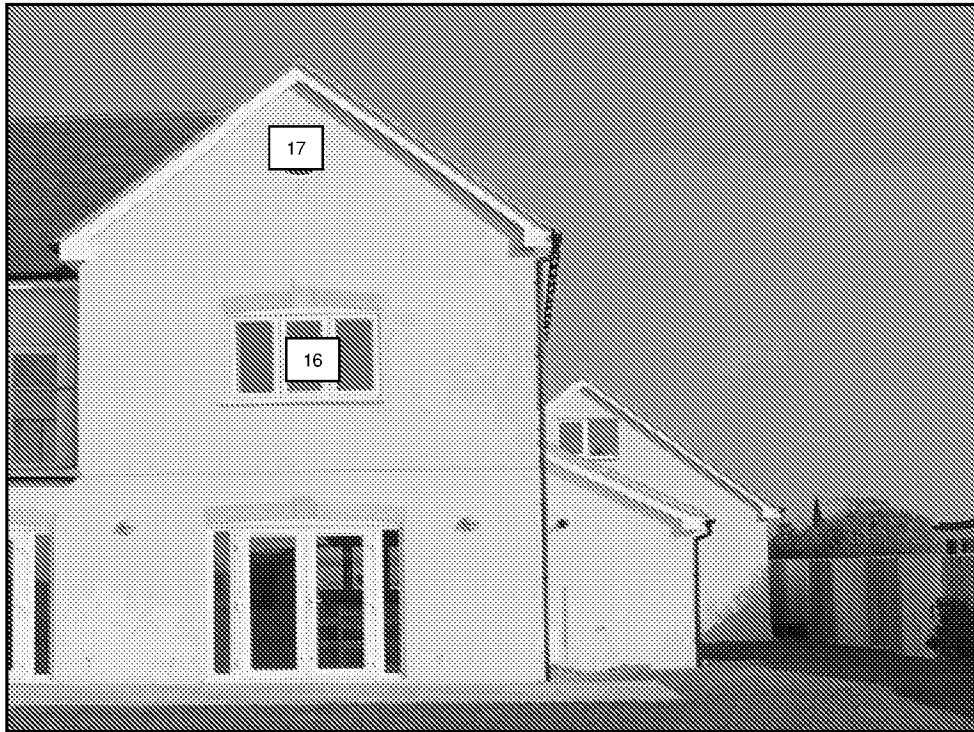
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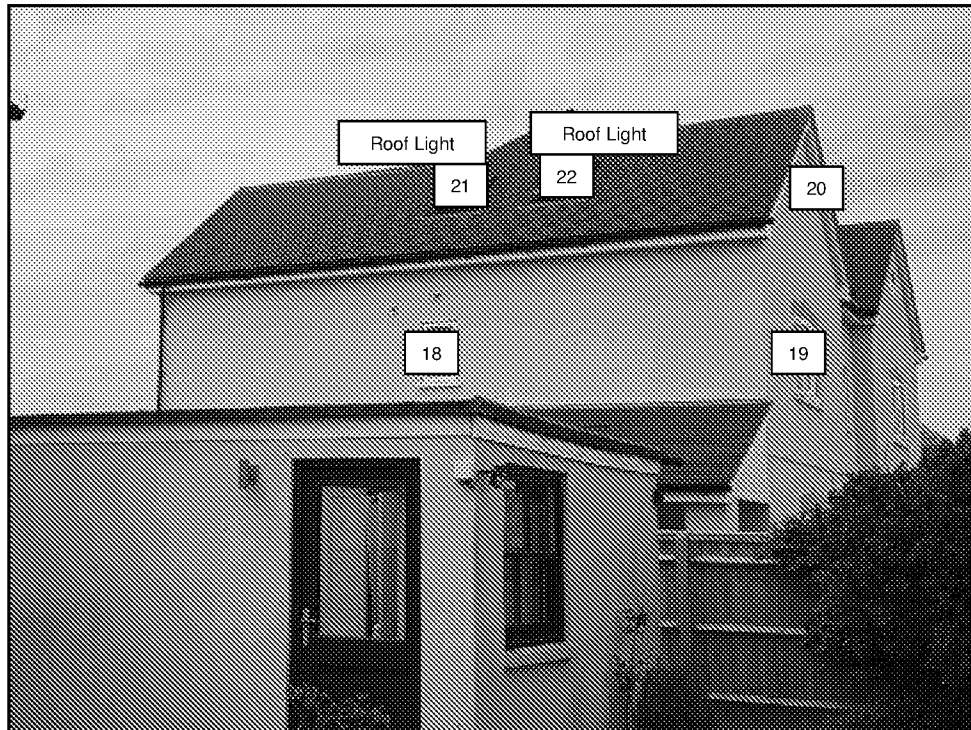
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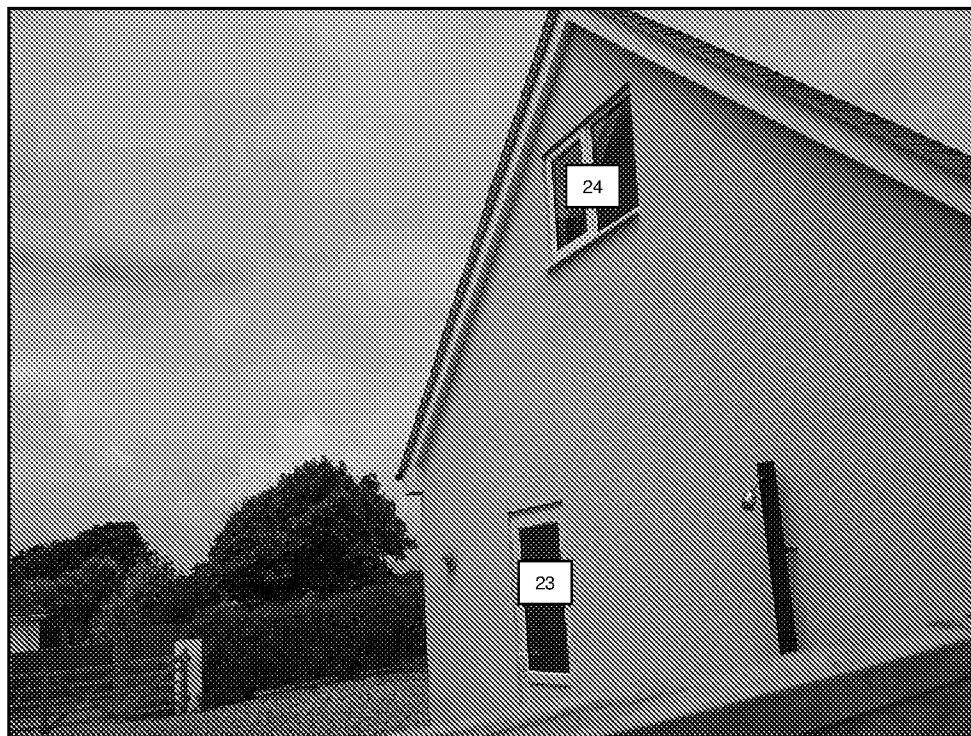
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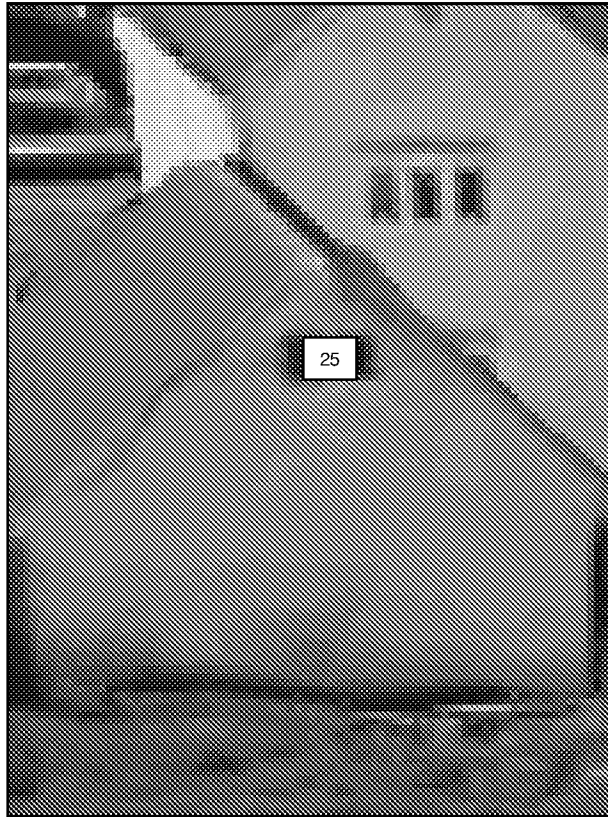
16 Coastal Road



16 Coastal Road



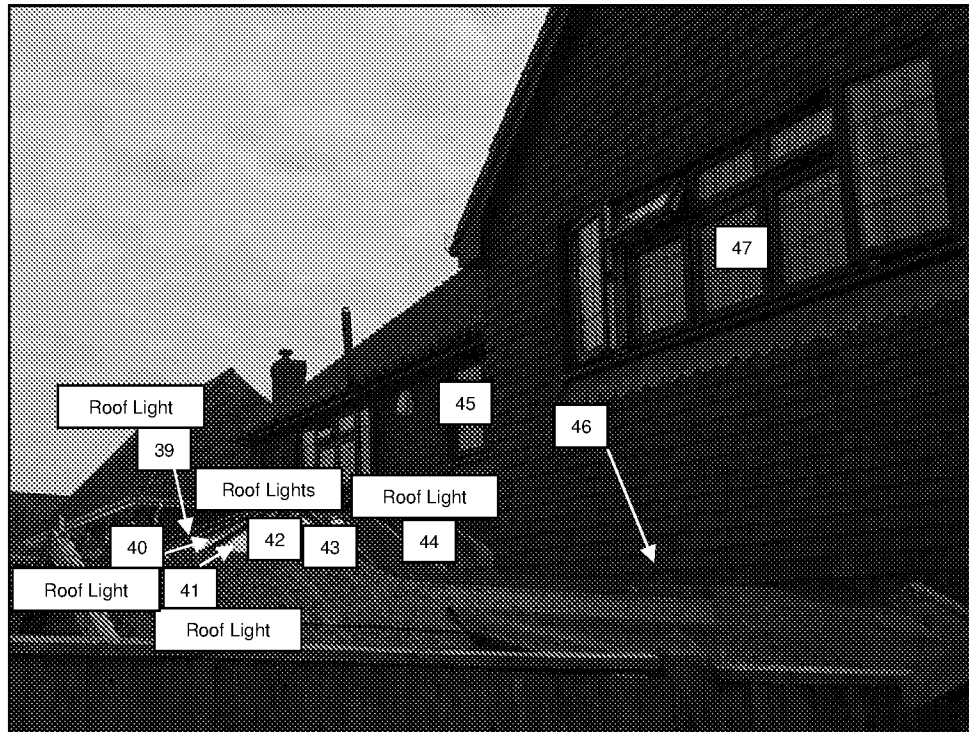
16 Coastal Road



16 Coastal Road



12 Coastal Road



12 Coastal Road



12 Coastal Road



12 Coastal Road

APPENDIX 2

DAYLIGHT AND SUNLIGHT RESULTS

Appendix 2 - Vertical Sky Component

14 Coastal Road, East Preston Littlehampton BN16 1SJ

Reference	Use Class	Vertical Sky Component			
		Before	After	Loss	Ratio
16 Coastal Road					
Window 1	Living Room/Sun Room/Dining Room/Kitchen	37.2%	37.2%	0.0%	1.0
Window 2	Living Room/Sun Room/Dining Room/Kitchen	33.3%	33.3%	0.0%	1.0
Window 3	Living Room/Sun Room/Dining Room/Kitchen	31.6%	31.6%	0.0%	1.0
Window 4	Living Room/Sun Room/Dining Room/Kitchen	32.9%	32.9%	0.0%	1.0
Window 5	Living Room/Sun Room/Dining Room/Kitchen	36.0%	36.0%	0.0%	1.0
Window 6	Living Room/Sun Room/Dining Room/Kitchen	32.4%	31.9%	0.5%	0.98
Window 7	Living Room/Sun Room/Dining Room/Kitchen	35.4%	35.3%	0.1%	1.0
Window 8	Living Room/Sun Room/Dining Room/Kitchen	37.0%	36.7%	0.3%	0.99
Window 9 (Secondary)	Living Room/Sun Room/Dining Room/Kitchen	28.1%	21.4%	6.7%	0.76
Window 10	Living Room/Sun Room/Dining Room/Kitchen	32.8%	32.7%	0.1%	1.0
Window 11	Cloaks	30.3%	30.3%	0.0%	1.0
Window 12	Hall	32.4%	32.4%	0.0%	1.0
Window 13	Utility	31.1%	20.7%	10.4%	0.67
Window 14	Utility	31.6%	21.2%	10.4%	0.67
Window 15	Utility	1.7%	0.9%	0.8%	0.53
Window 16	Master Bedroom	38.4%	38.3%	0.1%	1.0
Window 17	Habitable	39.4%	39.3%	0.1%	1.0
Window 18	Shower	37.0%	32.3%	4.7%	0.87
Window 19	Bedroom	38.0%	38.0%	0.0%	1.0
Window 20	Boys Dormitory	39.6%	39.6%	0.0%	1.0
Window 21	Boys Dormitory	83.2%	82.8%	0.4%	1.0
Window 22	Boys Dormitory	83.1%	82.8%	0.3%	1.0
Window 23	Habitable	18.6%	16.8%	1.8%	0.9
Window 24	Habitable	31.4%	29.9%	1.5%	0.95
Window 25	Habitable	39.5%	39.5%	0.0%	1.0
12 Coastal Road					
Window 26	Habitable	22.4%	22.4%	0.0%	1.0
Window 27	Habitable	29.6%	29.6%	0.0%	1.0
Window 28	Habitable	34.7%	34.7%	0.0%	1.0
Window 29	Habitable	36.7%	36.7%	0.0%	1.0
Window 30	Habitable	37.2%	37.2%	0.0%	1.0
Window 31	Habitable	36.9%	36.9%	0.0%	1.0
Window 32	Habitable	35.7%	35.6%	0.1%	1.0
Window 33	Habitable	31.0%	31.0%	0.0%	1.0
Window 34	Habitable	22.3%	22.2%	0.1%	1.0
Window 35	Habitable	66.9%	66.9%	0.0%	1.0
Window 36	Habitable	78.8%	78.8%	0.0%	1.0
Window 37	Habitable	81.2%	81.2%	0.0%	1.0
Window 38	Habitable	82.6%	82.6%	0.0%	1.0
Window 39	Habitable	83.1%	83.1%	0.0%	1.0
Window 40	Habitable	82.8%	82.8%	0.0%	1.0

Appendix 2 - Vertical Sky Component

14 Coastal Road, East Preston Littlehampton BN16 1SJ

Reference	Use Class	Vertical Sky Component			
		Before	After	Loss	Ratio
Window 41	Habitable	80.5%	80.4%	0.1%	1.0
Window 42	Habitable	76.4%	76.4%	0.0%	1.0
Window 43	Habitable	0.1%	0.1%	0.0%	1.0
Window 44	Habitable	55.9%	55.9%	0.0%	1.0
Window 45	Habitable	37.6%	37.6%	0.0%	1.0
Window 46	Habitable	35.3%	35.3%	0.0%	1.0
Window 47	Habitable	39.4%	39.4%	0.0%	1.0
Window 48	Habitable	5.5%	5.4%	0.1%	0.98
Window 49	Habitable	29.4%	29.4%	0.0%	1.0
Window 50	Habitable	36.4%	36.4%	0.0%	1.0
Window 51	Habitable	36.4%	36.4%	0.0%	1.0
Window 52	Habitable	36.4%	36.4%	0.0%	1.0
Window 53	Habitable	29.4%	29.4%	0.0%	1.0
Window 54	Habitable	38.1%	38.0%	0.1%	1.0
Window 55	Habitable	38.0%	38.0%	0.0%	1.0
Window 56	Habitable	38.0%	38.0%	0.0%	1.0

Appendix 2 - Daylight Distribution

14 Coastal Road, East Preston Littlehampton BN16 1SJ

Reference	Use Class	Daylight Distribution			
		Before	After	Loss	Ratio
<u>16 Coastal Road</u>					
Window 1	Living Room/Sun Room/Dining Room/Kitchen	100%	100%	0.0%	1.0
Window 2	Living Room/Sun Room/Dining Room/Kitchen	100%	100%	0.0%	1.0
Window 3	Living Room/Sun Room/Dining Room/Kitchen	100%	100%	0.0%	1.0
Window 4	Living Room/Sun Room/Dining Room/Kitchen	100%	100%	0.0%	1.0
Window 5	Living Room/Sun Room/Dining Room/Kitchen	100%	100%	0.0%	1.0
Window 6	Living Room/Sun Room/Dining Room/Kitchen	100%	100%	0.0%	1.0
Window 7	Living Room/Sun Room/Dining Room/Kitchen	100%	100%	0.0%	1.0
Window 8	Living Room/Sun Room/Dining Room/Kitchen	100%	100%	0.0%	1.0
Window 9 (Secondary)	Living Room/Sun Room/Dining Room/Kitchen	100%	100%	0.0%	1.0
Window 10	Living Room/Sun Room/Dining Room/Kitchen	100%	100%	0.0%	1.0
Window 11	Cloaks	95%	95%	0.0%	1.0
Window 12	Hall	79%	79%	0.0%	1.0
Window 13	Utility	95%	95%	0.0%	1.0
Window 14	Utility	95%	95%	0.0%	1.0
Window 15	Utility	95%	95%	0.0%	1.0
Window 16	Master Bedroom	97%	97%	0.0%	1.0
Window 17	Habitable	65%	65%	0.0%	1.0
Window 18	Shower	92%	92%	0.0%	1.0
Window 19	Bedroom	97%	97%	0.0%	1.0
Window 20	Boys Dormitory	77%	77%	0.0%	1.0
Window 21	Boys Dormitory	77%	77%	0.0%	1.0
Window 22	Boys Dormitory	77%	77%	0.0%	1.0
Window 23	Habitable	20%	20%	0.0%	1.0
Window 24	Habitable	69%	69%	0.0%	1.0
Window 25	Habitable	69%	69%	0.0%	1.0

Appendix 2 - Sunlight to Windows

14 Coastal Road, East Preston Littlehampton BN16 1SJ

Reference	Use Class	Sunlight to Windows							
		Total Sunlight Hours				Winter Sunlight Hours			
		Before	After	Loss	Ratio	Before	After	Loss	Ratio
<u>16 Coastal Road</u>									
Window 4	Living Room/Sun Room/Dining Room/Kitchen	64%	64%	0%	1.0	24%	24%	0%	1.0
Window 5	Living Room/Sun Room/Dining Room/Kitchen	84%	84%	0%	1.0	30%	30%	0%	1.0
Window 6	Living Room/Sun Room/Dining Room/Kitchen	69%	69%	0%	1.0	26%	26%	0%	1.0
Window 7	Living Room/Sun Room/Dining Room/Kitchen	78%	77%	1%	0.99	30%	30%	0%	1.0
Window 8	Living Room/Sun Room/Dining Room/Kitchen	82%	79%	3%	0.96	30%	29%	1%	0.97
Window 9 (Secondary)	Living Room/Sun Room/Dining Room/Kitchen	45%	35%	10%	0.78	15%	11%	4%	0.73
Window 13	Utility	45%	28%	17%	0.62	12%	10%	2%	0.83
Window 14	Utility	45%	28%	17%	0.62	12%	10%	2%	0.83
Window 16	Master Bedroom	83%	82%	1%	0.99	30%	30%	0%	1.0
Window 17	Habitable	88%	86%	2%	0.98	30%	30%	0%	1.0
Window 18	Shower	48%	44%	4%	0.92	14%	12%	2%	0.86
Window 21	Boys Dormitory	79%	79%	0%	1.0	23%	23%	0%	1.0
Window 22	Boys Dormitory	79%	78%	1%	0.99	23%	22%	1%	0.96
Window 23	Habitable	49%	46%	3%	0.94	10%	7%	3%	0.7
Window 24	Habitable	75%	72%	3%	0.96	21%	18%	3%	0.86
<u>12 Coastal Road</u>									
Window 26	Habitable	13%	13%	0%	1.0	0%	0%	0%	1.0
Window 35	Habitable	21%	21%	0%	1.0	0%	0%	0%	1.0
Window 36	Habitable	50%	50%	0%	1.0	1%	1%	0%	1.0
Window 49	Habitable	59%	59%	0%	1.0	22%	22%	0%	1.0
Window 50	Habitable	84%	84%	0%	1.0	30%	30%	0%	1.0
Window 51	Habitable	84%	84%	0%	1.0	30%	30%	0%	1.0
Window 52	Habitable	84%	84%	0%	1.0	30%	30%	0%	1.0
Window 53	Habitable	61%	61%	0%	1.0	24%	24%	0%	1.0
Window 54	Habitable	84%	83%	1%	0.99	30%	30%	0%	1.0
Window 55	Habitable	84%	84%	0%	1.0	30%	30%	0%	1.0
Window 56	Habitable	84%	84%	0%	1.0	30%	30%	0%	1.0

Appendix 2 - Overshadowing to Gardens and Open Spaces
14 Coastal Road, East Preston Littlehampton BN16 1SJ

Reference	Total Area	Area receiving at least two hours of sunlight on 21st March						
		Before		After		Loss		Ratio
<u>16 Coastal Road</u>								
Garden 1	460.43 m2	460.42 m2	100%	460.42 m2	100%	0.0 m2	0%	1.0
<u>12 Coastal Road</u>								
Garden 2	206.86 m2	204.42 m2	99%	204.42 m2	99%	0.0 m2	0%	1.0
Garden 3	258.24 m2	258.24 m2	100%	258.24 m2	100%	0.0 m2	0%	1.0

APPENDIX 3

OVERSHADOWING TO GARDENS AND OPEN SPACES

Appendix 3 : Overshadowing to Gardens and Open Spaces

Key

- 

Receives under two hours sunlight on 21st March before and after the development.
- 

Receives under two hours sunlight on 21st March before the development; but will receive at least two hours sunlight on 21st March after the development (light improved).
- 

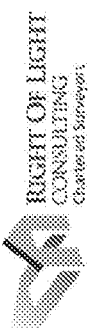
Receives at least two hours sunlight on 21st March before the development; but will receive under two hours sunlight after the development (light loss).
- 

Receives at least two hours sunlight on 21st March before and after the development.

Notes:

1. Contours derived in accordance with BRE Guide : Site Layout Planning for Daylight and Sunlight

Project Name: 14 Coastal Road, East Preston Littlehampton BN16 1SJ	
Drawing Title: Appendix 3 - Overshadowing to Gardens and Open Spaces	
Drawing No: 1 of 1	
Scale: As not scale	
Client:	Rev: -
Drawn:	Details of revision
Check:	
Issue:	



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