gia CHARTERED SURVEYORS

DAYLIGHT & SUNLIGHT

IMPACT ON NEIGHBOURING PROPERTIES REPORT

Meadows Hall, Church Road, Richmond

Richmond Housing Partnership

4 July 2022

GIA No: **17727** Fee Quote: **FQ0002789**

PROJECT DATA:

Client	**Richmond Housing Partnership**
Architect	**Wimshurst Pellereti**
Project Title	**Meadows Hall, Church Road, Richmond**
Project Number	**17727**

REPORT DATA:

Report Title	**Impact on Neighbouring Properties**
GIA Department	**Daylight & Sunlight**
Dated	**4 July 2022**
Fee Quote	**FQ0002789**
Prepared by	**VL**
Checked by	**KH**
Type	**Final**

Revisions	No:	Date:	Notes:	Signed:

SOURCES OF INFORMATION:

Information Received	**IR-06-17227**
Release Number	**Rel_04_17227**
Issue Number	**IS01-EvP**
	IS02-EvP SHOG

DISCLAIMER:

This report has been prepared for Richmond Housing Partnership by GIA as their appointed Daylight & Sunlight consultants. 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.

CONTENTS

USER TIP:
Click any heading to go directly to that content.

APPENDICES (BOUND SEPARATELY)

USER TIP:
Return to the contents list from any page by clicking on the GIA logo.

gia CHARTERED SURVEYORS

1 EXECUTIVE SUMMARY

1.1 GIA have assessed the proposed Wimhurst Pellereti scheme for the former Meadows Hall site on Church Road, Richmond to understand the potential effect of the proposed development on the daylight and sunlight amenity of the relevant neighbouring properties.

1.2 The National Planning Policy Framework (July 2021 ("NPPF") outlines 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 an efficient use of a site".* The NPPG asks whether there would be an "unreasonable impact" on daylight and sunlight amenity to neighbouring occupiers.

1.3 In considering the potential impact to neighbouring properties, Part D of Policy D6 of the London Plan (March 2021) advises that the design of development should *"provide sufficient daylight and sunlight to new and surrounding housing that is appropriate for its context, whilst…minimising overshadowing and maximising the usability of outside amenity space".* (our emphasis)

1.4 It is clear that the GLA's focus is on sufficient or retained daylight and sunlight to neighbouring properties and highlights that context will be a consideration to determine sufficiency.

1.5 Policy LP8 of the Richmond Local Plan (July 2018) states that all development will be required to protect amenity and living conditions. The Council will *"ensure the design and layout of buildings enables good standards of daylight and sunlight to be achieved in…existing properties affected by new development".* (our emphasis) The supporting text (para. 4.8.5) clarifies that the Council will have regard to the most recent Building Research Establishment guidance when assessing daylight and sunlight.

1.6 The Daylight and Sunlight analysis has been considered by reference to the criteria and methodology within the BRE Guidelines (2011), which when published, recognised that it should not form a mandatory set of criteria, rather it should be used to help and inform design.

1.7 Upon successful completion of the Proposed Development five of the seven properties will meet the national numerical values identified in paragraphs 2.2.21 and 3.2.11 of the BRE Guidelines for daylight and sunlight.

1.8 GIA have also undertaken an overshadowing analysis of the neighbouring amenity spaces. The results show that all amenity spaces will remain BRE compliant.

1.9 It is our opinion that the Proposed Development is appropriate in its context. A good standard of daylight and sunlight amenity will be retained within the surrounding neighbouring properties and a sufficient level of daylight and sunlight is retained, thus satisfying the London Plan (2021) and Richmond Local Plan (2018) tests.

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2 THE SITE

GIA have been instructed to review and advise on the daylight and sunlight impacts associated with the implementation of the Proposed Development at Meadows Hall, Church Road, Richmond.

THE SITE

2.1 The Site is located in the London Borough of Richmond upon Thames ("LBR"). The Site was formerly occupied by Meadows Hall, a one storey social centre, but is now currently vacant. The building was demolished in 2018 under LBR Planning Ref: 18/2020/FUL. The Site is bound by 51-55 (odd) Sheen Road to the north; 1-13 (odd) Houblon Road to the east; 40 Church Road to the south; and Church Road to the west.

2.2 Figure 01 below illustrates the Site. Further drawings are enclosed at Appendix 03 of this report.

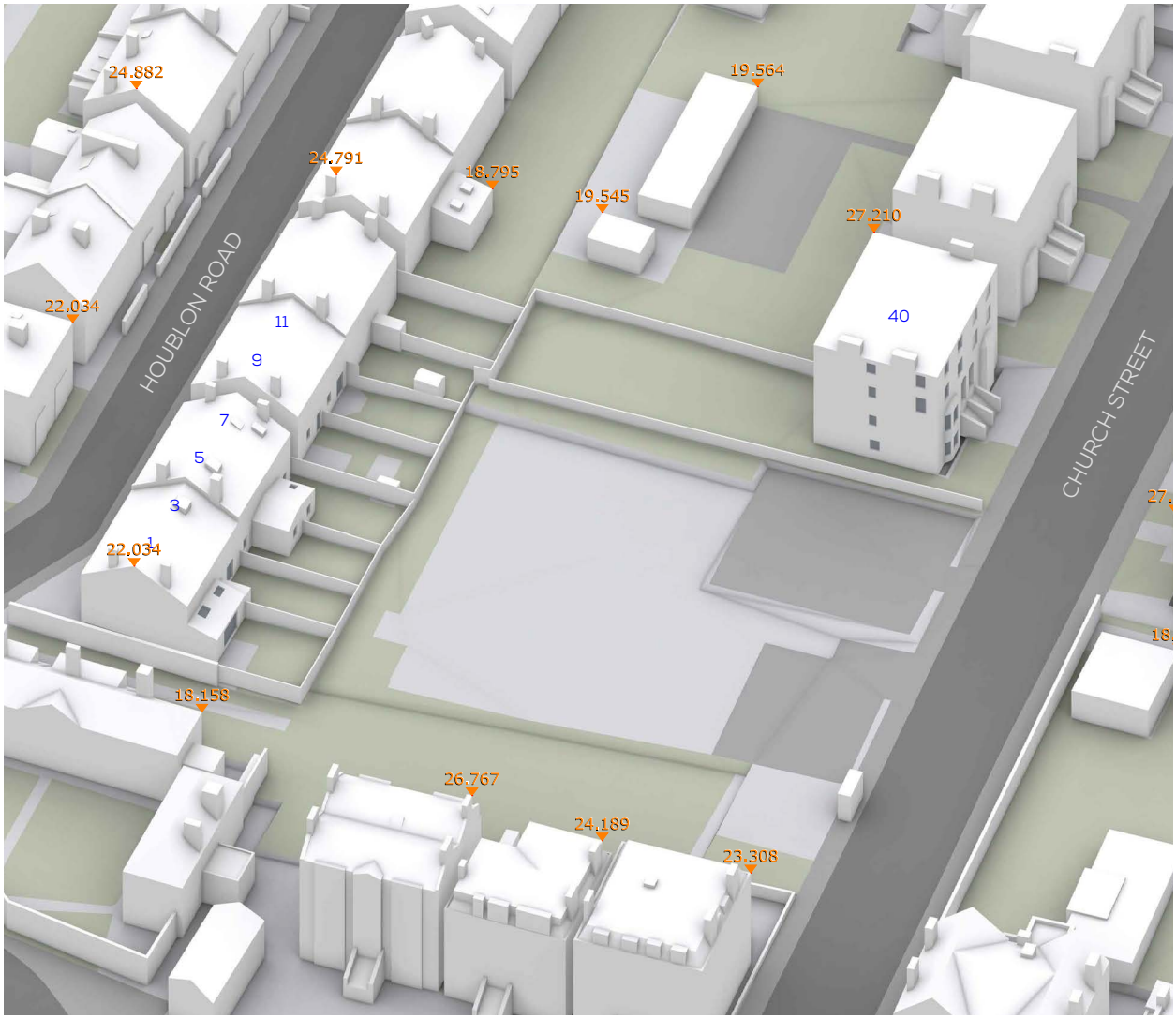

Figure 01: 3D model of the site and Existing Property

PROPOSED DEVELOPMENT

2.3 The Proposed Development comprises the erection of a five storey residential building on the western site boundary and a two storey residential building on the eastern site boundary ("the Proposed Development").

2.4 GIA's understanding of the Proposed Development is illustrated in Figure 02 and further drawings are enclosed at Appendix 03.

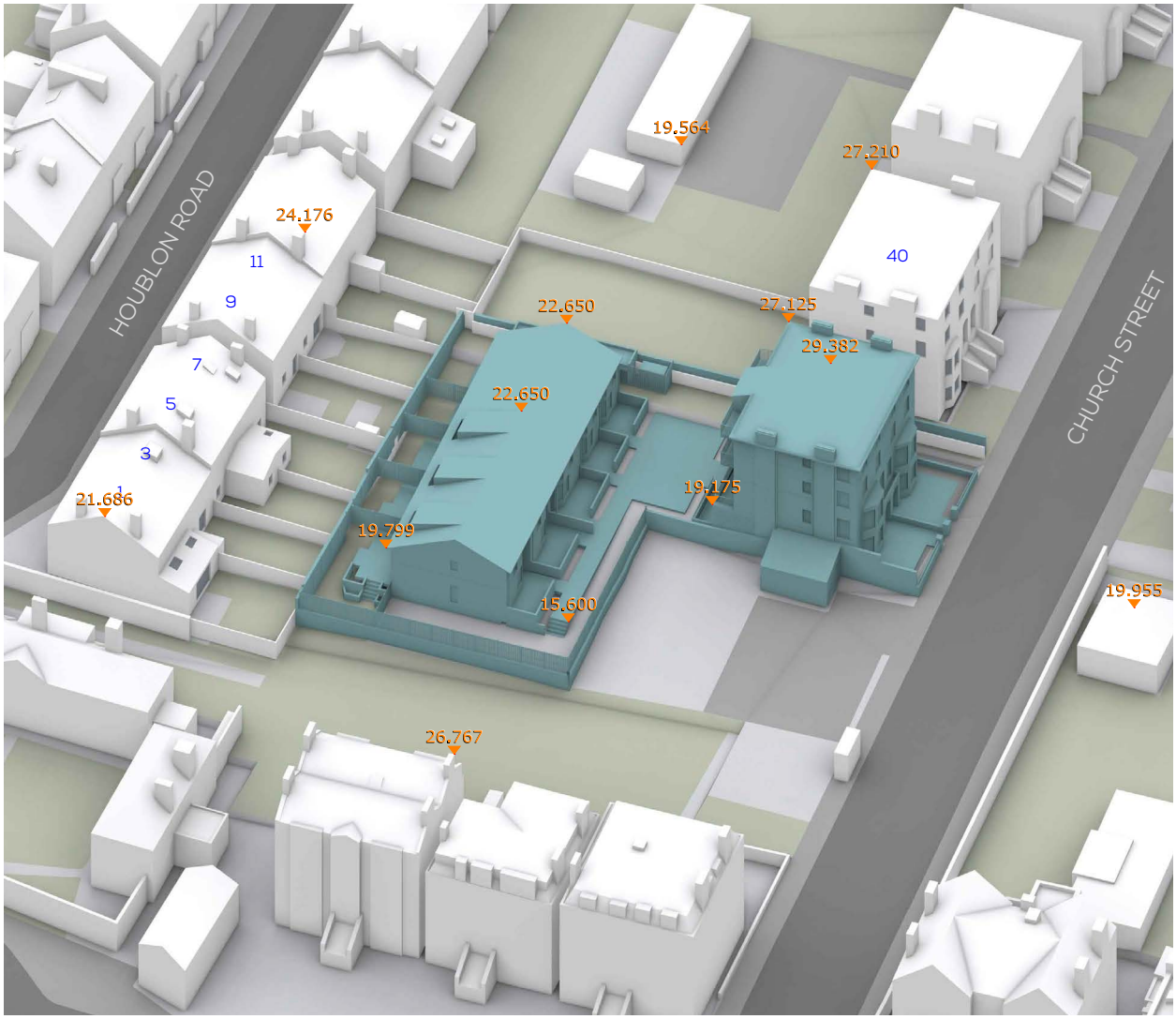

Figure 02: 3D Perspective View of the Proposed Development

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 (NPPF) (July 2021) (Ministry of Housing Communities and Local Government (MHCLG));
- National Planning Practice Guidance (NPPG) (June 2021) (MHCLG);
- The London Plan – (March 2021) (Greater London Authority);
- The London Plan Housing SPG (March 2016, updated 2017) (Greater London Authority);
- Richmond Local Plan (July 2018); and
- Richmond Residential Development Standards SPD (March 2010).

NATIONAL PLANNING POLICY FRAMEWORK (JULY 2021)

3.2 The NPPF (February 2019) 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.

> *"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 2021)

3.3 In light of the update to the Government's Planning Practice Guidance, we have considered the relevant paragraphs on 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".

CONSOLIDATED LONDON PLAN (MARCH 2021)

3.5 The London Plan was published in March 2021 and sets out the integrated economic, environmental, transport and social framework for the development of London over the next 20-25 years.

3.6 Part D of Policy D6 (Housing Quality and Standards) states that the design of development "should provide sufficient daylight and sunlight to new and surrounding housing that is appropriate for its context, whilst avoiding overheating, minimising overshadowing and maximising the usability of outside amenity space." (our emphasis).

3.7 It is clear that the GLA's focus is on sufficient or retained daylight and sunlight to neighbouring properties and highlights that context will be a consideration to determine sufficiency.

HOUSING SUPPLEMENTARY PLANNING GUIDANCE "HOUSING SPG" (LONDON PLAN, MARCH 2016, UPDATED IN 2017)

3.8 The Mayor published a Supplementary Planning Guidance on Housing in March 2016. The London Plan sets out the policy framework for development in London. The Supplementary Planning Guidance, *"provides guidance on a range of strategic policies including housing supply, residential density, housing standards, build to rent developments, student accommodation and viability appraisals."*

3.9 The Housing SPG moves away from the rigid application of the national numerical values provided in the BRE Handbook. Paragraph 1.3.45 states that:

> *"an appropriate degree of flexibility needs to be applied when using 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."

3.10 Paragraph 1.3.46 further states that:

"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 a 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."

3.11 To optimise development the GLA recognises that the definition of acceptable living environments should be based on the wider concept of amenity. Paragraph 1.2.41 states that:

"planned redevelopment can also deliver a higher standard of new accommodation, improved residential amenity and design quality, together with affordable housing provision. Boroughs and other partners are encouraged to take this."

3.12 Paragraph 2.3.46 suggests that:

"Where direct sunlight cannot be achieved in line with Standard 32, developers should demonstrate how the daylight standards proposed within a scheme and individual units will achieve good amenity for residents. They should also demonstrate how the design has sought to optimise the amount of daylight and amenity available to residents, for example, through the design, colour and landscaping of surrounding buildings and spaces within a development."

RICHMOND LOCAL PLAN (2020)

3.13 The Richmond Local Plan was adopted on 3 July 2018 and 3 March 2020 in relation to two legal challenges and sets out policies and guidance for the development of the borough over the next 15 years.

3.14 Policy LP 8 (Amenity and Living Conditions) states that the Council will *"ensure the design and layout of buildings enables good standards of daylight and sunlight to be achieved in new development and in existing properties affected by new development; where existing daylight and sunlight conditions are already substandard, they should be improved where possible"*

SUPPLEMENTARY PLANNING DOCUMENT RESIDENTIAL DEVELOPMENT STANDARDS (2010)

3.15 Richmond have also produced a series of Supplementary Planning Guidance (SPG) and Supplementary Planning Documents (SPD) to provide greater detail on policies within the Local Plan to support decisions on planning applications.

3.16 Paragraph 3.1.1 of the SPD Residential Development Standards states: *"If no substantial loss of sunlight or daylight to adjoining dwellings and gardens occurs residential development will generally be acceptable subject to the overall design quality, impact on the character of the area and sustainability of the proposal."*

3.17 Paragraph 3.1.2 states: *"Residential development should create good living conditions and should not cause any significant loss of daylight or sunlight to habitable rooms or gardens in neighbouring properties. In deciding the acceptability of proposals the council will be guided by the Building Research Establishment (BRE) standards. Regard will also be made to the impact on residential amenity and the patterns of use of the rooms and gardens."*

3.18 The SPD acknowledges that a loss in daylight and sunlight can occur. The question that is asked is whether the loss is substantial or significant.

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 (2022)'*, guidelines and methodology for the measurement and assessment of daylight and sunlight.

BUILDING RESEARCH ESTABLISHMENT GUIDELINES 2011

4.1 The BRE Guidelines note that the document is intended to be used in conjunction with the daylight recommendations found within the BS EN 17037 (2019) and UK annex and The Applications Manual on Window Design of the Chartered Institution of Building Services Engineers (CIBSE).

4.2 The BRE Guidelines provides two methodologies for daylight assessment of neighbouring properties, namely;

1 The Vertical Sky Component (VSC); and

2 The No Sky Line (NSL).

4.3 For daylight to be compliant (in accordance with figure 20 of the Guide), both the VSC and NSL tests have to be met.

4.4 Whilst the VSC and NSL metrics are used to assess daylight impacts, the Median Daylight Factor ("MDF") and Luminance (Lux Levels) criteria should be used in conjunction when assessing the daylight amenity within new developments.

4.5 There is one methodology provided by the BRE Guidelines for sunlight assessment, denoted as Annual Probable Sunlight Hours (APSH).

4.6 The BRE Guidelines provide alternative assessments to better understand the impact on a neighbouring property in such situations. The relevant assessments for the purpose of this report are detailed within the BRE Guidelines and summarised below.

4.7 The BRE Guidelines provide a calculation for the VSC and APSH analysis to quantify an appropriate alternative value based on the context of an environment. This approach is commonly known as the 'mirror image' analysis.

4.8 The BRE Guidelines provide an alternative assessment where there are existing windows with balconies above them. This test determines whether it is the presence of the existing balcony that is the reason for the large relative impact on daylight (VSC).

4.9 The BRE Guide provides two methods of overshadowing assessment, the Sun Hours on Ground and Transient Overshadowing studies.

4.10 The BRE Guide provides two methods of overshadowing assessment, the Sun Hours on Ground and Transient Overshadowing studies.

BRE GUIDELINES SUPPLEMENTARY TESTS

4.11 The BRE Guidelines outline that a VSC value is calculated for each window; however "If a room has two or more windows of equal size, the mean of their VSC's may be taken".

4.12 Although not strictly in accordance with the BRE methodology, where a room is served by two or more windows of the same or different sizes, the VSC value to the room has been calculated by applying an average weighting calculation to understand the VSC value to the room. It is GIA's opinion that this is a reasonable method to follow in that it follows the principles of the Guidelines.

4.13 The BRE also provide a methodology to calculate APSH in relation to the room and window "If a room has multiple windows on the same walls or adjacent walls, the highest value of APSH should be taken. If a room has two windows on opposite walls, the APSH due to each can be added together."

4.14 The above extract from the BRE Guidelines is in relation to proposed units rather than existing buildings. It does, however, make sense to apply this methodology to existing rooms. A room served by multiple windows could receive the benefit of sunlight entering from all of them and not just one.

4.15 Evaluating per-room Probable Sunlight Hours is meant to be carried out with diagrams and acetate overlays, which makes accounting for individual spots challenging if not impossible. APSH assessments are now typically done using specialised computer software which allows the assessment of rooms with multiple windows to be completed more accurately than what is suggested in the BRE Guidelines.

4.16 Appendix F of the BRE Guidelines allows for supplementary analysis to be undertaken in order to establish alternative target values. This exercise places a theoretical notional massing of the property for which alternative target values are to be created and mirrors the massing onto the site. This exercise is called a "mirror massing" assessment.

4.17 "Sections 2.1, 2.2 and 2.3 give numerical target values in assessing how much light from the sky is blocked by obstructing buildings. These values are purely advisory and different targets may be used based on the special requirements of the proposed development or its location. Such alternative targets may be generated from the layout dimensions of existing development, or they may be derived from considering the internal layout and daylighting needs of the proposed development itself."

4.18 "... where an existing building has windows that are unusually close to the site boundary and taking more than their fair share of light... To ensure that new development matches the height and proportions of existing buildings, the VSC and APSH targets for these windows should be set to those for a "mirror image" building of the same height and size and equal distance away from the other side of the boundary"

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 to carry out the relevant technical studies. All relevant assumptions made in producing this model can be found in Appendix 01.

SURROUNDING PROPERTIES

5.2 GIA have identified the following properties as relevant for daylight and sunlight assessment:

- 40 Church Road;
- 1 Houblon Road;
- 3 Houblon Road;
- 5 Houblon Road;
- 7 Houblon Road;
- 9 Houblon Road; and
- 11 Houblon Road.

5.3 The following properties adhere to the numerical values set out within the BRE Guidelines and are not discussed further:

- 1 Houblon Road;
- 3 Houblon Road;
- 7 Houblon Road;
- 9 Houblon Road; and
- 11 Houblon Road.

5.4 Where changes in daylight and sunlight occur to the remaining two properties (40 Church Road and 5 Houblon Road), the impacts are fully discussed in the following sections. All results can be found in Appendix 04.

5.5 To assist the readers understanding of the surrounding properties and window locations, we have produced window maps and contour plots which are enclosed at Appendix 05 and 06 of this report.

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DISCUSSION OF RESULTS

Property Reference

5.6 40 Church Road is a solely residential property located to the south of the Proposed Development. GIA have acquired floorplans from online sales documents. Using these we have been able to confirm that this property comprises four flats from lower ground floor to second floor. The northern apertures of 40 Church Road benefit from an unobstructed view across the Site, which is uncharacteristic when compared to the other properties along Church Road.

5.7 This property remains BRE compliant for the daylight to the room (NSL) and sunlight (APSH) assessments.

5.8 Below, GIA have summarised the daylight to the window (VSC) results in table format:

Daylight (VSC)

No. of Windows	BRE Compliant	20-30% Reduction	30-40% Reduction	+40% Reduction
19	15 (79%)	0 (0%)	1 (5%)	3 (16%)

5.9 19 windows were tested for VSC, 15 of these windows remain BRE compliant.

5.10 The remaining four windows are located on the lower ground, ground and first floor and serve open plan LKDs. The changes in VSC are all in excess of 38%. Notwithstanding this, as a result of the open plan design of the LKDs, they benefit from mitigating windows on the western façade. As a result, three of the windows serving the ground floor and first floor LKDs will remain compliant against the supplementary VSC to the room assessment.

5.11 The final window serves the lower ground LKD. The room experiences a percentage reduction in VSC of 21%, only marginally above the 20% threshold which the BRE consider to be a noticeable reduction. It is our view that the reduction in VSC is unlikely to be perceptible to occupants.

Conclusion

5.12 In consideration of the above, although there is a breach of the BRE Guidelines in relation to daylight we consider that the Proposed Development continues to provide a good standard of daylight and sunlight to neighbouring properties. Sufficient daylight and sunlight will be provided.

Figure 03: Window map of 40 Church Road (Northern Elevation)

Figure 04: Window map of 40 Church Road (Western Elevation)

DISCUSSION OF RESULTS

5 Houblon Road

5.13 5 Houblon Road is located to the east of the property and is solely residential in use. The internal layouts have been assumed in line with Appendix 01.

5.14 This property remains BRE compliant for the daylight to the window (VSC) and sunlight (APSH) assessments.

5.15 Below, GIA have summarised the daylight to the room (NSL) results in table format:

Daylight (NSL)

No. of Rooms	BRE Compliant	20-30% Reduction	30-40% Reduction	+40% Reduction
2	1 (50%)	1 (50%)	0 (0%)	0 (0%)

5.16 Of the rooms assessed, one (50%) will experience no noticeable alteration in daylight distribution. The remaining room will experience a minor change of 27%. This room is located on the elevation closest to the Proposed Development and will have a proposed NSL value of 70% meaning that daylight distribution will be retained to over two thirds of the room.

Conclusion

5.17 In consideration of the above, although there is a breach of the BRE Guidelines in relation to daylight we consider that the Proposed Development continues to provide good standard of daylight and sunlight to neighbouring properties. Sufficient daylight and sunlight will be provided.

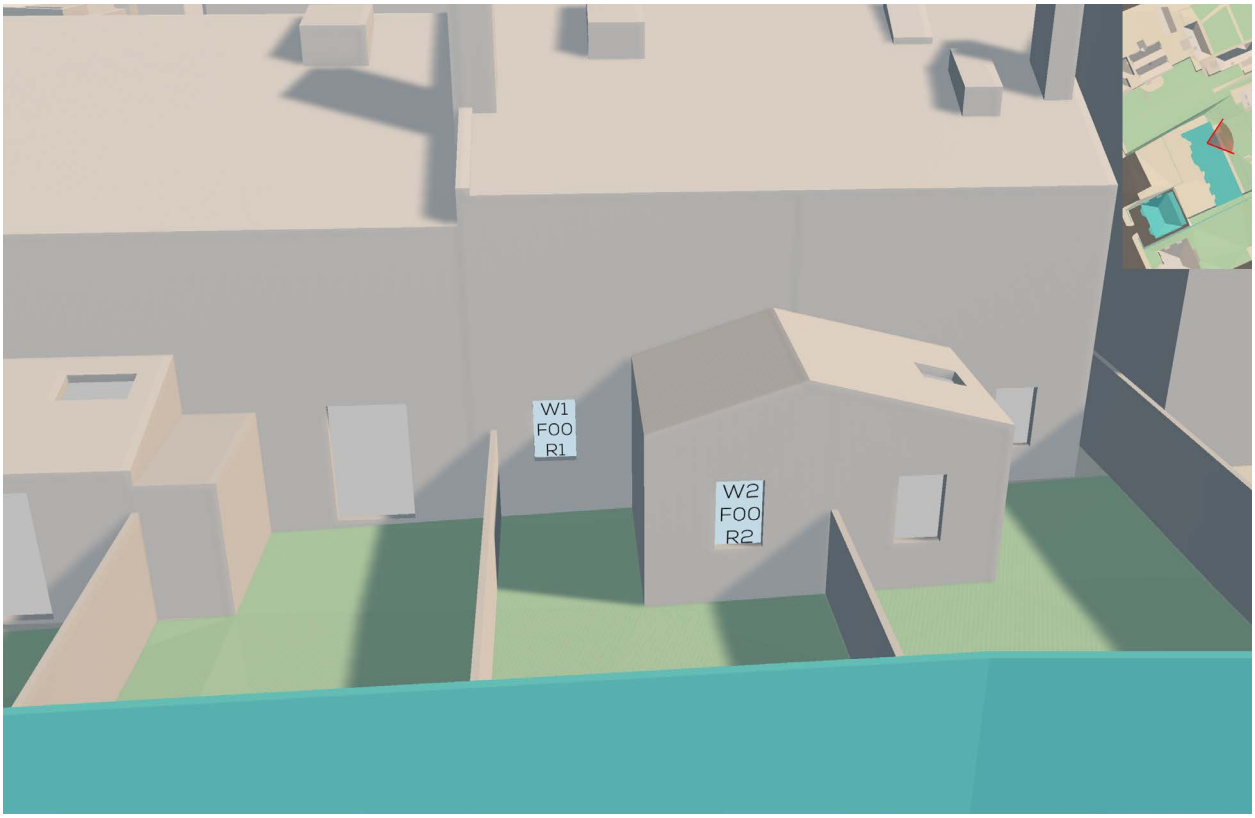


Figure 05: Window Map of 5 Houblon Road (Western Elevation)

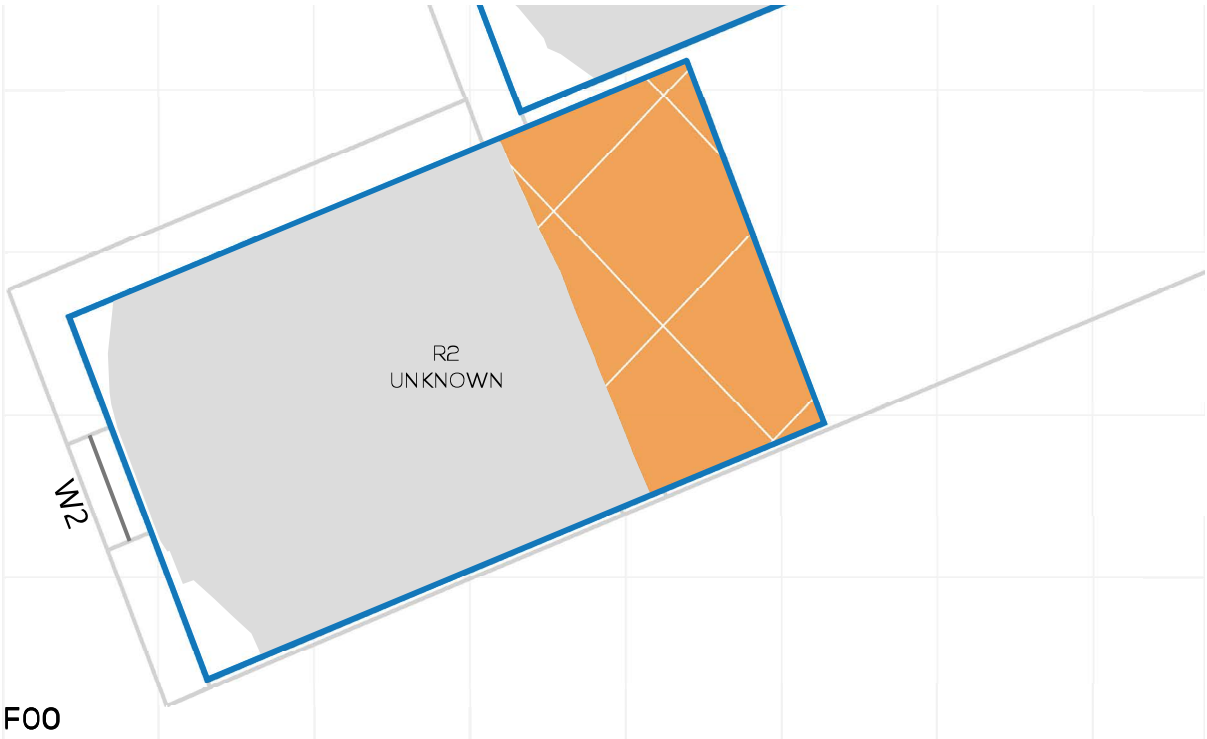
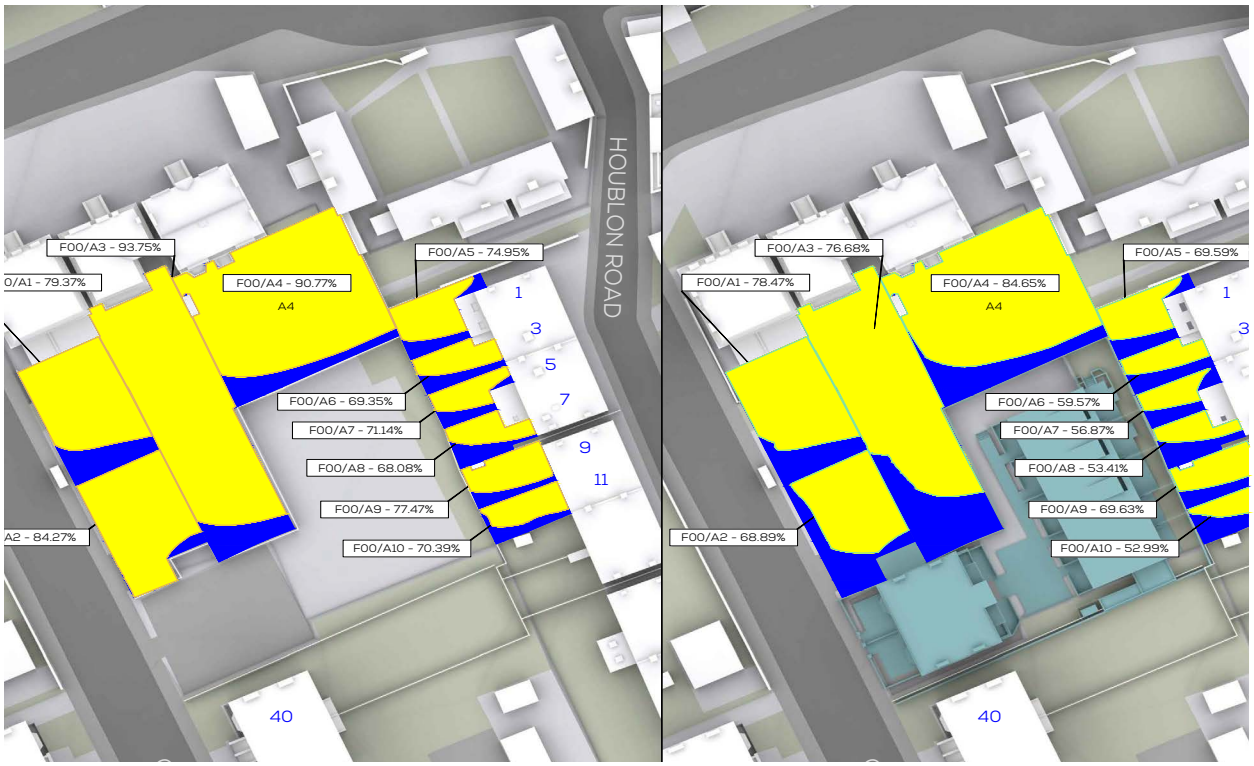


Figure 06: Daylight Distribution Contour Plot for 5 Houblon Road

6 OVERSHADOWING

GIA have undertaken an overshadowing assessment of the neighbouring amenity spaces.

6.1 GIA have undertaken a Sun Hours on Ground assessment of all of the neighbouring amenity spaces. The BRE Guidelines recommend "*that at least half of the amenity areas…should receive at least two hours of sunlight on 21 March*". Following the assessment all amenity spaces remain compliant against the recommendations of the BRE Guidelines. The area highlighted in yellow illustrates the area which receives a minimum of 2 hours of sunlight of sunlight on 21 March and the blue indicates how much area does not achieve that target.



7 CONCLUSIONS

GIA have undertaken a daylight and sunlight assessment in relation to the Proposed Development at Meadows Hall, Church Road, Richmond. The technical analysis has been undertaken in accordance with the BRE Guidelines.

7.1 Our technical analysis shows that following the implementation of the Proposed Development the Proposed Development will remain compliant for sunlight with some surrounding properties experiencing changes in daylight outside of the BRE recommendations.

7.2 Where breaches of guidance occur these are limited to two properties; 40 Church Road and 5 Houblon Road. 40 Church Road remains compliant for daylight distribution and sunlight and all but one room will remain compliant against the supplementary VSC to the room assessment. The remaining room will experience a minor reduction in VSC. 5 Houblon Road remains compliant in terms of VSC and APSH and will experience a minor change in daylight distribution.

7.3 GIA have also undertaken an overshadowing analysis of the neighbouring amenity spaces. The results show that all amenity spaces will remain BRE compliant.

7.4 It is our conclusion, that the Proposed Development complies with the relevant Richmond Local Plan (2018) and London Plan (2021) on daylight and sunlight.

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