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DAYLIGHT AND SUNLIGHT

IMPACT ON NEIGHBOURING PROPERTIES REPORT

JOHN STREET

Grainger Residential Limited

June 2025

GIA No: **20780**

PROJECT DATA:

Client	**Grainger Residential Limited**
Architect	**Chapman Taylor**
Project Title	**John Street**
Project Number	**20780**

REPORT DATA:

Report Title	**Impact on Neighbouring Properties Report**
GIA Department	**Daylight Department**
Dated	**3rd June 2025**
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Site Photos	**Google**
3D models	**GIA Point Cloud dated September 2024**
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DISCLAIMER:

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CONTENTS

1 EXECUTIVE SUMMARY

GIA have assessed the Chapman Taylor scheme at John Street, Cardiff to understand the potential changes in light to the relevant sensitive receptors.

1.1 GIA have been instructed by Grainger Residential Limited to advise on impacts to daylight and sunlight in relation to the redevelopment proposal at John Street, Cardiff.

1.2 A detailed description of the Site and surrounding area is provided within the Design and Access Statement and Planning Statement and not repeated herein.

1.3 GIA have undertaken technical assessments on daylight and sunlight to understand the potential effect of the development on the amenity of the relevant neighbouring receptors.

1.4 The technical analysis has been considered by reference to the criteria and methodology within the Building Research Establishment Guidance (BR209, 2022) which when published, recognised that it "*is advisory and the numerical target values within it may be varied to meet the needs of the development and its location*"[1].

1.5 No technical assessment has been undertaken in respect of overshadowing as we do not understand there to be any relevant areas of outdoor amenity which lie to the North of the Site and which would thus be material for consideration.

1.6 The approach to be taken to daylight and sunlight issues has been considered carefully by a number of recent appeal decisions from the Inspectorate. A two-stage process is to be adopted. This was examined more recently at the appeal at Goldsworth Road, Woking with the Inspector fully endorsing the two stage approach (PINS Ref: APP/A3655/W/21/3276474) which stems from the High Court decision on the application of Melanie Rainbird and The Council of the London Borough of Tower Hamlets[2].

1.7 The key headlines from the relevant policy documents are summarised in Section 3 of this report.

1.8 GIA's technical analysis illustrates that upon successful completion of the John Street Development, four of the eight relevant properties assessed would meet the BRE Guidelines, these being 1) The Golden Cross Public House, 2) Edward England Wharf, 3) Radisson Blu Hotel and 4) Cardiff Marriott Hotel. The remaining four properties (Meridian Plaza, Altolusso Apartments, Zenith Student Accommodation and The Copper Works) include windows and/or rooms which do not meet the BRE guidance. These properties are discussed in more detail within this report.

1.9 As recommended by the BRE within Appendix F of the Guidelines (setting Alternative Target Values), we have carried out a supplementary assessment of the Proposed Development using the extant Planning Consent as an alternative baseline to ensure that there would be no material change to the consented levels of VSC daylight and APSH sunlight.

1.10 Having considered the relevant local policies and guidance (see Sections 3 and 4) and the results of the analysis (see Section 5), it is our view that the daylight and sunlight impacts rising from the John Street Development fall within the reasonable tolerance permitted by the BRE, or by reference to Appendix F (setting Alternative Target Values), by virtue of either i) the isolated nature of the breaches, ii) the architecture of the neighbour which contributes to the issue, iii) the reasonable retained levels of daylight and sunlight, iv) the transient (and therefore less sensitive) usage of the rooms being assessed, v) the site's location and urban context, vi) the current low scale of development on the Site, vii) the rooms being single aspect and deeper than five metres (thus NSL change may be unavoidable); and/or viii) the fact that there is no material change in daylight and sunlight levels when compared to the extant Planning Consent.

1.11 This report is supported by several documents, drawings and results which are all enclosed within the Appendices as listed on the Contents Page. All assumptions used in collating this report can be found in Appendix 01.

1 Littlefair, P. (2022). Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice. Hertfordshire: HIS BRE Press, p 85 paragraph F1

2 Rainbird, R (on the application of) v The Council of the London Borough of Tower Hamlets [2018] EWHC 657 (Admin) (28 March 2018)

2 THE SITE - CONSENTED & PROPOSED DEVELOPMENTS

GIA have been instructed to review and advise on the daylight and sunlight impacts associated with the implementation of the proposed development at John Street, Cardiff.

THE SITE

2.1 A detailed description of the Site and surrounding area is provided within the Design & Access Statement and not repeated herein. Figure 02 below illustrates our understanding of the Site in the existing scenario.

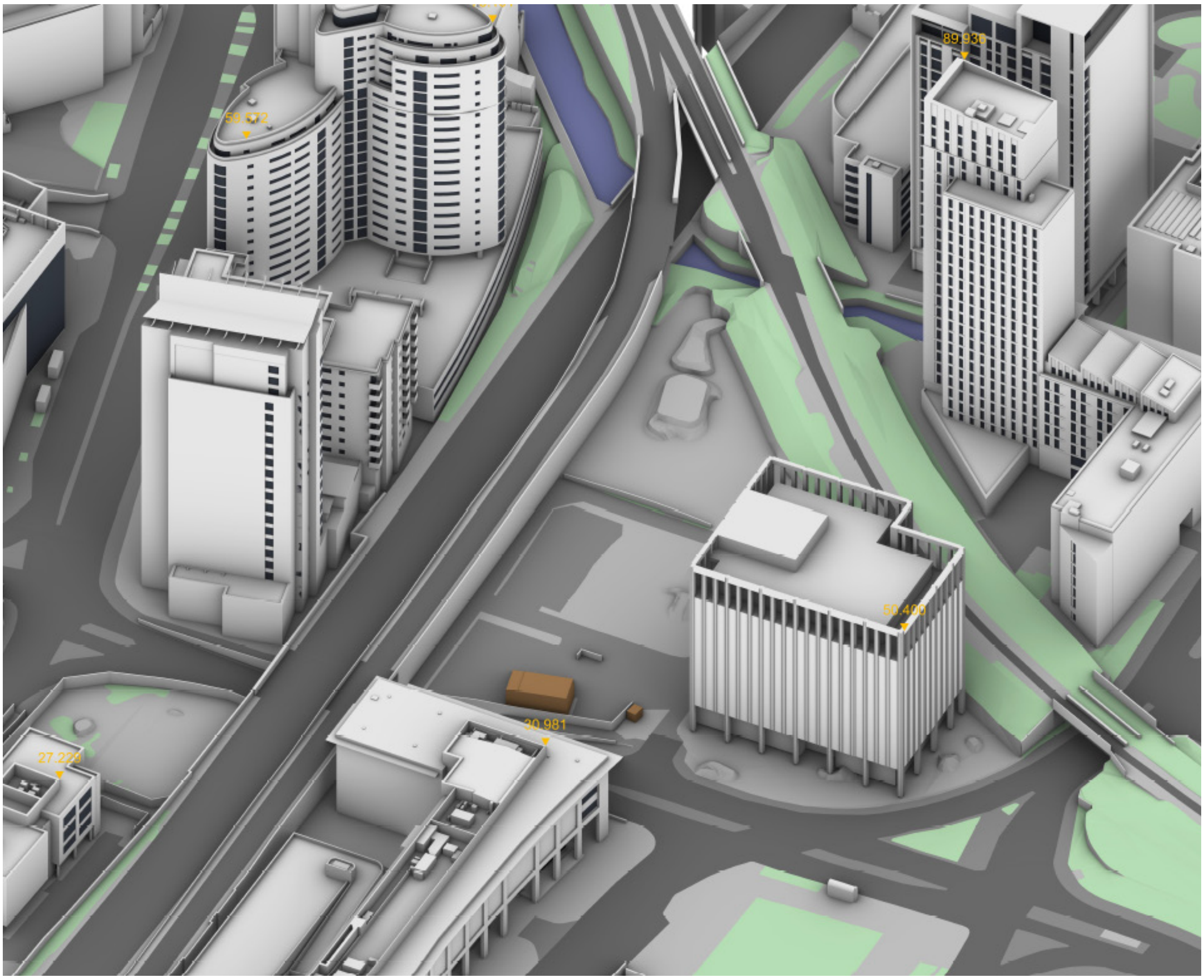


Figure 01: Isometric view of the existing site within context (with existing buildings shown in brown)

CONSENTED DEVELOPMENT

2.2 The Site benefits from an extant Planning Consent which was granted in April 2018 under Planning Reference 17/02615/MJR (since varied by application 9/01065/MJR). This permitted redevelopment to provide a mixed use commercial and leisure hotel with associated parking and landscaping ('the Consented Development').

2.3 Appendix F of the BRE Guide states that: "*Sometimes there may be an extant planning permission for a site but the developer wants to change the design. In assessing the loss of light to existing windows, a local authority may allow the Vertical Sky Component (VSC) and Annual Probable Sunlight Hours (APSH) for the permitted scheme to be used as alternative benchmarks.*"

2.4 As such, we have carried out a supplementary assessment of the Proposed Development using the extant consent as an alternative baseline to ensure that there would be no material change to the consented levels of VSC daylight and APSH sunlight.

2.5 This dual assessment scenario approach is considered especially appropriate due to the fact that the Site has been cleared to make way for redevelopment and hence the existing baseline comprises an empty plot of land that allows a greater level of daylight and sunlight availability. Its form is inconsistent with the roof scape of the neighbouring buildings, which are generally between 2-23 storeys in height.

2.6 Figure 03 below illustrates our understanding of the Consented Development within context.

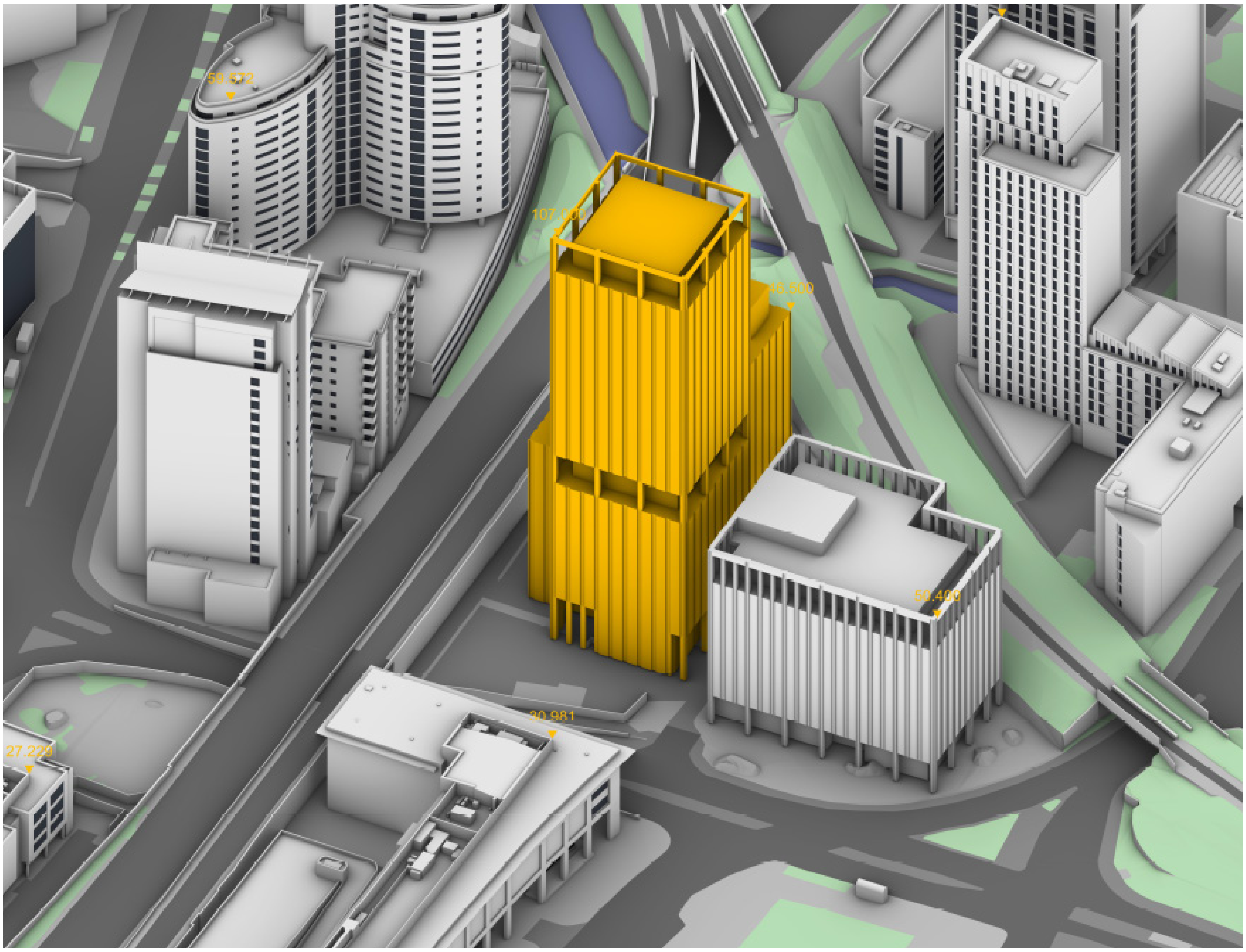


Figure 02: Isometric view of the Consented Development within context (shown in yellow)

PROPOSED DEVELOPMENT

2.7 A detailed description of the Proposed Development is provided within the Design & Access Statement and not repeated herein.

2.8 Figure 04 below illustrates the Site in the proposed scenario.

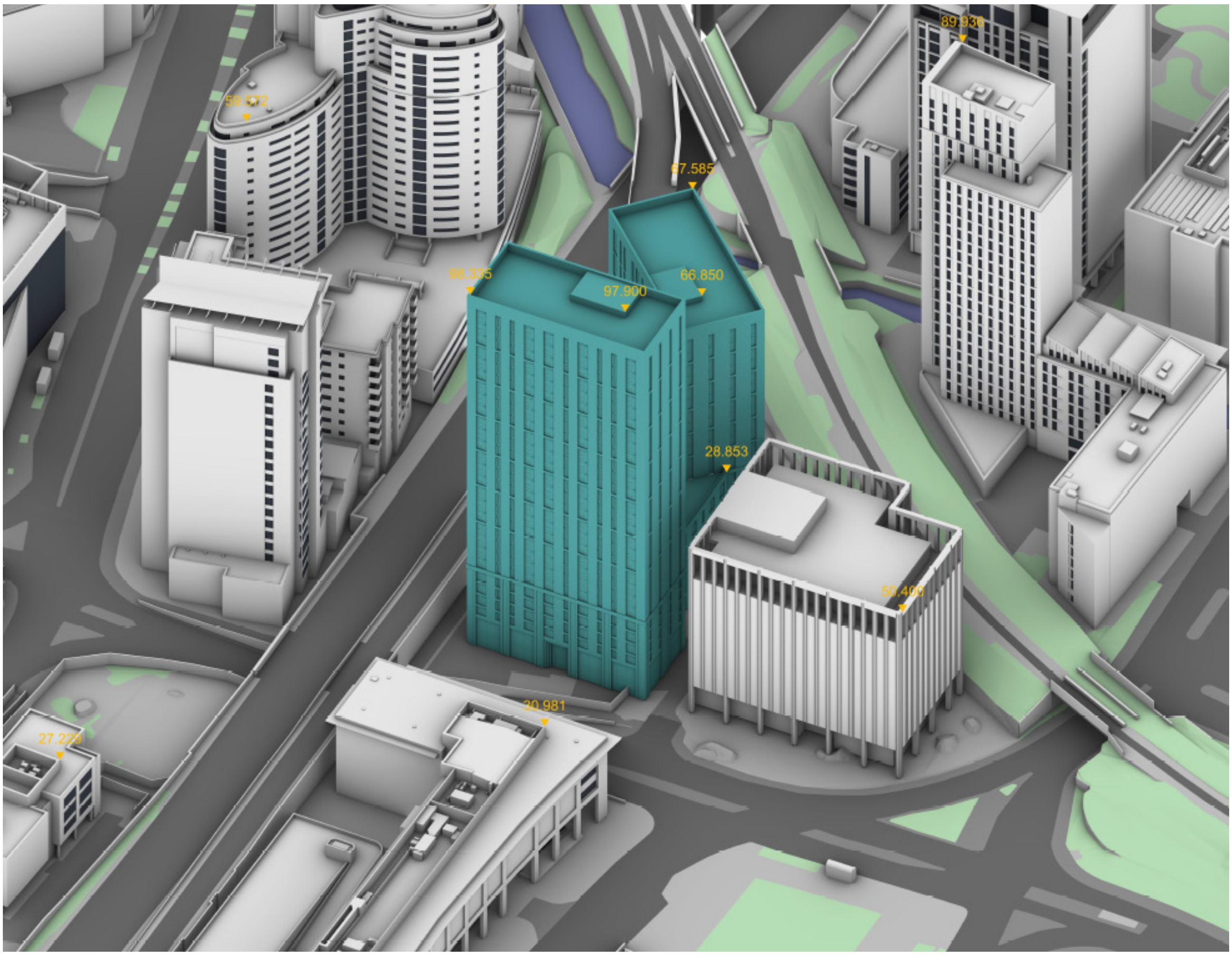


Figure 03: Isometric view of the Proposed Development within context (shown in teal)

3 POLICY & THE WIDER CONTEXT

This section details the relevant planning policies relating to daylight and sunlight amenity including overshadowing.

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:

- Planning Policy Wales (2024);
- Cardiff Local Development Plan 2006-2026;
- Cardiff Residential Design Guide Supplementary Planning Guidance (2017); and
- Tall Buildings Supplementary Planning Guidance (2017).

PLANNING POLICY WALES (2024)

3.2 Maximising Well-being and Creating Sustainable Places through Placemaking Paragraph 2.7:-

Placemaking in development decisions happens at all levels and involves considerations at a global scale... down to the very local level, such as considering the amenity impact on neighbouring properties and people.

3.3 Promoting Healthier Places Paragraph 3.21:-

The planning system must consider the impacts of new development on existing communities and maximise health protection and well-being and safeguard amenity.

CARDIFF LOCAL DEVELOPMENT PLAN 2006-2026

3.4 KP5: Good Quality & Sustainable Design states the following:

"To help support the development of Cardiff as a world-class European Capital City, all new development will be required to be of a high quality, sustainable design and make a positive contribution to the creation of distinctive communities, places and spaces by...Ensuring no undue effect on the amenity of neighbouring occupiers and connecting positively to surrounding communities..."

CARDIFF RESIDENTIAL DESIGN GUIDE SSPG

3.5 The guidance follows the BRE publication Site Layout Planning for Daylight and Sunlight and applies its standards in assessing the quality of natural light within and around developments. While BRE standards are used as a benchmark, Cardiff acknowledges that they are not absolute and should be applied flexibly depending on site-specific circumstances. Proposals that fall short of these standards must justify their approach and demonstrate that acceptable light levels are still achieved through alternative means. The standards apply to both new and existing properties and to all habitable rooms (excluding bathrooms, storage areas, and circulation spaces) .

TALL BUILDINGS SPG

3.6 The Cardiff SPGs set a framework that allows for contextually appropriate intensification and tall buildings, while ensuring good levels of residential amenity are maintained or enhanced.

3.7 Tall buildings are encouraged in strategic locations such as the Enterprise Zone and Regional Transport Hub (where the site is located), where intensification and regeneration are priorities. Proposals must demonstrate a high standard of design while mitigating environmental impacts such as overshadowing, loss of daylight, and microclimate effects. Tall buildings must provide good internal amenity for residents and ensure adequate daylight, sunlight, and privacy, especially within the public realm.

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."*

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 In respect to NSL, the BRE states the following at paragraph D3:-

"The calculation can only be carried out where room layouts are known. Using estimated room layouts is likely to give inaccurate results and is not recommended."

4.5 Therefore, where room layouts for the surrounding properties are unavailable, no NSL calculations have been undertaken.

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

4.7 Appendix F of the BRE Guide states that: "*Sometimes there may be an extant planning permission for a site but the developer wants to change the design. In assessing the loss of light to existing windows, a local authority may allow the Vertical Sky Component (VSC) and Annual Probable Sunlight Hours (APSH) for the permitted scheme to be used as alternative benchmarks.*"

4.8 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.

4.9 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.

4.10 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 is 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%.

4.11 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.

MODELLING

5.1 GIA have produced a three-dimensional computer model of the site and surrounding properties based on point cloud survey data collected in September 2024.

5.2 Where publicly available, floor plans of the relevant properties have been included 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 NEIGHBOURING PROPERTIES

5.3 GIA have identified the following 8 properties as relevant for daylight and sunlight assessment due to their proximity and usage. The location of each can be found on the plan in Figure 04. All results can be found in Appendix 04.:

- Golden Cross Public House, Hayes Bridge Road (1)
- Meridian Plaza (2)
- Altolusso Apartments, Bute Terrace (3)
- Edward England Wharf (4)
- Zenith Student Accommodation, Herbert Street (5)
- The Copper Works, 5 Capital Quarter, Tyndall Street (6)
- Radisson Blu Hotel, Bute Terrace (7)
- Cardiff Marriott Hotel, Mill Lane (8)

5.4 Based on the results of our technical analysis, the following 4 properties will meet the numerical recommendations set out within the BRE Guidelines (Stage 1) and are not discussed further:

- Golden Cross Public House, Hayes Bridge Road (1)
- Edward England Wharf (4)
- Radisson Blu Hotel, Bute Terrace (7)
- Cardiff Marriott Hotel, Mill Lane (8)

5.5 The properties which do not meet the numerical recommendations set out within the BRE Guidelines are considered below in further detail.

5.6 To assist the readers understanding of the surrounding properties and window locations, window maps have been produced which are enclosed at Appendix 05 of this report.

TWO-STAGE APPROACH

5.7 The impacts to relevant neighbouring properties have been considered in two stages:

Stage 1 - Is there a strict compliance with the BRE Guidelines?

- The national numerical assessments for daylight and sunlight as outlined in the BRE Guidelines are applied. Where properties, windows and/or rooms meet the recommendations of the BRE Guidelines, these are not discussed further.

Stage 2 - Is there an unacceptable loss of daylight/sunlight amenity?

- Where properties, windows and rooms do not meet the recommendations of the BRE Guidelines, wider material considerations are examined and applied.

5.8 In order to establish whether the Proposed Development will result in unacceptable harm (Stage 2), the following material considerations have been examined and applied (where relevant):

5.9 Based on Stage 2 of the Two-Stage Approach an impact is considered acceptable in context when;

Daylight (VSC & NSL)

- The impact to a window or room is minor (20-29.9%).
- The VSC to the room is BRE compliant.
- Daylight distribution is impacted in a bedroom which the BRE Guide considers *"less important"*.
- The room is single aspect and deeper than five metres and therefore the NSL change may be unavoidable (as advised in the BRE Guidelines).
- There is a low existing daylight value which is causing a disproportionate percentage change.
- The window is restricted by the building's own architecture.
- The impact is not materially dissimilar to that caused by implementation of the Consented Development.

Sunlight (APSH & WPSH)

- The impact to a room is minor (20.1%-29.9%).
- There is a low existing APSH or WPSH value which is causing a disproportionate percentage change.
- The loss of sunlight is to a bedroom or

kitchen which the BRE Guidelines consider "*less important*" and "*need not be analysed*".

- The window is restricted by the building's own architecture.
- The impact is not materially dissimilar to that caused by implementation of the Consented Development.

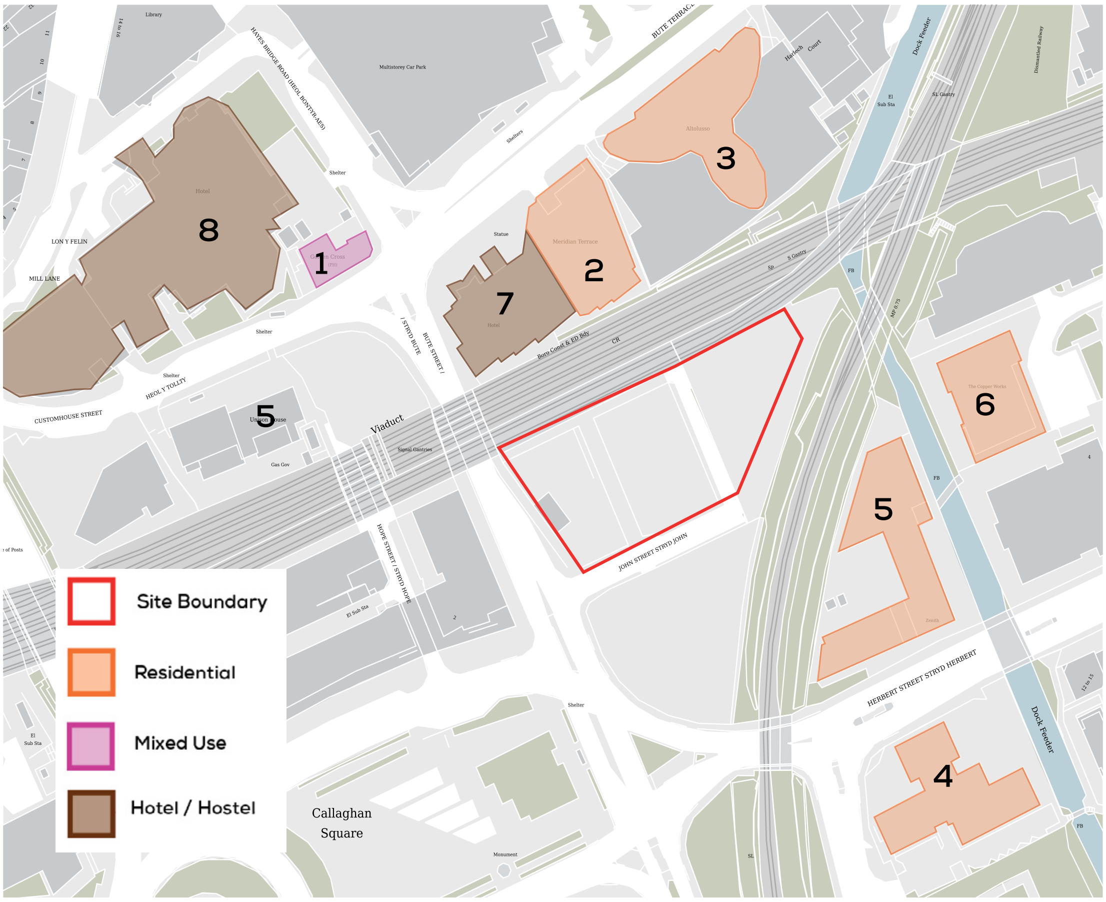
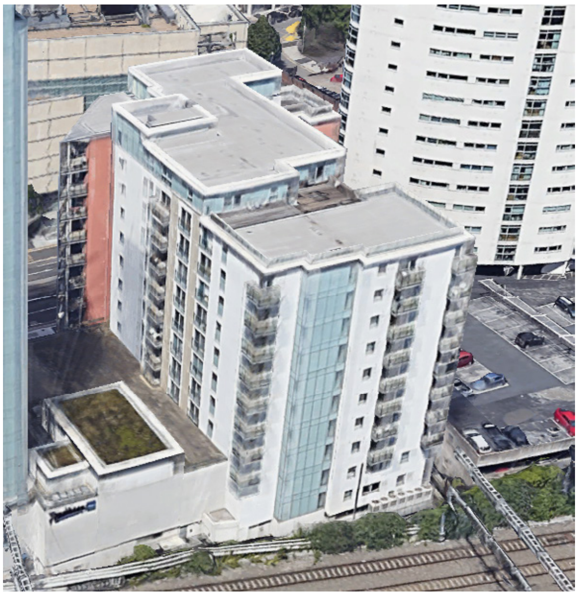


Figure 04: Plan showing the location and use of assessed properties

MERIDIAN PLAZA (PROPERTY 2)



5.10 This 11 storey apartment block is understood to comprise residential apartments on the 3rd floor and above. It is located directly to the North of the site, on the opposite side of the railway viaduct. Please see Figure 04 for a more exact location.

5.11 Our modelling of this property is based on comprehensive floor plans downloaded from the Cardiff Planning Portal, and which can be found in Appendix 06. In accordance with the BRE Guidelines, NSL and APSH have been assessed using the plans obtained.

5.12 The technical VSC, NSL and APSH results and NSL contours can be found in Appendix 04. A full set of corresponding window maps can be found in Appendix 05.

Daylight (VSC & NSL)

5.13 A total of 112 windows serving 86 site facing rooms between the 3rd and 11th floors have been included for technical daylight analysis. They comprise a mixture of multi-purpose Living/Kitchen/Dining rooms (LKDs), studios and bedrooms.

5.14 Of these, 40 rooms and corresponding windows (46.5%) will fully comply with both VSC and NSL daylight criteria and hence are entirely BRE compliant with regards to daylight amenity.

5.15 22 rooms (25.5%) experience minor alterations in either VSC and/or NSL which only just exceed the recommended 20% maximum change.

5.16 The remaining 24 rooms (28%) all directly face, and derive most of their existing light, from across the development site. They comprise a mixture of 2 LKDs and 1 bedroom per floor.

5.17 Turning first to the 16 LKDS, these all experience percentage reductions in VSC of between around 30-50%, with retained VSC levels sitting in a range of between around 12-24%. However, these larger reductions are partly a function of the balconies present in these locations. These balconies inherently suppress sky visibility and force the windows beneath to derive daylight and sunlight at a shallower angle directly across the development site. The BRE acknowledges that such designs may result in an unreasonable limitation upon a developer.

5.18 One LKD per floor (8 in total) also breaches NSL criteria. However these rooms are just over 7.5m deep. As stated in the BRE at 2.2.12, '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.'

5.19 The remaining 8 LKDs are not quite as deep and are dual aspect, containing westerly orientated windows that are not directly site facing. As a result, they remain adequately well lit in NSL terms. The occupants of these rooms should thus retain a reasonable sense of light on the whole.

5.20 Turning next to the 8 bedrooms, these each breach both VSC and NSL daylight criteria. However, retained VSC sits in a range of around 17-22% VSC which is comparable with many other inner city centre locations. The alterations could further be considered as reasonable in respect of the more secondary bedroom usage.

Sunlight (APSH)

5.21 A total of 85 site facing rooms oriented within 90 degrees of due South have been included for technical sunlight analysis. All comprise a mixture of LKDs, studios and bedrooms. Note that the BRE suggests that an assessment of loss of sunlight to bedrooms is not typically required, however, we have included for completeness.

5.22 Of these, 64 (75%) will fully comply with APSH sunlight criteria and hence are entirely BRE compliant with regards to sunlight amenity.

5.23 17 rooms (20%) experience minor derogations from APSH guidance throughout the year which do not exceed 30%.

5.24 The remaining 4 rooms (5%) experience slightly larger alterations of up to 35.1%, however, most will retain relatively good sunlight throughout the year which is close to the 25% recommended minimum APSH.

Comparison with Consented Scheme

5.25 When compared with the Consented Scheme there are some small losses in VSC daylight and APSH sunlight, none of which are material. The greatest absolute alteration in VSC daylight is 2.4%, which is unlikely to be perceptible to the room's occupants.

Summary

5.26 The overall effect upon the daylight and sunlight amenity to this property may be considered reasonable within the context of: i) the urban location in which the BRE advises that its guidance should be applied flexibly; ii) the current low scale of development on the Site; iii) the presence of balconies which contributes to the issue, iv) the reasonable retained levels of daylight and sunlight and v) the fact that there is no material change in daylight and sunlight levels when compared to the extant Planning Consent.

ALTOLUSSO APARTMENTS (PROPERTY 3)

5.27 This 23 storey tower comprises multiple private apartments on all floors. It is located to the North of the Site, on the opposite side of the railway viaduct. Please see Figure 04 for a more exact location.

5.28 Our modelling of this property is based on floor plans located on sample leases downloaded from the Land Registry website, and which can be found in Appendix 06. In accordance with the BRE Guidelines, NSL and APSH have been assessed using the plans obtained.

5.29 The technical VSC, NSL and APSH results and NSL contours can be found in Appendix 04. A full set of corresponding window maps can be found in Appendix 05.

Daylight (VSC & NSL)

5.30 A total of 630 windows serving 291 site facing rooms between the 3rd and 11th floors have been included for technical daylight analysis. They comprise a mixture of multi-purpose Living/Kitchen/Dining rooms (LKDs) and bedrooms.

5.31 Of these, 257 rooms and corresponding windows (88.3%) will fully comply with both VSC and NSL daylight criteria and hence are entirely BRE compliant with regards to daylight amenity.

5.32 The remaining 34 rooms (11.7%) are understood to be spread across 18 flats and all experience minor alterations in VSC (sky visibility at the window face) of no more than 25.3%, and hence only just exceed the recommended 20% maximum change. Further, most are fully compliant with regards to NSL criteria, which analyses the penetration of light within the room itself.

Sunlight (APSH)

5.33 A total of 291 site facing rooms oriented within 90 degrees of due South have been included for technical sunlight analysis. All comprise a mixture of LKDs and bedrooms. Note that the BRE suggests that an assessment of loss of sunlight to bedrooms is not typically required, however, we have included for completeness.

5.34 Of these, 285 (98%) will fully comply with APSH and WPSH sunlight criteria and hence are entirely BRE compliant with regards to sunlight amenity.

5.35 The remaining 6 rooms (20%) are all fully compliant with regards to APSH (sunlight throughout the year as a whole) but will experience derogations from WPSH (winter sunlight) guidance. Retained levels of annual sunlight are excellent with all rooms retaining at least 30% APSH compared to the recommended 25% minimum, and retained winter sunlight is still very reasonable for the urban location, with all rooms retaining 4% WPSH compared to the recommended 5%.

Comparison with Consented Scheme

5.36 When compared with the Consented Scheme there are a mixture of very small gains and losses in VSC daylight and APSH sunlight, none of which are material and all of which are unlikely to be perceptible to the rooms' occupants.

Summary

5.37 The overall effect upon the daylight and sunlight amenity to this property may be considered reasonable within the context of: i) the urban location in which the BRE advises that its guidance should be applied flexibly; ii) the current low scale of development on the Site; iii) the minor and isolated level of impact, iv) the fact that there is no material change in daylight and sunlight levels when compared to the extant Planning Consent.

ZENITH STUDENT ACCOMMODATION (PROPERTY 5)

5.38 This property is used as student accommodation and is located to the South East of the Site, on the opposite side of the railway viaduct. Please see Figure 04 for a more exact location. Given its use, we understand the occupants of this building are transitory and not long term residents.

5.39 The BRE Guidelines only reference student accommodation in terms of daylight amenity to any proposed schemes (paragraph C17). No specific guidance is given in respect of impacts on neighbouring student accommodation and the treatment of existing student bedrooms. We have nonetheless included this property for detailed analysis and discussion, although the more transitory nature of its occupants should be borne in mind when weighing up the acceptability of any effect.

5.40 Our modelling of this property is based on comprehensive floor plans downloaded from the Cardiff Planning Portal, and which can be found in Appendix 06. In accordance with the BRE Guidelines, NSL and APSH have been assessed using the plans obtained.

5.41 The technical VSC, NSL and APSH results and NSL contours for these rooms can be found in Appendix 04. A full set of corresponding window maps can be found in Appendix 05.

Daylight (VSC & NSL)

5.42 A total of 537 windows serving 446 site facing rooms have been included for technical daylight analysis. They comprise a mix of student bedrooms, studio apartments and communal kitchens.

5.43 Of these, 283 rooms and corresponding windows (63.5%) will fully comply with both VSC and NSL daylight criteria and hence are entirely BRE compliant with regards to daylight amenity.

5.44 125 rooms (28%) experience minor alterations in either VSC and/or NSL which only just exceed the recommended 20% maximum change.

5.45 The remaining 38 rooms (8.5%) experience larger reductions in either VSC and NSL daylight but which are mostly under 35%, with the exception of a few outliers. These rooms retain VSC in a range of around 12-24%, with those sitting at the lower end of this scale being located on the ground floor where light is naturally more restricted or being served by more than one window, at least one of which is BRE compliant.

Sunlight (APSH)

5.46 A total of 277 site facing rooms oriented within 90 degrees of due South have been included for technical sunlight analysis. Note that a majority comprise student bedrooms and the BRE suggests that an assessment of loss of sunlight to bedrooms is not typically required, however, we have included for completeness.

5.47 Of the total, 263 (95%) will fully comply with APSH sunlight criteria and hence are entirely BRE compliant with regards to sunlight amenity.

5.48 The remaining 14 rooms (5%) experience a mix of minor and moderate derogations from APSH guidance but retained levels sit in a range of 16-24% which is not unreasonable given the location and usage. Most of these rooms are also compliant with regards to WPSH (winter sunlight).

Comparison with Consented Scheme

5.49 When compared with the Consented Scheme there are some small gains and losses in VSC daylight and APSH sunlight, none of which are material. The greatest absolute alteration in VSC daylight is 1.5%, which is unlikely to be perceptible to the room's occupants.

Summary

5.50 The overall effect upon the daylight and sunlight amenity to this property may be considered reasonable within the context of: i) the urban location in which the BRE advises that its guidance should be applied flexibly; ii) the current low scale of development on the Site; iii) the transient (and therefore less sensitive) usage of the rooms being assessed; v) the reasonable retained levels of daylight and sunlight for bedroom usage and v) the fact that there is no material change in daylight and sunlight levels when compared to the extant Planning Consent.

THE COPPER WORKS, 5 CAPITAL QUARTER (PROPERTY 6)

5.51 This 23 storey tower block comprises private apartments above ground level. It is located to the East of the Site, on the opposite side of the railway viaduct. Please see Figure 04 for a more exact location.

5.52 Our modelling of this property is based on comprehensive floor plans downloaded from the Cardiff Planning Portal, and which can be found in Appendix 06. In accordance with the BRE Guidelines, NSL and APSH have been assessed using the plans obtained.

5.53 The technical VSC, NSL and APSH results and NSL contours for these rooms can be found in Appendix 04. A full set of corresponding window maps can be found in Appendix 05.

Daylight (VSC & NSL)

5.54 A total of 250 windows serving 207 site facing rooms have been included for technical daylight analysis. Almost all of these rooms comprise multi-purpose Living/Kitchen/Dining rooms (LKDs) and bedrooms.

5.55 Of these, 141 rooms and corresponding windows (68%) will fully comply with both VSC and NSL daylight criteria and hence are entirely BRE compliant with regards to daylight amenity.

5.56 43 rooms (21%) experience minor alterations in either VSC and/or NSL which only just exceed the recommended 20% maximum change.

5.57 Of the remaining 23 rooms, 17 (8%) breach NSL criteria to a greater extent but are fully compliant with regards to VSC criteria. These rooms are unusually deep (about 9-10m). As stated in the BRE at 2.2.12, *'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.'*

5.58 1 further room (F01, R2) experiences a slightly larger breach of VSC criteria but is fully compliant with regards to NSL criteria.

5.59 This leaves 5 rooms and corresponding windows which breach both daylight tests, at least one breach of which exceeds 30%. However, these types of impacts are again mostly to rooms which are over 5m deep and are very localised. Only one room in this category (F01, R7, of unknown usage) experiences alterations in excess of 40%.

Sunlight (APSH)

5.60 A total of 207 site facing rooms oriented within 90 degrees of due South have been included for technical sunlight analysis. Almost all comprise a mixture of LKDs and bedrooms.

5.61 Of these, 169 (82%) will fully comply with APSH sunlight criteria and hence are entirely BRE compliant with regards to sunlight amenity.

5.62 21 rooms (10%) experience minor derogations from APSH guidance throughout the year which do not exceed 30%.

5.63 The remaining 17 rooms (8%) experience larger alterations, however, will retain some sense of sunlight throughout the year. Some comprise bedrooms which have a lower expectation of natural light. The BRE states at 3.2.3 that "Normally loss of sunlight need not be analysed to kitchens and bedrooms, except for bedrooms that also comprise a living space". However, we have included for completeness.

Comparison with Consented Scheme

5.64 When compared with the Consented Scheme there are some small gains and losses in VSC daylight and APSH sunlight, none of which are material. The greatest absolute alteration in VSC daylight is 0.7%, which is unlikely to be perceptible to the room's occupants.

Summary

5.65 The overall effect upon the daylight and sunlight amenity to this property may be considered reasonable within the context of: i) the urban location in which the BRE advises that its guidance should be applied flexibly; ii) the current low scale of development on the Site; iii) the mostly minor level of effect; iv) the rooms being single aspect and deeper than five metres (thus NSL change may be unavoidable as advised in the BRE Guidelines); and v) the fact that there is no material change in daylight and sunlight levels when compared to the extant Planning Consent.

6 CONCLUSIONS

GIA have undertaken a daylight and sunlight assessment in relation to the Proposed Development at John Street. The technical analysis has been undertaken in accordance with the BRE Guidelines.

6.1 GIA have completed a comprehensive technical analysis of the impact to daylight and sunlight of the John Street Site. This does not include an assessment of overshadowing as we do not understand there to be any relevant areas of outdoor amenity which lie to the North of the Site and which would thus be material for consideration.

6.2 As recommended by the BRE within Appendix F of the Guidelines (setting Alternative Target Values), we have carried out a supplementary assessment of the Proposed Development using the extant Planning Consent as an alternative baseline to ensure that there would be no material change to the consented levels of VSC daylight and APSH sunlight.

6.3 GIA's technical analysis illustrates that upon successful completion of the John Street Development, four of the eight properties assessed would meet the BRE Guidelines, these being 1) The Golden Cross Public House, 2) Edward England Wharf, 3) Radisson Blu Hotel and 4) Cardiff Marriott Hotel. The remaining four properties (Meridian Plaza, Altolusso Apartments, Zenith Student Accommodation and The Copper Works) include windows and/or rooms which not meet the BRE guidance.

6.4 When constructing buildings, alterations in light to adjoining properties are often unavoidable and the numerical guidance given in the BRE document can be treated flexibly in consideration of site specifics.

6.5 It is GIA's opinion that the impacts to the four neighbouring properties which breach guidance is considered to be within the intention and flexible application of the BRE Guidelines by virtue of either i) the isolated nature of the breaches, ii) the architecture of the neighbour which contributes to the issue, iii) the reasonable retained levels of daylight and sunlight, iv) the transient (and therefore less sensitive) usage of the rooms being assessed, v) the site's location and urban context, vi) the current low scale of development on the site, vii) the rooms being single aspect and deeper than five metres (thus NSL change may be unavoidable); and/or viii) the fact that there is no material change in daylight and sunlight levels when compared to the extant Planning Consent.

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