

33 Conway Street, W1

**Internal Daylight and
Sunlight Report**

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Reference:	1155
Date:	3rd May 2012

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Executive Summary

- This report provides detailed analysis of the daylight and sunlight internally to the scheme on the ground and basement levels. This report has been written for planning purposes.
- Local planning policy refers to the BRE Guidelines as the principal reference in determining the acceptability of the scheme in terms of daylight and sunlight. The methods and approach recommended in the BRE Guidelines have been used in the analysis of the daylight and sunlight within the scheme. A detailed computer analysis has been used to calculate accurately the numerical results in three dimensions.
- The internal daylight results shows that all rooms on the ground and basement level will meet the BRE Guidelines daylight criteria. Therefore the proposal as a whole will appear well daylit.
- The sunlight results show that all but one window to the living rooms within the proposal will meet the BRE Guidelines' sunlight criteria. The BRE Guidelines makes clear that some flexibility in the application of the numerical guidelines should be considered in an urban location such as this site. Therefore, given that flexibility, the proposal as a whole is considered to be in alignment with the intention of the BRE Guidelines and so is considered acceptable and in accordance with planning policy.
- Overall therefore daylight and sunlight internal to the proposal will be acceptable and in accordance with the intent of BRE Guidelines' recommendations and thus with local planning policy.

1. Introduction

- 1.1 This report provides the daylight and sunlight analysis internal to the proposed scheme by Cluttons received 23rd April 2012. Analysis has been provided for the ground and basement level as it is understood that there is no planning concern as to daylight and sunlight internal to the rooms on the upper levels. This report has been written for planning purposes. The report has been written by Waldrams Chartered Surveyors, specialists in provision of daylight and sunlight reports.

Summary of how daylight and sunlight are considered for planning

- 1.2 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 Building Research Establishment (BRE) Guidelines, used in conjunction with British Standard BS8206 Part 2. The BRE Guidelines provide scientific, objective methods for establishing the acceptability of daylight and sunlight internal to the scheme and the surrounding properties. In practice it is principally the main habitable rooms internal to the scheme and within the surrounding residential properties which are sensitive in terms of loss of daylight and sunlight. This report therefore focuses on the internal daylight and sunlight and the change in daylight and sunlight to habitable rooms in the surrounding residential property.
- 1.3 The BRE Guidelines specify that the daylight and sunlight results be considered flexibly and in the context of the site. Clearly there would be a higher expectation for daylight and sunlight in a rural or suburban environment than in a dense city centre location. Likewise if the existing site is open or only has low existing buildings, but has been earmarked in local development policy for high density development, then it is inevitable that the change

between existing and proposed levels will be relatively large. In these situations it is the retained level of daylight and sunlight which the primary measure of acceptability, not the change between existing and proposed levels. The important factor in all cases is that the levels of daylight and sunlight are appropriate, taking into account all the planning policy requirements of the site. The BRE Guidelines acknowledge this in the introduction where the BRE Guidelines state:

- 1.4 “The guide is intended for building designers and their clients, consultants and planning officials. The advice given here is not mandatory and thus this document should not be seen as an instrument of planning policy. Its aim is to help rather constrain the designer. Although it gives numerical guidelines, these should be interpreted flexibly because natural lighting is only one of the many factors in site layout design. In special circumstances the developer or planning authority may wish to use different target values.”

(Page 1, BRE Guidelines)

- 1.5 Thus, the numerical figures should not be rigidly applied, but instead used as part of the overall evaluation of the daylight and sunlight to the surroundings in context of the site, its existing massing, and the need for regeneration and local planning policy guidance for the site. In particular existing local precedents or recent planning consents may provide a good indication as to appropriate levels in the vicinity.
- 1.6 The method for assessing internal daylight to the scheme is:
- Average Daylight Factor (ADF);
- and for internal sunlight it is:
- Annual Probable Sunlight Hours (APSH).

- 1.7 The ADF measure of daylight takes into account the main factors which affect the actual daylight appearance of a room including the area of the window.
- 1.8 ADF provides an absolute measure of daylight expressed as a ratio of daylight for the room in question as a proportion of the daylight outside at any moment in time. The ADF for a living room should be above 1.5% (i.e. the room should enjoy a minimum of 1.5% of the average external daylight at any moment in time), whilst that for a bedroom and kitchen should be in excess of 1% and 2% respectively. ADF is dependent on the area of sky visibility, which is closely related to VSC, the area of the window serving the room, the glazing transmittance, the total area of the room's surfaces and the internal reflectance of the room.
- 1.9 The test for sunlight is calculated for each main south facing window to habitable rooms and in particular living rooms. 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). Of this, each main window to a main habitable room may be adversely affected if it has less than 25% of the total APSH across the whole year or less than 5% APSH during the winter months (defined as the 6 months from September 21st through to March 21st).

Method used for calculating the daylight and sunlight results

- 1.10 The analysis provided in this report utilizes state-of-the-art software to calculate in three dimensions the internal ADF for daylight and APSH for sunlight following the methods specified in the revised 2011 BRE Guidelines to correctly calculate the daylight and sunlight to all rooms and windows within the scheme. A three dimensional accurate computer model has been created for the

existing site in context of the immediate surrounding properties which either could be affected by the proposal or which could materially affect the result of a potentially affected room and window.

2. Sources of information used in the report

Cluttons

tf 2012 04 04c Existing and Proposed.dwg

Received 23/4/2012

Ordnance Survey

Digital Extract

Waldrams

Site Photographs

References:

BRE Guidelines (BR 209):- Site layout planning for daylight and sunlight: a guide to good practice, by PJ Littlefair (2011).

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 the Introduction (Section 1) of this report.

3. The Proposed Scheme

- 3.1 The internal layouts of the proposed scheme also showing the room and windows references to the results are shown on drawings 0594-01 and 02 for the basement and ground floor respectively.

4. Internal Daylight and Sunlight Analysis

- 4.1 The internal daylight and sunlight analysis has been undertaken following the revised BRE Guidelines' methodology (October 2011)
- 4.2 The rooms and window references relating to the results in Appendix 2 are shown on drawing 0594-01 and 02 in Appendix 1 for the basement and ground floors respectively.

Internal Daylight Analysis

- 4.3 The ADF results show that all rooms within the scheme in the proposed basement and ground floors meet the BRE Guideline level, and thus in accordance with the BRE Guidelines.
- 4.4 Therefore daylight internal to the scheme will be acceptable, meeting with the BRE Guidelines and thus planning policy on daylight.

Internal Sunlight Analysis

- 4.5 Only those windows which face within 90 degrees of due south need to be analysed in relation to sunlight according to the BRE Guidelines. The north facing windows are recorded as N/A in the sunlight results in Appendix 2. For this reason sunlight is not always available in an urban location due to the orientation of the building.
- 4.6 The BRE Guidelines make clear that it is only main living rooms which are important in relation to sunlight. The results in Appendix 2 show that all south facing windows serving living room/kitchen/dining rooms on the ground and basement level will meet the BRE Guidelines' sunlight criteria except one window labelled W3 on the ground floor with 9% total APSH. In an urban location such as this, similar levels of sunlight are not uncommon. The main facade of the property facing Conway Street itself is north facing and so the

orientation of the building means that there is no sunlight to the front of the building.

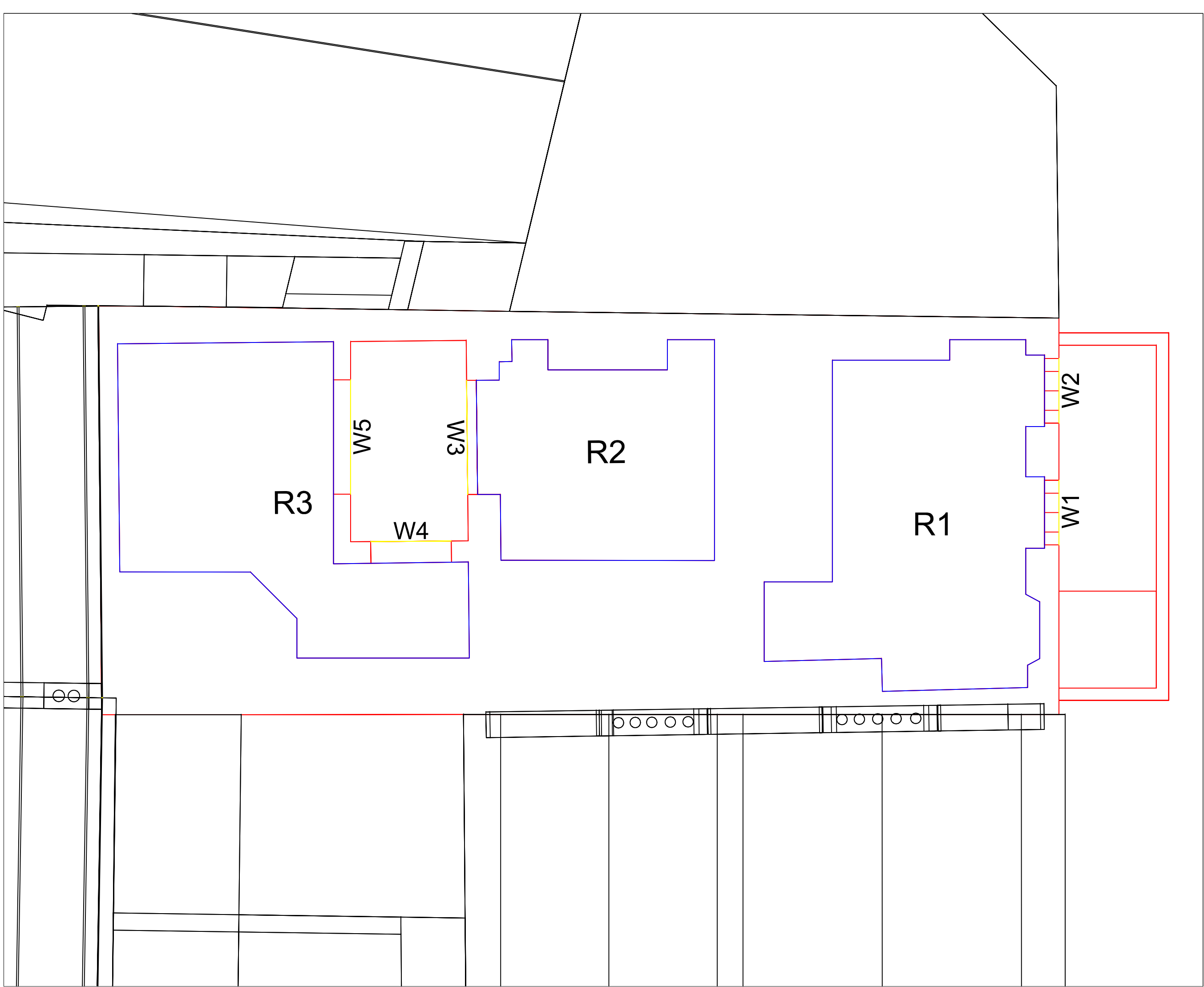
- 4.7 Overall therefore sunlight is considered to be acceptable and in line with planning policy in an urban environment where some flexibility in the application of the numerical BRE Guideline criteria is allowed.

5. Conclusion

- 5.1 This report details the daylight and sunlight analysis internal to the proposal itself in the basement and ground floor. This report has been written for planning purposes. The analysis is based on the methods laid out in the October 2011 BRE Guidelines, used by planning officers to determine acceptability of daylight and sunlight internal to proposals.
- 5.2 The internal daylight results show that all rooms on the ground and basement level will meet the BRE Guidelines daylight criteria. Therefore the proposal as a whole will appear well daylighted.
- 5.3 The sunlight results show that all but one window to the living rooms within the proposal will meet the BRE Guidelines' sunlight criteria. The BRE Guidelines make clear that some flexibility in the application of the numerical guidelines should be considered in an urban location such as this site. Therefore, given that flexibility, the proposal as a whole is considered to be in alignment with the intention of the BRE Guidelines and so is considered acceptable and in accordance with planning policy.
- 5.4 Overall therefore daylight and sunlight internal to the proposal will be acceptable and in accordance with the intent of BRE Guidelines' recommendations and thus with local planning policy.

APPENDIX 1

DRAWINGS



Sources of Information

Cluttons
tf 2012 04 04c Existing and Proposed.dwg
Received 23/04/2012

Site Photographs

Ordnance Survey

Waldrams

Chartered Surveyors

Rights of Light
Daylight and sunlight

Project 33 Conway street
London

Drawing Basement

Date 24/04/2012

Scale NTS

Drawn By PS

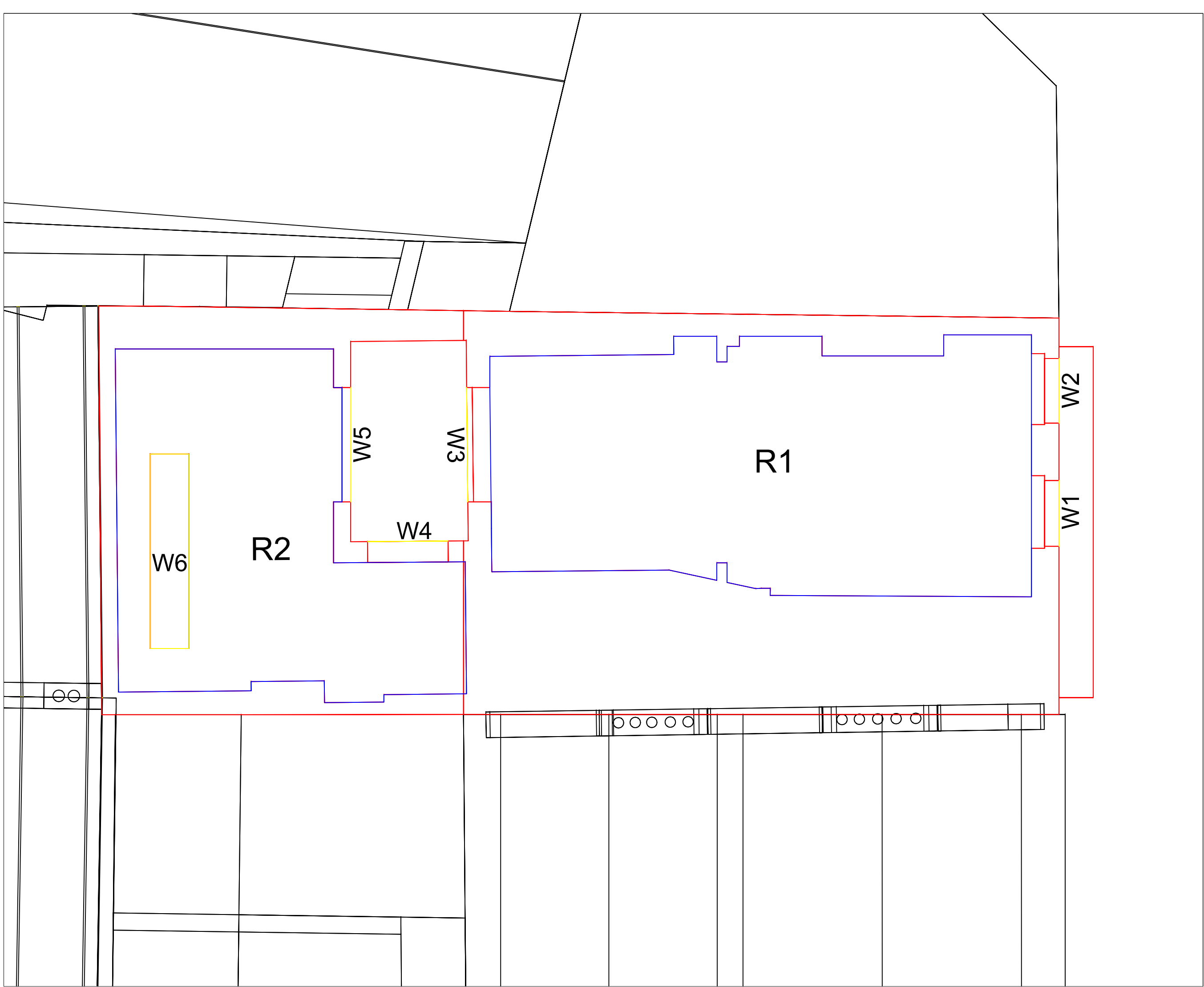
Checked By IT

Drawing No. Rev.

0594

01

01



Sources of Information

Cluttons
tf 2012 04 04c Existing and Proposed.dwg
Received 23/04/2012

Site Photographs

Ordnance Survey

Waldrams

Chartered Surveyors

Rights of Light
Daylight and sunlight

Project 33 Conway street
London

Drawing Ground Flor

Date 24/04/2012

Scale NTS

Drawn By PS

Checked By IT

Drawing No. Rev.

0594

02

01

APPENDIX 2

INTERNAL DAYLIGHT AND SUNLIGHT RESULTS

Floor	Room ID	Window ID	Room Use	ADF	TOTAL ADF	TOTAL APSH	WINTER APSH
Basement	R1	W1	Bedroom	0.6		N/A	N/A
		W2	Bedroom	0.5	1.1	N/A	N/A
Basement	R2	W3	Bedroom	1.4	1.4	0	0
Basement	R3	W4	Bedroom	0.7		N/A	N/A
		W5	Bedroom	1.0	1.7	N/A	N/A
Ground	R1	W1	Living room	0.5		N/A	N/A
		W2	Living room	0.5		N/A	N/A
		W3	Living room	0.6	1.5	9	0
Ground	R2	W4	L/K/D	0.6		N/A	N/A
		W5	L/K/D	0.8		N/A	N/A
		RL1	L/K/D	0.7	2.1	N/A	N/A
First	R1	W1	L/K/D	1.2		N/A	N/A
		W2	L/K/D	1.2		N/A	N/A
		W3	L/K/D	1.2	3.7	N/A	N/A
First	R2	W4	Bedroom	2.1	2.1	39	14
Second	R1	W1	L/K/D	1.0		N/A	N/A
		W2	L/K/D	1.0		N/A	N/A
		W3	L/K/D	1.0	3.1	N/A	N/A
Second	R2	W4	Bedroom	1.3	1.3	43	16
Third	R1	W1	L/K/D	0.9		N/A	N/A
		W2	L/K/D	0.8		N/A	N/A
		W3	L/K/D	0.8	2.5	N/A	N/A
Third	R2	W4	Bedroom	1.3	1.3	47	17
Third	R3	W5	Bedroom	1.7	1.7	47	15