



DAYLIGHT & SUNLIGHT

**Waterfront Square,
Reading**

Packaged Living

17 July 2024

GIA No: **19977** Fee Quote: **FP01**

PROJECT DATA:

Client **Packaged Living**
Architect **Assael Architects**
Project Title **Waterfront Square, Reading**
Project Number **19977**

REPORT DATA:

Report Title **Daylight & Sunlight**
GIA Department **Daylight Department**
Dated **17 July 2024**
Fee Quote **Fee Proposal No. 01**
Prepared by **ES**
Checked by **NH**
Type **Final**

Revisions	No:	Date:	Notes:	Signed:

SOURCES OF INFORMATION:

Information Received **IR14**
Release Number **Rel_06**
Issue Number **02 & 03**
3D models **VU.CITY**
OS Data **FIND Maps**

DISCLAIMER:

N.B This report has been prepared for Packaged Living by GIA as their appointed Daylight & Sunlight consultants. This report is intended solely for Packaged Living and may contain confidential information. No part or whole of its contents may be disclosed to or relied upon by any Third Parties without the express written consent of GIA. It is accurate as at the time of publication and based upon the information we have been provided with as set out in the report. It does not take into account changes that have taken place since the report was written nor does it take into account private information on internal layouts and room uses of adjoining properties unless this information is publicly available.



© Crown copyright and database rights 2018.
OS 100047514

CONTENTS

1	EXECUTIVE SUMMARY	2
2	THE SITE	4
3	POLICY & THE WIDER CONTEXT	6
4	BRE GUIDELINES & CONTEXT METHODOLOGY	8
5	DAYLIGHT & SUNLIGHT IMPACTS TO NEIGHBOURING PROPERTIES	9
6	CONCLUSIONS	14

1 EXECUTIVE SUMMARY

GIA have assessed the scheme (the “Proposed Development”) for Waterfront Square, Reading to understand the potential changes in light to the relevant sensitive receptors.

- 1.1 GIA have been instructed by Packaged Living to undertake detailed technical assessments to understand the potential daylight and sunlight changes that the proposed redevelopment of Waterfront Square, Reading, will have upon the surrounding residential properties.
- 1.2 The surrounding daylight and sunlight review within this report considers residential properties only as they are recognised by the Building Research Establishment (BRE 2022) 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 construction of the Proposed Development..
- 1.3 We have completed technical analyses 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)’.
- 1.4 It is inevitable when constructing buildings in an urban environment that alterations in daylight and sunlight to surrounding properties can occur. It is well-established and accepted that the BRE Guidelines, which set out the numerical benchmark for daylight and sunlight assessments, are predicated on a relatively low-rise suburban environment. The Planning Practice Guidance (PPG) – Making Effective Use of Land, updated on 20 July 2021, Paragraph: 007 Reference ID: 66-007-20190722 states that:
- 1.5 The analysis results show that the construction of the Proposed Development, either in isolation or in combination with the proximate committed developments, will result in either BRE compliant or minor changes in daylight and BRE compliant changes in sunlight amenity to the surrounding residential sensitive receptors.
- 1.6 The daylight and sunlight effect of the Proposed Development is therefore considered to be no greater than minor and, therefore, reasonable in context.

“All developments should maintain acceptable living standards. What this means in practice, in relation to assessing appropriate levels of sunlight and daylight, will depend to some extent on the context for the development as well as its detailed design. For example, in areas of high-density historic buildings, or city centre locations where tall modern buildings predominate, lower daylight and sunlight levels at some windows may be unavoidable if new developments are to be in keeping with the general form of their surroundings.”

INTENTIONALLY BLANK PAGE

2 THE SITE

GIA have been instructed to review and advise on the daylight & sunlight and impacts associated with the implementation of the proposed redevelopment of Waterfront Square, Reading.

THE SITE

- 2.1 The site is bounded by the River Thames to the north, the Thames Water building to the east, Vastern Road to the south and Waterfront Square to the west.
- 2.2 Figure 01 below illustrates the existing site. The only proximate residential property (Thames Court) is located to the north west as indicated

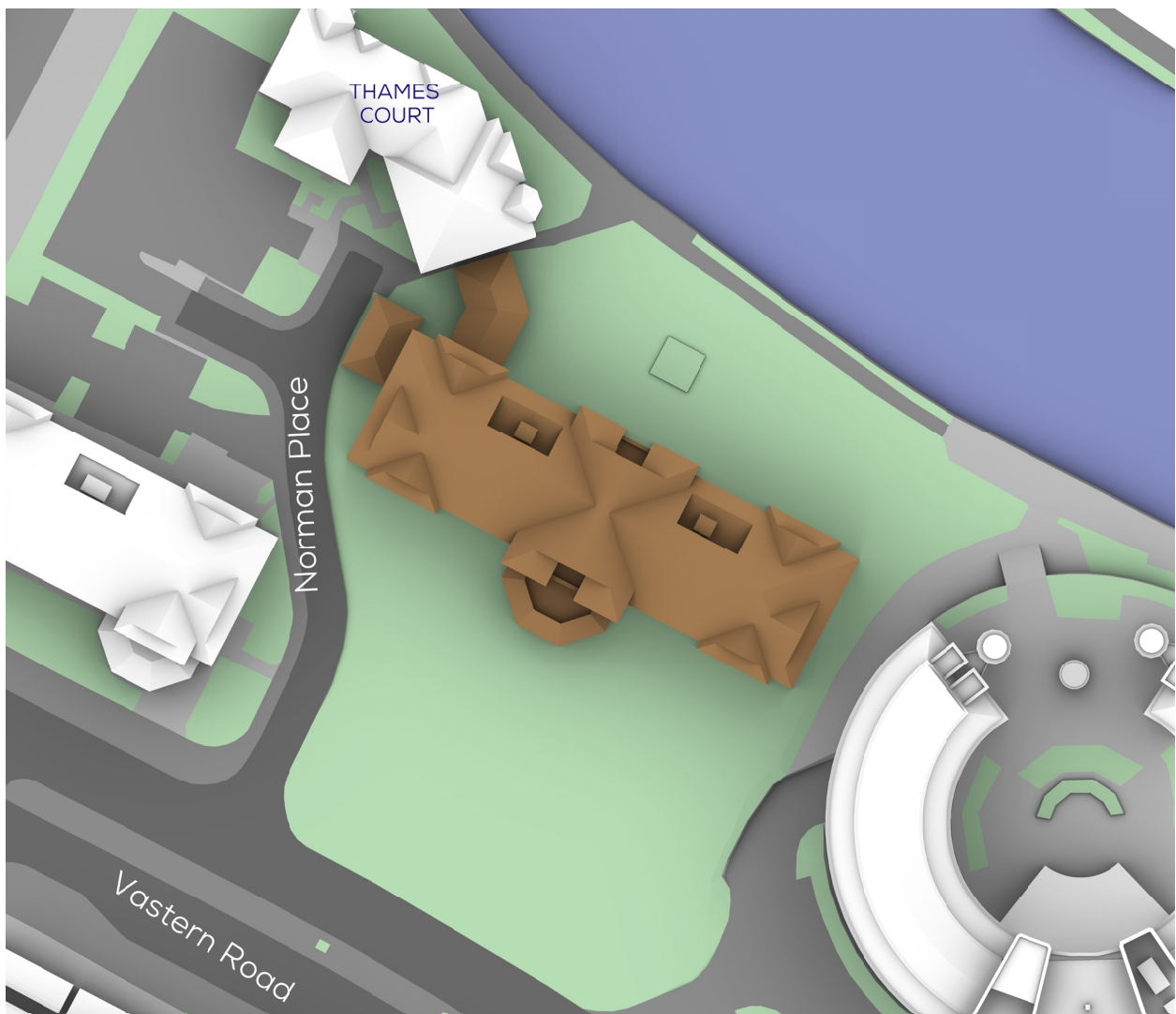


Figure 01: The Site, Existing Property and Surrounding Context

PROPOSED DEVELOPMENT

- 2.3 Our analysis is based on the proposed scheme massing model provided by Assael Architects in June 2024.
- 2.4 GIA's understanding of the Proposed Development is illustrated in Figure 02 below.
- 2.5 The buildings coloured yellow are the proximate consented developments with which the effects of the Proposed Development have also been assessed.

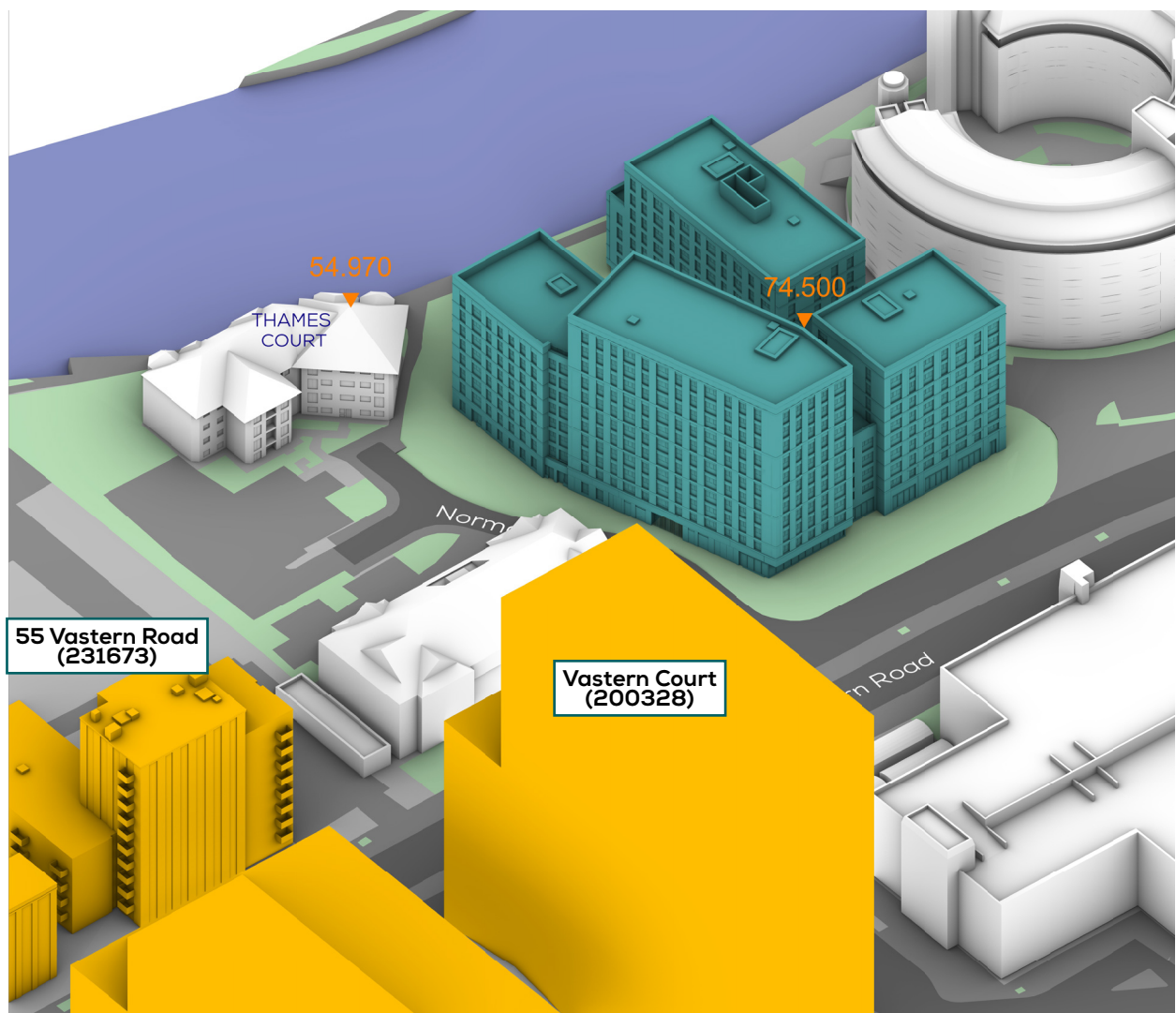


Figure 02: 3D Perspective View of the Proposed Development in a cumulative scenario

3 POLICY & THE WIDER CONTEXT

3.1 Below we have detailed sections from the following documents as they are, in our opinion, the most pertinent in relation to daylight and sunlight matters and how we have approached the effects of the Proposed Development on the relevant neighbouring properties:

- National Planning Policy Framework (2023);
- National Planning Practice Guidance (updated '2021); and
- Reading Borough Local Plan (2019)

NATIONAL PLANNING POLICY FRAMEWORK (2023)

3.2 The NPPF (December 2023) states that local planning authorities should refuse applications which they consider fail to make efficient use of land. The discussion in relation to daylight and sunlight highlights the Government's recognition that increased flexibility is required in response to the requirement for higher density development:

"Local planning authorities should refuse applications which they consider fail to make efficient use of land, taking into account the policies in this Framework. In this context, 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)".

NATIONAL PLANNING PRACTICE GUIDANCE (JUNE 2023)

- 3.3 In light of the update to the Government's Planning Practice Guidance, GIA have considered the relevant paragraphs which relate to daylight and sunlight.
- 3.4 Paragraph 6 of the NPPG (Ref ID: 66-006-20190722) acknowledges that new development may cause an impact on daylight and sunlight levels enjoyed by neighbouring occupiers. It requires local authorities to assess whether the impact to neighbouring occupiers would be "unreasonable".
- 3.5 Paragraph 7 (Ref ID: 66-007-20190722) refers to the wider planning considerations in assessing appropriate levels of daylight and sunlight. The test is whether living standards are 'acceptable' and recognises that acceptability will depend to some extent on context.

READING BOROUGH LOCAL PLAN

3.6 Policy CC8 (Safeguarding Amenity) states that:

"Development will not cause a detrimental impact on the living environment of existing residential properties or unacceptable living conditions for new residential properties, in terms of...Access to sunlight and daylight..."

3.7 The additional information regarding Policy CC8 then goes on to recommend the use of the 'BRE Site Layout Planning for Daylight and Sunlight: A guide to good practice' document.

INTENTIONALLY BLANK PAGE

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 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."*
- 4.2 The BRE Guidelines provides two methodologies for daylight assessment of neighbouring properties, namely;
- The Vertical Sky Component (VSC); and
 - The No Sky Line (NSL).
- 4.3 There is one methodology provided by the BRE Guidelines for sunlight assessment, denoted as Annual Probable Sunlight Hours (APSH).
- 4.4 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.
- 4.5 The following table provides a summary of the criteria set out within the BRE Guidelines for daylight & 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%.

- 4.6 When considering the significance of daylight, and sunlight effects, professional judgement has been used. Consideration has been given to the proportion of rooms/windows/amenity areas 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.

- 6.1 We have created a three-dimensional computer model of the site and the surrounding properties to allow for a detailed daylight and sunlight assessment.
- 6.2 The daylight and sunlight review within this report considers existing residential properties only, as they are recognised by the Building Research Establishment (BRE 2022) as having the highest expectation for natural light when compared to other uses, such as commercial.
- 6.3 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.

RELEVANT SENSITIVE RECEPTORS

- 6.4 GIA have identified the following properties as relevant for daylight and sunlight assessment:
 - Thames Court
- 6.5 The location of the above properties relevant to the Site can be seen on Figure 01 above.
- 6.6 Where potentially noticeable changes in daylight and sunlight occur, the impacts are fully discussed in the following sections.

THAMES COURT EXISTING V PROPOSED



Figure 03: Thames Court

6.7 100 windows serving 48 site facing rooms have been modelled and analysed for daylight. All 48 rooms are material for consideration in sunlight terms as they have one or more windows orientated to within 90 degrees of due south.

DAYLIGHT

6.8 With the Proposed Development in place any changes in daylight amenity (VSC & NSL) to 39 of the 48 rooms will be BRE compliant.

6.9 The remaining 9 rooms are all served by multiple (at least 3) windows.

6.10 With the Proposed Development in place, one or two of the windows serving each room will experience VSC changes which breach BRE guidance.

6.11 The location of these windows can be seen coloured orange in the model image on the opposite page (see Fig. 04).

6.12 That said, any VSC changes experienced by the other windows serving these 9 rooms will all be fully BRE compliant and, as a result, the rooms served by these windows will all be fully BRE compliant in NSL terms, and retain daylight distribution to between 99.1% and 99.8% of the rooms' areas.

6.13 The effect of the Proposed Development upon these 9 rooms and Thames Court overall is therefore considered to be minor.

SUNLIGHT

6.14 All 48 rooms material for consideration in sunlight terms will retain well in excess of the BRE recommended levels of sunlight amenity with the Proposed Development in place.

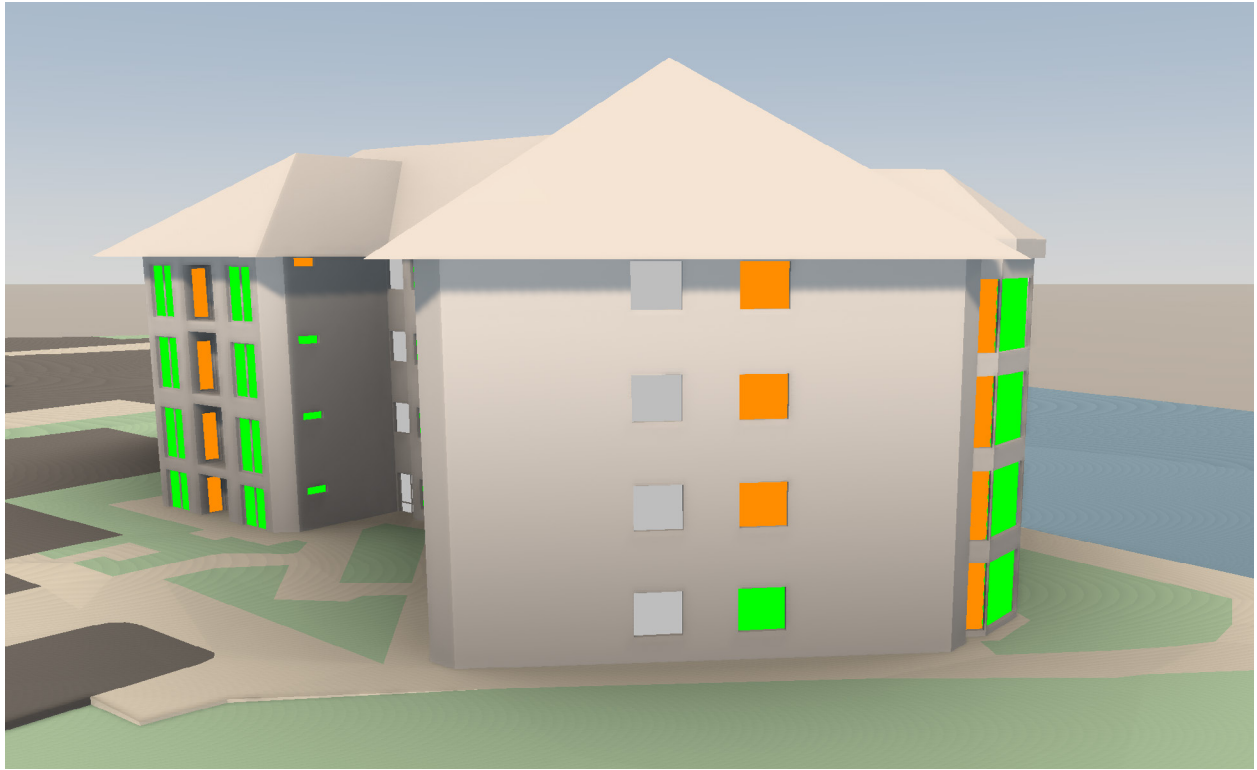


Figure 04: Location of the windows which breach BRE Guidance - Existing v Proposed

VERTICAL SKY COMPONENT					NO SKY LINE				
WINDOW					ROOM				
TOTAL	PASS	LOSS			TOTAL	PASS	LOSS		
		20-30	30-40	40+			20-30	30-40	40+
100	88	0	7	5	48	48	0	0	0

Table 01: VSC & NSL - Thames Court

ANNUAL PROBABLE SUNLIGHT HOURS							
ROOM							
TOTAL	PASS	ANNUAL (%)			WINTER (%)		
		20-30	30-40	40+	20-30	30-40	40+
48	48	0	0	0	0	0	0

Table 02: APSH - Thames Court

THAMES COURT EXISTING V PROPOSED + COMMITTED DEVELOPMENTS



Figure 05: Thames Court

DAYLIGHT

- 6.15 With the Proposed and Committed Developments in place, any changes in daylight amenity (VSC & NSL) to 36 of the 48 rooms will be BRE compliant.
- 6.16 For the 12 rooms which will experience VSC changes that breach BRE guidance, the location of these windows can be seen coloured orange in the model image on the opposite page (Fig. 06).
- 6.17 Any VSC changes experienced by the windows serving these 12 rooms will mostly be driven by the adjacent committed developments, as illustrated by the results of the existing v's proposed scenario.
- 6.18 In NSL terms, the 12 rooms retain good daylight distribution to between 59% and 99.8% of the rooms' areas and all meet the BRE recommendation.
- 6.19 The effect of the Proposed Development upon these 12 rooms and Thames Court overall is therefore considered to be minor.

SUNLIGHT

- 6.20 For sunlight, 29 of the 48 rooms which have a material consideration in sunlight terms will retain well in excess of the BRE recommended levels of sunlight amenity with the Proposed Development in place.
- 6.21 Again, any changes in sunlight experienced by the windows serving the 19 rooms seeing lower levels of sunlight will mostly be driven by the adjacent committed developments, as illustrated by the results of the existing v's proposed scenario.

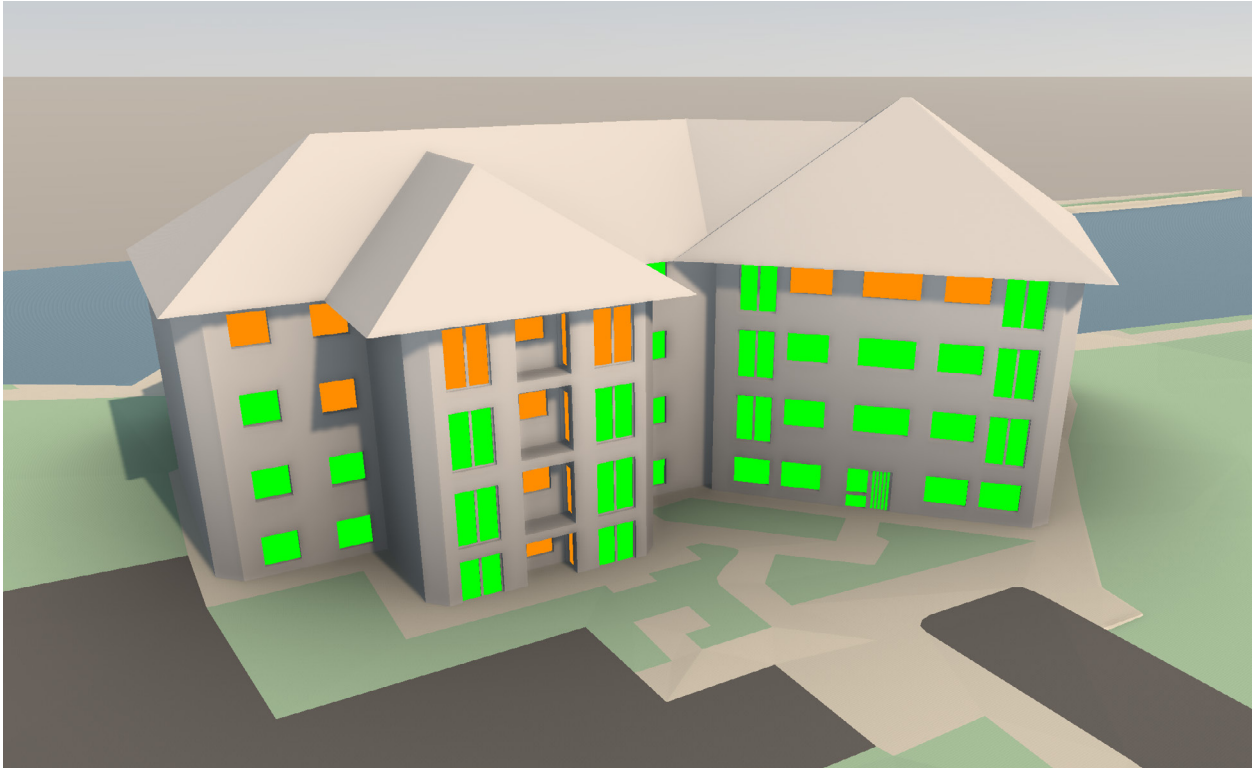


Figure 06: Location of the windows which breach BRE Guidance - Existing v Proposed + committed Developments

VERTICAL SKY COMPONENT					NO SKY LINE				
WINDOW					ROOM				
TOTAL	PASS	LOSS			TOTAL	PASS	LOSS		
		20-30	30-40	40+			20-30	30-40	40+
100	70	14	8	8	48	48	0	0	0

Table 03: VSC & NSL - Thames Court

ANNUAL PROBABLE SUNLIGHT HOURS							
ROOM							
TOTAL	PASS	ANNUAL (%)			WINTER (%)		
		20-30	30-40	40+	20-30	30-40	40+
48	37	3	3	2	0	0	7

Table 04: APSH - Thames Court

6 CONCLUSIONS

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

- 6.1 The analysis results show that the construction of the Proposed Development, either in isolation or in combination with the proximate committed developments, will result in either BRE compliant or minor changes in daylight and sunlight amenity to the surrounding residential sensitive receptors.
- 6.2 The daylight and sunlight effect of the Proposed Development is therefore considered to be no greater than minor and, therefore, reasonable in context.



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@glasurveyors.ie

77 Lower Camden Street
Dublin Ireland
D02 XE80