

Daylight and Sunlight Amenity Impact Assessment Report

Proposed Residential Development
87 Rochdale Road
Manchester

Prepared for: Portwood Developments Limited

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1. Executive Summary

- 1.1.1 Portwood Developments Limited has developed a proposal for the redevelopment of 87 Rochdale Road, at the north eastern edge of Manchester City Centre.
- 1.1.2 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.
- 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 The provisions / numerical targets of the BRE Guidance are not mandatory, and they should be applied flexibly for development of sites within and at the edge of the City Centre, commercially influenced areas or areas where greater density is sought / encouraged by planning policy. A point acknowledged by the NPPF.
- 1.1.7 The BRE Guidance promotes the setting of alternative target values for use in such areas where high density exists, such as within or at the edge of City Centres, or where increased density is being sought/encouraged by Planning Policy.
- 1.1.8 The Site and its immediate surroundings are located within the ‘New Town’ area of the Northern Gateway, as defined in the Northern Gateway Strategic Redevelopment Framework. An increase in massing and density is sought, thus justifying the flexible application of the BRE Guidance and the setting of alternative targets.

- 1.1.9 This Report documents the measured impact that the Proposed Development will have on the daylight and sunlight amenity of the Site facing habitable rooms of the following neighbouring buildings located in the vicinity of the Site and of known residential use:
- The Citadel Apartments, Ludgate Hill;
 - 6 Ludgate Hill Apartments;
 - The Marble Arch Public House, 73 Rochdale Road;
 - 85 Rochdale Road; and
 - 18-20 Rochdale Road.
- 1.1.10 The upper floors of the Marble Arch Public House and 85 Rochdale Road are known to be put to residential use, hence why they have been identified as relevant daylight and sunlight receptors. 18-20 Rochdale Road has the benefit of a Planning Permission for its conversion to residential use and we note that building works are underway.
- 1.1.11 A private garden and public beer garden forming part of the Marble Arch Public House are identified as external amenity areas, justifying a “Time in Sun” assessment.
- 1.1.12 The proposed landscaped area within the Proposed Development is also identified as an external amenity space, also justifying a Time in Sun assessment.

Daylight Amenity Impact

- 1.1.13 Overall, the Proposed Development will have an impact on daylight amenity that is considered to be appropriate and balanced, given the urban / City Centre fringe location of the Site and increase in massing envisaged for the area by Planning Policy.
- 1.1.14 Despite some measured reductions in Vertical Sky Component (“VSC”) levels, the significant majority (90%, or 226 windows) of the 250 windows appraised in the neighbouring receptors would continue to achieve the BRE’s 27% VSC target, or continue to achieve VSCs in excess of 0.8x baseline values, accepted by the BRE on the grounds that it would not be noticed by the room occupants.
- 1.1.15 17 Windows (7%) would achieve VSC values that are within a perceived Acceptable Tolerance of the BRE targets, given their location at the edge of the City Centre, and within the New Town area where increased density is envisaged by Planning Policy.

- 1.1.16 7 windows (3%) of the 250 windows appraised would not achieve a VSC that is within an Acceptable Tolerance of the BRE targets. Of these:
- 4 windows serve rooms within The Citadel apartment building. All of these windows serve rooms that would pass the NSL and which are also served by a window achieving the VSC target. The impact of the Proposed Development on these rooms is non-significant – they will remain well daylit in the proposed condition.
 - 3 windows serve rooms of 85 Rochdale Road, and account for a statistical minority of this receptor. One of these rooms is also served by a window achieving a VSC within an Acceptable Tolerance of the target.
- 1.1.17 Of the 191 rooms appraised, 159 (83%) would pass the BRE's No Sky Line ("NSL") test, experiencing either no reductions in daylight distribution, or reductions that would not be noticeable to the room occupants, i.e. daylight distribution would remain to at least 0.8x baseline value.
- 1.1.18 32 rooms (17%), predominantly located within 6 Ludgate Hill, would experience a reduction in NSL that could be noticeable to the room occupants. Notwithstanding, 24 of these 32 rooms would continue to receive direct daylight to the majority of their area. The remaining 8 rooms are within 6 Ludgate Hill and 85 Rochdale Road, and represent a statistical minority of rooms appraised.
- 1.1.19 Overall, the impact of the Proposed Development on the daylight amenity of these neighbouring receptors is therefore considered to be appropriate and non-significant, given the New Town location of the Site within the Northern Gateway.

Sunlight Amenity Impact

- 1.1.20 Not all of the Site facing windows / rooms of the above neighbouring buildings need to be sunlight amenity impact appraised as a consequence of compass orientation. The BRE Guidance only requires the appraisal of windows facing within 90 degrees of due south.
- 1.1.21 In the proposed condition, 23 rooms (96%) of the 24 rooms appraised would continue to achieve the BRE's Winter and Annual sunlight targets, or experience reductions in sunlight that would not be noticeable to the room occupants (acceptable to the BRE on the basis that proposed values remain at least 0.8x of baseline values).

- 1.1.22 The remaining room (located in The Citadel) would achieve the Annual Sunlight target and a Winter sunlight value that is within an Acceptable Tolerance of BRE targets, appropriate given the urban location of the Site.
- 1.1.23 The Proposed Development will therefore have a non-significant impact on sunlight amenity of all neighbouring receptors.
- 1.1.24 The private garden and public beer garden forming part of the Marble Arch Public House will see an increase in the extent to which it receives 2 hours of sunlight measured on 21 March. Accordingly, it can be easily concluded that the Proposed Development will not have a significant impact on the sunlight amenity of these external spaces.
- 1.1.25 The landscaping / external amenity areas of the Proposed Development will receive 2 hours of sunlight on 21 March to 71% of its area. Accordingly, this proposed external amenity space will appear adequately sunlight throughout the year.



2. Introduction

2.1 Background and Instructions

- 2.1.1 Portwood Developments Limited (“Portwood”) has developed a proposal for the redevelopment of 87 Rochdale Road, at the north eastern edge of 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 and habitable rooms of the following neighbouring buildings are identified as key receptors and have been daylight and sunlight amenity impact appraised:
- The Citadel Apartments, Ludgate Hill;
 - 6 Ludgate Hill Apartments;
 - The Marble Arch Public House, 73 Rochdale Road;
 - 85 Rochdale Road; and
 - 18-20 Rochdale Road.
- 2.2.3 We have also identified the external amenity areas associated with The Marble Arch Public House as a sunlight receptor worthy of review. We are also instructed to appraise the sunlight conditions of the external amenity areas of / within the Proposed Development.
- 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 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 bounded by Gould Street, a surface car park and The Marble Arch Public House to the south west, 85 Rochdale Road and the Rochdale Road highway to the south east, Clive Street to the east and the former gas works site to the north and north west. The Site currently comprises an area of open land and a small number of single and two storey commercial (lightweight industrial use) buildings.
- 2.4.2 It is located within North Manchester, as defined by the Core Strategy. It is, however, also located immediately adjacent to the City Centre fringe, as defined in the Core Strategy.
- 2.4.3 The Site surroundings are of mixed uses. To the south west there is high-density residential buildings of circa six and seven storeys. To the north east and south east of the Site, uses are predominantly commercial.
- 2.4.4 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 demolition of all existing buildings on the Site. Two linked residential apartment blocks of 11 and 12 storeys in height will be constructed in an inverted L-shaped configuration. Two small blocks of town or coach houses will also be constructed - one located at the north western corner of the Site; the other at the south eastern end of the Site fronting Clive Street. All open parts of the Site will be landscaped.
- 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 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:
- 18 -20 Rochdale Road – MCC Ref. CDN/20/0515;
 - 73 Rochdale Road – MCC Ref. 129833/FO/2021;
 - 85 Rochdale Road – MCC Ref 094925/FO/2010/N1;
 - The Citadel, Ludgate Hill – Lease plans available from Land Registry; and
 - 6 Ludgate Hill – Lease plans available from Land Registry.

- 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 Core Strategy was adopted on 11th 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 Supplementary Planning Documents (SPDs) provide more detail to policies in the Core Strategy. Manchester adopted its 'Guide to Development in Manchester SPD and Planning Guidance' in April 2007. We understand that it has yet to be updated to reflect the adopted Core Strategy and the saved Policies from the UDP.

3.2.4 The Council will promote / encourage the construction of tall buildings - Policy EN2 of the Core Strategy refers. Proposals for tall buildings will be supported if certain design criteria are met. It is acknowledged that tall buildings can have a significant impact on the local environment and the Council expect that the impact be modelled / measured.

3.2.5 The Council do also acknowledge, in Policy CC1 of the Core Strategy – Primary Economic Development Focus: City Centre and Fringe, that development in the City Centre and Fringe will be considered a suitable location for the consideration of high density buildings.

- 3.2.6 The Site immediately neighbours the City Centre 'Fringe', as defined in Policy CC1, at the edge of Manchester City Centre.
- 3.2.7 The Site falls within the bounds of the 'New Town' area of the Manchester Northern Gateway, defined in the Strategic Regeneration Framework ("the Northern Gateway SRF") for this area of Manchester dated February 2019.
- 3.2.8 This document notes that the New Town area's *"relationship with the city centre and key transport nodes sets the context for a higher density urban form"*.
- 3.2.9 The Northern SRF goes on to confirm via the zoning diagram below that buildings of between 8 and 12 storeys in height are envisaged for the Site, and that in general terms heights of up to 12 storeys should be considered a baseline.



- 3.2.10 In this regard, the impacts of development on the daylight and sunlight amenity of receptors in this area should be considered appropriate if those impacts, and residual daylight and sunlight amenity levels, are considered in line with and appropriate to the increased massing and density envisaged and sought for this area by planning policy.
- 3.2.11 Policy DM1 – Development Management – confirms that all developments should have regard to a number of issues, such as the effects on amenity, including light.
- 3.2.12 In July 2017, the Council published their “Residential Quality Guidance” (“RQG”) with the confirmed intention of providing clear direction on the considerations, qualities, and opportunities that will help to deliver high quality residential development as part of successful and sustainable neighbourhoods across Manchester.
- 3.2.13 In encouraging developers to “appreciate scale” the RQG 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.
- 3.2.14 Although the above-mentioned Local Planning Policy and Guidance makes express reference to daylight and sunlight amenity, no guidance is provided on how daylight and sunlight amenity impact might be measured and evaluated in practice.
- 3.2.15 Accordingly, it is necessary and appropriate 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”. The current edition of the BRE Guidance was published in 2011.
- 3.3.3 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.
- 3.3.4 The BRE Guidance is technically robust and has become the industry standard methodology for assessing daylight and sunlight amenity in the built environment.
- 3.3.5 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’.

- 3.3.6 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.
- 3.3.7 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.

- 3.3.8 The increase in density promoted for the Site and its surroundings by the Northern Gateway SRF, coupled with the flexible approach to residential daylight and sunlight amenity typically applied elsewhere both within and at the edge of Manchester City Centre does, in our opinion, justify the flexible application of the BRE Guidance on this Site.



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 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 an environment at the edge of the City Centre.
- 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 higher density massing environments, through applying BRE principles.

- 4.3.7 To explain, the BRE Guidance confirms that the 27% target VSC is an acceptable level of daylight, and one that is capable and accepted of being reduced to 0.8x in the proposed condition.
- 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 20% reduction 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 certain Site facing windows and rooms in the following neighbouring buildings as sensitive or key receptors:
- The Citadel Apartments, Ludgate Hill;
 - 6 Ludgate Hill Apartments;
 - The Marble Arch Public House, 73 Rochdale Road;
 - 85 Rochdale Road; and
 - 18-20 Rochdale Road.

- 5.2.4 The upper floors of the Marble Arch Public House and 85 Rochdale Road are known to be put to residential use, hence why they have been identified as relevant daylight and sunlight receptors. 18-20 Rochdale Road has the benefit of a Planning Permission for its conversion to residential use and we note that building works are underway.
- 5.2.5 The position of the above neighbouring buildings, 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 the neighbouring buildings considered as part of the Report 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.
- 5.2.8 Not all of the above neighbouring buildings need to be sunlight amenity impact appraised, on the basis that windows of north facing orientation have no reasonable expectation of any direct sunlight. As noted above, the BRE confirm that any windows that are oriented more than 90 degrees of due south do not need to be sunlight impact appraised.
- 5.2.9 Certain external areas forming part of the Marble Arch Public House (73 Rochdale Road) have been subject to a BRE Time in Sun assessment. We are also briefed to Time in Sun appraise the proposed external amenity areas of the Proposed Development itself.

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)
The Citadel Apartments	103 windows (86%)	17 windows (14%)
6 Ludgate Hill Apartments	92 windows (94%)	6 window (6%)
The Marble Arch Public House	3 windows (100%)	0 windows (0%)
85 Rochdale Road	7 windows (100%)	0 windows (0%)
18-20 Rochdale Road	22 windows (100%)	0 windows (0%)

5.3.4 The windows of the neighbouring receptors are predominantly well daylight, the majority (91%) achieving the BRE's aspirational VSC target of 27% in the baseline condition.

5.3.5 23 windows (9%) of those appraised do not achieve the BRE's aspirational targets in the baseline condition. The majority of these serve rooms in the Citadel Apartments, and are either set within an elevational recess or are directly overlooking the neighbouring massing of 6 Ludgate Hill, both of which are inherent limitations on daylight potential.

5.3.6 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 target.

Table 2 – Summary of Baseline APSH Results

Receptors	BRE Pass ($\geq 5\%$ & 25% APSH)	BRE Fail ($< 5\%$ &/or $<25\%$ APSH)
The Citadel Apartments	12 rooms (100%)	0 room (0%)
6 Ludgate Hill Apartments	5 rooms (100%)	0 rooms (0%)
The Marble Arch Public House	n/a – Windows are north facing	
85 Rochdale Road	3 rooms (100%)	0 rooms (0%)
18-20 Rochdale Road	4 rooms (100%)	0 rooms (0%)

- 5.3.7 All rooms appraised (100%) would achieve the BRE's Winter and Annual APSH targets in the Baseline Condition. These rooms receive higher levels of sunlight than would usually be anticipated for apartments at the edge of a city centre. A factor in this high percentage of rooms achieving both the Annual and Winter sunlight targets is the relative absence of massing on the Site in the existing or baseline condition.

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.
- 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 red 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 The results of the APSH daylight tests are tabulated in Appendix 5.
- 5.4.6 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.
- 5.4.7 Because some of the rooms are served by multiple windows or are dual aspect, we have summarised the results of our sunlight study on a room-by-room basis.
- 5.4.8 We have measured the sunlight impact of the Proposed Development against the BRE's 5% winter APSH target and 25% annual APSH target. Where rooms do not achieve these aspirational targets, we have deemed them to be within an acceptable tolerance of them where they achieve a winter APSH of 4% and an annual APSH of 20%. Again, we consider this to be acceptable level of amenity in a built up urban environment.
- 5.4.9 The results of the "Time in Sun" tests can be found at Appendix 5.

- 5.4.10 The tabulated VSC, NSL and APSH 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;
 - Amber 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 results is more than the Acceptable Tolerance reduction.
- 5.4.11 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.
- 5.4.12 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.
- 5.4.13 Therefore, any yellow or pink results for VSC or APSH are considered BRE compliant if the Pr/Ex results are coloured green (i.e. the result in the Proposed Condition is not < 0.8x baseline values, and therefore not noticeable to the room occupants).
- 5.4.14 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.

The Citadel Apartments

The Citadel is a 6-7 storey residential building, located to the west of the Site and separated from it by Gould Street.

Its windows do not overlook the Site directly, however, the Proposed Development will be seen once constructed.

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



Daylight Amenity Impact

120 individual windows have been appraised, serving 84 habitable rooms.

In the baseline condition 103 windows (86%) appraised achieve the 27% VSC target.

17 windows (14%) do not achieve the 27% target in the baseline condition. The majority of these windows are positioned within a recess, which limits the daylight amenity of the rooms. The remainder directly overlook the significant neighbouring mass of the 6 Ludgate Hill apartment building.

Notwithstanding some small measured reductions in the extent to which the sky would continue to be seen over the Site, 116 windows (97%) would continue to either achieve the 27% VSC target in the proposed condition or achieve VSC values that are at least 0.8x the baseline values, which are accepted by the BRE on the grounds that it would not be noticed by the room occupants.

The remaining 4 windows (3%), none of which achieve the BRE target in the baseline condition, are all recessed, and each serves a room also served by a larger, main window that does achieve the BRE target. On that basis the rooms served by this minority of windows would remain well daylight.

As a whole, all 84 rooms (100%) appraised would pass the BRE's NSL test, either experiencing no reduction in NSL, or very minor reductions in NSL that would not be noticeable to the room occupants.

In our opinion, the impact that the Proposed Development will have on the daylight amenity of this neighbouring building is considered to be appropriate and non-significant.

Sunlight Amenity Impact

The majority of the Citadel's window provision is north east facing and, in accordance with the BRE Guidance, on the basis that they are oriented more than 90 degrees from due south, they do not need to be sunlight amenity impact appraised. There are, however, 12 rooms (two per floor) served by a window facing within 90 degrees of due south that have been sunlight impact appraised.

In the existing condition, all 12 of these rooms (100%) would achieve both the Annual and Winter sunlight targets.

In the proposed condition, 11 rooms would continue to achieve both Annual and Winter sunlight targets, or experience reductions that would not be noticeable to the room occupants (acceptable to the BRE on the basis that proposed values remain at least 0.8x of the baseline values).

A single room would achieve the Annual sunlight target, and achieve a winter APSH of 4%, which we consider to be within an Acceptable Tolerance of the BRE target given the urban locale and that planning policy is promoting density and massing in the Site and its surroundings.

In our opinion, the impact that the Proposed Development will have on the sunlight amenity of this neighbouring building is considered to be appropriate and non-significant.

6 Ludgate Hill Apartments

The 6 Ludgate Hill apartment building is located to the south west of the Site and separated from it by Gould Street.

Its Gould Street window provision overlooks the Site directly.

The rooms overlook the Site are known to comprise a mixture of habitable uses –LKDs and bedrooms.



Daylight Amenity Impact

98 individual windows have been appraised, serving 88 habitable rooms.

In the baseline condition, a majority of windows appraised (94%, or 92 windows in total) achieve the 27% VSC target. 6 windows (6%) do not achieve the 27% target in the baseline condition, as a result of their direct outlook towards the two storey, pitched roofed mass of The Marble Arch pub or, at the other end of the building, towards The Citadel apartments.

Notwithstanding small, general reductions in the extent to which the sky would continue to be seen over the Site, 84 windows (86%) would continue to either achieve the 27% VSC target in the proposed condition, or achieve VSC values that are at least 0.8x the baseline values, which are accepted by the BRE on the grounds that it would not be noticed by the room occupants.

The other 14 windows (14%) would achieve a VSC value of at least 23%, which we consider to be within an acceptable tolerance of the BRE's daylight targets given the urban locale of the Site.

59 rooms (67%) of the 88 appraised would pass the BRE's NSL test. 29 rooms (33%) would not pass the test, experiencing a reduction that could be noticeable to the room occupants.

Notwithstanding, 23 of these rooms would continue to receive direct daylight to the majority of their area (to between 51% and 74% each rooms' respective area).

The 6 remaining rooms that do not pass the NSL test are all located at ground and first floor levels (ground floor room refs. R4, R13 & R16 and 1st floor rooms R5, R14 & R17 – see Appendix 4). The following parameters justify the flexible conclusion of these impacts as non-significant:

- All 6 rooms are understood to serve bedrooms. In multi room apartments (contrasted against "studio" apartments), the bedroom is a low sensitivity daylight receptor.
- The rooms are all served by windows that would achieve either the VSC target or acceptable tolerance VSC values, meaning that adequate levels of sky visibility (given the urban locale) will continue to be received at the face of the window.
- These windows / rooms are a statistical minority (only 7% of the Site facing rooms of as a whole).

In our opinion, the impact that the Proposed Development will have on the daylight amenity of this neighbouring building is therefore considered to be appropriate and non-significant.

Sunlight Amenity Impact

The majority of this neighbouring building's Gould Street / Site facing window provision is north east facing and, in accordance with the BRE Guidance, on the basis that they are oriented more than 90 degrees from due south, they do not need to be sunlight amenity impact appraised.

There are 5 rooms (one per floor, located at the corner of Rochdale Road and Gould Street) served by a window within 90 degrees of due south that have been sunlight impact appraised.

In the baseline condition, all 5 rooms (100%) would achieve both Annual and Winter sunlight targets.

In the proposed condition all 5 rooms (100%) would continue to achieve both Annual and Winter sunlight targets, experiencing no reduction in Annual or Winter sunlight.

The Proposed Development will have a non-significant impact on the sunlight amenity of this neighbouring building.

The Marble Arch Public House, 73 Rochdale Road

The Marble Arch is located to the immediate south west of the Site. It has windows within its north west and north east facing elevations that overlook the Site directly.

The upper floors are understood to be of habitable use.



Daylight Amenity Impact

3 individual windows have been appraised, serving 3 assumed habitable rooms.

In the baseline condition, all 3 windows appraised (100%) achieve the BRE's 27% VSC target.

Notwithstanding small, general reductions in the extent to which the sky would continue to be seen over the Site, 2 windows (66%) would continue to either achieve the 27% VSC target in the proposed condition or continue to achieve VSC values of at least 0.8x baseline values, accepted by the BRE on the grounds that it would not be noticed by the room occupants.

The single remaining window (3%) would achieve a VSC value of at least 26%, which we consider to be within an acceptable tolerance of the BRE's 27% target given the urban locale of the Site.

All 3 rooms (100%) appraised would pass the BRE's NSL test, experiencing either no reduction in NSL or, where a measurable reduction is experienced, it would not be noticeable to the room occupants.

On that basis the impact that the Proposed Development will have on the daylight amenity of this neighbouring building is considered to be appropriate and non-significant.

Sunlight Amenity Impact

The windows through which the Proposed Development will be seen are north east and north west facing. In accordance with the BRE Guidance, the windows / rooms are not required to be sunlight amenity impact appraised as they are not oriented within 90 degrees of due south.

Sunlight to External Amenity Spaces

To the rear / north of this neighbouring building, it has two external amenity spaces. The first a garden upon the flat roof of part of the building. The second an external "beer garden" at a lower level.

Both have been "Time in Sun" amenity impact appraised.

To recap, the BRE consider that an external amenity space should appear adequately sunlit throughout the year if at least half of its area receives at least 2 hours of sunlight on 21 March. If this is not achieved, then the BRE consider a 20% reduction of the existing / baseline value to be permissible, on the basis that it would not be noticed by the regular users of the amenity space.

In the baseline condition, these external amenity areas receive 2 hours of sunlight to a combined 40.4% of their area. In the proposed condition, this will see a small / marginal increase to 40.51%.

On this basis, we can conclude that the impact that the Proposed Development will have on the sunlight amenity of these external amenity spaces is considered to be appropriate and non-significant.

85 Rochdale Road

85 Rochdale Road is located to the south of the Site. It has a window provision that overlooks the Site through which the Proposed Development will be seen once constructed.

There is understood to be rooms of residential use to the 1st floor



Daylight Amenity Impact

7 individual windows have been appraised, serving an assumed 6 habitable rooms at 1st floor level.

In the baseline condition, all 7 windows appraised (100%) achieve the BRE's 27% VSC target.

3 windows (43%) would continue to achieve the 27% VSC target in the proposed condition. The rooms served by these windows would also pass the BRE's NSL test, experiencing no noticeable movement in the NSL and receiving internal daylight distribution to the significant majority of their area.

There is a single window (14%) that would achieve a VSC value of at least 21.6%, which we consider to be within an acceptable tolerance of the BRE's 27% target given the urban locale of the Site.

Of the remaining 3 windows, one serves the room that is also served by the acceptable tolerance window noted above. In our opinion, (given the urban locale) the daylight amenity of this room is not materially prejudiced on the basis that at least one of the windows achieve a VSC within an acceptable tolerance of the BRE target, and the room would also comfortably pass the BRE's NSL test.

The remaining 2 windows (29%) do not achieve the BRE's VSC target, and would experience a VSC reduction that would be noticeable to the room occupants. The rooms served by these windows would also not pass the NSL test. This does, however, represent a statistical minority.

On the whole, we consider these impacts to be appropriate and balanced given the urban locale, and the uplift in massing and density in this area that is promoted by planning policy.

Sunlight Amenity Impact

The main Site facing elevation of this building is north facing, as are some of its window provision. On that basis, in accordance with the BRE Guidance, the north facing windows / rooms are not required to be sunlight amenity impact appraised as they are not oriented within 90° of due south.

However, the Site facing elevations of this building does contain some windows that are oriented within 90° of due south. Accordingly, the 3 rooms notionally assumed rooms that are served by these windows have been sunlight amenity impact appraised.

All three rooms (100%) achieve the 25% annual and 5% winter APSH targets in the baseline condition and will continue to achieve these targets in the proposed condition. Some rooms will, in fact, achieve

improvements / gains in annual APSH – a factor of the Proposed Development being located further away than an existing building on the Site that is currently limiting sunlight amenity.

In our opinion, the impact that the Proposed Development will have on the sunlight amenity of this neighbouring building is considered to be appropriate and non-significant.

18-20 Rochdale Road

18-20 Rochdale Road is located to the east of the Site and separated from it by Rochdale Road.

It is a commercial building with the benefit of a Planning Permission for its conversion to residential use, the works of which are currently underway.

Its window provision overlooks part of the Site directly.



Daylight Amenity Impact

22 individual windows have been appraised, serving 8 habitable rooms.

In the baseline condition, all 22 windows (100%) achieve the BRE's 27% VSC target.

Notwithstanding small reductions in the extent to which the sky would continue to be seen over the Site, 21 windows (95%) would continue to achieve the 27% VSC target in the proposed condition

The remaining single window (5%) would achieve a VSC values of 26%, which we consider to be within an acceptable tolerance of the BRE's daylight targets given the urban locale of the Site.

7 rooms (88%) of the 8 appraised would pass the BRE's NSL test, experiencing either no reduction in NSL, or movement in the NSL that would not be noticeable to the room occupants.

The remaining room – a first floor bedroom – would experience a reduction in daylight distribution to 0.79x baseline values which, in qualitative terms, is not materially different from the 0.8x permitted by the BRE on the basis it would not be noticeable to the room occupants.

On that basis the impact that the Proposed Development will have on the daylight amenity of this neighbouring building is considered to be appropriate and non-significant.

Sunlight Amenity Impact

The main Site facing elevation of this building is north facing. On that basis, in accordance with the BRE Guidance, the windows / rooms of that elevation are not required to be sunlight amenity impact appraised as they are not oriented within 90° of due south.

However, the windows in the splayed elevation of this building are south facing and would rely on the Site for some degree of sunlight amenity (in the summer months). Accordingly, the rooms served by these windows have been sunlight amenity impact appraised. On this basis, there are four individual rooms that have been sunlight amenity impact appraised, served by 15 individual windows.

All four rooms (100%) achieve both the 25% annual and 5% winter APSH targets in the baseline condition. Despite minor reductions in the annual APSH, all four rooms will continue to achieve the above annual and winter sunlight targets in the proposed condition.

In our opinion, the impact that the Proposed Development will have on the sunlight amenity of this neighbouring building is considered to be appropriate and non-significant.

External Amenity Areas

There is one external amenity area within the bounds of the Site, comprising the landscaped area between the various buildings of the Proposed Development.



Sunlight Amenity Impact – Landscaped Areas of the Proposed Development

Within the Proposed Development there is landscaped area between the proposed buildings, and this has been “Time in Sun” amenity impact appraised.

To recap, the BRE consider that an external amenity space should appear adequately sunlit throughout the year if at least half of its area receives at least 2 hours of sunlight on 21 March.

As a whole, this landscaped area would receive at least 2 hours of direct sunlight to 71% of its area on 21 March, exceeding the BRE target of 50%. A conclusion can be drawn that this external amenity space would therefore appear adequately sunlit throughout the year.

Appendix 1: Baseline and Proposed Massing Plans

Plan View
Existing Site

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 3D Point Cloud Survey carried out by Norman Oliver Ltd. 3D photogrammetric model produced by Accucities is used for surrounding contextual detail.
Neighbouring Buildings internal room layouts, window positions/dimensions and massing derived from plans found on the planning portal.
Where plans/elevations were unavailable assumptions have been made based on site photography, Bing Maps and Google Earth.

Proposed Model
Proposed scheme massing -
"136-JMA-ZZ-XX-M3-A-0002-Architectural.dwg"
Supplied by Joanna Beal of JMA on 23/06/2021.

Massing Legend

Existing
Proposed

All heights in m AOD

REV:	NOTES:	DRWN:	DATE:



The Old Post Office, 63 Newton Street, Manchester, M1 1ET
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CLIENT:
Portwood Developments Limited

PROJECT:
New Development
Rochdale Road
Manchester

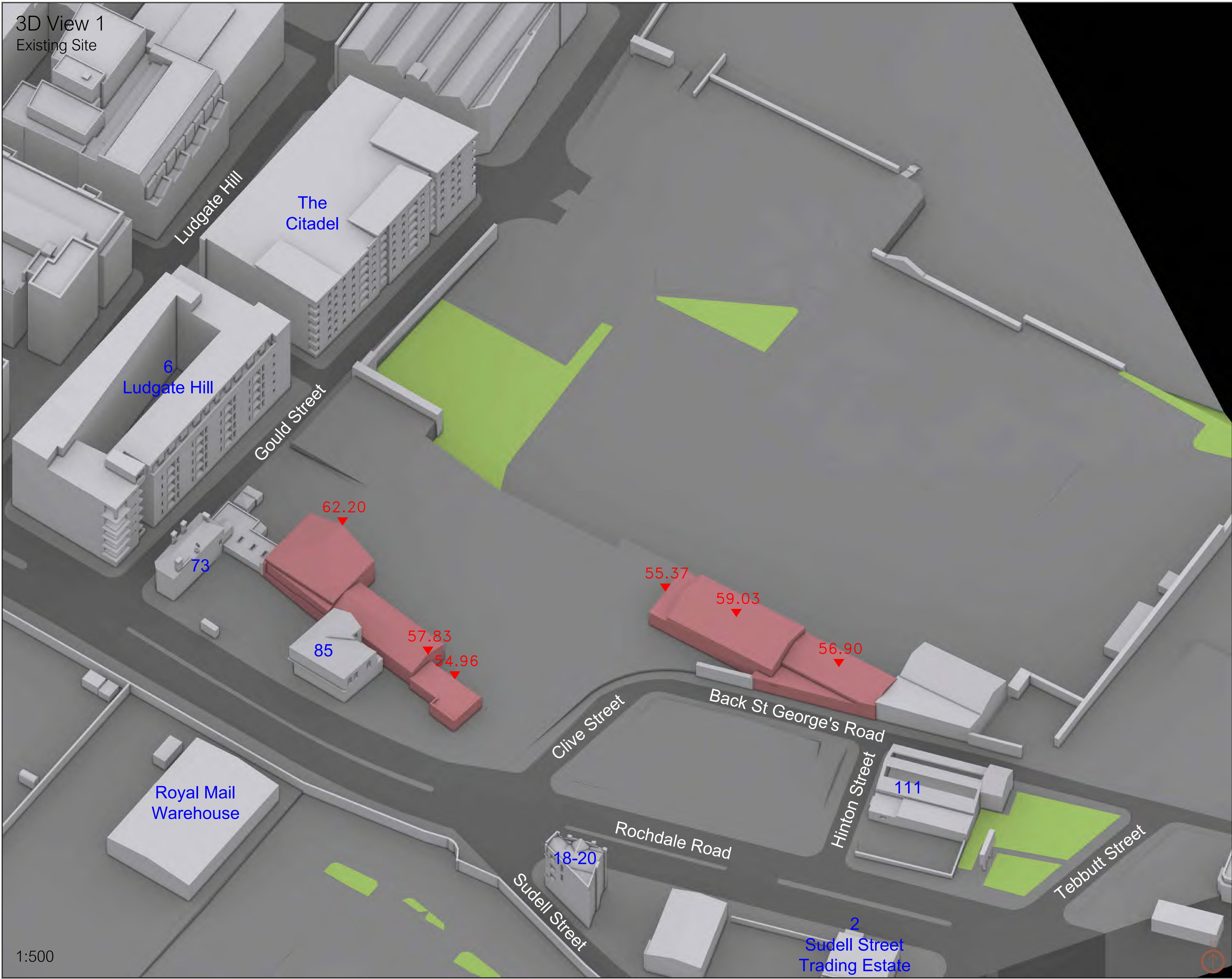
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Plan View
Existing Site

SCALE @ A2: 1:500	DATE: 19.08.2021	DRAWN: GSH
	CHECKED: DMH	

DRAWING NUMBER: 2871_MA-01	REV: .
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3D View 1
Existing Site



NOTES:
No dimensions are to be scaled from this drawing.
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Analysis
Produced using WalDRAM Tools
MBS Survey Software Ltd (www.mbs-software.co.uk)

Existing Model & Surrounding Model
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Proposed Model
Proposed scheme massing -
"136-JMA-ZZ-XX-M3-A-0002-Architectural.dwg"
Supplied by Joanna Beal of JMA on 23/06/2021.

Massing Legend

Existing

Proposed

All heights in m AOD

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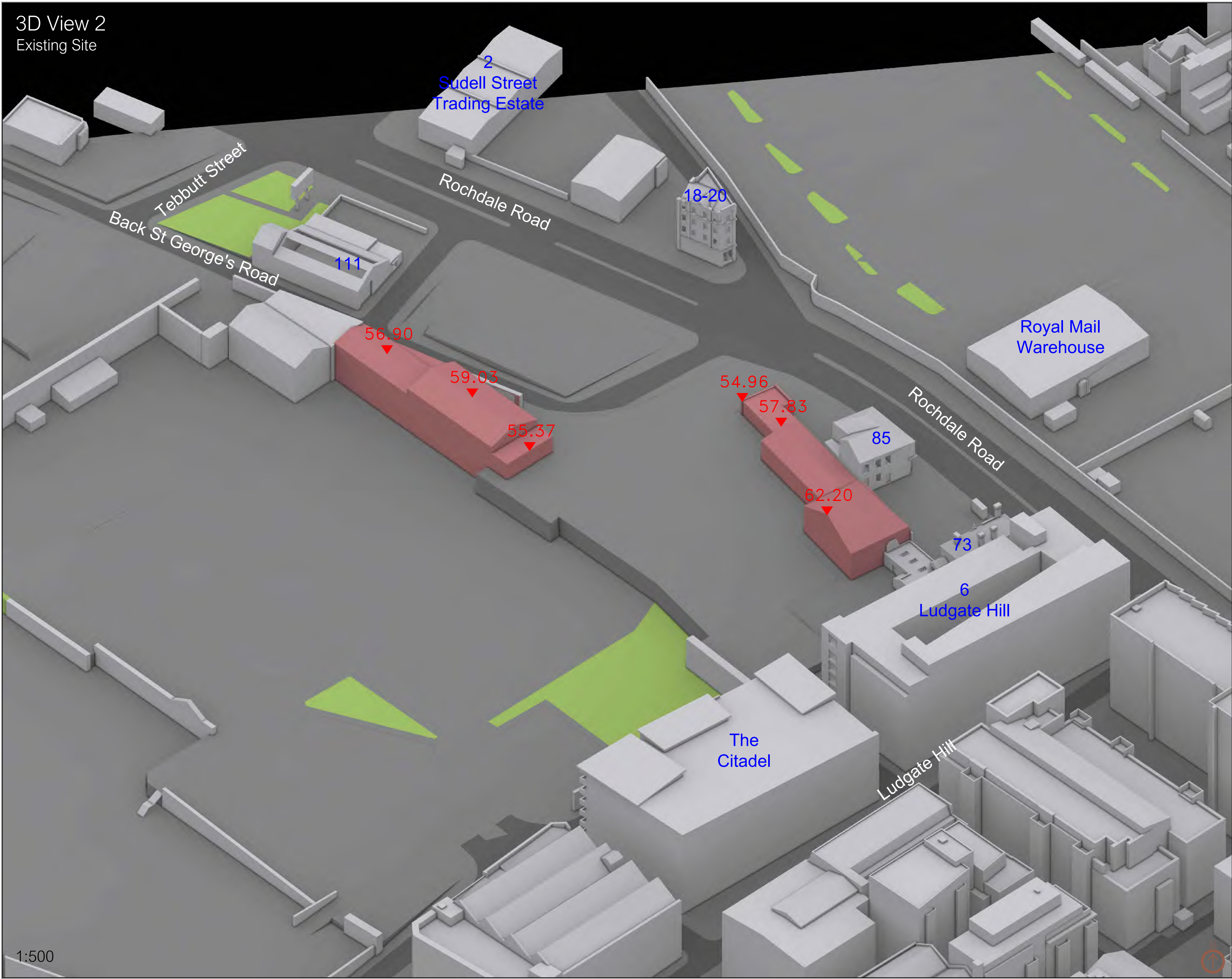
PROJECT:
New Development
Rochdale Road
Manchester

DRAWING TITLE:
3D View 1
Existing Site

SCALE @ A2: 1:500	DATE: 19.08.2021	DRAWN: GSH
	CHECKED: DMH	

DRAWING NUMBER: 2871_MA-02	REV: .
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3D View 2
Existing Site



NOTES:
No dimensions are to be scaled from this drawing.
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Analysis
Produced using WalDRAM Tools
MBS Survey Software Ltd (www.mbs-software.co.uk)

Existing Model & Surrounding Model
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Neighbouring Buildings internal room layouts, window positions/dimensions and massing derived from plans found on the planning portal.
Where plans/elevations were unavailable assumptions have been made based on site photography, Bing Maps and Google Earth.

Proposed Model
Proposed scheme massing -
"136-JMA-ZZ-XX-M3-A-0002-Architectural.dwg"
Supplied by Joanna Beal of JMA on 23/06/2021.

Massing Legend

Existing

Proposed

All heights in m AOD

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Manchester

DRAWING TITLE:
3D View 2
Existing Site

SCALE @ A2: 1:500	DATE: 19.08.2021	DRAWN: GSH
	CHECKED: DMH	

DRAWING NUMBER: 2871_MA-03	REV: .
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Plan View
Proposed Scheme

1:500

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 3D Point Cloud Survey carried out by Norman Oliver Ltd. 3D photogrammetric model produced by Accucities is used for surrounding contextual detail.
Neighbouring Buildings internal room layouts, window positions/dimensions and massing derived from plans found on the planning portal.
Where plans/elevations were unavailable assumptions have been made based on site photography, Bing Maps and Google Earth.

Proposed Model
Proposed scheme massing -
"136-JMA-ZZ-XX-M3-A-0002-Architectural.dwg"
Supplied by Joanna Beal of JMA on 23/06/2021.

Massing Legend

Existing

Proposed

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PROJECT:
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Manchester

DRAWING TITLE:
Plan View
Proposed Scheme

SCALE @ A2:	DATE:	DRAWN:	GSH
1:500	19.08.2021	CHECKED:	DMH

DRAWING NUMBER:	REV:
2871_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 Waldrum Tools
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Existing Model & Surrounding Model
Existing Site derived from a 3D Point Cloud Survey carried out by Norman Oliver Ltd. 3D photogrammetric model produced by Accuties is used for surrounding contextual detail.
Neighbouring Buildings internal room layouts, window positions/dimensions and massing derived from plans found on the planning portal.
Where plans/elevations were unavailable assumptions have been made based on site photography, Bing Maps and Google Earth.

Proposed Model
Proposed scheme massing -
"136-JMA-ZZ-XX-M3-A-0002-Architectural.dwg"
Supplied by Joanna Beal of JMA on 23/06/2021.

Massing Legend

Existing
Proposed

All heights in m AOD

REV:	NOTES:	DRWN:	DATE:



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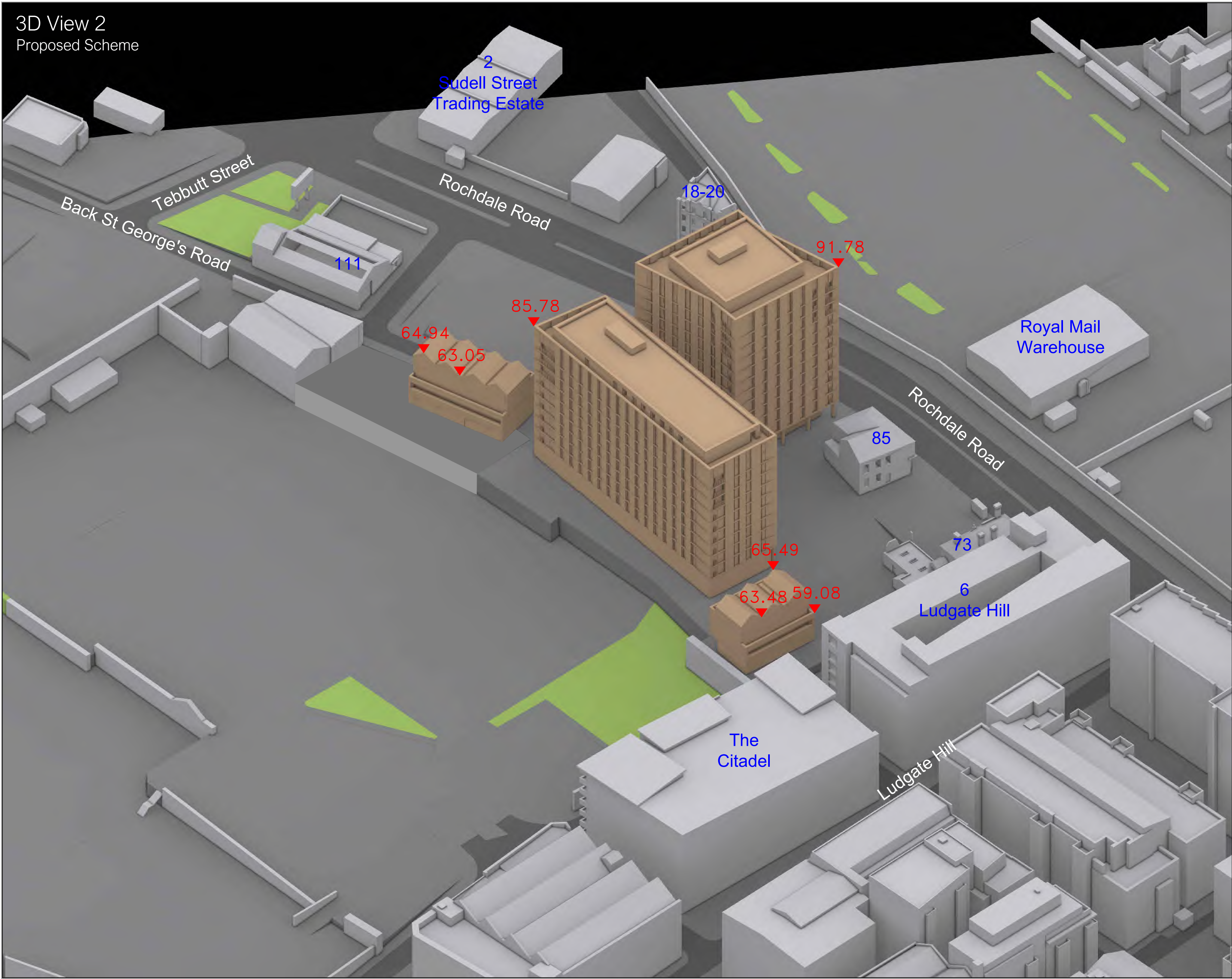
PROJECT:
New Development
Rochdale Road
Manchester

DRAWING TITLE:
3D View 1
Proposed Scheme

SCALE @ A2: 1:500	DATE: 19.08.2021	DRAWN: GSH
CHECKED: DMH		REV: .

DRAWING NUMBER:
2871_MA-02

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
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Neighbouring Buildings internal room layouts, window positions/dimensions and massing derived from plans found on the planning portal.
Where plans/elevations were unavailable assumptions have been made based on site photography, Bing Maps and Google Earth.

Proposed Model
Proposed scheme massing -
"136-JMA-ZZ-XX-M3-A-0002-Architectural.dwg"
Supplied by Joanna Beal of JMA on 23/06/2021.

Massing Legend

Existing

Proposed

All heights in m AOD

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CLIENT:
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PROJECT:
New Development
Rochdale Road
Manchester

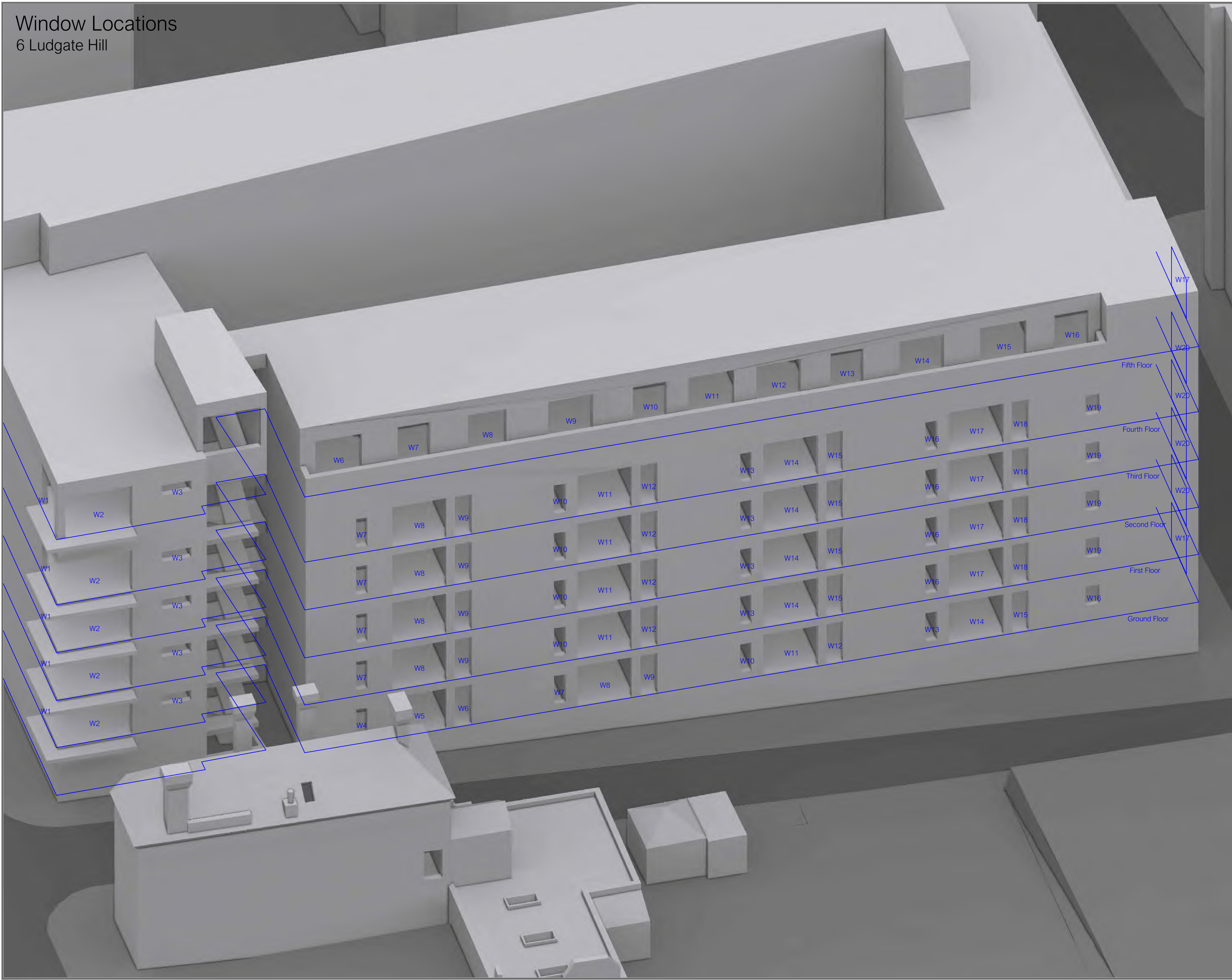
DRAWING TITLE:
3D View 2
Proposed Scheme

SCALE @ A2:	DATE:	DRAWN:	GSH
1:500	19.08.2021	CHECKED:	DMH

DRAWING NUMBER:	REV:
2871_MA-06	.

Appendix 2: Window Reference Plans

Window Locations
6 Ludgate Hill



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 3D Point Cloud Survey carried out by Norman Oliver Ltd. 3D photogrametric model produced by Accucities is used for surrounding contextual detail.
Neighbouring Buildings internal room layouts, window positions/dimensions and massing derived from plans found on the planning portal.
Where plans/elevations were unavailable assumptions have been made based on site photography, Bing Maps and Google Earth.
Proposed Model
Proposed scheme massing -
"136-JMA-ZZ-XX-M3-A-0002-Architectural.dwg"
Supplied by Joanna Beal of JMA on 23/06/2021.

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:
Portwood Developments Limited

PROJECT:
New Development
Rochdale Road
Manchester

DRAWING TITLE:
Window Locations
6 Ludgate Hill

SCALE @ A2: NTS	DATE: 19.08.2021	DRAWN: GSH
	CHECKED: DMH	

DRAWING NUMBER: 2871_MA-13	REV: .
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Window Locations
The Citadel

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 3D Point Cloud Survey carried out by Norman Oliver Ltd. 3D photogrametric model produced by Accucities is used for surrounding contextual detail.
Neighbouring Buildings internal room layouts, window positions/dimensions and massing derived from plans found on the planning portal.
Where plans/elevations were unavailable assumptions have been made based on site photography, Bing Maps and Google Earth.

Proposed Model
Proposed scheme massing -
"136-JMA-ZZ-XX-M3-A-0002-Architectural.dwg"
Supplied by Joanna Beal of JMA on 23/06/2021.

Massing Legend

Existing
Proposed

All heights in m AOD

REV:	NOTES:	DRWN:	DATE:



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Tel: 0161 835 2101
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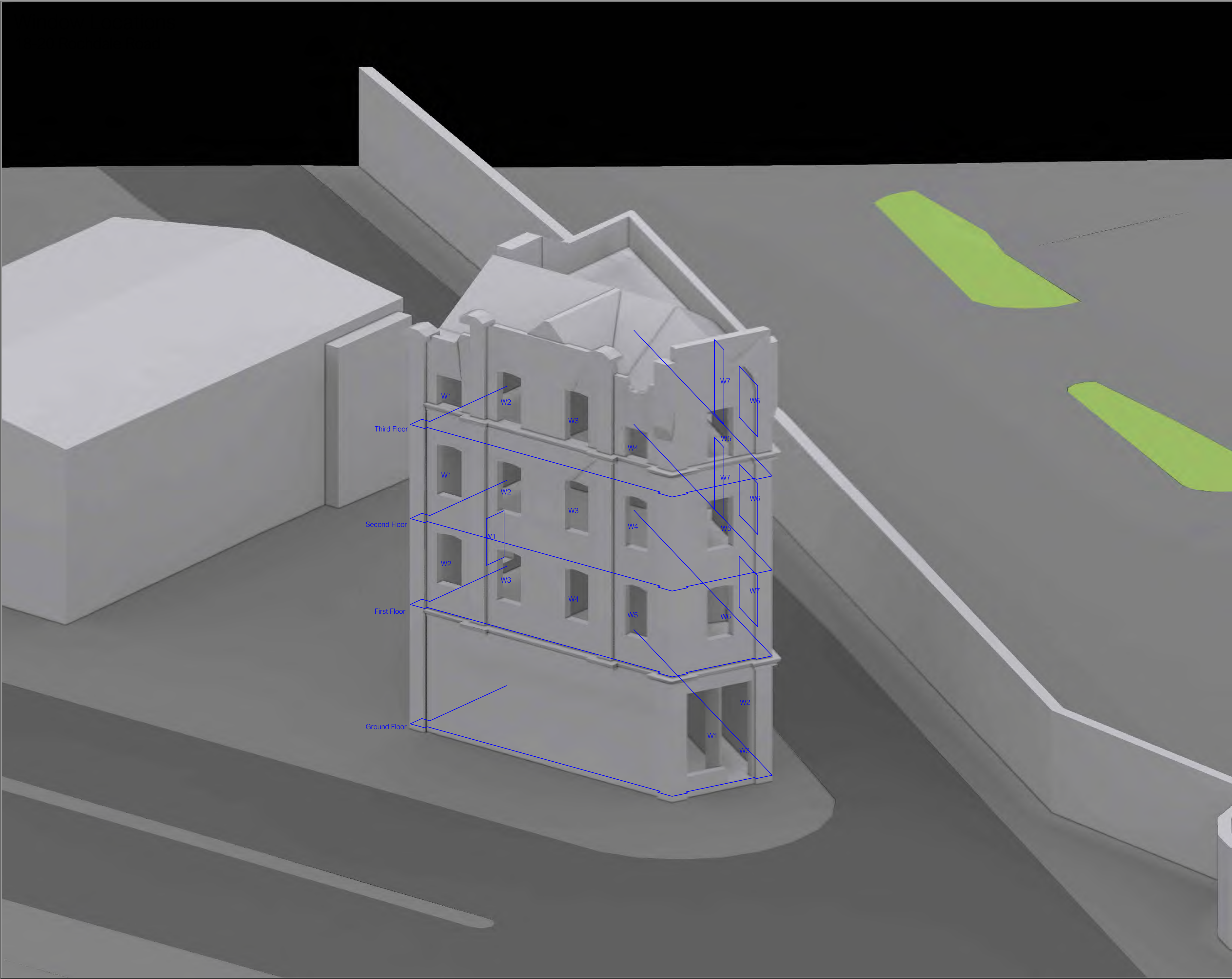
CLIENT:
Portwood Developments Limited

PROJECT:
New Development
Rochdale Road
Manchester

DRAWING TITLE:
Window Locations
The Citadel

SCALE @ A2:	DATE:	DRAWN:	GSH
NTS	19.08.2021	CHECKED:	DMH

DRAWING NUMBER: 2871_MA-14	REV: .
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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 3D Point Cloud Survey carried out by Norman Oliver Ltd. 3D photogrammetric model produced by Accucities is used for surrounding contextual detail.
Neighbouring Buildings internal room layouts, window positions/dimensions and massing derived from plans found on the planning portal.
Where plans/elevations were unavailable assumptions have been made based on site photography, Bing Maps and Google Earth.

Proposed Model
Proposed scheme massing -
"136-JMA-ZZ-XX-M3-A-0002-Architectural.dwg"
Supplied by Joanna Beal of JMA on 23/06/2021.

Massing Legend

Existing

Proposed

All heights in m AOD

REV:	NOTES:	DRWN:	DATE:



grayscanlanhill
chartered building surveyors

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Tel: 0161 835 2101
Email: info@grayscanlanhill.com Web: www.grayscanlanhill.com

CLIENT:
Portwood Developments Limited

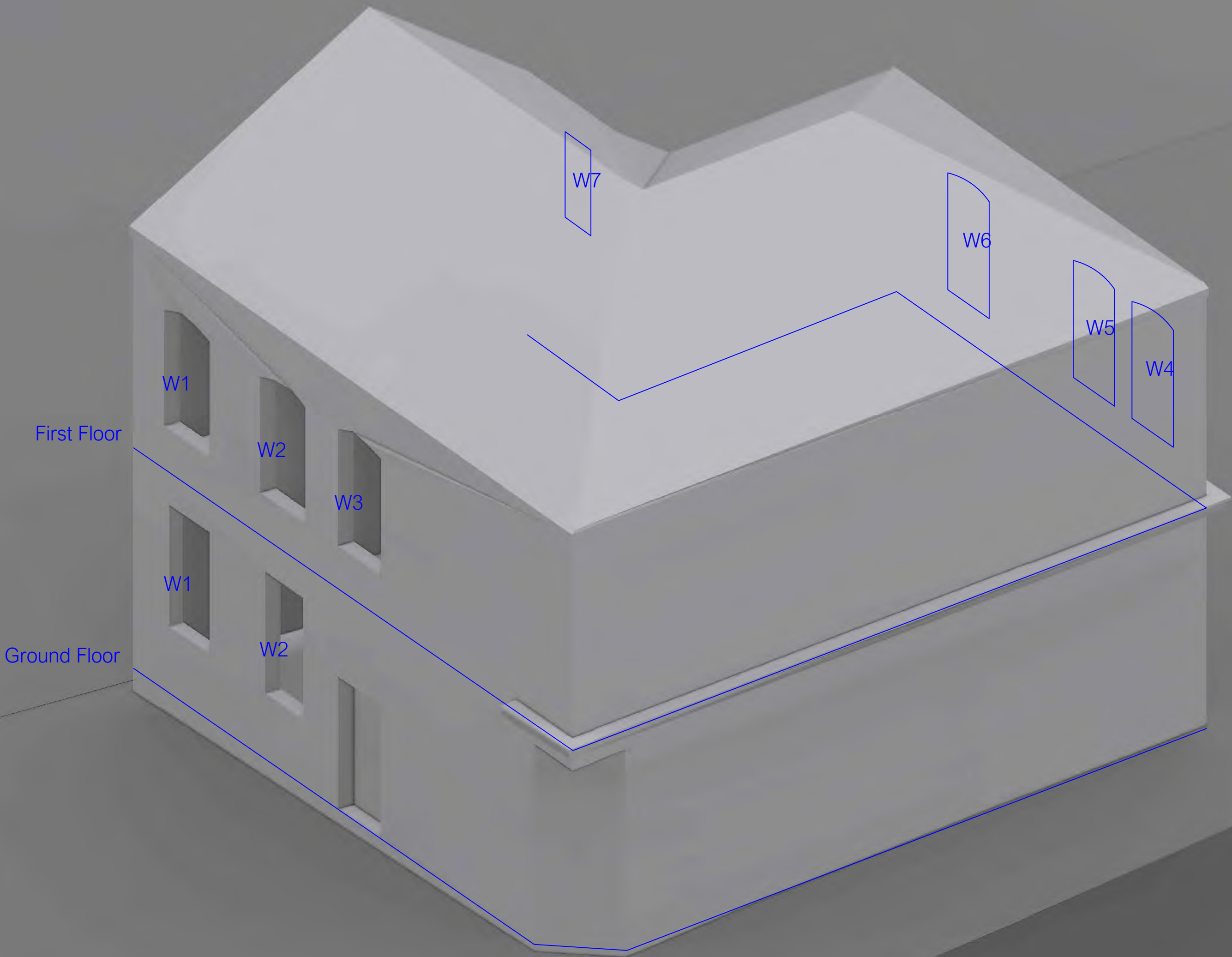
PROJECT:
New Development
Rochdale Road
Manchester

DRAWING TITLE:
Window Locations
18-20 Rochdale Road

SCALE @ A2:	DATE:	DRAWN:	GSH
NTS	19.08.2021	CHECKED:	DMH

DRAWING NUMBER:	REV:
2871_MA-15	.

Window Locations
85 Rochdale Road



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 3D Point Cloud Survey carried out by Norman Oliver Ltd. 3D photogrammetric model produced by Accucities is used for surrounding contextual detail.
Neighbouring Buildings internal room layouts, window positions/dimensions and massing derived from plans found on the planning portal.
Where plans/elevations were unavailable assumptions have been made based on site photography, Bing Maps and Google Earth.

Proposed Model
Proposed scheme massing -
"136-JMA-ZZ-XX-M3-A-0002-Architectural.dwg"
Supplied by Joanna Beal of JMA on 23/06/2021.

Massing Legend

Existing
Proposed

All heights in m AOD

REV:	NOTES:	DRWN:	DATE:



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CLIENT:
Portwood Developments Limited

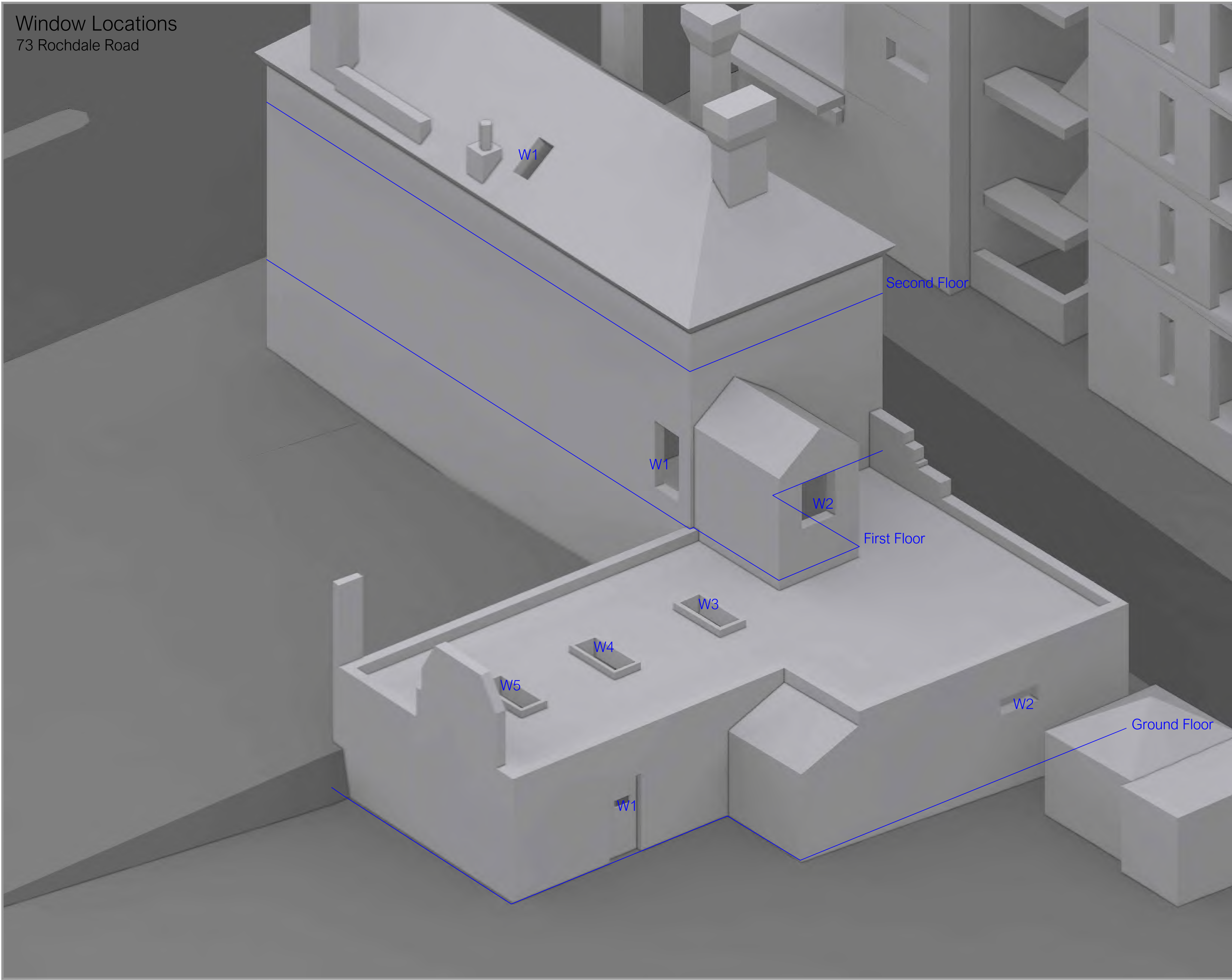
PROJECT:
New Development
Rochdale Road
Manchester

DRAWING TITLE:
Window Locations
18-20 Rochdale Road

SCALE @ A2: NTS	DATE: 19.08.2021	DRAWN: GSH
	CHECKED: DMH	

DRAWING NUMBER: 2871_MA-16	REV: .
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Window Locations
73 Rochdale Road



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 3D Point Cloud Survey carried out by Norman Oliver Ltd. 3D photogrammetric model produced by Accucities is used for surrounding contextual detail.
Neighbouring Buildings internal room layouts, window positions/dimensions and massing derived from plans found on the planning portal.
Where plans/elevations were unavailable assumptions have been made based on site photography, Bing Maps and Google Earth.

Proposed Model
Proposed scheme massing -
"136-JMA-ZZ-XX-M3-A-0002-Architectural.dwg"
Supplied by Joanna Beal of JMA on 23/06/2021.

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:
Portwood Developments Limited

PROJECT:
New Development
Rochdale Road
Manchester

DRAWING TITLE:
Window Locations
18-20 Rochdale Road

SCALE @ A2:	DATE:	DRAWN:	GSH
NTS	19.08.2021	CHECKED:	DMH

DRAWING NUMBER: 2871_MA-17	REV: .
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Appendix 3: Baseline vs Proposed VSC Results

Project Name: New Development Rochdale Road
Project No.: 2871
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
The Citadel Ludgate Hill									
Ground	R1		Residential	Unknown	W1	17.97	15.19	2.78	0.85
					W2	36.50	29.29	7.21	0.80
					W3	36.62	31.46	5.16	0.86
					W4	36.99	31.95	5.05	0.86
	R2		Residential	Unknown	W5	37.39	32.35	5.04	0.87
	R3		Residential	Unknown	W6	37.75	32.70	5.05	0.87
	R4		Residential	Unknown	W7	37.99	33.01	4.98	0.87
	R5		Residential	Unknown	W8	38.38	33.54	4.83	0.87
	R6		Residential	Unknown	W9	37.47	32.97	4.50	0.88
	R7		Residential	Unknown	W10	38.47	34.19	4.28	0.89
	R8		Residential	Unknown	W11	38.53	34.51	4.02	0.90
	R9		Residential	Unknown	W12	38.52	34.75	3.77	0.90
	R10		Residential	Unknown	W13	38.68	35.17	3.51	0.91
	R11		Residential	Unknown	W14	17.38	16.61	0.77	0.96
	R12		Residential	Unknown	W15	12.36	8.84	3.52	0.72
					W16	38.73	35.68	3.05	0.92
	R13		Residential	Unknown	W17	38.77	35.94	2.82	0.93
	R14		Residential	Unknown	W18	38.78	36.09	2.69	0.93
					W19	38.82	36.41	2.41	0.94
					W20	28.62	28.62	0.00	1.00
First	R1		Residential	Unknown	W1	19.28	16.73	2.55	0.87
					W2	38.53	31.85	6.68	0.83
					W3	38.66	32.76	5.90	0.85
					W4	38.70	32.92	5.79	0.85
	R2		Residential	Unknown	W5	38.81	33.24	5.57	0.86
	R3		Residential	Unknown	W6	38.85	33.54	5.30	0.86
	R4		Residential	Unknown	W7	38.86	33.83	5.03	0.87
	R5		Residential	Unknown	W8	38.95	34.29	4.66	0.88
	R6		Residential	Unknown	W9	38.01	33.68	4.33	0.89
	R7		Residential	Unknown	W10	38.93	34.85	4.08	0.90
	R8		Residential	Unknown	W11	38.95	35.14	3.81	0.90
	R9		Residential	Unknown	W12	38.94	35.37	3.58	0.91
	R10		Residential	Unknown	W13	39.02	35.72	3.30	0.92

Project Name: New Development Rochdale Road
 Project No.: 2871
 Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R11		Residential	Unknown	W14	17.44	16.71	0.73	0.96
	R12		Residential	Unknown	W15	12.79	9.49	3.30	0.74
					W16	39.05	36.18	2.87	0.93
	R13		Residential	Unknown	W17	39.07	36.42	2.66	0.93
	R14		Residential	Unknown	W18	39.08	36.55	2.53	0.94
					W19	39.11	36.83	2.27	0.94
					W20	30.98	30.98	0.00	1.00
Second	R1		Residential	Unknown	W1	20.80	18.41	2.39	0.89
					W2	38.95	32.95	6.00	0.85
					W3	39.05	33.55	5.50	0.86
					W4	39.07	33.71	5.36	0.86
	R2		Residential	Unknown	W5	39.16	34.03	5.14	0.87
	R3		Residential	Unknown	W6	39.18	34.28	4.90	0.87
	R4		Residential	Unknown	W7	39.20	34.58	4.62	0.88
	R5		Residential	Unknown	W8	39.26	34.98	4.28	0.89
	R6		Residential	Unknown	W9	38.29	34.28	4.01	0.90
	R7		Residential	Unknown	W10	39.21	35.44	3.76	0.90
	R8		Residential	Unknown	W11	39.22	35.69	3.53	0.91
	R9		Residential	Unknown	W12	39.21	35.89	3.32	0.92
	R10		Residential	Unknown	W13	39.25	36.20	3.05	0.92
	R11		Residential	Unknown	W14	17.64	16.95	0.69	0.96
	R12		Residential	Unknown	W15	13.02	9.98	3.05	0.77
					W16	39.27	36.60	2.66	0.93
	R13		Residential	Unknown	W17	39.28	36.81	2.47	0.94
	R14		Residential	Unknown	W18	39.29	36.93	2.36	0.94
					W19	39.30	37.18	2.12	0.95
					W20	33.95	33.95	0.00	1.00
Third	R1		Residential	Unknown	W1	22.70	20.45	2.24	0.90
					W2	39.24	33.85	5.39	0.86
					W3	39.29	34.26	5.03	0.87
					W4	39.30	34.42	4.88	0.88
	R2		Residential	Unknown	W5	39.38	34.74	4.65	0.88
	R3		Residential	Unknown	W6	39.40	34.98	4.42	0.89
	R4		Residential	Unknown	W7	39.41	35.25	4.16	0.89
	R5		Residential	Unknown	W8	39.43	35.61	3.83	0.90

Project Name: New Development Rochdale Road
 Project No.: 2871
 Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R6		Residential	Unknown	W9	38.43	34.83	3.60	0.91
	R7		Residential	Unknown	W10	39.37	36.00	3.37	0.91
	R8		Residential	Unknown	W11	39.36	36.20	3.16	0.92
	R9		Residential	Unknown	W12	39.36	36.37	2.99	0.92
	R10		Residential	Unknown	W13	39.37	36.64	2.74	0.93
	R11		Residential	Unknown	W14	17.89	17.27	0.62	0.97
	R12		Residential	Unknown	W15	13.20	10.48	2.73	0.79
					W16	39.38	36.98	2.40	0.94
	R13		Residential	Unknown	W17	39.38	37.15	2.23	0.94
	R14		Residential	Unknown	W18	39.39	37.26	2.13	0.95
					W19	39.40	37.49	1.91	0.95
					W20	37.11	37.11	0.00	1.00
Fourth	R1		Residential	Unknown	W1	25.12	23.11	2.01	0.92
					W2	39.28	34.59	4.69	0.88
					W3	39.28	34.87	4.41	0.89
					W4	39.30	35.04	4.26	0.89
	R2		Residential	Unknown	W5	39.44	35.40	4.04	0.90
	R3		Residential	Unknown	W6	39.48	35.66	3.82	0.90
	R4		Residential	Unknown	W7	39.49	35.89	3.60	0.91
	R5		Residential	Unknown	W8	39.49	36.20	3.28	0.92
	R6		Residential	Unknown	W9	38.40	35.30	3.10	0.92
	R7		Residential	Unknown	W10	39.35	36.48	2.87	0.93
	R8		Residential	Unknown	W11	39.34	36.64	2.70	0.93
	R9		Residential	Unknown	W12	39.34	36.78	2.57	0.93
	R10		Residential	Unknown	W13	39.33	37.00	2.33	0.94
	R11		Residential	Unknown	W14	17.01	16.49	0.51	0.97
	R12		Residential	Unknown	W15	13.08	10.74	2.33	0.82
					W16	39.31	37.25	2.05	0.95
	R13		Residential	Unknown	W17	39.29	37.39	1.91	0.95
	R14		Residential	Unknown	W18	39.29	37.47	1.82	0.95
					W19	39.33	37.69	1.63	0.96
					W20	39.18	39.18	0.00	1.00

Project Name: New Development Rochdale Road
Project No.: 2871
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
Fifth	R1		Residential	Unknown	W1	28.21	26.43	1.78	0.94
					W2	39.06	34.99	4.07	0.90
					W3	38.82	35.02	3.79	0.90
					W4	38.81	35.17	3.64	0.91
	R2		Residential	Unknown	W5	39.33	35.90	3.43	0.91
	R3		Residential	Unknown	W6	39.53	36.30	3.23	0.92
	R4		Residential	Unknown	W7	39.54	36.50	3.04	0.92
	R5		Residential	Unknown	W8	39.44	36.68	2.76	0.93
	R6		Residential	Unknown	W9	37.84	35.24	2.60	0.93
	R7		Residential	Unknown	W10	39.14	36.73	2.40	0.94
	R8		Residential	Unknown	W11	39.12	36.86	2.27	0.94
	R9		Residential	Unknown	W12	39.16	37.00	2.15	0.94
	R10		Residential	Unknown	W13	39.10	37.13	1.96	0.95
	R11		Residential	Unknown	W14	24.29	23.87	0.42	0.98
	R12		Residential	Unknown	W15	16.01	14.06	1.95	0.88
					W16	39.00	37.28	1.72	0.96
	R13		Residential	Unknown	W17	38.84	37.24	1.61	0.96
	R14		Residential	Unknown	W18	38.76	37.22	1.53	0.96
					W19	38.66	37.28	1.38	0.96
					W20	38.53	38.53	0.00	1.00
6 Ludgate Hill									
Ground	R4		Residential	Unknown	W4	26.84	22.10	4.74	0.82
	R5		Residential	Unknown	W5	29.06	22.95	6.12	0.79
	R6		Residential	Unknown	W6	30.79	23.56	7.22	0.77
	R7		Residential	Unknown	W7	33.58	25.00	8.58	0.74
	R8		Residential	Unknown	W8	34.49	25.39	9.10	0.74
	R9		Residential	Unknown	W9	35.32	25.68	9.63	0.73
	R10		Residential	Unknown	W10	36.57	25.89	10.68	0.71
	R11		Residential	Unknown	W11	36.91	25.87	11.05	0.70
	R12		Residential	Unknown	W12	37.16	25.78	11.38	0.69
	R13		Residential	Unknown	W13	37.60	25.08	12.52	0.67
	R14		Residential	Unknown	W14	37.74	25.11	12.63	0.67

Project Name: New Development Rochdale Road
Project No.: 2871
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R15		Residential	Unknown	W15	37.86	25.25	12.61	0.67
	R16		Residential	Unknown	W16	38.14	25.87	12.27	0.68
	R17		Residential	Unknown	W17	17.76	17.10	0.66	0.96
First	R1		Residential	Unknown	W1	28.28	28.28	0.00	1.00
					W2	24.20	23.45	0.75	0.97
					W3	29.28	27.62	1.66	0.94
	R5		Residential	Unknown	W7	31.42	26.04	5.38	0.83
	R6		Residential	Unknown	W8	33.21	26.22	6.99	0.79
	R7		Residential	Unknown	W9	34.33	26.77	7.56	0.78
	R8		Residential	Unknown	W10	36.07	27.79	8.29	0.77
	R9		Residential	Unknown	W11	36.63	27.96	8.67	0.76
	R10		Residential	Unknown	W12	37.14	28.11	9.04	0.76
	R11		Residential	Unknown	W13	37.90	28.11	9.79	0.74
	R12		Residential	Unknown	W14	38.11	28.09	10.02	0.74
	R13		Residential	Unknown	W15	38.26	28.02	10.24	0.73
	R14		Residential	Unknown	W16	38.51	27.35	11.16	0.71
	R15		Residential	Unknown	W17	38.59	27.42	11.17	0.71
	R16		Residential	Unknown	W18	38.65	27.60	11.05	0.71
	R17		Residential	Unknown	W19	38.79	28.19	10.60	0.73
	R18		Residential	Unknown	W20	19.54	19.07	0.47	0.98
Second	R1		Residential	Unknown	W1	28.92	28.92	0.00	1.00
					W2	28.68	25.94	2.74	0.90
					W3	34.85	31.37	3.48	0.90
	R5		Residential	Unknown	W7	35.75	29.70	6.05	0.83
	R6		Residential	Unknown	W8	36.70	29.57	7.13	0.81
	R7		Residential	Unknown	W9	37.22	29.83	7.39	0.80
	R8		Residential	Unknown	W10	38.10	30.25	7.85	0.79
	R9		Residential	Unknown	W11	38.34	30.27	8.08	0.79
	R10		Residential	Unknown	W12	38.55	30.27	8.28	0.79
	R11		Residential	Unknown	W13	38.88	30.12	8.75	0.77
	R12		Residential	Unknown	W14	38.97	30.10	8.87	0.77

Project Name: New Development Rochdale Road
Project No.: 2871
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R13		Residential	Unknown	W15	39.03	30.06	8.97	0.77
	R14		Residential	Unknown	W16	39.14	29.56	9.57	0.76
	R15		Residential	Unknown	W17	39.16	29.69	9.47	0.76
	R16		Residential	Unknown	W18	39.18	29.93	9.25	0.76
	R17		Residential	Unknown	W19	39.26	30.53	8.73	0.78
	R18		Residential	Unknown	W20	22.28	22.01	0.27	0.99
Third	R1		Residential	Unknown	W1	29.14	29.14	0.00	1.00
					W2	31.86	26.98	4.88	0.85
					W3	38.72	33.48	5.24	0.86
	R5		Residential	Unknown	W7	39.05	32.87	6.18	0.84
	R6		Residential	Unknown	W8	39.13	32.58	6.55	0.83
	R7		Residential	Unknown	W9	39.23	32.50	6.73	0.83
	R8		Residential	Unknown	W10	39.38	32.31	7.07	0.82
	R9		Residential	Unknown	W11	39.40	32.18	7.22	0.82
	R10		Residential	Unknown	W12	39.42	32.10	7.32	0.81
	R11		Residential	Unknown	W13	39.47	31.93	7.54	0.81
	R12		Residential	Unknown	W14	39.47	31.92	7.55	0.81
	R13		Residential	Unknown	W15	39.48	31.94	7.54	0.81
	R14		Residential	Unknown	W16	39.48	31.65	7.84	0.80
	R15		Residential	Unknown	W17	39.49	31.81	7.68	0.81
	R16		Residential	Unknown	W18	39.49	32.06	7.43	0.81
	R17		Residential	Unknown	W19	39.50	32.68	6.82	0.83
	R18		Residential	Unknown	W20	26.65	26.55	0.10	1.00
Fourth	R1		Residential	Unknown	W1	34.62	34.62	0.00	1.00
					W2	37.51	32.85	4.66	0.88
					W3	39.28	34.45	4.83	0.88
	R5		Residential	Unknown	W7	39.55	34.07	5.48	0.86
	R6		Residential	Unknown	W8	39.56	33.92	5.64	0.86
	R7		Residential	Unknown	W9	39.56	33.78	5.78	0.85
	R8		Residential	Unknown	W10	39.57	33.56	6.00	0.85
	R9		Residential	Unknown	W11	39.57	33.47	6.09	0.85

Project Name: New Development Rochdale Road
Project No.: 2871
Report Title: Daylight & Sunlight - Neighbour Analysis

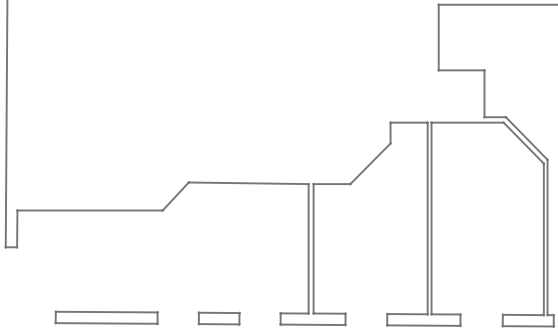
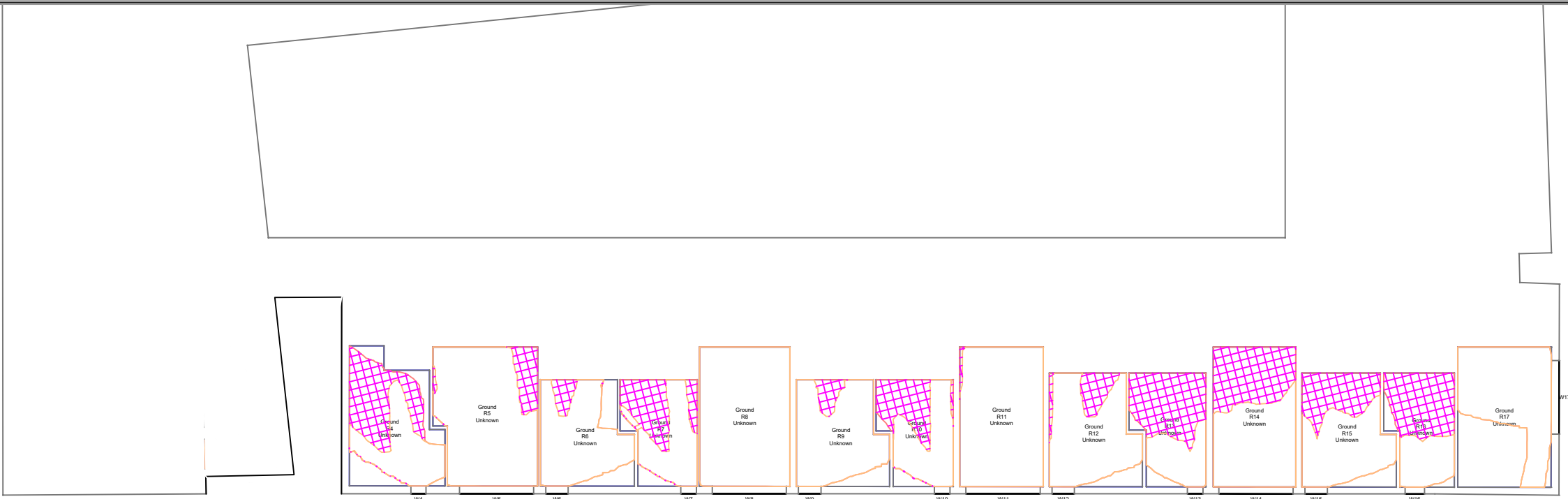
Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R10		Residential	Unknown	W12	39.57	33.44	6.14	0.84
	R11		Residential	Unknown	W13	39.57	33.38	6.19	0.84
	R12		Residential	Unknown	W14	39.57	33.44	6.13	0.85
	R13		Residential	Unknown	W15	39.57	33.52	6.05	0.85
	R14		Residential	Unknown	W16	39.56	33.37	6.19	0.84
	R15		Residential	Unknown	W17	39.56	33.52	6.03	0.85
	R16		Residential	Unknown	W18	39.55	33.73	5.82	0.85
	R17		Residential	Unknown	W19	39.54	34.22	5.32	0.87
	R18		Residential	Unknown	W20	32.77	32.77	0.00	1.00
Fifth	R1		Residential	Unknown	W1	37.03	37.03	0.00	1.00
					W2	39.61	35.79	3.83	0.90
					W3	39.61	35.70	3.92	0.90
	R5		Residential	Unknown	W6	39.46	35.13	4.33	0.89
	R6		Residential	Unknown	W7	39.55	35.07	4.48	0.89
	R7		Residential	Unknown	W8	39.59	34.97	4.62	0.88
	R8		Residential	Unknown	W9	39.59	34.84	4.76	0.88
	R9		Residential	Unknown	W10	39.60	34.75	4.85	0.88
	R10		Residential	Unknown	W11	39.60	34.73	4.87	0.88
	R11		Residential	Unknown	W12	39.60	34.76	4.84	0.88
	R12		Residential	Unknown	W13	39.60	34.80	4.80	0.88
	R13		Residential	Unknown	W14	39.58	34.73	4.86	0.88
	R14		Residential	Unknown	W15	39.43	34.81	4.62	0.88
	R15		Residential	Unknown	W16	36.30	32.00	4.30	0.88
	R16		Residential	Unknown	W17	39.54	39.54	0.00	1.00
Sixth	R1		Residential	Unknown	W1	39.62	36.13	3.49	0.91
85 Rochdale Road									
First	R1		Residential	Unknown	W1	31.81	31.45	0.35	0.99
	R2		Residential	Unknown	W2	31.89	31.64	0.25	0.99
	R3		Residential	Unknown	W3	32.13	31.90	0.24	0.99
	R4		Residential	Unknown	W4	39.16	23.28	15.88	0.59
					W5	39.16	19.48	19.68	0.50

Project Name: New Development Rochdale Road
Project No.: 2871
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.	Window Ref.	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R5		Residential	Unknown	W6	39.16	12.25	26.90	0.31
	R6		Residential	Unknown	W7	32.88	8.89	23.99	0.27
73 Rochdale Road									
First	R1		Residential	Unknown	W1	34.89	26.83	8.06	0.77
	R2		Residential	Unknown	W2	30.39	24.85	5.54	0.82
Second	R1		Residential	Unknown	W1	81.99	74.27	7.72	0.91
18-20 Rochdale Road									
Ground	R1		Residential	LKD	W1	35.43	25.97	9.46	0.73
First	R1		Residential	Bedroom	W1	35.53	35.46	0.07	1.00
					W2	38.27	29.67	8.60	0.78
					W3	38.29	29.13	9.17	0.76
	R2		Residential	Bedroom	W4	38.33	28.54	9.79	0.74
	R3		Residential	Bedroom	W5	38.18	27.82	10.36	0.73
					W6	37.27	28.39	8.88	0.76
					W7	38.86	38.86	0.00	1.00
Second	R1		Residential	LKD	W1	38.32	30.41	7.91	0.79
					W2	38.19	29.72	8.47	0.78
					W3	38.21	29.13	9.09	0.76
					W4	38.15	28.51	9.65	0.75
					W5	37.35	28.89	8.46	0.77
					W6	39.06	39.06	0.00	1.00
					W7	39.07	39.07	0.00	1.00
Third	R1		Residential	Bedroom	W1	38.63	31.44	7.19	0.81
					W2	38.75	31.12	7.64	0.80
	R2		Residential	Bedroom	W3	38.82	30.58	8.24	0.79
	R3		Residential	Bedroom	W4	38.27	29.38	8.90	0.77
					W5	38.04	30.11	7.93	0.79
					W6	39.09	39.09	0.00	1.00
					W7	39.19	39.19	0.00	1.00

Appendix 4: Baseline vs Proposed NSL Contour Plots

6 Ludgate Hill
Ground Floor



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)

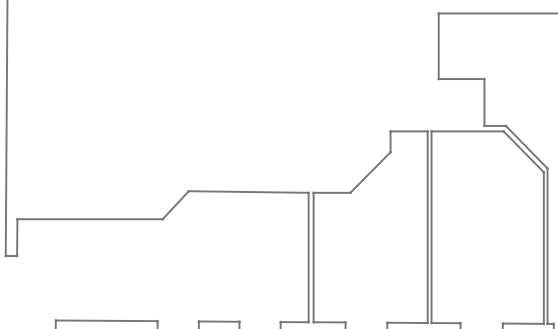
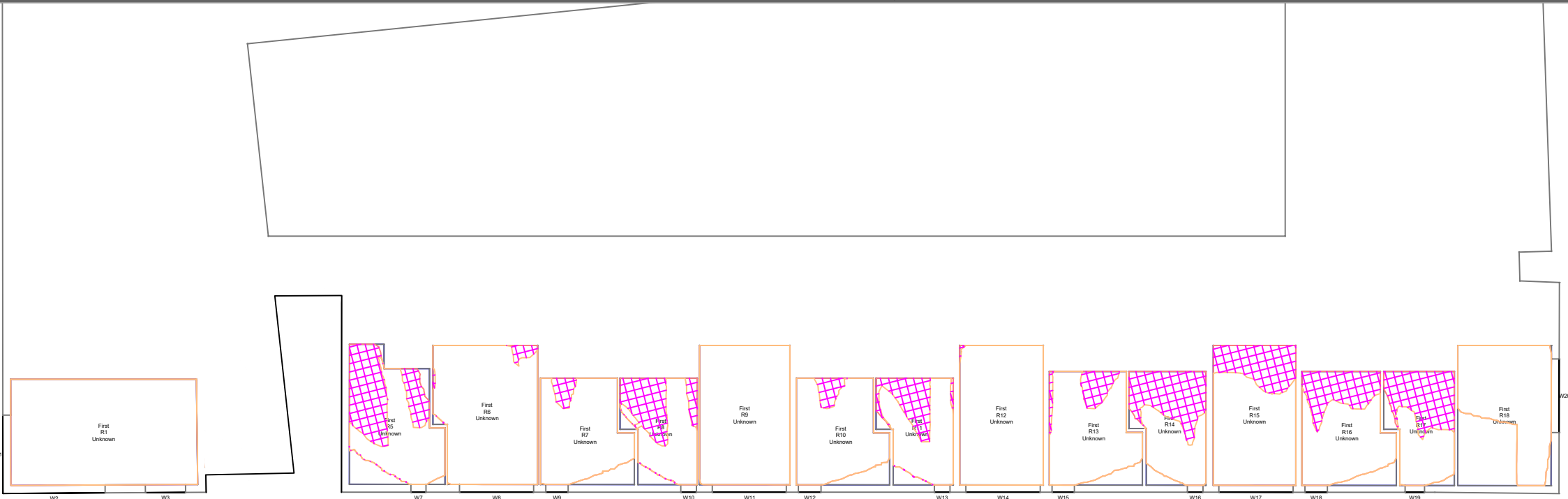
Existing Model & Surrounding Model
Existing Site derived from a 3D Point Cloud Survey carried out by Norman Oliver Ltd. 3D photogrammetric model produced by Accuties is used for surrounding contextual detail.
Neighbouring Buildings internal room layouts, window positions/dimensions and massing derived from plans found on the planning portal.
Where plans/elevations were unavailable assumptions have been made based on site photography, Bing Maps and Google Earth.

Proposed Model
Proposed scheme massing -
"136-JMA-ZZ-XX-M3-A-0002-Architectural.dwg"
Supplied by Joanna Beal of JMA on 23/06/2021.

1:200



6 Ludgate Hill
First Floor



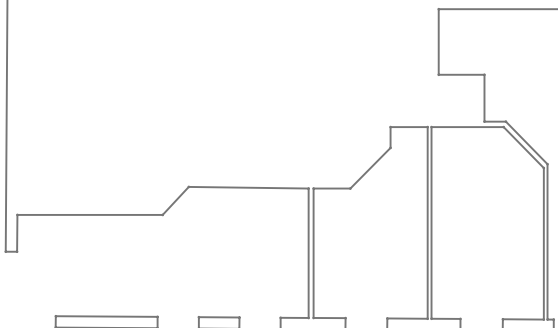
- Massing Legend
- Existing
 - Proposed
- All heights in m AOD
- DD Legend
- Room Area (Measured Layout)
 - Existing No Sky Area
 - Proposed No Sky Area
 - Area of Loss/Gain

REV:	NOTES:	DRWN:	DATE:
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1:200



6 Ludgate Hill
Second Floor



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Email: info@grayscanlanhill.com Web: www.grayscanlanhill.com

CLIENT:
Portwood Developments Limited

PROJECT:
New Development
Rochdale Road
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

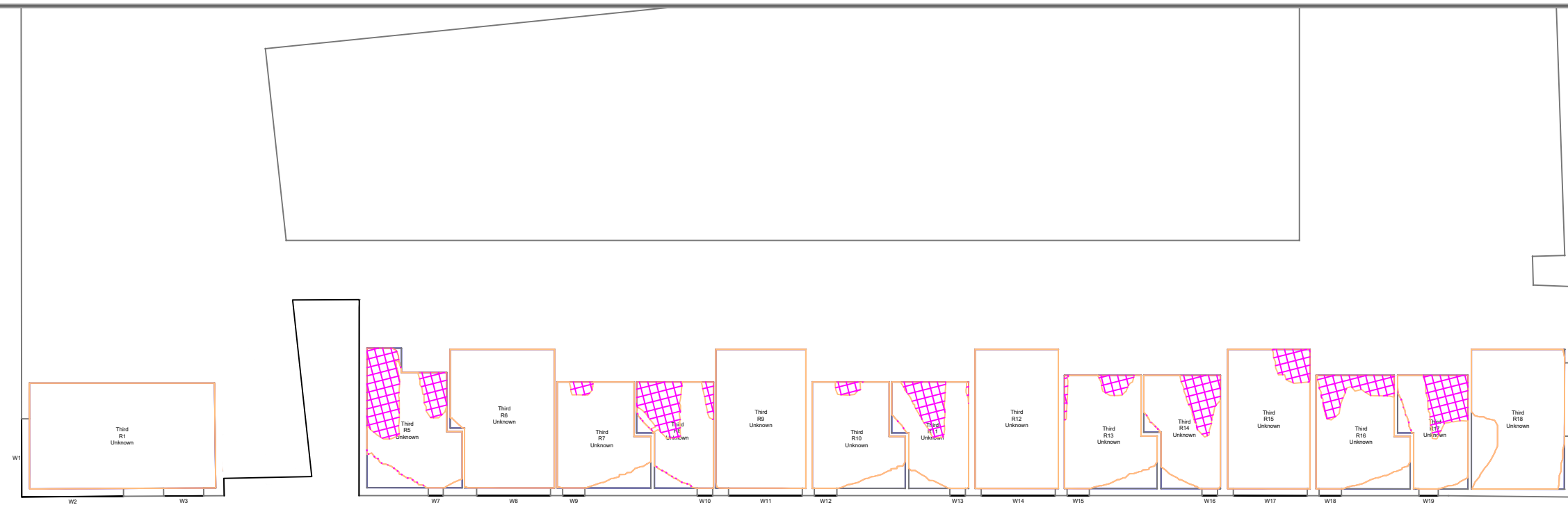
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1:200	19.08.2021	CHECKED:	DMH

DRAWING NUMBER: 2871_MA-07	REV: .
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1:200

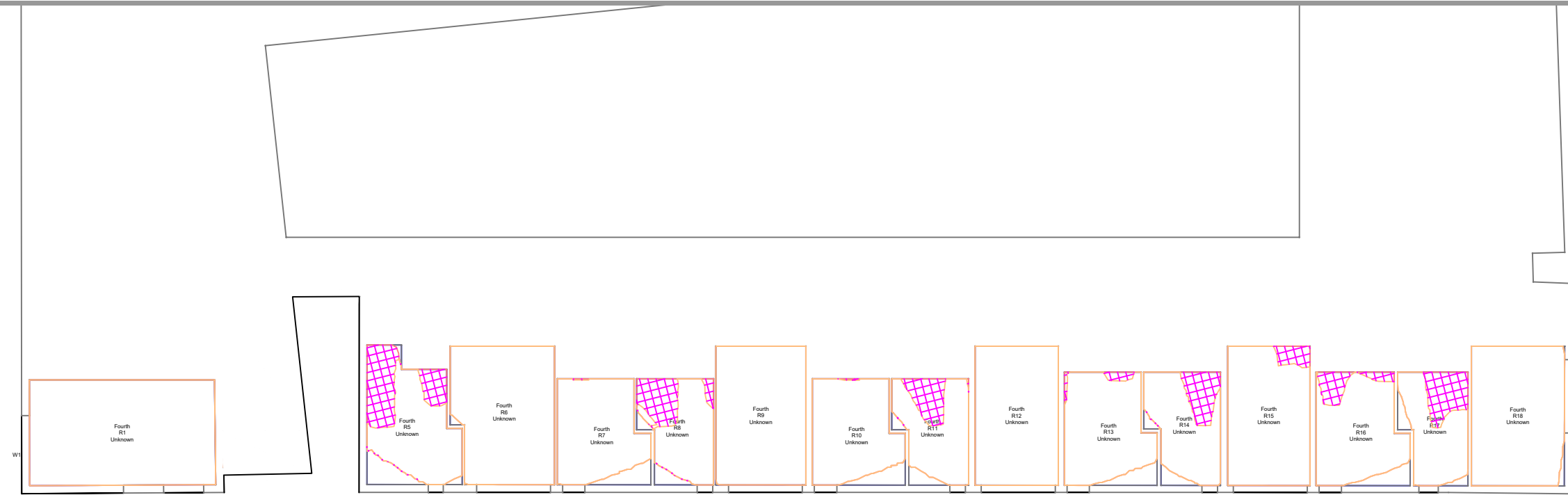


6 Ludgate Hill
Third Floor



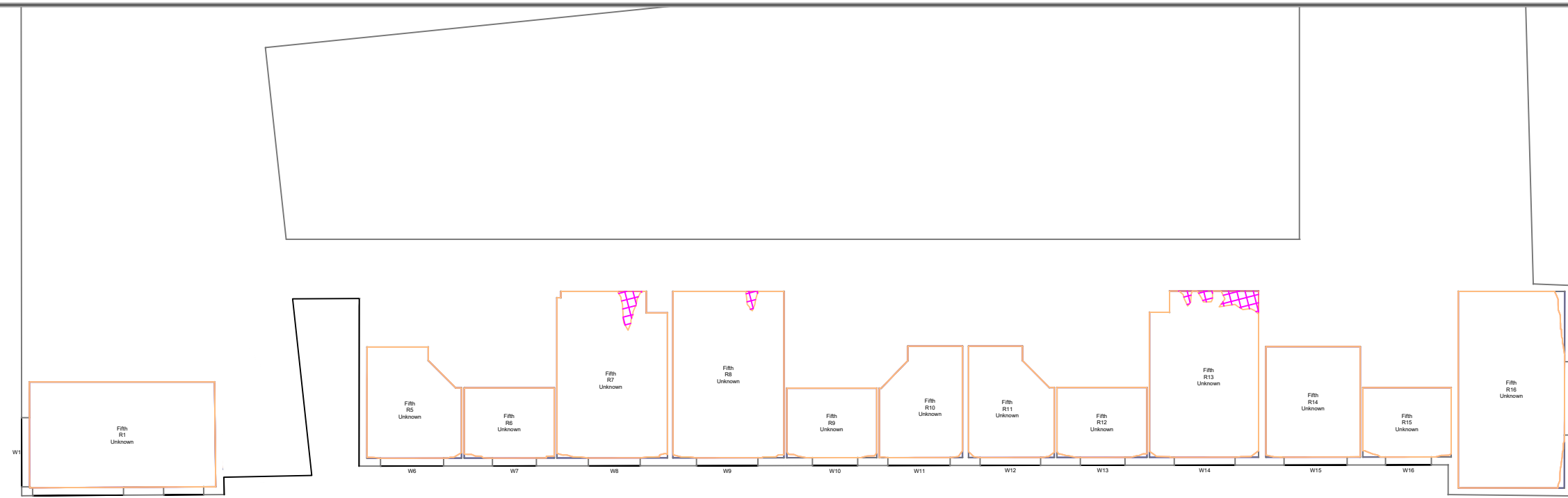
1:200

6 Ludgate Hill
Fourth Floor



1:200

6 Ludgate Hill
Fifth Floor



1:200

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

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Proposed Model

Proposed scheme massing -
 "136-JMA-ZZ-XX-M3-A-0002-Architectural.dwg"

Supplied by Joanna Beal of JMA on 23/06/2021.

Massing Legend

Existing
Proposed

All heights in m AOD

DD Legend

-  Room Area (Measured Layout)
-  Existing No Sky Area
-  Proposed No Sky Area
-  Area of Loss/Gain

REV:

NOTES:

RWN:	DA:
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2



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CLIENT:

Portwood Developments Limited

PROJECT:

New Development
Rochdale Road
Manchester

DRAWING TITLE:

Contour Plots
Daylight Distribution

SCALE @ A2:

1:200

DATE: _____

19.08.2021

LAWN: G

GSH

CHECKED: D

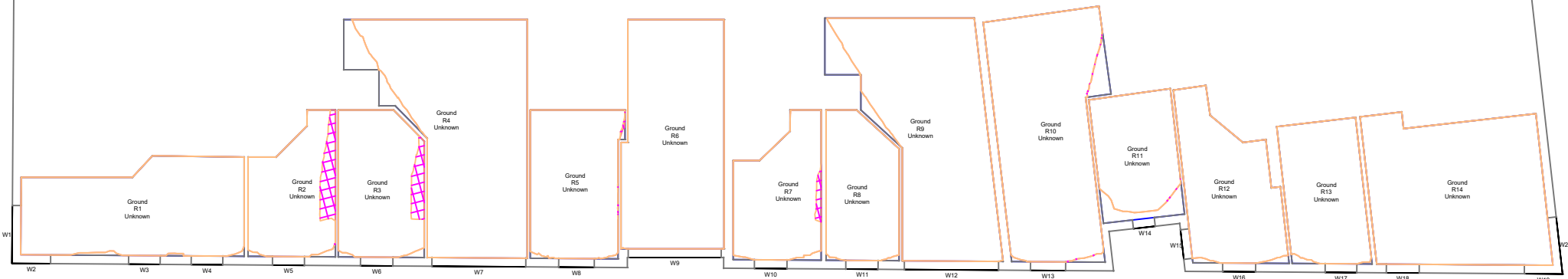
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DRAWING NUMBER:

2871_MA-07

1

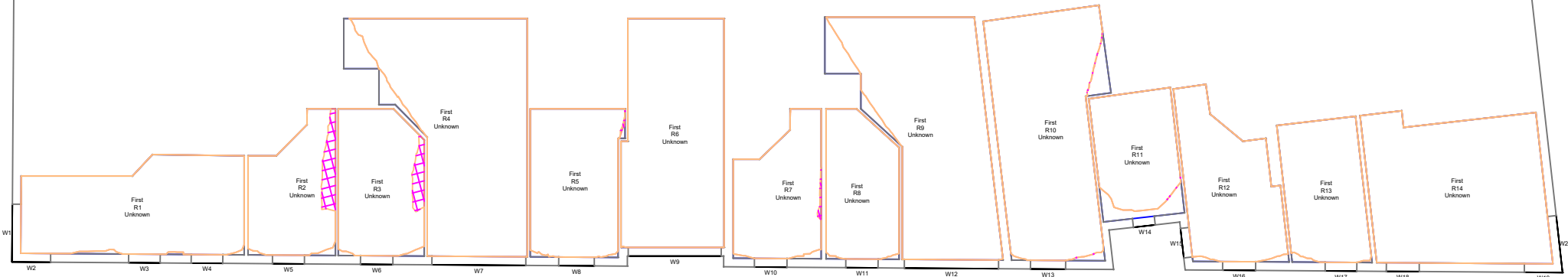
The Citadel
Ground Floor



1:200



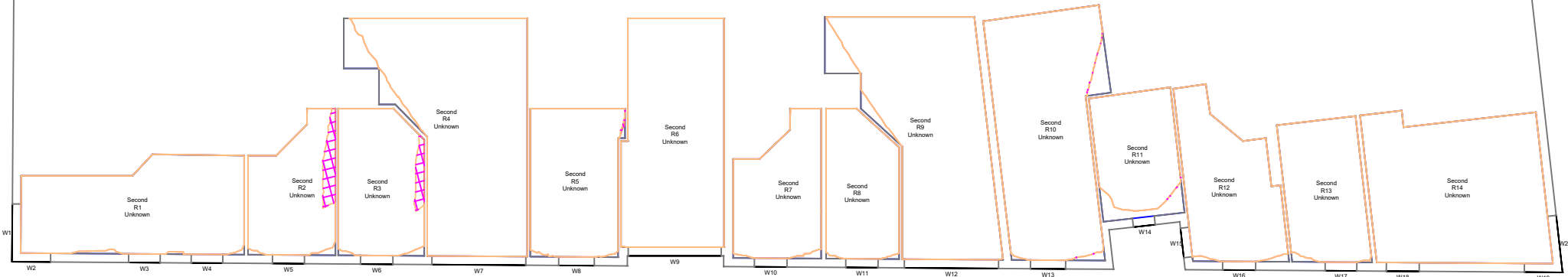
The Citadel
First Floor



1:200



The Citadel
Second Floor



1:200



NOTES:
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Analysis
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Proposed Model
Proposed scheme massing -
"136-JMA-ZZ-XX-M3-A-0002-Architectural.dwg"
Supplied by Joanna Beal of JMA on 23/06/2021.

- Massing Legend
- Existing
 - Proposed
- All heights in m AOD
- DD Legend
- Room Area (Measured Layout)
 - Existing No Sky Area
 - Proposed No Sky Area
 - Area of Loss/Gain

REV:	NOTES:	DRWN:	DATE:



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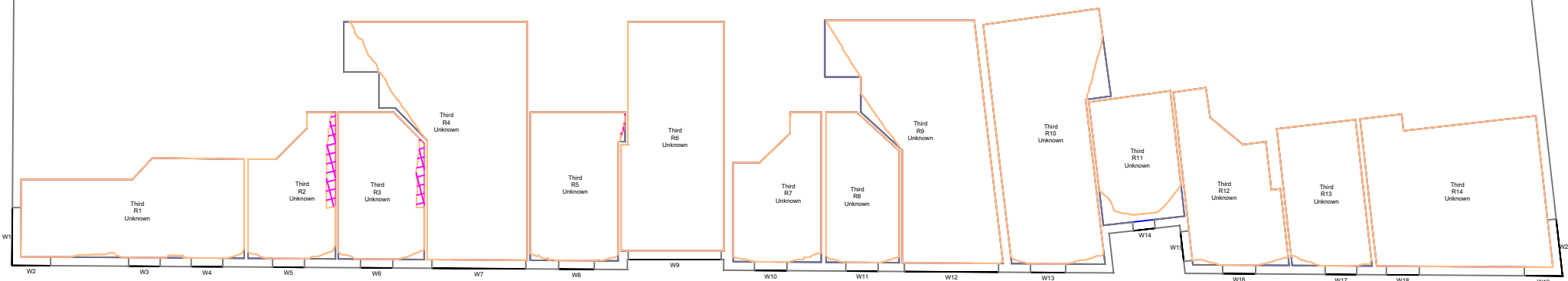
PROJECT:
New Development
Rochdale Road
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	GSH
1:200	19.08.2021	CHECKED:	DMH

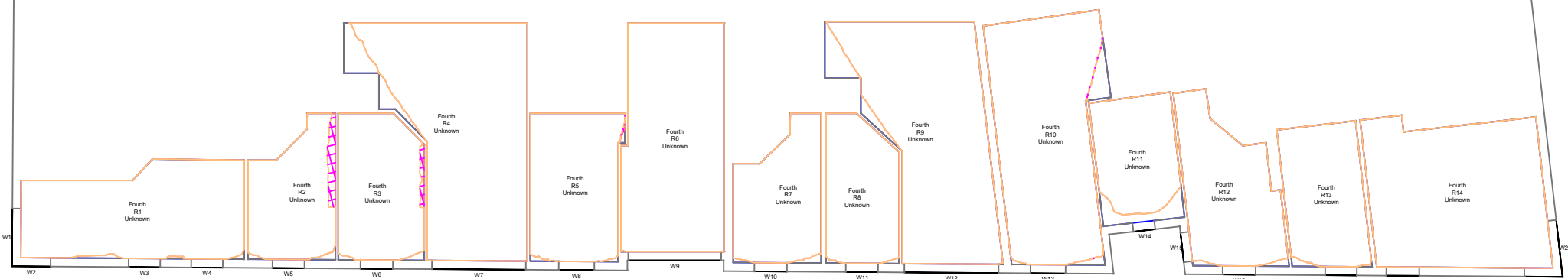
DRAWING NUMBER:	REV:
2871_MA-09	.

The Citadel
Third Floor



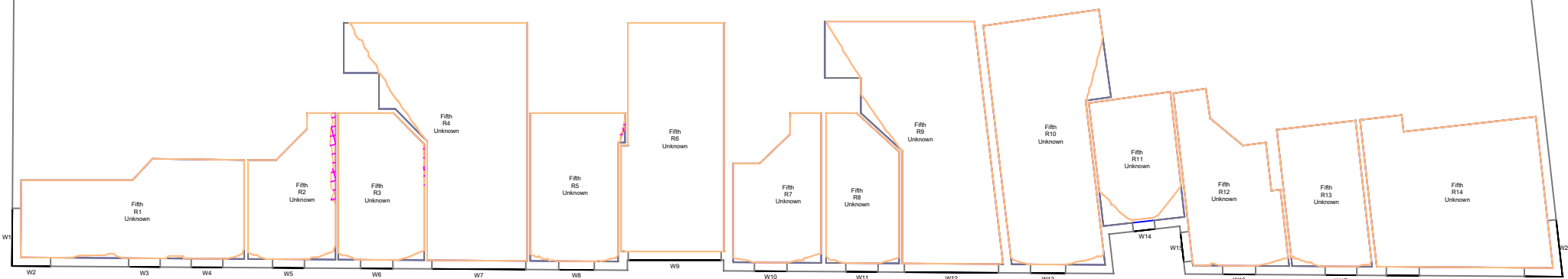
1:200

The Citadel
Fourth Floor



1:200

The Citadel
Fifth Floor



1:200

NOTES:
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Analysis
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MBS Survey Software Ltd (www.mbs-software.co.uk)

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Proposed Model
Proposed scheme massing -
"136-JMA-ZZ-XX-M3-A-0002-Architectural.dwg"
Supplied by Joanna Beal of JMA on 23/06/2021.

- Massing Legend
- Existing
 - Proposed
- All heights in m AOD
- DD Legend
- Room Area (Measured Layout)
 - Existing No Sky Area
 - Proposed No Sky Area
 - Area of Loss/Gain

REV:	NOTES:	DRWN:	DATE:

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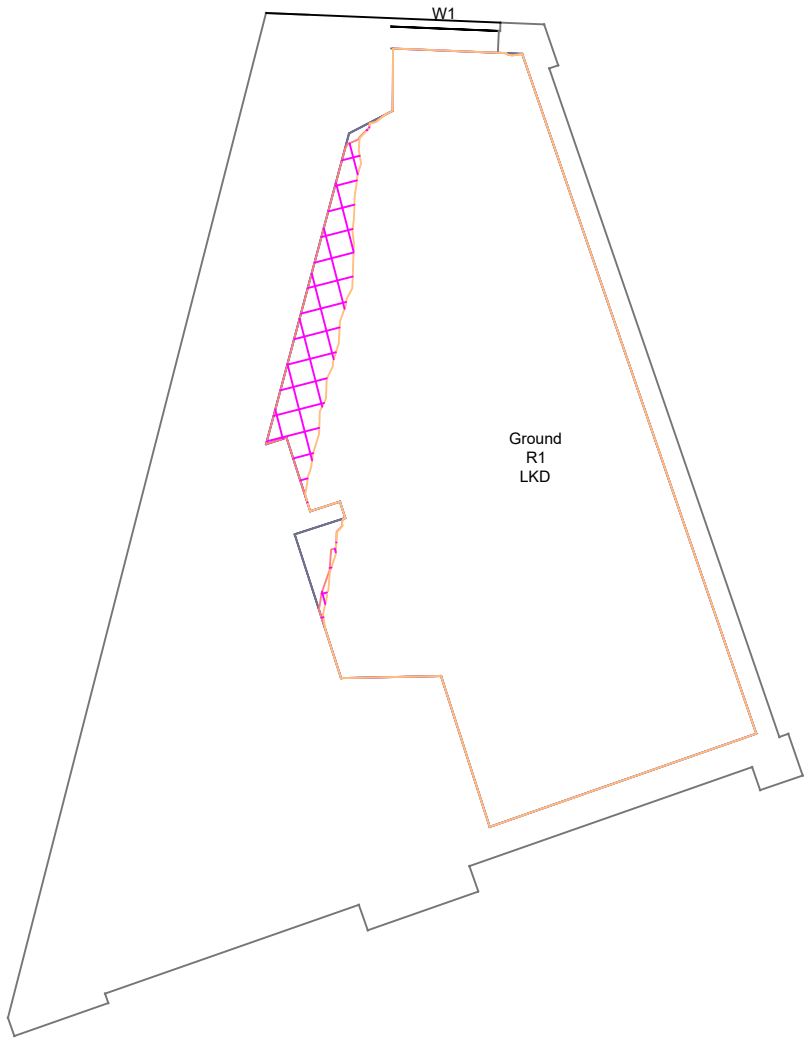
PROJECT:
New Development
Rochdale Road
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	GSH
1:200	19.08.2021	CHECKED:	DMH

DRAWING NUMBER:	REV:
2871_MA-10	.

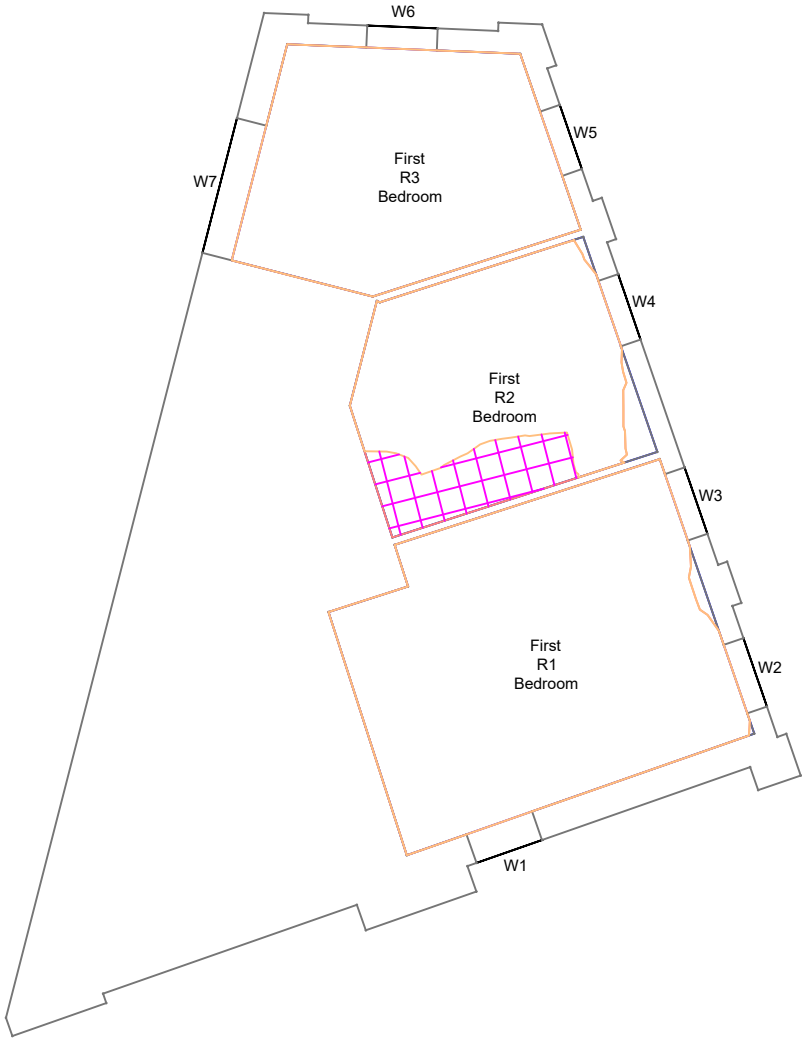
18-20 Rochdale Road
Ground Floor



1:100



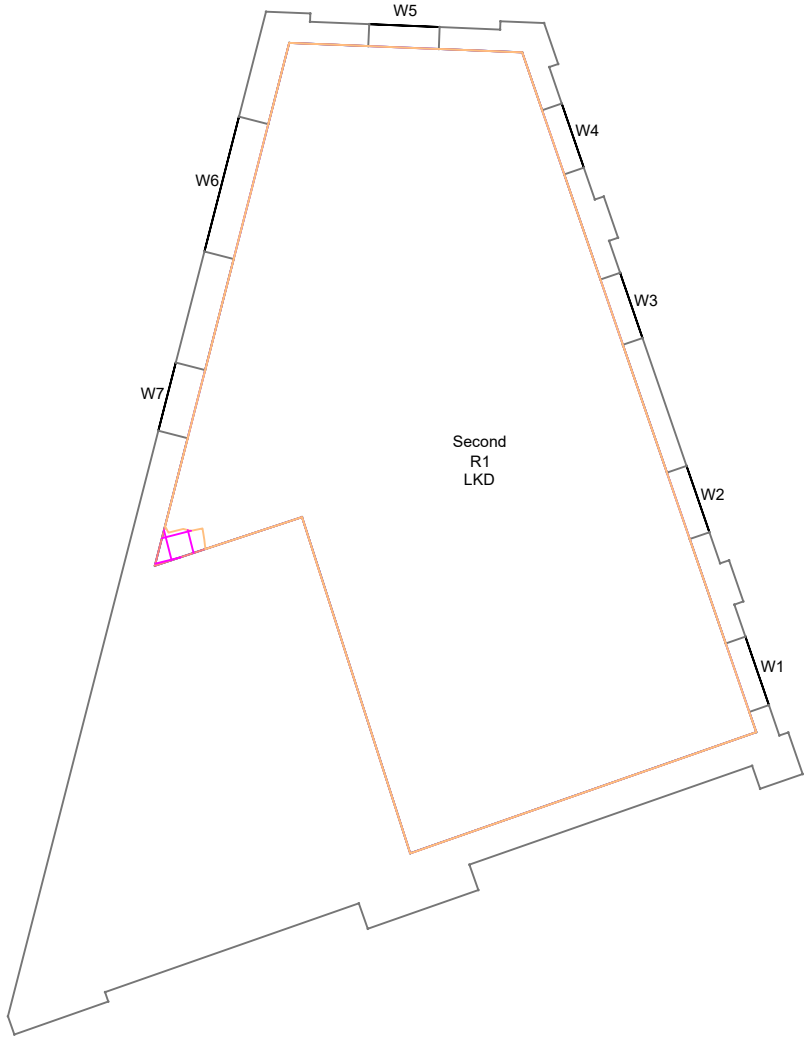
18-20 Rochdale Road
First Floor



1:100



18-20 Rochdale Road
Second Floor



1:100



18-20 Rochdale Road
Third Floor



1:100



NOTES:
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Analysis
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MBS Survey Software Ltd (www.mbs-software.co.uk)

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Proposed Model
Proposed scheme massing -
"136-JMA-ZZ-XX-M3-A-0002-Architectural.dwg"
Supplied by Joanna Beal of JMA on 23/06/2021.

Massing Legend

Existing

Proposed

All heights in m AOD

DD Legend

Room Area (Measured Layout)

Existing No Sky Area

Proposed No Sky Area

Area of Loss/Gain

REV:	NOTES:	DRWN:	DATE:



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PROJECT:
New Development
Rochdale Road
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	GSH
1:200	19.08.2021	CHECKED:	DMH

DRAWING NUMBER:	REV:
2871_MA-11	.

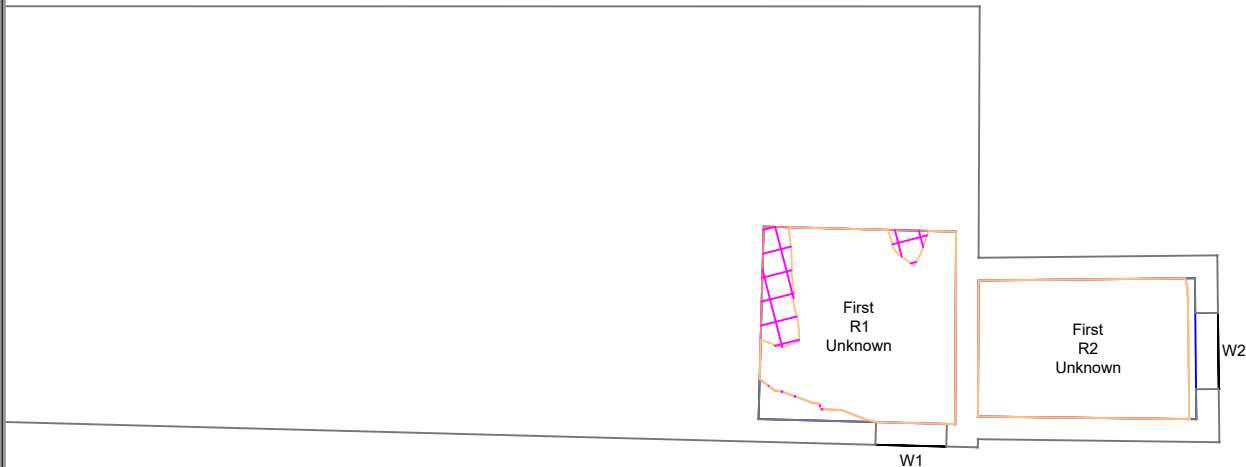
85 Rochdale Road
First Floor



1:100



73 Rochdale Road
First Floor



1:100



NOTES:
No dimensions are to be scaled from this drawing.
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Analysis
Produced using Waldram Tools
MBS Survey Software Ltd (www.mbs-software.co.uk)

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

Proposed Model
Proposed scheme massing -
"136-JMA-ZZ-XX-M3-A-0002-Architectural.dwg"
Supplied by Joanna Beal of JMA on 23/06/2021.

Massing Legend

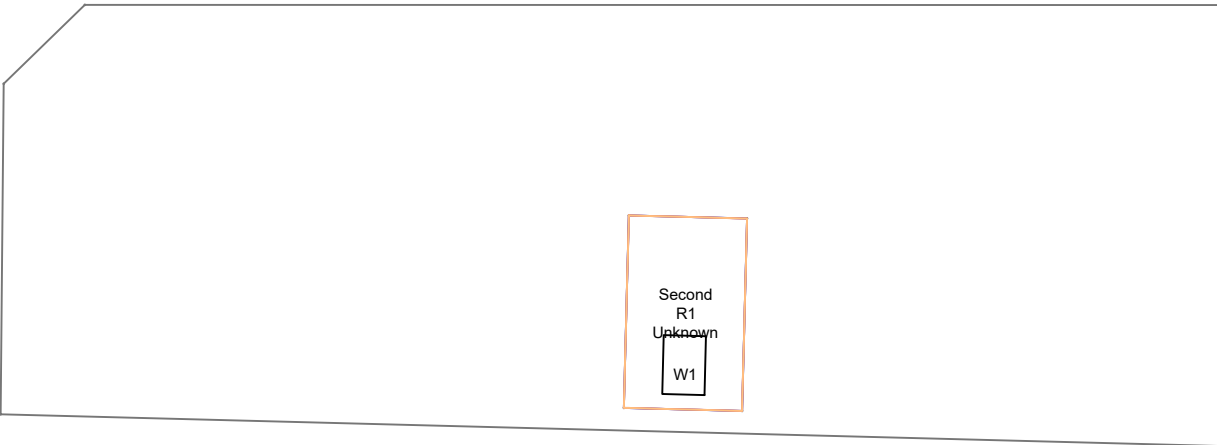
Existing
Proposed

All heights in m AOD

DD Legend

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

73 Rochdale Road
Second Floor



1:100



REV:	NOTES:	DRWN:	DATE:

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CLIENT:
Portwood Developments Limited

PROJECT:
New Development
Rochdale Road
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	GSH
1:200	19.08.2021	CHECKED:	DMH

DRAWING NUMBER:	REV:
2871_MA-12	.

Project Name: New Development Rochdale Road
Project No.: 2871
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
The Citadel Ludgate Hill												
Ground	R1		Unknown	23.35	251.33	23.09	248.59	0.99	23.09	0.00	0.00	1.00
Ground	R2		Unknown	12.54	134.95	12.32	132.66	0.98	10.79	1.54	16.53	0.88
Ground	R3		Unknown	14.53	156.38	14.32	154.09	0.99	13.28	1.04	11.15	0.93
Ground	R4		Unknown	36.14	389.02	34.15	367.58	0.94	34.15	0.00	0.00	1.00
Ground	R5		Unknown	15.83	170.34	15.64	168.30	0.99	15.60	0.04	0.41	1.00
Ground	R6		Unknown	27.14	292.12	27.14	292.09	1.00	27.14	0.00	0.00	1.00
Ground	R7		Unknown	12.84	138.20	12.60	135.65	0.98	12.32	0.28	3.05	0.98
Ground	R8		Unknown	12.12	130.49	12.01	129.23	0.99	12.01	0.00	0.00	1.00
Ground	R9		Unknown	32.93	354.49	31.25	336.37	0.95	31.25	0.00	0.00	1.00
Ground	R10		Unknown	30.01	323.05	28.85	310.58	0.96	28.84	0.02	0.19	1.00
Ground	R11		Unknown	12.23	131.66	10.83	116.58	0.89	10.83	0.00	0.03	1.00
Ground	R12		Unknown	16.06	172.86	15.80	170.02	0.98	15.79	0.00	0.01	1.00
Ground	R13		Unknown	13.50	145.28	13.30	143.19	0.99	13.30	0.00	0.00	1.00
Ground	R14		Unknown	30.47	328.01	30.47	328.01	1.00	30.47	0.00	0.00	1.00
First	R1		Unknown	23.35	251.33	23.10	248.59	0.99	23.10	0.00	0.00	1.00
First	R2		Unknown	12.54	134.95	12.32	132.66	0.98	11.04	1.29	13.83	0.90
First	R3		Unknown	14.53	156.38	14.32	154.09	0.99	13.47	0.85	9.11	0.94
First	R4		Unknown	36.14	389.02	34.22	368.31	0.95	34.22	0.00	0.00	1.00
First	R5		Unknown	15.83	170.34	15.64	168.30	0.99	15.61	0.03	0.30	1.00
First	R6		Unknown	27.14	292.12	27.14	292.09	1.00	27.14	0.00	0.00	1.00
First	R7		Unknown	12.84	138.20	12.60	135.65	0.98	12.51	0.09	0.96	0.99
First	R8		Unknown	12.12	130.49	12.01	129.23	0.99	12.01	0.00	0.00	1.00
First	R9		Unknown	32.93	354.49	31.27	336.60	0.95	31.27	0.00	0.00	1.00
First	R10		Unknown	30.01	323.05	28.86	310.66	0.96	28.85	0.01	0.13	1.00
First	R11		Unknown	12.23	131.66	10.82	116.52	0.88	10.82	0.00	0.02	1.00
First	R12		Unknown	16.06	172.86	15.80	170.02	0.98	15.79	0.00	0.00	1.00
First	R13		Unknown	13.50	145.28	13.30	143.19	0.99	13.30	0.00	0.00	1.00
First	R14		Unknown	30.47	328.01	30.47	328.01	1.00	30.47	0.00	0.00	1.00
Second	R1		Unknown	23.35	251.33	23.10	248.60	0.99	23.10	0.00	0.00	1.00
Second	R2		Unknown	12.54	134.95	12.32	132.66	0.98	11.18	1.15	12.35	0.91
Second	R3		Unknown	14.53	156.38	14.32	154.09	0.99	13.63	0.68	7.32	0.95
Second	R4		Unknown	36.14	389.02	34.22	368.31	0.95	34.22	0.00	0.00	1.00
Second	R5		Unknown	15.83	170.34	15.64	168.30	0.99	15.61	0.03	0.29	1.00
Second	R6		Unknown	27.14	292.12	27.14	292.09	1.00	27.14	0.00	0.00	1.00
Second	R7		Unknown	12.84	138.20	12.60	135.65	0.98	12.60	0.00	0.01	1.00
Second	R8		Unknown	12.12	130.49	12.01	129.23	0.99	12.01	0.00	0.00	1.00
Second	R9		Unknown	32.93	354.49	31.27	336.60	0.95	31.27	0.00	0.00	1.00
Second	R10		Unknown	30.01	323.05	28.86	310.67	0.96	28.86	0.01	0.06	1.00
Second	R11		Unknown	12.23	131.66	10.83	116.59	0.89	10.83	0.00	0.01	1.00
Second	R12		Unknown	16.06	172.86	15.80	170.02	0.98	15.80	0.00	0.00	1.00
Second	R13		Unknown	13.50	145.28	13.30	143.19	0.99	13.30	0.00	0.00	1.00
Second	R14		Unknown	30.47	328.01	30.47	328.01	1.00	30.47	0.00	0.00	1.00
Third	R1		Unknown	23.35	251.33	23.10	248.60	0.99	23.10	0.00	0.00	1.00
Third	R2		Unknown	12.54	134.95	12.32	132.66	0.98	11.43	0.90	9.65	0.93
Third	R3		Unknown	14.53	156.38	14.32	154.09	0.99	13.77	0.54	5.83	0.96
Third	R4		Unknown	36.14	389.02	34.22	368.31	0.95	34.22	0.00	0.00	1.00
Third	R5		Unknown	15.83	170.34	15.64	168.30	0.99	15.61	0.03	0.28	1.00
Third	R6		Unknown	27.14	292.12	27.14	292.09	1.00	27.14	0.00	0.00	1.00
Third	R7		Unknown	12.84	138.20	12.60	135.65	0.98	12.60	0.00	0.00	1.00
Third	R8		Unknown	12.12	130.49	12.01	129.23	0.99	12.01	0.00	0.00	1.00
Third	R9		Unknown	32.93	354.49	31.27	336.60	0.95	31.27	0.00	0.00	1.00
Third	R10		Unknown	30.01	323.05	28.87	310.71	0.96	28.87	0.00	0.00	1.00
Third	R11		Unknown	12.23	131.66	10.84	116.64	0.89	10.84	0.00	0.01	1.00
Third	R12		Unknown	16.06	172.86	15.80	170.02	0.98	15.80	0.00	0.00	1.00
Third	R13		Unknown	13.50	145.28	13.30	143.19	0.99	13.30	0.00	0.00	1.00
Third	R14		Unknown	30.47	328.01	30.47	328.01	1.00	30.47	0.00	0.00	1.00
Fourth	R1		Unknown	23.35	251.33	23.10	248.60	0.99	23.10	0.00	0.00	1.00
Fourth	R2		Unknown	12.54	134.95	12.32	132.66	0.98	11.56	0.77	8.24	0.94
Fourth	R3		Unknown	14.53	156.38	14.32	154.09	0.99	14.01	0.31	3.33	0.98
Fourth	R4		Unknown	36.14	389.02	34.22	368.31	0.95	34.22	0.00	0.00	1.00
Fourth	R5		Unknown	15.83	170.34	15.64	168.30	0.99	15.61	0.03	0.28	1.00
Fourth	R6		Unknown	27.14	292.12	27.14	292.09	1.00	27.14	0.00	0.00	1.00
Fourth	R7		Unknown	12.84	138.20	12.60	135.65	0.98	12.60	0.00	0.00	1.00
Fourth	R8		Unknown	12.12	130.49	12.01	129.23	0.99	12.01	0.00	0.00	1.00
Fourth	R9		Unknown	32.93	354.49	31.27	336.60	0.95	31.27	0.00	0.00	1.00
Fourth	R10		Unknown	30.01	323.05	28.87	310.74	0.96	28.87	0.00	0.03	1.00
Fourth	R11		Unknown	12.23	131.66	10.78	116.07	0.88	10.78	0.00	0.00	1.00
Fourth	R12		Unknown	16.06	172.86	15.80	170.02	0.98	15.80	0.00	0.00	1.00
Fourth	R13		Unknown	13.50	145.28	13.30	143.19	0.99	13.30	0.00	0.00	1.00
Fourth	R14		Unknown	30.47	328.01	30.47	328.01	1.00	30.47	0.00	0.00	1.00
Fifth	R1		Unknown	23.35	251.33	23.10	248.63	0.99	23.10	0.00	0.00	1.00
Fifth	R2		Unknown	12.54	134.95	12.32	132.66	0.98	11.94	0.38	4.12	0.97
Fifth	R3		Unknown	14.53	156.38	14.32	154.09	0.99	14.29	0.02	0.26	1.00
Fifth	R4		Unknown	36.14	389.02	34.21	368.21	0.95	34.21	0.00	0.00	1.00
Fifth	R5		Unknown	15.83	170.34	15.64	168.30	0.99	15.61	0.03	0.28	1.00

Project Name: New Development Rochdale Road Project No.: 2871 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
Fifth	R6		Unknown	27.14	292.12	27.14	292.09	1.00	27.14	0.00	0.00	1.00
Fifth	R7		Unknown	12.84	138.20	12.60	135.60	0.98	12.60	0.00	0.00	1.00
Fifth	R8		Unknown	12.12	130.49	12.00	129.19	0.99	12.00	0.00	0.00	1.00
Fifth	R9		Unknown	32.93	354.49	31.27	336.59	0.95	31.27	0.00	0.00	1.00
Fifth	R10		Unknown	30.01	323.05	28.87	310.75	0.96	28.87	0.00	0.00	1.00
Fifth	R11		Unknown	12.23	131.66	10.98	118.19	0.90	10.98	0.00	0.00	1.00
Fifth	R12		Unknown	16.06	172.86	15.89	171.00	0.99	15.89	0.00	0.00	1.00
Fifth	R13		Unknown	13.50	145.28	13.31	143.25	0.99	13.31	0.00	0.00	1.00
Fifth	R14		Unknown	30.47	328.01	30.47	328.01	1.00	30.47	0.00	0.00	1.00
6 Ludgate Hill												
Ground	R4		Unknown	15.78	169.86	12.34	132.85	0.78	6.16	6.18	66.53	0.50
Ground	R5		Unknown	19.69	211.90	19.58	210.78	0.99	17.51	2.07	22.30	0.89
Ground	R6		Unknown	13.04	140.41	10.74	115.62	0.82	9.82	0.92	9.87	0.91
Ground	R7		Unknown	10.38	111.71	9.53	102.55	0.92	5.39	4.14	44.56	0.57
Ground	R8		Unknown	18.09	194.73	18.08	194.66	1.00	18.08	0.00	0.00	1.00
Ground	R9		Unknown	13.02	140.16	11.90	128.07	0.91	10.88	1.02	10.96	0.91
Ground	R10		Unknown	10.47	112.71	9.68	104.20	0.92	5.85	3.83	41.20	0.60
Ground	R11		Unknown	16.76	180.45	16.76	180.45	1.00	16.59	0.17	1.85	0.99
Ground	R12		Unknown	13.78	148.31	12.69	136.57	0.92	10.80	1.89	20.36	0.85
Ground	R13		Unknown	11.17	120.27	10.39	111.83	0.93	3.86	6.53	70.34	0.37
Ground	R14		Unknown	16.58	178.50	16.58	178.50	1.00	9.98	6.61	71.10	0.60
Ground	R15		Unknown	14.04	151.12	12.96	139.54	0.92	8.42	4.55	48.94	0.65
Ground	R16		Unknown	10.26	110.46	9.61	103.42	0.94	3.75	5.86	63.08	0.39
Ground	R17		Unknown	18.81	202.48	12.15	130.80	0.65	12.15	0.00	0.00	1.00
First	R1		Unknown	28.31	304.75	28.31	304.75	1.00	28.31	0.00	0.00	1.00
First	R5		Unknown	15.78	169.86	13.72	147.73	0.87	7.52	6.20	66.76	0.55
First	R6		Unknown	19.69	211.90	19.58	210.78	0.99	19.07	0.51	5.53	0.97
First	R7		Unknown	13.04	140.41	11.90	128.10	0.91	11.13	0.77	8.32	0.94
First	R8		Unknown	10.38	111.71	9.53	102.55	0.92	5.62	3.90	42.00	0.59
First	R9		Unknown	18.09	194.73	18.08	194.66	1.00	18.08	0.00	0.00	1.00
First	R10		Unknown	13.02	140.16	11.91	128.15	0.91	11.03	0.88	9.44	0.93
First	R11		Unknown	10.47	112.71	9.68	104.20	0.92	6.77	2.91	31.30	0.70
First	R12		Unknown	16.76	180.45	16.76	180.45	1.00	16.72	0.04	0.46	1.00
First	R13		Unknown	13.78	148.31	12.69	136.61	0.92	11.03	1.66	17.83	0.87
First	R14		Unknown	11.17	120.27	10.39	111.84	0.93	5.19	5.20	55.94	0.50
First	R15		Unknown	16.58	178.50	16.58	178.50	1.00	12.27	4.31	46.38	0.74
First	R16		Unknown	14.04	151.12	12.97	139.58	0.92	9.05	3.92	42.17	0.70
First	R17		Unknown	10.26	110.46	9.61	103.43	0.94	4.68	4.93	53.09	0.49
First	R18		Unknown	18.81	202.48	12.88	138.60	0.68	12.88	0.00	0.00	1.00
Second	R1		Unknown	28.31	304.75	28.31	304.75	1.00	28.31	0.00	0.00	1.00
Second	R5		Unknown	15.78	169.86	14.08	151.53	0.89	8.01	6.07	65.33	0.57
Second	R6		Unknown	19.69	211.90	19.58	210.78	0.99	19.57	0.02	0.16	1.00
Second	R7		Unknown	13.04	140.41	11.90	128.10	0.91	11.28	0.62	6.71	0.95
Second	R8		Unknown	10.38	111.71	9.53	102.55	0.92	5.87	3.66	39.36	0.62
Second	R9		Unknown	18.09	194.73	18.08	194.66	1.00	18.08	0.00	0.00	1.00
Second	R10		Unknown	13.02	140.16	11.91	128.17	0.91	11.22	0.69	7.40	0.94
Second	R11		Unknown	10.47	112.71	9.68	104.20	0.92	7.20	2.48	26.71	0.74
Second	R12		Unknown	16.76	180.45	16.76	180.45	1.00	16.76	0.00	0.00	1.00
Second	R13		Unknown	13.78	148.31	12.69	136.63	0.92	11.34	1.36	14.59	0.89
Second	R14		Unknown	11.17	120.27	10.39	111.84	0.93	7.61	2.78	29.93	0.73
Second	R15		Unknown	16.58	178.50	16.58	178.50	1.00	14.63	1.96	21.05	0.88
Second	R16		Unknown	14.04	151.12	12.97	139.60	0.92	9.68	3.28	35.36	0.75
Second	R17		Unknown	10.26	110.46	9.61	103.43	0.94	6.25	3.36	36.12	0.65
Second	R18		Unknown	18.81	202.48	14.57	156.82	0.77	14.57	0.00	0.00	1.00
Third	R1		Unknown	28.31	304.75	28.31	304.75	1.00	28.31	0.00	0.00	1.00
Third	R5		Unknown	15.78	169.86	14.08	151.55	0.89	8.59	5.48	59.04	0.61
Third	R6		Unknown	19.69	211.90	19.58	210.78	0.99	19.58	0.00	0.00	1.00
Third	R7		Unknown	13.04	140.41	11.90	128.10	0.91	11.51	0.40	4.26	0.97
Third	R8		Unknown	10.38	111.71	9.53	102.55	0.92	6.22	3.31	35.64	0.65
Third	R9		Unknown	18.09	194.73	18.08	194.66	1.00	18.08	0.00	0.00	1.00
Third	R10		Unknown	13.02	140.16	11.91	128.18	0.91	11.48	0.43	4.60	0.96
Third	R11		Unknown	10.47	112.71	9.68	104.20	0.92	7.38	2.30	24.77	0.76
Third	R12		Unknown	16.76	180.45	16.76	180.45	1.00	16.76	0.00	0.00	1.00
Third	R13		Unknown	13.78	148.31	12.69	136.63	0.92	11.72	0.97	10.44	0.92
Third	R14		Unknown	11.17	120.27	10.39	111.84	0.93	8.08	2.31	24.89	0.78
Third	R15		Unknown	16.58	178.50	16.58	178.50	1.00	15.03	1.55	16.68	0.91
Third	R16		Unknown	14.04	151.12	12.97	139.61	0.92	10.40	2.57	27.69	0.80
Third	R17		Unknown	10.26	110.46	9.61	103.43	0.94	6.63	2.97	32.01	0.69
Third	R18		Unknown	18.81	202.48	16.67	179.45	0.89	16.67	0.00	0.00	1.00
Fourth	R1		Unknown	28.31	304.75	28.31	304.75	1.00	28.31	0.00	0.00	1.00
Fourth	R5		Unknown	15.78	169.86	14.07	151.44	0.89	9.43	4.63	49.89	0.67
Fourth	R6		Unknown	19.69	211.90	19.58	210.78	0.99	19.58	0.00	0.00	1.00
Fourth	R7		Unknown	13.04	140.41	11.89	128.02	0.91	11.87	0.03	0.28	1.00
Fourth	R8		Unknown	10.38	111.71	9.53	102.58	0.92	6.76	2.77	29.81	0.71
Fourth	R9		Unknown	18.09	194.73	18.08	194.66	1.00	18.08	0.00	0.00	1.00
Fourth	R10		Unknown	13.02	140.16	11.90	128.10	0.91	11.86	0.04	0.41	1.00

Project Name: New Development Rochdale Road
Project No.: 2871
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
Fourth	R11		Unknown	10.47	112.71	9.68	104.20	0.92	7.67	2.01	21.67	0.79
Fourth	R12		Unknown	16.76	180.45	16.76	180.45	1.00	16.76	0.00	0.00	1.00
Fourth	R13		Unknown	13.78	148.31	12.67	136.43	0.92	12.23	0.45	4.83	0.96
Fourth	R14		Unknown	11.17	120.27	10.39	111.81	0.93	8.26	2.13	22.89	0.80
Fourth	R15		Unknown	16.58	178.50	16.58	178.50	1.00	15.65	0.93	10.03	0.94
Fourth	R16		Unknown	14.04	151.12	12.97	139.58	0.92	11.43	1.54	16.60	0.88
Fourth	R17		Unknown	10.26	110.46	9.60	103.33	0.94	6.97	2.63	28.27	0.73
Fourth	R18		Unknown	18.81	202.48	18.59	200.05	0.99	18.59	0.00	0.00	1.00
Fifth	R1		Unknown	28.31	304.75	28.31	304.75	1.00	28.31	0.00	0.00	1.00
Fifth	R5		Unknown	13.79	148.45	13.74	147.89	1.00	13.74	0.00	0.00	1.00
Fifth	R6		Unknown	9.16	98.55	9.06	97.50	0.99	9.06	0.00	0.00	1.00
Fifth	R7		Unknown	25.94	279.19	25.79	277.58	0.99	25.15	0.64	6.88	0.98
Fifth	R8		Unknown	26.71	287.56	26.63	286.64	1.00	26.41	0.22	2.37	0.99
Fifth	R9		Unknown	9.02	97.14	8.93	96.10	0.99	8.93	0.00	0.00	1.00
Fifth	R10		Unknown	12.21	131.43	12.18	131.07	1.00	12.18	0.00	0.00	1.00
Fifth	R11		Unknown	12.43	133.82	12.37	133.20	1.00	12.37	0.00	0.00	1.00
Fifth	R12		Unknown	9.10	97.95	9.00	96.83	0.99	9.00	0.00	0.00	1.00
Fifth	R13		Unknown	25.60	275.61	25.51	274.54	1.00	24.31	1.20	12.86	0.95
Fifth	R14		Unknown	15.08	162.36	15.06	162.13	1.00	15.06	0.00	0.00	1.00
Fifth	R15		Unknown	8.86	95.41	8.74	94.05	0.99	8.74	0.00	0.00	1.00
Fifth	R16		Unknown	30.24	325.48	29.62	318.83	0.98	29.62	0.00	0.00	1.00
Sixth	R1		Unknown	3.11	33.48	3.11	33.48	1.00	3.11	0.00	0.00	1.00
111 Rochdale Road												
Ground	R1		Unknown	217.32	2339.17	217.32	2339.17	1.00	217.32	0.00	0.00	1.00
Ground	R2		Unknown	25.71	276.74	25.62	275.72	1.00	25.51	0.10	1.13	1.00
85 Rochdale Road												
First	R1		Unknown	12.85	138.37	12.73	137.02	0.99	12.71	0.02	0.20	1.00
First	R2		Unknown	8.72	93.89	8.69	93.57	1.00	8.69	0.00	0.00	1.00
First	R3		Unknown	10.99	118.30	10.93	117.66	0.99	10.93	0.00	0.00	1.00
First	R4		Unknown	18.14	195.29	17.95	193.18	0.99	17.14	0.81	8.70	0.95
First	R5		Unknown	14.51	156.16	14.22	153.12	0.98	5.25	8.98	96.61	0.37
First	R6		Unknown	7.03	75.68	6.48	69.70	0.92	3.21	3.26	35.10	0.50
Marble Arch Pub, 73 Rochdale Road												
First	R1		Unknown	6.55	70.55	6.21	66.80	0.95	5.40	0.81	8.68	0.87
First	R2		Unknown	5.27	56.69	5.09	54.75	0.97	5.09	0.00	0.00	1.00
Second	R1		Unknown	3.98	42.87	3.98	42.87	1.00	3.98	0.00	0.00	1.00
18-20 Rochdale Road												
Ground	R1		LKD	39.15	421.36	38.77	417.32	0.99	36.67	2.10	22.63	0.95
First	R1		Bedroom	18.19	195.85	18.08	194.59	0.99	18.08	0.00	0.00	1.00
First	R2		Bedroom	10.56	113.66	10.20	109.82	0.97	8.10	2.11	22.67	0.79
First	R3		Bedroom	11.47	123.50	11.47	123.50	1.00	11.47	0.00	0.00	1.00
Second	R1		LKD	49.77	535.69	49.77	535.69	1.00	49.56	0.21	2.25	1.00
Third	R1		Bedroom	16.61	178.76	16.47	177.33	0.99	16.47	0.00	0.00	1.00
Third	R2		Bedroom	10.64	114.52	10.28	110.69	0.97	8.94	1.34	14.43	0.87
Third	R3		Bedroom	17.68	190.27	17.68	190.27	1.00	17.06	0.61	6.61	0.97

Appendix 5: Baseline vs Proposed APSH Results

Project Name: New Development Rochdale Road Project No.: 2871 Report Title: Daylight & Sunlight - Neighbour Analysis													
Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	Window Orientation	Total Suns per Room Annual Existing	Total Suns per Room Annual Proposed	Annual Suns Lost	Annual Pr/Ex	Total Suns per Room Winter Existing	Total Suns per Room Winter Proposed	Wnter Suns Lost	Winter Pr/Ex
The Citadel Ludgate Hill													
Ground	R1	Residential	Unknown	W1 W2 W3 W4	150 60°N 60°N 60°N	45	36	9.00	0.80	7	7	0	1.00
	R12	Residential	Unknown	W15 W16	143 60°N	32	27	5.00	0.84	6	4	2	0.67
First	R1	Residential	Unknown	W1 W2 W3 W4	150 60°N 60°N 60°N	48	41	7.00	0.85	7	7	0	1.00
	R12	Residential	Unknown	W15 W16	143 60°N	33	28	5.00	0.85	7	5	2	0.71
Second	R1	Residential	Unknown	W1 W2 W3 W4	150 60°N 60°N 60°N	52	45	7.00	0.87	10	10	0	1.00
	R12	Residential	Unknown	W15 W16	143 60°N	32	29	3.00	0.91	7	5	2	0.71
Third	R1	Residential	Unknown	W1 W2 W3 W4	150 60°N 60°N 60°N	57	50	7.00	0.88	10	10	0	1.00
	R12	Residential	Unknown	W15 W16	143 60°N	31	28	3.00	0.90	7	5	2	0.71
Fourth	R1	Residential	Unknown	W1 W2 W3 W4	150 60°N 60°N 60°N	60	54	6.00	0.90	11	11	0	1.00
	R12	Residential	Unknown	W15 W16	143 60°N	30	28	2.00	0.93	7	6	1	0.86
Fifth	R1	Residential	Unknown	W1 W2 W3 W4	150 60°N 60°N 60°N	63	58	5.00	0.92	13	13	0	1.00
	R12	Residential	Unknown	W15 W16	143 60°N	30	28	2.00	0.93	6	5	1	0.83
6 Ludgate Hill													
First	R1	Residential	Unknown	W1 W2 W3	149 59°N 59°N	61	61	0.00	1.00	20	20	0	1.00
Second	R1	Residential	Unknown	W1 W2 W3	149 59°N 59°N	61	61	0.00	1.00	20	20	0	1.00
Third	R1	Residential	Unknown	W1 W2 W3	149 59°N 59°N	62	62	0.00	1.00	21	21	0	1.00
Fourth	R1	Residential	Unknown	W1 W2 W3	149 59°N 59°N	76	76	0.00	1.00	23	23	0	1.00
Fifth	R1	Residential	Unknown	W1 W2 W3	149 59°N 59°N	76	76	0.00	1.00	23	23	0	1.00
85 Rochdale Road													
First	R1	Commercial	Unknown	W1	246	57	59	-2.00	1.04	17	17	0	1.00
	R2	Commercial	Unknown	W2	246	58	59	-1.00	1.02	17	17	0	1.00
	R3	Commercial	Unknown	W3	246	62	62	0.00	1.00	20	20	0	1.00
18-20 Rochdale Road													
Ground	R1	Residential	LKD	W1	242	60	46	14.00	0.77	19	19	0	1.00
First	R3	Residential	Bedroom	W5 W6 W7	310°N 242 164	95	82	13.00	0.86	26	26	0	1.00
Second	R1	Residential	LKD	W1 W2 W3 W4 W5 W6 W7	310°N 310°N 310°N 310°N 242 164 164	96	83	13.00	0.86	27	27	0	1.00
Third	R3	Residential	Bedroom	W4 W5 W6 W7	310°N 242 164 164	96	83	13.00	0.86	27	27	0	1.00

Appendix 6: 2 Hour Time in Sun Results

Plan View - Existing
2 Hour Time in Sun Test



Plan View - Proposed
2 Hour Time in Sun Test



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 3D Point Cloud Survey carried out by Norman Oliver Ltd. 3D photogrammetric model produced by Accuties is used for surrounding contextual detail.
Neighbouring Buildings internal room layouts, window positions/dimensions and massing derived from plans found on the planning portal.
Where plans/elevations were unavailable assumptions have been made based on site photography, Bing Maps and Google Earth.

Proposed Model
Proposed scheme massing -
"136-JMA-ZZ-XX-M3-A-0002-Architectural.dwg"
Supplied by Joanna Beal of JMA on 23/06/2021.

Massing Legend

Existing
Proposed

All heights in m AOD

Analysis Legend

Area with more than 2 Hours direct sunlight
Area with less than 2 Hours direct sunlight
Percentage of area with more than 2 Hours direct sunlight

REV:	NOTES:	DRWN:	DATE:



grayscanlanhill
chartered building surveyors

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CLIENT:
Portwood Developments Limited

PROJECT:
New Development
Rochdale Road
Manchester

DRAWING TITLE:
Plan View
2 hour Time in Sun Test

SCALE @ A2: 1:500	DATE: 16.08.2021	DRAWN: GSH
	CHECKED: DMH	

DRAWING NUMBER: 2871_MA-18	REV: .
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Plan View
2 Hour Time in Sun Test



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 Walldram Tools
MBS Survey Software Ltd (www.mbs-software.co.uk)

Existing Model & Surrounding Model
Existing Site derived from a 3D Point Cloud Survey carried out by Norman Oliver Ltd. 3D photogrametric model produced by Accuties is used for surrounding contextual detail.
Neighbouring Buildings internal room layouts, window positions/dimensions and massing derived from plans found on the planning portal.
Where plans/elevations were unavailable assumptions have been made based on site photography, Bing Maps and Google Earth.

Proposed Model
Proposed scheme massing -
"136-JMA-ZZ-XX-M3-A-0002-Architectural.dwg"
Supplied by Joanna Beal of JMA on 23/06/2021.

Massing Legend

Existing

Proposed

All heights in m AOD

Analysis Legend

Area with more than 2 Hours direct sunlight

Area with less than 2 Hours direct sunlight

%

 Percentage of area with more than 2 Hours direct sunlight

REV:	NOTES:	DRWN:	DATE:



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Email: info@grayscanlanhill.com Web: www.grayscanlanhill.com

CLIENT:
Portwood Developments Limited

PROJECT:
New Development
Rochdale Road
Manchester

DRAWING TITLE:
Plan View
2 hour Time in Sun Test

SCALE @ A2: NTS	DATE: 16.08.2021	DRAWN: GSH
	CHECKED: DMH	

DRAWING NUMBER: 2871_MA-17	REV: .
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