AA PROJECTS

Daylight Sunlight Report

Private and Confidential

Sharer Investments (3) Ltd
December 2021

57 Fortess Road

London

Contents

Appendices

1.0 Executive Summary

The brief for this commission is the preparation of a Daylight Sunlight report to examine the impact of the proposed development on the daylight and sunlight light levels that would be enjoyed within the development itself (labelled B1 – 57 Fortess Road, London in the report).

The daylight sunlight review in this report has been based on the methodologies set out in the Building Research Establishment (BRE) report 'Site layout planning for daylight and sunlight - A guide to good practice' by P. J. Littlefair.

We have not undertaken an assessment of any adjacent properties as the proposed works are internal only and there is no additional building massing to impact on neighbouring properties.

A 3D computer model of the existing properties/surrounding areas and the proposed development has been created and then run through proprietary software to calculate the proposed light levels at each window and within each room being assessed. These light levels were then compared with the corresponding levels in the BRE guidelines.

Overall, our detailed technical assessment results using the existing site as a baseline are as shown in the tables below:

Summary Table Using Existing Site as Baseline							
Building No.	Address	Total No of Rooms	Total No of Windows	VSC		ADF	
				Percentage of Windows Compliant for VSC daylight (including Negligible)	Percentage of Windows Minor Loss of VSC Daylight	Percentage of Rooms Compliant for ADF Daylight (including Negligible)	Percentage of Rooms Minor Loss of ADF Daylight
B1	57 Fortess Road	2	4	100%	0%	100%	0%
Total		**2**	**4**	**100%**	**0%**	**100%**	**0%**

Summary Table Using Existing Site as Baseline							
Building No.	Address	Total No of Rooms	Total No of Windows	APSH Summer		APSH Winter	
				Percentage of Windows Compliant for APSH Summer Sunlight (including Negligible)	Percentage of Windows Minor Loss of APSH Summer Sunlight	Percentage of Windows Compliant for Winter APSH Sunlight (Including Negligible)	Percentage of Windows Minor Loss of APSH Winter Sunlight
B1	57 Fortess Road	2	4	100%	0%	100%	0%
Total		2	4	100%	0%	100%	0%

In respect of sunlight, 100% of all windows assessed meet the APSH Summer and winter BRE criteria.

There is thus no reason why the proposed development should not be supported because of concerns over reductions in daylight or sunlight levels that would be enjoyed within the development.

2.0 Introduction & Methodology

2.1 Instructions

The brief for this commission is the preparation of a Daylight Sunlight report to examine the impact of the proposed development on the daylight and sunlight light levels that would be enjoyed within the development itself (labelled B1 – 57 Fortess Road, London in the report).

We have not undertaken an assessment of any adjacent properties as the proposed works are internal only and there is no additional building massing to impact on neighbouring properties.

A 3D computer model of the existing properties/surrounding areas and the proposed development has been created and then run through proprietary software to calculate the proposed light levels at each window and within each room being assessed. These light levels were then compared with the corresponding levels in the BRE guidelines.

It is usual to assess daylight/sunlight in relation to the guidelines set out in the Building Research Establishment (BRE) report 'Site layout planning for daylight and sunlight - A guide to good practice' by P. J. Littlefair. We shall refer to this report throughout as the 'BRE'. One of the primary sources for the BRE document is the more detailed guidance contained within 'British Standard Code of Practice for Daylighting, BS8206 Part 2', and we shall also refer to this document.

The BRE guidelines note that "In housing, the main requirement for sunlight is in living rooms, where it is valued at any time of day, but especially in the afternoon." Other areas such as bedrooms are therefore to be treated as less important.

We examine two measures of diffuse daylight in this study, namely Vertical Sky Component (VSC) and Average Daylight Factor (ADF). In terms of sunlight, we examine the BRE Annual Probable sunlight Hours (APSH). All these measures of daylight and sunlight are discussed in Appendices A to D.

The criteria contained in the BRE document are provided for guidance and should be interpreted flexibly. In its introduction the BRE report states *"The advice given here is not mandatory……Although it gives numerical guidelines, these should be interpreted flexibly……For example, in an historic city centre, or in an area with modern high rise buildings, a higher degree of obstruction may be unavoidable…."*.

In addition, the new National Planning Policy Framework (NPPF) stipulates that: ''A flexible approach should be taken in applying policies relating to daylight and sunlight, where they would otherwise inhibit making efficient use of a site.''

The site does not benefit from any historic planning permission and there are no Strategic Regeneration Framework planning guidelines for the local area. The results have therefore been calculated using the existing site massing as the baseline condition.

The various measures and appropriateness of daylight and sunlight calculations are discussed and set out below.

2.2 Vertical Sky Component (VSC)

VSC is a measure of the light reaching a point at the centre of a window, and the BRE guideline is based on the loss of VSC at a single window. It is therefore not appropriate in cases where rooms are served by multiple windows and in particular when a room is dual or multi-aspect. If one window fails the criterion, in reality the daylight to the room would not necessarily be seriously impacted, and the daylight within the room would in all probability remain good. In addition, VSC takes no account of the size of a window. The VSC at the centre of a very small window is identical to VSC at the centre of a large window. Clearly a measure of daylight which accounts for the size and number of windows is therefore more appropriate. This is accomplished by NSL.

We have performed the VSC calculations and the figures are tabulated in Appendix E.

2.3 No-Sky Line (NSL) (also known as Daylight Distribution (DD))

No-Sky Line (NSL) is a measure of the distribution of daylight within a room. As it maps out the region within a room where light can penetrate directly from the sky, it therefore accounts for the size of and number of windows by simple geometry. This is also its weakness.

To quote from Appendix B, - 'in principle a point lies within the No-Sky Line no matter how small a patch of sky it can see—even if for instance there is only a keyhole allowing light in to the room. Clearly the method is intended to map out areas within a room which receive a significant amount of direct daylight from the sky, so that it would be better if a small but finite amount of direct daylight were used to divide the two regions. This would also reduce the tendency for the No-Sky Line position to vary wildly at the rear of a room, rather like when small variations in tidal height cause the tide line to move by large distances on a virtually level beach'.

The position of the no-sky line can therefore be very sensitive to very small changes in light levels. In addition, NSL does not account for other factors that determine the daylight level in a room. Double glazing has a transmittance of say 64%. In comparing an unglazed window with a double glazed window, the position of the No-Sky line doesn't change at all, even though the

light level has been reduced by nearly half. A further factor which influences the daylight levels within a room is the colour (or more specifically – the reflectance) of the walls, ceiling and floor.

If these are all very dark colours, clearly the room will not have a very daylight appearance. No account is taken of this important factor. There is clearly a need for a measure of daylight which attempts to account for all the important factors which contribute to the interior daylight in a room, and this measure is the Average Daylight Factor (ADF).

The BRE NSL calculations are not applicable to a proposed development (ADF is used instead) and therefore NSL calculations have not been carried out.

2.4 Average Daylight Factor (ADF)

Whilst the BRE guide recommends that ADF is mainly used to assess daylight within a proposed development (as the developer has control of the design), it is still a very useful measure of actual daylight within a room based on room volume, glazing ration and use, particularly where the other measures (VSC and NSL) are not conclusive.

The BRE guide provides a series of progressive tests and it is only necessary to progress to the next test if the window/room does not pass the test being applied to it. Thus, where a window does not pass the VSC test, the BRE guide suggest that the ADF of the room behind it should be considered.

ADF is a measure of the daylight within a room and accounts for factors such as the number of windows and their size in relation to the size of the room. Clearly a small room with a large window will be better illuminated by daylight than a large room with a small window. It also accounts for the above-mentioned window transmittance and internal reflectance.

The general idea is that one calculates the daylight which reaches each of the windows, and allowing for the window size, the light which then enters the room through all of the windows. The light is then imagined to bounce around within the room, controlled by the reflectance of the internal surfaces.

The ADF is detailed in British Standard 8206 Part 2. As for the BRE report, it provides guidance for acceptable values in the presence of supplementary electric lighting, depending on the room use. These are 1.0% for a bedroom, 1.5% for a living room and 2.0% for a kitchen. The ADF figures are tabulated in Appendix F.

2.5 Annual Probable Sunlight Hours (APSH)

In relation to sunlight, the BRE recommends that the Annual Probable sunlight Hours (APSH) received at a given window in the proposed case should be at least 25% of the total available including at least 5% in winter. Only those residential windows that face within 90 degrees of south should be considered. The sunlight figures are provided in tabular form in Appendix G.

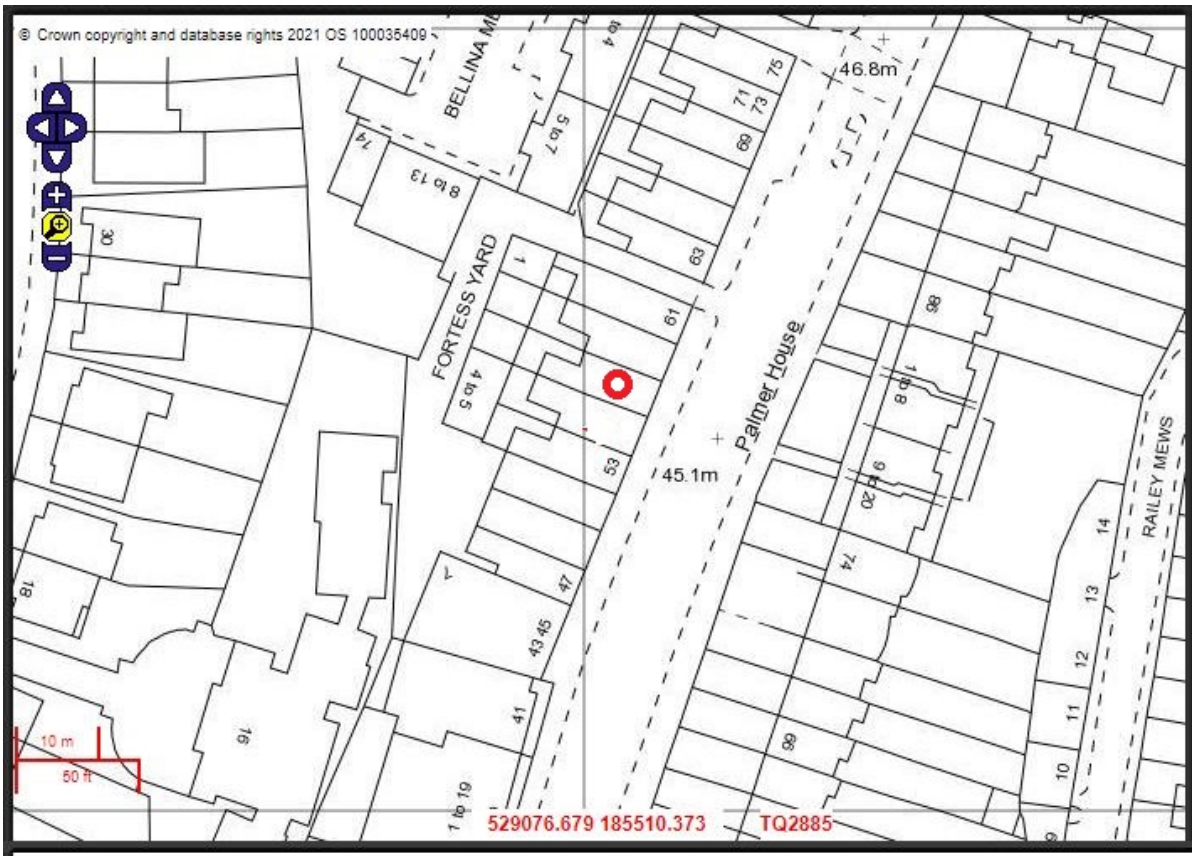
3.0 Site and Surrounding Properties

The subject development consists of the conversion of a ground/basement floor retail unit into a residential apartment at 57 Fortess Road. The site is roughly rectangular in plan and situated on Fortess Road, located to the North of the City of London.

An aerial photograph and site plan of the development site is included below for information.

Aerial Photograph

Site Plan



We have checked the Planning Portal to assess whether there any other surrounding consented schemes that would impact on the results in this study and none were found.

A 3D image marked up to show the location of the proposed development (amongst others) is included in section 4 below.

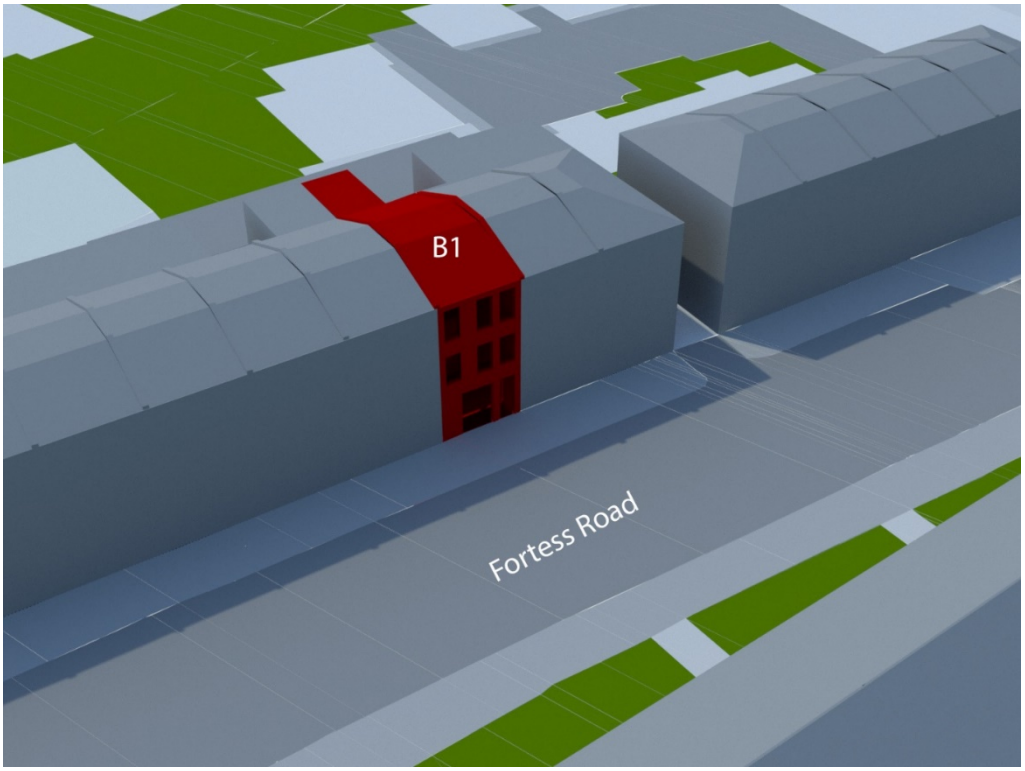
4.0 Proposed Scheme

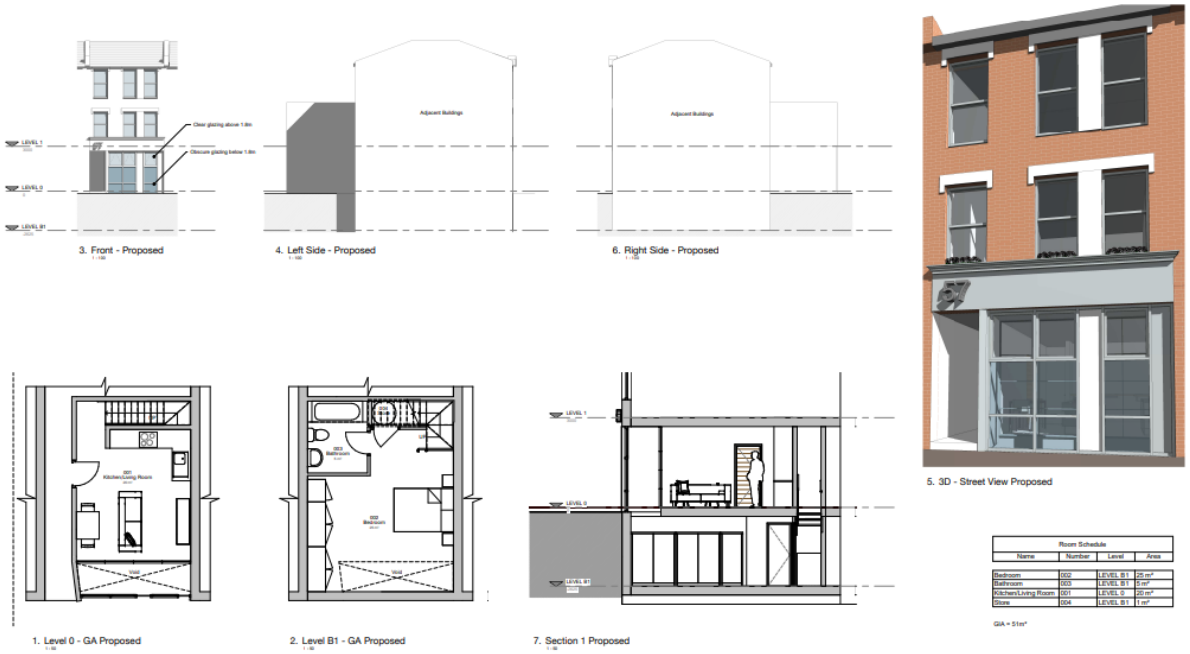
Various drawings prepared by Debtal Architecture were provided of the proposed development to allow us to carry out this report as set out below. The proposed drawings show that it is intended to convert a ground / basement retail unit into a residential apartment at 57 Fortess Road, London.

DA21078 - 57 Fortess Road, London - 003 - Proposed GA Plans and Elevations
DA21078 - 57 Fortess Road, London - 004 - Proposed 3D Section

An image from the 3D model showing the proposed scheme is shown below:

Proposed Scheme





5.0 Previously Consented Scheme

The site does not benefit from any historic planning permission and there are no Strategic Regeneration Framework Planning guidelines for the local area. The results have therefore been calculated using the existing site massing as the baseline condition.

6.0 Calculations and Assumptions

In order to calculate the various measures of daylight and sunlight it is necessary to construct a 3D computer model. The proposed development was modelled from the sources listed above. The site and surrounding properties were set out using an OS Map. The 3D model was created so as to reproduce the massing of the buildings both on and surrounding the site, at a level of detail appropriate to the calculations performed. All heights are given Above Ordnance Datum (AOD).

We have assumed that the surrounding properties will be double glazed with a window transmittance of 0.64 and rooms with an average internal surface reflectance of 0.6. These typical values are provided in both the BRE and the British Standard publications. VSC values were calculated on the outer plane of the windows, while APSH values were calculated on the inner plane.

The model was analysed using proprietary software to calculate the proposed light levels at each window and within each room (being assessed). These light levels were then compared with the corresponding levels in the BRE guidelines.

7.0 Results Discussion

7.1 Generally

We shall now discuss the results of the calculations of the various measures of daylight and sunlight in relation to the selected properties, rooms and windows.

We refer to the drawings in the appendices showing the locations of rooms and windows on a floor-by-floor basis.

Also, please refer to the following appendices:

Appendix E – VSC table
Appendix F - ADF results are tabulated
Appendix G – Annual Probable Sunlight Hours are tabulated
Appendix H – Summary Spreadsheets
Appendix I – Drawings & Model Views

In terms of VSC, the BRE guide recommends that a VSC level of over 27% is achieved or the reduction is no greater than 20% (or 80% of the former value).

The BRE does not state a required amount of No-Sky Line floor area that should remain after a development but merely suggests a maximum reduction (proposed No-Sky Line floor areas should be more than 0.8 times the existing).

The BRE guidelines for ADF of Kitchens (2%), Living Rooms (1.5%) and Bedrooms (1%) should be noted when reading this report. There is no stated acceptable reduction in values where these values are not met. However, the accepted reduction in VSC noted above would typically result in a 14% reduction in ADF as noted in C8 of the BRE guide. This would therefore also be classed as a reasonable reduction (as noted in the appendices of the BRE guide). This measure is only used where VSC and NSL measures are not met (not applicable here).

In relation to sunlight, we note that the BRE guidelines for Annual Probable Sunlight Hours (APSH) only apply to windows that face within 90 degrees of due south and therefore only rooms and windows that fall into this category have been considered.

The BRE recommends that the APSH received at a given window in the proposed case should be at least 25% of the total available including at least 5% in winter or the reduction should be no greater than 20%.

A table summarising the above is set out below:

Method	BRE Criteria
VSC	A window may be adversely affected if its VSC measured at the center of the window is less than 27% and less than 0.8 times its former value.
NSL	A room may be adversely affected if the daylight distribution (NSL) is reduced beyond 0.8 times its existing area.
ADF	Rooms within a proposed development should achieve ADF values of 2% (Kitchens), 1.5% (Living Rooms), 1% (Bedrooms). Where used to assess losses to adjacent properties, the reduction should be less than 14% as noted in Appendix C8 of the BRE guide.
APSH	A window may be adversely affected if a point at the center of the window received for the whole year, less than 25% of the APSH including at least 5% of the APSH during the winter months (21st September to 21st March) and less than 0.8 times its former sunlight hours during either period, and for existing neighboring buildings, if there is a reduction in total APSH which is greater than 4%.

With regard to the BRE guidelines, professional judgement has been used to determine whether the potential effects will result in adverse or beneficial effects.

Beneficial effects are experienced when the massing/design of a new building results in improved BRE guideline results to the adjacent properties when compared to the results obtained from the previous building on the site. Alternatively, beneficial effects can often be seen when the analysis shows that the proposed development design would return better BRE results than would be obtained from a previous extant Planning Permission.

The initial numerical criteria for determining the category of an adverse effect is based on percentage alterations, as follows:

- 20-29.9% alteration = minor adverse;
- 30-39.9% alteration = moderate adverse; and
- 40% alteration = major adverse

In respect of ADF the numerical criteria for determining the category of effect is based on percentage alterations, as follows:

- 0-14% alteration = negligible
- 15-21% alteration = minor adverse;
- 22-28% alteration = moderate adverse; and
- 29% and above alteration = major adverse

Other factors tending towards a minor impact are:

- Only a small number of windows are affected;
- The loss of light is only marginally outside the guidelines;
- An affected room has other sources of skylight or sunlight; and
- The affected building only has a low level of requirement for skylight or sunlight

Other factors tending towards a major adverse impact are:

- A large number of windows are affected;
- The loss of light is substantially outside the guidelines;
- All the windows in a particular property are affected; and
- The affected indoor spaces have a particular strong requirement for skylight or sunlight, e.g. a living room in a dwelling

However, when assigning criteria per property, consideration has been given to the proportion of rooms/windows affected, as well as the percentage alterations, absolute changes, and any other relevant factors, such as there may be mitigating factors such as balconies, overhangs or design features which may also affect the determination of assigning the criteria.

For example, where an adjacent property has overhanging balconies, the windows below them will be very reliant on horizontal light/sky visibility. Any development near to those windows may therefore return poor BRE guideline daylight sunlight results but this would be largely due to the adjoining buildings own design rather than the size and massing of the new development. The same principal applies to adjacent recessed windows. Section 2 of the BRE guide goes further to say that the daylight sunlight analysis can be undertaken without the adjacent building balconies in place if the results are overly affected by them.

In addition, where a room in an adjacent building is served by more than one window, the BRE guide states that it is acceptable to take an average of the VSC results. Thus, the room may have one window that passes the BRE VSC test and one that fails but when averaged, the results may very well mean the room passes VSC as a whole. Also, for APSH if a room is served by multiple windows which face in different directions, the values can be added together or, if they have the same orientation, the lower value can be disregarded.

The BRE guidelines also note that "In housing, the main requirement for sunlight is in living rooms, where it is valued at any time of day, but especially in the afternoon." Other areas such as bedrooms are therefore to be treated as less important.

The criteria to be met when assessing the light within a proposed development are set out below.

Method	BRE Criteria
VSC	A window may be adversely affected if its VSC measured at the centre of the window is less than 27%. Multiple windows serving a room can be averaged.
ADF	Rooms within a proposed development should achieve ADF values of 2% (Kitchens), 1.5% (Living Rooms), 1% (Bedrooms).
APSH	A window may be adversely affected if a point at the centre of the window received for the whole year is less than 25% of the APSH including at least 5% of the APSH during the winter months (21st September to 21st March).

A word of explanation about labelling of rooms and windows is required. Every room and window is given a unique reference by reference to the building, floor level, room and window number. This is necessary to track the rooms and windows through the various calculations, and these labels appear in the tables of results.

7.2 57 Fortess Road, London (B1)

Front Elevation

This property is a three-storey vacant former commercial/retail property of mainly traditional brick construction and pitched roof. There are glazed windows in the front elevation providing light to the ground and basement levels (via a floor cut out).

The floor layouts for this property used in the 3D model have been provided by the architects.

Note:
To assess the glazed window that serves the ground and basement level, we registered it as two windows, one set registered to the ground floor living room, and the other set to the basement bedroom. The results therefore show four window references but this is purely an exercise to allow the window to illuminate both spaces in the calculations. There has been no duplication or additional windows added.

7.2.1 Vertical Sky Component (VSC)

The results in Appendix E show that all the windows (100%) to habitable rooms exceed the BRE target figure of 27% and therefore pass the BRE criteria.

7.2.2 Average Daylight Factor (ADF)

The table in Appendix F shows that the 2 rooms analysed (100%) meet or exceed the target ADF values and therefore fully pass the BRE criteria.

7.2.3 Annual Probable Sunlight Hours (APSH)

The results in Appendix G show that all windows (100%) meet or exceed the BRE recommended levels of 25% in summer and 5% in winter and therefore fully pass the BRE criteria.

8.0 Summary & Conclusions

We have considered the proposed development in relation to the BRE guidelines on daylight and sunlight and the results are tabulated in the Appendices and summarised above.

In respect of daylight, the results against the BRE criteria demonstrate 100% of windows are compliant with regard to VSC and ADF. The light enjoyed within the proposed rooms will therefore be good.

In respect of sunlight, 100% of windows assessed meet the APSH Summer and Winter BRE criteria.

There is thus no reason why the proposed development should not be supported because of concerns over daylight or sunlight levels that would be enjoyed within the proposed development.

We trust this report is of assistance and look forward to receiving your further instructions. In the meantime, if you have any comments or queries, please do not hesitate to contact me.

9.0 Conditions of Use of This Report

This report is to be regarded as confidential to and for the sole use of the recipient. Consequently, no responsibility is accepted to any third party in respect of its contents in whole or in part.

Appendix A

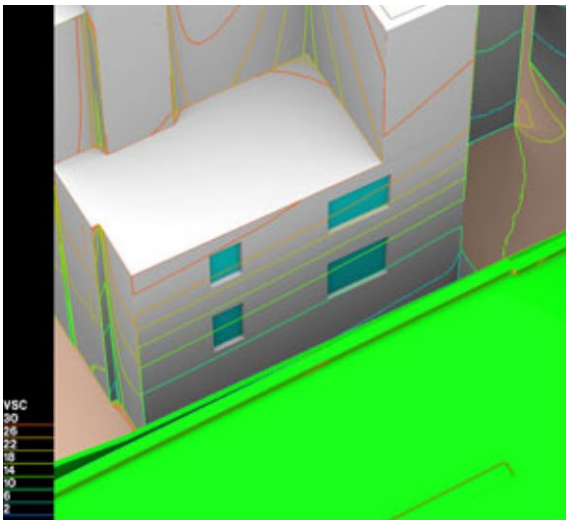
Vertical Sky Component (VSC)

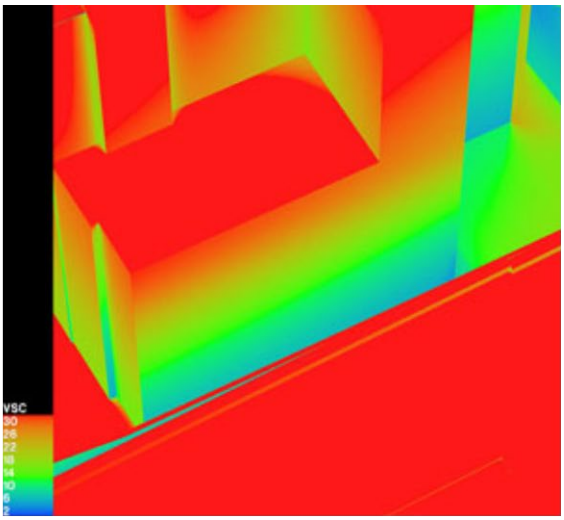
APPENDIX A – Vertical Sky Component (VSC)

The Vertical Sky Component is a measure of the amount of skylight incident on a vertical plane (i.e. the sky factor on a Vertical Plane). It is most commonly applied to the light incident at the centre of a window and in this sense is a measure of the potential for good daylighting. The VSC is calculated by taking the ratio of the skylight incident at a point to the unobstructed skylight available on a horizontal plane. For a uniform sky, the maximum value is 50% (since the point is on a vertical plane, clearly only the half of the hemisphere which is in front of the plane can contribute). For a CIE sky, the maximum value is 39.6%.

Simple VSC Example

The frames below show 2 different ways of showing how the VSC varies across the face of a building:





Clearly in this case, the further down the windows are, the less light they receive, and therefore the lower the value of the VSC.

BRE Criterion

The guidelines state that if the VSC at the centre of a window is less than 27% and less than 0.8 times its former value, the diffuse daylighting of the existing building will be adversely affected. A value of 27% corresponds to an obstruction angle of 25 degrees over an infinite extent in plan.

This guideline (as with all the BRE guidelines) can be interpreted flexibly. The above criterion was developed in the case of suburban development where existing development was 2 storeys across an average street width. In city centre locations, the target VSC can be reduced to allow proposed buildings to match the height of other buildings in the neighbourhood.

Appendix B

No-Sky Line (NSL)

APPENDIX B – No-Sky Line (NSL)

The No-Sky Line is a measure of the impact of development on the daylight distribution in a room. The No-Sky Line can be determined by examining a grid of points on the working plane of the room. Those from which the sky is visible lie within the No-Sky Line, and those from which it is not, lie outside. For a fine enough grid, the boundary between the two is the No-Sky Line. The BRE state that for residential properties, the working plane is to be taken at 850mm above floor level, and for commercial properties, 700mm above floor level.

BRE Criterion

The BRE state the following for the criterion to be used in comparing the No-Sky Line for the existing buildings with that for proposed development:

'*If, following construction of a new development, the no-sky line moves so that the area of the existing room which does receive direct skylight is reduced to less than 0.8 times its former value, then this will be noticeable to the occupants, and more of the room will appear poorly lit. This is also true if the no-sky line encroaches on key areas like kitchen sinks and worktops.*'

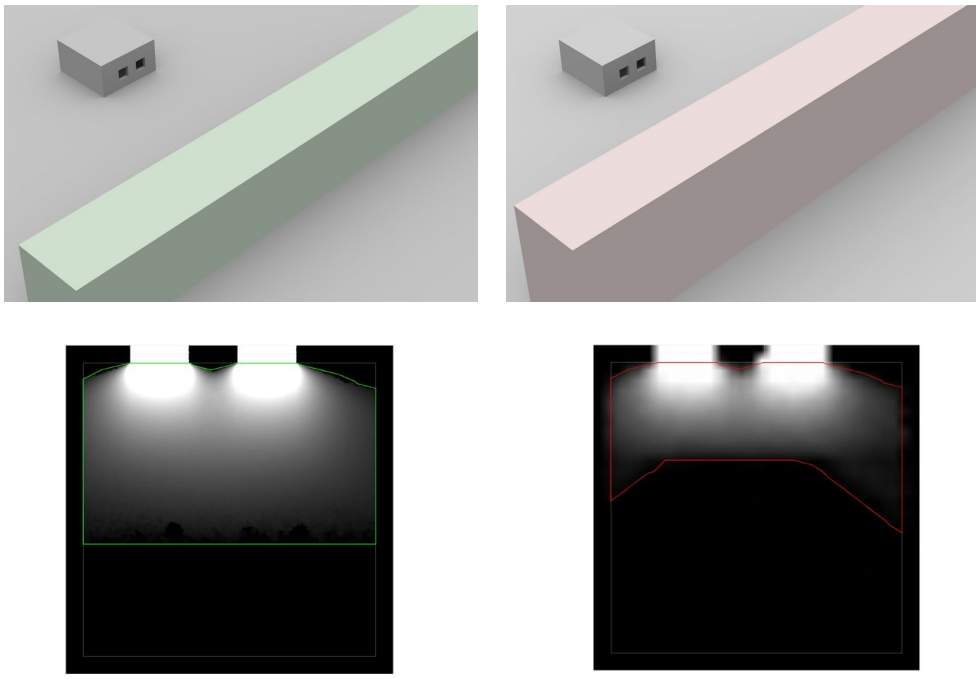
The BRE guide goes on to state that the guidelines need to be applied sensibly and flexibly. For instance, there is no point designing a proposed scheme with tiny gaps in it in order to safeguard the No-Sky line.

The above highlights a potential weakness in the method—in principle a point lies within the No-Sky Line no matter how small a patch of sky it can see—even if for instance there is only a keyhole allowing light in to the room. Clearly the method is intended to map out areas within a room which receive a significant amount of direct daylight from the sky, so that it would be better if a small but finite amount of direct daylight were used to divide the two regions. This would also reduce the tendency for the No-Sky Line position to vary wildly at the rear of a room, rather like when small variations in tidal height cause the tide line to move by large distances on a virtually level beach.

That said, the No-Sky line takes into account multiple windows serving the same room, which the VSC criterion does not. It also takes account of the size of the windows, and the size and layout of the room being served by the window(s). These two factors are also not accounted for in a VSC analysis.

VSC and No-Sky Line are in a sense complementary. VSC is a measure of the potential for good daylighting—does the front face of a window receive adequate daylight and by how much is it reduced? No-Sky Line on the other hand, by examining what happens to daylight when it enters a room through the windows serving it, attempts to answer the question, how is the daylight and its distribution impacted within a room?

Simple NSL Example



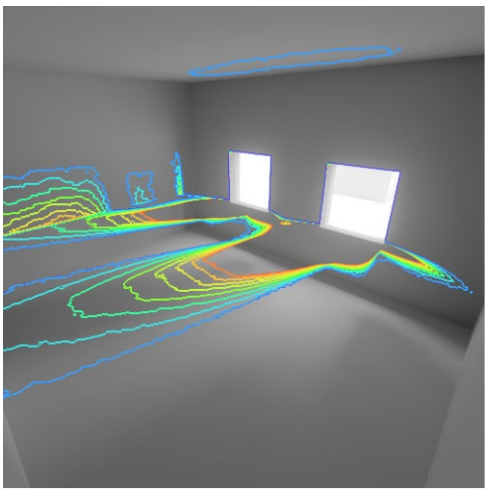
In the example above, we show a room served by 2 windows, in front of which a two storey building is having an additional storey added. The area of the room is 25 sq m, the area enclosed by the existing No-Sky Line is 15 sq m, and that enclosed by the proposed No-Sky Line is 9.4 sq m. The proposed area is 0.63 times its former value (37% reduction), and therefore this room would fail the BRE No-Sky Line test.

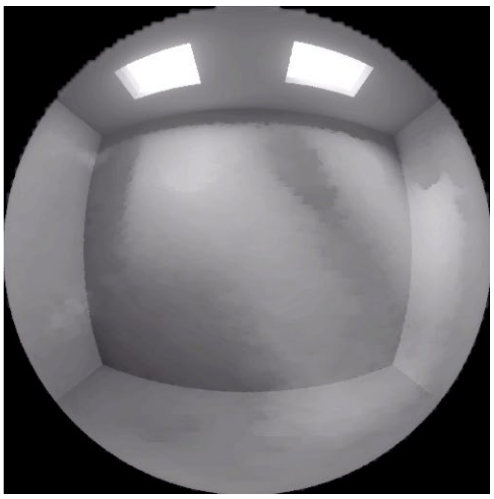
Appendix C

Average Daylight Factor (ADF)

APPENDIX C – Average Daylight Factor (ADF)

The Average Daylight Factor (ADF) is a measure of interior daylight. It can be used to establish whether a room will have a predominantly daylit appearance and if not, and it can provide levels below which a room should not fall even if supplementary electric lighting is provided.





ADF values can be calculated for rooms within a proposed development and checked against the recommended value. Existing and Proposed ADF values can also be calculated for properties which overlook a site.

Factors on which the ADF depend are: VSC at the face of each window, the Total Window Area, Total Wall Area, Wall Reflectivity and Window Transmission.

There are no specific BRE criteria for reduction in ADF if a proposed development were to be implemented, but in Appendix C it states that *'if the VSC is reduced from 30% to 24% (0.8 times its former value)…the ADF is reduced to 0.86 times its former value'*. This implies that if up to a 20% reduction in VSC is acceptable, then up to a 14% reduction in ADF is also acceptable. In practice, the relationship between VSC and ADF is more complicated but the above holds to be approximately true over a range of values.

BRE Criterion

The BRE states that for a predominantly daylit appearance the ADF should be 5% or more if there is no supplementary electric lighting, or 2% or more if there is supplementary electric lighting. There are additional recommendations for dwellings. These are: 2.0% - Kitchens, 1.5% - Living Rooms, 1.0% - Bedrooms.

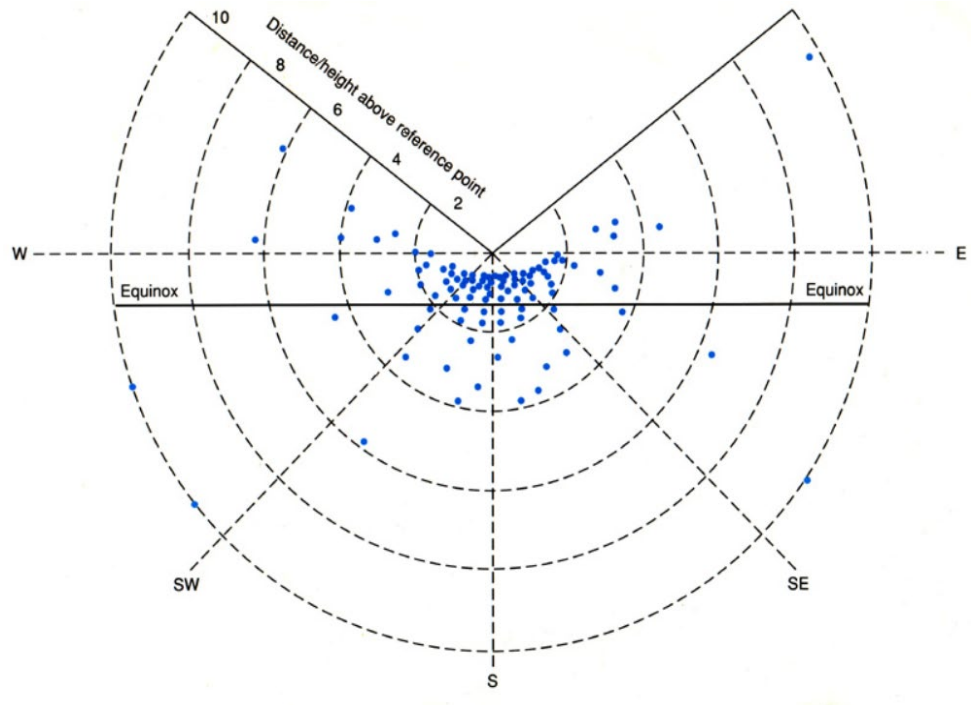
These figures are also recommended in BS 8206 Part 2 1992 entitled 'Code of Practice for Daylighting'. There are no specific guidelines for comparing figures before and after development, but it is possible to infer that a reduction in ADF of over 14% would constitute a material loss, corresponding to a 20% loss of VSC.

Appendix D

Annual Probable Sunlight Hours (APSH)

APPENDIX D – Annual Probable Sunlight Hours (APSH)

Annual probable sunlight hours (APSH) is a measure of the average number of hours of sunlight one would expect to receive at a given position, as a fraction of the unobstructed total number of hours at the same location. The BRE have compiled data sets consisting of a statistical sample of solar positions convolved with local meteorological data. Using these to calculate APSH, one would simply calculate the number of solar positions visible from a point, compared to the total number, expressed as a percentage. The diagram below, taken from the BRE report, shows the solar positions, relative to a reference point, used to calculate Sunlight Availability for London (51.5°N).



BRE Criterion

The BRE report states that for windows within a new development, if a point at the centre of a window on the plane of the inside surface of the wall "*...can receive more than one quarter of annual probable sunlight hours, including at least 5% of annual probable hours during the winter months between 21st September and 21st March, then the room should still receive enough sunlight.*"

For windows in surrounding properties which experience a change in APSH, it goes on to say that "*Any reduction in sunlight access below this level should be kept to a minimum. If the available sunlight hours are both less than the amount given and less than 0.8 times their former value, either over the whole year or just during the winter months, then the occupants will notice the loss of sunlight*."

Appendix E

Vertical Sky Component Calculation Table

Project Name: 57 Fortess Road
Project No: BS/19390
Report Title: Daylight & Sunlight - Analysis
Date of Analysis: 16/12/2021

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.		VSC	Pr/Ex	Meets BRE Criteria
B1								
Ground	R1	Residential	Bedroom	W1	Proposed	27.82	1.00	YES
				W2	Proposed	27.80	1.00	YES
	R1	Residential	LK	W1	Proposed	27.82	1.00	YES
				W2	Proposed	27.80	1.00	YES

Appendix F

Average Daylight Factor Calculation Table

Project Name: 57 Fortess Road
Project No: BS/19390
Report Title: Daylight & Sunlight - Neighbour Analysis
Date of Analysis: 14/12/2021

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	Glass Transmittance	Glazed Area	Clear Sky Angle Existing	Clear Sky Angle Proposed	Room Surface Area	Average Surface Reflectance	Below Working Plane Factor	ADF Proposed	Req'd Value	Meets BRE Criteria
Proposed														
Basement	R1	Residential	Bedroom	W1	0.68	4.23	64.67	64.67	90.49	0.50	1.00	2.74		
			Bedroom	W2	0.68	2.00	62.07	62.07	90.49	0.50	1.00	1.25		
												3.99	1.00	YES
Ground	R1	Residential	LK	W1-L	0.68	1.52	N/R	N/R	83.45	0.50	0.15	N/R		
			LK	W1-U	0.68	2.71	64.67	64.67	83.45	0.50	1.00	1.90		
			LK	W2-L	0.68	0.72	N/R	N/R	83.45	0.50	0.15	N/R		
			LK	W2-U	0.68	1.28	62.07	62.07	83.45	0.50	1.00	0.87		
												2.77	2.00	YES

Appendix G

Annual Probable Sunlight Hours Calculation Table

Project Name: 57 Fortess Road
Project No: BS/19390
Report Title: Daylight & Sunlight - Neighbour Analysis
Date of Analysis: 16/12/2021

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	Annual	Pr/Ex	Meets BRE Criteria	Winter	Pr/Ex	Meets BRE Criteria
B1										
Ground	R1	Residential	Bedroom	W1	48.00	1.00	YES	14.00	1.00	YES
					48.00			14.00		
				W2	49.00	1.00	YES	14.00	1.00	YES
					49.00			14.00		
	R1	Residential	LK	W1	48.00	1.00	YES	14.00	1.00	YES
					48.00			14.00		
				W2	49.00	1.00	YES	14.00	1.00	YES
					49.00			14.00		

Appendix H

Results Summary Spreadsheets

		VSC									
		VSC - Existing Site as Baseline									
		Meet or Exceed BRE Guidelines			Below BRE Guidelines						
Building No.	Address	Total no. of Windows	No. Windows that Meet or Exceed BRE Guidelines		21-30% Reduction - Minor		31-40% Reduction - Moderate		>40% Reduction - Major		Total
B1	57 Fortess Road	4	4	100%	0	0%	0	0%	0	0%	0
	Total	**4**	**4**	**100%**	**0**	**0%**	**0**	**0%**	**0**	**0%**	**0**

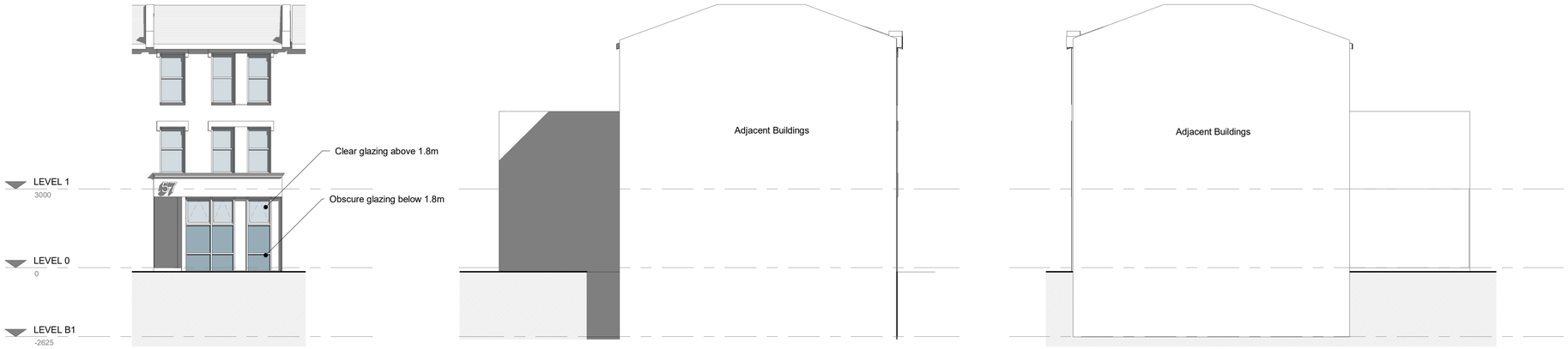
		ADF - Existing Site as Baseline											
		Meet or Exceed BRE Guidelines											
Building No.	Address	Total no. of Rooms	No. rooms that meet or exceed BRE Guidelines		1%-14% Reduction - Negligible		15%-21% Reduction - Minor		22%-28% Reduction - Moderate		>28% Reduction - Major		
B1	57 Fortess Road	2	2	100%	0	0%	0	0%	0	0%	0	0%	
	Total	**2**	**2**	**100%**	**0**	**0%**	**0**	**0%**	**0**	**0%**	**0**	**0%**	

		Summer APSH - Existing Site as Baseline										Winter APSH - Existing Site as Baseline									
		Meet or Exceed Summer BRE Guidelines				Below Threshold for Summer APSH						Meet or Exceed Winter BRE Guidelines				Below Threshold for Winter APSH					
Building No.	Address	Total no. of Windows	No. Windows that Pass BRE			21%-30% Reduction - Minor		31%-40% Reduction - Moderate		>40% Reduction - Major		Total no. of Windows	No. Windows that Pass BRE			21%-30% Reduction -		31%-40% Reduction -		>40% Reduction -	
			Not Within 90 Degrees of South	Pass	%								Not Within 90 Degrees of South	Pass	%						
B1	57 Fortess Road	4	0	4	100%	0	0%	0	0%	0	0%	4	0	4	100%	0	0%	0	0%	0	0%
	Total	**4**	**0**	**4**	**100%**	**0**	**0%**	**0**	**0%**	**0**	**0%**	**4**	**0**	**4**	**100%**	**0**	**0%**	**0**	**0%**	**0**	**0%**

Summary Table Using Existing Site as Baseline													
Building No.	Address	Total No of Rooms	Total No of Windows	VSC			ADF			APSH Summer		APSH Winter	
				Percentage of Windows Compliant for VSC daylight (including Negligible)	No of Windows Minor Loss	Percentage of Windows Minor Loss of VSC Daylight	Percentage of Rooms Compliant for ADF Daylight (including Negligible)	No of Rooms Minor Loss	Percentage of Rooms Minor Loss of ADF Daylight	Percentage of Windows Compliant for APSH Summer Sunlight (including Negligible)	Percentage of Windows Minor Loss of APSH Summer Sunlight	Percentage of Windows Compliant for Winter APSH Sunlight (Including Negligible)	Percentage of Windows Minor Loss of APSH Winter Sunlight
B1	57 Fortess Road	2	4	100%	0	0%	100%	0	0%	100%	0%	100%	0%
Total		**2**	**4**	**100%**	**0**	**0%**	**100%**	**0**	**0%**	**100%**	**0%**	**100%**	**0%**

Appendix I

Drawings & Model Views

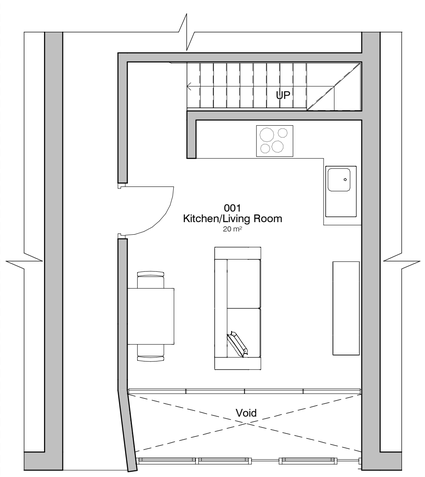


3. Front - Proposed
1 : 100

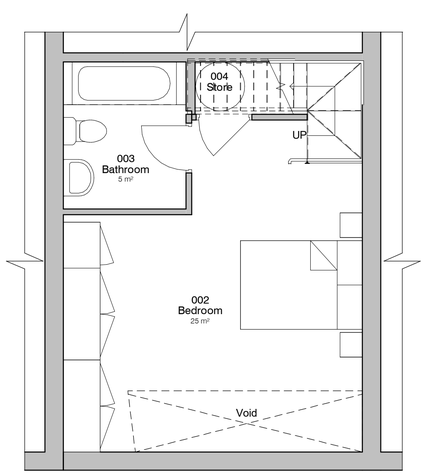
4. Left Side - Proposed
1 : 100

6. Right Side - Proposed
1 : 100

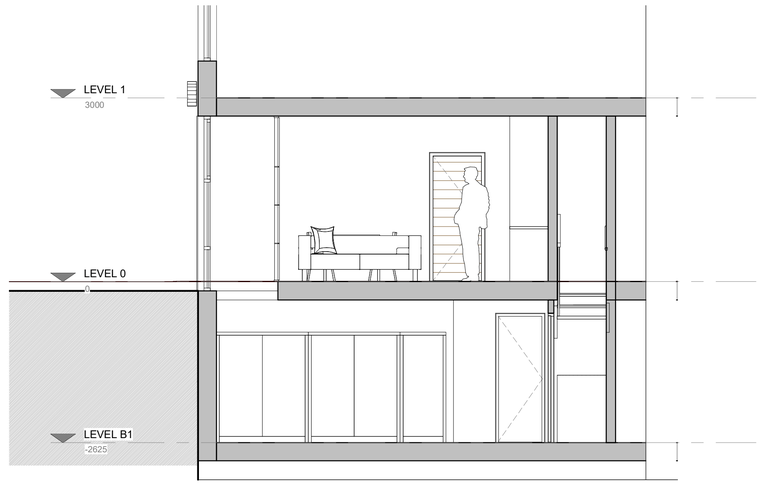
5. 3D - Street View Proposed



1. Level 0 - GA Proposed
1 : 50



2. Level B1 - GA Proposed
1 : 50



7. Section 1 Proposed
1 : 50

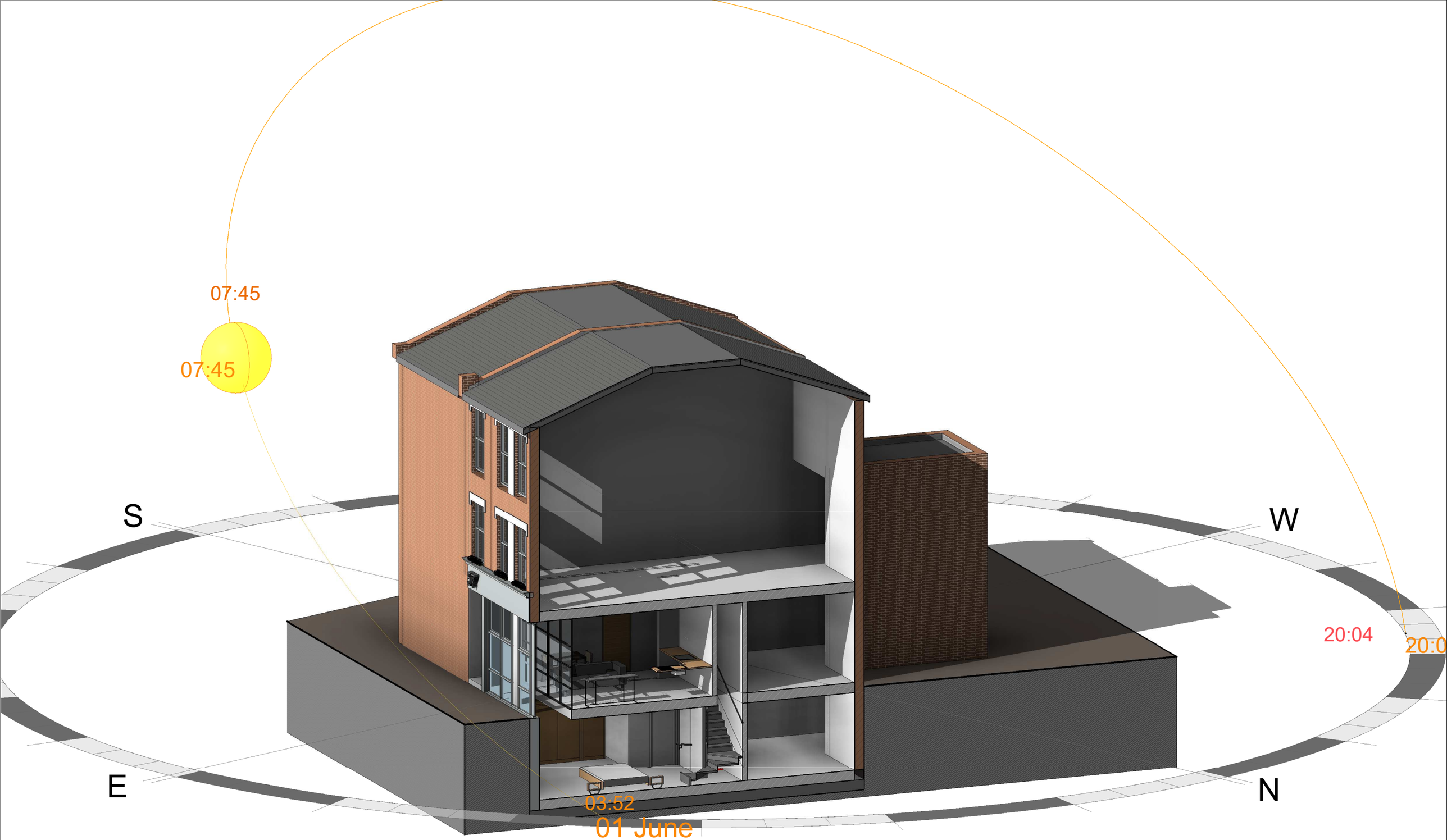
Room Schedule			
Name	Number	Level	Area
Bedroom	002	LEVEL B1	25 m²
Bathroom	003	LEVEL B1	5 m²
Kitchen/Living Room	001	LEVEL 0	20 m²
Store	004	LEVEL B1	1 m²

GIA = 51m²

0.5 0 0.5 1 1.5 2 2.5
SCALE 1: 50 m

REV.	DESCRIPTION	BY	DATE

PROJECT: 57 Fortess Road, London	SCALE @ A1: As indicated / DATE: 4 NOV 2021	DRAWN BY: JS
CLIENT: Sharer Investments (3) Ltd	STATUS: PLANNING	
TITLE: Proposed GA Plans and Elevations	PROJECT NO.: DA21078. / DRAWING NO.: 003.	REV:
DA DEBTAL ARCHITECTURE www.debtal.co.uk	NOTES	



PROJECT
57 Fortess Road, London

CLIENT
Sharer Investments (3) Ltd

SCALE @ A3

DATE
5 NOV 2021

DRAWN BY
JS

STATUS

TITLE
Proposed 3D Section

PROJECT NO.
DA21078.

DRAWING NO.
004.

REV.

REV DESCRIPTION BY DATE

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