



DAYLIGHT & SUNLIGHT

IMPACT ON NEIGHBOURING PROPERTIES REPORT

The Oracle, Reading

The Oracle Limited Partnership

16 February 2024

GIA No: **2137** Fee Quote: FP01

PROJECT DATA:

Client **The Oracle Limited Partnership**
Architect **CRTKL Architects**
Project Title **The Oracle, Reading**
Project Number **2137**

REPORT DATA:

Report Title **Daylight & Sunlight**
GIA Department **Daylight Department**
Dated **16 February 2024**
Fee Quote **Fee Proposal No. 01**
Prepared by **EP**
Checked by **MB**
Type **Final**

Revisions	No:	Date:	Notes:	Signed:

SOURCES OF INFORMATION:

Information Received **IR07-20230524**
Release Number **Rel_04**
Issue Number **02**
3D models **VU.CITY**
OS Data **FIND Maps**

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B: NSL CONTOURS

1 EXECUTIVE SUMMARY

GIA have assessed the CRTKL Architects' scheme (the "Proposed Development") for The Oracle, Reading to understand the potential changes in light to the relevant sensitive receptors.

- 1.1 We have undertaken a daylight and sunlight assessment for the proposed development to be known as Yield Hall Place at The Oracle, Reading.
- 1.2 We have completed 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 (2022)'.
- 1.3 The BRE 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 context of each site.
- 1.4 Notwithstanding, the results indicate an excellent level of compliance for the surrounding properties that have been assessed. 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
New Century Place	41/41 (100%)	23/24 (96%)	19/19 (100%)
George Hotel	19/19 (100%)	19/19 (100%)	-
Dukesbridge Chambers	69/69 (100%)	52/52 (100%)	42/42 (100%)
Townsend House	20/20 (100%)	10/10 (100%)	1/1 (100%)

Table 01 – Daylight & Sunlight Levels

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2 THE SITE

GIA have been instructed to review and advise on the daylight, sunlight and overshadowing impacts associated with the implementation of the proposed development known as The Oracle, Reading.

THE SITE

- 2.1 Yield Hall Place 1 is bound by Yield Hall Place to the north and east, the River Kennet to the south and The Oracle Shopping Centre to the west.
- 2.2 Yield Hall Place 2 is bound by the River Kennet to the north, London Street to the east, Mill Lane to the south and The Oracle multi-storey car park to the west. The drawing extract below shows the existing site:
- 2.3 Our understanding of these existing buildings and the surrounding context is depicted on GIA drawings within Appendix 03.



Figure 01: 3D model of the existing site

PROPOSED DEVELOPMENT

- 2.4 Our analysis of this option is based on the proposed scheme drawings produced by CRTKL Architects, received on 25 January 2024.
- 2.5 GIA's understanding of the proposed scheme is illustrated in the image below, and full drawings are contained within Appendix 03.

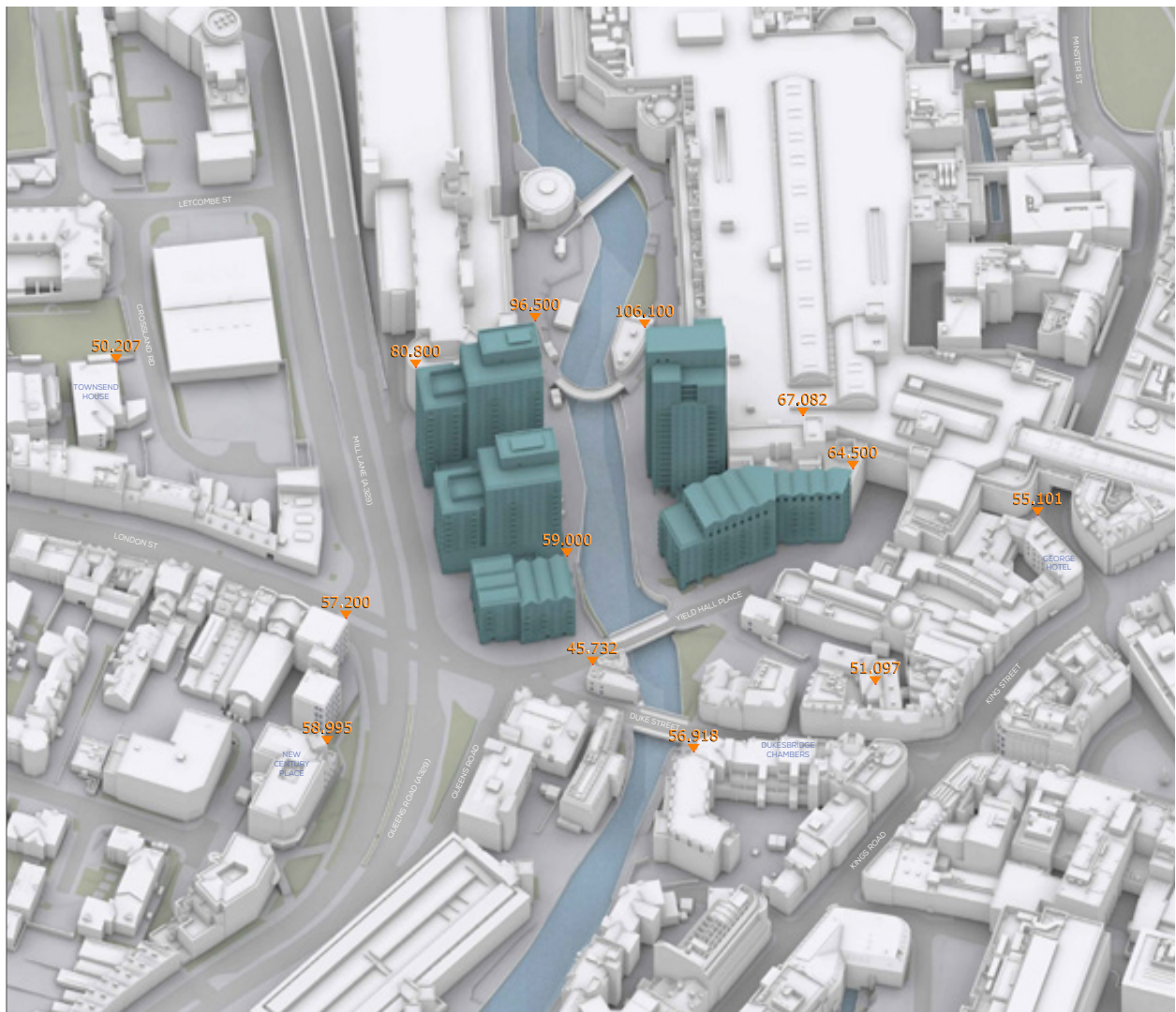


Figure 02: 3D Perspective View of the Proposed Scheme

3 POLICY & THE WIDER CONTEXT

3.1 Outlined below are sections from the following documents which are considered to be the most pertinent in relation to daylight and sunlight matters and how the effects of the Proposed Development on relevant neighbouring properties have been approached:

- National Planning Policy Framework (December 2023); and
- National Planning Practice Guidance (November 2023).

NATIONAL PLANNING POLICY FRAMEWORK (DECEMBER 2023)

3.2 The NPPF highlights the Government's recognition that increased flexibility is required on daylight and sunlight in response to the requirement for higher density development. By stating that "when considering applications for housing, authorities should take a flexible approach in applying policies or guidance relating to daylight and sunlight, where they would otherwise inhibit making efficient use of a site (as long as the resulting scheme would provide acceptable living standards)"¹ (our emphasis).

NATIONAL PLANNING PRACTICE GUIDANCE (NOVEMBER 2023)

3.3 The PPG outlines that all developments should "maintain acceptable living standards" and that assessing appropriate daylight and sunlight amenity "will depend to some extent on context"².

¹ MHCLG. (2023). National Planning Policy Framework (2023), p 38, para 129(c)

² MHCLG. (2023). National Planning Policy Guidance (2023), para 66-007-20190722

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4 BRE GUIDELINES & CONTEXT METHODOLOGY

The Building Research Establishment (BRE) have set out in their handbook 'Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice (BR209, 2022)', guidelines and methodology for the measurement and assessment of daylight and sunlight.

BUILDING RESEARCH ESTABLISHMENT GUIDELINES (BR209, 2022)

- 4.1 The BRE Guidelines note that the document is intended to be used in conjunction with the interior daylight recommendations found within the British Standard BS EN 17037 Daylighting in Buildings and the Chartered Institution of Building Services Engineers (CIBSE) LG 10 Daylighting – a guide for designers.
- 4.2 The BRE handbook *"is intended for use in 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. The guidelines may also be applied to any existing non-domestic building where the occupants have a reasonable expectation of daylight; this would normally include schools, hospitals, hotels and hostels, small workshops, and some offices."*
- 4.3 The BRE Guidelines provides two methodologies for daylight assessment of neighbouring properties, namely;
 - The Vertical Sky Component (VSC); and
 - The No Sky Line (NSL).
- 4.4 There is one methodology provided by the BRE Guidelines for sunlight assessment, denoted as Annual Probable Sunlight Hours (APSH).
- 4.5 It is an inevitable consequence of the built-up urban environment that daylight and sunlight will be more limited in dense urban areas. It is well acknowledged that in such situations there may be many planning and urban design matters to consider other than daylight and sunlight.
- 4.6 Paragraph 4.5.10 notes that *"numerical values given are purely advisory. Different criteria may be used based on the requirements for solar energy in an area viewed against other site layout constraints. Another important issue is whether the existing solar panels are reasonably sited, at a sensible height and distance from the boundary. A greater loss of solar radiation may be inevitable if panels are mounted close to the ground and near to the site boundary."*¹

- 4.7 Appendix 02 of this report elaborates on the mechanics of each of the above assessment criteria, explains the appropriateness of their use and the parameters of each specific recommendation.

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

¹ Littlefair, P. (2022). Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice. Hertfordshire: HIS BRE Press, p 29 para 3.3.17

4.9 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.”

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

4.11 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%+

4.12 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, including mitigating factors such as location and nature of the development, balconies, overhangs or design features which may also affect the determination of assigning the criteria.

5 DAYLIGHT & SUNLIGHT IMPACTS TO NEIGHBOURING PROPERTIES

This section details the daylight and sunlight impacts in relation to the relevant properties neighbouring the Site.

- 5.1 A three-dimensional computer model of the Site and surrounding properties was produced based on photogrammetry. Where available we have included floor plans of the relevant properties and this context model has been used to carry out the technical assessments. All relevant assumptions made in producing this model can be found in Appendix 01.

RELEVANT SENSITIVE RECEPTORS

- 5.2 GIA have identified the following properties as relevant for daylight and sunlight assessment:
- New Century Place
 - George Hotel
 - Dukesbridge Chambers
 - Townsend House
- 5.3 The properties are fully discussed in the following sections. All results can be found in Appendix 04.

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NEW CENTURY PLACE



Figure 03: Rendered Image of New Century Place

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
New Century Place	41/41 (100%)	23/24 (96%)	19/19 (100%)

Table 02 - Results - New Century Place

- 5.4 With the proposed development in place, this property will fully accord with the BRE target criteria for VSC daylight and APSH sunlight.
- 5.5 Of the 24 rooms assessed for NSL daylight, 23 will fully comply with the criteria set out within the BRE. The room that falls short of the BRE recommended targets is reduced by between 20-30% with the proposed development in place, which is considered minor in BRE terms.
- 5.6 The BRE states that "if an existing building contains rooms lit from one side only and greater than 5m deep, then a greater movement of the no sky line may be unavoidable". The room that does not meet the BRE criteria for NSL daylight is a single aspect studio apartment, with a depth of approximately six metres. This makes it difficult for daylight to penetrate to the rear of the room and places a high burden on the development site to maintain existing levels.
- 5.7 Overall, given the minor, limited reduction and the flexibility with which the BRE guideline are intended to be used, the impacts to daylight and sunlight on this property are considered wholly acceptable.

GEORGE HOTEL



Figure 04: Rendered Image of George Hotel

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
George Hotel	19/19 (100%)	19/19 (100%)	-

Table 03 - Results - George Hotel

- 5.8 With the proposed development in place, this property will fully accord with the BRE criteria for VSC and NSL daylight. No living rooms face within 90 degrees of due south and, as such, an APSH assessment is not necessary.

DUKESBRIDGE CHAMBERS

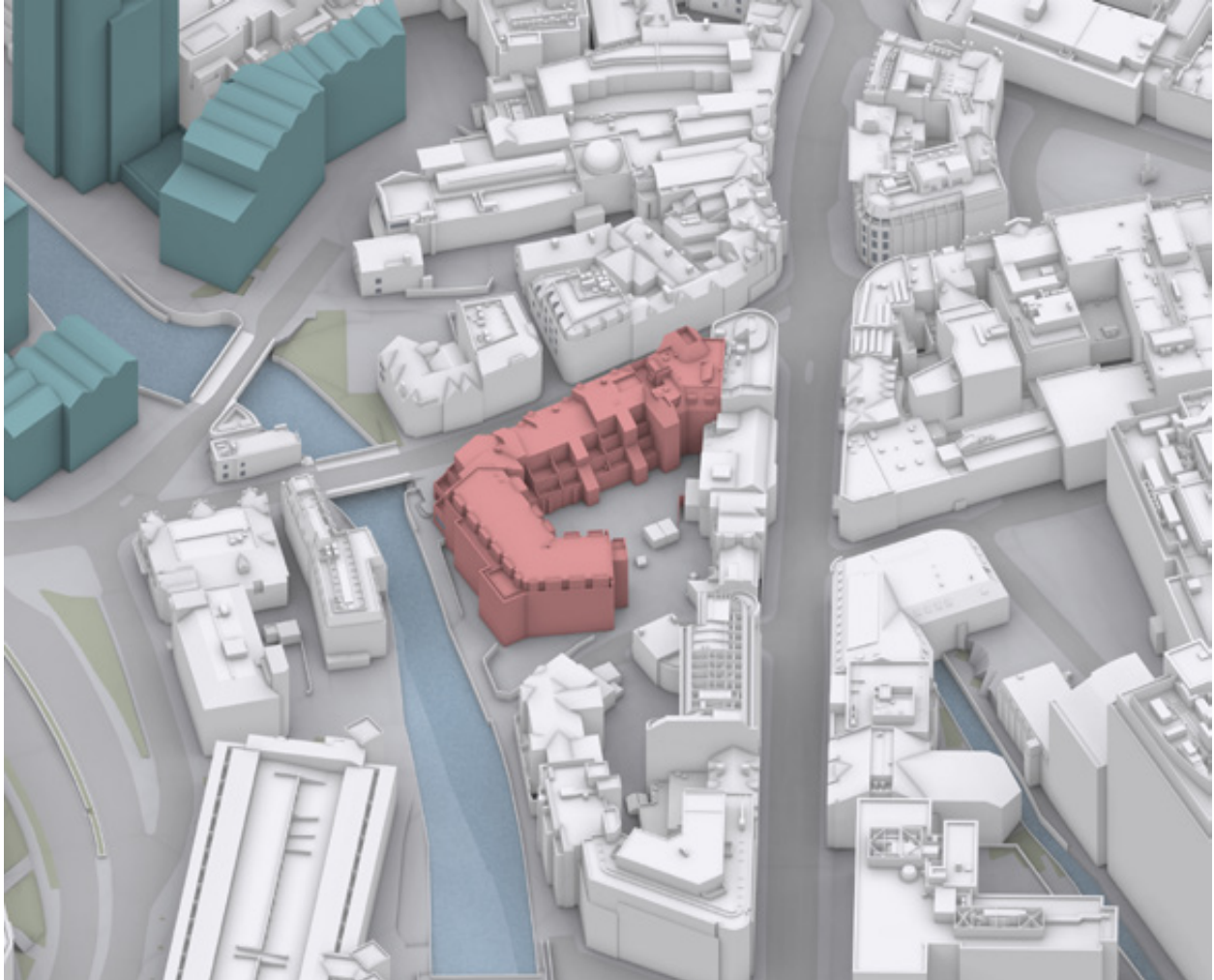


Figure 05: Rendered Image of Dukesbridge Chambers

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
Dukesbridge Chambers	69/69 (100%)	52/52 (100%)	42/42(100%)

Table 04 - Results - Dukesbridge Chambers

5.9 With the proposed development in place, this property will fully accord with the BRE criteria for VSC and NSL daylight, and APSH sunlight.

TOWNSEND HOUSE

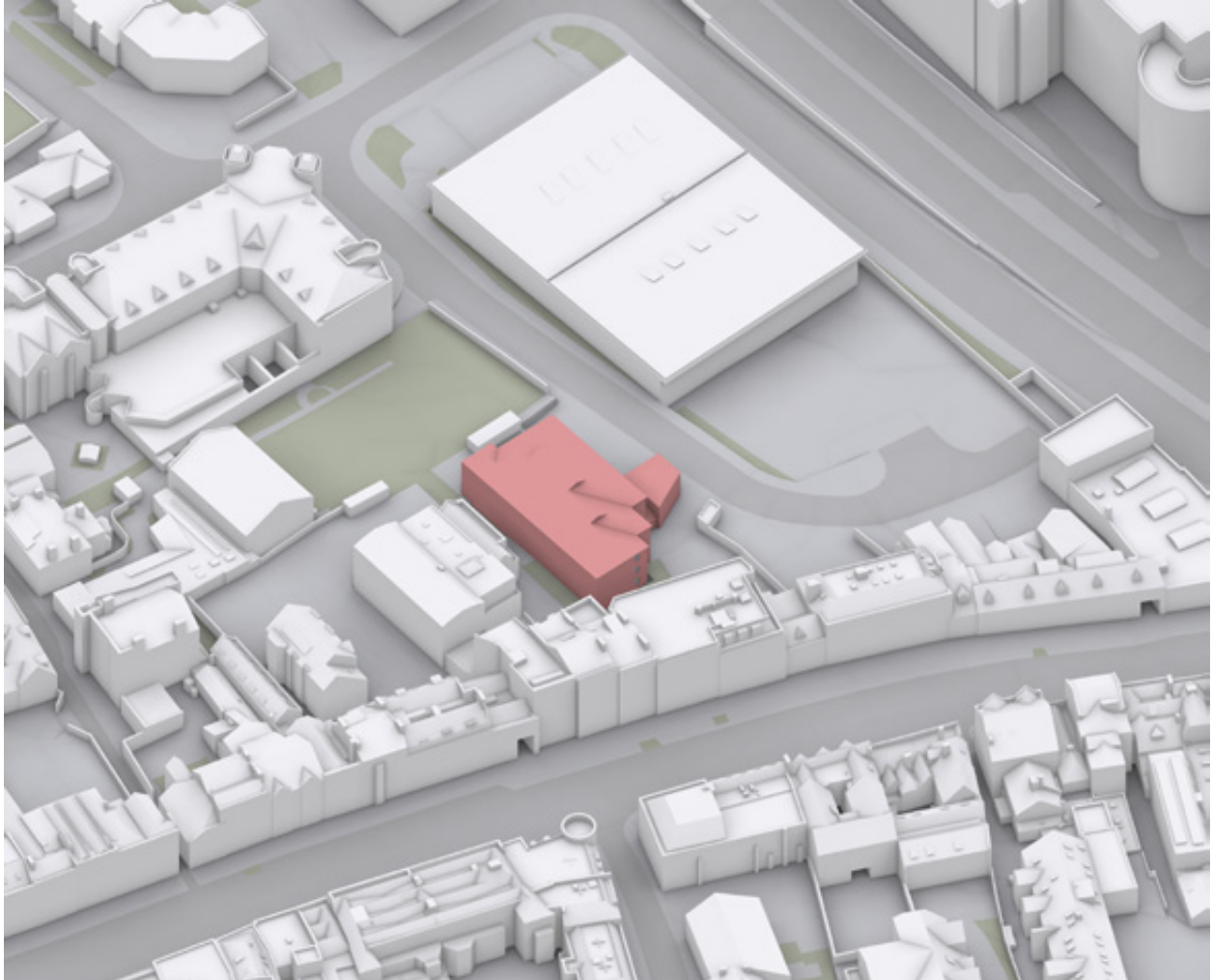


Figure 06: Rendered Image of Townsend House

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
Townsend House	20/20 (100%)	10/10 (100%)	1/1 (100%)

Table 05 - Results - Townsend House

5.10 With the proposed development in place, this property will fully accord with the BRE criteria for VSC and NSL daylight, and APSH sunlight.

6 CONCLUSIONS

GIA have undertaken a daylight and sunlight assessment in relation to the Proposed Development known as The Oracle, Reading. The technical analysis has been undertaken in accordance with the BRE handbook.

- 6.1 We have undertaken a daylight and sunlight assessment for the proposed development to be known as Yield Hall Place at The Oracle, Reading.
- 6.2 We have completed 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 (2022)'.
- 6.3 Our assessment has identified isolated, limited impacts to the surrounding residential properties, which are minor in nature, and considered acceptable given the dense, urban nature of the site and the flexibility with which the BRE guidelines are intended to be used.
- 6.4 The overall impact of the scheme on the surrounding residential properties is therefore considered wholly acceptable.



For further details please contact us on:

LONDON

T 020 7202 1400

E mail@gia.uk.com

The Whitehouse
Belvedere Road
London SE1 8GA

MANCHESTER

T 0161 672 5100

E manchester@gia.uk.com

2 Commercial Street
Manchester
M15 4RQ

BELFAST

T 02892 449 674

E belfast@gia.uk.com

River House
48-60 High Street
Belfast BT1 2BE

BRISTOL

T 0117 374 1504

E bristol@gia.uk.com

33 Bristol
Colston Avenue
Bristol BS1 4UA

DUBLIN

T 020 7202 1400

E hello@giasurveyors.ie

26-27 Upper Mount Street
Dublin Ireland
D02 F890