



DAYLIGHT & SUNLIGHT

IMPACT ON NEIGHBOURING
PROPERTIES

Bridgewater House, Manchester

15 June 2022

GIA No: 1900

PROJECT DATA:

Client **Watch This Space Property Ltd**
Architect **Snook Architects**
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1900-ep-22-0615(DaySun Report)
Principles of Daylight and Sunlight
Existing Drawings: 1900-REL01-IS01-001 to 1900-REL01-IS01-003
Proposed Drawings: 1900-REL01-IS01-004 to 1900-REL01-IS01-006
Results and Window Maps

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Appended to this report:

Appendix 01	-	Principles of Daylight and Sunlight
Appendix 02	-	Existing Drawings
Appendix 03	-	Proposed Drawings
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1.0 Executive Summary

We have undertaken a daylight and sunlight assessment for the proposed development known as Bridgewater House, Manchester.

We have undertaken a technical analysis using the methodologies set out within the Building Research Establishment Guidelines entitled 'Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice (2011)'.

The results for each property are summarised in the table below:

Name/Address of Building	Percentage of Windows Compliant for VSC Daylight	Percentage of Rooms Compliant for NSL Daylight	Percentage of Rooms Compliant for APSH Sunlight
Transition	21/21 (100%)	11/11 (100%)	N/A
Victoria Residence	28/28 (100%)	11/11 (100%)	3/3 (100%)
Blade C4	40/40 (100%)	24/24 (100%)	4/4 (100%)
Cylinder	85/85 (100%)	40/40 (100%)	N/A

All of the properties surrounding the site will fully accord with the BRE target criteria for daylight and sunlight with the proposed development in place. The impact to daylight and sunlight is negligible and therefore wholly acceptable.

2.0 Instructions

GIA have been instructed by Watch This Space Property Ltd to undertake a detailed technical assessment to understand the potential daylight and sunlight changes that the proposed development known as Bridgewater House, Manchester will have upon the surrounding residential properties.

The daylight and sunlight review within this report considers existing residential properties only, as they are recognised by the Building Research Establishment (BRE 2011) as having the highest expectation for natural light when compared to other uses – such as commercial. The criteria suggested within the BRE have been used to understand and compare the existing levels of light, and the light achieved subsequent to the development of the proposed scheme.

3.0 Introduction

Daylight and Sunlight

We have undertaken technical analysis using the methodologies set out within the Building Research Establishment Guidelines entitled 'Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice (2011)', (the "BRE Guide").

The guidelines in question are precisely that: guidelines which provide a recommendation to inform site layout and design. They are not mandatory, nor do they form planning policy and their interpretation may be treated flexibly depending on the specifics of each site.

The BRE Guide provides two methodologies for daylight assessment to surrounding properties, namely:

- The Vertical Sky Component (VSC); and
- The No Sky Line (NSL).

There is one methodology for sunlight assessment, denoted as Annual Probable Sunlight Hours (APSH).

The assessment of baseline levels to the surrounding properties considers whether a window/room already meets the BRE criteria in the existing scenario only, whilst the BRE guide states that a window/room should not be reduced by any more than 0.8 times its former value (a 20% reduction) in the proposed scenario. As such, as the VSC target is 27%, if a window in the baseline has 25% VSC, it will be classed as not meeting the BRE targets. In the proposed scenario, if the same window is reduced to 24%, it will be classed as meeting the VSC target as it is within 0.8 times its former value. Therefore, some windows/rooms may not meet the target criteria in the baseline but will in the proposed scenario.

The following table provides a summary of the criteria set out within the BRE Guidelines for daylight and sunlight.

Method	BRE Criteria
VSC	A window may be adversely affected if its VSC measured at the centre 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.
APSH	A window may be adversely affected if a point at the centre of the window receives for the whole year, less than 25% of the APSH including at least 5% of the APSH during the winter months (21 September to 21 March) and less than 0.8 times its former sunlight hours during either period, and for existing neighbouring buildings, if there is a reduction in total APSH which is greater than 4%.

For daylight and sunlight, the BRE Guidelines outline the approach within the accompanying Appendix I, in terms of assigning criteria to assess the effects:

"Adverse impacts occur when there is a significant decrease in the amount of skylight and sunlight reaching an existing building where it is required...The assessment of impact will depend on a combination of factors, and there is no simple rule of thumb that can be applied."

"Where the loss of skylight or sunlight fully meets the guidelines, the impact is assessed as negligible or minor adverse. Where the loss of light is well within the guidelines, or only a small number of windows or limited area of open space lose light (within the guidelines), a classification of negligible impact is more appropriate. Where the loss of light is only just within the guidelines and a larger number of windows or open space are affected, a minor adverse impact would be more appropriate, especially if there is a particularly strong requirement for daylight and sunlight in the affected building or open space."

"Where the loss of skylight or sunlight does not meet the guidelines in this book, the impact is assessed as minor, moderate or major adverse. Factors tending towards a minor adverse impact include:

- 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."*

The classification of major adverse is documented within Paragraph 7 of the BRE Guidelines:

"Factors tending towards a major adverse impact include:

- 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".*

Beneficial impacts occur when there is a significant increase in the amount of skylight and sunlight reaching an existing building. Beneficial impacts should be worked out on the same principals as adverse impacts."

The BRE Guidelines do not provide any Guidance on what constitutes a moderate adverse impact.

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

Magnitude of Effect	Percentage Alteration
Negligible	0-20%
Minor	20-29.9%
Moderate	30-39.9%
Major	40%+

When considering the significance of daylight and sunlight effects, professional judgement has been used. Consideration has been given to the proportion of rooms/windows affected, as well as the percentage alterations, absolute changes, retained daylight and sunlight levels and sensitivity of the receptor. This is in addition to any other relevant factors, such as there may be mitigating factors including location and nature of the development, balconies, overhangs or design features which may also affect the determination of assigning the criteria.

4.0 Sources of Information

In compiling this report, we have used the following information:

GIA

Site photographs

Vu.City Modelling

Baseline model

Snook Architects

IR01-20220519

Manchester Planning Portal

Blade C4 drawings

Transition drawings

Victoria Residence drawings

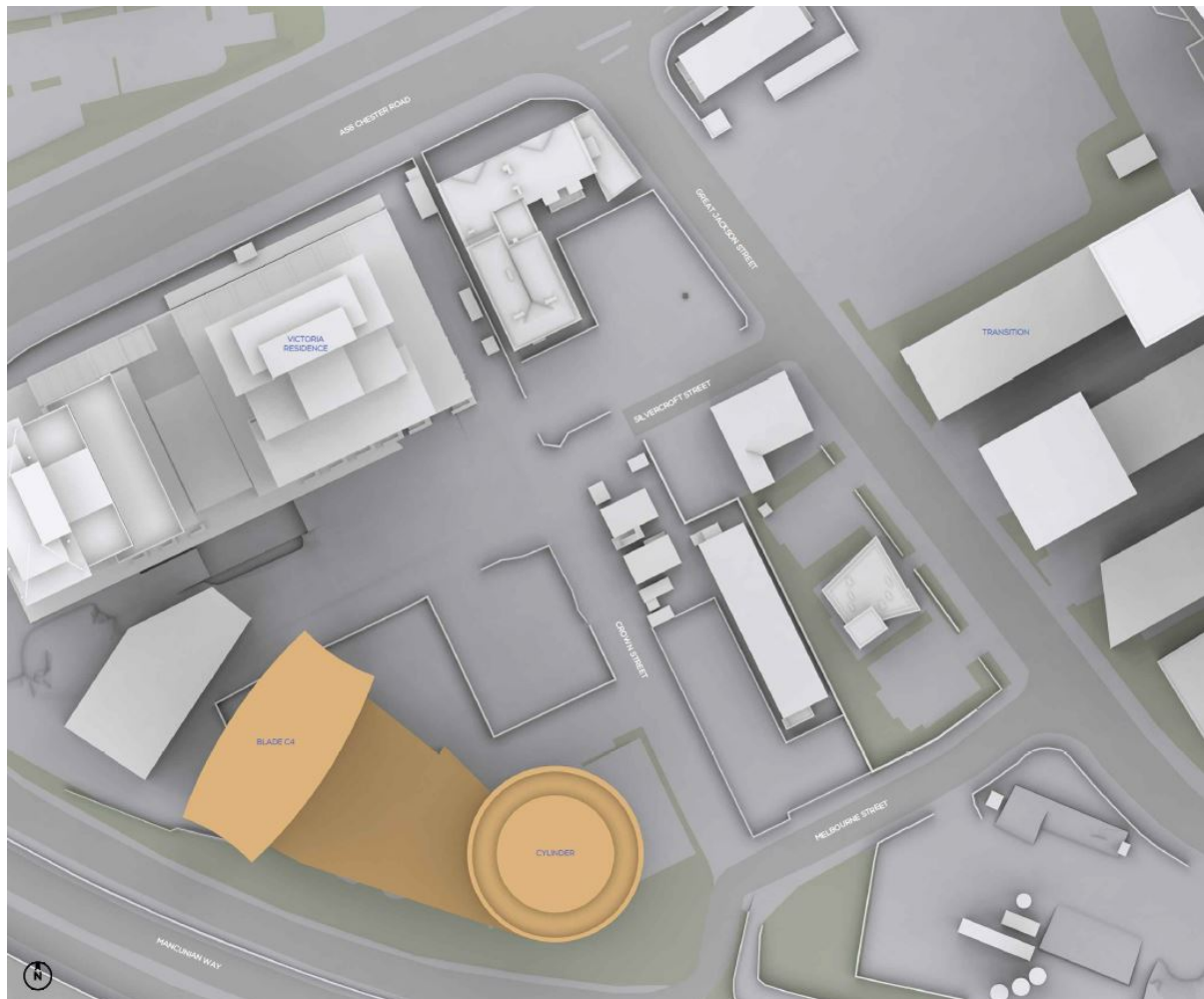
5.0 Assumptions

- a) All residential buildings have been identified by reference to the Valuation Office Agency (VOA) search and/or external observation.
- b) We have not sought access to the adjoining properties, thus if plans were not publicly available, we have made reasonable assumptions as to the internal layouts of the rooms behind the fenestration based upon the building form and architecture. This is normal practice where access to adjoining properties is not available. Unless the building form dictates otherwise, we assume a standard 4.2m deep room (14ft) for residential properties.
- c) Floor levels have been assumed for the adjoining properties. This dictates the level of the working plane which is relevant for the No Skyline assessment.

6.0 The Site

The site is bound by Chester Road to the north, Great Jackson Street to the east, Silvercroft Street to the south and existing residential buildings to the west.

The drawing extract below shows the existing site:

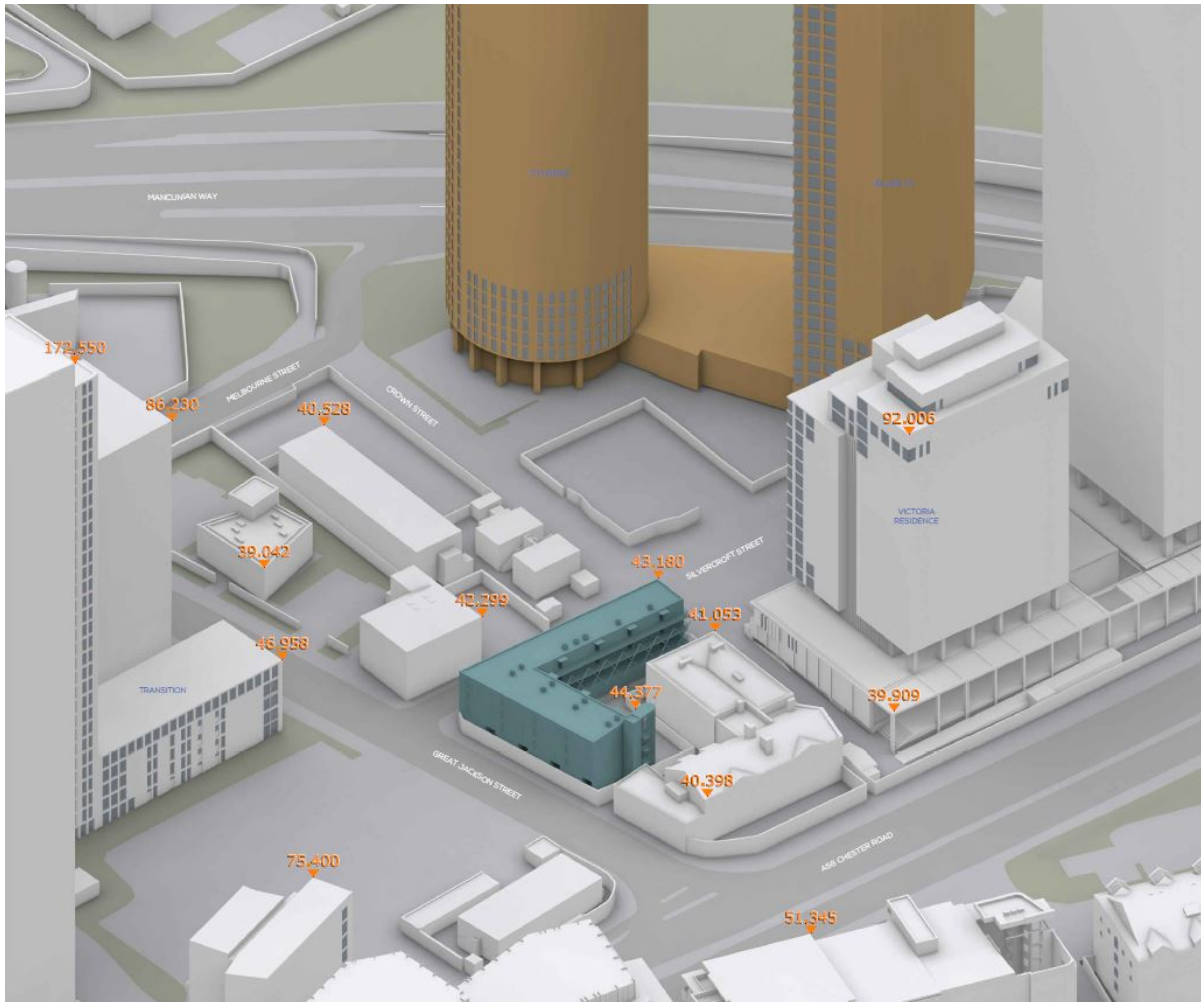


Our understanding of this existing building and the surrounding context is depicted on GIA drawings: 1900-RELO1-IS01-01, 1900-RELO1-IS01-02 and 1900-RELO1-IS01-03 contained within Appendix 02.

7.0 The Proposal

GIA's understanding of the proposed scheme is illustrated in drawings 1900-REL01-IS01-04, 1900-REL01-IS01-05 and 1900-REL01-IS01-06 shown within Appendix 03.

The drawing extract below shows the site with the proposal in place, with consented schemes shown in orange:



Our analysis of this option is based on the proposed scheme drawings produced by Snook Architects received on 19 May 2022.

8.0 Surrounding Properties

We have created a three-dimensional computer model of the site and the surrounding properties to allow for a detailed daylight and sunlight assessment.

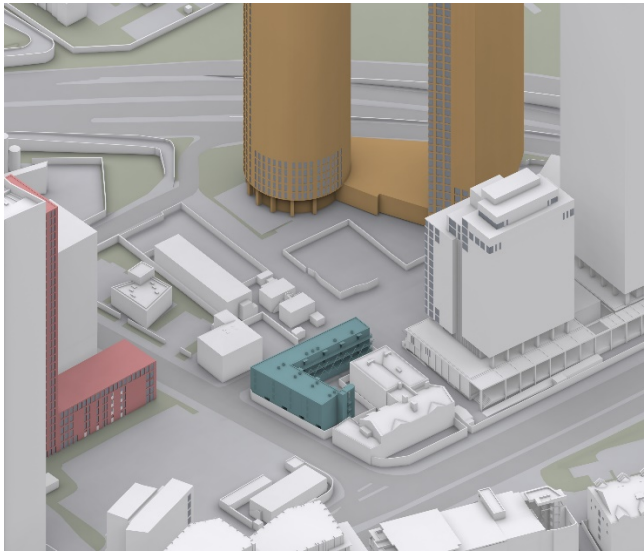
The benchmark condition of the site allows us to calculate the daylight and sunlight conditions within the neighbouring buildings. From this, we can then compare them with the conditions within these properties assuming the current proposed development is in place.

Those properties surrounding the site that are thought to have the potential to be impacted by the proposed development are listed in the table below:

Name/Address of Building	Assumed Use	Position (in relation to the Development)
Transition	Residential	East
Victoria Residence	Residential	West
Blade C4	Residential	South west
Cylinder	Residential	South west

A short commentary of the impacts of the current proposal to each property is set out below, and full results and contour plots are contained at Appendix 04.

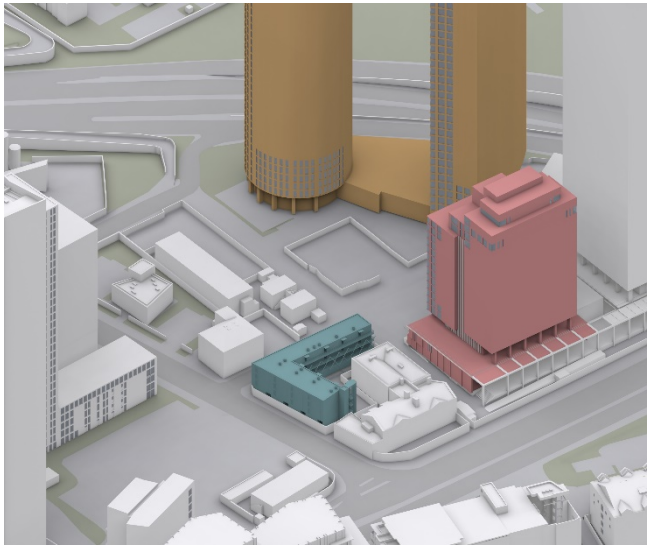
Transition



Name/Address of Building	Percentage of Windows Compliant for VSC Daylight	Percentage of Rooms Compliant for NSL Daylight	Percentage of Rooms Compliant for APSH Sunlight
Transition	21/21 (100%)	11/11 (100%)	N/A

With the proposed development in place, all windows and rooms assessed will meet the BRE criteria for VSC and NSL daylight. None of the rooms face within 90° of due south and therefore no sunlight analysis has been undertaken.

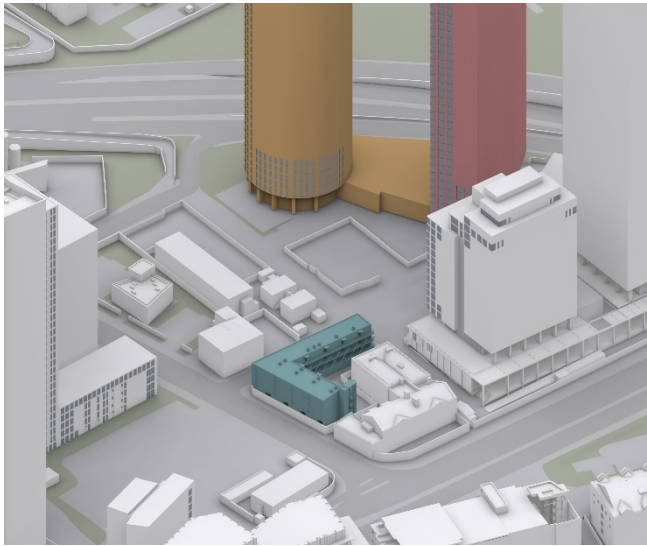
Victoria Residence



Name/Address of Building	Percentage of Windows Compliant for VSC Daylight	Percentage of Rooms Compliant for NSL Daylight	Percentage of Rooms Compliant for APSH Sunlight
Victoria Residence	28/28 (100%)	11/11 (100%)	3/3 (100%)

With the proposed development in place, all windows and rooms assessed will meet the BRE criteria for VSC and NSL daylight, and APSH sunlight.

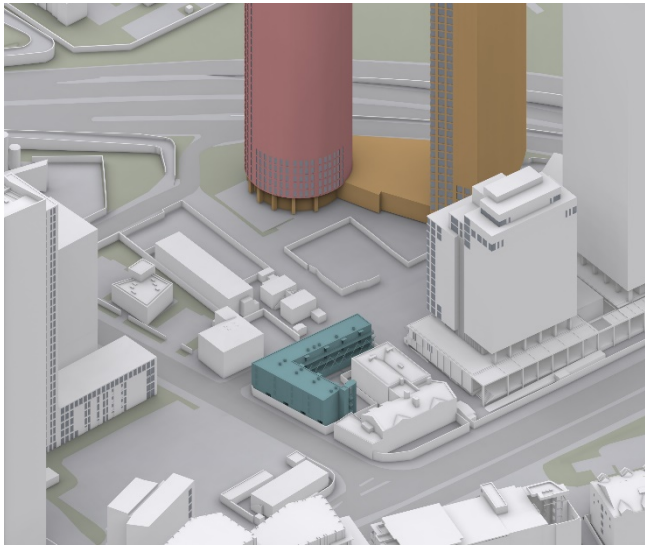
Blade C4



Name/Address of Building	Percentage of Windows Compliant for VSC Daylight	Percentage of Rooms Compliant for NSL Daylight	Percentage of Rooms Compliant for APSH Sunlight
Blade C4	40/40 (100%)	24/24 (100%)	4/4 (100%)

With the proposed development in place, all windows and rooms assessed will meet the BRE criteria for VSC and NSL daylight, and APSH sunlight.

Cylinder



Name/Address of Building	Percentage of Windows Compliant for VSC Daylight	Percentage of Rooms Compliant for NSL Daylight	Percentage of Rooms Compliant for APSH Sunlight
Cylinder	85/85 (100%)	40/40 (100%)	N/A

With the proposed development in place, all windows and rooms assessed will meet the BRE criteria for VSC and NSL daylight. None of the rooms face within 90° of due south and therefore no sunlight analysis has been undertaken.

9.0 Conclusions

We have undertaken a daylight and sunlight assessment for the proposed development known as Bridgewater House in Manchester.

We have undertaken a technical analysis using the methodologies set out within the Building Research Establishment Guidelines entitled 'Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice (2011)'.

All of the properties surrounding the site will fully accord with the BRE target criteria for daylight and sunlight with the proposed development in place. The impact to daylight and sunlight is negligible and therefore wholly acceptable.