



Schofield

Internal Daylight & Sunlight Report

Revision: A

Old School House,
Hillingdon Road,
Uxbridge, UB10 0AA

04 April 2022

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1.0 INTRODUCTION

- 1.1 Schofield Surveyors have been instructed by Aujla Property Limited to test the effects of the proposed development at Old School House, Hillingdon Road, London UB10 0AA on the daylight and sunlight availability to the new rooms within the proposal itself. The assessment considers the design information provided by Stephen Davy Peter Smith Architecture dated February 2022.
- 1.2 We have not been asked to consider the effects to the neighbouring amenity as application is for a Prior Approval for a change of use only, so there is no additional massing to test the effects of existing vs proposed.
- 1.5 The methodology and criteria used for this assessment is provided by two documents. The first is the Building Research Establishment's (BRE) guidance "Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice" (BRE 209 2nd Edition, 2011) and the second is the BS EN 17037: 2018 (formerly BS 8206 part 2).
- 1.6 To carry out our assessments, we have generated a 3D computer model of the site based upon two dimensional elevations, a topographical survey and photogrammetry. With this model, we have utilised our specialist computer software to calculate the daylight and sunlight impacts to the new units to determine the effect, if any, the proposed development may have.
- 1.7 The numerical criteria suggested within the BRE guidelines and BS EN 17037: 2018 has been applied to our assessment. It is also important to note that these guidelines are not a rigid set of rules, but they are purely advisory and need to be applied both sensibly and flexibly according to the specific context of the site.
- 1.8 Section 1.6 of the guidance states:

"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 and design."

2.0 THE SITE

2.1 The site is located at Old School House, Hillingdon Road, London, UB10 0AA .

2.2 The below image shows the site taken from architectural drawings/OS data: -



3.0 Methodology

- 3.1 The site is situated in the London Borough of Hillingdon and this report has considered all relevant planning policy which relates specifically to daylight and sunlight.
- 3.2 The most recognised methodology, which most London Authorities adhere to, is the Building Research Establishment's *"Site planning for daylight and sunlight – a guide to good practice"* (2011), which is most commonly referred to as the "BRE guide".

The London Plan – The Mayor of London (March 2021)

The Mayor of London's new London Plan gives the following:

3.3 Policy D6 – C&D Housing Quality and Standards

"Housing Development should maximise the provision of dual aspect dwellings and normally avoid the provision of single aspect dwellings. A single aspect dwelling should only be provided where it is considered a more appropriate design solution to meet the requirements of Part B in Policy D3 optimising site capacity through the design led approach than a dual aspect dwelling, and it can be demonstrated that it will have adequate passive ventilation, daylight and privacy and avoid overheating.

The design development should provide sufficient daylight and sunlight to new and surrounding housing that is appropriate for its context, whilst avoiding overheating, maximising overshadowing, and maximising the instability of outside amenity space".

The Housing SGP – The Mayor of London (March 2016)

- 3.4 The Mayor of London has published a Supplementary Planning Guidance (SPG) in March 2016, which includes the following information:

Standards for privacy, daylight and sunlight:

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 the 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.

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 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 harm”.

4.0 DAYLIGHT & SUNLIGHT

4.1 For daylight within new buildings, the appropriate method to assess impacts is the Average Daylight Factor (ADF) assessment. The BRE guide and BS 8206 Part 2 recommends the following values for habitable rooms:

- Bedrooms: 1% ADF
- Living rooms: 1.5% ADF
- Kitchens: 2% ADF
- Living/kitchen/dining: 2%

4.2 In consideration of the above, it is important to note that for multi-purpose living/kitchen/diner arrangements, the higher target can be difficult to achieve due to the depth and size of the internal space, particularly if the kitchen is located to the rear of the space. On that basis, we would usually expect the living room target rate of 1.5% ADF to be more than appropriate for this type of room. Although, for completeness, we have used a 2% target, but added commentary on the 1.5% level where appropriate.

4.3 For sunlight APSH, the BRE guide states:

“3.1.2. In housing, the main requirement for sunlight is in living rooms, where it is valued at any time of the day but especially in the afternoons...It is viewed as less important in bedrooms and kitchens, where people prefer it in the mornings rather than afternoon.

4.4 When considering the scheme itself, where a window faces directly north, no matter what external obstruction is present, the window will not be able to receive good levels of sunlight throughout the year. However, conversely, if a window faces directly south and has no obstructions, the window will receive very high levels of sunlight, where, in most instances, solar shading will be required.

4.5 In consideration of the above criteria for assessing daylight and sunlight, key consideration needs to be applied for when assessing daylight and sunlight whilst being mindful of the BRE criteria as well as the London Plan, the SPG and recent Appeal decisions. In that regard, the results are presented whilst being mindful of the BRE target criteria and applying flexibility in accordance with the relevant policy documents.

5.0 APPLYING THE BRE GUIDE

5.1 In paragraph 2.2.2 of the BRE Guide, it states that:

“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.”

5.2 Our detailed technical assessments therefore only consider residential habitable properties.

5.3 For daylight within the proposed scheme, we have considered all habitable rooms, such as kitchens, living rooms, bedrooms, and living/kitchen/diners (LKD). Entrance halls, bathrooms, WC's etc have been ignored within our assessment due to the rooms not serving habitable space.

- 5.4 For sunlight, the BRE acknowledges that those windows/rooms which predominantly face north are unlikely to satisfy its targets. In addition, the focus on sunlight is mainly living spaces within the scheme where bedrooms and kitchens are considered less important. In that regard, focus has been applied to those windows/rooms facing within 90° of due south only.
- 5.5 In applying the guidance, it is extremely important to consider it sensibly and flexibly, with careful consideration of the specific context of the site. Its numerical targets theoretically apply to most built environments, from city centres to sub-urban towns and villages. Therefore, in more tightly constrained sites, the default BRE targets can be very challenging to achieve.
- 5.6 With the above in mind, a rigid application of the guidance in certain situations could easily conflict with appropriate development in this area. A flexible approach therefore must be applied to allow development to be in keeping with its neighbouring environment. The BRE states that:

“2.2.3 Note that the numerical values given here are purely advisory. Different criteria may be used, based on the requirements for daylighting in the area viewed against other site constraints. Another important issue is whether the existing building in itself a good neighbour, standing a reasonable distance from the boundary and taking no more than its fair share of light”.

6.0 SOURCES OF INFORMATION

- 6.1 The site has been scanned to provide two-dimensional survey elevations and a topographical survey. This information has been utilised within the 3D model to ensure an accurate 3D environment can be prepared. In addition, a photogrammetry model has been utilised in the assessment.
- 6.2 The following drawings have been used:

Matrix Surveys

Drawing No:	Revision:	Date:
Elevation 1: 21/2628	-	Jan 2022
Elevation 2: 21/2628	-	Jan 2022
Elevation 3: 21/2628	-	Jan 2022
Elevation 4: 21/2628	-	Jan 2022
2628 - Ground	-	Jan 2022
2628 - First	-	Jan 2022
2628 - Site	-	Jan 2022

- 6.3 The following information has been provided by the Architect, Stephen Davy Peter Smith in March 2022:

Drawing No:	Revision:	Date:
2135-P002-S0_P0-Site Plan	P0	February 2022
2135-P101-S0_P0-First Floor Plan	P0	February 2022
2135-P102-S0-P0-Revised First Floor Plan	P0	March 2022

7.0 RESULTS – Internal daylight and sunlight

Daylight – ADF

- 7.1 The full set of results are presented in Appendix 3 together with the associated plans illustrating the windows/rooms considered for assessment. Commentary on the impacts is provided below.

Property	Number of Rooms Tested	Rooms satisfying BRE (ADF)		Rooms not satisfying BRE
		Number	%	
Old School House	18	18	100%	0
Total	18	18	100%	0

- 7.2 The results show that out of the 18 rooms that have been considered, all 18 (100%) fully comply with BS 8206 ADF requirements.

Sunlight – APSH

- 7.6 The full set of results are presented within Appendix 3 of this report together with a summary below.

Property	Number of Rooms Tested	Annual			Winter		
		Rooms that meet BRE Guidelines		No. of Rooms Experiencing Adverse Impacts	Rooms that meet BRE Guidelines		No. of Rooms Experiencing Adverse Impacts
		No.	%		No.	%	
Old School House	5	5	100%	0	5	100%	0
Total	5	5	100%	0	5	100%	0

- 7.7 The focus of the BRE sunlight is on main living rooms, rather than bedrooms and kitchens, which the guide views as less as important and it states:

“3.12 In housing, the main requirement is in living rooms, where it is valued at any time of the day but especially in the afternoon. Sunlight is also required in conservatories. It is viewed as less important in bedrooms and kitchens.”

- 7.11 The results of the sunlight APSH assessment show that out of the 79 rooms that face within 90 degrees of due south, all 5 (100%) comply with BRE targets.

8.0 CONCLUSION

- 8.1 Schofield Surveyors have undertaken a detailed assessment of the habitable rooms that form part of the development site for daylight and sunlight amenity. Our assessments are presented in full to the rear of this report.

Daylight and sunlight to the scheme

- 8.2 The results of the overall Average Daylight Factor assessment show good levels of light, with 100% of the rooms achieving BRE targets.

8.3 Similarly, the APSH sunlight results show good levels to those main living rooms that sit within a southerly aspect. The detailed results show that out of the 5 rooms considered, all 5 (100%) comply with targets.

Appendix 1

Plans

Notes:

Rev Description	Date
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4th Floor, 3-4 John Prince's Street
London, W1G 0JL
020 3771 9445
info@schofieldsurveyors.co.uk
schofieldsurveyors.co.uk

Project:
Old School House
Hillingdon Road
Uxbridge UB10 0AA

Title:
Proposed building

Date: 04/04/2022	Scale: N.T.S
Drawing: 22.041.SPT.800	<div>Rev</div>

Appendix 2

Results – Scheme

Notes:

Rev Description	Date
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4th Floor, 3-4 John Prince's Street
London, W1G 0JL
020 3771 9445
info@schofieldsurveyors.co.uk
schofieldsurveyors.co.uk

Project:

Old School House
Hillingdon Road
Uxbridge UB10 0AA

Title:

Ground Floor Plan

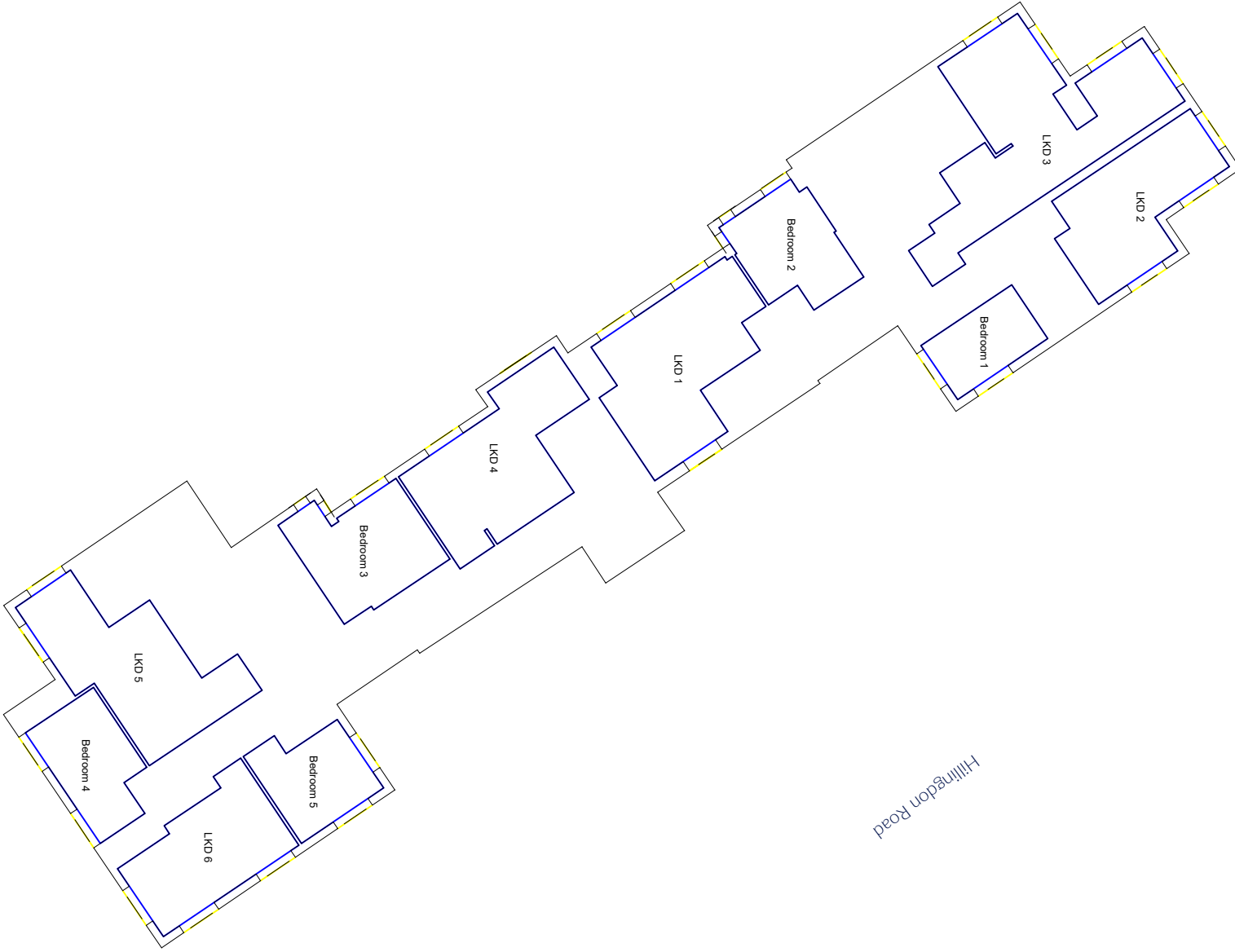
Date:	Scale:
-------	--------

04/04/2022 N.T.S

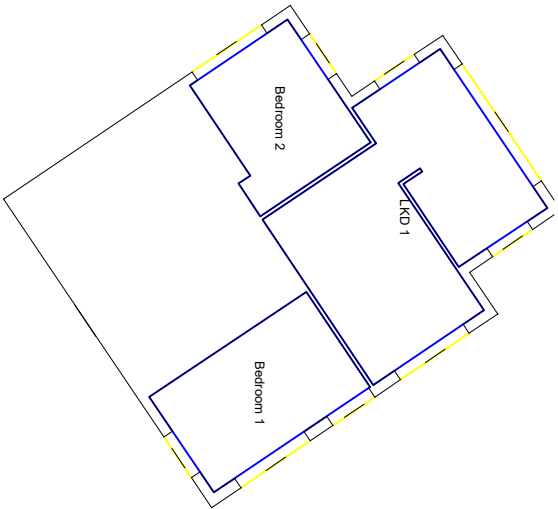
Drawing:

22.041.LOC.800

Rev



Notes:



Hillingdon Road

Rev | Description

Date



4th Floor, 3-4 John Prince's Street
London, W1G 0JL
020 3771 9445
info@schofieldsurveyors.co.uk
schofieldsurveyors.co.uk

Project:

Old School House
Hillingdon Road
Uxbridge UB10 0AA

Title:

First Floor Plan

Date:

04/04/2022

Scale:

N.T.S

Drawing:

22.041.LOC.801

Rev

Project Name: Old School House, Hillingdon Road
Project No.: 1
Report Title: Average Daylight Factor - Proposed Scheme Analysis
Date: 01/04/2022

Floor Ref.	Room Ref.	Room Use.	Window Ref.	Glass Transmittance	Glazed Area	Clear Sky Angle Proposed	Room Surface Area	Average Surface Reflectance	Below Working Plane Factor	ADF Proposed	Req'd Value	Meets BRE Criteria
B1												
Ground	LKD 1	LKD	W1	0.68	2.24	70.10	114.38	0.65	1.00	1.62		
		LKD	W14	0.68	2.08	66.78	114.38	0.65	1.00	1.43		
		LKD	W15	0.68	2.11	70.24	114.38	0.65	1.00	1.52		
										4.57	2.00	YES
Ground	LKD 2	LKD	W4	0.68	1.85	82.96	96.59	0.65	1.00	1.87		
		LKD	W5	0.68	1.85	70.53	96.59	0.65	1.00	1.59		
		LKD	W6	0.68	1.83	77.01	96.59	0.65	1.00	1.72		
										5.17	2.00	YES
Ground	LKD 3	LKD	W7	0.68	1.83	76.50	184.02	0.65	1.00	0.90		
		LKD	W8	0.68	1.85	55.82	184.02	0.65	1.00	0.66		
		LKD	W9	0.68	1.83	56.46	184.02	0.65	1.00	0.66		
		LKD	W10	0.68	1.84	73.62	184.02	0.65	1.00	0.87		
Ground	LKD 4	LKD	W16	0.68	0.68	64.95	115.00	0.65	1.00	0.45		
		LKD	W17	0.68	2.33	68.57	115.00	0.65	1.00	1.64		
										2.09	2.00	YES
Ground	LKD 5	LKD	W21	0.68	1.85	73.54	118.75	0.65	1.00	1.35		
		LKD	W22	0.68	1.84	58.47	118.75	0.65	1.00	1.07		
										2.41	2.00	YES
Ground	LKD 6	LKD	W25	0.68	1.84	75.42	87.56	0.65	1.00	1.87		
		LKD	W26	0.68	1.84	82.39	87.56	0.65	1.00	2.04		
		LKD	W27	0.68	1.84	81.99	87.56	0.65	1.00	2.03		
										5.94	2.00	YES
Ground	Bedroom 1	Bedroom	W2	0.68	1.86	61.46	51.39	0.65	1.00	2.62		
		Bedroom	W3	0.68	1.84	83.00	51.39	0.65	1.00	3.49		
										6.11	1.00	YES
Ground	Bedroom 2	Bedroom	W11	0.68	1.16	57.24	68.02	0.65	1.00	1.15		
		Bedroom	W12	0.68	0.54	59.88	68.02	0.65	1.00	0.56		
		Bedroom	W13	0.68	0.55	39.66	68.02	0.65	1.00	0.38		
										2.09	1.00	YES
Ground	Bedroom 3	Bedroom	W18	0.68	2.35	66.87	80.29	0.65	1.00	2.31		
		Bedroom	W19	0.68	0.52	37.49	80.29	0.65	1.00	0.29		
		Bedroom	W20	0.68	0.56	60.83	80.29	0.65	1.00	0.50		
										3.09	1.00	YES
Ground	Bedroom 4	Bedroom	W23	0.68	1.81	74.34	65.74	0.65	1.00	2.41		
		Bedroom	W24	0.68	1.82	74.66	65.74	0.65	1.00	2.43		
										4.84	1.00	YES
Ground	Bedroom 5	Bedroom	W28	0.68	1.84	81.74	61.70	0.65	1.00	2.87		
		Bedroom	W29	0.68	1.84	61.44	61.70	0.65	1.00	2.15		
										5.03	1.00	YES
First	LKD 1	LKD	W4	0.68	2.65	48.06	141.14	0.65	1.00	1.06		
		LKD	W5	0.68	1.55	40.48	141.14	0.65	1.00	0.52		
		LKD	W6	0.68	4.52	44.27	141.14	0.65	1.00	1.67		
		LKD	W7	0.68	1.53	35.01	141.14	0.65	1.00	0.45		
First	LKD 2	LKD	W10	0.68	1.58	44.59	91.63	0.65	1.00	0.91		
		LKD	W11	0.68	1.56	35.71	91.63	0.65	1.00	0.72		
		LKD	W19	0.68	1.65	44.65	91.63	0.65	1.00	0.95		
										2.57	2.00	YES
First	LKD 3	LKD	W14	0.68	2.43	44.39	71.49	0.65	1.00	1.78		
		LKD	W15	0.68	2.66	47.04	71.49	0.65	1.00	2.06		
		LKD	W16	0.68	1.62	46.75	71.49	0.65	1.00	1.25		
										5.09	2.00	YES
First	Bedroom 1	Bedroom	W1	0.68	1.58	45.68	67.81	0.65	1.00	1.25		
		Bedroom	W2	0.68	2.67	48.39	67.81	0.65	1.00	2.25		
		Bedroom	W3	0.68	1.62	48.00	67.81	0.65	1.00	1.35		
										4.84	1.00	YES
First	Bedroom 2	Bedroom	W8	0.68	1.53	35.11	59.96	0.65	1.00	1.06		
		Bedroom	W9	0.68	2.69	44.82	59.96	0.65	1.00	2.36		

Project Name: Old School House, Hillingdon Road
 Project No.: 1
 Report Title: Average Daylight Factor - Proposed Scheme Analysis
 Date: 01/04/2022

Floor Ref.	Room Ref.	Room Use.	Window Ref.	Glass Transmittance	Glazed Area	Clear Sky Angle Proposed	Room Surface Area	Average Surface Reflectance	Below Working Plane Factor	ADF Proposed	Req'd Value	Meets BRE Criteria
First	Bedroom 3	Bedroom	W12	0.68	2.68	44.40	53.19	0.65	1.00	3.42	1.00	YES
			W13	0.68	1.62	44.17	53.19	0.65	1.00	2.63		
										1.58		
										4.22	1.00	YES
First	Bedroom 4	Bedroom	W17	0.68	2.69	46.87	49.76	0.65	1.00	2.98		
			W18	0.68	1.57	44.77	49.76	0.65	1.00	1.66		
										4.64	1.00	YES

Project Name: Old School House
 Project No.: 1
 Report Title: APSH Assessment
 Date of Analysis: 01/04/2022

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	Total Suns per Room Annual	Meets BRE Criteria	Total Suns per Room Winter	Meets BRE Criteria
B1								
Ground	LKD 1	Residential	LKD	W1 W14 W15	53.00	YES	14.00	YES
	LKD 3	Residential	LKD	W7 W8 W9 W10	48.00	YES	14.00	YES
	LKD 4	Residential	LKD	W16 W17	46.00	YES	15.00	YES
	LKD 5	Residential	LKD	W21 W22	76.00	YES	23.00	YES
First	LKD 2	Residential	LKD	W10 W11 W19	28.00	YES	19.00	YES