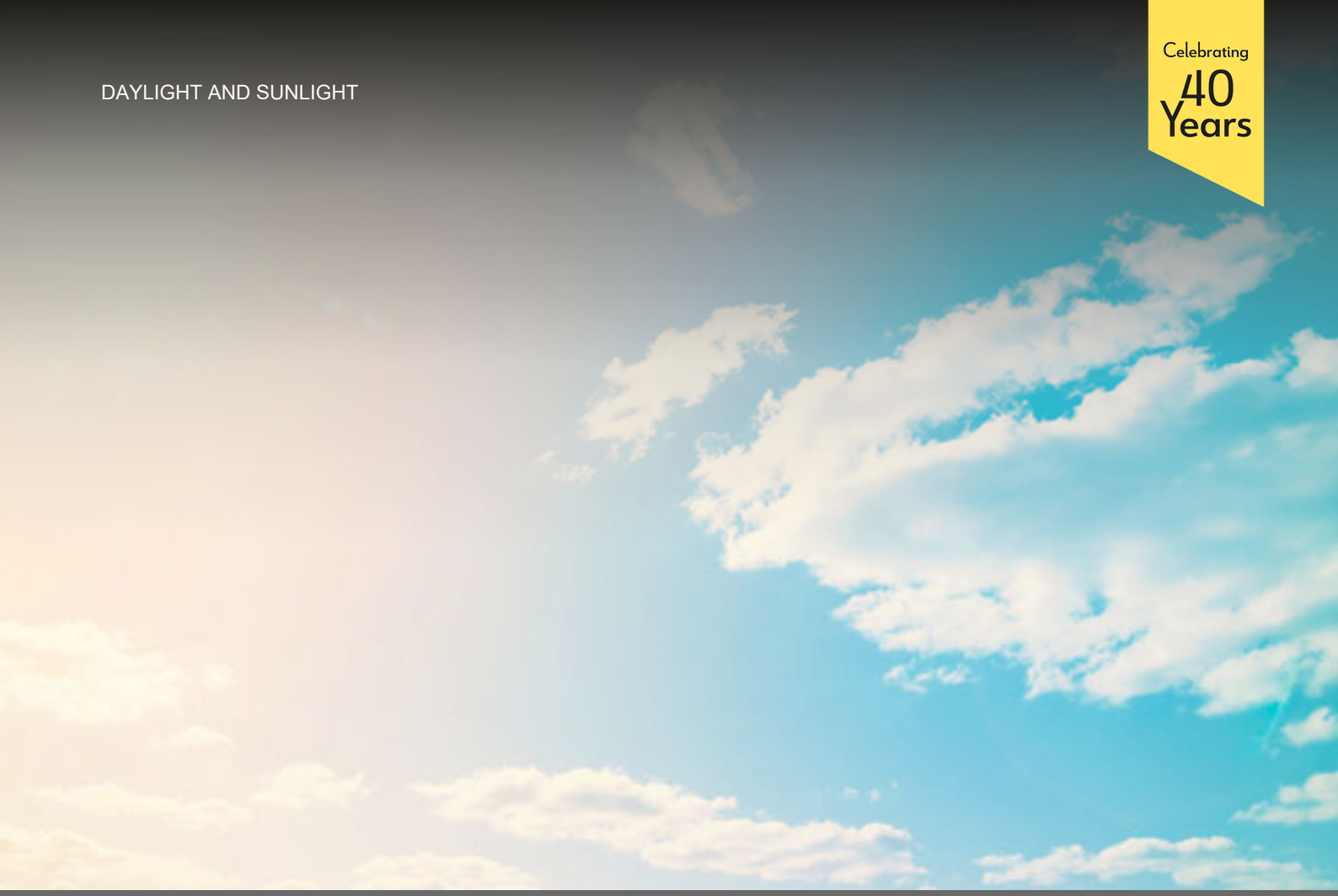
Celebrating 40 Years



29 GREAT JAMES STREET LONDON WC1N 3EY

Daylight and Sunlight Report

08 October 2021

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VERSION HISTORY

Version	Date	Details
1.0	08/10/2021	First issue

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Statements and opinions in this report are expressed on behalf of Delva Patman Redler LLP.

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APPENDICES

1. Introduction

1.1. Delva Patman Redler LLP ("we") have been engaged by the Applicant to assess daylight and sunlight for a planning application for proposed development at 29 Great James Street ("the Site"). We have been instructed to assess the potential effects on neighbouring properties.

1.2. Our daylight and sunlight study has been carried out using the assessment methodology recommended in the Building Research Establishment (BRE) Report 209, *'Site Layout Planning for Daylight and Sunlight: A guide to good practice'* (second edition, 2011) ("the BRE guide") and the Professional Guidance Note, *'Daylighting and sunlighting'* (1st edition, 2012), published by the Royal Institution of Chartered Surveyors.

1.3. The Site is located within the London Borough of Camden The Site is shown outlined in red in the aerial photograph in Figure 1 below and on the location plan in Appendix 2.

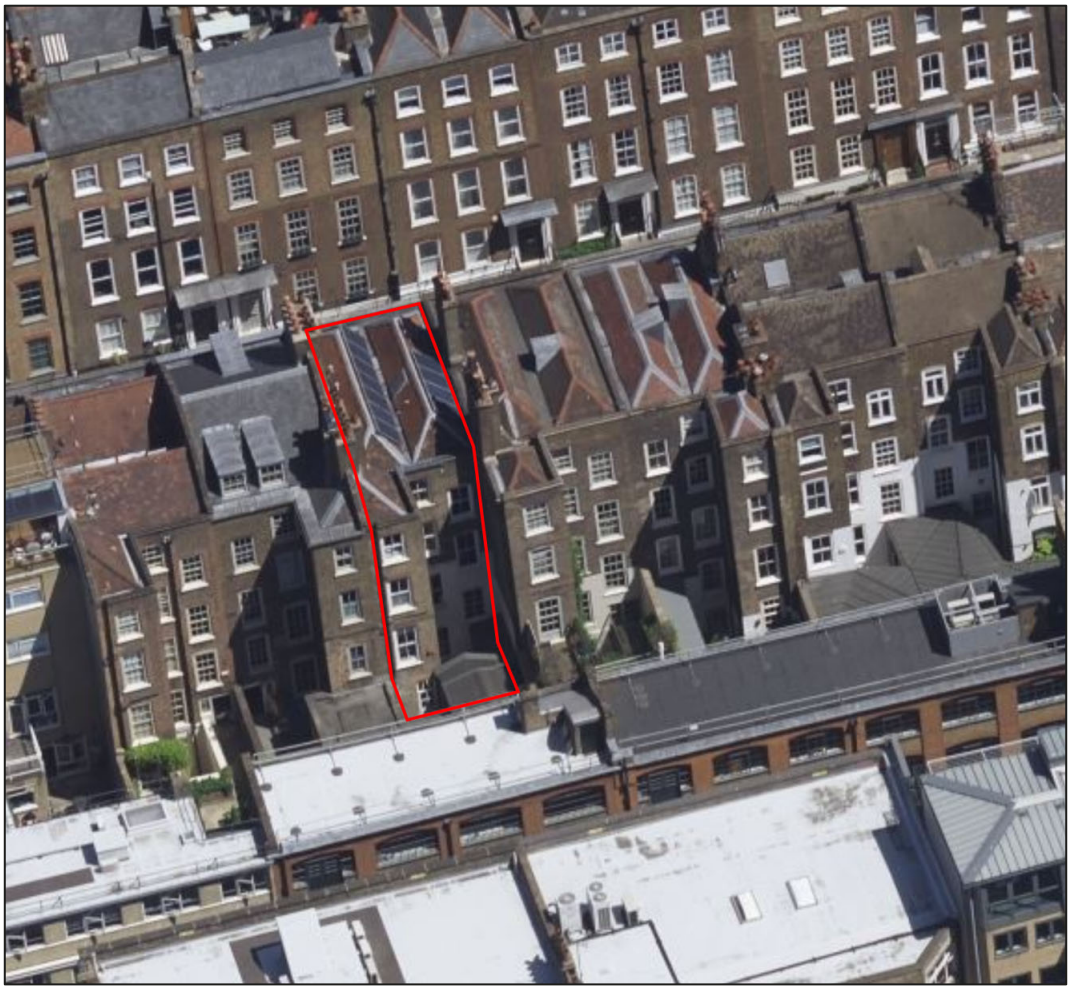

Figure 1 - Aerial photo of the Site and neighbouring buildings (© Bing)

1.4. The proposed development is illustrated in spot-height drawings in Appendix 2. It comprises of removing the current store buildings to the rear and creating a two-storey residential extension.

1.5. This report is accompanied by Appendices explaining the BRE assessment methodology and containing drawings and tabulated results, as listed on the Contents page.

2. Planning policy and guidance

National Planning Policy and Guidance

National Planning Policy Framework (July 2021)

2.1. The National Planning Policy Framework (NPPF) sets out the Government's planning policies and how these should be applied. It provides a framework within which locally prepared plans for housing and other development can be produced. It places an emphasis on sustainable development and delivery of housing.

2.2. Chapter 11 of the NPPF, entitled *"Making effective use of land"*, promotes the effective use of land in meeting the need for homes and other uses. It gives examples such as developing under-utilised land and buildings, especially if this would help to meet identified needs for housing where land supply is constrained and available sites could be used more effectively, and upward extensions to create new homes, where they would be consistent with the prevailing height and form of neighbouring properties and the overall street scene.

2.3. In particular, paragraph 125 of the NPPF states:

> *Area-based character assessments, design guides and codes and masterplans can be used to help ensure that land is used efficiently while also creating beautiful and sustainable places. Where there is an existing or anticipated shortage of land for meeting identified housing needs, it is especially important that planning policies and decisions avoid homes being built at low densities, and ensure that developments make optimal use of the potential of each site. In these circumstances:*
>
> *c) 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).*

BRE Report 209, 'Site Layout Planning for Daylight and Sunlight: A guide to good practice' (2011)

2.4. The leading publication providing national guidance on the provision of daylight and sunlight to new development, and the impacts of development on daylight and sunlight to neighbouring buildings and open spaces, is BRE Report 209, '*Site Layout Planning for Daylight and Sunlight: A guide to good practice*' (second edition, 2011). It is referred to in the development plan documents or supplementary planning documents of most planning authorities.

2.5. The BRE guide states:

> *(Its) main aim is … to help to ensure good conditions in the local environment, considered broadly, with enough sunlight and daylight on or between buildings for good interior and exterior conditions.*
>
> *The guide is intended for building designers and their clients, consultants and planning officials. The advice given is not mandatory and the report should not be seen as a part of planning policy. Its aim is to help rather than constrain the designer.*
>
> *Although it gives numerical guidelines, these should be interpreted flexibly because natural lighting is only one of the many factors in site layout design.*
>
> *In special circumstances the developer or planning authority may wish to use different target values. For example, in a historic city centre, or in an area with modern high rise buildings, a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings… The calculation methods … are entirely flexible in this respect.*

British Standard, BS EN 17037:2019, 'Daylight in buildings'

2.6. British Standard, BS EN 17037:2019, 'Daylight in buildings' provides a standard and methodology by which to assess daylight and sunlight in new buildings. It does not deal with sunlight to open spaces or the effects of development on daylight and sunlight to existing neighbouring buildings.

Regional planning policy and guidance

Camden Local Plan 2017

2.7. The Camden Local Plan sets out the Council's planning policies and replaces the Core Strategy and Development Policies planning documents. The Local Plan will cover the period from 2016-2031.

2.8. Policy A1 Managing the impact of development states:

> *"We will seek to ensure that the amenity of communities, occupiers and neighbours is protected; The factors we will consider include (f) sunlight, daylight and overshadowing;".*

2.9. Paragraph 6.5 specifically relates to sunlight, daylight and overshadowing stating:

> *"Loss of daylight and sunlight can be caused if spaces are overshadowed by development. To assess whether acceptable levels of daylight and sunlight are available to habitable, outdoor amenity and open spaces, the Council will take into account the most recent guidance published by the Building Research Establishment (currently the Building Research Establishment's Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice 2011).*

3. Acceptability of daylight/sunlight levels and impacts

3.1. The assessment of impact on daylight and sunlight amenity is a two-part process[1]: first, as a matter of calculation, whether there would be a material deterioration in conditions by reference to the BRE guidelines; and second, as a matter of judgment, whether that deterioration would be acceptable in the circumstances.

3.2. The first stage can be addressed by applying the BRE assessment methodology and numerical guidelines. The second stage brings into play much wider considerations, such as:

i) Whether the neighbouring building stands unusually close to the site boundary, including the highway, taking more than its fair share of light, such that a greater reduction in light may be unavoidable if one site is not to be prejudiced by how another has been developed. (A 'mirror-image' study can be informative in such cases.)

ii) Whether windows in neighbouring buildings are self-obstructed by overhanging or inset balconies or other projections such as to make relatively larger reductions unavoidable even if there is a modest new obstruction opposite - in effect themselves taking away more than their fair share of light. (A 'without balconies' study can be informative in such cases.)

iii) In historic city centres or areas characterised by modern tall buildings, high density and close proximity, a higher degree of obstruction may be unavoidable if new buildings are to match the height and proportion of existing buildings.

iv) In areas that are designated by planning authorities for substantial growth or providing opportunities for change and sustainable regeneration, the sort of change that would be brought about by the introduction of taller, denser development is to be expected, including reductions in daylight and sunlight levels, closer proximity, loss of outlook, etc.

3.3. Where a higher degree of obstruction may be unavoidable it is appropriate to consider the reasonableness of the retained levels of daylight and sunlight with the proposed development in place.

[1] Rainbird, R (on the application of) v The Council of the London Borough of Tower Hamlets [2018]

4. Assessment methodology and numerical guidelines

4.1. The technical assessments that underpin this daylight and sunlight study have been carried out in accordance with the assessment methodology recommended in the BRE guide.

4.2. The principal assessments and numerical criteria are summarised below. A fuller explanation of the assessment methodology is given at Appendix 1 of this report.

4.3. British Standard, BS EN 17037:2019, *'Daylight in buildings'* provides an alternative method for assessing daylight and sunlight in new buildings; however, it does not cover impacts on existing neighbouring buildings or sunlight to open spaces. The BRE guide does and is the leading publication providing national guidance and is referred to in development plan documents or supplementary planning documents of most planning authorities. We have therefore followed the methodologies in the BRE guide.

Existing neighbouring buildings and amenity spaces

Daylight to neighbouring buildings

4.4. If the head of the new development subtends an angle of more than 25° measured from the centre of the lowest affected window in an existing neighbouring building in a plane perpendicular to the window wall, then a more detailed check is needed to find the loss of skylight.

4.5. The more detailed tests are:

i) vertical sky component (**VSC**) at the centre of each main window, which measures the total amount of skylight available; and

ii) no-sky line (**NSL**) on the working plane inside a room, where room layouts are known, which measures the area that can receive direct skylight and assesses the distribution of daylight around the room.

4.6. Loss of daylight resulting from development will be noticeable if either:

- the VSC at the centre of the window will be reduced to both less than 27% and less than 0.8 times its former value, or
- the area of the working plane in a room that is enclosed by the no-sky line (NSL) and can receive direct skylight will be reduced to less than 0.8 times its former value.

4.7. The VSC test need only be run where room layouts are known, for example from planning or estate agents' records. The author of the BRE Guide, Dr Littlefair, recommends not running the NSL test using estimated layouts because it can give inaccurate findings.[2]

4.8. In respect of these numerical guidelines, the BRE guide states:

> *Note that numerical values given here are purely advisory. Different criteria may be used based on the requirements for daylighting in an area viewed against other site layout constraints.*

4.9. In respect of the windows and rooms to be assessed, the BRE guide states:

> *The guidelines given here are intended for use for rooms in adjoining dwellings where daylight is required, including living rooms, kitchens and bedrooms.*

[2] BRE Client Report dated 5 March 2019 for a review at Reardon and Lowder Houses, Wapping on behalf of London Borough of Tower Hamlets (Planning application reference PA/18/03541/A1)

4.10. In housing, living rooms, dining rooms and kitchens have a greater requirement for daylight. Bedrooms should also be analysed but are less important. Bathrooms, stairwells and other areas without a requirement for daylight need not be assessed.

4.11. For a bay window, the centre window facing directly outwards can be taken as the main window for the VSC calculation. If a room has two or more windows of equal size, the mean of their VSCs may Sunlight to neighbouring buildings

4.12. In designing new development, care should be taken to safeguard the access to sunlight for existing dwellings and any nearby non-domestic buildings where there is a particular requirement for sunlight.

4.13. Obstruction to sunlight may become an issue if part of the development is situated within 90˚ of due south of a main window wall of an existing building, and in the section drawn perpendicular to this existing window wall, the new development subtends an angle greater than 25˚ to the horizontal measured from the centre of the lowest window to a main living room.

4.14. The amount of sunlight reaching a room is measured by calculating the percentage of annual probable sunlight hours (**APSH**) at the centre its windows.

4.15. If, following development, the APSH will be greater than 25%, including at least 5% of APSH in the winter months between 21 September and 21 March, then the room should still receive enough sunlight.

4.16. Sunlight will be adversely affected if the centre of the window will:

- receive less than 25% APSH or less than 5% APSH during the winter months (21 September to 21 March); and
- less than 0.8 times its former sunlight hours during either period; and
- the reduction in sunlight over the whole year will be greater than 4% APSH.

4.17. All main living rooms of dwellings, and conservatories, should be checked if they have a window facing within 90˚of due south.

4.18. When asked to clarify whether bedrooms should be assessed, the author of the BRE guide, Dr Paul Littlefair, wrote:

> *"The BRE Report 'Site layout planning for daylight and sunlight: a guide to good practice' recommends that 'all main living rooms of dwellings, and conservatories, should be checked if they have a window facing within 90° of due south. Kitchens and bedrooms are less important, although care should be taken not to block too much sun.' Normally we would not include loss of sunlight to bedrooms in a detailed analysis; and loss of sunlight to bedrooms would not be treated as a material issue except in bedrooms that also comprised a living space, for example a bed sitting room in an old people's home. Loss of diffuse daylight to bedrooms does need to be taken into account, as stated in paragraph 2.2.2 of the BRE Report."* [3]

4.19. Our assessment has therefore assessed the loss of sunlight to all rooms that have a window facing within 90º of due south.

Sunlight to neighbouring gardens and amenity spaces

4.20. Sunlight should be assessed on the equinox (21 March) to main back gardens of houses, allotments, parks and playing fields, children's playgrounds, outdoor swimming pools, sitting-out areas such as in public squares, and focal points for views, such as a group of monuments or fountains.

4.21. The assessment measures the percentage of each area that can receive at least two hours of sunlight on 21 March - the two-hours sun-on-ground (**SOG**) test.

[3] BRE letter dated 16 December 2014

4.22. If, following development, the area of the garden or other amenity space that can receive two hours of direct sunlight on 21 March is reduced to both less than 50% of its total area and less than 0.8 times its former value, the loss of sunlight is likely to be noticeable and the space will tend to look more heavily overshadowed.

4.23. The assessment normally excludes sunlight at an altitude of 10° or less and ignores fences or walls less than 1.5 metres high, and trees and shrubs. Front gardens, driveways and hard standings for cars need not be assessed.

5. Scope of the assessment

Neighbouring buildings

5.1. The principal recommendations in the BRE guide relate to residential buildings. Its guidelines on daylight are intended for use for rooms in neighbouring dwellings where daylight is required, including living rooms, kitchens and bedrooms (BRE paragraph 2.2.2). Its guidelines on sunlight apply to all main living rooms of neighbouring dwellings and conservatories that have a window facing within 90˚of due south (BRE paragraph 3.2.3).

5.2. Consequently, our assessment has been scoped to include nearby residential accommodation, as is common practice for studies for planning applications, and relevant amenity spaces.

5.3. We identified the properties that are in residential use from a site visit and online research, including the Valuation Office Agency council tax list, local authority planning records, and estate agency websites.

5.4. We have run the BRE daylight and sunlight tests in the existing baseline and proposed development scenarios. This establishes the levels that would be retained in the proposed development condition and the degree to which they change from the existing baseline.

6. Information used in our technical study

6.1. We have undertaken our technical study using a 3D computer model built in AutoCAD and specialist analysis software, which runs the assessments recommended in the BRE guide.

6.2. We compiled our 3D computer model from the following information:

6.2.1. 3D computer model of the existing buildings on the Site and the contextual massing produced from photogrammetry (aerial photography) supplied by AccuCities Ltd, subsequently enhanced by us with the more detailed information listed below

6.2.2. Floor plans for neighbouring buildings, where available

6.2.3. Proposed development: 3D model supplied by Quinn Architects on 27 September 2021 (file name: Proposed Condition)

6.3. To aid accuracy of the assessment and interpretation of the results, we carried out online searches to obtain the floor plans for the neighbouring buildings referred to above, including from online planning application records and general estate agency websites. This is the approach recommended in the Professional Guidance Note, 'Daylighting and sunlighting' (1st edition, 2012), published by the Royal Institution of Chartered Surveyors, which states:

> *As a minimum, and subject to any limitations relating to a client instruction, surveyors should undertake searches of the local authority's planning portal to establish existing or proposed room layouts of neighbouring properties if they are available. This will ensure a robust approach and enable the surveyor to produce reliable information for daylight distribution analysis, or if average daylight factor (ADF) tests are appropriate … Surveyors should also use the internet to search for other relevant information, including estate agent details, which commonly include plans of properties that can also be useful in determining a room layout or use.*

6.4. Our research yielded the information listed in **Table 1** below. The plan ref. refers to the numbering on the location plan at Appendix 2.

***Table 1** - Information on internal layouts of neighbouring properties*

Plan ref.	Neighbouring property	Information used
1	28 Great James Street	Plans from planning consent ref. 2014/3017/L
2	30 Great James Street	Plans from planning consent ref. 2104/6328/L

6.5. Where we found plans for neighbouring properties, we used them to model their rooms. Where we were been unable to find plans, we modelled their rooms based on estimated dimensions, typically adopting a generic 4m-deep room for residential premises, unless the style of building suggested otherwise.

6.6. Our 3D computer model is shown on our spot-height drawings at Appendix 2.

Limitations and assumptions

6.7. In compiling our 3D computer model for our technical study, we have sought to be as accurate as reasonably possible within the scope of our instruction. We have relied upon the information noted above.

6.8. Whilst we have used plans for neighbouring buildings where available, we have typically made reasonable assumptions as to their internal floor levels and wall thicknesses.

6.9. We have used proven and trusted specialist computer software (Waldram Tools for AutoCAD®) to run the calculations recommended in the BRE guide.

6.10. To the best of our knowledge, the information and advice contained in this report is accurate at the date of issue, based on the information provided to or procured by us prior to its production.

7. Baseline condition for neighbouring properties

7.1. We have assessed the impacts of the proposed development relative to the existing baseline condition.

7.2. The existing baseline scenario and the proposed development scenario are shown on our spot-height drawing nos. 21570-SPT-001 respectively at Appendix 2.

7.3. The daylight and sunlight levels in the existing baseline and proposed development conditions are shown in the results tables Appendix 3.

7.4. The levels in the proposed scenario are then compared with those in the baseline scenario so that the loss of natural light can be quantified and compared with the BRE numerical guidelines.

7.5. Window maps for the assessed buildings are attached at Appendix 2.

8. Effects of the proposed development on neighbouring properties

8.1. We assessed the effects of the proposed development on the following properties:

- 28 Great James Street
- 30 Great James Street

Daylight to neighbouring properties

VSC and NSL

8.2. The results of the VSC and NSL analyses of the neighbouring properties are tabulated in **Error! Reference source not found.** and summarised in Table 2 and Table 3 below.

Table 2 - Number of rooms experiencing VSC effects as a result of the proposed development

Address	Total number of windows tested	Number of windows meeting VSC guidelines	Number of windows with impacts beyond VSC guidelines
30 Great James Street	15	15	0
28 Great James Street	12	12	0
Total	**27**	**27**	**0**

Table 3 - Number of rooms experiencing NSL effects as a result of the proposed development

Address	Total number of rooms tested	Number of rooms meeting NSL guidelines	Number of rooms with impacts beyond NSL guidelines
30 Great James Street	12	12	0
28 Great James Street	11	11	0
Total	**23**	**23**	**0**

8.3. Of the 27 habitable windows assessed in the 2 neighbouring properties, all 27 (100%) would satisfy the VSC guidelines and all 23 rooms (100%) would satisfy with the NSL guidelines.

Sunlight to neighbouring properties

8.4. The results of the annual and winter sunlight analyses are tabulated in Appendix B and summarised Table 4 below.

Table 4 – Number of rooms experiencing APSH effects as a result of the proposed development

Address	Total number of rooms tested	Number of windows meeting APSH guidelines	Number of windows with impacts beyond APSH guidelines
30 Great James Street	12	12	0
28 Great James Street	11	11	0
Total	**23**	**23**	**0**

8.5. Table 4 shows that of the 23 windows assessed in 2 neighbouring properties, all 23 (100%) would satisfy the BRE guidelines for both annual and winter APSH.

Sunlight to gardens and amenity spaces

8.6. The results of the two-hour sun-on-ground analyses are shown on the relevant drawing in Appendix 4. In summary, all neighbouring gardens/amenity spaces would satisfy the BRE guidelines for sun on ground.

9. Conclusion

9.1. The Site is in an urban location on the west side of Great James Street with residential properties located directly to the east and west. The properties directly to the rear are commercial.

9.2. We have assessed the potential effects of the proposed development on daylight and sunlight to surrounding residential properties and amenity spaces.

9.3. We ran our assessments using methodologies recommended in the BRE guide.

9.4. The advice contained in the BRE guide is not mandatory and its numerical guidelines should be interpreted flexibly.

9.5. The daylight and sunlight results indicate that all neighbouring habitable windows and rooms will fully comply with the BRE recommendations.

9.6. The overshadowing assessment shows that all neighbouring amenity areas will comply with the BRE recommendations.

9.7. Overall, the proposed rear extension will only have a negligible effect only the daylight, sunlight and overshadowing to the neighbouring properties and will satisfy the BRE guidelines.

9.8. In conclusion, it is submitted that the layout of the proposed development is consistent with the Council's local planning policy on daylight and sunlight, particularly having regard to paragraph 123(c) of the National Planning Policy Framework and paragraphs 1.3.45 and 1.3.46 of the Mayor of London's Housing SPG.

Delva Patman Redler LLP
Chartered Surveyors

Appendix 1

Assessment methodology and glossary

1. This appendix explains the daylight and sunlight assessment methodology recommended in BRE Report 209, *'Site Layout Planning for Daylight and Sunlight: A guide to good practice'* (2011) and provides a glossary of the terminology used.

Assessment methodology

Daylight and sunlight to neighbouring buildings and amenity spaces

Daylight to neighbouring buildings

2. The BRE guide states:

> *In designing a new development or extension to a building, it is important to safeguard the daylight to nearby buildings.*
>
> *The guidelines given here are intended for use for 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.*

3. To quantify the impact of development on daylight to a building, the BRE guide recommends two tests:
   a) calculating the vertical sky component (**VSC**) at the centre of each main window on the outside plane of the window wall, to measure the total amount of skylight available to the window; and
   b) plotting the no-sky line (**NSL**) on the working plane inside a room, where layouts are known, and measuring the area that can receive direct skylight, to assess the distribution of daylight around the room.

4. The VSC measures the skylight available at the window. The guide states:

> *Any reduction in the total amount of skylight can be calculated by finding the VSC at the centre of each main window … For a bay window, the centre window facing directly outwards can be taken as the main window. If a room has two or more windows of equal size, the mean of their VSCs may be taken. The reference point is in the external plane of the window wall. Windows to bathrooms, toilets, storerooms, circulation areas and garages need not be analysed.*

5. The NSL test is described thus:

> *Where room layouts are known, the impact on the daylighting distribution in the existing building can be found by plotting the 'no sky line' in each of the main rooms. For houses this would include living rooms, dining rooms and kitchens; bedrooms should also be analysed although they are less important. In non-domestic buildings each main room where daylight is expected should be investigated. The no sky line divides points on the working plane which can and cannot see the sky.*

6. If, following development, the VSC to a neighbouring window will be greater than 27% then enough skylight should still be reaching the window. Any reduction below this level should be kept to a minimum. If the VSC will be both less than 27% and less than 0.8 times its former value, occupants of the existing building will notice the reduction in the amount of skylight. The area lit by the window is likely to appear more gloomy and electric lighting will be needed more of the time.

7. If, following development, the no-sky line moves so that the area of the existing room that can receive direct skylight will be reduced to less than 0.8 times its former value, this will be noticeable to the

occupants and more of the room will appear poorly lit. This is also true if the no-sky line encroaches on key areas like kitchen sinks and worktops.

Sunlight to neighbouring buildings

8. The BRE guide states:

> *To assess loss of sunlight to an existing building, it is suggested that all main living rooms of dwellings, and conservatories, should be checked if they have a window facing within 90˚of due south. Kitchens and bedrooms are less important, although care should be taken not to block too much sun.*
>
> *A point at the centre of the window on the outside face of the window wall may be taken [as the calculation point].*

9. To quantify the available sunlight, the BRE guide advises measuring the percentage of annual probable sunlight hours (**APSH**), which is defined as follows:

> *'probable sunlight hours' means the total number of hours in the year that the sun is expected to shine on unobstructed ground, allowing for average levels of cloudiness for the location in question.*

10. The assessment calculates the percentage of APSH over the whole year (annual sunlight) and between 21 September and 21 March (winter sunlight).

11. If, following development, the APSH to a neighbouring window will be greater than 25%, including at least 5% of APSH in the winter months between 21 September and 21 March, then the room should still receive enough sunlight. Any reduction in sunlight access below this level should be kept to a minimum.

12. If the available sunlight hours will be both less than the above amounts and less than 0.8 times their former value, either over the whole year or just in the winter months, then the occupants of the building will notice the loss of sunlight; if the overall annual loss is greater than 4% of APSH, the room may appear colder and less cheerful and pleasant.

Sunlight to neighbouring gardens and amenity spaces

13. Sunlight should be assessed on the equinox (21 March) to main back gardens of houses, allotments, parks and playing fields, children's playgrounds, outdoor swimming pools, sitting-out areas, such as in public squares and focal points for views, such as a group of monuments or fountains.

14. The assessment measures the percentage of each area that can receive at least two hours of sunlight on 21 March - the 'two-hours sun-on-ground' (**SOG**) test.

15. It is recommended that at least half of the area of a garden or amenity space should be able to receive at least two hours of sunlight on 21 March. If such a space is already heavily obstructed, then any further loss of sunlight should be kept to a minimum. In this poorly sunlit case, if, following development, the area which can receive two hours of direct sunlight on 21 March is reduced to less than 0.8 times its former size, this loss of sunlight is likely to be noticeable. In such cases the garden or amenity area will tend to look more heavily overshadowed.

16. Sunlight at an altitude of 10° or less is ignored, because it is likely to be blocked by planting, and fences or walls less than 1.5 metres high can also be ignored. Front gardens, driveways and hard standing for cars are usually omitted. Normally, trees and shrubs need not be included, partly because their shapes are almost impossible to predict, and partly because the dappled shade of a tree is more pleasant than a deep shadow of a building.

17. Where a large building is proposed which may affect a number of gardens or open spaces, the guide advises it can be illustrative to plot shadow plans showing the location of shadows at different times of day and year. The equinox (21 March) is the best assessment date as it shows the average level of shadowing. Mid-summer (21 June) is an optional addition date when there would be greater sunlight availability and reduced overshadowing.

Glossary of terms

18. The daylight and sunlight terminology used in our report is explained below.

Term	Meaning
Annual probable sunlight hours (**APSH**)	The long-term average of the total number of hours during a year in which direct sunlight is expected to shine on the unobstructed ground, allowing for average levels of cloudiness for the location in question.
Average daylight factor (**ADF**)	Ratio of total daylight flux incident on the working plane to the area of the working plane, expressed as a percentage of the outdoor illuminance on a horizontal plane due to an unobstructed CIE standard overcast sky. Thus a 1% ADF would mean that the average indoor illuminance would be one hundredth the outdoor unobstructed illuminance.
Daylight	Combined skylight and sunlight.
No-sky line (**NSL**)	The outline on the working plane of the area from which no sky can be seen. It divides points on the working plane which can and cannot see the sky.
Obstruction angle	The angular altitude of the top of an obstruction above the horizontal, measured from a reference point in a vertical plane in a section perpendicular to the vertical plane.
Room depth criterion (**RDC**)	The limiting depth of a room for good daylighting, where it is lit from one side only. The limiting depth is a factor of the window head height above floor level, the room width, and the average reflectance of surfaces in the rear half of the room (away from the window). Sunlight below an angle of
Sky factor	Ratio of the parts of illuminance at a point on a given plane that would be received directly through unglazed openings from a sky of uniform luminance, to illuminance on a horizontal plane due to an unobstructed hemisphere of this sky. The sky factor does not include reflected light, either from outdoor or indoor surfaces.
Sun on ground (**SOG**)	The measure of sunlight potential to gardens and amenity spaces. It is measured in hours on the spring equinox (21 March) at a point on the ground accounting for the latitude of the site location. Sunlight below an altitude of 10° is usually discounted as it is likely to be prevented from reaching the ground by fences, plants or other low-level obstructions.
Vertical sky component (**VSC**)	The amount of daylight falling on a vertical wall or window. It is the ratio of that part of illuminance, at a point on a given vertical plane (e.g. window), that is received directly from a CIE standard overcast sky, to simultaneous illuminance on a horizontal plane due to an unobstructed hemisphere of this sky. The VSC does not include reflected light, either from the ground or from other buildings. The ratio is usually expressed as a percentage. The maximum value is almost 40% for a completely unobstructed vertical wall.
Working plane	Horizontal, vertical or inclined plane in which a visual task lies. Normally the working plane may be taken to be horizontal, 0.85 m above the floor in housing.

Appendix 2

Location drawings

Site location plan
Spot-height drawings
Window maps

NO DIMENSIONS TO BE SCALED FROM THIS DRAWING

KEY:

Existing	Consented
Proposed	Cumulative
Neighboring Property	Cutback Envelope

SOURCE DATA:

Context model:
Accucities:
Dwg No: TQ3081-NE-HD-SOLID

Existing:
Mobile CAD Surveying:
Dwg No: 3167 - 29 Great James Street-WC1N 3EY (Issue Drawing 2021.08.23)

Proposed:
Quinn Architects:
Dwg No: Proposed condition - 27.09.2021

NOTES:

REV	Description	Drawn	Date

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Chartered Surveyors

London 020 7936 3668
Liverpool 0151 242 0980
Bristol 0117 450 9703

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info@delvapatmanredler.co.uk

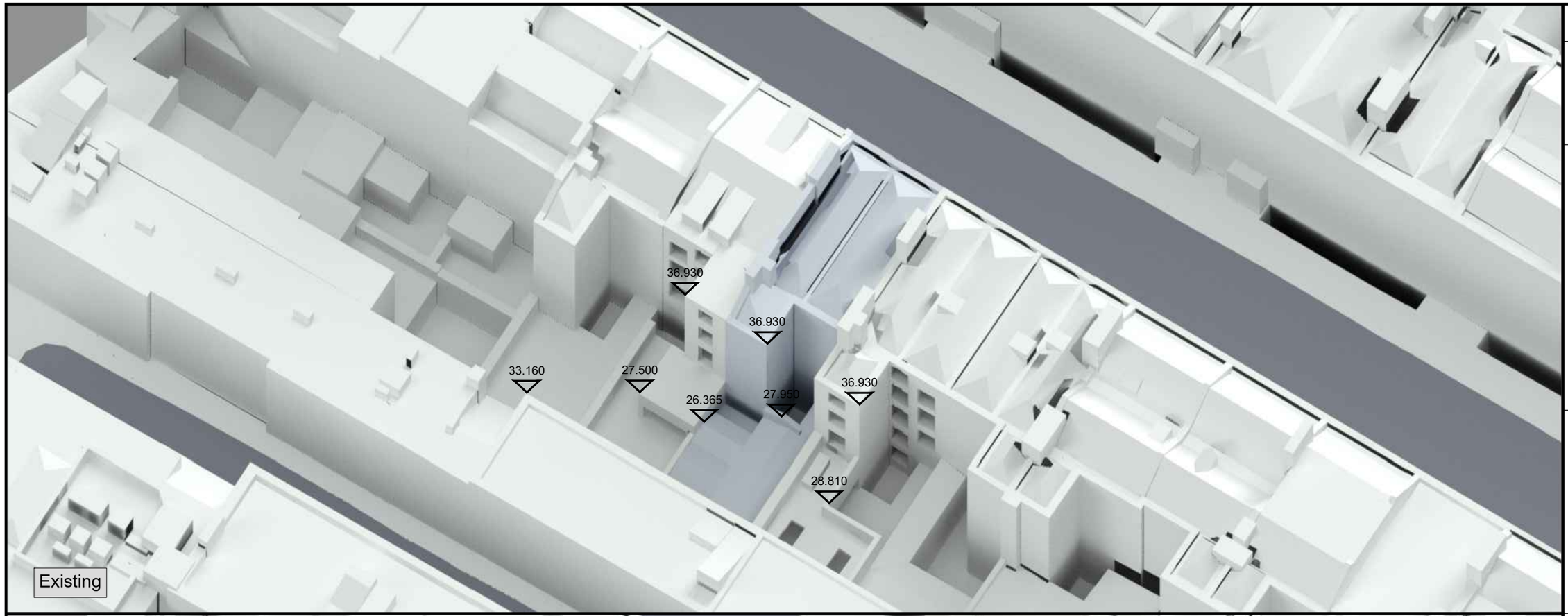
TITLE:

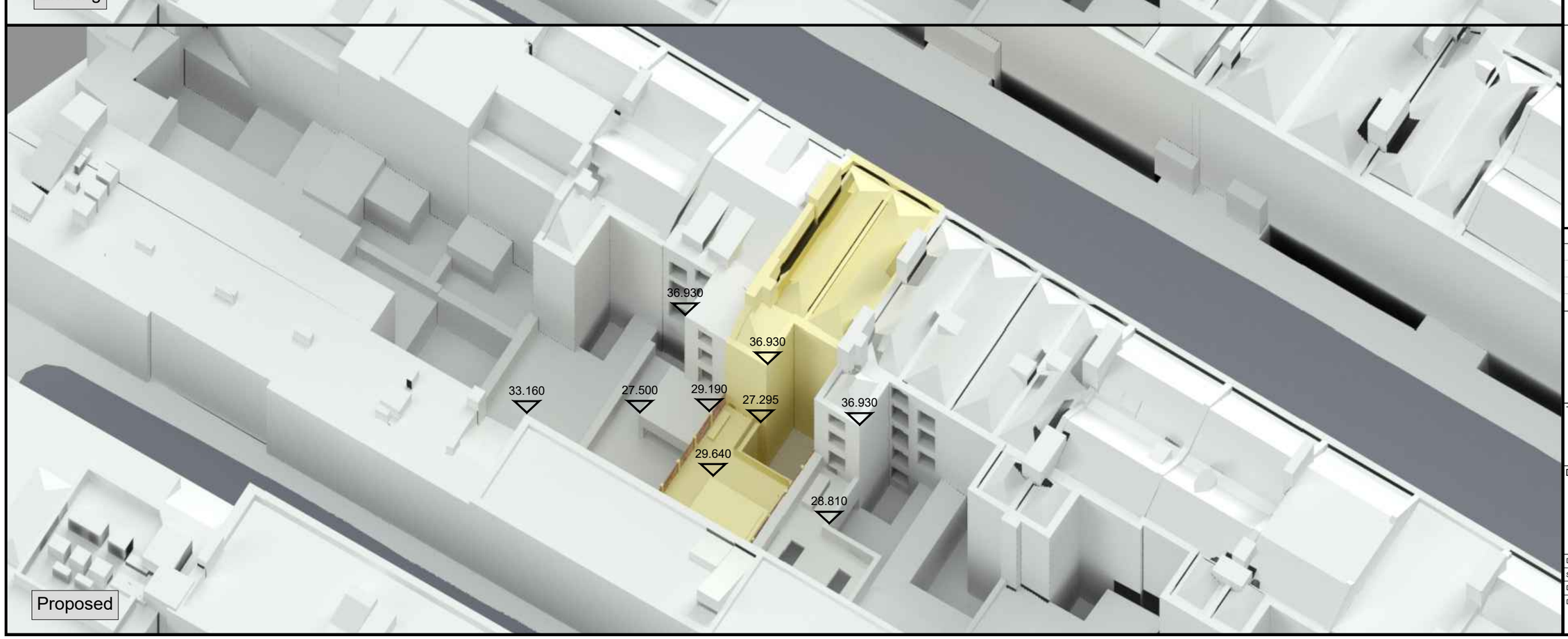
29 GREAT JAMES STREET
LONDON
WC1N 3EY

DRAWING:

WINDOW LOCATION DRAWING

DRAWN: CH	JOB NBR: 21570
SCALE: NTS	
DATE: 08.10.2021	
DWG NO: LOC-001	REV: -





NO DIMENSIONS TO BE SCALED FROM THIS DRAWING

KEY:

- Existing
- Consented
- Proposed
- Cumulative
- Neighboring Property
- Cutback Envelope

SOURCE DATA:

Context model:
Accucities:
Dwg No: TQ3081-NE-HD-SOLID

Existing:
Mobile CAD Surveying:
Dwg No: 3167 - 29 Great James Street-WC1N 3EY (Issue Drawing 2021.08.23)

Proposed:
Quinn Architects:
Dwg No: Proposed condition - 27.09.2021

NOTES:

REV	Description	Drawn	Date

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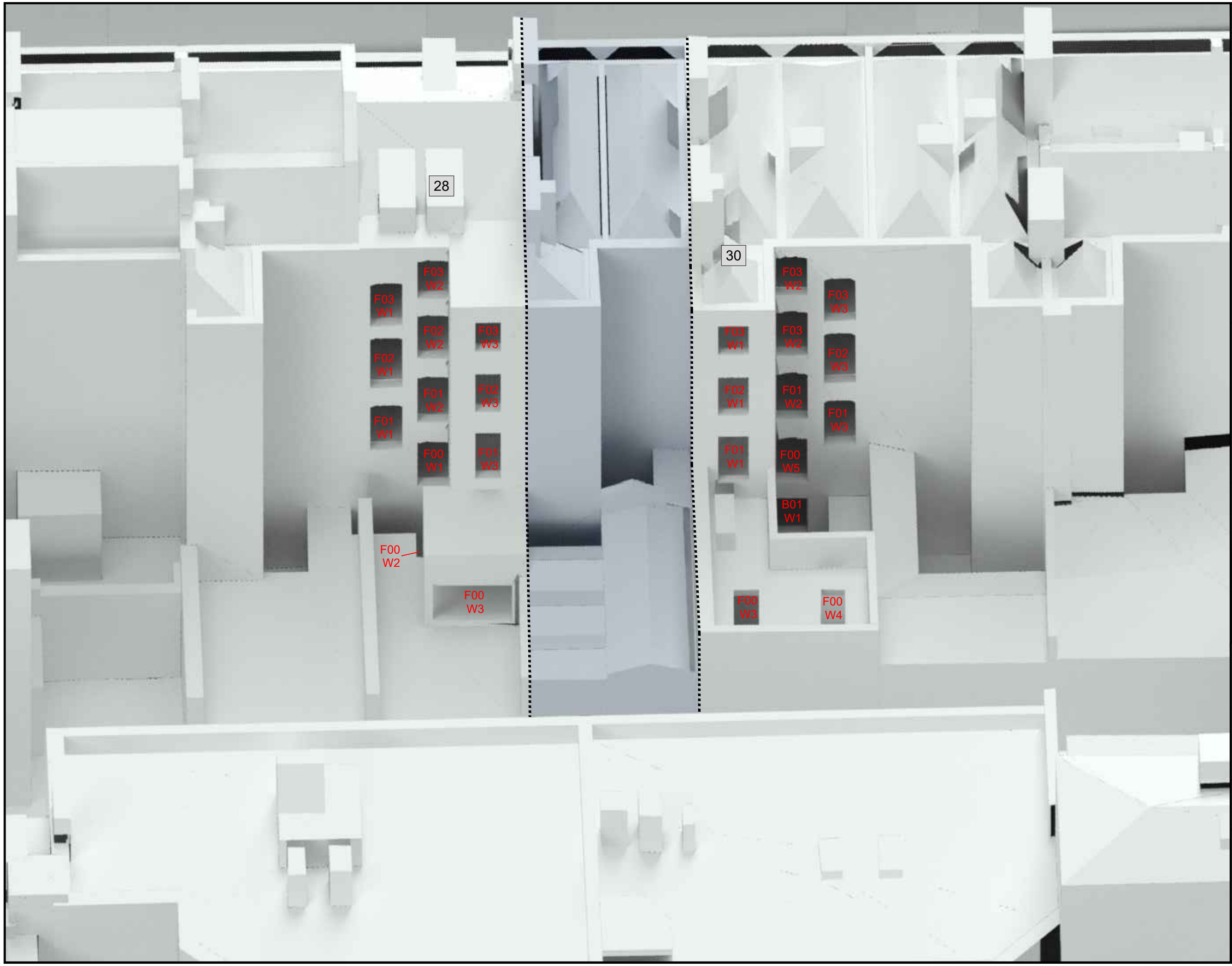
TITLE:
29 GREAT JAMES STREET
LONDON
WC1N 3EY

DRAWING:
SPOT HEIGHT DRAWING

DRAWN: CH	JOB NBR: 21570
SCALE: NTS	
DATE: 08.10.2021	
DWG NO: SPT-001	REV: -



NO DIMENSIONS TO BE SCALED FROM THIS DRAWING

KEY:

- Existing
- Consented
- Proposed
- Cumulative
- Neighboring Property
- Cutback Envelope

SOURCE DATA:

Context model:
Accucities:
Dwg No: TQ3081-NE-HD-SOLID

Existing:
Mobile CAD Surveying:
Dwg No: 3167 - 29 Great James Street-WC1N 3EY (Issue Drawing 2021.08.23)

Proposed:
Quinn Architects:
Dwg No: Proposed condition - 27.09.2021

NOTES:

REV	Description	Drawn	Date

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TITLE:

29 GREAT JAMES STREET
LONDON
WC1N 3EY

DRAWING:

WINDOW LOCATION DRAWING

DRAWN: CH	JOB NBR: 21570
SCALE: NTS	
DATE: 08.10.2021	
DWG NO: WP-001	REV: -

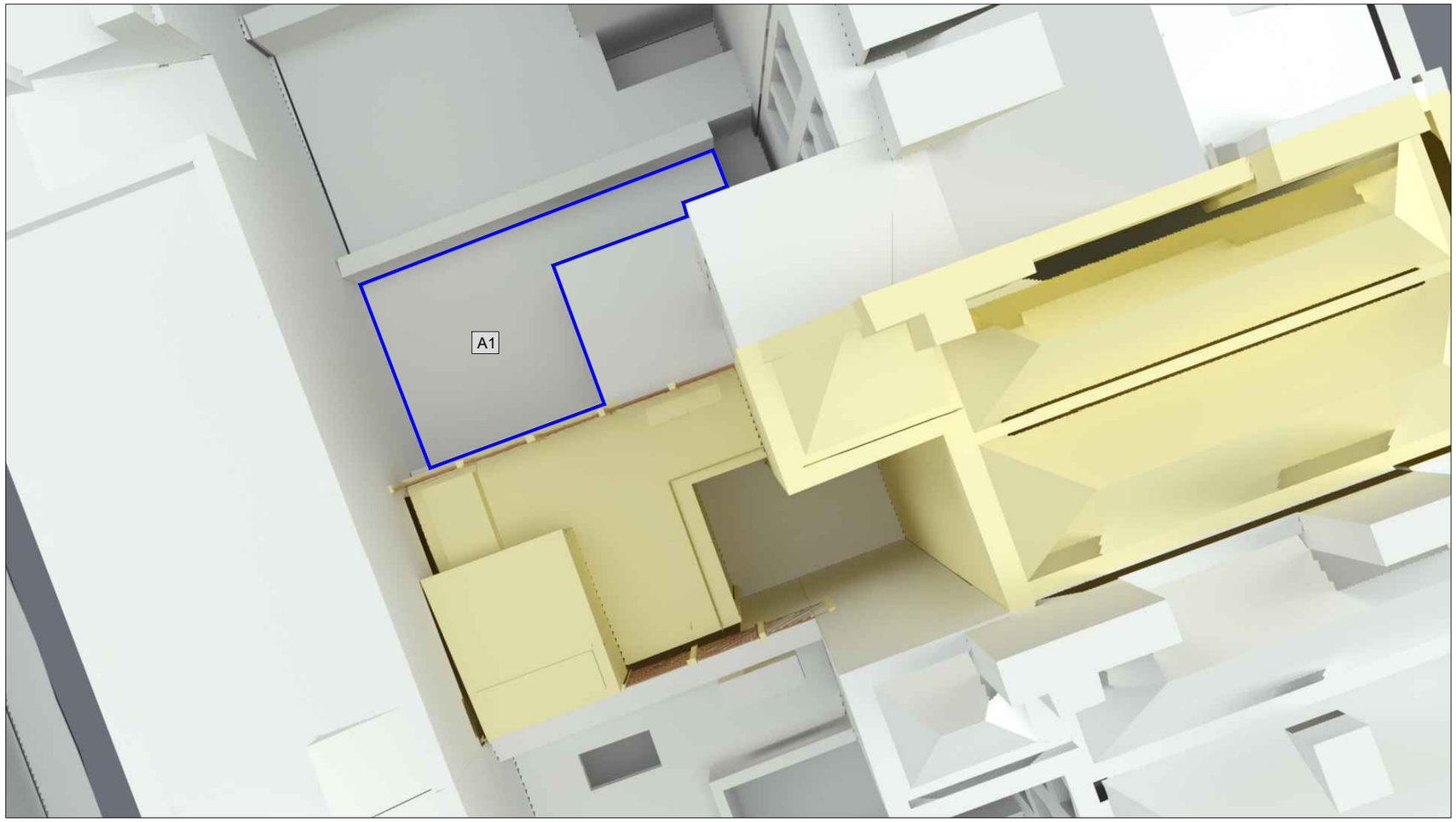
Appendix 3

Daylight and sunlight results for neighbouring properties

Property, room & window attributes				VSC				NSL				APSH (room)						
Floor	Room	Room use	Window Ref./Orientation	Exis. (% VSC)	Prop. (% VSC)	Loss (% VSC)	Pro./Ex. ratio	Exis. (% rm)	Prop. (% rm)	Loss (m^2)	Pro./Ex. ratio	Annual (%APSH) Exis.	Prop.	Loss	Pro./Ex	Winter (%APSH) Exis.	Prop.	Pro./Ex
30 Great James Street																		
B01	R1	Bedroom	W1 ←	6.3	6.3	0.0	1.00	50%	50%	0.00	1.00	10	10	0	1.00	0	0	N/A
F00	R1	Kitchen	W1 ↓	8.9	8.9	0.0	1.00											
		Kitchen	W2 →	3.0	3.0	0.0	1.00											
		Kitchen	W3 Hz	46.7	46.6	N/A	N/A											
		Kitchen	W4 Hz	47.0	46.7	N/A	N/A	100%	100%	0.00	1.00	21	21	0	1.00	4	4	1.00
	R2	Dining Room	W5 ←	9.8	9.8	0.0	1.00	78%	78%	0.00	1.00	16	16	0	1.00	0	0	N/A
F01	R1	Study	W1 ←	24.2	24.2	0.0	1.00	99%	99%	0.00	1.00	23	23	0	1.00	1	1	1.00
	R2	Living Room	W2 ←	13.8	13.8	0.0	1.00	82%	82%	0.00	1.00	21	21	0	1.00	1	1	1.00
	R3	Stairwell	W3 ←	16.2	16.2	0.0	1.00	89%	89%	0.00	1.00	23	23	0	1.00	1	1	1.00
F02	R1	Shower-WC	W1 ←	30.1	30.1	N/A	N/A	99%	99%	0.00	1.00	30	30	N/A	N/A	2	2	1.00
	R2	Bedroom	W2 ←	16.5	16.5	0.0	1.00	82%	82%	0.00	1.00	25	25	N/A	N/A	3	3	1.00
	R3	Stairwell	W3 ←	20.8	20.8	0.0	1.00	99%	99%	0.00	1.00	28	28	N/A	N/A	2	2	1.00
F03	R1	Shower-WC	W1 ←	33.0	33.0	N/A	N/A	99%	99%	0.00	1.00	32	32	N/A	N/A	4	4	1.00
	R2	Bedroom	W2 ←	21.1	21.1	0.0	1.00	83%	83%	0.00	1.00	26	26	N/A	N/A	4	4	1.00
	R3	Stairwell	W3 ←	25.8	25.8	0.0	1.00	99%	99%	0.00	1.00	31	31	N/A	N/A	4	4	1.00
28 Great James Street																		
F00	R1	Kitchen	W1 ←	11.4	11.4	0.0	1.00	77%	77%	0.00	1.00	5	5	0	1.00	0	0	N/A
	R2	Living Room	W2 ↑	12.3	12.3	0.0	1.00											
		Living Room	W3 ←	8.1	6.9	1.2	0.86	100%	100%	0.00	1.00	6	3	3	N/A*	0	0	N/A
F01	R1	Stairwell	W1 ←	18.0	18.0	0.0	1.00	93%	93%	0.00	1.00	20	20	0	1.00	1	1	1.00
	R2	Living Room	W2 ←	16.0	16.0	0.0	1.00	96%	96%	0.00	1.00	10	10	0	1.00	0	0	N/A
	R3	Bathroom	W3 ←	25.4	25.4	0.0	1.00	98%	98%	0.00	1.00	24	24	0	1.00	1	1	1.00
F02	R1	Stairwell	W1 ←	23.2	23.2	0.0	1.00	99%	99%	0.00	1.00	27	27	N/A	N/A	3	3	1.00
	R2	Bedroom	W2 ←	19.3	19.3	0.0	1.00	97%	97%	0.00	1.00	15	15	0	1.00	1	1	1.00
	R3	Bathroom	W3 ←	31.2	31.2	N/A	N/A	98%	98%	0.00	1.00	33	33	N/A	N/A	4	4	1.00
F03	R1	Stairwell	W1 ←	28.3	28.3	N/A	N/A	99%	99%	0.00	1.00	32	32	N/A	N/A	4	4	1.00
	R2	Bedroom	W2 ←	24.2	24.2	0.0	1.00	98%	98%	0.00	1.00	20	20	0	1.00	1	1	1.00
	R3	Bathroom	W3 ←	33.9	33.9	N/A	N/A	98%	98%	0.00	1.00	34	34	N/A	N/A	5	5	N/A

Appendix 4

Sun-on-ground results for neighbouring amenity areas



Amenity Area (m²)		BRE Recommendations (At least 50% of Amenity Area)	Existing Area	Existing %age of Area	Proposed Area	Proposed %age of Area	%age Change	Condition
B1\F00\A1	33.75	16.87	0.00	0%	0.00	0%	0%	Pass
Total	33.75	16.87	0.00	0%	0.00	0%	0%	Pass

NO DIMENSIONS TO BE SCALED FROM THIS DRAWING

KEY:

Overshadowing:

Existing 2-Hr Sunlit Area

Proposed 2-Hr Sunlit Area

A02 Amenity Area Number

SOURCE DATA:

Context model:
Accucities:
Dwg No: TQ3081-NE-HD-SOLID

Existing:
Mobile CAD Surveying:
Dwg No: 3167 - 29 Great James Street-WC1N 3EY (Issue Drawing 2021.08.23)

Proposed:
Quinn Architects:
Dwg No: Proposed condition - 27.09.2021

NOTES:

REV	Description	Drawn	Date

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TITLE:

29 GREAT JAMES STREET
LONDON
WC1N 3EY

DRAWING:

Sun-On-Ground Assessment

DRAWN: CH
SCALE: NTS
DATE: 08.10.2021

JOB NBR: 21570

DWG NO: SHD-001

REV: -