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Daylight and Sunlight Amenity Impact Assessment Report

Proposed Development
27-33 King Street West and The Carriage Works
Manchester
M3 2PN

Prepared for: Property Alliance Group

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1. Executive Summary

- 1.1.1 Property Alliance Group has developed a proposal for the redevelopment of 27-33 King Street West and The Carriage Works on Garden Lane / St Mary's Parsonage in Manchester City Centre.
- 1.1.2 Gray Scanlan Hill is appointed to evaluate the daylight and sunlight amenity impact of the Proposed Development on the surrounding built environment.
- 1.1.3 This Report confirms our assessment methodology, findings and opinions.
- 1.1.4 We have used the provisions set out in the Building Research Establishment ("BRE") design guidance *Site Layout Planning for Daylight & Sunlight: A Guide to Good Practice*, which is recognised as the industry standard, technically robust, methodology for appraising daylight and sunlight amenity impact in the built environment.
- 1.1.5 The BRE Guidance primarily seeks to promote the daylight and sunlight impact assessment of neighbouring buildings of residential use; it highlights the consideration of daylight and sunlight to living rooms and daylight to bedrooms and family kitchens.
- 1.1.6 This report assesses the impact the Proposed Development will have on the daylight and sunlight amenity of 65 Bridge Street and the outside seating area bound by Bridge Street and King Street West.
- 1.1.7 The provisions / numerical targets of the BRE Guidance are not mandatory, and they should be applied flexibly for development of sites within City Centres, or commercially influenced areas where greater density is sought / encouraged by planning policy. A point acknowledged by the NPPF.
- 1.1.8 The BRE Guidance promotes the setting of alternative target values for use in such areas where mixed or high-density exists, such as within City Centres.
- 1.1.9 The Site and its immediate surroundings are located within Manchester City Centre. The City Centre location and high density massing in the immediate vicinity justifies the flexible application of the BRE Guidance and the setting of alternative targets.

Daylight Amenity Impact

- 1.1.10 The Proposed Development will have an impact on daylight amenity of 65 Bridge Street that is considered to be appropriate and balanced, given the City Centre location of the Site and the mixed density of buildings in the immediate vicinity of the Site.
- 1.1.11 Despite some measured reductions in Vertical Sky Component ("VSC") levels, the majority of windows of 65 Bridge Street (60%) would retain VSC values that are in excess of 0.8x baseline values, accepted by the BRE on the grounds that the reduction is unlikely to be noticed by the room occupants.
- 1.1.12 A minority of 65 Bridge Street's windows (40%) would experience a reduction in VSC that may be noticeable to room occupants. Notwithstanding, VSC values of these windows will remain at least 0.74x baseline values, and in this regard amount to no more than a low magnitude of change.
- 1.1.13 The rooms served by these windows would pass the BRE's 'NSL' test, as would all other habitable rooms of 65 Bridge Street. Reductions in daylight distribution within the rooms appraised is negligible and unlikely to be noticeable to room occupants.
- 1.1.14 Impacts on the daylight amenity of 65 Bridge Street is therefore considered to be balanced and appropriate given the City Centre location of the Site and low magnitude of change.

Sunlight Amenity Impact

- 1.1.15 The Proposed Development is located to the north of the 65 Bridge Street. On the basis that sunlight is received from the south, 65 Bridge Street does not receive direct sunlight over the Site. Accordingly, and the massing of the Proposed Development will have no influence or impact on the sunlight amenity of this neighbouring building.
- 1.1.16 The Proposed Development is also located to the north of the paved area of public realm situated between King Street West, St Marys Parsonage and Bridge Street. Again, on this basis, the Proposed Development will have no influence or impact on the extent to which this external amenity space receives direct sunlight.

2. Introduction

2.1 Background and Instructions

- 2.1.1 Property Alliance Group has developed a proposal for the redevelopment of 27-33 King Street West and The Carriage Works on Garden Lane / St Mary's Parsonage in Manchester City Centre.
- 2.1.2 Gray Scanlan Hill is appointed to evaluate the daylight and sunlight amenity impact of the Proposed Development on those key parts of the surrounding built environment.
- 2.1.3 This Report confirms our assessment methodology, findings and opinions.

2.2 Scope of this Report

- 2.2.1 For reasons explained elsewhere in this Report, our appraisal is based on the provisions of the Building Research Establishment's ("BRE") *Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice*. The BRE Guidance provides an objective means for evaluating daylight and sunlight amenity impacts in the built environment.
- 2.2.2 For reasons that will become apparent as this Report progresses, the Site facing windows of the habitable rooms of 65 Bridge Street are identified as key receptors and have been daylight and sunlight amenity impact appraised. The upper floors of this neighbouring building were, at the date of our inspection, undergoing conversion to residential use.
- 2.2.3 For completeness, we also acknowledge that an area of public realm, located between King Street West and Bridge Street, is an external amenity space in the vicinity of the Site worthy of sunlight amenity impact review.
- 2.2.4 We have undertaken a daylight and sunlight technical analysis and have measured, using computerised 3D massing simulations of the Site and its surroundings and specialist computer software, the amount of daylight and/or sunlight that is available to the abovementioned receptors, both as existing / baseline and as proposed.

2.3 Professional Experience

- 2.3.1 This appraisal has been overseen by Mike Scanlan, who is a Director at Gray Scanlan Hill. He has, over the course of the last 18 years, specialised in advising and representing his Clients on various third-party development issues, including rights of light (common law), daylight and sunlight and overshadowing amenity assessments (for Town & Country Planning), the Party Wall etc Act 1996 and access to land / airspace negotiations.
- 2.3.2 He commenced his training at building surveying consultancy, Malcolm Hollis, until August 2005 when he became a founding Director of Gray Scanlan Hill, where he has continued to provide third party development consultancy advice to Clients.
- 2.3.3 He has advised both developers and neighbouring adjoining owners on the “light” impact of proposed property and infrastructure developments. He has also accepted instructions to advise Local Authorities on the practical application of the BRE Guidance.
- 2.3.4 A member of the Royal Institution of Chartered Surveyors (“RICS”), he has frequently lectured on third party development issues to fellow property professionals as part of numerous regional CPD programmes and conferences.

2.4 The Site

- 2.4.1 The Site is located in Manchester City Centre. It comprises land bound by King Street West, St Marys Parsonage, Garden Lane and Smithy Lane.
- 2.4.2 The Site is currently occupied by buildings of 3 and 4 storeys in height. The neighbouring buildings to the west are typically of greater height, with buildings to the south and east generally being of comparable massing to the existing buildings of Reedham House.
- 2.4.3 Certain images contained at Appendix 1 communicate the existing physical relationship between the Site and its immediate surroundings in massing terms.

2.5 The Proposed Development

- 2.5.1 The Proposed Development comprises the erection of 14 storey building and the refurbishment of the existing buildings at 3 Smithy Lane and Carriage Works on Garden Lane / St Mary's Parsonage with ground floor extension to comprise office accommodation (Class E) with front of house and commercial floorspace at ground floor (Class E) with associated landscaping and other works following demolition of existing buildings at 27-29 King Street West and 31-33 King Street West and link bridge from Carriage Works on Garden Lane / St Mary's Parsonage to 3 St Marys Parsonage
- 2.5.2 The proposed massing images contained at Appendix 1 communicate the footprint and height of the Proposed Development relative to its immediate surroundings.

2.6 Information Relied upon and Site Specific Limitations

- 2.6.1 We have inspected the Site and walked its surroundings and in so doing have identified the window provision of the neighbouring buildings that overlook the Site (to the extent that such windows are capable of being observed from the adjacent public highways).
- 2.6.2 To facilitate the running of the computerised technical analysis, we have constructed digital 3D massing models of the Site and its immediate surroundings, both in its existing or baseline configuration and as is proposed. In establishing the 3D massing models, we have relied on the following information, provided to us by others:
- A digital photogrammetric model of the Site and its surroundings by AccuCities; and
 - A 3D model of the Proposed Development prepared by Jon Matthews Architects.
- 2.6.3 The interior of the neighbouring buildings has not been inspected. It has therefore been necessary to make assumptions regarding the use and arrangement of the rooms. These assumptions can be observed from the No Sky Line Contour Plans at Appendix 4.
- 2.6.4 Our room arrangement assumptions are influenced by plans forming part of planning applications downloaded from Manchester City Council's Planning Public Access System and other online or digital resources, as follows:
- 65 Bridge Street – MCC Ref. 131395/FO/2021

- 2.6.5 Further, the height between the internal floor level and the window cill in each room of the neighbouring buildings will influence the position of the working plane, which is the level at which the internal distribution of skylight is measured. As we have not inspected the neighbouring buildings, we have had to assume the position of the working plane
- 2.6.6 On the basis that the neighbouring buildings have not been inspected, we have also had to make assumptions as to their use and function. Our assumptions are primarily influenced by observations made during our Site inspection. We have also identified the neighbouring buildings of residential use by reference to Valuation Office Agency records – neighbouring buildings with a Council Tax Band being of residential use.
- 2.6.7 Our technical analysis only appraises the daylight and sunlight amenity impact that the massing of the Proposed Development will have on the of the surrounding built environment. It is not a cumulative assessment that acknowledges the massing of any other construction development proposed in the vicinity of the Site.

3. Standards

3.1 National Planning Policy

- 3.1.1 There are no national planning policy guidelines that directly govern daylight and sunlight amenity in terms of sufficiency and acceptable impacts.
- 3.1.2 It is, however, acknowledged that the National Planning Policy Framework (“NPPF”) 2021 confirms the Government’s objective to conserve and enhance the natural and local environment in the planning system. The availability of daylight and sunlight are, of course, natural resources that can enhance an environment.
- 3.1.3 The NPPF promotes, where appropriate, an uplift in density for residential development in town and city centres, and notes that a flexible approach should be taken in applying guidance relating to daylight and sunlight in such areas of high density.

3.2 Local Planning Policy and Guidance

- 3.2.1 Manchester City Council’s (“the Council”) Core Strategy was adopted in July 2012 and is the key development plan document in the Local Development Framework (“LDF”).
- 3.2.2 It describes Manchester today and outlines the Council’s vision for Manchester in 2027 along with the planning policies which will be used to deliver that vision.
- 3.2.3 The Council will promote the construction of tall buildings – Policy EN2 of the Core Strategy refers. Tall buildings, in the context of that Policy, are defined as buildings which are substantially taller than their neighbourhoods and / or which significantly change the skyline. Proposals for tall buildings will be supported if certain design criteria are met.
- 3.2.4 It is acknowledged as part of Policy EN2 that tall buildings can have a significant impact on the local environment and the Council expect that its impact be modelled.
- 3.2.5 The Council do, however, acknowledge in Policy CC6 of the Core Strategy that development in the City Centre will generally be “high density” and that the scale, massing and height of development in the City Centre will exceed what is appropriate elsewhere in the City.

- 3.2.6 The Core Strategy confirms that all new developments should follow certain “development principles”. Policy DM1 – Development Management – confirms that all developments should have regard to a number of issues, such as the effects on amenity, including light.
- 3.2.7 The Guide to Development in Manchester Supplementary Planning Document (“SPD”) confirms that consideration should be given to issues including overshadowing to hard landscaped areas within the public realm.
- 3.2.8 This SPD was published in March 2017 and is intended to provide clear direction on the considerations, qualities, and opportunities that will help to deliver high quality residential development of part of successful and sustainable neighbourhoods across Manchester.
- 3.2.9 In encouraging developers to “appreciate scale” the SPD acknowledges that taller buildings can have an impact on the character and atmospheric quality of the spaces immediately around them; affecting light and shadow amongst other things and requiring developers and their design teams to demonstrate how massing and scale have been considered in terms of its impact on the neighbourhood, street and block.
- 3.2.10 Although the above-mentioned Policy documents allude to or reference daylight and sunlight amenity, and an appropriateness of scale and massing, there is no bespoke “daylight and sunlight” policy. Further, no guidance is provided on how daylight and sunlight amenity impact might be measured and evaluated in practice.
- 3.2.11 Accordingly, it is necessary to consider and administer the design guidance available from the Building Research Establishment (BRE) and their Guidance Note ‘*Site Layout Planning for Daylight & Sunlight: A Guide to Good Practice*’.

3.3 The BRE “Site Layout Planning for Daylight & Sunlight”

- 3.3.1 The BRE Guidance was produced following extensive consultation with architects, planning officers, consultants, professional institutions and Government officials.
- 3.3.2 The Guidance was first published in 1991 and superseded the Department of the Environment Guidance “Sunlight and Daylight Planning Criteria and Design of Buildings”.
- 3.3.3 The current edition (3rd) of the BRE Guidance was published in June 2022.
- 3.3.4 Its overall purpose is to assist in evaluating the relationship between new and existing buildings to ensure that each retains the potential to achieve a “fair share” of available daylight and sunlight given their relative siting, height and mass.
- 3.3.5 The BRE Guidance is technically robust and has become the industry standard methodology for assessing daylight and sunlight amenity in the built environment.
- 3.3.6 The provisions of the BRE Guidance are not mandatory and the BRE have taken steps to confirm that it should not be read as an instrument of planning policy:

‘The guide is intended for building designers and their clients, consultants and planning officials. The advice given here is not mandatory and this document should not be seen as an instrument 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 daylight is only one of many factors in site layout design’.

- 3.3.7 It is important to note that the BRE Guidance was principally developed for use in the assessment of low density suburban environments and should, therefore, be applied flexibly for developments in urban City or Town Centre sites, commercially influenced areas or areas where greater density is sought / encouraged.
- 3.3.8 The BRE targets should not, therefore, be seen as absolute and immovable targets when applied in built environments either of existing high density or where increased density is being sought / encouraged. To facilitate the flexible application of the BRE Guidance in such circumstances, it promotes the setting of alternative target values.
- 3.3.9 The mixed density and the City Centre location of the Site and its surroundings do, in our opinion, justify the flexible application of the BRE Guidance in the daylight and sunlight amenity impact appraisal of this Proposed Development.

4. The BRE Tests

4.1 Daylight

- 4.1.1 The BRE Guidance confirms that its daylight provisions are intended for use for rooms in neighbouring dwellings where daylight is required, which would include living rooms, kitchens and bedrooms. It goes on to confirm that windows serving bathrooms, toilets, store rooms, circulation areas, and garages need not be analysed.
- 4.1.2 There are several different methods of measuring daylight amenity.
- 4.1.3 The BRE recommend that the Vertical Sky Component (“VSC”) test is used (rather than the Average Daylight Factor (“ADF”) test) when considering the impact that a new development will have on the daylight amenity of an existing neighbouring building.
- 4.1.4 The VSC is a unit of measurement that represents the amount of visible sky that is capable of being received at the external face of a window. Daylight is derived directly from the sky. On that basis, the more unobstructed sky or sky visibility available to a window, the potential daylighting capability of the room served by it will increase.
- 4.1.5 The unit is expressed as a percentage, as it is the ratio between the amount of visible sky available to the window being tested, compared to that available from a totally unobstructed sky. To put this unit of measurement into perspective, the maximum percentage VSC value of a window located in a vertical plane is 50%, but in practice the VSC values do not typically exceed 40%, because of projecting window reveals and window heads which lessen / reduce the angles of measurement.
- 4.1.6 The BRE Guidance for daylight confirms that: “... *daylighting of an existing building may be adversely affected ... if ... the VSC measured at the centre of an existing ... window is less than 27%, and less than 0.8 times its former value*”
- 4.1.7 In this regard, an aspirational target of 27% VSC is established for each window.
- 4.1.8 However, if a window already receives less than 27% VSC, then a reduction in the existing value of up to 20% (i.e. to 0.8x baseline value) is accepted as permissible on the basis that such a reduction is unlikely to be noticed by the room’s occupants.

- 4.1.9 We would stress that should a window's VSC value be reduced by more than 20%, this does not mean that the room will ordinarily be left with inadequate levels of daylight; it simply means that the reduction in light will be more noticeable to the occupants.
- 4.1.10 The BRE Guidance confirms that the daylight distribution of an existing building can be found by plotting the No Sky Line ("NSL") for each main room, which would include living rooms, dining rooms and kitchens (bedrooms are considered less important).
- 4.1.11 The NSL is measured at an internal working plane within a room and divides those parts of it which can and cannot see the sky through its window provision.
- 4.1.12 Those parts of a room beyond the NSL usually look dark and gloomy, compared with the rest of the room, because they receive no direct daylight.
- 4.1.13 The BRE Guidance confirms that the area of a room within the baseline NSL can be reduced by 20% (or to 0.8x baseline value) without being noticed by the room occupants.

4.2 Sunlight to Buildings

- 4.2.1 Unlike daylight, which is not influenced by orientation and assumes that light from the sky is uniform, the availability of sunlight is dependent upon compass orientation.
- 4.2.2 As the United Kingdom is in the northern hemisphere, sun is only received from the south, rising in the east and setting in the west. The availability of sunlight is therefore dependent upon the orientation of the window being tested relative to due south.
- 4.2.3 The BRE Guidance for sunlight concludes that:
- "If a living room of an existing dwelling has a main window facing within 90° of due south and any part of the new development subtends an angle of more than 25° to the horizontal, measured from the centre of the window in a vertical section perpendicular to the window, the sunlighting of the existing dwelling may be adversely affected".*
- 4.2.4 The BRE Guidance goes on to conclude that sunlight will be adversely affected if the living room window "...receives less than 25% of annual probable sunlight hours, or less than 5% of annual probable sunlight hours between 21 September and 21 March".
- 4.2.5 September – March are acknowledged as the "winter months".

- 4.2.6 Sunlight, therefore, only needs to be considered for windows serving living rooms, which is in contrast to the daylight test that applies equally to kitchens and bedrooms.
- 4.2.7 Again, the BRE confirms that where the APSH values are not met in the existing condition, a reduction of up to 20% (i.e. 0.8x) the existing value would be acceptable, on the basis that the reduction is unlikely to be noticed by the building occupants.
- 4.2.8 We would, again, stress that reductions of more than 20% should not ordinarily be interpreted as a window being left with insufficient levels of sunlight amenity; it simply means that the reduction is more likely to be noticed by the building occupants.

4.3 Alternative Daylight and Sunlight Targets

- 4.3.1 The BRE acknowledge the need for the provisions of the Guidance to be applied and interpreted flexibly, including adjustment, where it is used outside of the low density suburban environments for which it was designed, in confirming that:

“... 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 proportion of existing buildings”.

- 4.3.2 This is logical. It is unrealistic to rigidly impose the BRE's low density massing targets in town or city centres or other local centres where increased density is sought.
- 4.3.3 The promoting of a high-density environment is at odds with the maintaining of those levels of daylight and sunlight that the BRE has set for its low density massing targets.
- 4.3.4 Gray Scanlan Hill consider the setting of alternative targets to be a necessary means of adjusting the BRE Guidance for use in a mixed density Town Centre environment.
- 4.3.5 It is unreasonable to expect higher density developments to fall in line with the BRE's low density targets. For this reason, the setting of alternative targets is justified in this instance, and an appropriate means of impact appraising the Proposed Development.
- 4.3.6 A generic or non-site specific alternative daylight target of 21.6% VSC can be established for massing environments of mixed or high density, through applying BRE principles.

- 4.3.7 To explain, the BRE Guidance confirms that the 27% target VSC is an acceptable level of daylight, the 0.8x or 20% reduction of which is acceptable to the BRE on the grounds that the reduction would not be noticed by the room occupants.
- 4.3.8 In this regard, if a window enjoys 27% VSC in the existing condition, it would be acceptable to reduce that VSC to 21.6%. In such circumstances, it would be concluded that a VSC of 21.6% would be adequate to satisfy the BRE's daylight test criterion.
- 4.3.9 That conclusion would be drawn on the basis that the reduction in direct sky light would not be noticed by the building or room occupants. However, that is not the same, and this is an important distinction, as concluding that 21.6% VSC is in anyway an insufficient or detrimental amount of direct sky light for a window or room to receive.
- 4.3.10 Logically, if 21.6% can be concluded as a sufficient proposed VSC for one habitable room window, then there is no reason why that could not be set as an alternative benchmark or target for all habitable room windows, regardless of their existing VSC values and the extent to which any reductions in sky light might be experienced.
- 4.3.11 A window with a VSC of 21.6% means that the window would still have access to more than half of the sky dome (from which daylight is derived) that is realistically available to an unobstructed window located in a vertical plane or elevation. We would therefore deem that a window achieving a VSC of at least 21.6% would at least be within an "acceptable tolerance" of the aspirational 27% target noted in the BRE Guidance.
- 4.3.12 Using the same principle, alternative "acceptable tolerance" APSH targets of 4% winter APSH (rather than 5%) and 20% annual APSH (rather than 25%) can be set.

4.4 Sunlight to Open Spaces

- 4.4.1 As well as ensuring that living rooms receive a good level of sunlight, it is also important that open spaces between and around buildings such as gardens are suitably sunlit.
- 4.4.2 The BRE recommend that the availability of sunlight should be checked for all external spaces where it will be required, and this would normally include:
- Gardens, usually the main back garden of a house;
 - Parks and playing fields;
 - Children's playgrounds;

- Outdoor swimming pools and paddling pools;
- Sitting out areas, such as those between non-domestic buildings / public squares;
- Focal points such as monuments or fountains.

4.4.3 The BRE Guidance concludes that:

“It is recommended that for it to appear adequately sunlit throughout the year, at least half of a garden or amenity area should receive at least two hours of sunlight on 21 March. If, as a result of new development an existing garden or amenity area does not meet the above, and the area which can receive two hours of sun on 21 March is less than 0.8 times its former value, then the loss of sunlight is likely to be noticeable”.

4.4.4 This ultimately means that 50% of any garden or external amenity space must be capable of receiving two hours of sunlight, and by implication be free from any permanent overshadowing, on 21 March. A reduction to 0.8x of the existing value is accepted by the BRE on the grounds that it is unlikely to be noticed by the occupants / users.

5. Assessment

5.1 Assessment Methodology

- 5.1.1 Our assessment follows the methodology set out in the BRE Guidance, which provides an objective means of measuring and evaluating daylight and sunlight amenity impacts.
- 5.1.2 To appraise the impact that the massing of the Proposed Development will have on the daylight and sunlight amenity of the surrounding built environment, a topographically accurate computer-generated 3D model has been constructed that simulates the massing of the Site and its surroundings in both its existing / baseline and proposed condition.
- 5.1.3 The assessment calculations have been undertaken using specialist computer software (known as “Waldram Tools”, a widely used and market leading simulated light measurement software) to perform the BRE daylight and sunlight tests.
- 5.1.4 The information upon which the 3D model and technical analysis is based, has been extracted from the information referred to in Section 2.6 of this Report.

5.2 Receptor Identification

- 5.2.1 It is clear from reading the BRE Guidance that it seeks to consider daylight and sunlight amenity for neighbouring buildings of residential use; it emphasises the availability of daylight and sunlight to living rooms, and daylight to bedrooms and family kitchens.
- 5.2.2 The relevant or sensitive daylight and sunlight receptors around the Site are therefore those windows that serve anticipated habitable room uses in the neighbouring buildings.
- 5.2.3 For the purposes of this Report, we have identified the Site facing windows and rooms of 65 Bridge Street as the only residential receptor. For completeness, we have also considered the paved area between Bridge Street West, St Mary’s Parsonage and Bridge Street, located to the south of the Site, as an external amenity space.
- 5.2.4 All other neighbouring buildings in the vicinity of the Site are of “non-domestic use” and are not therefore identified as key or sensitive receptors.
- 5.2.5 The position of this neighbouring building, relative to the Site and the Proposed Development, can be observed on the massing plans at Appendix 1 below.

5.2.6 Window reference plans of the principal elevations of this neighbouring building can be found at Appendix 2.

5.2.7 In line with BRE principles, any windows in the above-mentioned buildings that are known to serve circulation space or welfare accommodation have not been analysed, neither have the windows that serve any ground floor retail / non-domestic uses.

5.3 Baseline Condition

5.3.1 The baseline condition acknowledges the massing of the existing buildings of the Site and the current massing of its surroundings at the date of this Report.

5.3.2 Baseline massing images of the Site are provided at Appendix 1.

5.3.3 A summary of the baseline daylight and sunlight amenity results is tabulated below:

Table 1 – Summary of Baseline VSC Results

Receptors	BRE Pass ($\geq 27\%$ VSC)	BRE Fail ($< 27\%$ VSC)
65 Bridge Street	0 windows (0%)	10 windows (100%)

5.3.4 None of the windows serving habitable rooms within 65 Bridge Street achieve the BRE's 27% target in the Baseline condition. These windows are either set within the narrow lightwell of 65 Bridge Street, or located in close proximity to the mass of the neighbouring buildings on the opposite side of Back Bridge Street. Both factors are significant obstacles to sky visibility, which place an inherent limitation on daylight amenity in the Baseline condition.

5.3.5 The BRE's NSL test is based upon the size of reduction in area receiving direct daylight in the proposed condition. On this basis, there is no NSL in the baseline condition.

5.3.6 The Proposed Development is located to the north of both 65 Bridge Street and the external amenity area between King Street West and Bridge Street. In accordance with the BRE Guidance, these receptors do not need to be sunlight appraised on the basis that sunlight is received from the south, and construction of the Proposed Development will not therefore have an impact on sunlight amenity of these receptors.

5.4 The Measured Daylight & Sunlight Amenity Impact

- 5.4.1 The results of the VSC daylight tests are tabulated in Appendix 3. We have measured the daylight impact of the Proposed Development against the BRE's 27% VSC target.
- 5.4.2 Where windows do not achieve this aspirational target, we have deemed them to be within an acceptable tolerance of it if where they achieve a VSC of 21.6%. We consider this to be acceptable level of amenity in a built up urban environment of mixed scale.
- 5.4.3 The results of the NSL tests are presented at Appendix 4.
- 5.4.4 To explain the NSL contour plots, the area of the room within the amber contour receives access to direct sky light. The hatched area of the room identifies each neighbouring room that will lose direct access to sky visibility, because of the Proposed Development.
- 5.4.5 As above, the BRE confirm that only windows facing within 90° of due south can have any real expectation of receiving sunlight and need to be technically appraised. This is because the sun rises in the east, sets in the west, passing through south. Because the identified neighbouring receptors are located to the south of the Site, the Proposed Development will be of no impact or influence on their sunlight amenity.
- 5.4.6 The tabulated VSC and NSL results contained within the Appendices of this Report appended have been colour annotated for ease of review, as follows:
- Green indicates the result achieves the unmodified BRE target;
 - Yellow indicates that the result comes within an Acceptable Tolerance of the unmodified BRE target (i.e. it does achieve the 'Alternative Target');
 - Pink indicates that the result is more than the Acceptable Tolerance reduction.
- 5.4.7 Results in the 'Pr/Ex' column show the proposed value as a proportion of the baseline value. These results are colour annotated pink or green based on whether the proposed result is, respectively, less than or greater than 0.8x the Baseline value.
- 5.4.8 Proposed "Pr/Ex" results that are greater than 0.8x Baseline Values are coloured green and are considered acceptable to the BRE on the basis that any reduction in VSC, NSL or APSH would not be noticed by the room occupants.

- 5.4.9 Therefore, a yellow or pink result for VSC or APSH are considered BRE compliant if the Pr/Ex result is coloured green (i.e. the result in the Proposed Condition is not $< 0.8x$ baseline values, and therefore not noticeable to the room occupants).
- 5.4.10 A summary of the results of our technical study, and commentary confirming our opinion of them, is set out on a neighbouring property by property basis below.

65 Bridge Street

65 Bridge Street is a 3 storey building, the upper floors of which are currently undergoing conversion to residential use.

It is located to the south of the Site. Its window provision does not overlook the Site directly, however the Proposed Development will likely be seen through them once constructed.

The rooms overlooking the Site will be a mixture of habitable uses – living / kitchen / dining rooms (“LKDs”) and bedrooms.



Daylight Amenity Impact

10 individual windows have been appraised, serving 6 habitable rooms.

In the baseline condition none of the windows appraised (0%) achieve the 27% VSC target, as a result of their proximity to adjacent buildings or their position within this building's lightwell.

In the proposed condition, 6 windows (60%) would achieve a VSC that is of at least 0.8x the baseline VSC values, which are accepted by the BRE on the grounds that reductions in daylight are unlikely to be noticed by the room occupants.

4 windows (40%) serving 3 second floor rooms (1 LKD; 2 bedrooms) would achieve VSC values of between 14% and 16% in the proposed condition. Notwithstanding this being less than the BRE's aspiration target, we consider the impact of the Proposed Development on the daylight amenity to be appropriate and balanced for the following reasons:

- None of these rooms achieve the BRE's VSC target in the baseline condition;
- All rooms served by these windows would pass the BRE's NSL test, with negligible reductions in the internal distribution of skylight;
- One room is also served by a second, south facing window that is not impacted by the Proposed Development;
- All four windows would retain VSC values of between 0.74x and 0.79x baseline values. On the basis that the BRE consider a reduction in VSC to 0.8x baseline figures unlikely to be noticed by room occupants, retained values that are >0.74x baseline figures amount to low magnitudes of change and, for certain windows, likely to be indistinguishable from the 0.8x target.

All 6 rooms appraised (100%) would pass the BRE's NSL test, experiencing no more than a negligible reduction in distribution of skylight within the rooms.

In our opinion, the impact that the Proposed Development will have on the daylight amenity of this neighbouring building is appropriate and balanced, given the existing limitation on daylight amenity, low magnitudes of change and the City Centre location.

Sunlight Amenity Impact

65 Bridge Street is located to the south of the Site and its Site-facing windows are north facing.

On the basis that direct sunlight is not therefore received over the Site to the benefit of this neighbouring building, the construction of the Proposed Development will have no influence or impact on its sunlight amenity, and in accordance with the BRE Guidance it need not be impact appraised.

External Amenity Area

There is a paved area between King Street West, St Mary's Parsonage and Bridge Street used as external amenity space and outside seating for the adjacent bars, restaurants and café.

It is located to the south of the Proposed Development.



Sunlight to External Amenity Space

This paved 'square' is located to the south of the Site.

On the basis that sunlight is received from the south, and the Site is located to the north, this external amenity area receives no direct sunlight over the Site. The Proposed Development will therefore have no impact on the ongoing sunlight amenity of this external amenity space.

Appendix 1: Baseline and Proposed Massing Plans

Plan View
Existing Site

NOTES:

No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

Analysis
Produced using Waldram Tools
MBS Survey Software Ltd (www.mbs-software.co.uk)

Existing Model & Surrounding Model
Existing Site derived from a supplied 3D context model by Accucities.

Neighbouring Buildings internal room layouts, window positions/dimensions derived by supplied plans and elevations.

Where plans/elevations were unavailable assumptions have been made based on site photography, Bing Maps and Google Earth.

Proposed Model
Proposed scheme massing - "107_JMA_Reedham House Rights to Light Model_220711.dwg"

Supplied by _____ on ____/____/____.

Massing Legend

Existing
Proposed

All heights in m AOD

REV:	NOTES:	DRWN:	DATE:



The Old Post Office, 63 Newton Street, Manchester, M1 1ET
Tel: 0161 835 2101
Email: info@grayscanlanhill.com Web: www.grayscanlanhill.com

CLIENT:
Property Alliance Group

PROJECT:
Reedham House Development
Manchester

DRAWING TITLE:
Plan View
Existing Site

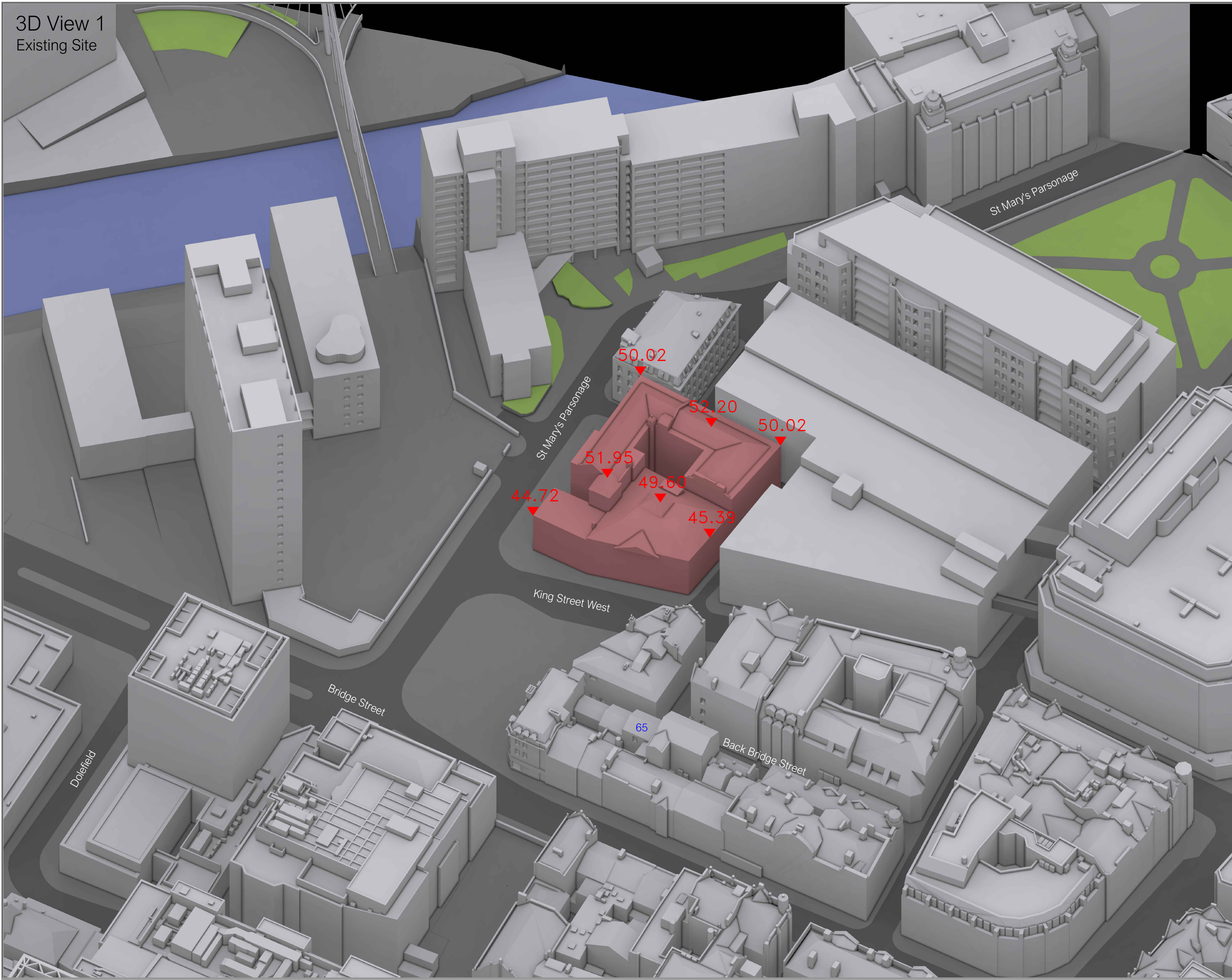
SCALE @ A2: 1:500	DATE: 08.07.2022	DRAWN: GSH
CHECKED: DMH		REV: .

DRAWING NUMBER:
3106_MA-01

1:500



3D View 1
Existing Site



NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

Analysis
Produced using WalDRAM Tools
MBS Survey Software Ltd (www.mbs-software.co.uk)

Existing Model & Surrounding Model
Existing Site derived from a supplied 3D context model by Accuties.

Neighbouring Buildings internal room layouts, window positions/dimensions derived by supplied plans and elevations.

Where plans/elevations were unavailable assumptions have been made based on site photography, Bing Maps and Google Earth.

Proposed Model
Proposed scheme massing - "107_JMA_Reedham House Rights to Light Model_220711.dwg"

Supplied by _____ on ____/____/____.

Massing Legend

Existing
Proposed

All heights in m AOD

REV:	NOTES:	DRWN:	DATE:

The Old Post Office, 63 Newton Street, Manchester, M1 1ET
Tel: 0161 835 2101
Email: info@grayscanlanhill.com Web: www.grayscanlanhill.com

CLIENT:
Property Alliance Group

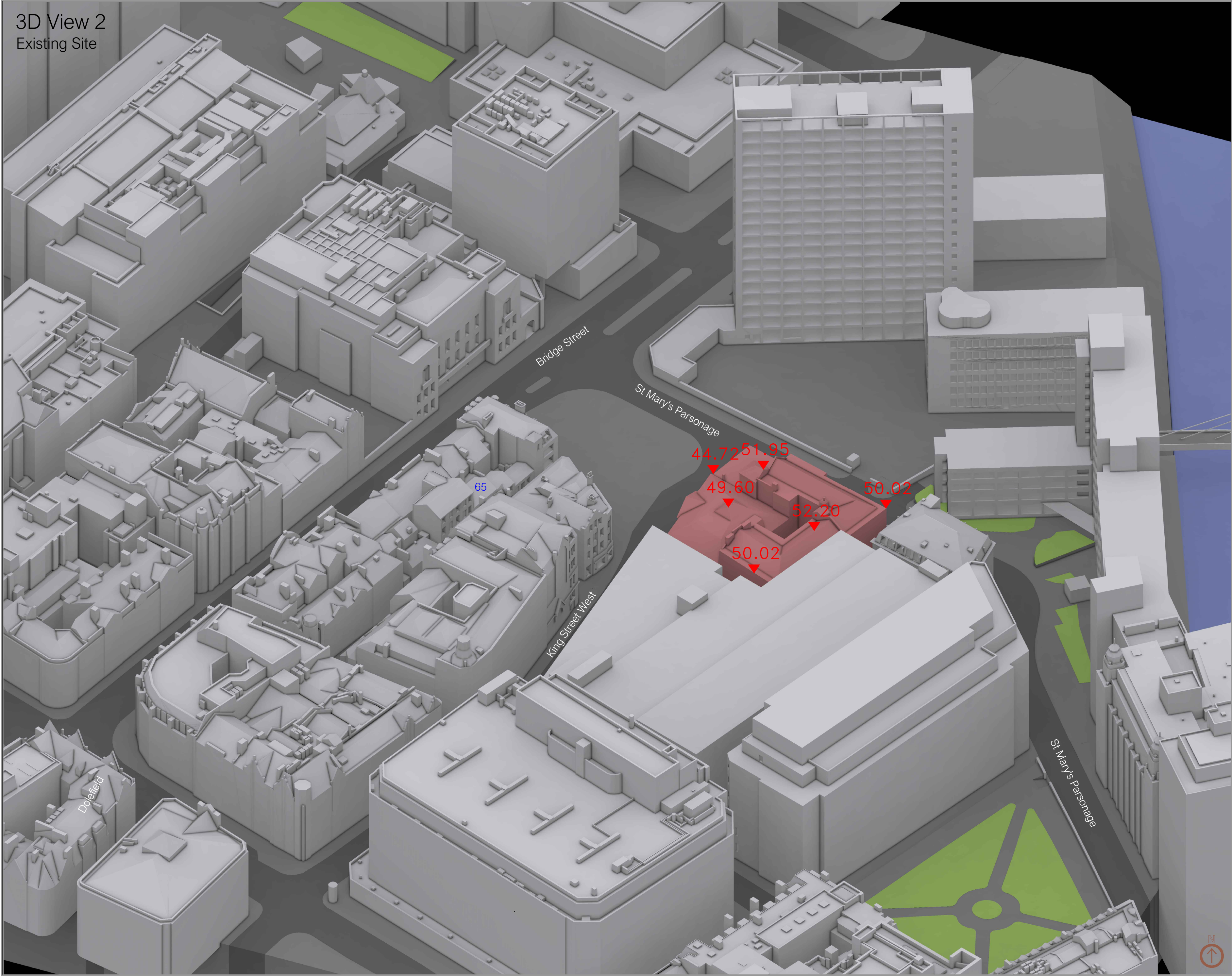
PROJECT:
Reedham House Development
Manchester

DRAWING TITLE:
3D View 1
Existing Site

SCALE @ A2: NTS	DATE: 08.07.2022	DRAWN: GSH
	CHECKED: DMH	

DRAWING NUMBER: 3106_MA-01	REV: .
-------------------------------	-----------

3D View 2
Existing Site



NOTES:

No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

Analysis
Produced using Waldram Tools
MBS Survey Software Ltd (www.mbs-software.co.uk)

Existing Model & Surrounding Model
Existing Site derived from a supplied 3D context model by Accuties.

Neighbouring Buildings internal room layouts, window positions/dimensions derived by supplied plans and elevations.

Where plans/elevations were unavailable assumptions have been made based on site photography, Bing Maps and Google Earth.

Proposed Model
Proposed scheme massing - "107_JMA_Reedham House Rights to Light Model_220711.dwg"

Supplied by _____ on ____/____/____.

Massing Legend

Existing
Proposed

All heights in m AOD

REV:	NOTES:	DRWN:	DATE:

The Old Post Office, 63 Newton Street, Manchester, M1 1ET
Tel: 0161 835 2101
Email: info@grayscanlanhill.com Web: www.grayscanlanhill.com

CLIENT:
Property Alliance Group

PROJECT:
Reedham House Development
Manchester

DRAWING TITLE:
3D View 2
Existing Site

SCALE @ A2: NTS	DATE: 08.07.2022	DRAWN: GSH
	CHECKED: DMH	

DRAWING NUMBER: 3106_MA-01	REV: .
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Plan View
Proposed Scheme

1:500

NOTES:

No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

Analysis
Produced using Waldram Tools
MBS Survey Software Ltd (www.mbs-software.co.uk)

Existing Model & Surrounding Model
Existing Site derived from a supplied 3D context model by Accuties.

Neighbouring Buildings internal room layouts, window positions/dimensions derived by supplied plans and elevations.

Where plans/elevations were unavailable assumptions have been made based on site photography, Bing Maps and Google Earth.

Proposed Model
Proposed scheme massing - "107_JMA_Reedham House Rights to Light Model_220711.dwg"

Supplied by _____ on ____/____/____.

Massing Legend

Existing
Proposed

All heights in m AOD

REV:	NOTES:	DRWN:	DATE:



The Old Post Office, 63 Newton Street, Manchester, M1 1ET
Tel: 0161 835 2101
Email: info@grayscanlanhill.com Web: www.grayscanlanhill.com

CLIENT:
Property Alliance Group

PROJECT:
Reedham House Development
Manchester

DRAWING TITLE:
Plan View
Proposed Scheme

SCALE @ A2: 1:500	DATE: 08.07.2022	DRAWN: GSH
CHECKED: DMH		REV: .

DRAWING NUMBER:
3106_MA-04

3D View 1
Proposed Scheme



NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

Analysis
Produced using WalDRAM Tools
MBS Survey Software Ltd (www.mbs-software.co.uk)

Existing Model & Surrounding Model
Existing Site derived from a supplied 3D context model by Accuties.

Neighbouring Buildings internal room layouts, window positions/dimensions derived by supplied plans and elevations.

Where plans/elevations were unavailable assumptions have been made based on site photography, Bing Maps and Google Earth.

Proposed Model
Proposed scheme massing - "107_JMA_Reedham House Rights to Light Model_220711.dwg"

Supplied by _____ on ____/____/____.

Massing Legend

Existing
Proposed

All heights in m AOD

REV:	NOTES:	DRWN:	DATE:



The Old Post Office, 63 Newton Street, Manchester, M1 1ET
Tel: 0161 835 2101
Email: info@grayscanlanhill.com Web: www.grayscanlanhill.com

CLIENT:
Property Alliance Group

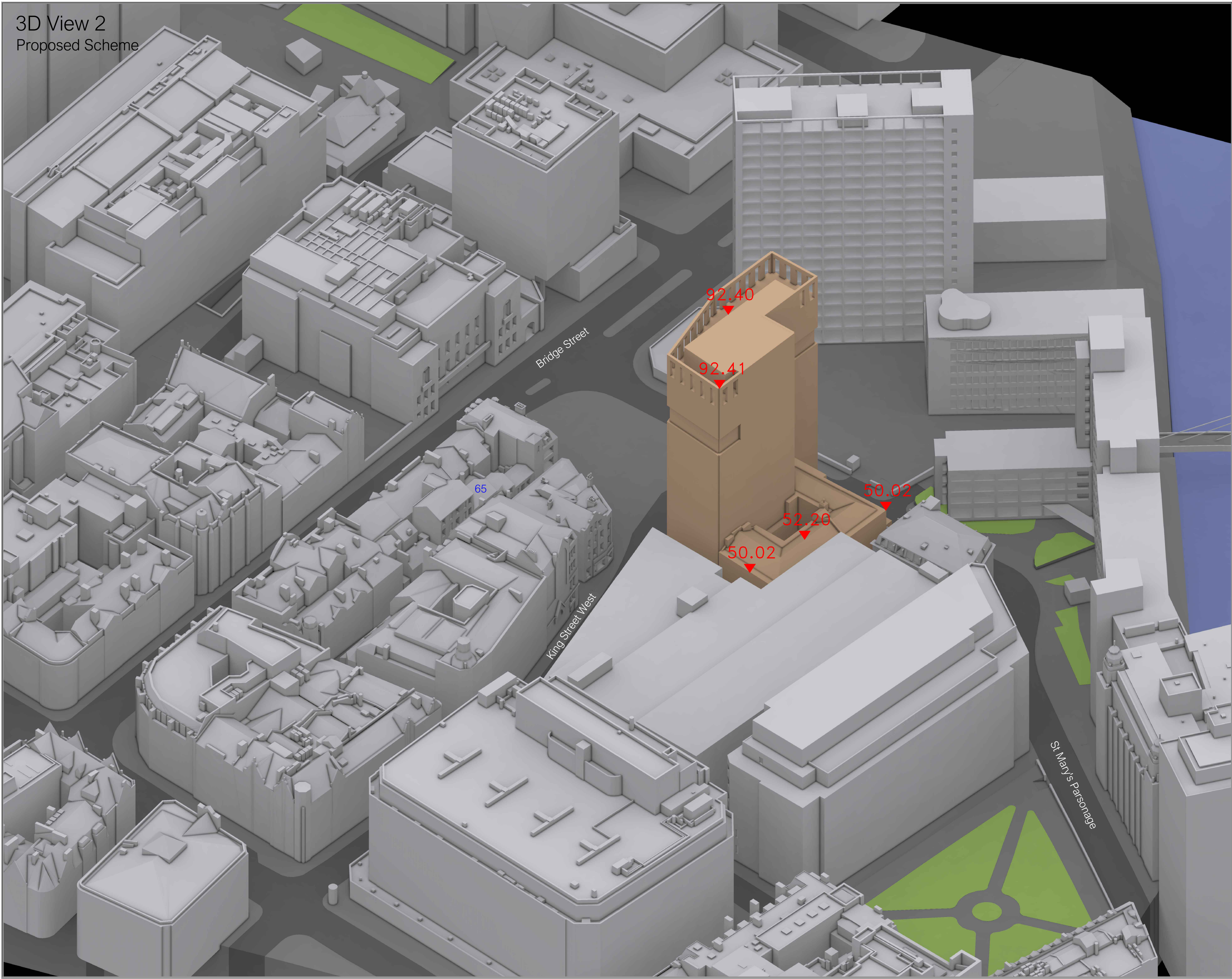
PROJECT:
Reedham House Development
Manchester

DRAWING TITLE:
3D View 1
Proposed Scheme

SCALE @ A2: 1:1000	DATE: 08.07.2022	DRAWN: GSH
CHECKED: DMH		

DRAWING NUMBER: 3106_MA-05	REV: .
-------------------------------	-----------

3D View 2
Proposed Scheme



NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

Analysis
Produced using Waldram Tools
MBS Survey Software Ltd (www.mbs-software.co.uk)

Existing Model & Surrounding Model
Existing Site derived from a supplied 3D context model by Accuties.

Neighbouring Buildings internal room layouts, window positions/dimensions derived by supplied plans and elevations.

Where plans/elevations were unavailable assumptions have been made based on site photography, Bing Maps and Google Earth.

Proposed Model
Proposed scheme massing - "107_JMA_Reedham House Rights to Light Model_220711.dwg"

Supplied by _____ on ____/____/____.

Massing Legend

Existing
Proposed

All heights in m AOD

REV:	NOTES:	DRWN:	DATE:

The Old Post Office, 63 Newton Street, Manchester, M1 1ET
Tel: 0161 835 2101
Email: info@grayscanlanhill.com Web: www.grayscanlanhill.com

CLIENT:
Property Alliance Group

PROJECT:
Reedham House Development
Manchester

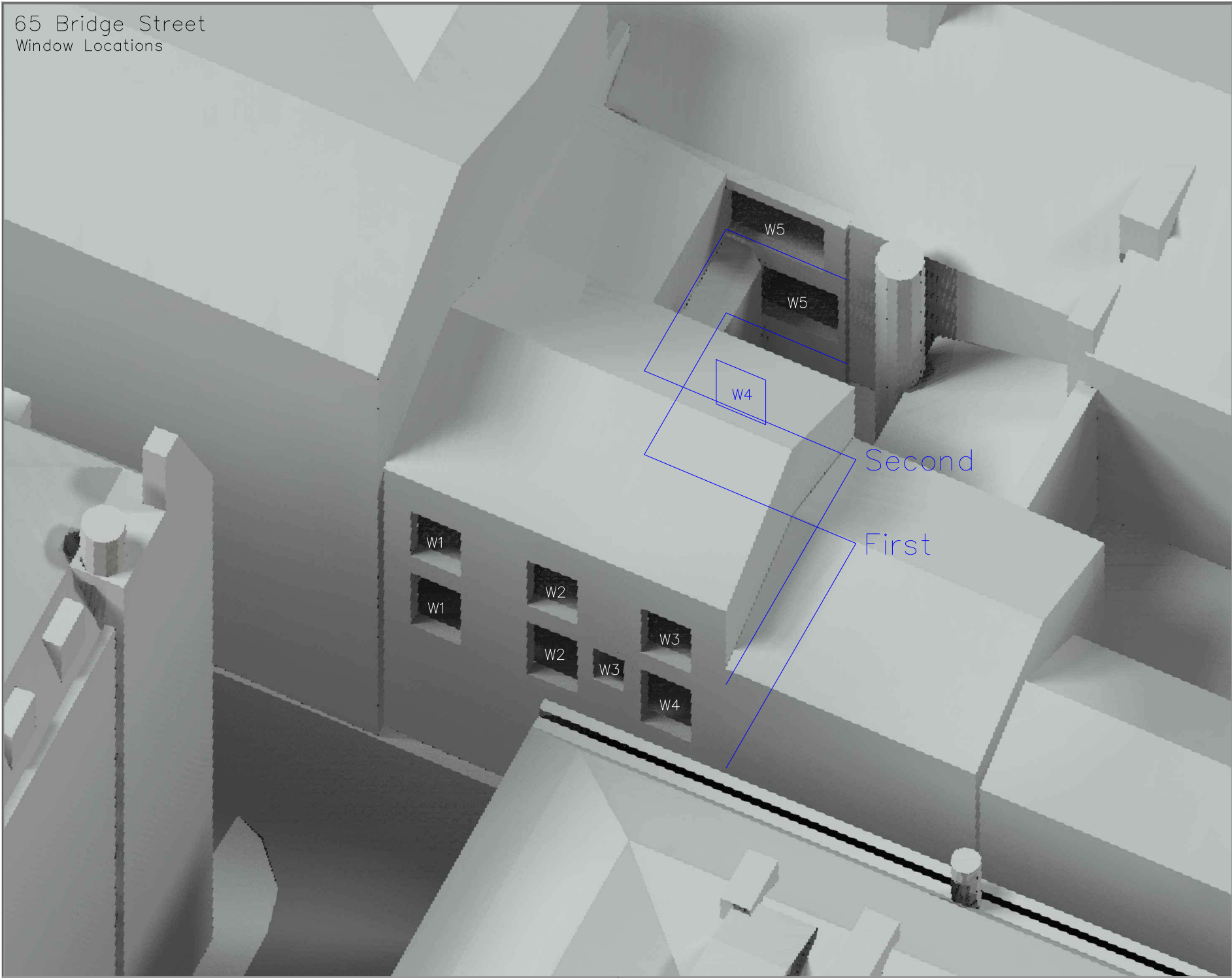
DRAWING TITLE:
3D View 2
Proposed Scheme

SCALE @ A2: 1:1000	DATE: 08.07.2022	DRAWN: GSH
CHECKED:	DMH	

DRAWING NUMBER: 3106_MA-06	REV: .
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Appendix 2: Window Reference Plans

65 Bridge Street
Window Locations



NOTES:
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site, where discrepancy occurs between specification and drawings the supervising officer must be notified.

Analysis
Produced using Waldram Tools
MBS Survey Software Ltd (www.mbs-software.co.uk)

Existing Model & Surrounding Model
Existing Site derived from a supplied 3D context model by Acoustics.

Neighbouring Buildings internal room layouts, window positions/dimensions derived by supplied plans and elevations.

Where plans/elevations were unavailable assumptions have been made based on site photography, Bing Maps and Google Earth.

Proposed Model
Proposed scheme massing –
"107_MA_Reedham House Rights to Light Model_220711.dwg"
Supplied by _____ on ____/____/____

Massing Legend

Existing
Proposed

All heights in m AOD

REV:	NOTES:	DRWN:	DATE:


The Old Post Office, 63 Newton Street, Manchester, M1 1ET
Tel: 0161 835 2101
Email: info@grayscanlanhill.com Web: www.grayscanlanhill.com

CLIENT:
Property Alliance Group Ltd

PROJECT:
Reedham House
Manchester

DRAWING TITLE:
Window Locations

SCALE @ A2:	DATE:	DRAWN:	GSH
1: 50	26.08.2022	CHECKED:	MBS

DRAWING NUMBER:	REV:
3106_MA-06	.

Appendix 3: Baseline vs Proposed VSC Results

Project Name: Reedham House, Manchester
Project No.: 3106
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
65 Bridge Street								
First	R1	Residential	LK	W1	15.13	12.12	3.01	0.80
				W2	14.34	13.31	1.03	0.93
	R2	Residential	Bedroom	W3	14.10	13.05	1.05	0.93
				W4	10.39	9.76	0.63	0.94
	R3	Residential	Bedroom	W5	8.86	8.15	0.71	0.92
Second	R1	Residential	LKD	W1	19.60	14.45	5.15	0.74
				W2	20.84	15.98	4.86	0.77
	R2	Residential	Bedroom	W3	20.02	15.22	4.80	0.76
				W4	20.84	20.84	0.00	1.00
	R3	Residential	Bedroom	W5	17.88	14.16	3.72	0.79

Appendix 4: Baseline vs Proposed NSL Contour Plots

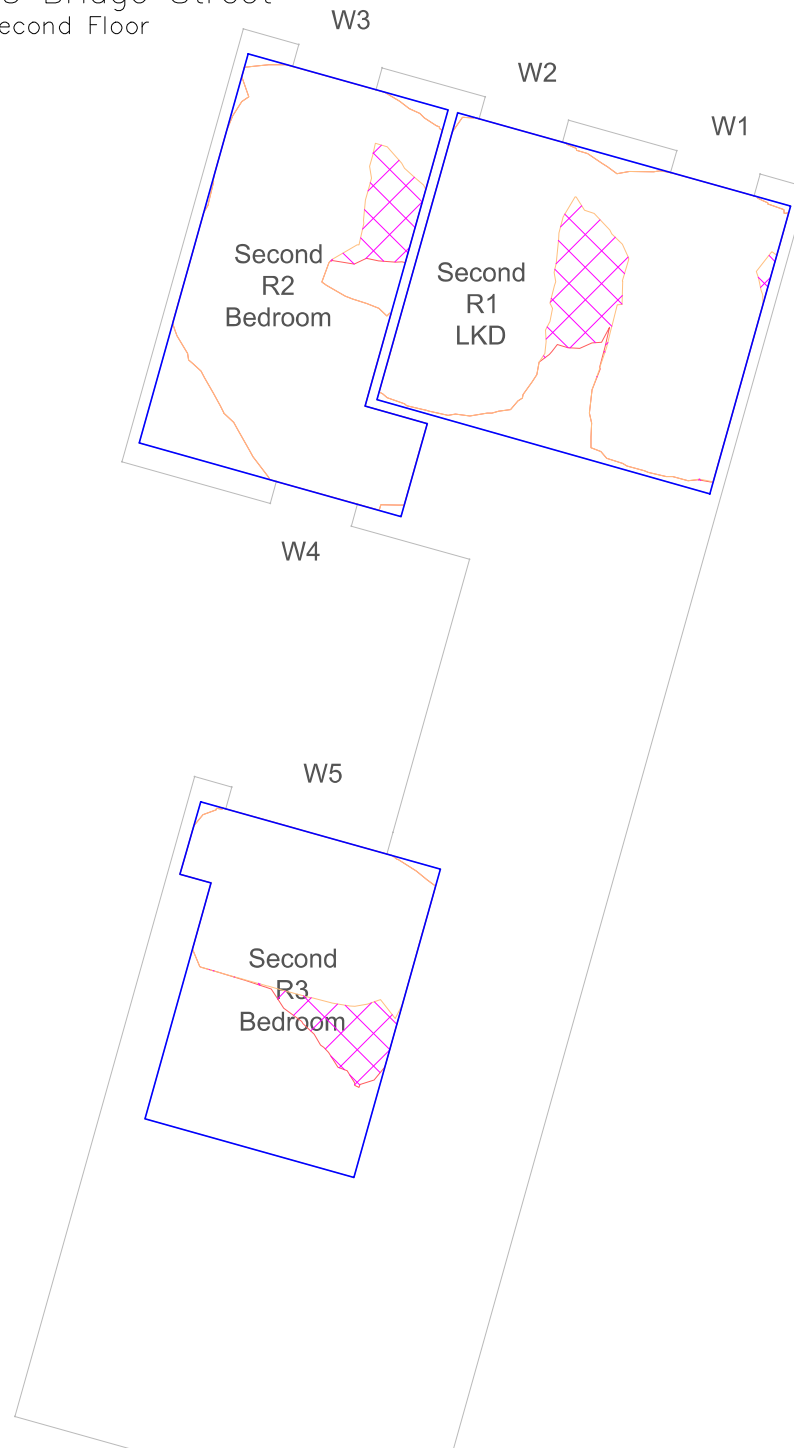
Project Name: Reedham House, Manchester
Project No.: 3106
Report Title: Daylight Distribution - Neighbour Analysis

Floor Ref.	Room Ref.	Room Attribute	Room Use.	Room Area m2	Room Area ft2	Lit Area m2 Existing	Lit Area ft2 Existing	Existing % lit	Lit Area m2 Proposed	Area Lost m2	Area Lost ft2	Pr/Ex
65 Bridge Street												
First	R1		LK	16.05	172.73	15.15	163.04	0.94	14.21	0.94	10.12	0.94
	R2		Bedroom	9.49	102.18	8.91	95.96	0.94	8.91	0.00	0.00	1.00
	R3		Bedroom	6.25	67.30	4.38	47.14	0.70	3.79	0.59	6.34	0.87
Second	R1		LKD	18.05	194.29	16.25	174.91	0.90	14.68	1.57	16.94	0.90
	R2		Bedroom	15.76	169.60	13.58	146.22	0.86	12.61	0.98	10.54	0.93
	R3		Bedroom	12.57	135.30	7.29	78.48	0.58	6.25	1.04	11.23	0.86

65 Bridge Street First Floor



65 Bridge Street Second Floor



NOTES:
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Analysis
Produced using Waldram Tools
MBS Survey Software Ltd (www.mbs-software.co.uk)
Existing Model & Surrounding Model
Existing Site derived from a supplied 3D context model by Accuties.
Neighbouring Buildings internal room layouts, window positions/dimensions derived by supplied plans and elevations.
Where plans/elevations were unavailable assumptions have been made based on site photography, Bing Maps and Google Earth.
Proposed Model
Proposed scheme massing -
"107_MA_Reedham House Rights to Light Model_220711.dwg"
Supplied by _____ on ____/____/____

Massing Legend
Existing
Proposed
All heights in m AOD

DD Legend
Room Area (Measured Layout)
Existing No Sky Line
Proposed No Sky Line
Area of Loss/Gain

REV:	NOTES:	DRWN:	DATE:

grayscanlanhill
chartered building surveyors
The Old Post Office, 63 Newton Street, Manchester, M1 1ET
Tel: 0161 835 2101
Email: info@grayscanlanhill.com Web: www.grayscanlanhill.com

CLIENT:
Property Alliance Group Ltd

PROJECT:
Reedham House
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE: 1:50	A2:	DATE: 26.08.2022	DRAWN: GSH
CHECKED: MBS			REV: .

DRAWING NUMBER:
3106_MA-05

