

Daylight and Sunlight Amenity Impact Assessment Report

Proposed Residential Redevelopment
Renaissance Hotel Site
Deansgate
Manchester

Prepared for: Deansgate SOF Alliance LeaseCo Limited, a joint venture between Property Alliance Group (PAG) and an affiliate of Starwood Capital (SCG)

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1. Executive Summary

- 1.1.1 Deansgate SOF Alliance LeaseCo Limited, a joint venture between Property Alliance Group (PAG) and an affiliate of Starwood Capital (SCG) have developed a proposal for the redevelopment of The Renaissance Hotel site on Deansgate in Manchester City Centre.
- 1.1.2 This Report relates to the proposed construction of a high quality landmark residential building on the northernmost area of the Renaissance Hotel Complex, following the consented partial demolition of Premier House which will clear the plot for development.
- 1.1.3 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.
- 1.1.4 This Report confirms our assessment methodology, findings and opinions.
- 1.1.5 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.
- 1.1.6 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.
- 1.1.7 The BRE Guidance targets 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.
- 1.1.8 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.
- 1.1.9 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 of known residential use:

- City Heights Apartments, Victoria Bridge Street;
- Britannic Buildings, 42-46 Victoria Street; and
- No. 1 Deansgate Apartments.

- 1.1.10 Following pre-application consultation with Manchester City Council, we are also briefed to appraise the daylight and sunlight amenity impact of the Proposed Development on the Premier Inn hotel located within the lower floors of the North Tower building.
- 1.1.11 On the basis that this Site is located in the City Centre, and is the subject of a Strategic Redevelopment Framework that envisages an increased uplift in the massing and density of the Site, the flexible application of the BRE Guidance is entirely justified.

Daylight Amenity Impact

- 1.1.12 Overall, the Proposed Development will have an impact on daylight amenity that is considered to be appropriate and balanced, given the City Centre location and the increase in massing envisaged for the area by Planning Policy.
- 1.1.13 Despite some measured reductions in Vertical Sky Component (“VSC”) levels, the significant majority (93%, or 1,078 windows) of the 1,155 windows appraised in the neighbouring receptors would continue to achieve the BRE’s 27% VSC target or experience a reduction in VSC of less than the 20% reduction that is accepted by the BRE on the grounds that it would not be noticed by the room occupants.
- 1.1.14 In total, 95% of the rooms appraised would pass the BRE’s NSL test, experiencing either no movement in NSL, or negligible reductions in daylight distribution that would not be noticeable to the room occupants.
- 1.1.15 All Site facing rooms within Britannic Buildings and City Heights Apartments will remain well daylit, as will a significant majority of windows and rooms of Premier Inn hotel.
- 1.1.16 A statistical minority of windows and rooms of the Premier Inn would not achieve the BRE targets. Notwithstanding, we consider impact on daylight amenity to be appropriate and balanced, on the basis that architectural features of North Tower inherently limit daylight amenity in the baseline, and that City Centre hotels for business & tourist use are considered to be a low sensitivity daylight receptor.
- 1.1.17 A majority of windows and rooms within No.1 Deansgate would achieve the BRE targets.

- 1.1.18 A minority of No.1 Deansgate windows (20 windows; 13%) would not achieve the VSC target.
- 1.1.19 Notwithstanding, we consider the impact on the daylight amenity of No.1 Deansgate to be appropriate and balanced, on the basis that these rooms account for only a small statistical minority of No.1 Deansgate as a whole, and that their daylight amenity is inherently limited in the baseline condition by the presence of winter gardens, which reduce their capacity to receive direct daylight.

Sunlight Amenity Impact

- 1.1.20 No.1 Deansgate is located to the south of the Site, and 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 do not need to be sunlight amenity impact appraised as they are not oriented within 90 degrees of due south.
- 1.1.21 In the proposed condition, 260 rooms (93%) of the 281 rooms appraised (all rooms of City Heights Apartments and Britannic Buildings and the significant majority of rooms in Premier Inn) 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 21 rooms (7% of all rooms appraised) are all within the Premier Inn portion of North Tower.
- 1.1.23 Notwithstanding, we consider the impact on sunlight amenity of Premier Inn to be appropriate and balanced, given the City Centre location, and that these rooms account for no more than a small, statistical minority of the Premier Inn as whole. Further, on the basis that the hotel's occupation is of transient use, by business users & tourist visitors to the City Centre, we consider is to be a low sensitivity sunlight receptor.
- 1.1.24 Overall, we consider the impact of the Proposed Development on the sunlight amenity of these neighbouring receptors to be appropriate and non-significant, given the City Centre Location and the massing envisaged for the Site by Planning Policy.

2. Introduction

2.1 Background and Instructions

- 2.1.1 Deansgate SOF Alliance LeaseCo Limited, a joint venture between Property Alliance Group (PAG) and an affiliate of Starwood Capital (SCG) have developed a proposal for the redevelopment of The Renaissance Hotel site on Deansgate in Manchester City Centre.
- 2.1.2 This particular planning application relates to the residential element of a wider mixed-use masterplan development at the site, comprising a building up to ground plus 26 storeys in height on the northern most plot of the masterplan site. 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:
- City Heights Apartments, North Tower, Victoria Bridge Street;
 - Britannic Buildings, 42-46 Victoria Street; and
 - No. 1 Deansgate Apartments.
- 2.2.3 Following pre-application consultation with Manchester City Council, we are also briefed appraise the daylight and sunlight amenity impact of the Proposed Development on the Premier Inn hotel accommodation located between the ground – 13th floors within the North Tower building.

- 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 Renaissance Hotel Complex is located in Manchester City Centre, and bounded by Deansgate to the east, Blackfriars Street to the south, the River Irwell to the west and Victoria Bridge Street to the north.
- 2.4.2 The Site the subject of this particular planning application for residential development and riverside public realm/ residents’ amenity space is of approximately 0.35 hectares and located at the northernmost area of the Renaissance Hotel Complex. The Site currently comprises part of the 3 – 4 storey Premier House, fronting Deansgate and Victoria Bridge Street.

- 2.4.3 The Site's surroundings are of predominantly commercial use, with office and retail premises comprising the majority of the surrounding area. There are, however, buildings of residential use to the east, north east and north of the Site.
- 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 partial demolition of Premier House at the northern end of the Renaissance Hotel Complex, followed by the construction of a residential apartment building of ground + 26 storeys. The podium of the residential tower building, positioned adjacent to the river Irwell, will be ground + 13 storeys in height.
- 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 Zmapping; 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 the planning applications downloaded from Manchester City Council's Planning Public Access System and from other online / digital resources as follows:

- No. 1 Deansgate – MCC Ref. 056636/00/CITY1/99;
- Britannic Buildings – Letting particulars available from Rightmove.co.uk;
- Britannic Buildings - Lease plans available from Land Registry; and
- City Heights Apartments – Sales particulars available from Rightmove.co.uk.

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 is located within the City Centre, as defined in Policy CC1.
- 3.2.7 The Council acknowledge within in Policy CC6 of the Core Strategy – City Centre High Density Development – that development in the City Centre will generally be “high density” and that the scale, massing and height of development in the City Centre will significantly exceed what is appropriate elsewhere in the City.
- 3.2.8 Given the increased density of the City Centre, both at present and as sought by planning policy, impacts on the amenity of daylight and sunlight receptors is an ordinary consequence of this approach to City Centre development.
- 3.2.9 Further, the Ramada Complex Strategic Regeneration Framework (“Ramada SRF”) dated May 2018 is adopted by the Council and confirms that high density development (tall buildings located in close proximity of one another) is appropriate for the Site.
- 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 massing and density promoted for the Site by the Core Strategy and the Ramada Complex SRF, coupled with the flexible approach to residential daylight and sunlight amenity typically applied elsewhere in 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 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. 0.8 x) 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 0.8x) 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. 0.8 x) 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 by 20%.
- 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 APSH targets of 4% winter APSH (rather than the low density 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 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 windows and rooms in the following neighbouring buildings as sensitive or key receptors:
- City Heights Apartments, North Tower, Victoria Bridge Street;
 - Britannic Buildings, 42-46 Victoria Street; and
 - No. 1 Deansgate Apartments.
- 5.2.4 Following pre-application consultation with Manchester City Council, we are also briefed to amenity impact appraise those parts of the North Tower building, occupied by Premier Inn and located in the lower half (ground – 13th floor) of the building.

- 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.

5.3 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)
North Tower – Premier Inn	175 windows (36%)	315 windows (64%)
North Tower – Apartments	347 windows (74%)	121 window (26%)
Britannic Buildings	32 windows (80%)	8 windows (20%)
No.1 Deansgate	16 windows (10%)	141 windows (90%)

- 5.3.4 Approximately half (49%) of the neighbouring receptor windows achieve the BRE's aspirational VSC target of 27% in the Baseline Condition.

- 5.3.5 Half of the windows appraised (51%, or 585 windows) do not achieve the BRE's aspirational targets in the Baseline condition. The majority of these serve rooms in the Premier Inn accommodation in the North Tower and rooms in No.1 Deansgate. The windows of these rooms overlook and are, respectively, in close proximity to and directly overlooking the neighbouring BT Building and the existing Renaissance Hotel building.
- 5.3.6 Further, both the North Tower building and No.1 Deansgate include architectural features that inhibit the receipt of daylight by the windows and rooms.
- 5.3.7 In addition to the main window, the majority of rooms of the North Tower are also served by a smaller, secondary panes that is surrounded by a projecting concrete sill that wraps around the perimeter of the window. This has the effect of limiting sky visibility as measured from the face of the window. All examples of this secondary window type do not achieve the VSC target in the baseline condition until the 25th floor of the building.
- 5.3.8 No.1 Deansgate also includes an architectural feature that limits daylight potential. Each apartment has a 'winter garden' – an enclosed area between the glazed face of the building and the rooms and windows appraised. These winter gardens are, in effect, a linear projecting structure above and below each window that limits the sky visibility.
- 5.3.9 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)
North Tower – Premier Inn	143 rooms (96%)	4 rooms (4%)
North Tower – Apartments	126 rooms (100%)	0 rooms (0%)
Britannic Buildings	7 rooms (87%)	1 room (13%)
No.1 Deansgate	N/a – North facing	

- 5.3.10 The majority of rooms appraised (98%) would achieve the BRE's Winter and Annual PSH targets in the 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 City Centre 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 City Centre environment.
- 5.4.9 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;
 - Yellow indicates that the result comes within an Acceptable Tolerance of the unmodified BRE target (i.e. it does achieve the 'Alternative Target');
 - Pink indicates that the results is more than the Acceptable Tolerance reduction.

- 5.4.10 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.
- 5.4.11 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.
- 5.4.12 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).
- 5.4.13 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.

North Tower – Premier Inn

The North Tower is a 25 storey building located to the north west of the Site and separated from it by the Irwell.

The lower portion of the building, from ground to 13th floor, is occupied by Premier Inn.

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

The rooms appraised are assumed to be hotel rooms.



Daylight Amenity Impact

490 individual windows have been appraised, serving 147 assumed hotel rooms.

In the baseline condition 175 windows (36%) appraised achieve the 27% VSC target.

315 windows (64%) do not achieve the 27% target in the baseline condition.

These windows are typically positioned at the lower floor levels and predominantly at the north western end of elevation close to, and oriented towards, the substantial and imposing mass of the neighbouring 9 storey BT building located on the other side of the river, which is an inherent limitation on the daylight amenity of the Site facing rooms. Further, at all floor levels, secondary window panes are set within a projecting architectural detail around the edge of each window that limits the daylight potential of the rooms as the projection reduces the angle of daylight measurement.

Notwithstanding some small measured reductions in the extent to which the sky would continue to be seen over the Site, 468 windows (96%) 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.

22 windows (only 4%) would not achieve the BRE targets, and would experience a reduction in VSC to less than the 0.8x the reduction permitted by the BRE. Of these:

- 17 serve assumed hotel rooms that are also served by multiple other windows which do achieve the BRE targets. These rooms will therefore remain adequately daylit, and all would pass the NSL test, experiencing either no reduction or negligible reductions in daylight distribution.
- 5 windows serve assumed hotel rooms between ground and 2nd floor levels. None of these windows would achieve the VSC target in the baseline condition as a consequence of the above-described inherent limitations. Notwithstanding the less than aspirational VSC impacts, 3 of these rooms would pass the BRE's NSL test, experiencing negligible reductions in daylight distribution.
- The remaining 2 windows that do not achieve the VSC target serve rooms at ground and 1st floor level that would also not pass the NSL test. These windows are both recessed into the face of the building, and also predominantly behind a plant/stair core structure serving the adjacent carparking deck. These factors significantly limit potential for daylight amenity, with neither window achieving the VSC target in the baseline condition placing an unrealistic burden on the Site.

These less than aspirational impacts on daylight amenity account for no more than a statistical minority of the Premier Inn accommodation as a whole.

We do not consider the Premier Inn to be sensitive to changes in daylight amenity. A distinction should be drawn between “business” or “City break” hotels located in City Centre locations and those “R&R” hotels, where the hotel is a destination in its own right and daylight amenity and views are part of their appeal (and therefore reasonably expected). The occupation of City Centre hotels is transient and high turnover. The occupants – business users and tourists to the City centre – are unlikely to occupy hotel rooms during daylight hours, owing to the attendance of meetings or shopping and exploring the City.

As a whole, 145 rooms (98%) of the 147 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, given the City Centre location, and the lesser sensitivity of hotel accommodation compared with habitable rooms within dwellings.

Sunlight Amenity Impact

147 individual rooms have been sunlight appraised, served by 490 individual windows.

143 rooms (97%) of the 147 appraised achieve both the 25% Annual and 5% Winter APSH targets in the baseline condition. 2 rooms (1.5%) achieve the Annual sunlight target in the Baseline Condition but not the Winter sunlight target. The remaining 2 rooms (1.5%) achieve neither the Annual nor the Winter sunlight targets in the baseline condition.

The Proposed Development would result in measured reductions to Annual and Winter sunlight. Notwithstanding these general reductions, 126 rooms (86%) would continue to achieve the BRE’s Winter and Annual sunlight targets. There is some partial BRE sunlight compliance as follows:

- 1 Room (<1%) would achieve the Annual sunlight target and come within an acceptable tolerance of the Winter sunlight target.
- A further 13 rooms (9%) would achieve the Annual sunlight target but not the winter target, the majority of these rooms being positioned close to the neighbouring 9 storey BT building.
- 4 rooms (3%) would achieve Annual APSH values that are within an acceptable tolerance of the Annual sunlight target, and Winter sunlight values that are not.

3 rooms (2%) would achieve neither the Annual nor Winter Sunlight targets.

Notwithstanding these impacts on sunlight amenity, we consider them to be balanced and appropriate for the following reasons:

- As noted above, we do not consider the Premier Inn to be sensitive to changes in sunlight amenity. A distinction should be drawn between “business” or “City break” hotels (such as Travelodge / Premier Inn) located in City Centre locations and those “R&R” hotels, where the hotel is a destination in its own right and daylight / sunlight amenity and views are part of their appeal (and therefore reasonably expected).

The occupation of City Centre hotels is transient and high turnover. The occupants - Business users and tourists to the City centre – are unlikely to occupy hotel rooms during daylight hours, owing to the attendance of meetings or shopping and exploring the City.

- These less than aspirational impacts account for a statistical minority of the Premier Inn accommodation as a whole, and are significantly influenced by their proximity to the adjacent 9 storey mass of the BT Building. Where these rooms achieve sunlight targets in the Baseline Condition, this is despite the mass of the neighbouring building, which in turn places a greater reliance on sunlight received over the Site.
- Any development of the Site in accordance with the massing envisaged in the Strategic Regeneration Framework will ordinarily result in some impacts on sunlight amenity. This should be considered an ordinary and appropriate consequence of high density development (as encouraged by planning policy) in the City Centre.

In our opinion, the impact that the Proposed Development will have on the sunlight amenity of this neighbouring building is considered to be appropriate, given the City Centre location and the lesser sensitivity of hotel accommodation compared with habitable rooms within dwellings.

North Tower – City Heights Apartments

The North Tower is a 25 storey building located to the north west of the Site and separated from it by the Irwell.

The upper portion of the building, from 14th floor upwards, are part of the City Heights Apartments accommodation.

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



Daylight Amenity Impact

468 individual windows have been appraised, serving 126 assumed habitable rooms.

In the baseline condition 347 windows (74%) appraised achieve the 27% VSC target.

A minority of windows (26%, or 121 windows in total) do not achieve the 27% target in the baseline condition. All of these windows are small, 'fanlight' style windows secondary to the main pane, and each is located within a projecting architectural detail that surrounds the window, limiting its capacity to receive direct daylight. They are not the main window of the room that they serve.

Notwithstanding some small measured reductions in the extent to which the sky would continue to be seen over the Site, all 468 windows (100%) would continue to either achieve the 27% VSC target in the Proposed Condition, or continue to achieve VSC values that are at least 0.8x Baseline values, accepted by the BRE on the grounds that it would not be noticed by the room occupants.

All of the 126 rooms (100%) appraised would also pass the BRE's NSL test, all experiencing no reduction in NSL.

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

126 individual rooms have been sunlight appraised, served by 468 individual windows.

All 126 rooms (100%) achieve both the 25% Annual and 5% Winter APSH targets in the Baseline condition.

The Proposed Development would result in general reductions in both Annual and Winter sunlight. Notwithstanding these reductions, all 126 rooms (100%) would continue to achieve the BRE's Winter and Annual sunlight targets.

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.

Britannic Buildings

The Britannic Buildings is located to the east of the Site. It has windows within its west facing elevations that overlook the Site directly.

The upper floors are apartments, above a ground floor commercial use.



Daylight Amenity Impact

40 individual windows have been appraised, serving 8 habitable rooms. All of these 'windows' are constituent panes of 16 large, 2- or 3-pane bay window.

In the Baseline condition 32 windows (80%) of the 40 appraised achieve the BRE's 27% VSC target. 8 windows (20%) do not achieve the 27% target in the Baseline condition, given their outlook towards, and their relative proximity to, the neighbouring Harvey Nichols building.

In the Proposed Condition all rooms (100%) will remain adequately daylit, insofar as:

- All rooms appraised are served by multiple windows, with at least one of these large window panes achieving the BRE target or VSC within an acceptable tolerance of them.
- All rooms would also pass the NSL test, receiving direct daylight to the significant majority of their respective area in the Proposed Condition. 6 rooms would experience no reduction in daylight distribution, with the remaining 2 rooms experiencing only negligible reductions in daylight distribution (remaining <0.98x Baseline values).

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

There are 8 rooms (two per floor) served by a window that is oriented within 90 degrees of due south that have been sunlight impact appraised.

In the existing condition, 7 rooms (87%) achieve both Annual and Winter sunlight targets in the baseline condition. 1 room (13%), located at first floor level achieves the Annual Sunlight target, but does not receive any direct sunlight in Winter in the baseline condition.

In the proposed condition all 8 rooms (100%) would continue to achieve both Annual and Winter sunlight targets, or in the instance of the single room above, experience no reduction in Winter sunlight (due to receiving none in the baseline condition).

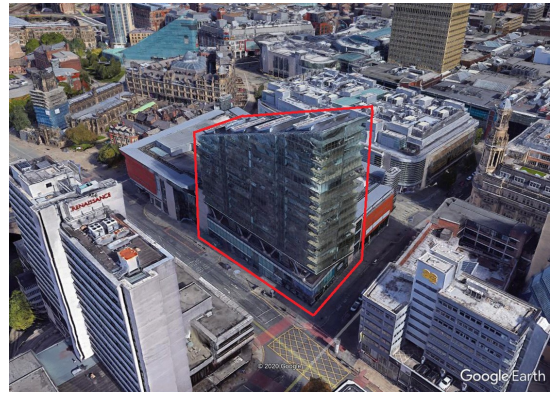
The Proposed Development will have no impact on the sunlight amenity of this neighbouring building.

No.1 Deansgate

No.1 Deansgate is located to the south east of the Site.

Its window provision does not overlook the Site directly, although the Proposed Development will be seen once constructed.

Residential accommodation is located from the 1st floor upwards.



Daylight Amenity Impact

157 individual windows have been appraised, serving an assumed 136 habitable rooms from 1st floor level upwards.

In the Baseline condition 16 windows (10%) achieve the BRE's 27% VSC target. 141 windows (90%) would not achieve the VSC target in the Baseline Condition, predominantly due to a combination of the massing of the existing Renaissance Hotel building, and the presence of apartment 'winter gardens', the floor & ceiling of which act as barriers to sky visibility from the windows of LKDs and bedrooms.

In the Proposed Condition 137 windows (87%) would continue to either achieve the 27% VSC target in the Proposed condition or continue to achieve VSC values that are at least 0.8x Baseline values, accepted by the BRE on the grounds that it would not be noticed by the room occupants

There are 20 windows (13%) that would achieve a VSC of <21.6%, and the reduction in VSC could be noticeable to the room occupants.

Of these, 6 windows serve a dual aspect room also served by another, larger (non-Site facing) window that would achieve a VSC of >30% in the Proposed Condition. These rooms will remain adequately daylit – they would pass the NSL test and the impact of the Proposed Development is not significant.

The remaining 14 windows serve single aspect rooms with an outlook towards the existing Renaissance Hotel building. Of these, 12 rooms are understood to be bedrooms which, in our opinion, are low sensitivity daylight receptors (when part of a multi room apartment).

Further, these rooms and the windows serving them are recessed, and set behind the winter gardens of each apartment. This design feature has the effect of reducing sky visibility and inherently limited daylight amenity – none of these windows achieve the VSC target in the baseline condition.

The impact of the Proposed Development on these rooms is, in our opinion, not significant on the basis that they pass the NSL test and given the presence of winter garden feature that limits daylight potential.

All 136 rooms (100%) appraised would pass the BRE's NSL test, experiencing either no reduction in daylight distribution, or a movement in the NSL that would not be noticeable to the room occupants.

Notwithstanding some measured reductions in VSC and NSL values amenity, the majority of No.1 Deansgate experiences no significant impact on daylight amenity. Where impacts of any significance on daylight amenity are identified, these account for a statistical minority of the building as a whole, and are contributed to by the presence of No.1 Deansgate's own architectural features – the winter gardens – which inhibit daylight amenity of the habitable rooms behind.

In our opinion, the impact of the Proposed Development on the daylight amenity of this neighbouring building is appropriate and balanced, given the City Centre location.

Sunlight Amenity Impact

No.1 Deansgate is located to the south of the Site, and the windows through which the Site and the Proposed Development will be seen are north east and north west facing.

In accordance with the BRE Guidance, the windows / rooms do not need to be sunlight amenity impact appraised as they are not oriented within 90 degrees of due south.

Appendix 1: Baseline and Proposed Massing Plans



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

Analysis
Produced using Waldram Tools
MBS Survey Software Ltd (www.mbs-software.co.uk)
Existing Model & Surrounding Model
Existing Site derived from a supplied 3D ZMAP model.

Neighbouring Buildings internal room layouts, window
positions/dimensions and massing derived from both
the ZMAP data and 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 - "150_B2
Model_G+26.dwg"
Supplied by Jon Matthews Architects on 16/07/2021.

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

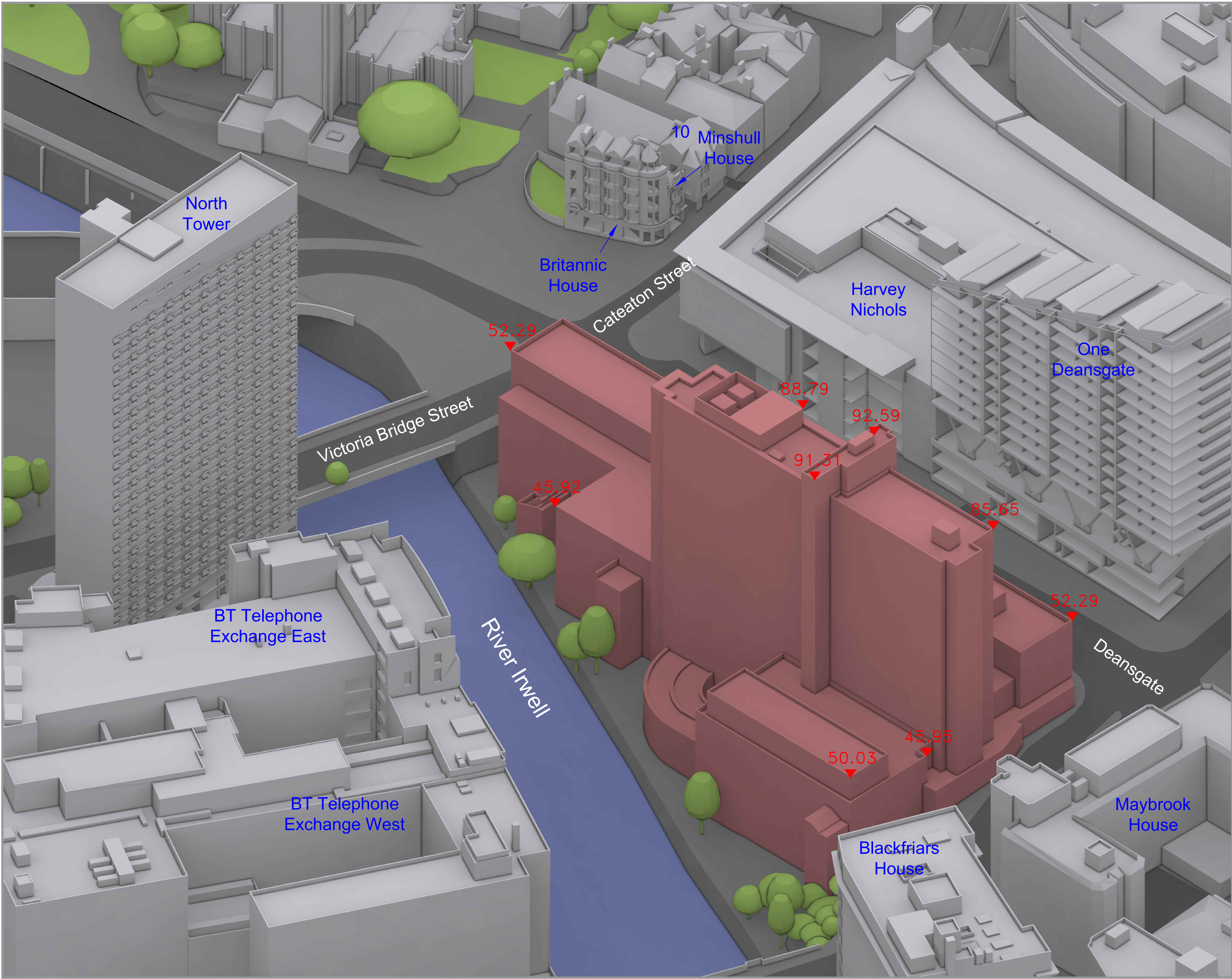
CLIENT:
Property Alliance Group Limited

PROJECT:
Renaissance Hotel
Deansgate
Manchester

DRAWING TITLE:
Plan View
Existing Site

SCALE @ A2: NTS	DATE: 19.07.2021	DRAWN: GSH
	CHECKED:	DMH

DRAWING NUMBER: 2571_MA-01	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 supplied 3D ZMAP model.

Neighbouring Buildings internal room layouts, window positions/dimensions and massing derived from both the ZMAP data and 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 - "150_B2 Model_G+26.dwg"
Supplied by Jon Matthews Architects on 16/07/2021.

Massing Legend

Existing

Proposed

All heights in m AOD

REV:	NOTES:	DRWN:	DATE:

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

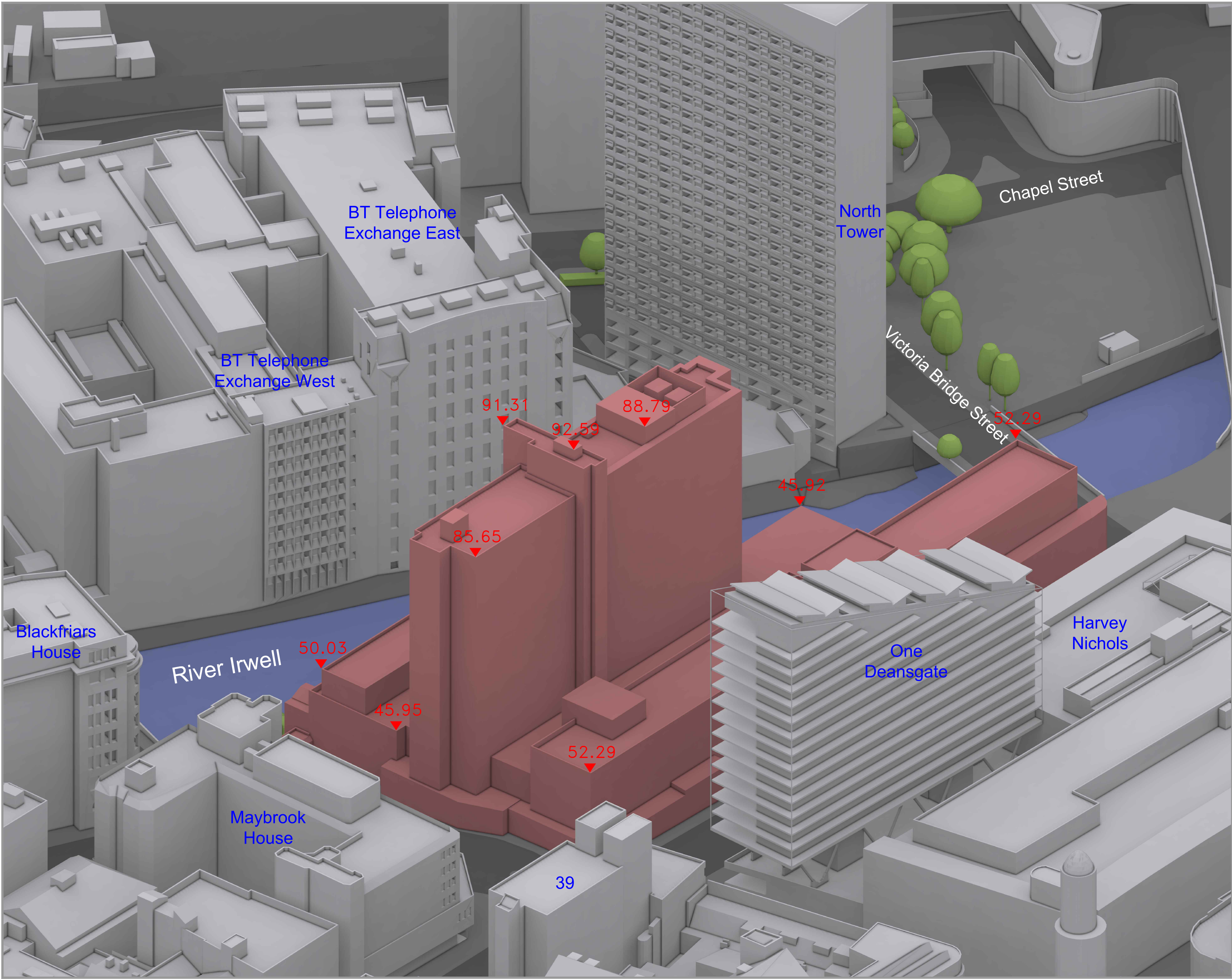
CLIENT:
Property Alliance Group Limited

PROJECT:
Renaissance Hotel
Deansgate
Manchester

DRAWING TITLE:
3D View 1
Existing Site

SCALE @ A2: NTS	DATE: 19.07.2021	DRAWN: GSH
	CHECKED:	DMH

DRAWING NUMBER: 2571_MA-02	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 supplied 3D ZMAP model.

Neighbouring Buildings internal room layouts, window
positions/dimensions and massing derived from both
the ZMAP data and 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 - "150_B2
Model_G+26.dwg"
Supplied by Jon Matthews Architects on 16/07/2021.

Massing Legend

- Existing
- Proposed

All heights in m AOD

REV:	NOTES:	DRWN:	DATE:



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

CLIENT:
Property Alliance Group Limited

PROJECT:
Renaissance Hotel
Deansgate
Manchester

DRAWING TITLE:
3D View 2
Existing Site

SCALE @ A2: NTS	DATE: 19.07.2021	DRAWN: GSH
	CHECKED:	DMH

DRAWING NUMBER: 2571_MA-03	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 supplied 3D ZMAP model.
Neighbouring Buildings internal room layouts, window positions/dimensions and massing derived from both the ZMAP data and 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 - "150_B2 Model_G+26.dwg"
Supplied by Jon Matthews Architects on 16/07/2021.

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:
Property Alliance Group Limited

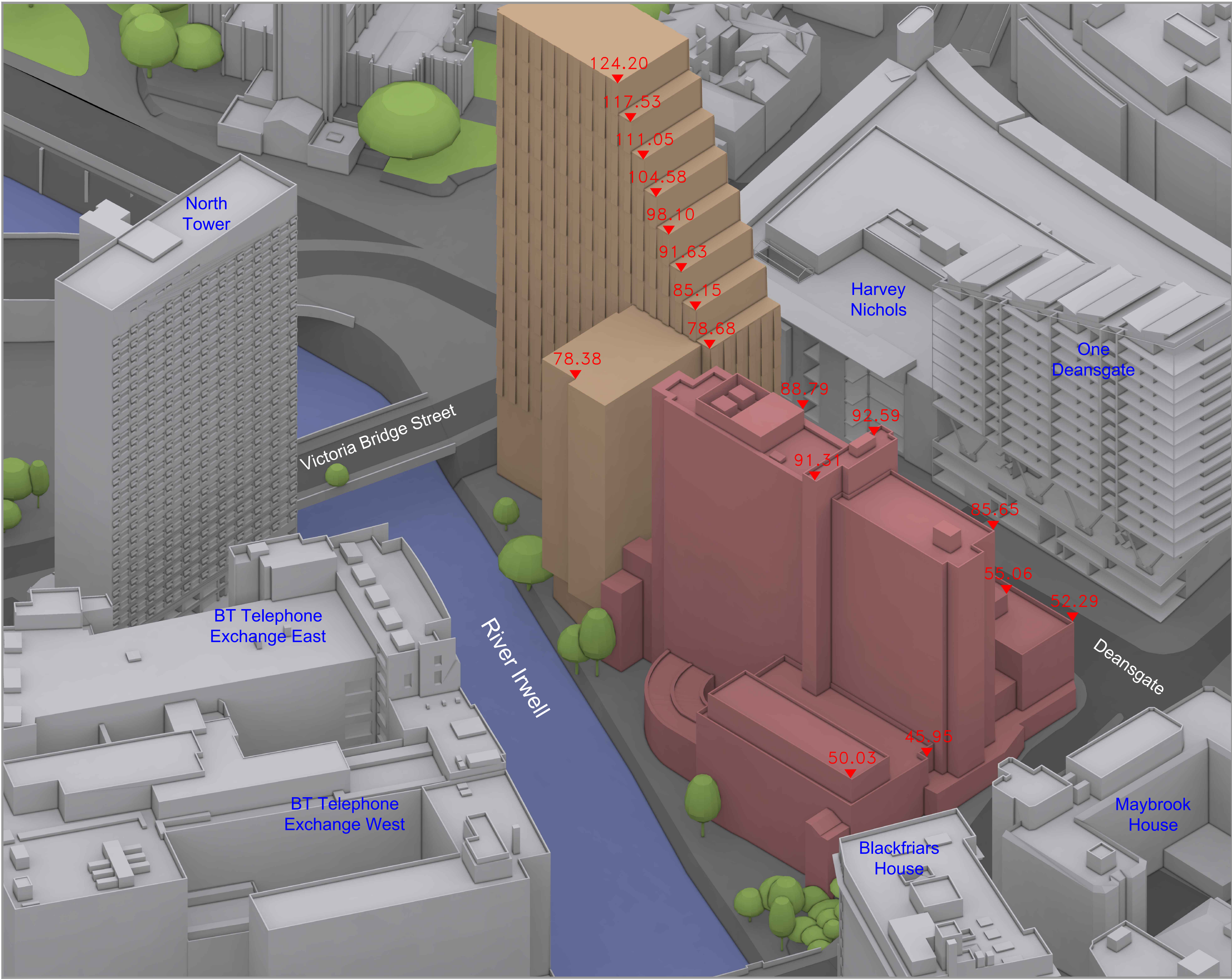
PROJECT:
Renaissance Hotel
Deansgate
Manchester

DRAWING TITLE:
Plan View
Proposed Scheme

SCALE @ A2: NTS	DATE: 19.07.2021	DRAWN: GSH
	CHECKED:	DMH

DRAWING NUMBER: 2571_MA-04	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 supplied 3D ZMAP model.

Neighbouring Buildings internal room layouts, window
positions/dimensions and massing derived from both
the ZMAP data and 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 - "150_B2
Model_G+26.dwg"
Supplied by Jon Matthews Architects on 16/07/2021.

Massing Legend

- Existing
- Proposed

All heights in m AOD

REV.	NOTES:	DRWN:	DATE:

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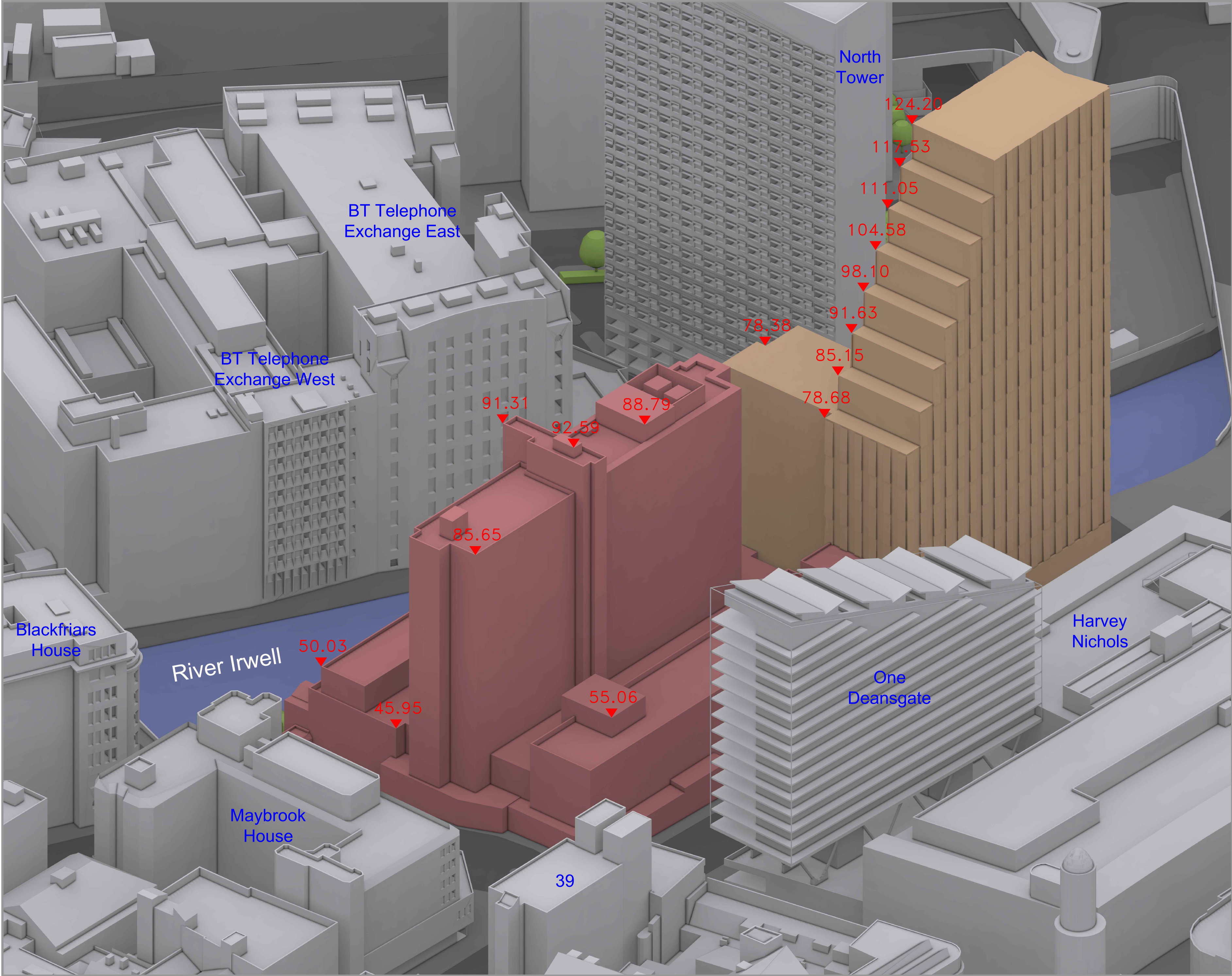
CLIENT:
Property Alliance Group Limited

PROJECT:
Renaissance Hotel
Deansgate
Manchester

DRAWING TITLE:
3D View 1
Proposed Scheme

SCALE @ A2: NTS	DATE: 19.07.2021	DRAWN: GSH
	CHECKED:	DMH

DRAWING NUMBER: 2571_MA-05	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 supplied 3D ZMAP model.

Neighbouring Buildings internal room layouts, window
positions/dimensions and massing derived from both
the ZMAP data and 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 - "150_B2
Model_G+26.dwg"
Supplied by Jon Matthews Architects on 16/07/2021.

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:
Property Alliance Group Limited

PROJECT:
Renaissance Hotel
Deansgate
Manchester

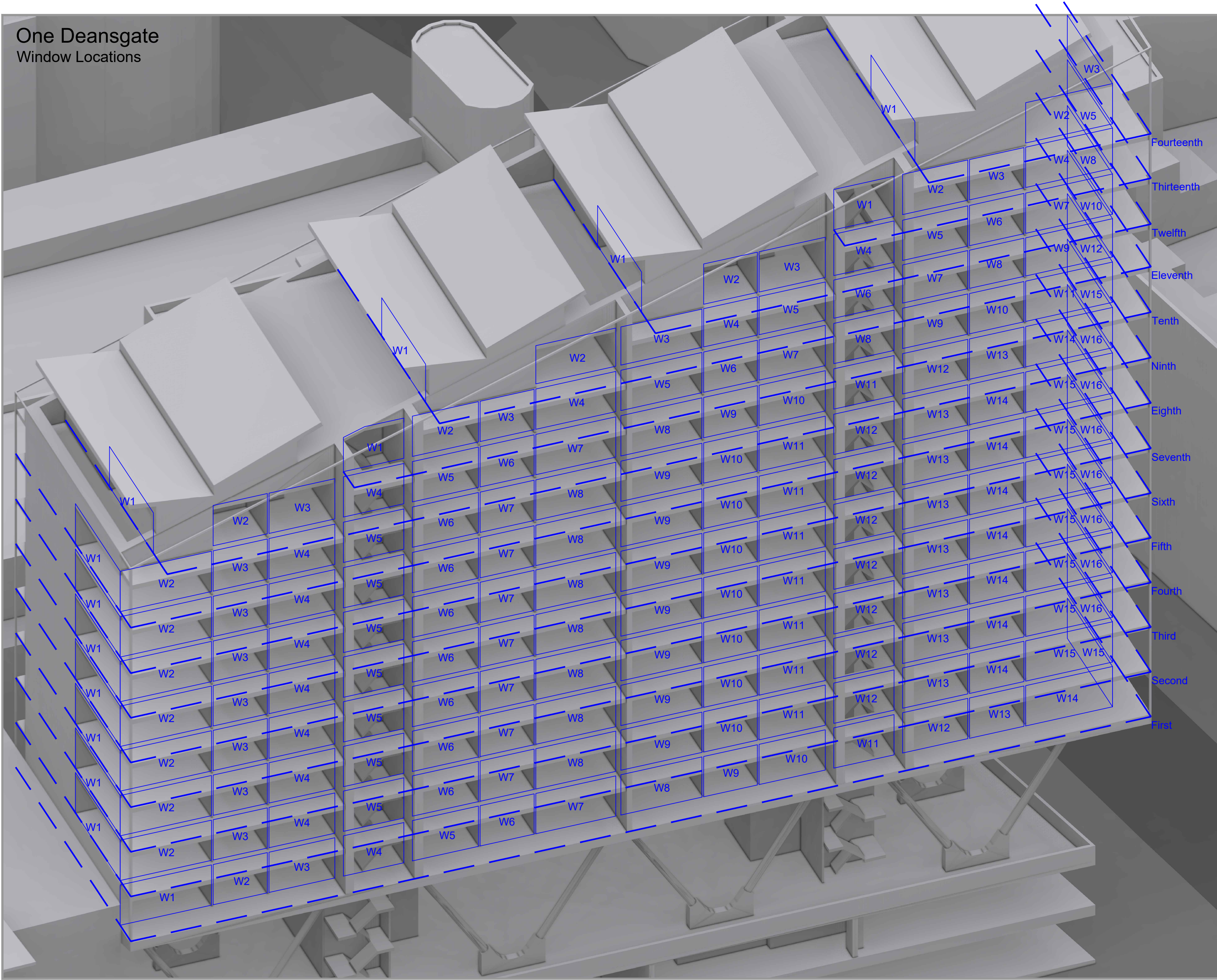
DRAWING TITLE:
3D View 2
Proposed Scheme

SCALE @ A2: NTS	DATE: 27.01.2021	DRAWN: GSH
	CHECKED:	DMH

DRAWING NUMBER: 2571_MA-06	REV: .
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Appendix 2: Window Reference Plans

One Deansgate
Window Locations



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

Analysis
Produced using Waldram Tools
MBS Survey Software Ltd (www.mbs-software.co.uk)
Existing Model & Surrounding Model
Existing Site derived from a supplied 3D ZMAP model.
Neighbouring Buildings internal room layouts, window
positions/dimensions and massing derived from both
the ZMAP data and 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 - "150_Renaissance_3D
Model_201119.dwg"
Supplied by Jon Matthews Architects on 19/11/2020.

Massing Legend

Existing

Proposed

All heights in m AOD

REV.	NOTES:	DRWN:	DATE:

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

CLIENT:
Property Alliance Group Limited

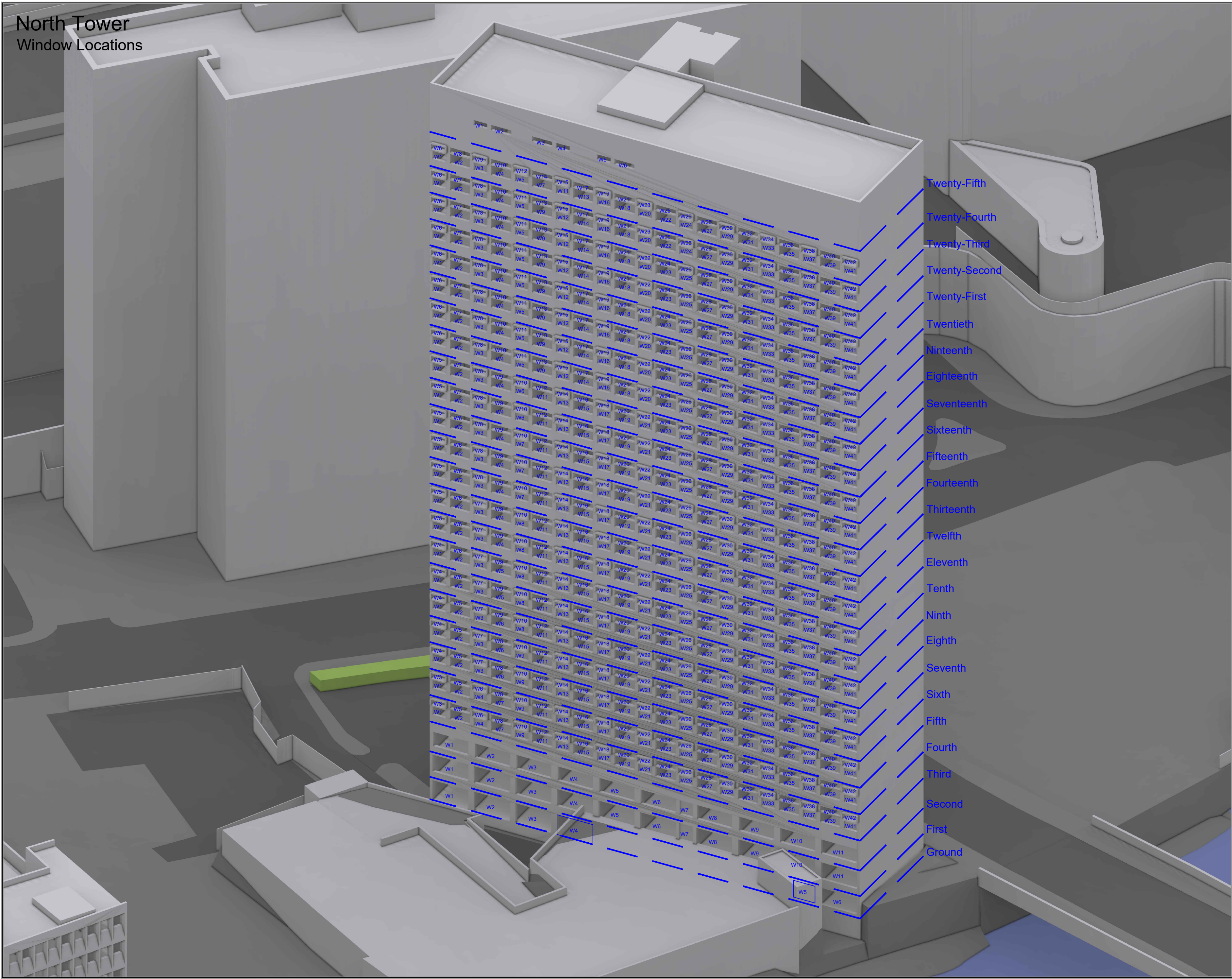
PROJECT:
Renaissance Hotel
Deansgate
Manchester

DRAWING TITLE:
Window Locations

SCALE @ A2: NTS	DATE: 19.07.2021	DRAWN: GSH
	CHECKED:	DMH

DRAWING NUMBER: 2571_MA-WM1	REV: .
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North Tower
Window Locations



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

Analysis
Produced using Waldram Tools
MBS Survey Software Ltd (www.mbs-software.co.uk)
Existing Model & Surrounding Model
Existing Site derived from a supplied 3D ZMAP model.
Neighbouring Buildings internal room layouts, window
positions/dimensions and massing derived from both
the ZMAP data and 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 - "150_Renaissance_3D
Model_201119.dwg"
Supplied by Jon Matthews Architects on 19/11/2020.

Massing Legend

Existing

Proposed

All heights in m AOD

REV:	NOTES:	DRWN:	DATE:



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

CLIENT:
Property Alliance Group Limited

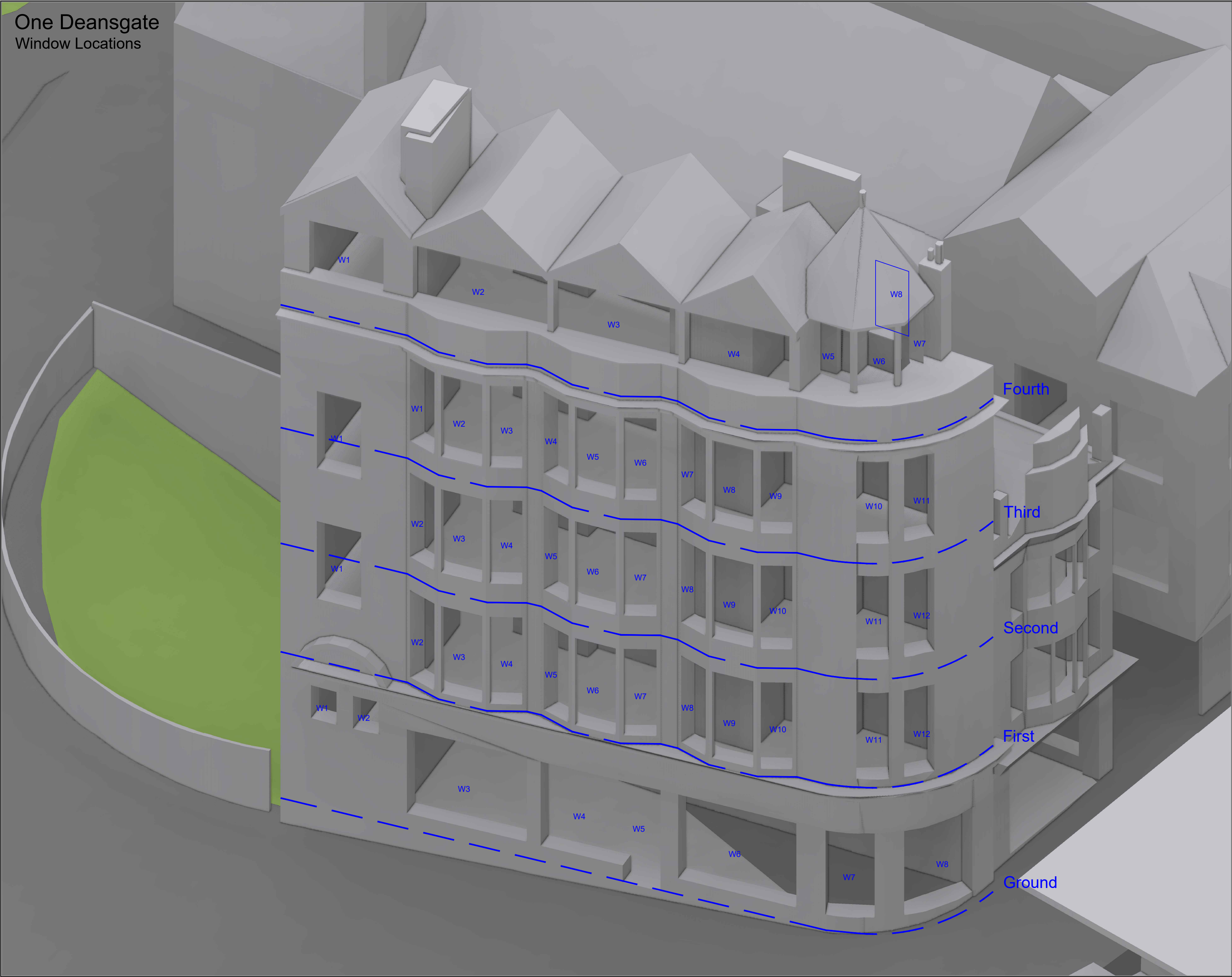
PROJECT:
Renaissance Hotel
Deansgate
Manchester

DRAWING TITLE:
Window Locations

SCALE @ A2: NTS	DATE: 19.07.2021	DRAWN: GSH
		CHECKED: DMH

DRAWING NUMBER: 2571_MA-WM2	REV: .
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One Deansgate
Window Locations



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

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Proposed scheme massing - "150_Renaissance_3D
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Massing Legend

Existing

Proposed

All heights in m AOD

REV:	NOTES:	DRWN:	DATE:


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PROJECT:
Renaissance Hotel
Deansgate
Manchester

DRAWING TITLE:
Window Locations

SCALE @ A2: NTS	DATE: 19.07.2021	DRAWN: GSH
	CHECKED: DMH	

DRAWING NUMBER: 2571_MA-WM3	REV: .
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Appendix 3: Baseline vs Proposed VSC Results

Project Name: Renaissance Hotel, Deansgate, Manchester
Project No.: 2571
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.	Window Ref.	Window Attribute	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
North Tower - Premier Inn										
Ground	R1		Commercial	Unknown	W1		11.85	10.18	1.66	0.86
	R2		Commercial	Unknown	W2		12.78	10.95	1.83	0.86
	R3		Commercial	Unknown	W3		13.28	11.91	1.37	0.90
	R4		Commercial	Unknown	W4		6.77	6.77	0.00	1.00
	R5		Commercial	Unknown	W5		6.22	3.32	2.91	0.53
	R6		Commercial	Unknown	W6		13.97	8.99	4.97	0.64
First	R1		Commercial	Unknown	W1		12.96	11.29	1.67	0.87
	R2		Commercial	Unknown	W2		13.95	12.06	1.89	0.86
	R3		Commercial	Unknown	W3		15.14	13.03	2.12	0.86
	R4		Commercial	Unknown	W4		16.45	14.06	2.39	0.85
	R5		Commercial	Unknown	W5		17.79	15.10	2.69	0.85
	R6		Commercial	Unknown	W6		19.15	16.11	3.03	0.84
					W7		19.93	16.64	3.28	0.84
	R7		Commercial	Unknown	W8		20.77	17.21	3.57	0.83
	R8		Commercial	Unknown	W9		20.79	17.84	2.95	0.86
	R9		Commercial	Unknown	W10		14.35	10.06	4.29	0.70
	R10		Commercial	Unknown	W11		20.70	15.53	5.17	0.75
Second	R1		Commercial	Unknown	W1		14.05	12.38	1.67	0.88
	R2		Commercial	Unknown	W2		15.03	13.14	1.89	0.87
	R3		Commercial	Unknown	W3		16.23	14.10	2.12	0.87
	R4		Commercial	Unknown	W4		17.52	15.12	2.40	0.86
	R5		Commercial	Unknown	W5		18.83	16.12	2.71	0.86
	R6		Commercial	Unknown	W6		20.17	17.11	3.06	0.85
					W7		20.91	17.58	3.33	0.84
	R7		Commercial	Unknown	W8		21.77	18.15	3.62	0.83
	R8		Commercial	Unknown	W9		22.94	18.79	4.15	0.82
	R9		Commercial	Unknown	W10		23.96	19.25	4.71	0.80
	R10		Commercial	Unknown	W11		24.95	19.61	5.34	0.79
Third	R1		Commercial	Unknown	W1		9.58	8.17	1.41	0.85
					W3		2.84	2.24	0.61	0.79
	R2		Commercial	Unknown	W2		15.51	14.00	1.52	0.90
					W4		10.37	8.81	1.56	0.85
					W5		16.17	14.52	1.65	0.90
					W6		3.32	2.60	0.72	0.78
	R3		Commercial	Unknown	W7		16.51	14.76	1.75	0.89
					W8		17.17	15.28	1.88	0.89

Project Name: Renaissance Hotel, Deansgate, Manchester
 Project No.: 2571
 Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.	Window Ref.	Window Attribute	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
			Commercial	Unknown	W9		11.34	9.59	1.75	0.85
					W10		4.05	3.19	0.86	0.79
					W11		17.71	15.72	1.99	0.89
					W12		18.35	16.23	2.12	0.88
			Commercial	Unknown	W13		12.50	10.54	1.96	0.84
					W14		5.01	4.00	1.01	0.80
					W15		18.93	16.65	2.27	0.88
					W16		19.57	17.16	2.41	0.88
			Commercial	Unknown	W17		13.69	11.50	2.19	0.84
					W18		6.03	4.87	1.17	0.81
			Commercial	Unknown	W19		20.20	17.60	2.60	0.87
					W20		20.84	18.10	2.74	0.87
					W21		14.99	12.54	2.45	0.84
					W22		7.15	5.80	1.35	0.81
			Commercial	Unknown	W23		21.45	18.48	2.96	0.86
					W24		22.08	18.98	3.11	0.86
					W25		16.16	13.41	2.75	0.83
					W26		8.19	6.63	1.56	0.81
			Commercial	Unknown	W27		22.56	19.17	3.38	0.85
					W28		23.19	19.66	3.53	0.85
					W29		17.29	14.16	3.13	0.82
					W30		9.22	7.37	1.84	0.80
			Commercial	Unknown	W31		23.65	19.74	3.91	0.83
					W32		24.29	20.22	4.07	0.83
					W33		18.35	14.79	3.56	0.81
					W34		10.19	8.01	2.18	0.79
			Commercial	Unknown	W35		24.65	20.13	4.51	0.82
					W36		25.30	20.63	4.66	0.82
					W37		19.31	15.22	4.09	0.79
					W38		11.08	8.50	2.58	0.77
			Commercial	Unknown	W39		25.63	20.43	5.20	0.80
					W40		26.27	20.91	5.36	0.80
					W41		20.27	15.60	4.66	0.77
					W42		11.97	8.98	3.00	0.75
Fourth	R1		Commercial	Unknown	W1		11.06	9.64	1.42	0.87
					W3		3.93	3.33	0.60	0.85
	R2		Commercial	Unknown	W2		17.12	15.61	1.51	0.91
					W4		11.86	10.28	1.58	0.87
					W5		17.86	16.23	1.63	0.91
					W6		4.43	3.71	0.72	0.84
	R3		Commercial	Unknown	W7		18.08	16.34	1.74	0.90
					W8		18.80	16.94	1.86	0.90
					W9		12.81	11.04	1.77	0.86
					W10		5.16	4.30	0.86	0.83
	R4		Commercial	Unknown	W11		19.21	17.23	1.98	0.90
					W12		19.92	17.82	2.10	0.89
					W13		13.95	11.96	1.98	0.86
					W14		6.11	5.09	1.02	0.83
	R5		Commercial	Unknown	W15		20.37	18.10	2.27	0.89
					W16		21.07	18.67	2.39	0.89
					W17		15.13	12.91	2.22	0.85
					W18		7.11	5.92	1.19	0.83

Project Name: Renaissance Hotel, Deansgate, Manchester
Project No.: 2571
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.	Window Ref.	Window Attribute	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R6		Commercial	Unknown	W19		21.58	18.99	2.60	0.88
					W20		22.27	19.55	2.72	0.88
					W21		16.36	13.87	2.49	0.85
					W22		8.21	6.82	1.39	0.83
	R7		Commercial	Unknown	W23		22.77	19.80	2.97	0.87
					W24		23.45	20.35	3.10	0.87
					W25		17.48	14.68	2.81	0.84
					W26		9.23	7.61	1.62	0.82
	R8		Commercial	Unknown	W27		23.84	20.43	3.41	0.86
					W28		24.50	20.96	3.54	0.86
					W29		18.57	15.36	3.20	0.83
					W30		10.24	8.32	1.92	0.81
	R9		Commercial	Unknown	W31		24.89	20.93	3.96	0.84
					W32		25.56	21.46	4.09	0.84
					W33		19.58	15.92	3.66	0.81
					W34		11.20	8.91	2.29	0.80
	R10		Commercial	Unknown	W35		25.84	21.26	4.58	0.82
					W36		26.50	21.79	4.71	0.82
					W37		20.50	16.28	4.22	0.79
					W38		12.07	9.35	2.72	0.77
	R11		Commercial	Unknown	W39		26.78	21.47	5.31	0.80
					W40		27.43	21.99	5.44	0.80
					W41		21.41	16.58	4.83	0.77
					W42		12.93	9.74	3.19	0.75
Fifth	R1		Commercial	Unknown	W1		12.80	11.38	1.42	0.89
					W4		5.45	4.86	0.59	0.89
	R2		Commercial	Unknown	W2		18.93	17.44	1.49	0.92
					W3		13.57	11.99	1.58	0.88
					W5		19.75	18.16	1.59	0.92
					W7		5.94	5.23	0.71	0.88
	R3		Commercial	Unknown	W6		19.81	18.10	1.72	0.91
					W8		20.61	18.79	1.82	0.91
					W9		14.48	12.70	1.78	0.88
					W10		6.62	5.77	0.85	0.87
	R4		Commercial	Unknown	W11		20.87	18.92	1.96	0.91
					W12		21.64	19.58	2.06	0.90
					W13		15.58	13.59	1.99	0.87
					W14		7.53	6.51	1.01	0.87
	R5		Commercial	Unknown	W15		21.95	19.70	2.25	0.90
					W16		22.69	20.33	2.36	0.90
					W17		16.68	14.45	2.23	0.87
					W18		8.48	7.29	1.19	0.86
	R6		Commercial	Unknown	W19		23.08	20.49	2.58	0.89
					W20		23.80	21.11	2.69	0.89
					W21		17.83	15.31	2.51	0.86
					W22		9.51	8.12	1.39	0.85
	R7		Commercial	Unknown	W23		24.19	21.22	2.97	0.88
					W24		24.90	21.82	3.08	0.88
					W25		18.88	16.04	2.84	0.85
					W26		10.48	8.85	1.63	0.84
	R8		Commercial	Unknown	W27		25.19	21.78	3.41	0.86

Project Name: Renaissance Hotel, Deansgate, Manchester
 Project No.: 2571
 Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.	Window Ref.	Window Attribute	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
					W28		25.88	22.36	3.53	0.86
					W29		19.91	16.65	3.25	0.84
					W30		11.43	9.49	1.94	0.83
	R9		Commercial	Unknown	W31		26.18	22.20	3.98	0.85
					W32		26.86	22.77	4.09	0.85
					W33		20.85	17.13	3.72	0.82
					W34		12.32	10.00	2.32	0.81
	R10		Commercial	Unknown	W35		27.07	22.45	4.62	0.83
					W36		27.74	23.02	4.72	0.83
					W37		21.71	17.41	4.31	0.80
					W38		13.13	10.36	2.77	0.79
	R11		Commercial	Unknown	W39		27.95	22.58	5.37	0.81
					W40		28.61	23.13	5.48	0.81
					W41		22.57	17.62	4.95	0.78
					W42		13.95	10.68	3.27	0.77
	Sixth	R1	Commercial	Unknown	W1		14.77	13.36	1.41	0.90
					W4		7.27	6.70	0.57	0.92
	R2		Commercial	Unknown	W2		20.94	19.49	1.45	0.93
					W3		15.49	13.93	1.56	0.90
					W5		21.86	20.33	1.53	0.93
					W7		7.72	7.04	0.68	0.91
	R3		Commercial	Unknown	W6		21.72	20.05	1.67	0.92
					W8		22.58	20.83	1.76	0.92
					W9		16.35	14.59	1.76	0.89
					W10		8.34	7.52	0.83	0.90
	R4		Commercial	Unknown	W11		22.66	20.76	1.90	0.92
					W12		23.49	21.49	2.00	0.91
					W13		17.34	15.36	1.98	0.89
					W14		9.16	8.18	0.98	0.89
	R5		Commercial	Unknown	W15		23.63	21.43	2.20	0.91
					W16		24.42	22.13	2.29	0.91
					W17		18.33	16.11	2.22	0.88
					W18		10.03	8.87	1.16	0.88
	R6		Commercial	Unknown	W19		24.65	22.12	2.54	0.90
					W20		25.42	22.80	2.62	0.90
					W21		19.38	16.87	2.51	0.87
					W22		10.97	9.61	1.36	0.88
	R7		Commercial	Unknown	W23		25.67	22.75	2.93	0.89
					W24		26.41	23.40	3.01	0.89
					W25		20.34	17.49	2.84	0.86
					W26		11.85	10.24	1.61	0.86
	R8		Commercial	Unknown	W27		26.59	23.21	3.38	0.87
					W28		27.30	23.84	3.46	0.87
					W29		21.28	18.01	3.27	0.85
					W30		12.71	10.79	1.93	0.85
	R9		Commercial	Unknown	W31		27.51	23.55	3.96	0.86
					W32		28.20	24.15	4.04	0.86
					W33		22.16	18.40	3.76	0.83
					W34		13.52	11.20	2.32	0.83
	R10		Commercial	Unknown	W35		28.33	23.71	4.62	0.84
					W36		28.99	24.31	4.68	0.84
					W37		22.95	18.59	4.36	0.81

Project Name: Renaissance Hotel, Deansgate, Manchester
Project No.: 2571
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.	Window Ref.	Window Attribute	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R11		Commercial	Unknown	W38		14.26	11.48	2.78	0.80
					W39		29.14	23.75	5.39	0.81
					W40		29.79	24.32	5.47	0.82
					W41		23.75	18.71	5.03	0.79
					W42		15.01	11.70	3.31	0.78
Seventh	R1		Commercial	Unknown	W1		17.02	15.64	1.38	0.92
					W4		9.29	8.74	0.55	0.94
	R2		Commercial	Unknown	W2		23.16	21.76	1.40	0.94
					W3		17.66	16.13	1.53	0.91
					W5		24.17	22.70	1.47	0.94
					W7		9.69	9.03	0.66	0.93
	R3		Commercial	Unknown	W6		23.79	22.18	1.61	0.93
					W8		18.38	16.65	1.72	0.91
					W9		24.74	23.05	1.69	0.93
					W10		10.22	9.43	0.79	0.92
	R4		Commercial	Unknown	W11		24.59	22.75	1.84	0.93
					W12		25.48	23.56	1.92	0.92
					W13		19.22	17.28	1.94	0.90
					W14		10.93	9.99	0.95	0.91
	R5		Commercial	Unknown	W15		25.42	23.30	2.12	0.92
					W16		26.27	24.06	2.21	0.92
					W17		20.08	17.90	2.18	0.89
					W18		11.69	10.57	1.12	0.90
	R6		Commercial	Unknown	W19		26.31	23.86	2.45	0.91
					W20		27.12	24.59	2.53	0.91
					W21		20.99	18.52	2.46	0.88
					W22		12.51	11.19	1.32	0.89
	R7		Commercial	Unknown	W23		27.21	24.37	2.84	0.90
					W24		27.97	25.06	2.91	0.90
					W25		21.83	19.04	2.80	0.87
					W26		13.27	11.71	1.56	0.88
	R8		Commercial	Unknown	W27		28.02	24.73	3.29	0.88
					W28		28.75	25.39	3.36	0.88
					W29		22.67	19.45	3.22	0.86
					W30		14.03	12.15	1.88	0.87
	R9		Commercial	Unknown	W31		28.83	24.97	3.87	0.87
					W32		29.53	25.59	3.93	0.87
					W33		23.44	19.73	3.71	0.84
					W34		14.72	12.45	2.27	0.85
	R10		Commercial	Unknown	W35		29.55	25.03	4.52	0.85
					W36		30.20	25.63	4.57	0.85
					W37		24.14	19.82	4.32	0.82
					W38		15.35	12.62	2.73	0.82
	R11		Commercial	Unknown	W39		30.28	24.97	5.31	0.82
					W40		30.90	25.55	5.35	0.83
					W41		24.85	19.84	5.01	0.80
					W42		16.00	12.74	3.26	0.80
Eighth	R1		Commercial	Unknown	W1		19.55	18.21	1.35	0.93
					W4		11.59	11.07	0.51	0.96
	R2		Commercial	Unknown	W2		25.57	24.23	1.34	0.95
					W3		20.01	18.51	1.50	0.93

Project Name: Renaissance Hotel, Deansgate, Manchester
Project No.: 2571
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.	Window Ref.	Window Attribute	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
			Commercial	Unknown	W6		26.66	25.26	1.40	0.95
					W7		11.88	11.26	0.62	0.95
					W5		26.02	24.47	1.55	0.94
					W8		20.53	18.85	1.68	0.92
	R3		Commercial	Unknown	W9		27.02	25.41	1.61	0.94
					W11		12.28	11.53	0.75	0.94
	R4		Commercial	Unknown	W10		26.64	24.87	1.77	0.93
					W12		27.58	25.74	1.84	0.93
					W13		21.21	19.33	1.89	0.91
					W14		12.85	11.94	0.90	0.93
	R5		Commercial	Unknown	W15		27.32	25.28	2.04	0.93
					W16		28.20	26.09	2.11	0.93
					W17		21.92	19.79	2.12	0.90
					W18		13.46	12.38	1.07	0.92
	R6		Commercial	Unknown	W19		28.06	25.71	2.36	0.92
					W20		28.90	26.47	2.43	0.92
					W21		22.67	20.27	2.40	0.89
					W22		14.12	12.86	1.27	0.91
	R7		Commercial	Unknown	W23		28.81	26.08	2.73	0.91
					W24		29.59	26.80	2.79	0.91
					W25		23.38	20.65	2.73	0.88
					W26		14.75	13.24	1.51	0.90
	R8		Commercial	Unknown	W27		29.50	26.32	3.18	0.89
					W28		30.23	26.99	3.24	0.89
					W29		24.09	20.94	3.15	0.87
					W30		15.37	13.55	1.82	0.88
	R9		Commercial	Unknown	W31		30.18	26.44	3.74	0.88
					W32		30.87	27.07	3.80	0.88
					W33		24.73	21.10	3.63	0.85
					W34		15.95	13.75	2.20	0.86
	R10		Commercial	Unknown	W35		30.78	26.39	4.39	0.86
					W36		31.42	27.00	4.42	0.86
					W37		25.32	21.09	4.23	0.83
					W38		16.48	13.82	2.65	0.84
	R11		Commercial	Unknown	W39		31.40	26.23	5.17	0.84
					W40		32.01	26.81	5.19	0.84
					W41		25.93	21.01	4.92	0.81
					W42		17.01	13.84	3.18	0.81
Ninth	R1		Commercial	Unknown	W1		22.23	20.92	1.31	0.94
					W4		14.08	13.60	0.48	0.97
	R2		Commercial	Unknown	W2		28.12	26.84	1.29	0.95
					W3		22.47	21.02	1.45	0.94
					W6		29.23	27.91	1.32	0.95
					W7		14.21	13.63	0.58	0.96
	R3		Commercial	Unknown	W5		28.36	26.89	1.48	0.95
					W8		22.80	21.17	1.63	0.93
					W9		29.38	27.86	1.52	0.95
					W11		14.45	13.74	0.71	0.95
	R4		Commercial	Unknown	W10		28.80	27.11	1.69	0.94
					W12		29.76	28.01	1.74	0.94
					W13		23.29	21.46	1.83	0.92
					W14		14.83	13.98	0.85	0.94

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Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.	Window Ref.	Window Attribute	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R5		Commercial	Unknown	W15		29.29	27.34	1.95	0.93
					W16		30.19	28.18	2.01	0.93
					W17		23.82	21.76	2.06	0.91
					W18		15.27	14.26	1.01	0.93
	R6		Commercial	Unknown	W19		29.87	27.62	2.25	0.92
					W20		30.70	28.39	2.31	0.92
					W21		24.41	22.08	2.33	0.90
					W22		15.77	14.57	1.20	0.92
	R7		Commercial	Unknown	W23		30.46	27.85	2.61	0.91
					W24		31.24	28.57	2.67	0.91
					W25		24.97	22.32	2.65	0.89
					W26		16.26	14.82	1.44	0.91
	R8		Commercial	Unknown	W27		31.01	27.96	3.05	0.90
					W28		31.73	28.62	3.11	0.90
					W29		25.53	22.47	3.06	0.88
					W30		16.74	15.01	1.74	0.90
	R9		Commercial	Unknown	W31		31.56	27.96	3.60	0.89
					W32		32.22	28.57	3.65	0.89
					W33		26.04	22.51	3.53	0.86
					W34		17.18	15.08	2.11	0.88
	R10		Commercial	Unknown	W35		32.04	27.80	4.23	0.87
					W36		32.65	28.39	4.26	0.87
					W37		26.51	22.40	4.12	0.84
					W38		17.60	15.04	2.56	0.85
	R11		Commercial	Unknown	W39		32.53	27.53	5.00	0.85
					W40		33.11	28.10	5.02	0.85
					W41		27.00	22.21	4.79	0.82
					W42		18.02	14.95	3.07	0.83
Tenth	R1		Commercial	Unknown	W1		24.99	23.72	1.27	0.95
					W5		16.67	16.22	0.45	0.97
	R2		Commercial	Unknown	W2		30.75	29.53	1.22	0.96
					W3		24.98	23.58	1.41	0.94
					W6		31.81	30.56	1.25	0.96
					W7		16.57	16.03	0.54	0.97
	R3		Commercial	Unknown	W4		30.77	29.36	1.40	0.95
					W8		25.11	23.53	1.58	0.94
					W9		31.74	30.30	1.44	0.95
					W11		16.60	15.94	0.66	0.96
	R4		Commercial	Unknown	W10		31.01	29.40	1.61	0.95
					W12		25.40	23.64	1.77	0.93
					W13		31.91	30.26	1.65	0.95
					W14		16.82	16.02	0.80	0.95
	R5		Commercial	Unknown	W15		31.32	29.46	1.85	0.94
					W16		32.17	30.26	1.90	0.94
					W17		25.76	23.77	1.99	0.92
					W18		17.11	16.16	0.95	0.94
	R6		Commercial	Unknown	W19		31.73	29.58	2.14	0.93
					W20		32.53	30.33	2.19	0.93
					W21		26.17	23.92	2.25	0.91
					W22		17.45	16.31	1.14	0.93
	R7		Commercial	Unknown	W23		32.14	29.65	2.48	0.92

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	R8	Commercial	Unknown		W24		32.88	30.35	2.54	0.92
					W25		26.57	24.01	2.56	0.90
					W26		17.77	16.41	1.36	0.92
					W27		32.53	29.63	2.91	0.91
					W28		33.23	30.27	2.96	0.91
					W29		26.98	24.02	2.96	0.89
					W30		18.11	16.46	1.65	0.91
					W31		32.94	29.50	3.44	0.90
					W32		33.58	30.10	3.48	0.90
					W33		27.35	23.94	3.41	0.88
					W34		18.42	16.41	2.01	0.89
					W35		33.28	29.22	4.06	0.88
	R9	Commercial	Unknown		W36		33.87	29.80	4.07	0.88
					W37		27.70	23.71	3.99	0.86
					W38		18.70	16.26	2.45	0.87
					W39		33.65	28.85	4.80	0.86
	R10	Commercial	Unknown		W40		34.21	29.40	4.81	0.86
					W41		28.07	23.42	4.65	0.83
					W42		19.01	16.07	2.94	0.85
					W43		33.65	28.85	4.80	0.86
	R11	Commercial	Unknown		W44		34.21	29.40	4.81	0.86
					W45		28.07	23.42	4.65	0.83
					W46		19.01	16.07	2.94	0.85
					W47		33.65	28.85	4.80	0.86
Eleventh	R1	Commercial	Unknown		W1		27.48	26.26	1.21	0.96
					W5		18.86	18.44	0.42	0.98
	R2	Commercial	Unknown		W2		33.13	31.97	1.16	0.97
					W3		27.28	25.92	1.36	0.95
					W6		34.05	32.88	1.17	0.97
					W7		18.66	18.16	0.50	0.97
					W8		32.96	31.63	1.33	0.96
	R3	Commercial	Unknown		W9		27.24	25.72	1.52	0.94
					W10		33.83	32.48	1.35	0.96
					W11		18.58	17.97	0.61	0.97
					W12		33.08	31.57	1.52	0.95
	R4	Commercial	Unknown		W13		27.39	25.69	1.70	0.94
					W14		33.92	32.38	1.55	0.95
					W15		18.68	17.93	0.74	0.96
					W16		33.25	31.49	1.75	0.95
	R5	Commercial	Unknown		W17		34.04	32.25	1.79	0.95
					W18		27.64	25.72	1.91	0.93
					W19		18.87	17.98	0.89	0.95
					W20		33.53	31.50	2.03	0.94
	R6	Commercial	Unknown		W21		34.28	32.21	2.07	0.94
					W22		27.89	25.73	2.16	0.92
					W23		19.05	17.99	1.06	0.94
					W24		33.77	31.42	2.35	0.93
	R7	Commercial	Unknown		W25		34.47	32.08	2.39	0.93
					W26		28.12	25.66	2.47	0.91
					W27		19.23	17.95	1.28	0.93
					W28		34.02	31.26	2.76	0.92
	R8	Commercial	Unknown		W29		34.66	31.86	2.80	0.92
					W30		28.39	25.54	2.85	0.90
					W31		19.42	17.86	1.56	0.92
					W32		34.28	31.01	3.27	0.90
	R9	Commercial	Unknown		W33		34.86	31.55	3.31	0.91
					W34		28.61	25.33	3.29	0.89

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	R10	Commercial	Unknown	W34			19.58	17.68	1.90	0.90
				W35			34.47	30.61	3.87	0.89
				W36			35.03	31.15	3.88	0.89
				W37			28.84	24.99	3.84	0.87
	R11	Commercial	Unknown	W38			19.76	17.44	2.32	0.88
				W39			34.73	30.14	4.59	0.87
				W40			35.24	30.65	4.59	0.87
				W41			29.08	24.59	4.49	0.85
				W42			19.96	17.15	2.81	0.86
Twelfth	R1	Commercial	Unknown	W1			29.46	28.32	1.14	0.96
				W5			20.50	20.13	0.37	0.98
	R2	Commercial	Unknown	W2			35.12	34.03	1.09	0.97
				W3			29.23	27.94	1.29	0.96
				W6			35.78	34.69	1.09	0.97
				W8			20.30	19.84	0.46	0.98
	R3	Commercial	Unknown	W4			34.89	33.64	1.25	0.96
				W7			29.15	27.69	1.46	0.95
				W9			35.55	34.30	1.25	0.96
				W11			20.22	19.66	0.56	0.97
	R4	Commercial	Unknown	W10			34.95	33.53	1.43	0.96
				W12			29.19	27.55	1.64	0.94
				W13			35.60	34.16	1.44	0.96
				W15			20.24	19.57	0.68	0.97
	R5	Commercial	Unknown	W14			34.99	33.34	1.65	0.95
				W16			35.62	33.95	1.67	0.95
				W17			29.32	27.49	1.84	0.94
				W18			20.34	19.52	0.82	0.96
	R6	Commercial	Unknown	W19			35.17	33.26	1.91	0.95
				W20			35.76	33.83	1.93	0.95
				W21			29.44	27.36	2.08	0.93
				W22			20.42	19.43	0.98	0.95
	R7	Commercial	Unknown	W23			35.26	33.04	2.21	0.94
				W24			35.82	33.58	2.24	0.94
				W25			29.54	27.18	2.36	0.92
				W26			20.48	19.30	1.19	0.94
	R8	Commercial	Unknown	W27			35.36	32.76	2.60	0.93
				W28			35.90	33.27	2.63	0.93
				W29			29.66	26.93	2.73	0.91
				W30			20.56	19.11	1.45	0.93
	R9	Commercial	Unknown	W31			35.49	32.39	3.09	0.91
				W32			35.98	32.87	3.11	0.91
				W33			29.76	26.61	3.16	0.89
				W34			20.63	18.84	1.78	0.91
	R10	Commercial	Unknown	W35			35.58	31.91	3.67	0.90
				W36			36.04	32.38	3.66	0.90
				W37			29.89	26.19	3.69	0.88
				W38			20.71	18.52	2.19	0.89
	R11	Commercial	Unknown	W39			35.72	31.36	4.36	0.88
				W40			36.16	31.81	4.35	0.88
				W41			30.03	25.71	4.32	0.86
				W42			20.80	18.15	2.66	0.87

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Thirteenth	R1	Commercial	Unknown		W1		30.83	29.77	1.06	0.97		
					W5		21.66	21.32	0.34	0.98		
	R2				Commercial	Unknown	W2		36.52	35.51	1.01	0.97
							W3		30.66	29.47	1.20	0.96
							W6		37.03	36.03	1.00	0.97
							W8		21.56	21.14	0.41	0.98
	R3				Commercial	Unknown	W4		36.35	35.19	1.16	0.97
							W7		30.59	29.22	1.37	0.96
							W9		36.89	35.74	1.16	0.97
							W11		21.51	21.00	0.51	0.98
	R4				Commercial	Unknown	W10		36.38	35.06	1.33	0.96
							W12		30.59	29.04	1.55	0.95
							W13		36.93	35.60	1.33	0.96
							W15		21.52	20.89	0.62	0.97
	R5				Commercial	Unknown	W14		36.38	34.84	1.54	0.96
							W16		30.66	28.92	1.74	0.94
							W17		36.91	35.37	1.55	0.96
							W18		21.57	20.81	0.76	0.96
	R6				Commercial	Unknown	W19		36.46	34.69	1.78	0.95
							W20		36.96	35.16	1.79	0.95
							W21		30.69	28.72	1.96	0.94
							W22		21.55	20.64	0.91	0.96
	R7				Commercial	Unknown	W23		36.46	34.40	2.06	0.94
							W24		36.93	34.84	2.08	0.94
							W25		30.70	28.46	2.24	0.93
							W26		21.53	20.43	1.10	0.95
	R8				Commercial	Unknown	W27		36.48	34.06	2.42	0.93
							W28		36.92	34.47	2.45	0.93
							W29		30.71	28.13	2.59	0.92
							W30		21.51	20.16	1.35	0.94
	R9				Commercial	Unknown	W31		36.46	33.58	2.88	0.92
							W32		36.87	33.96	2.90	0.92
							W33		30.69	27.70	2.99	0.90
							W34		21.47	19.81	1.66	0.92
	R10				Commercial	Unknown	W35		36.46	33.03	3.43	0.91
							W36		36.85	33.42	3.43	0.91
							W37		30.73	27.22	3.51	0.89
							W38		21.47	19.43	2.04	0.91
	R11				Commercial	Unknown	W39		36.51	32.40	4.10	0.89
							W40		36.88	32.79	4.09	0.89
							W41		30.77	26.65	4.12	0.87
							W42		21.48	18.99	2.49	0.88
North Tower - City Heights Apartments												
Fourteenth	R1	Residential	Unknown		W1		31.82	30.83	0.99	0.97		
					W5		22.55	22.24	0.31	0.99		
	R2				Residential	Unknown	W2		37.56	36.62	0.94	0.97
							W3		31.76	30.64	1.11	0.96
							W6		37.94	37.01	0.93	0.98
							W8		22.50	22.11	0.38	0.98
	R3				Residential	Unknown	W4		37.48	36.40	1.08	0.97
							W7		31.70	30.43	1.27	0.96
							W9		37.86	36.79	1.07	0.97

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			Residential	Unknown	W11		22.45	21.97	0.48	0.98
					W10		37.45	36.22	1.24	0.97
					W12		31.66	30.20	1.46	0.95
					W13		37.79	36.56	1.24	0.97
			Residential	Unknown	W15		22.38	21.79	0.58	0.97
					W14		37.40	35.96	1.44	0.96
					W16		31.60	29.94	1.66	0.95
					W17		37.73	36.29	1.44	0.96
			Residential	Unknown	W18		22.30	21.59	0.71	0.97
					W19		37.33	35.67	1.66	0.96
					W20		37.65	35.98	1.68	0.96
					W21		31.52	29.64	1.88	0.94
			Residential	Unknown	W22		22.23	21.37	0.86	0.96
					W23		37.25	35.32	1.93	0.95
					W24		37.58	35.62	1.95	0.95
					W25		31.46	29.32	2.14	0.93
			Residential	Unknown	W26		22.16	21.11	1.05	0.95
					W27		37.21	34.93	2.28	0.94
					W28		37.53	35.23	2.30	0.94
					W29		31.41	28.95	2.47	0.92
			Residential	Unknown	W30		22.12	20.83	1.28	0.94
					W31		37.16	34.46	2.70	0.93
					W32		37.49	34.76	2.73	0.93
					W33		31.39	28.55	2.84	0.91
			Residential	Unknown	W34		22.09	20.52	1.57	0.93
					W35		37.15	33.94	3.21	0.91
					W36		37.46	34.24	3.22	0.91
					W37		31.39	28.07	3.32	0.89
			Residential	Unknown	W38		22.07	20.14	1.92	0.91
					W39		37.14	33.31	3.84	0.90
					W40		37.46	33.62	3.85	0.90
					W41		31.38	27.48	3.91	0.88
			Residential	Unknown	W42		22.05	19.70	2.36	0.89
	Fifteenth	R1	Residential	Unknown	W1		32.25	31.34	0.92	0.97
					W5		22.82	22.54	0.28	0.99
		R2	Residential	Unknown	W2		37.98	37.10	0.88	0.98
					W3		32.18	31.14	1.04	0.97
					W7		38.22	37.36	0.86	0.98
					W8		22.77	22.42	0.36	0.98
		R3	Residential	Unknown	W4		37.91	36.90	1.01	0.97
					W6		32.12	30.93	1.19	0.96
					W10		38.14	37.15	1.00	0.97
					W11		22.73	22.28	0.45	0.98
		R4	Residential	Unknown	W9		37.85	36.69	1.16	0.97
					W12		32.06	30.68	1.37	0.96
					W13		38.08	36.93	1.15	0.97
					W15		22.67	22.11	0.55	0.98
		R5	Residential	Unknown	W14		37.79	36.44	1.35	0.96
					W16		31.99	30.41	1.58	0.95
					W17		38.03	36.68	1.35	0.96
					W19		22.61	21.93	0.68	0.97

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Sixteenth	R6	Residential	Unknown		W18		37.73	36.16	1.57	0.96
					W20		37.96	36.39	1.58	0.96
					W21		31.93	30.12	1.81	0.94
					W22		22.55	21.72	0.83	0.96
	R7	Residential	Unknown		W23		37.66	35.83	1.82	0.95
					W24		37.90	36.06	1.84	0.95
					W25		31.86	29.80	2.06	0.94
					W26		22.49	21.48	1.01	0.96
	R8	Residential	Unknown		W27		37.61	35.46	2.15	0.94
					W28		37.86	35.69	2.17	0.94
					W29		31.83	29.45	2.38	0.93
					W30		22.46	21.22	1.23	0.95
	R9	Residential	Unknown		W31		37.58	35.02	2.56	0.93
					W32		37.83	35.25	2.58	0.93
					W33		31.80	29.07	2.73	0.91
					W34		22.43	20.93	1.50	0.93
	R10	Residential	Unknown		W35		37.56	34.53	3.03	0.92
					W36		37.81	34.77	3.04	0.92
					W37		31.79	28.60	3.19	0.90
					W38		22.42	20.58	1.83	0.92
	R11	Residential	Unknown		W39		37.55	33.93	3.63	0.90
					W40		37.81	34.19	3.63	0.90
					W41		31.79	28.04	3.75	0.88
					W42		22.40	20.16	2.24	0.90
	R1	Residential	Unknown		W1		32.49	31.64	0.85	0.97
					W5		23.05	22.79	0.26	0.99
	R2	Residential	Unknown		W2		38.22	37.40	0.82	0.98
					W3		32.42	31.46	0.97	0.97
					W7		38.45	37.66	0.79	0.98
					W8		23.01	22.68	0.33	0.99
	R3	Residential	Unknown		W4		38.16	37.22	0.95	0.98
					W6		32.38	31.26	1.11	0.97
					W10		38.38	37.46	0.92	0.98
					W11		22.97	22.55	0.42	0.98
	R4	Residential	Unknown		W9		38.11	37.02	1.09	0.97
					W12		32.32	31.04	1.28	0.96
					W13		38.34	37.26	1.07	0.97
					W15		22.92	22.40	0.52	0.98
	R5	Residential	Unknown		W14		38.07	36.80	1.27	0.97
					W16		32.27	30.79	1.48	0.95
					W17		38.29	37.03	1.26	0.97
					W19		22.88	22.23	0.65	0.97
	R6	Residential	Unknown		W18		38.02	36.54	1.48	0.96
					W20		38.25	36.77	1.47	0.96
					W21		32.22	30.50	1.72	0.95
					W22		22.83	22.04	0.79	0.97
	R7	Residential	Unknown		W23		37.96	36.24	1.72	0.95
					W24		38.20	36.48	1.72	0.95
					W25		32.17	30.19	1.98	0.94
					W26		22.79	21.82	0.97	0.96
	R8	Residential	Unknown		W27		37.93	35.89	2.03	0.95
					W28		38.17	36.14	2.04	0.95

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Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.	Window Ref.	Window Attribute	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
					W29		32.14	29.86	2.28	0.93
					W30		22.77	21.59	1.18	0.95
	R9		Residential	Unknown	W31		37.90	35.50	2.41	0.94
					W32		38.15	35.73	2.41	0.94
					W33		32.13	29.52	2.61	0.92
					W34		22.75	21.32	1.43	0.94
	R10		Residential	Unknown	W35		37.89	35.04	2.85	0.92
					W36		38.13	35.28	2.85	0.93
					W37		32.12	29.08	3.05	0.91
					W38		22.74	21.00	1.74	0.92
	R11		Residential	Unknown	W39		37.88	34.48	3.40	0.91
					W40		38.14	34.75	3.39	0.91
					W41		32.12	28.55	3.57	0.89
					W42		22.73	20.61	2.11	0.91
Seventeenth	R1		Residential	Unknown	W1		32.71	31.92	0.79	0.98
					W6		23.25	23.02	0.23	0.99
	R2		Residential	Unknown	W2		38.44	37.68	0.77	0.98
					W3		32.65	31.75	0.89	0.97
					W7		38.66	37.94	0.72	0.98
					W8		23.22	22.92	0.30	0.99
	R3		Residential	Unknown	W4		38.39	37.51	0.88	0.98
					W5		32.61	31.58	1.03	0.97
					W10		38.60	37.76	0.84	0.98
					W11		23.20	22.81	0.39	0.98
	R4		Residential	Unknown	W9		38.35	37.34	1.02	0.97
					W12		32.57	31.38	1.19	0.96
					W13		38.57	37.58	0.98	0.97
					W15		23.16	22.67	0.49	0.98
	R5		Residential	Unknown	W14		38.32	37.14	1.18	0.97
					W16		32.53	31.15	1.38	0.96
					W17		38.54	37.38	1.16	0.97
					W19		23.13	22.52	0.61	0.97
	R6		Residential	Unknown	W18		38.29	36.90	1.38	0.96
					W20		32.50	30.89	1.61	0.95
					W21		38.51	37.15	1.36	0.96
					W22		23.10	22.35	0.75	0.97
	R7		Residential	Unknown	W23		38.25	36.63	1.61	0.96
					W24		38.47	36.87	1.60	0.96
					W25		32.47	30.59	1.88	0.94
					W26		23.08	22.15	0.93	0.96
	R8		Residential	Unknown	W27		38.23	36.32	1.91	0.95
					W28		38.46	36.56	1.90	0.95
					W29		32.45	30.27	2.18	0.93
					W30		23.06	21.93	1.13	0.95
	R9		Residential	Unknown	W31		38.21	35.95	2.26	0.94
					W32		38.44	36.18	2.26	0.94
					W33		32.43	29.94	2.50	0.92
					W34		23.04	21.66	1.38	0.94
	R10		Residential	Unknown	W35		38.19	35.52	2.68	0.93
					W36		38.43	35.75	2.68	0.93
					W37		32.43	29.52	2.91	0.91
					W38		23.03	21.35	1.68	0.93

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Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.	Window Ref.	Window Attribute	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R11		Residential	Unknown	W39		38.19	34.99	3.20	0.92
					W40		38.44	35.23	3.21	0.92
					W41		32.43	29.02	3.42	0.89
					W42		23.02	20.97	2.06	0.91
Eighteenth	R1		Residential	Unknown	W1		32.90	32.18	0.72	0.98
					W6		23.44	23.24	0.20	0.99
	R2		Residential	Unknown	W2		38.63	37.93	0.70	0.98
					W3		32.85	32.03	0.81	0.98
					W7		38.85	38.21	0.64	0.98
					W8		23.42	23.15	0.26	0.99
	R3		Residential	Unknown	W4		38.60	37.79	0.81	0.98
					W5		32.82	31.88	0.94	0.97
					W10		38.80	38.05	0.76	0.98
					W11		23.40	23.06	0.35	0.99
	R4		Residential	Unknown	W9		38.57	37.64	0.94	0.98
					W12		32.79	31.70	1.09	0.97
					W13		38.78	37.89	0.89	0.98
					W15		23.38	22.94	0.44	0.98
	R5		Residential	Unknown	W14		38.55	37.46	1.09	0.97
					W16		32.77	31.50	1.27	0.96
					W17		38.76	37.71	1.05	0.97
					W19		23.36	22.80	0.56	0.98
	R6		Residential	Unknown	W18		38.53	37.25	1.28	0.97
					W20		32.75	31.26	1.49	0.95
					W21		38.74	37.50	1.24	0.97
					W23		23.34	22.64	0.70	0.97
	R7		Residential	Unknown	W22		38.50	37.01	1.50	0.96
					W24		38.72	37.25	1.46	0.96
					W25		32.73	30.99	1.74	0.95
					W26		23.32	22.46	0.87	0.96
	R8		Residential	Unknown	W27		38.49	36.72	1.77	0.95
					W28		38.71	36.96	1.75	0.95
					W29		32.72	30.66	2.05	0.94
					W30		23.31	22.25	1.07	0.95
	R9		Residential	Unknown	W31		38.48	36.37	2.11	0.95
					W32		38.70	36.61	2.09	0.95
					W33		32.71	30.33	2.38	0.93
					W34		23.31	21.99	1.31	0.94
	R10		Residential	Unknown	W35		38.48	35.96	2.51	0.93
					W36		38.70	36.20	2.49	0.94
					W37		32.71	29.92	2.79	0.91
					W38		23.30	21.68	1.62	0.93
	R11		Residential	Unknown	W39		38.47	35.45	3.02	0.92
					W40		38.70	35.70	3.00	0.92
					W41		32.71	29.43	3.28	0.90
					W42		23.29	21.31	1.98	0.91
Nineteenth	R1		Residential	Unknown	W1		33.06	32.42	0.64	0.98
					W6		23.60	23.43	0.17	0.99
	R2		Residential	Unknown	W2		38.81	38.17	0.64	0.98
					W3		33.02	32.29	0.73	0.98
					W7		39.01	38.45	0.57	0.99

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			Residential	Unknown	W8		23.58	23.36	0.22	0.99
					W4		38.78	38.04	0.74	0.98
					W5		33.00	32.15	0.85	0.97
					W10		38.97	38.31	0.67	0.98
			Residential	Unknown	W12		23.58	23.27	0.30	0.99
					W9		38.76	37.91	0.85	0.98
					W11		32.99	32.00	0.99	0.97
					W13		38.96	38.17	0.79	0.98
			Residential	Unknown	W15		23.57	23.17	0.40	0.98
					W14		38.75	37.76	0.99	0.97
					W16		32.98	31.82	1.15	0.97
					W17		38.95	38.02	0.94	0.98
			Residential	Unknown	W19		23.56	23.05	0.51	0.98
					W18		38.74	37.58	1.16	0.97
					W20		32.96	31.61	1.35	0.96
					W21		38.94	37.83	1.11	0.97
			Residential	Unknown	W23		23.55	22.91	0.64	0.97
					W22		38.73	37.36	1.37	0.96
					W24		38.93	37.61	1.32	0.97
					W25		32.96	31.36	1.59	0.95
			Residential	Unknown	W26		23.54	22.74	0.80	0.97
					W27		38.73	37.10	1.63	0.96
					W28		38.93	37.34	1.59	0.96
					W29		32.95	31.06	1.89	0.94
			Residential	Unknown	W30		23.53	22.53	1.00	0.96
					W31		38.72	36.77	1.95	0.95
					W32		38.92	37.01	1.91	0.95
					W33		32.95	30.71	2.23	0.93
			Residential	Unknown	W34		23.53	22.29	1.24	0.95
					W35		38.71	36.38	2.33	0.94
					W36		38.92	36.63	2.29	0.94
					W37		32.95	30.31	2.64	0.92
			Residential	Unknown	W38		23.52	21.98	1.54	0.93
					W39		38.71	35.90	2.81	0.93
					W40		38.92	36.14	2.78	0.93
					W41		32.95	29.83	3.12	0.91
			Residential	Unknown	W42		23.51	21.61	1.90	0.92
					W1		33.20	32.63	0.57	0.98
			Residential	Unknown	W6		23.71	23.58	0.14	0.99
					W2		38.95	38.38	0.57	0.99
					W3		33.17	32.52	0.65	0.98
			Residential	Unknown	W7		39.13	38.64	0.49	0.99
					W9		23.71	23.52	0.19	0.99
			Residential	Unknown	W4		38.93	38.27	0.66	0.98
					W5		33.16	32.40	0.76	0.98
					W10		39.10	38.52	0.58	0.99
			Residential	Unknown	W12		23.70	23.44	0.26	0.99
					W8		38.92	38.16	0.77	0.98
					W11		33.15	32.27	0.89	0.97
					W13		39.09	38.40	0.69	0.98
			Residential	Unknown	W15		23.70	23.35	0.35	0.99

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Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.	Window Ref.	Window Attribute	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R5		Residential	Unknown	W14		38.92	38.02	0.90	0.98
					W16		33.14	32.11	1.03	0.97
					W17		39.09	38.26	0.83	0.98
					W19		23.70	23.24	0.46	0.98
	R6		Residential	Unknown	W18		38.91	37.86	1.05	0.97
					W20		33.14	31.92	1.22	0.96
					W21		39.09	38.10	0.99	0.97
					W23		23.69	23.11	0.58	0.98
	R7		Residential	Unknown	W22		38.91	37.67	1.24	0.97
					W24		33.13	31.69	1.44	0.96
					W25		39.08	37.90	1.18	0.97
					W26		23.69	22.95	0.74	0.97
	R8		Residential	Unknown	W27		38.90	37.42	1.48	0.96
					W28		39.08	37.66	1.42	0.96
					W29		33.13	31.41	1.71	0.95
					W30		23.68	22.76	0.92	0.96
	R9		Residential	Unknown	W31		38.90	37.12	1.77	0.95
					W32		39.08	37.36	1.72	0.96
					W33		33.12	31.09	2.03	0.94
					W34		23.68	22.52	1.16	0.95
	R10		Residential	Unknown	W35		38.89	36.76	2.13	0.95
					W36		39.08	37.00	2.08	0.95
					W37		33.13	30.67	2.46	0.93
					W38		23.67	22.23	1.44	0.94
	R11		Residential	Unknown	W39		38.89	36.30	2.59	0.93
					W40		39.08	36.55	2.54	0.94
					W41		33.13	30.21	2.93	0.91
					W42		23.67	21.87	1.80	0.92
Twenty-First	R1		Residential	Unknown	W1		33.27	32.77	0.51	0.98
					W6		23.76	23.65	0.11	1.00
	R2		Residential	Unknown	W2		39.02	38.51	0.51	0.99
					W3		33.24	32.67	0.58	0.98
					W7		39.18	38.76	0.42	0.99
					W9		23.76	23.60	0.16	0.99
	R3		Residential	Unknown	W4		39.00	38.41	0.59	0.98
					W5		33.23	32.56	0.67	0.98
					W10		39.15	38.65	0.50	0.99
					W12		23.76	23.53	0.22	0.99
	R4		Residential	Unknown	W8		39.00	38.31	0.68	0.98
					W11		33.23	32.44	0.78	0.98
					W13		39.15	38.55	0.60	0.98
					W15		23.76	23.45	0.30	0.99
	R5		Residential	Unknown	W14		39.00	38.20	0.80	0.98
					W16		33.22	32.31	0.92	0.97
					W17		39.15	38.43	0.72	0.98
					W19		23.75	23.35	0.40	0.98
	R6		Residential	Unknown	W18		39.00	38.06	0.94	0.98
					W20		33.22	32.14	1.08	0.97
					W21		39.15	38.28	0.86	0.98
					W23		23.75	23.23	0.52	0.98
	R7		Residential	Unknown	W22		38.99	37.88	1.11	0.97
					W24		33.22	31.94	1.28	0.96

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					W25		39.14	38.11	1.04	0.97
					W26		23.75	23.09	0.67	0.97
	R8	Residential	Unknown		W27		38.99	37.66	1.33	0.97
					W28		39.14	37.89	1.26	0.97
					W29		33.22	31.68	1.53	0.95
					W30		23.75	22.90	0.84	0.96
	R9	Residential	Unknown		W31		38.99	37.39	1.59	0.96
					W32		39.14	37.62	1.53	0.96
					W33		33.22	31.39	1.83	0.95
					W34		23.75	22.68	1.06	0.96
	R10	Residential	Unknown		W35		38.99	37.07	1.92	0.95
					W36		39.15	37.29	1.86	0.95
					W37		33.22	31.00	2.22	0.93
					W38		23.75	22.40	1.34	0.94
	R11	Residential	Unknown		W39		38.99	36.64	2.35	0.94
					W40		39.15	36.88	2.28	0.94
					W41		33.23	30.53	2.71	0.92
					W42		23.74	22.06	1.68	0.93
Twenty-Second	R1	Residential	Unknown		W1		33.29	32.85	0.44	0.99
					W6		23.77	23.69	0.08	1.00
	R2	Residential	Unknown		W2		39.04	38.59	0.45	0.99
					W3		33.26	32.76	0.50	0.98
					W7		39.20	38.85	0.36	0.99
					W9		23.77	23.65	0.12	0.99
	R3	Residential	Unknown		W4		39.02	38.50	0.52	0.99
					W5		33.25	32.66	0.59	0.98
					W10		39.18	38.75	0.43	0.99
					W12		23.77	23.59	0.18	0.99
	R4	Residential	Unknown		W8		39.02	38.41	0.61	0.98
					W11		33.25	32.56	0.69	0.98
					W14		39.17	38.66	0.51	0.99
					W15		23.77	23.52	0.26	0.99
	R5	Residential	Unknown		W13		39.02	38.31	0.71	0.98
					W16		33.25	32.44	0.81	0.98
					W17		39.17	38.55	0.62	0.98
					W19		23.77	23.43	0.34	0.99
	R6	Residential	Unknown		W18		39.02	38.18	0.84	0.98
					W20		33.25	32.29	0.96	0.97
					W21		39.17	38.42	0.75	0.98
					W23		23.77	23.32	0.45	0.98
	R7	Residential	Unknown		W22		39.02	38.03	0.99	0.97
					W24		33.25	32.11	1.13	0.97
					W25		39.17	38.27	0.90	0.98
					W27		23.77	23.18	0.59	0.98
	R8	Residential	Unknown		W26		39.02	37.83	1.19	0.97
					W28		39.17	38.07	1.10	0.97
					W29		33.24	31.88	1.36	0.96
					W30		23.77	23.01	0.76	0.97
	R9	Residential	Unknown		W31		39.02	37.59	1.42	0.96
					W32		39.17	37.83	1.34	0.97
					W33		33.25	31.62	1.62	0.95
					W34		23.77	22.81	0.96	0.96

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	R10		Residential	Unknown	W35		39.02	37.30	1.72	0.96
					W36		39.17	37.54	1.63	0.96
					W37		33.25	31.27	1.98	0.94
					W38		23.77	22.54	1.22	0.95
	R11		Residential	Unknown	W39		39.02	36.91	2.11	0.95
					W40		39.18	37.16	2.02	0.95
					W41		33.27	30.84	2.43	0.93
					W42		23.77	22.22	1.55	0.93
	Twenty-Third	R1	Residential	Unknown	W1		33.30	32.92	0.38	0.99
					W6		23.78	23.72	0.06	1.00
	R2		Residential	Unknown	W2		39.06	38.67	0.39	0.99
					W3		33.27	32.84	0.43	0.99
					W7		39.23	38.94	0.29	0.99
					W9		23.78	23.68	0.10	1.00
	R3		Residential	Unknown	W4		39.05	38.60	0.46	0.99
					W5		33.26	32.76	0.51	0.98
					W10		39.21	38.86	0.35	0.99
					W12		23.78	23.63	0.15	0.99
	R4		Residential	Unknown	W8		39.05	38.52	0.53	0.99
					W11		33.26	32.67	0.59	0.98
					W14		39.21	38.78	0.43	0.99
					W15		23.78	23.57	0.21	0.99
	R5		Residential	Unknown	W13		39.05	38.43	0.62	0.98
					W16		33.26	32.57	0.70	0.98
					W17		39.21	38.69	0.52	0.99
					W19		23.78	23.49	0.28	0.99
	R6		Residential	Unknown	W18		39.05	38.32	0.73	0.98
					W20		33.26	32.43	0.83	0.98
					W21		39.21	38.58	0.63	0.98
					W23		23.78	23.40	0.38	0.98
	R7		Residential	Unknown	W22		39.05	38.19	0.86	0.98
					W24		33.26	32.28	0.98	0.97
					W25		39.21	38.45	0.76	0.98
					W27		23.78	23.28	0.50	0.98
	R8		Residential	Unknown	W26		39.05	38.01	1.04	0.97
					W28		39.21	38.27	0.94	0.98
					W29		33.26	32.08	1.18	0.96
					W30		23.78	23.12	0.66	0.97
	R9		Residential	Unknown	W31		39.05	37.80	1.25	0.97
					W32		39.21	38.06	1.15	0.97
					W33		33.26	31.84	1.42	0.96
					W34		23.78	22.93	0.85	0.96
	R10		Residential	Unknown	W35		39.05	37.54	1.51	0.96
					W36		39.21	37.80	1.41	0.96
					W37		33.27	31.53	1.74	0.95
					W38		23.78	22.69	1.09	0.95
	R11		Residential	Unknown	W39		39.06	37.20	1.86	0.95
					W40		39.22	37.46	1.76	0.96
					W41		33.29	31.14	2.14	0.94
					W42		23.78	22.38	1.40	0.94
Twenty-Fourth	R1		Residential	Unknown	W1		33.31	32.99	0.32	0.99

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Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.	Window Ref.	Window Attribute	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
			Residential	Unknown	W6		23.78	23.73	0.05	1.00
					W2		39.15	38.81	0.34	0.99
					W3		33.28	32.91	0.37	0.99
					W8		39.39	39.15	0.25	0.99
			Residential	Unknown	W9		23.78	23.70	0.07	1.00
					W4		39.14	38.74	0.39	0.99
					W5		33.28	32.85	0.43	0.99
					W10		39.40	39.10	0.29	0.99
			Residential	Unknown	W12		23.78	23.66	0.12	1.00
					W7		39.14	38.68	0.46	0.99
					W11		33.28	32.78	0.51	0.98
					W14		39.39	39.04	0.35	0.99
			Residential	Unknown	W15		23.78	23.61	0.17	0.99
					W13		39.14	38.60	0.54	0.99
					W16		33.28	32.68	0.60	0.98
					W17		39.40	38.97	0.43	0.99
			Residential	Unknown	W19		23.78	23.55	0.23	0.99
					W18		39.14	38.51	0.63	0.98
					W20		33.28	32.57	0.71	0.98
					W21		39.40	38.88	0.52	0.99
			Residential	Unknown	W23		23.78	23.46	0.31	0.99
					W22		39.14	38.39	0.75	0.98
					W24		33.28	32.44	0.84	0.97
					W25		39.39	38.76	0.63	0.98
			Residential	Unknown	W27		23.78	23.36	0.42	0.98
					W26		39.14	38.24	0.90	0.98
					W28		33.28	32.26	1.02	0.97
					W29		39.40	38.61	0.78	0.98
			Residential	Unknown	W30		23.78	23.23	0.55	0.98
					W31		39.14	38.05	1.08	0.97
					W32		39.39	38.43	0.97	0.98
					W33		33.28	32.06	1.22	0.96
			Residential	Unknown	W34		23.78	23.05	0.73	0.97
					W35		39.14	37.83	1.31	0.97
					W36		39.40	38.20	1.20	0.97
					W37		33.28	31.78	1.51	0.95
			Residential	Unknown	W38		23.78	22.83	0.95	0.96
					W39		39.14	37.52	1.62	0.96
					W40		39.39	37.89	1.50	0.96
					W41		33.30	31.44	1.86	0.94
			Residential	Unknown	W42		23.78	22.55	1.23	0.95
Twenty-Fifth	R1		Residential	Unknown	W1		39.62	39.35	0.27	0.99
	R2		Residential	Unknown	W2		39.62	39.33	0.29	0.99
	R3		Residential	Unknown	W3		39.62	39.28	0.34	0.99
					W4		39.62	39.25	0.37	0.99
	R4		Residential	Unknown	W5		39.62	39.18	0.44	0.99
	R5		Residential	Unknown	W6		39.62	39.14	0.48	0.99
Britannic House										
First	R2		Residential	LK	W2		30.20	24.65	5.55	0.82

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Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.	Window Ref.	Window Attribute	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex					
	R3		Residential	Bedroom	W3		29.25	22.01	7.23	0.75					
					W4		26.00	18.04	7.96	0.69					
					W5		28.87	22.80	6.07	0.79					
					W6		28.72	20.99	7.74	0.73					
					W7		25.19	16.91	8.28	0.67					
					W8		28.61	21.96	6.64	0.77					
					W9		28.07	19.91	8.16	0.71					
					W10		24.84	16.35	8.49	0.66					
					W11		23.61	15.24	8.37	0.65					
					W12		20.66	13.47	7.20	0.65					
					Second	R2		Residential	LK	W2		31.02	25.21	5.81	0.81
										W3		30.57	23.00	7.58	0.75
W4		27.62	19.29	8.33						0.70					
W5		29.77	23.41	6.37						0.79					
W6		30.18	22.06	8.12						0.73					
W7		27.00	18.31	8.69						0.68					
R3		Residential	Bedroom	W8			29.59	22.60	6.99	0.76					
				W9			29.68	21.08	8.60	0.71					
				W10			27.10	18.12	8.98	0.67					
				W11			26.27	17.33	8.94	0.66					
				W12			23.96	16.22	7.74	0.68					
				Third		R2		Residential	LK	W1		31.01	25.02	5.99	0.81
W2		31.20	23.40		7.80					0.75					
W3		28.22	19.65		8.57					0.70					
W4		29.78	23.21		6.56					0.78					
W5		30.95	22.57		8.37					0.73					
W6		27.91	18.94		8.97					0.68					
R3		Residential	Bedroom		W7		29.73	22.51	7.22	0.76					
					W8		30.70	21.79	8.92	0.71					
					W9		28.58	19.23	9.35	0.67					
					W10		28.64	19.28	9.36	0.67					
					W11		27.19	19.06	8.13	0.70					
					Fourth	R2		Residential	LK	W2		32.41	24.51	7.90	0.76
W3		32.30	23.85	8.45						0.74					
R3		Residential	Bedroom	W4			32.16	23.21	8.95	0.72					
				W5			25.84	17.06	8.78	0.66					
				W6			30.68	21.90	8.77	0.71					
				W7			29.76	26.51	3.25	0.89					
				W8			35.76	35.76	0.00	1.00					
				One Deansgate											
First	R1		Residential	Unknown	W1		10.00	5.75	4.25	0.57					
	R2		Residential	Unknown	W2		9.35	5.63	3.72	0.60					
	R3		Residential	Unknown	W3		7.88	4.66	3.22	0.59					
	R6		Residential	Unknown	W5		7.24	6.22	1.02	0.86					
	R7		Residential	Unknown	W6		8.21	6.40	1.81	0.78					
	R8		Residential	Unknown	W7		7.36	5.89	1.47	0.80					
	R9		Residential	Unknown	W8		7.29	6.85	0.44	0.94					
	R10		Residential	Unknown	W9		8.13	7.07	1.06	0.87					
R11		Residential	Unknown	W10		7.23	6.27	0.96	0.87						

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Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.	Window Ref.	Window Attribute	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R14		Residential	Unknown	W12		8.12	8.12	0.00	1.00
	R15		Residential	Unknown	W13		9.47	8.80	0.68	0.93
	R16		Residential	Unknown	W14		10.17	9.51	0.66	0.93
					W15		13.96	13.96	0.00	1.00
Second	R1		Residential	Unknown	W1		36.76	30.02	6.74	0.82
					W2		11.40	7.02	4.37	0.62
	R2		Residential	Unknown	W3		10.54	6.81	3.73	0.65
	R3		Residential	Unknown	W4		8.96	5.77	3.20	0.64
	R6		Residential	Unknown	W6		8.36	7.41	0.95	0.89
	R7		Residential	Unknown	W7		9.34	7.57	1.77	0.81
	R8		Residential	Unknown	W8		8.43	6.97	1.46	0.83
	R9		Residential	Unknown	W9		8.44	8.01	0.43	0.95
	R10		Residential	Unknown	W10		9.30	8.23	1.07	0.89
	R11		Residential	Unknown	W11		8.28	7.31	0.97	0.88
	R14		Residential	Unknown	W13		9.24	9.24	0.00	1.00
	R15		Residential	Unknown	W14		10.63	9.95	0.67	0.94
	R16		Residential	Unknown	W15		11.31	10.66	0.65	0.94
					W16		16.03	16.03	0.00	1.00
Third	R1		Residential	Unknown	W1		37.74	31.10	6.63	0.82
					W2		12.46	8.17	4.29	0.66
	R2		Residential	Unknown	W3		11.64	8.00	3.64	0.69
	R3		Residential	Unknown	W4		10.02	6.91	3.10	0.69
	R6		Residential	Unknown	W6		9.50	8.64	0.86	0.91
	R7		Residential	Unknown	W7		10.54	8.79	1.75	0.83
	R8		Residential	Unknown	W8		9.60	8.13	1.47	0.85
	R9		Residential	Unknown	W9		9.67	9.24	0.42	0.96
	R10		Residential	Unknown	W10		10.53	9.46	1.08	0.90
	R11		Residential	Unknown	W11		9.43	8.45	0.98	0.90
	R14		Residential	Unknown	W13		10.39	10.39	0.00	1.00
	R15		Residential	Unknown	W14		11.80	11.14	0.67	0.94
	R16		Residential	Unknown	W15		12.45	11.81	0.64	0.95
					W16		17.77	17.77	0.00	1.00
Fourth	R1		Residential	Unknown	W1		38.17	31.66	6.51	0.83
					W2		13.53	9.34	4.19	0.69
	R2		Residential	Unknown	W3		12.74	9.21	3.52	0.72

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Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.	Window Ref.	Window Attribute	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R3		Residential	Unknown	W4		11.11	8.12	2.99	0.73
	R6		Residential	Unknown	W6		10.66	9.87	0.79	0.93
	R7		Residential	Unknown	W7		11.75	10.02	1.73	0.85
	R8		Residential	Unknown	W8		10.80	9.34	1.46	0.86
	R9		Residential	Unknown	W9		10.90	10.49	0.41	0.96
	R10		Residential	Unknown	W10		11.77	10.69	1.08	0.91
	R11		Residential	Unknown	W11		10.62	9.64	0.98	0.91
	R14		Residential	Unknown	W13		11.52	11.52	0.00	1.00
	R15		Residential	Unknown	W14		12.94	12.28	0.66	0.95
	R16		Residential	Unknown	W15 W16		13.54 18.89	12.91 18.89	0.63 0.00	0.95 1.00
Fifth	R1		Residential	Unknown	W1 W2		38.41 14.59	32.04 10.53	6.36 4.05	0.83 0.72
	R2		Residential	Unknown	W3		13.84	10.45	3.39	0.76
	R3		Residential	Unknown	W4		12.22	9.36	2.86	0.77
	R6		Residential	Unknown	W6		11.82	11.10	0.71	0.94
	R7		Residential	Unknown	W7		12.95	11.25	1.70	0.87
	R8		Residential	Unknown	W8		12.03	10.58	1.45	0.88
	R9		Residential	Unknown	W9		12.13	11.74	0.39	0.97
	R10		Residential	Unknown	W10		13.02	11.94	1.08	0.92
	R11		Residential	Unknown	W11		11.84	10.87	0.97	0.92
	R14		Residential	Unknown	W13		12.65	12.65	0.00	1.00
	R15		Residential	Unknown	W14		14.07	13.43	0.64	0.95
	R16		Residential	Unknown	W15 W16		14.63 19.94	14.02 19.94	0.61 0.00	0.96 1.00
Sixth	R1		Residential	Unknown	W1 W2		38.56 15.66	32.38 11.76	6.18 3.89	0.84 0.75
	R2		Residential	Unknown	W3		14.96	11.72	3.24	0.78
	R3		Residential	Unknown	W4		13.36	10.61	2.75	0.79
	R6		Residential	Unknown	W6		12.99	12.36	0.63	0.95
	R7		Residential	Unknown	W7		14.18	12.51	1.67	0.88
	R8		Residential	Unknown	W8		13.29	11.85	1.44	0.89
	R9		Residential	Unknown	W9		13.38	13.01	0.37	0.97
	R10		Residential	Unknown	W10		14.28	13.20	1.08	0.92
	R11		Residential	Unknown	W11		13.09	12.12	0.97	0.93

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	R14		Residential	Unknown	W13		13.79	13.79	0.00	1.00
	R15		Residential	Unknown	W14		15.22	14.59	0.63	0.96
	R16		Residential	Unknown	W15		15.72	15.12	0.60	0.96
					W16		20.90	20.90	0.00	1.00
Seventh	R1		Residential	Unknown	W1		38.72	32.73	5.99	0.85
					W2		17.32	13.52	3.80	0.78
	R2		Residential	Unknown	W3		16.67	13.51	3.16	0.81
	R3		Residential	Unknown	W4		15.04	12.34	2.70	0.82
	R6		Residential	Unknown	W6		14.73	14.16	0.57	0.96
	R7		Residential	Unknown	W7		16.02	14.33	1.69	0.89
	R8		Residential	Unknown	W8		15.12	13.65	1.46	0.90
	R9		Residential	Unknown	W9		15.22	14.86	0.35	0.98
	R10		Residential	Unknown	W10		16.15	15.05	1.11	0.93
	R11		Residential	Unknown	W11		14.90	13.91	0.99	0.93
	R14		Residential	Unknown	W13		15.48	15.48	0.00	1.00
	R15		Residential	Unknown	W14		16.95	16.32	0.63	0.96
	R16		Residential	Unknown	W15		17.41	16.81	0.59	0.97
					W16		22.28	22.28	0.00	1.00
Eighth	R1		Residential	Unknown	W1		38.84	33.09	5.74	0.85
					W2		18.34	14.77	3.57	0.81
	R2		Residential	Unknown	W3		17.75	14.77	2.98	0.83
	R3		Residential	Unknown	W4		16.16	13.59	2.58	0.84
	R6		Residential	Unknown	W6		15.92	15.44	0.49	0.97
	R7		Residential	Unknown	W7		17.26	15.62	1.64	0.90
	R8		Residential	Unknown	W8		16.38	14.95	1.43	0.91
	R9		Residential	Unknown	W9		16.47	16.15	0.32	0.98
	R10		Residential	Unknown	W10		17.40	16.32	1.09	0.94
	R11		Residential	Unknown	W11		16.12	15.16	0.97	0.94
	R14		Residential	Unknown	W13		16.59	16.59	0.00	1.00
	R15		Residential	Unknown	W14		18.06	17.46	0.60	0.97
	R16		Residential	Unknown	W15		18.46	17.90	0.57	0.97
					W16		22.57	22.57	0.00	1.00
Ninth	R1		Residential	Unknown	W1		30.62	25.50	5.12	0.83
	R2		Residential	Unknown	W2		33.76	30.21	3.55	0.89
	R3		Residential	Unknown	W3		30.72	27.45	3.27	0.89

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	R6		Residential	Unknown	W5		17.10	16.70	0.40	0.98
	R7		Residential	Unknown	W6		18.48	16.89	1.60	0.91
	R8		Residential	Unknown	W7		17.62	16.22	1.40	0.92
	R9		Residential	Unknown	W8		17.70	17.41	0.29	0.98
	R10		Residential	Unknown	W9		18.62	17.56	1.06	0.94
	R11		Residential	Unknown	W10		17.31	16.37	0.94	0.95
	R14		Residential	Unknown	W12		17.67	17.67	0.00	1.00
	R15		Residential	Unknown	W13		19.13	18.55	0.58	0.97
	R16		Residential	Unknown	W14		19.47	18.93	0.54	0.97
					W15		22.62	22.62	0.00	1.00
Tenth	R2		Residential	Unknown	W2		18.22	17.87	0.35	0.98
	R3		Residential	Unknown	W3		19.64	18.08	1.57	0.92
	R4		Residential	Unknown	W4		18.79	17.42	1.38	0.93
	R5		Residential	Unknown	W5		18.87	18.61	0.26	0.99
	R6		Residential	Unknown	W6		19.79	18.75	1.04	0.95
	R7		Residential	Unknown	W7		18.46	17.54	0.91	0.95
	R10		Residential	Unknown	W9		18.70	18.70	0.00	1.00
	R11		Residential	Unknown	W10		20.15	19.59	0.55	0.97
	R12		Residential	Unknown	W11		20.43	19.91	0.53	0.97
					W12		22.67	22.67	0.00	1.00
Eleventh	R1		Residential	Unknown	W1		25.84	22.30	3.54	0.86
	R2		Residential	Unknown	W2		33.75	32.17	1.58	0.95
	R3		Residential	Unknown	W3		18.56	18.33	0.23	0.99
	R4		Residential	Unknown	W4		19.40	18.46	0.94	0.95
	R5		Residential	Unknown	W5		18.16	17.33	0.83	0.95
	R6		Residential	Unknown	W6		16.35	16.35	0.00	1.00
	R9		Residential	Unknown	W8		19.62	19.12	0.50	0.97
	R10		Residential	Unknown	W9		19.83	19.36	0.47	0.98
					W10		21.24	21.24	0.00	1.00
Twelfth	R1		Residential	Unknown	W1		21.50	21.11	0.39	0.98
	R2		Residential	Unknown	W2		37.02	35.95	1.07	0.97
	R3		Residential	Unknown	W3		33.88	32.89	0.99	0.97
	R6		Residential	Unknown	W5		20.66	20.66	0.00	1.00
	R7		Residential	Unknown	W6		22.13	21.61	0.51	0.98

Project Name: Renaissance Hotel, Deansgate, Manchester
Project No.: 2571
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.	Window Ref.	Window Attribute	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
	R8		Residential	Unknown	W7		22.31	21.82	0.49	0.98
							23.06	23.06	0.00	1.00
Thirteenth	R2		Residential	Unknown	W2		20.03	20.03	0.00	1.00
	R3		Residential	Unknown	W3		21.40	20.94	0.46	0.98
	R4		Residential	Unknown	W4		21.55	21.11	0.44	0.98
					W5		21.98	21.98	0.00	1.00
Fourteenth	R1		Residential	Unknown	W1		28.58	27.11	1.47	0.95
	R2		Residential	Unknown	W2		38.25	37.81	0.44	0.99
					W3		39.01	39.01	0.00	1.00

Appendix 4: Baseline vs Proposed NSL Contour Plots

Project Name: Renaissance Hotel, Deansgate, Manchester Project No.: 2571 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
North Tower												
Ground	R1		Unknown	21.37	230.03	8.40	90.37	0.39	8.35	0.05	0.50	0.99
Ground	R2		Unknown	22.30	240.05	11.10	119.43	0.50	11.10	0.00	0.00	1.00
Ground	R3		Unknown	22.30	240.05	16.96	182.57	0.76	16.96	0.00	0.00	1.00
Ground	R4		Unknown	22.34	240.51	8.24	88.67	0.37	8.24	0.00	0.00	1.00
Ground	R5		Unknown	22.09	237.77	7.35	79.14	0.33	2.93	4.42	47.55	0.40
Ground	R6		Unknown	21.37	230.03	19.60	210.97	0.92	16.62	2.98	32.11	0.85
First	R1		Unknown	21.37	230.03	10.77	115.98	0.50	10.77	0.00	0.04	1.00
First	R2		Unknown	22.30	240.05	13.95	150.20	0.63	13.95	0.00	0.00	1.00
First	R3		Unknown	22.30	240.05	17.42	187.50	0.78	17.42	0.00	0.00	1.00
First	R4		Unknown	22.34	240.51	18.82	202.55	0.84	18.82	0.00	0.00	1.00
First	R5		Unknown	22.30	240.05	20.12	216.61	0.90	20.12	0.00	0.00	1.00
First	R6		Unknown	30.43	327.51	30.43	327.51	1.00	30.43	0.00	0.02	1.00
First	R7		Unknown	22.51	242.34	22.51	242.33	1.00	22.51	0.01	0.06	1.00
First	R8		Unknown	22.13	238.22	22.09	237.82	1.00	22.09	0.00	0.02	1.00
First	R9		Unknown	22.09	237.77	16.89	181.82	0.76	11.48	5.41	58.26	0.68
First	R10		Unknown	21.37	230.03	21.37	230.03	1.00	21.36	0.01	0.13	1.00
Second	R1		Unknown	21.37	230.03	9.65	103.91	0.45	9.62	0.04	0.38	1.00
Second	R2		Unknown	22.30	240.05	12.64	136.10	0.57	12.64	0.01	0.07	1.00
Second	R3		Unknown	22.30	240.05	17.26	185.79	0.77	17.25	0.01	0.08	1.00
Second	R4		Unknown	22.34	240.51	18.68	201.02	0.84	18.66	0.01	0.13	1.00
Second	R5		Unknown	22.30	240.05	20.02	215.54	0.90	20.01	0.01	0.13	1.00
Second	R6		Unknown	30.43	327.51	30.43	327.51	1.00	30.41	0.01	0.13	1.00
Second	R7		Unknown	22.51	242.34	22.50	242.17	1.00	22.49	0.01	0.13	1.00
Second	R8		Unknown	22.13	238.22	22.13	238.22	1.00	22.13	0.00	0.04	1.00
Second	R9		Unknown	22.09	237.77	22.09	237.76	1.00	22.09	0.00	0.03	1.00
Second	R10		Unknown	21.37	230.03	21.37	230.03	1.00	21.35	0.02	0.23	1.00
Third	R1		Unknown	8.15	87.74	2.65	28.56	0.33	2.65	0.00	0.03	1.00
Third	R2		Unknown	22.13	238.22	13.03	140.30	0.59	13.02	0.02	0.16	1.00
Third	R3		Unknown	22.09	237.77	16.69	179.63	0.76	16.68	0.01	0.13	1.00
Third	R4		Unknown	22.13	238.22	18.43	198.42	0.83	18.42	0.01	0.15	1.00
Third	R5		Unknown	22.13	238.22	19.91	214.34	0.90	19.90	0.01	0.15	1.00
Third	R6		Unknown	22.09	237.77	21.19	228.10	0.96	21.17	0.02	0.18	1.00
Third	R7		Unknown	22.13	238.22	22.05	237.39	1.00	22.03	0.02	0.23	1.00
Third	R8		Unknown	22.09	237.77	22.00	236.83	1.00	21.99	0.02	0.18	1.00
Third	R9		Unknown	22.13	238.22	22.04	237.27	1.00	22.03	0.01	0.15	1.00
Third	R10		Unknown	22.11	237.99	22.03	237.14	1.00	22.01	0.02	0.19	1.00
Third	R11		Unknown	21.49	231.29	21.41	230.41	1.00	21.40	0.01	0.07	1.00
Fourth	R1		Unknown	8.15	87.74	3.47	37.31	0.43	3.46	0.00	0.02	1.00
Fourth	R2		Unknown	22.13	238.22	14.34	154.36	0.65	14.33	0.01	0.11	1.00
Fourth	R3		Unknown	22.09	237.77	17.40	187.30	0.79	17.39	0.01	0.12	1.00
Fourth	R4		Unknown	22.13	238.22	18.86	202.99	0.85	18.85	0.01	0.14	1.00
Fourth	R5		Unknown	22.13	238.22	20.17	217.09	0.91	20.15	0.01	0.15	1.00
Fourth	R6		Unknown	22.09	237.77	21.29	229.21	0.96	21.28	0.01	0.13	1.00
Fourth	R7		Unknown	22.13	238.22	22.06	237.44	1.00	22.05	0.01	0.10	1.00
Fourth	R8		Unknown	22.09	237.77	22.00	236.83	1.00	21.99	0.02	0.16	1.00
Fourth	R9		Unknown	22.13	238.22	22.04	237.26	1.00	22.03	0.01	0.13	1.00
Fourth	R10		Unknown	22.11	237.99	22.03	237.16	1.00	22.01	0.02	0.20	1.00
Fourth	R11		Unknown	21.49	231.29	21.41	230.44	1.00	21.40	0.01	0.10	1.00
Fifth	R1		Unknown	8.15	87.74	4.24	45.66	0.52	4.24	0.00	0.02	1.00
Fifth	R2		Unknown	22.13	238.22	15.69	168.85	0.71	15.68	0.01	0.10	1.00
Fifth	R3		Unknown	22.09	237.77	18.08	194.57	0.82	18.07	0.01	0.09	1.00
Fifth	R4		Unknown	22.13	238.22	19.39	208.68	0.88	19.37	0.01	0.14	1.00
Fifth	R5		Unknown	22.13	238.22	20.47	220.30	0.92	20.45	0.01	0.15	1.00
Fifth	R6		Unknown	22.09	237.77	21.41	230.45	0.97	21.40	0.01	0.15	1.00
Fifth	R7		Unknown	22.13	238.22	22.05	237.39	1.00	22.04	0.02	0.19	1.00
Fifth	R8		Unknown	22.09	237.77	22.00	236.83	1.00	21.99	0.01	0.11	1.00
Fifth	R9		Unknown	22.13	238.22	22.04	237.22	1.00	22.03	0.01	0.11	1.00
Fifth	R10		Unknown	22.11	237.99	22.03	237.14	1.00	22.01	0.02	0.19	1.00
Fifth	R11		Unknown	21.49	231.29	21.41	230.41	1.00	21.40	0.01	0.07	1.00
Sixth	R1		Unknown	8.15	87.74	5.14	55.28	0.63	5.13	0.00	0.02	1.00
Sixth	R2		Unknown	22.13	238.22	17.59	189.35	0.79	17.58	0.01	0.09	1.00
Sixth	R3		Unknown	22.09	237.77	19.15	206.15	0.87	19.14	0.01	0.08	1.00
Sixth	R4		Unknown	22.13	238.22	20.13	216.65	0.91	20.12	0.01	0.12	1.00
Sixth	R5		Unknown	22.13	238.22	20.86	224.49	0.94	20.84	0.01	0.15	1.00
Sixth	R6		Unknown	22.09	237.77	21.56	232.07	0.98	21.54	0.02	0.17	1.00
Sixth	R7		Unknown	22.13	238.22	22.06	237.42	1.00	22.04	0.01	0.15	1.00
Sixth	R8		Unknown	22.09	237.77	22.00	236.83	1.00	21.99	0.01	0.09	1.00
Sixth	R9		Unknown	22.13	238.22	22.04	237.24	1.00	22.03	0.01	0.07	1.00
Sixth	R10		Unknown	22.11	237.99	22.03	237.14	1.00	22.01	0.02	0.18	1.00
Sixth	R11		Unknown	21.49	231.29	21.41	230.41	1.00	21.40	0.01	0.06	1.00
Seventh	R1		Unknown	8.15	87.74	6.37	68.52	0.78	6.36	0.00	0.01	1.00
Seventh	R2		Unknown	22.13	238.22	20.27	218.14	0.92	20.26	0.01	0.09	1.00
Seventh	R3		Unknown	22.09	237.77	20.88	224.78	0.95	20.88	0.01	0.08	1.00
Seventh	R4		Unknown	22.13	238.22	21.25	228.73	0.96	21.24	0.01	0.10	1.00
Seventh	R5		Unknown	22.13	238.22	21.56	232.08	0.97	21.55	0.01	0.14	1.00

Project Name: Renaissance Hotel, Deansgate, Manchester Project No.: 2571 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
Seventh	R6		Unknown	22.09	237.77	21.83	234.94	0.99	21.81	0.02	0.17	1.00
Seventh	R7		Unknown	22.13	238.22	22.06	237.42	1.00	22.04	0.01	0.15	1.00
Seventh	R8		Unknown	22.09	237.77	22.00	236.83	1.00	21.99	0.01	0.08	1.00
Seventh	R9		Unknown	22.13	238.22	22.04	237.24	1.00	22.03	0.01	0.06	1.00
Seventh	R10		Unknown	22.11	237.99	22.03	237.14	1.00	22.01	0.02	0.18	1.00
Seventh	R11		Unknown	21.49	231.29	21.41	230.41	1.00	21.40	0.01	0.06	1.00
Eighth	R1		Unknown	8.15	87.74	7.46	80.33	0.92	7.46	0.00	0.01	1.00
Eighth	R2		Unknown	22.13	238.22	22.03	237.09	1.00	22.02	0.01	0.07	1.00
Eighth	R3		Unknown	22.09	237.77	22.01	236.87	1.00	22.00	0.01	0.08	1.00
Eighth	R4		Unknown	22.13	238.22	22.07	237.56	1.00	22.06	0.01	0.09	1.00
Eighth	R5		Unknown	22.13	238.22	22.07	237.59	1.00	22.06	0.01	0.11	1.00
Eighth	R6		Unknown	22.09	237.77	21.98	236.64	1.00	21.98	0.01	0.10	1.00
Eighth	R7		Unknown	22.13	238.22	22.05	237.39	1.00	22.04	0.02	0.18	1.00
Eighth	R8		Unknown	22.09	237.77	22.00	236.83	1.00	22.00	0.01	0.08	1.00
Eighth	R9		Unknown	22.13	238.22	22.04	237.22	1.00	22.03	0.00	0.05	1.00
Eighth	R10		Unknown	22.11	237.99	22.03	237.14	1.00	22.02	0.02	0.16	1.00
Eighth	R11		Unknown	21.49	231.29	21.41	230.41	1.00	21.40	0.01	0.06	1.00
Ninth	R1		Unknown	8.15	87.74	7.64	82.22	0.94	7.64	0.00	0.00	1.00
Ninth	R2		Unknown	22.13	238.22	22.07	237.59	1.00	22.07	0.00	0.05	1.00
Ninth	R3		Unknown	22.09	237.77	22.03	237.18	1.00	22.03	0.01	0.08	1.00
Ninth	R4		Unknown	22.13	238.22	22.07	237.56	1.00	22.06	0.01	0.09	1.00
Ninth	R5		Unknown	22.13	238.22	22.07	237.59	1.00	22.06	0.01	0.10	1.00
Ninth	R6		Unknown	22.09	237.77	22.02	236.99	1.00	22.01	0.01	0.08	1.00
Ninth	R7		Unknown	22.13	238.22	22.05	237.39	1.00	22.04	0.02	0.18	1.00
Ninth	R8		Unknown	22.09	237.77	22.00	236.83	1.00	22.00	0.01	0.07	1.00
Ninth	R9		Unknown	22.13	238.22	22.04	237.22	1.00	22.03	0.00	0.04	1.00
Ninth	R10		Unknown	22.11	237.99	22.03	237.14	1.00	22.02	0.01	0.11	1.00
Ninth	R11		Unknown	21.49	231.29	21.41	230.41	1.00	21.40	0.01	0.06	1.00
Tenth	R1		Unknown	8.15	87.74	7.94	85.43	0.97	7.94	0.00	0.00	1.00
Tenth	R2		Unknown	22.13	238.22	22.07	237.59	1.00	22.07	0.00	0.04	1.00
Tenth	R3		Unknown	22.09	237.77	22.03	237.18	1.00	22.03	0.01	0.06	1.00
Tenth	R4		Unknown	22.13	238.22	22.07	237.56	1.00	22.06	0.01	0.09	1.00
Tenth	R5		Unknown	22.13	238.22	22.07	237.59	1.00	22.06	0.01	0.09	1.00
Tenth	R6		Unknown	22.09	237.77	22.02	236.99	1.00	22.01	0.01	0.07	1.00
Tenth	R7		Unknown	22.13	238.22	22.05	237.39	1.00	22.04	0.02	0.18	1.00
Tenth	R8		Unknown	22.09	237.77	22.00	236.83	1.00	22.00	0.01	0.07	1.00
Tenth	R9		Unknown	22.13	238.22	22.04	237.22	1.00	22.03	0.00	0.04	1.00
Tenth	R10		Unknown	22.11	237.99	22.03	237.14	1.00	22.02	0.01	0.09	1.00
Tenth	R11		Unknown	21.49	231.29	21.41	230.41	1.00	21.40	0.01	0.06	1.00
Eleventh	R1		Unknown	8.15	87.74	8.08	87.02	0.99	8.08	0.00	0.00	1.00
Eleventh	R2		Unknown	22.13	238.22	22.07	237.59	1.00	22.07	0.00	0.04	1.00
Eleventh	R3		Unknown	22.09	237.77	22.03	237.18	1.00	22.03	0.00	0.03	1.00
Eleventh	R4		Unknown	22.13	238.22	22.07	237.56	1.00	22.06	0.01	0.06	1.00
Eleventh	R5		Unknown	22.13	238.22	22.07	237.59	1.00	22.06	0.01	0.09	1.00
Eleventh	R6		Unknown	22.09	237.77	22.02	237.01	1.00	22.01	0.01	0.08	1.00
Eleventh	R7		Unknown	22.13	238.22	22.06	237.42	1.00	22.05	0.01	0.10	1.00
Eleventh	R8		Unknown	22.09	237.77	22.00	236.83	1.00	22.00	0.00	0.05	1.00
Eleventh	R9		Unknown	22.13	238.22	22.04	237.24	1.00	22.04	0.00	0.04	1.00
Eleventh	R10		Unknown	22.11	237.99	22.03	237.14	1.00	22.02	0.01	0.08	1.00
Eleventh	R11		Unknown	21.49	231.29	21.41	230.41	1.00	21.40	0.01	0.06	1.00
Twelfth	R1		Unknown	8.15	87.74	8.08	87.02	0.99	8.08	0.00	0.00	1.00
Twelfth	R2		Unknown	22.13	238.22	22.07	237.59	1.00	22.07	0.00	0.02	1.00
Twelfth	R3		Unknown	22.09	237.77	22.03	237.18	1.00	22.03	0.00	0.03	1.00
Twelfth	R4		Unknown	22.13	238.22	22.07	237.56	1.00	22.07	0.00	0.04	1.00
Twelfth	R5		Unknown	22.13	238.22	22.07	237.59	1.00	22.07	0.01	0.07	1.00
Twelfth	R6		Unknown	22.09	237.77	22.02	236.99	1.00	22.01	0.01	0.07	1.00
Twelfth	R7		Unknown	22.13	238.22	22.05	237.39	1.00	22.04	0.01	0.13	1.00
Twelfth	R8		Unknown	22.09	237.77	22.00	236.83	1.00	22.00	0.00	0.03	1.00
Twelfth	R9		Unknown	22.13	238.22	22.04	237.22	1.00	22.04	0.00	0.03	1.00
Twelfth	R10		Unknown	22.11	237.99	22.03	237.14	1.00	22.02	0.01	0.08	1.00
Twelfth	R11		Unknown	21.49	231.29	21.41	230.41	1.00	21.40	0.01	0.07	1.00
Thirteenth	R1		Unknown	8.15	87.74	8.08	87.02	0.99	8.08	0.00	0.00	1.00
Thirteenth	R2		Unknown	22.13	238.22	22.07	237.59	1.00	22.07	0.00	0.00	1.00
Thirteenth	R3		Unknown	22.09	237.77	22.03	237.18	1.00	22.03	0.00	0.02	1.00
Thirteenth	R4		Unknown	22.13	238.22	22.07	237.56	1.00	22.07	0.00	0.04	1.00
Thirteenth	R5		Unknown	22.13	238.22	22.07	237.59	1.00	22.07	0.00	0.04	1.00
Thirteenth	R6		Unknown	22.09	237.77	22.02	236.99	1.00	22.01	0.01	0.07	1.00
Thirteenth	R7		Unknown	22.13	238.22	22.05	237.39	1.00	22.04	0.01	0.13	1.00
Thirteenth	R8		Unknown	22.09	237.77	22.00	236.83	1.00	22.00	0.00	0.03	1.00
Thirteenth	R9		Unknown	22.13	238.22	22.04	237.22	1.00	22.04	0.00	0.03	1.00
Thirteenth	R10		Unknown	22.11	237.99	22.03	237.14	1.00	22.02	0.01	0.07	1.00
Thirteenth	R11		Unknown	21.49	231.29	21.41	230.41	1.00	21.40	0.01	0.07	1.00
Fourteenth	R1		Unknown	4.99	53.70	4.99	53.70	1.00	4.99	0.00	0.00	1.00
Fourteenth	R2		Unknown	13.54	145.79	13.53	145.64	1.00	13.53	0.00	0.00	1.00
Fourteenth	R3		Unknown	21.69	233.49	21.69	233.43	1.00	21.68	0.00	0.02	1.00
Fourteenth	R4		Unknown	10.49	112.94	10.49	112.94	1.00	10.49	0.00	0.03	1.00

Project Name: Renaissance Hotel, Deansgate, Manchester Project No.: 2571 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
Fourteenth	R5		Unknown	13.54	145.79	13.53	145.64	1.00	13.53	0.00	0.00	1.00
Fourteenth	R6		Unknown	21.69	233.49	21.69	233.44	1.00	21.68	0.00	0.02	1.00
Fourteenth	R7		Unknown	10.49	112.94	10.49	112.93	1.00	10.49	0.00	0.03	1.00
Fourteenth	R8		Unknown	13.52	145.51	13.50	145.36	1.00	13.50	0.00	0.00	1.00
Fourteenth	R9		Unknown	21.73	233.94	21.73	233.88	1.00	21.72	0.01	0.09	1.00
Fourteenth	R10		Unknown	10.47	112.71	10.47	112.70	1.00	10.47	0.00	0.04	1.00
Fourteenth	R11		Unknown	13.15	141.55	13.15	141.49	1.00	13.14	0.00	0.04	1.00
Fifteenth	R1		Unknown	4.99	53.70	4.99	53.70	1.00	4.99	0.00	0.00	1.00
Fifteenth	R2		Unknown	13.54	145.79	13.53	145.64	1.00	13.53	0.00	0.00	1.00
Fifteenth	R3		Unknown	21.69	233.49	21.69	233.43	1.00	21.68	0.00	0.02	1.00
Fifteenth	R4		Unknown	10.49	112.94	10.49	112.94	1.00	10.49	0.00	0.02	1.00
Fifteenth	R5		Unknown	13.54	145.79	13.53	145.64	1.00	13.53	0.00	0.00	1.00
Fifteenth	R6		Unknown	21.69	233.49	21.69	233.44	1.00	21.68	0.00	0.02	1.00
Fifteenth	R7		Unknown	10.49	112.94	10.49	112.93	1.00	10.49	0.00	0.03	1.00
Fifteenth	R8		Unknown	13.52	145.51	13.50	145.36	1.00	13.50	0.00	0.00	1.00
Fifteenth	R9		Unknown	21.73	233.94	21.73	233.88	1.00	21.72	0.01	0.09	1.00
Fifteenth	R10		Unknown	10.47	112.71	10.47	112.70	1.00	10.47	0.00	0.04	1.00
Fifteenth	R11		Unknown	13.15	141.55	13.15	141.49	1.00	13.14	0.00	0.04	1.00
Sixteenth	R1		Unknown	4.99	53.70	4.99	53.70	1.00	4.99	0.00	0.00	1.00
Sixteenth	R2		Unknown	13.54	145.79	13.53	145.64	1.00	13.53	0.00	0.00	1.00
Sixteenth	R3		Unknown	21.69	233.49	21.69	233.43	1.00	21.68	0.00	0.02	1.00
Sixteenth	R4		Unknown	10.49	112.94	10.49	112.94	1.00	10.49	0.00	0.01	1.00
Sixteenth	R5		Unknown	13.54	145.79	13.53	145.64	1.00	13.53	0.00	0.00	1.00
Sixteenth	R6		Unknown	21.69	233.49	21.69	233.44	1.00	21.68	0.00	0.02	1.00
Sixteenth	R7		Unknown	10.49	112.94	10.49	112.93	1.00	10.49	0.00	0.03	1.00
Sixteenth	R8		Unknown	13.52	145.51	13.50	145.36	1.00	13.50	0.00	0.00	1.00
Sixteenth	R9		Unknown	21.73	233.94	21.73	233.88	1.00	21.72	0.01	0.09	1.00
Sixteenth	R10		Unknown	10.47	112.71	10.47	112.70	1.00	10.47	0.00	0.02	1.00
Sixteenth	R11		Unknown	13.15	141.55	13.15	141.49	1.00	13.14	0.00	0.04	1.00
Seventeenth	R1		Unknown	4.99	53.70	4.99	53.70	1.00	4.99	0.00	0.00	1.00
Seventeenth	R2		Unknown	13.54	145.79	13.53	145.64	1.00	13.53	0.00	0.00	1.00
Seventeenth	R3		Unknown	21.69	233.49	21.69	233.44	1.00	21.68	0.00	0.02	1.00
Seventeenth	R4		Unknown	10.49	112.94	10.49	112.93	1.00	10.49	0.00	0.01	1.00
Seventeenth	R5		Unknown	13.54	145.79	13.53	145.64	1.00	13.53	0.00	0.00	1.00
Seventeenth	R6		Unknown	21.69	233.49	21.69	233.44	1.00	21.68	0.00	0.02	1.00
Seventeenth	R7		Unknown	10.49	112.94	10.49	112.93	1.00	10.49	0.00	0.03	1.00
Seventeenth	R8		Unknown	13.52	145.51	13.50	145.36	1.00	13.50	0.00	0.00	1.00
Seventeenth	R9		Unknown	21.73	233.94	21.73	233.88	1.00	21.72	0.01	0.09	1.00
Seventeenth	R10		Unknown	10.47	112.71	10.47	112.70	1.00	10.47	0.00	0.02	1.00
Seventeenth	R11		Unknown	13.15	141.55	13.14	141.47	1.00	13.14	0.01	0.07	1.00
Eighteenth	R1		Unknown	4.99	53.70	4.99	53.70	1.00	4.99	0.00	0.00	1.00
Eighteenth	R2		Unknown	13.54	145.79	13.53	145.64	1.00	13.53	0.00	0.00	1.00
Eighteenth	R3		Unknown	21.69	233.49	21.69	233.44	1.00	21.68	0.00	0.02	1.00
Eighteenth	R4		Unknown	10.49	112.94	10.49	112.93	1.00	10.49	0.00	0.01	1.00
Eighteenth	R5		Unknown	13.54	145.79	13.53	145.64	1.00	13.53	0.00	0.00	1.00
Eighteenth	R6		Unknown	21.69	233.49	21.69	233.44	1.00	21.68	0.00	0.02	1.00
Eighteenth	R7		Unknown	10.49	112.94	10.49	112.93	1.00	10.49	0.00	0.02	1.00
Eighteenth	R8		Unknown	13.52	145.51	13.50	145.36	1.00	13.50	0.00	0.00	1.00
Eighteenth	R9		Unknown	21.73	233.94	21.73	233.88	1.00	21.72	0.01	0.09	1.00
Eighteenth	R10		Unknown	10.47	112.71	10.47	112.70	1.00	10.47	0.00	0.01	1.00
Eighteenth	R11		Unknown	13.15	141.55	13.14	141.47	1.00	13.14	0.01	0.07	1.00
Nineteenth	R1		Unknown	4.99	53.70	4.99	53.70	1.00	4.99	0.00	0.00	1.00
Nineteenth	R2		Unknown	13.54	145.79	13.53	145.64	1.00	13.53	0.00	0.00	1.00
Nineteenth	R3		Unknown	21.69	233.49	21.69	233.43	1.00	21.68	0.00	0.02	1.00
Nineteenth	R4		Unknown	10.49	112.94	10.49	112.93	1.00	10.49	0.00	0.00	1.00
Nineteenth	R5		Unknown	13.54	145.79	13.53	145.64	1.00	13.53	0.00	0.00	1.00
Nineteenth	R6		Unknown	21.69	233.49	21.69	233.44	1.00	21.68	0.00	0.02	1.00
Nineteenth	R7		Unknown	10.49	112.94	10.49	112.93	1.00	10.49	0.00	0.01	1.00
Nineteenth	R8		Unknown	13.52	145.51	13.50	145.36	1.00	13.50	0.00	0.00	1.00
Nineteenth	R9		Unknown	21.73	233.94	21.73	233.88	1.00	21.72	0.01	0.09	1.00
Nineteenth	R10		Unknown	10.47	112.71	10.47	112.70	1.00	10.47	0.00	0.01	1.00
Nineteenth	R11		Unknown	13.15	141.55	13.15	141.49	1.00	13.14	0.00	0.04	1.00
Twentieth	R1		Unknown	4.99	53.70	4.99	53.70	1.00	4.99	0.00	0.00	1.00
Twentieth	R2		Unknown	13.54	145.79	13.53	145.64	1.00	13.53	0.00	0.00	1.00
Twentieth	R3		Unknown	21.69	233.49	21.69	233.43	1.00	21.68	0.00	0.02	1.00
Twentieth	R4		Unknown	10.49	112.94	10.49	112.93	1.00	10.49	0.00	0.00	1.00
Twentieth	R5		Unknown	13.54	145.79	13.53	145.64	1.00	13.53	0.00	0.00	1.00
Twentieth	R6		Unknown	21.69	233.49	21.69	233.44	1.00	21.68	0.00	0.02	1.00
Twentieth	R7		Unknown	10.49	112.94	10.49	112.93	1.00	10.49	0.00	0.01	1.00
Twentieth	R8		Unknown	13.52	145.51	13.50	145.36	1.00	13.50	0.00	0.00	1.00
Twentieth	R9		Unknown	21.73	233.94	21.73	233.88	1.00	21.72	0.01	0.09	1.00
Twentieth	R10		Unknown	10.47	112.71	10.47	112.70	1.00	10.47	0.00	0.01	1.00
Twentieth	R11		Unknown	13.15	141.55	13.15	141.49	1.00	13.14	0.01	0.06	1.00
Twenty-First	R1		Unknown	4.99	53.70	4.99	53.70	1.00	4.99	0.00	0.00	1.00
Twenty-First	R2		Unknown	13.54	145.79	13.53	145.64	1.00	13.53	0.00	0.00	1.00
Twenty-First	R3		Unknown	21.69	233.49	21.69	233.43	1.00	21.68	0.00	0.02	1.00

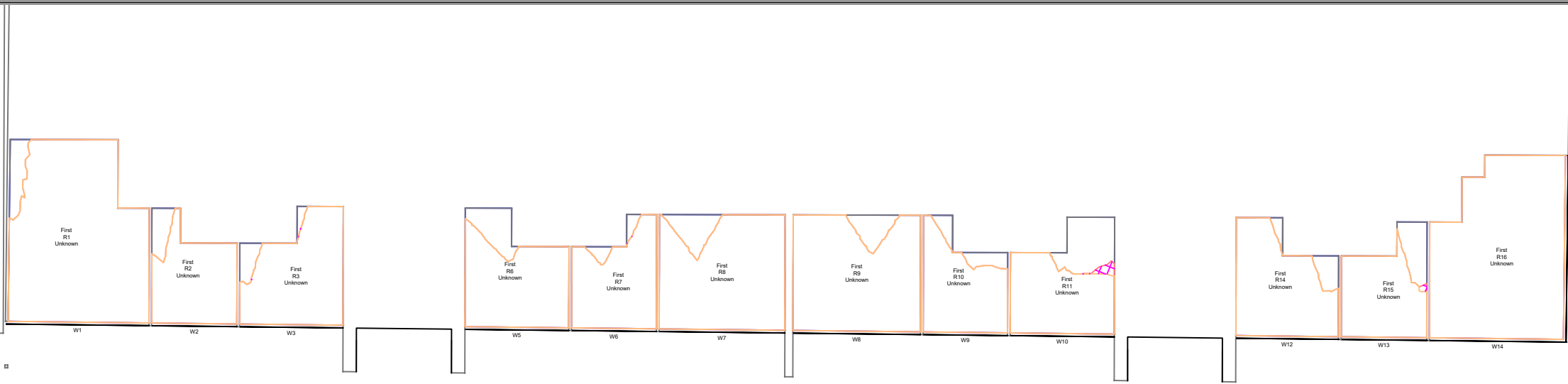
Project Name: Renaissance Hotel, Deansgate, Manchester Project No.: 2571 Report Title: Daylight Distribution - Neighbour Analysis												
Floor Ref.	Room Ref.	Room Attribute	Room Use.	Room Area m2	Room Area ft2	Lit Area m2 Existing	Lit Area ft2 Existing	Existing % lit	Lit Area m2 Proposed	Area Lost m2	Area Lost ft2	Pr/Ex
Twenty-First	R4		Unknown	10.49	112.94	10.49	112.93	1.00	10.49	0.00	0.00	1.00
Twenty-First	R5		Unknown	13.54	145.79	13.53	145.64	1.00	13.53	0.00	0.00	1.00
Twenty-First	R6		Unknown	21.69	233.49	21.69	233.44	1.00	21.68	0.00	0.02	1.00
Twenty-First	R7		Unknown	10.49	112.94	10.49	112.93	1.00	10.49	0.00	0.00	1.00
Twenty-First	R8		Unknown	13.52	145.51	13.50	145.36	1.00	13.50	0.00	0.00	1.00
Twenty-First	R9		Unknown	21.73	233.94	21.73	233.88	1.00	21.72	0.01	0.09	1.00
Twenty-First	R10		Unknown	10.47	112.71	10.47	112.70	1.00	10.47	0.00	0.01	1.00
Twenty-First	R11		Unknown	13.15	141.55	13.15	141.49	1.00	13.14	0.00	0.04	1.00
Twenty-Second	R1		Unknown	4.99	53.70	4.99	53.70	1.00	4.99	0.00	0.00	1.00
Twenty-Second	R2		Unknown	13.54	145.79	13.53	145.64	1.00	13.53	0.00	0.00	1.00
Twenty-Second	R3		Unknown	21.69	233.49	21.69	233.43	1.00	21.68	0.00	0.02	1.00
Twenty-Second	R4		Unknown	10.49	112.94	10.49	112.94	1.00	10.49	0.00	0.00	1.00
Twenty-Second	R5		Unknown	13.54	145.79	13.53	145.64	1.00	13.53	0.00	0.00	1.00
Twenty-Second	R6		Unknown	21.69	233.49	21.69	233.44	1.00	21.68	0.00	0.02	1.00
Twenty-Second	R7		Unknown	10.49	112.94	10.49	112.93	1.00	10.49	0.00	0.00	1.00
Twenty-Second	R8		Unknown	13.52	145.51	13.50	145.36	1.00	13.50	0.00	0.00	1.00
Twenty-Second	R9		Unknown	21.73	233.94	21.73	233.88	1.00	21.72	0.01	0.09	1.00
Twenty-Second	R10		Unknown	10.47	112.71	10.47	112.70	1.00	10.47	0.00	0.01	1.00
Twenty-Second	R11		Unknown	13.15	141.55	13.15	141.49	1.00	13.14	0.00	0.04	1.00
Twenty-Third	R1		Unknown	4.99	53.70	4.99	53.70	1.00	4.99	0.00	0.00	1.00
Twenty-Third	R2		Unknown	13.54	145.79	13.53	145.64	1.00	13.53	0.00	0.00	1.00
Twenty-Third	R3		Unknown	21.69	233.49	21.69	233.44	1.00	21.69	0.00	0.02	1.00
Twenty-Third	R4		Unknown	10.49	112.94	10.49	112.93	1.00	10.49	0.00	0.00	1.00
Twenty-Third	R5		Unknown	13.54	145.79	13.53	145.64	1.00	13.53	0.00	0.00	1.00
Twenty-Third	R6		Unknown	21.69	233.49	21.69	233.44	1.00	21.68	0.00	0.02	1.00
Twenty-Third	R7		Unknown	10.49	112.94	10.49	112.93	1.00	10.49	0.00	0.00	1.00
Twenty-Third	R8		Unknown	13.52	145.51	13.50	145.36	1.00	13.50	0.00	0.00	1.00
Twenty-Third	R9		Unknown	21.73	233.94	21.73	233.88	1.00	21.72	0.01	0.09	1.00
Twenty-Third	R10		Unknown	10.47	112.71	10.47	112.70	1.00	10.47	0.00	0.00	1.00
Twenty-Third	R11		Unknown	13.15	141.55	13.14	141.47	1.00	13.14	0.00	0.05	1.00
Twenty-Fourth	R1		Unknown	4.99	53.70	4.99	53.70	1.00	4.99	0.00	0.00	1.00
Twenty-Fourth	R2		Unknown	13.54	145.79	13.53	145.64	1.00	13.53	0.00	0.00	1.00
Twenty-Fourth	R3		Unknown	21.69	233.49	21.69	233.43	1.00	21.69	0.00	0.01	1.00
Twenty-Fourth	R4		Unknown	10.49	112.94	10.49	112.93	1.00	10.49	0.00	0.00	1.00
Twenty-Fourth	R5		Unknown	13.54	145.79	13.53	145.64	1.00	13.53	0.00	0.00	1.00
Twenty-Fourth	R6		Unknown	21.69	233.49	21.69	233.44	1.00	21.68	0.00	0.02	1.00
Twenty-Fourth	R7		Unknown	10.49	112.94	10.49	112.93	1.00	10.49	0.00	0.00	1.00
Twenty-Fourth	R8		Unknown	13.52	145.51	13.50	145.36	1.00	13.50	0.00	0.00	1.00
Twenty-Fourth	R9		Unknown	21.73	233.94	21.73	233.88	1.00	21.72	0.01	0.09	1.00
Twenty-Fourth	R10		Unknown	10.47	112.71	10.47	112.70	1.00	10.47	0.00	0.00	1.00
Twenty-Fourth	R11		Unknown	13.15	141.55	13.15	141.49	1.00	13.14	0.00	0.04	1.00
Twenty-Fifth	R1		Unknown	13.54	145.79	10.77	115.88	0.79	10.77	0.00	0.00	1.00
Twenty-Fifth	R2		Unknown	21.69	233.49	19.08	205.43	0.88	19.08	0.00	0.00	1.00
Twenty-Fifth	R3		Unknown	10.49	112.94	7.82	84.18	0.75	7.82	0.00	0.00	1.00
Twenty-Fifth	R4		Unknown	13.54	145.79	10.75	115.73	0.79	10.75	0.00	0.00	1.00
Twenty-Fifth	R5		Unknown	21.69	233.49	19.05	205.10	0.88	19.05	0.00	0.00	1.00
Britannic House												
First	R2		LK	23.09	248.57	22.99	247.47	1.00	22.71	0.28	3.03	0.99
First	R3		Bedroom	11.51	123.90	11.40	122.68	0.99	11.40	0.00	0.00	1.00
Second	R2		LK	23.09	248.57	22.99	247.49	1.00	22.71	0.28	3.03	0.99
Second	R3		Bedroom	11.51	123.90	11.40	122.74	0.99	11.40	0.00	0.00	1.00
Third	R2		LK	23.09	248.57	23.01	247.70	1.00	22.99	0.02	0.21	1.00
Third	R3		Bedroom	11.51	123.90	11.40	122.73	0.99	11.40	0.00	0.00	1.00
Fourth	R2		LK	21.60	232.48	21.54	231.81	1.00	21.54	0.00	0.00	1.00
Fourth	R3		Bedroom	7.97	85.75	7.96	85.71	1.00	7.96	0.00	0.00	1.00
One Deansgate												
First	R1		Unknown	32.54	350.23	30.93	332.94	0.95	30.93	0.00	0.00	1.00
First	R2		Unknown	10.91	117.46	9.68	104.24	0.89	9.68	0.00	0.00	1.00
First	R3		Unknown	14.06	151.36	12.91	138.98	0.92	12.91	0.00	0.01	1.00
First	R6		Unknown	14.12	151.98	11.90	128.09	0.84	11.90	0.00	0.00	1.00
First	R7		Unknown	10.98	118.21	10.27	110.55	0.94	10.27	0.00	0.02	1.00
First	R8		Unknown	20.08	216.15	18.18	195.74	0.91	18.18	0.00	0.00	1.00
First	R9		Unknown	20.57	221.45	19.03	204.87	0.93	19.03	0.00	0.00	1.00
First	R10		Unknown	10.88	117.16	9.49	102.16	0.87	9.49	0.00	0.00	1.00
First	R11		Unknown	14.04	151.10	10.26	110.40	0.73	9.99	0.27	2.88	0.97
First	R14		Unknown	13.92	149.79	12.57	135.33	0.90	12.57	0.00	0.00	1.00
First	R15		Unknown	11.09	119.33	9.09	97.80	0.82	9.02	0.07	0.72	0.99
First	R16		Unknown	30.65	329.88	30.65	329.88	1.00	30.65	0.00	0.00	1.00
Second	R1		Unknown	32.54	350.23	32.54	350.23	1.00	32.54	0.00	0.00	1.00
Second	R2		Unknown	10.91	117.46	9.69	104.31	0.89	9.69	0.00	0.00	1.00
Second	R3		Unknown	14.06	151.36	12.95	139.36	0.92	12.95	0.00	0.01	1.00
Second	R6		Unknown	14.12	151.98	11.91	128.16	0.84	11.91	0.00	0.00	1.00
Second	R7		Unknown	10.98	118.21	10.28	110.63	0.94	10.28	0.00	0.01	1.00
Second	R8		Unknown	20.08	216.15	18.19	195.77	0.91	18.19	0.00	0.00	1.00
Second	R9		Unknown	20.57	221.45	19.04	204.90	0.93	19.04	0.00	0.00	1.00
Second	R10		Unknown	10.88	117.16	9.74	104.84	0.89	9.74	0.00	0.00	1.00

Project Name: Renaissance Hotel, Deansgate, Manchester Project No.: 2571 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
Second	R11		Unknown	14.04	151.10	10.52	113.22	0.75	10.42	0.10	1.10	0.99
Second	R14		Unknown	13.92	149.79	12.59	135.56	0.91	12.59	0.00	0.00	1.00
Second	R15		Unknown	11.09	119.33	9.16	98.65	0.83	9.13	0.03	0.37	1.00
Second	R16		Unknown	30.65	329.88	30.65	329.88	1.00	30.65	0.00	0.00	1.00
Third	R1		Unknown	32.54	350.23	32.54	350.23	1.00	32.54	0.00	0.00	1.00
Third	R2		Unknown	10.91	117.46	9.69	104.35	0.89	9.69	0.00	0.00	1.00
Third	R3		Unknown	14.06	151.36	13.15	141.53	0.94	13.15	0.00	0.01	1.00
Third	R6		Unknown	14.12	151.98	11.91	128.23	0.84	11.91	0.00	0.00	1.00
Third	R7		Unknown	10.98	118.21	10.28	110.65	0.94	10.28	0.00	0.01	1.00
Third	R8		Unknown	20.08	216.15	18.19	195.81	0.91	18.19	0.00	0.00	1.00
Third	R9		Unknown	20.57	221.45	19.04	204.95	0.93	19.04	0.00	0.00	1.00
Third	R10		Unknown	10.88	117.16	10.01	107.74	0.92	10.01	0.00	0.00	1.00
Third	R11		Unknown	14.04	151.10	10.85	116.80	0.77	10.80	0.05	0.58	1.00
Third	R14		Unknown	13.92	149.79	12.75	137.22	0.92	12.75	0.00	0.00	1.00
Third	R15		Unknown	11.09	119.33	9.22	99.19	0.83	9.22	0.00	0.00	1.00
Third	R16		Unknown	30.65	329.88	30.65	329.88	1.00	30.65	0.00	0.00	1.00
Fourth	R1		Unknown	32.54	350.23	32.54	350.23	1.00	32.54	0.00	0.00	1.00
Fourth	R2		Unknown	10.91	117.46	9.75	104.96	0.89	9.75	0.00	0.00	1.00
Fourth	R3		Unknown	14.06	151.36	13.45	144.76	0.96	13.45	0.00	0.00	1.00
Fourth	R6		Unknown	14.12	151.98	11.95	128.58	0.85	11.95	0.00	0.00	1.00
Fourth	R7		Unknown	10.98	118.21	10.32	111.14	0.94	10.32	0.00	0.01	1.00
Fourth	R8		Unknown	20.08	216.15	18.19	195.84	0.91	18.19	0.00	0.00	1.00
Fourth	R9		Unknown	20.57	221.45	19.04	204.99	0.93	19.04	0.00	0.00	1.00
Fourth	R10		Unknown	10.88	117.16	10.08	108.52	0.93	10.08	0.00	0.00	1.00
Fourth	R11		Unknown	14.04	151.10	11.21	120.64	0.80	11.21	0.00	0.00	1.00
Fourth	R14		Unknown	13.92	149.79	13.07	140.69	0.94	13.07	0.00	0.00	1.00
Fourth	R15		Unknown	11.09	119.33	9.42	101.42	0.85	9.42	0.00	0.00	1.00
Fourth	R16		Unknown	30.65	329.88	30.65	329.88	1.00	30.65	0.00	0.00	1.00
Fifth	R1		Unknown	32.54	350.23	32.54	350.23	1.00	32.54	0.00	0.00	1.00
Fifth	R2		Unknown	10.91	117.46	10.08	108.45	0.92	10.08	0.00	0.00	1.00
Fifth	R3		Unknown	14.06	151.36	13.82	148.71	0.98	13.81	0.00	0.00	1.00
Fifth	R6		Unknown	14.12	151.98	12.28	132.17	0.87	12.28	0.00	0.00	1.00
Fifth	R7		Unknown	10.98	118.21	10.66	114.78	0.97	10.66	0.00	0.00	1.00
Fifth	R8		Unknown	20.08	216.15	18.38	197.86	0.92	18.38	0.00	0.00	1.00
Fifth	R9		Unknown	20.57	221.45	19.12	205.85	0.93	19.12	0.00	0.00	1.00
Fifth	R10		Unknown	10.88	117.16	10.35	111.37	0.95	10.35	0.00	0.00	1.00
Fifth	R11		Unknown	14.04	151.10	12.03	129.49	0.86	12.03	0.00	0.00	1.00
Fifth	R14		Unknown	13.92	149.79	13.60	146.39	0.98	13.60	0.00	0.00	1.00
Fifth	R15		Unknown	11.09	119.33	9.84	105.86	0.89	9.84	0.00	0.00	1.00
Fifth	R16		Unknown	30.65	329.88	30.65	329.88	1.00	30.65	0.00	0.00	1.00
Sixth	R1		Unknown	32.54	350.23	32.54	350.23	1.00	32.54	0.00	0.00	1.00
Sixth	R2		Unknown	10.91	117.46	10.68	114.92	0.98	10.68	0.00	0.00	1.00
Sixth	R3		Unknown	14.06	151.36	13.93	149.99	0.99	13.93	0.00	0.00	1.00
Sixth	R6		Unknown	14.12	151.98	13.26	142.76	0.94	13.26	0.00	0.00	1.00
Sixth	R7		Unknown	10.98	118.21	10.84	116.71	0.99	10.84	0.00	0.00	1.00
Sixth	R8		Unknown	20.08	216.15	19.47	209.58	0.97	19.47	0.00	0.00	1.00
Sixth	R9		Unknown	20.57	221.45	19.94	214.68	0.97	19.94	0.00	0.00	1.00
Sixth	R10		Unknown	10.88	117.16	10.58	113.92	0.97	10.58	0.00	0.00	1.00
Sixth	R11		Unknown	14.04	151.10	13.34	143.63	0.95	13.34	0.00	0.00	1.00
Sixth	R14		Unknown	13.92	149.79	13.70	147.49	0.98	13.70	0.00	0.00	1.00
Sixth	R15		Unknown	11.09	119.33	10.61	114.23	0.96	10.61	0.00	0.00	1.00
Sixth	R16		Unknown	30.65	329.88	30.65	329.88	1.00	30.65	0.00	0.00	1.00
Seventh	R1		Unknown	32.54	350.23	32.54	350.23	1.00	32.54	0.00	0.00	1.00
Seventh	R2		Unknown	10.91	117.46	10.91	117.46	1.00	10.91	0.00	0.00	1.00
Seventh	R3		Unknown	14.06	151.36	14.06	151.36	1.00	14.06	0.00	0.00	1.00
Seventh	R6		Unknown	14.12	151.98	14.12	151.98	1.00	14.12	0.00	0.00	1.00
Seventh	R7		Unknown	10.98	118.21	10.98	118.21	1.00	10.98	0.00	0.00	1.00
Seventh	R8		Unknown	20.08	216.15	20.08	216.15	1.00	20.08	0.00	0.00	1.00
Seventh	R9		Unknown	20.57	221.45	20.57	221.45	1.00	20.57	0.00	0.00	1.00
Seventh	R10		Unknown	10.88	117.16	10.88	117.16	1.00	10.88	0.00	0.00	1.00
Seventh	R11		Unknown	14.04	151.10	14.04	151.10	1.00	14.04	0.00	0.00	1.00
Seventh	R14		Unknown	13.92	149.79	13.92	149.79	1.00	13.92	0.00	0.00	1.00
Seventh	R15		Unknown	11.09	119.33	11.09	119.33	1.00	11.09	0.00	0.00	1.00
Seventh	R16		Unknown	30.65	329.88	30.65	329.88	1.00	30.65	0.00	0.00	1.00
Eighth	R1		Unknown	32.54	350.23	32.54	350.23	1.00	32.54	0.00	0.00	1.00
Eighth	R2		Unknown	10.91	117.46	10.91	117.46	1.00	10.91	0.00	0.00	1.00
Eighth	R3		Unknown	14.06	151.36	14.06	151.36	1.00	14.06	0.00	0.00	1.00
Eighth	R6		Unknown	14.12	151.98	14.12	151.98	1.00	14.12	0.00	0.00	1.00
Eighth	R7		Unknown	10.98	118.21	10.98	118.21	1.00	10.98	0.00	0.00	1.00
Eighth	R8		Unknown	20.08	216.15	20.08	216.15	1.00	20.08	0.00	0.00	1.00
Eighth	R9		Unknown	20.57	221.45	20.57	221.45	1.00	20.57	0.00	0.00	1.00
Eighth	R10		Unknown	10.88	117.16	10.88	117.16	1.00	10.88	0.00	0.00	1.00
Eighth	R11		Unknown	14.04	151.10	14.04	151.10	1.00	14.04	0.00	0.00	1.00
Eighth	R14		Unknown	13.92	149.79	13.92	149.79	1.00	13.92	0.00	0.00	1.00
Eighth	R15		Unknown	11.09	119.33	11.09	119.33	1.00	11.09	0.00	0.00	1.00
Eighth	R16		Unknown	30.65	329.88	30.65	329.88	1.00	30.65	0.00	0.00	1.00

Project Name: Renaissance Hotel, Deansgate, Manchester
Project No.: 2571
Report Title: Daylight Distribution - Neighbour Analysis

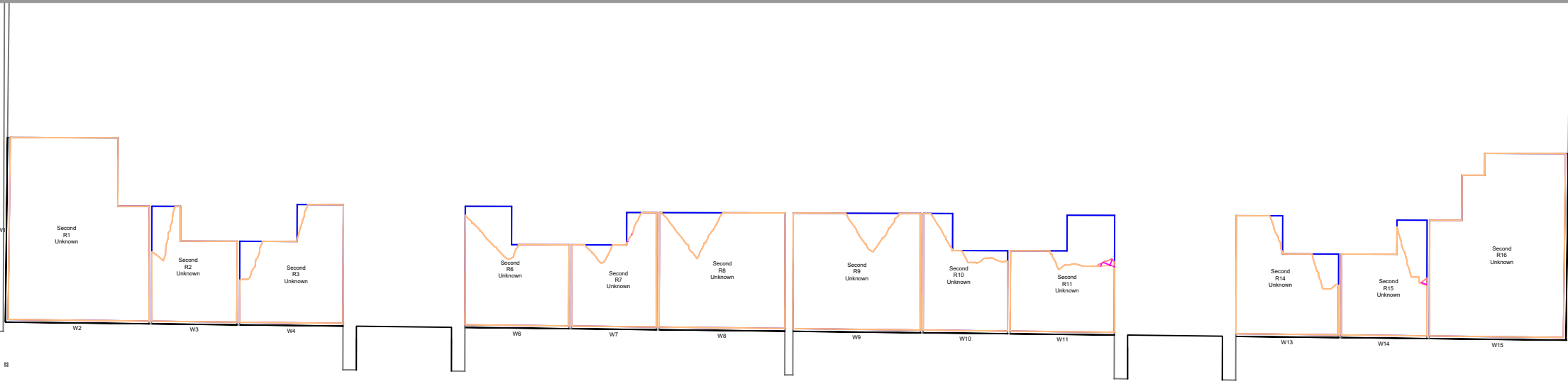
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Ninth	R1		Unknown	20.79	223.83	20.79	223.83	1.00	20.79	0.00	0.00	1.00
Ninth	R2		Unknown	10.91	117.46	10.91	117.46	1.00	10.91	0.00	0.00	1.00
Ninth	R3		Unknown	14.06	151.36	14.06	151.36	1.00	14.06	0.00	0.00	1.00
Ninth	R6		Unknown	14.12	151.98	14.12	151.98	1.00	14.12	0.00	0.00	1.00
Ninth	R7		Unknown	10.98	118.21	10.98	118.21	1.00	10.98	0.00	0.00	1.00
Ninth	R8		Unknown	20.08	216.15	20.08	216.15	1.00	20.08	0.00	0.00	1.00
Ninth	R9		Unknown	20.57	221.45	20.57	221.45	1.00	20.57	0.00	0.00	1.00
Ninth	R10		Unknown	10.88	117.16	10.88	117.16	1.00	10.88	0.00	0.00	1.00
Ninth	R11		Unknown	14.04	151.10	14.04	151.10	1.00	14.04	0.00	0.00	1.00
Ninth	R14		Unknown	13.92	149.79	13.92	149.79	1.00	13.92	0.00	0.00	1.00
Ninth	R15		Unknown	11.09	119.33	11.09	119.33	1.00	11.09	0.00	0.00	1.00
Ninth	R16		Unknown	30.65	329.88	30.65	329.88	1.00	30.65	0.00	0.00	1.00
Tenth	R2		Unknown	14.12	151.98	14.12	151.98	1.00	14.12	0.00	0.00	1.00
Tenth	R3		Unknown	10.98	118.21	10.98	118.21	1.00	10.98	0.00	0.00	1.00
Tenth	R4		Unknown	20.08	216.15	20.08	216.15	1.00	20.08	0.00	0.00	1.00
Tenth	R5		Unknown	20.57	221.45	20.57	221.45	1.00	20.57	0.00	0.00	1.00
Tenth	R6		Unknown	10.88	117.16	10.88	117.16	1.00	10.88	0.00	0.00	1.00
Tenth	R7		Unknown	14.04	151.10	14.04	151.10	1.00	14.04	0.00	0.00	1.00
Tenth	R10		Unknown	13.92	149.79	13.92	149.79	1.00	13.92	0.00	0.00	1.00
Tenth	R11		Unknown	11.09	119.33	11.09	119.33	1.00	11.09	0.00	0.00	1.00
Tenth	R12		Unknown	30.65	329.88	30.65	329.88	1.00	30.65	0.00	0.00	1.00
Eleventh	R1		Unknown	33.79	363.70	33.79	363.70	1.00	33.79	0.00	0.00	1.00
Eleventh	R2		Unknown	20.08	216.15	20.08	216.15	1.00	20.08	0.00	0.00	1.00
Eleventh	R3		Unknown	20.57	221.45	20.57	221.45	1.00	20.57	0.00	0.00	1.00
Eleventh	R4		Unknown	10.88	117.16	10.88	117.16	1.00	10.88	0.00	0.00	1.00
Eleventh	R5		Unknown	14.04	151.10	14.04	151.10	1.00	14.04	0.00	0.00	1.00
Eleventh	R8		Unknown	13.92	149.79	13.92	149.79	1.00	13.92	0.00	0.00	1.00
Eleventh	R9		Unknown	11.09	119.33	11.09	119.33	1.00	11.09	0.00	0.00	1.00
Eleventh	R10		Unknown	30.65	329.88	30.65	329.88	1.00	30.65	0.00	0.00	1.00
Twelfth	R1		Unknown	21.75	234.16	21.75	234.16	1.00	21.75	0.00	0.00	1.00
Twelfth	R2		Unknown	10.88	117.16	10.88	117.16	1.00	10.88	0.00	0.00	1.00
Twelfth	R3		Unknown	14.04	151.10	14.04	151.10	1.00	14.04	0.00	0.00	1.00
Twelfth	R6		Unknown	13.92	149.79	13.92	149.79	1.00	13.92	0.00	0.00	1.00
Twelfth	R7		Unknown	11.09	119.33	11.09	119.33	1.00	11.09	0.00	0.00	1.00
Twelfth	R8		Unknown	30.65	329.88	30.65	329.88	1.00	30.65	0.00	0.00	1.00
Thirteenth	R2		Unknown	13.92	149.79	13.92	149.79	1.00	13.92	0.00	0.00	1.00
Thirteenth	R3		Unknown	11.09	119.33	11.09	119.33	1.00	11.09	0.00	0.00	1.00
Thirteenth	R4		Unknown	30.65	329.88	30.65	329.88	1.00	30.65	0.00	0.00	1.00
Fourteenth	R1		Unknown	33.79	363.69	33.79	363.69	1.00	33.79	0.00	0.00	1.00
Fourteenth	R2		Unknown	30.65	329.88	30.65	329.88	1.00	30.65	0.00	0.00	1.00

One Deansgate
First Floor



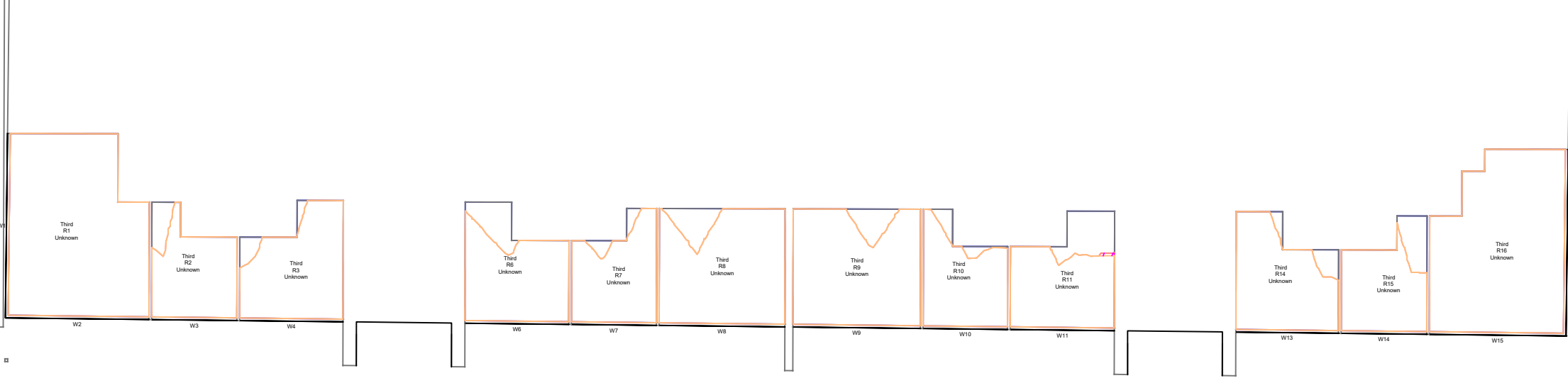
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One Deansgate
Second Floor



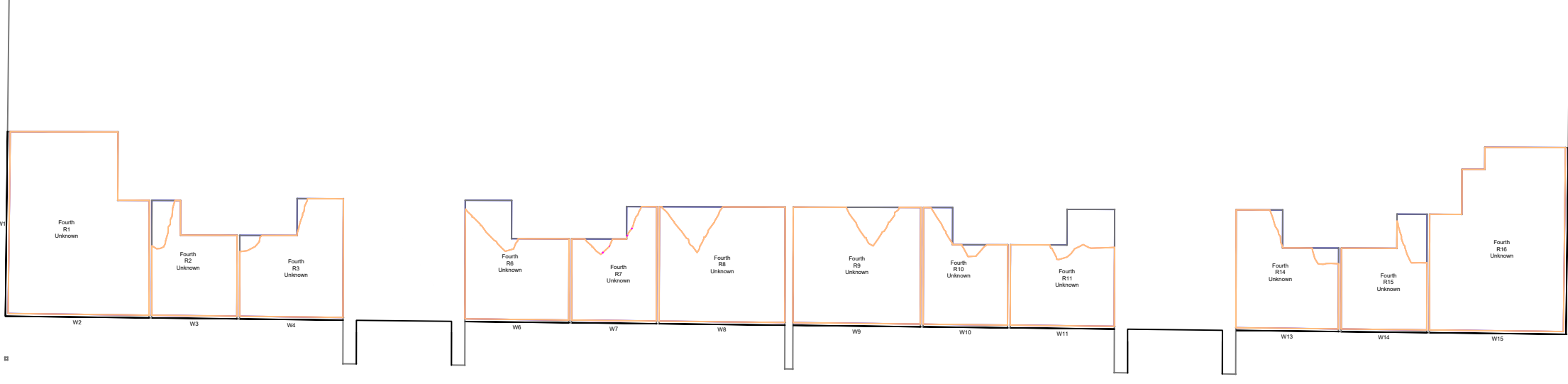
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One Deansgate
Third Floor



1:200

One Deansgate
Fourth 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
Existing Site derived from a supplied 3D ZMAP model.

Neighbouring Buildings internal room layouts, window
positions/dimensions and massing derived from both
the ZMAP data and 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 - "150_B2
Model_G+26.dwg"
Supplied by Jon Matthews Architects on 16/07/2021.

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:

grayscanlanhill
chartered building surveyors

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

CLIENT:
Property Alliance Group Limited

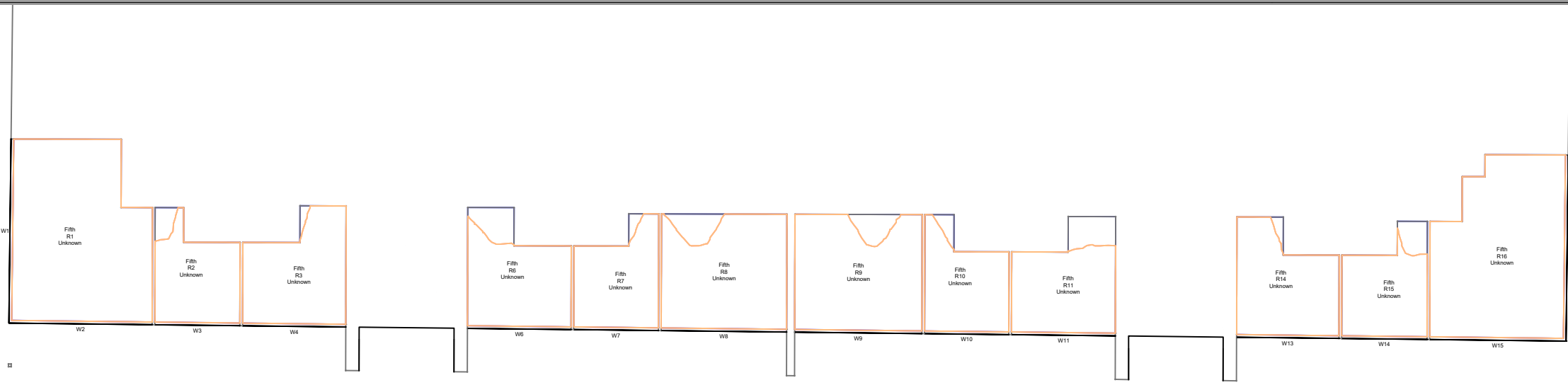
PROJECT:
Renaissance Hotel
Deansgate
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2: 1:200	DATE: 19.07.2021	DRAWN: GSH
CHECKED: DMH		REV:

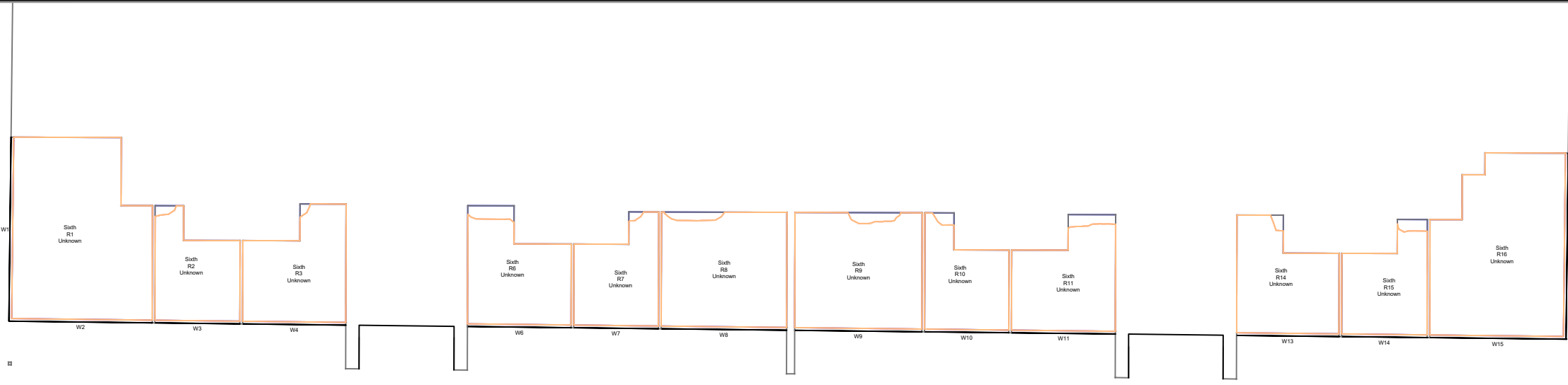
DRAWING NUMBER:
2571_MA-07

One Deansgate
Fifth Floor



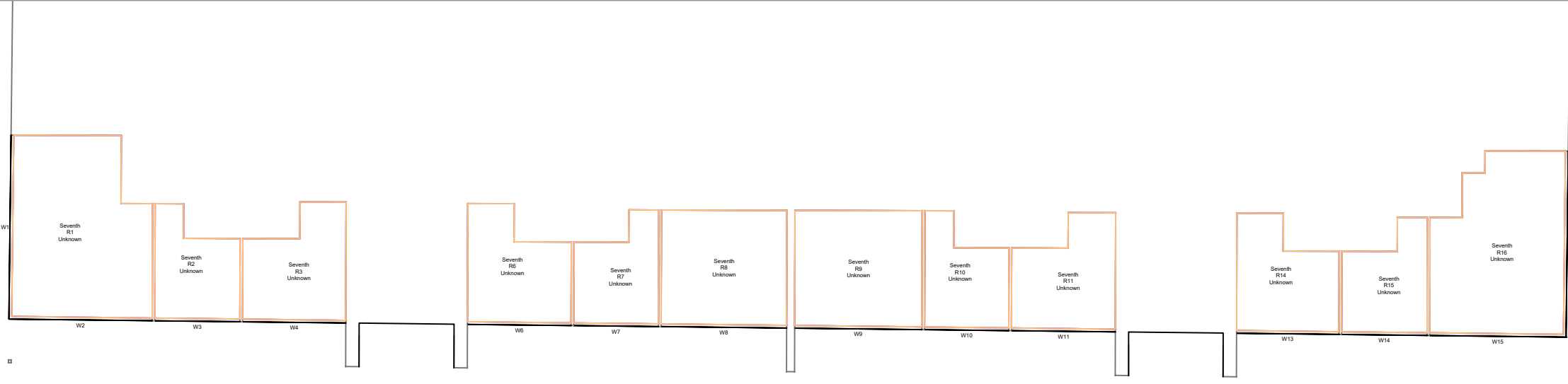
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One Deansgate
Sixth Floor



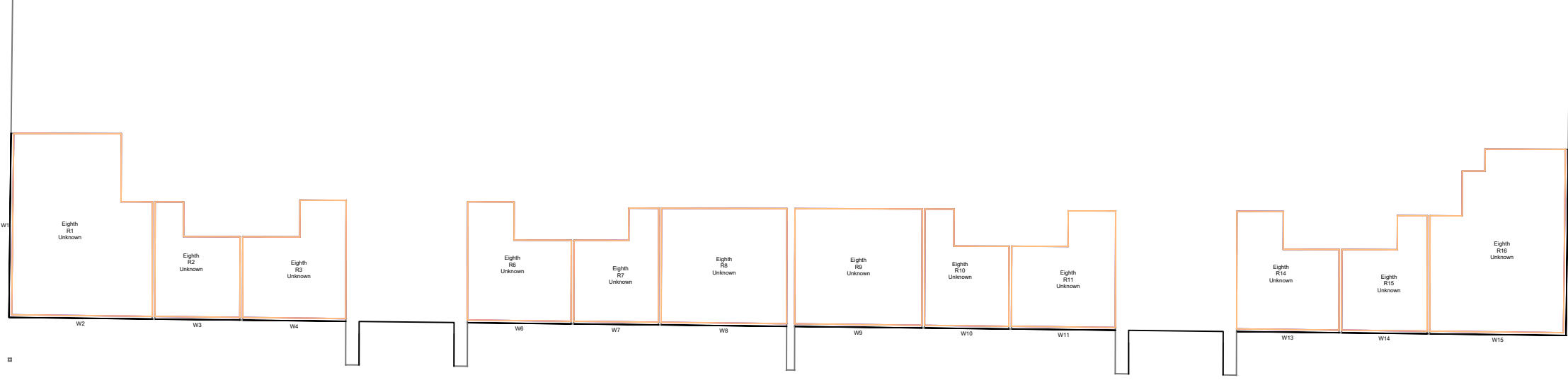
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One Deansgate
Seventh Floor



1:200

One Deansgate
Eighth Floor



1:200

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
Existing Site derived from a supplied 3D ZMAP model.

Neighbouring Buildings internal room layouts, window
positions/dimensions and massing derived from both
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portal.

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

Proposed Model
Proposed scheme massing - "150_B2
Model_G+26.dwg"
Supplied by Jon Matthews Architects on 16/07/2021.

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:

grayscanlanhill
chartered building surveyors

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

CLIENT:
Property Alliance Group Limited

PROJECT:
Renaissance Hotel
Deansgate
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2: 1:200	DATE: 19.07.2021	DRAWN: GSH
CHECKED: DMH		

DRAWING NUMBER: 2571_MA-08	REV: .
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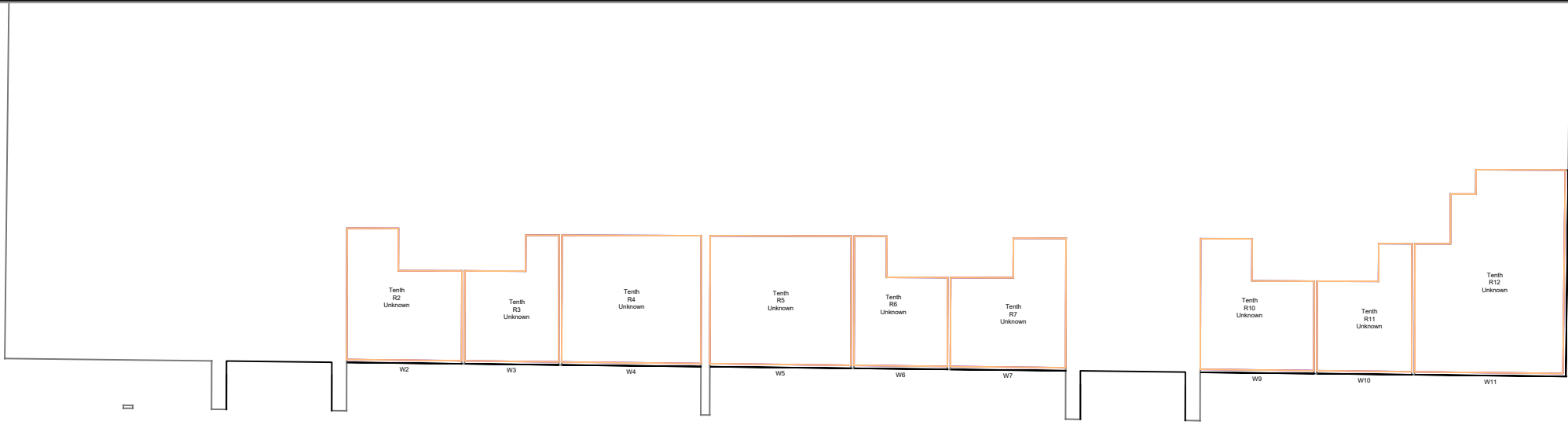
One Deansgate
Ninth Floor



1:200



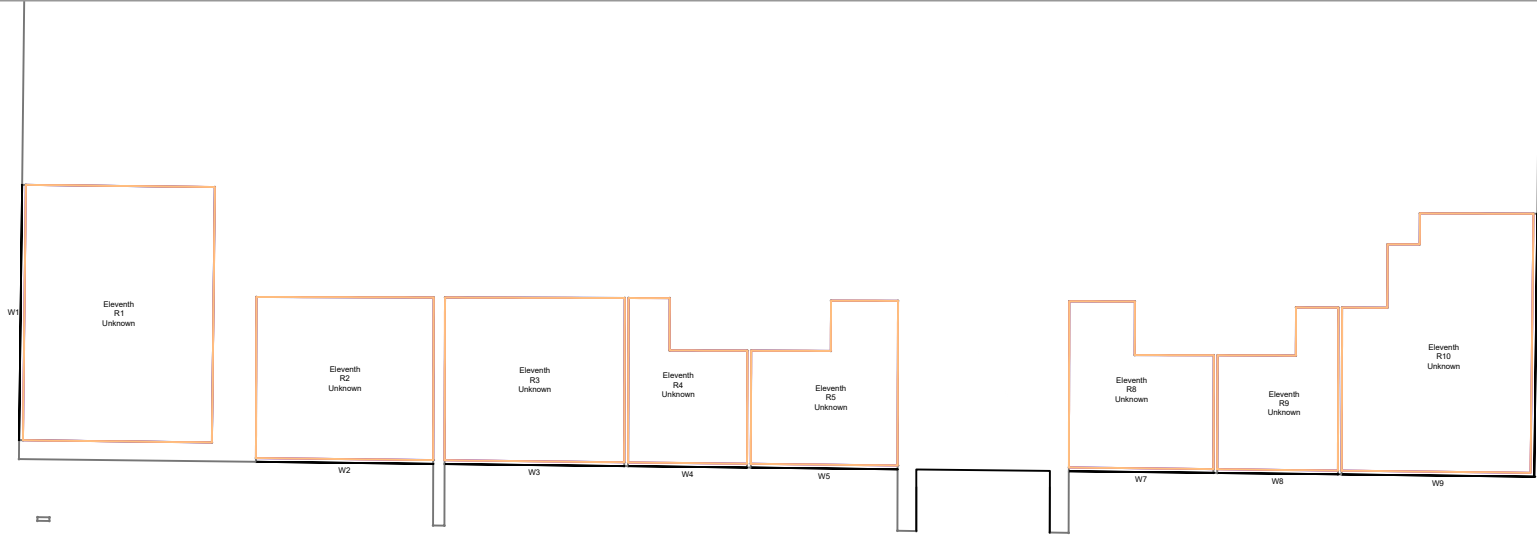
One Deansgate
Tenth Floor



1:200



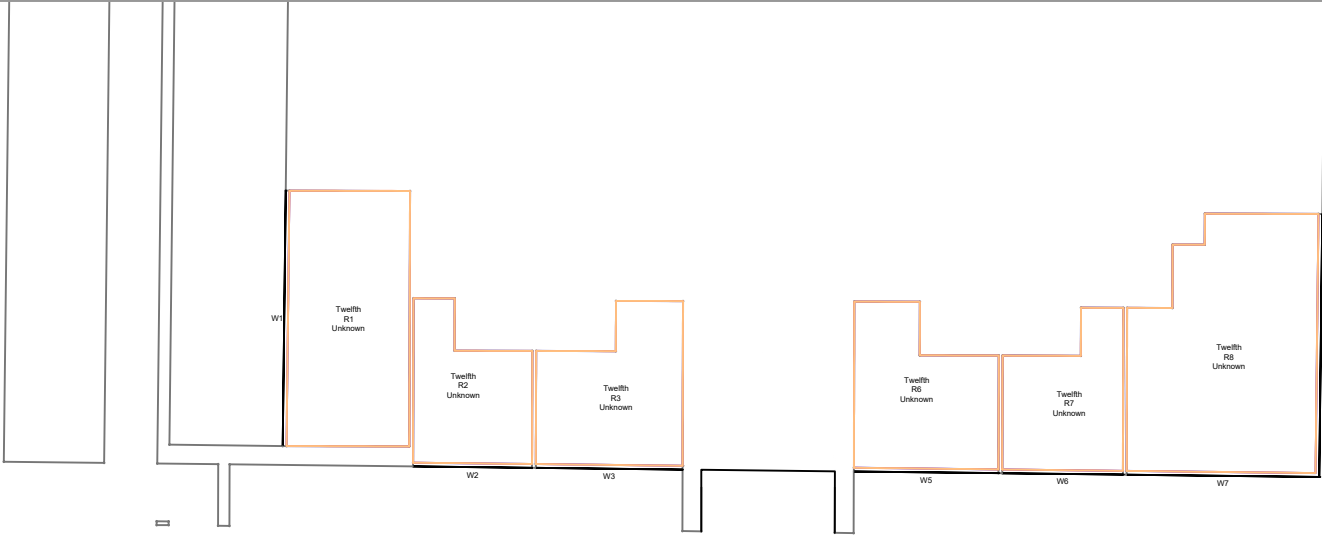
One Deansgate
Eleventh Floor



1:200



One Deansgate
Twelfth Floor



1:200



NOTES:
No dimensions are to be scaled from this drawing.
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discrepancy occurs between specification and
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Analysis
Produced using Waldram Tools
MBS Survey Software Ltd (www.mbs-software.co.uk)
Existing Model & Surrounding Model
Existing Site derived from a supplied 3D ZMAP model.

Neighbouring Buildings internal room layouts, window
positions/dimensions and massing derived from both
the ZMAP data and 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 - "150_B2
Model_G+26.dwg"
Supplied by Jon Matthews Architects on 16/07/2021.

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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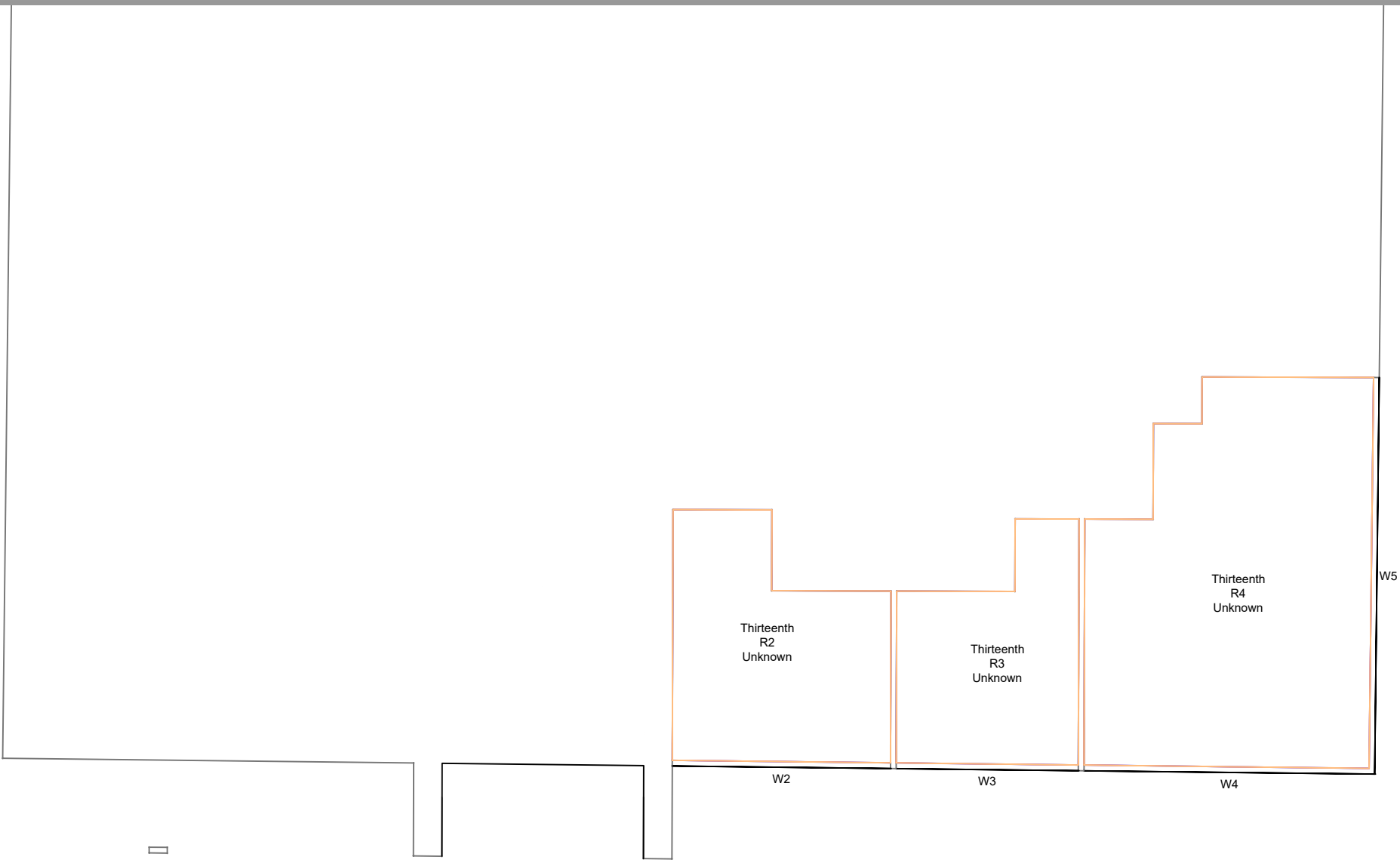
PROJECT:
Renaissance Hotel
Deansgate
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2: 1:200	DATE: 19.07.2021	DRAWN: GSH
	CHECKED: DMH	

DRAWING NUMBER: 2571_MA-09	REV: .
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One Deansgate
Thirteenth Floor



1:100



One Deansgate
Fourteenth Floor



1:100



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

Analysis
Produced using Waldram Tools
MBS Survey Software Ltd (www.mbs-software.co.uk)
Existing Model & Surrounding Model
Existing Site derived from a supplied 3D ZMAP model.

Neighbouring Buildings internal room layouts, window
positions/dimensions and massing derived from both
the ZMAP data and 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 - "150_B2
Model_G+26.dwg"
Supplied by Jon Matthews Architects on 16/07/2021.

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:


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

CLIENT:
Property Alliance Group Limited

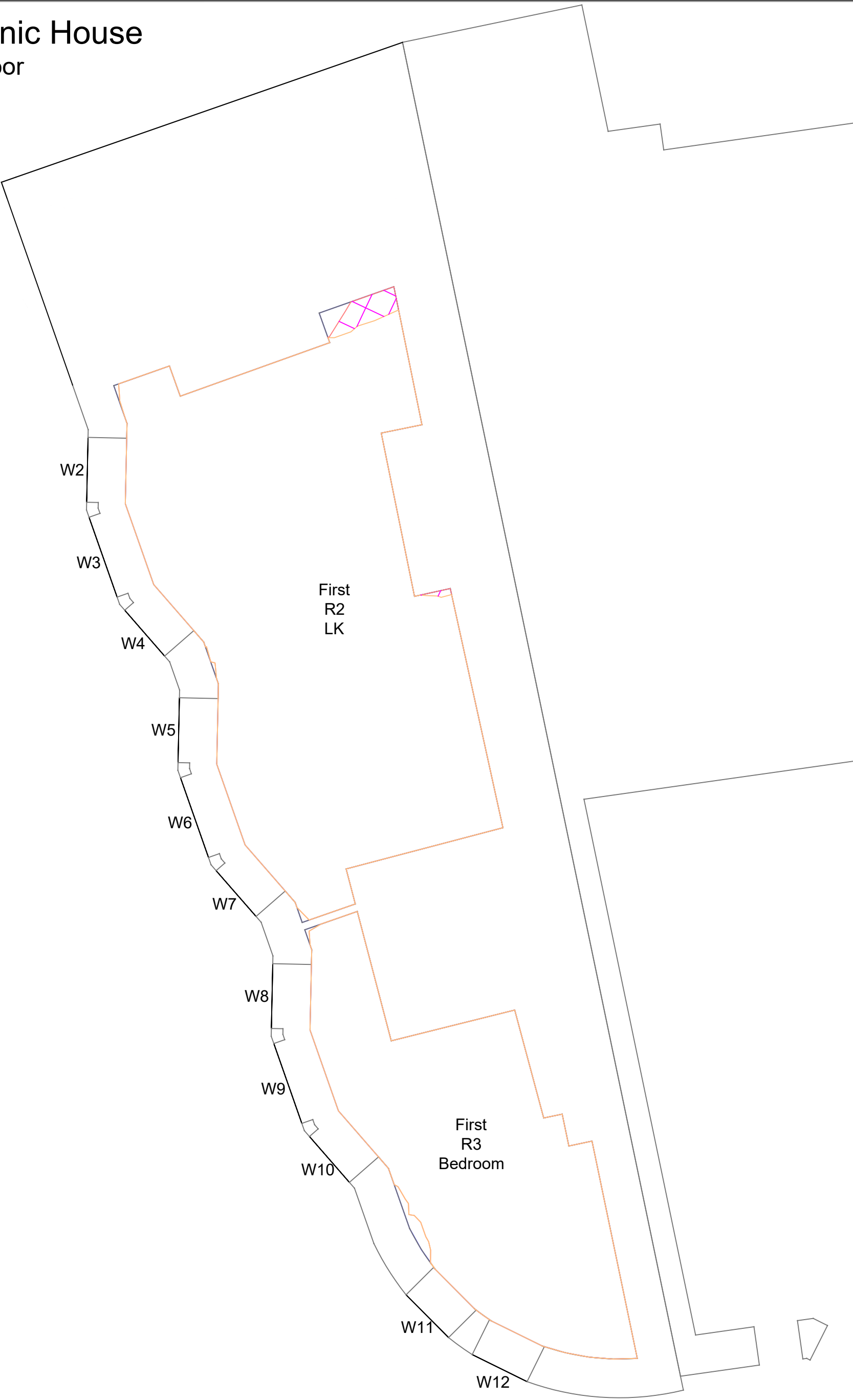
PROJECT:
Renaissance Hotel
Deansgate
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2: 1:100	DATE: 19.07.2021	DRAWN: GSH
	CHECKED: DMH	

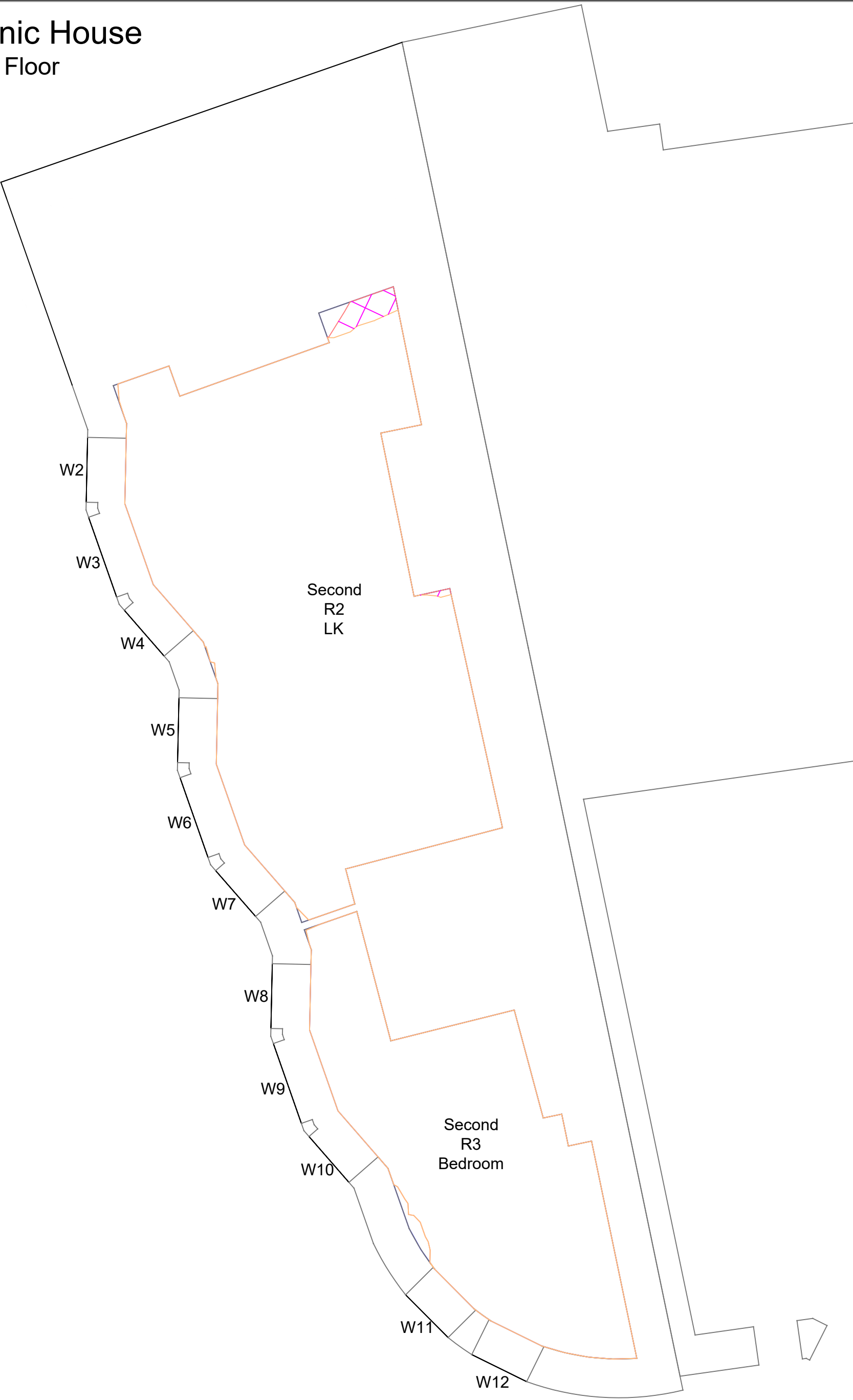
DRAWING NUMBER: 2571_MA-10	REV: .
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Britannic House
 First Floor



1:50

Britannic House
 Second Floor



1:50

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

Analysis
 Produced using Waldram Tools
 MBS Survey Software Ltd (www.mbs-software.co.uk)
 Existing Model & Surrounding Model
 Existing Site derived from a supplied 3D ZMAP model.
 Neighbouring Buildings internal room layouts, window
 positions/dimensions and massing derived from both
 the ZMAP data and 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 - "150_B2
 Model_G+26.dwg"
 Supplied by Jon Matthews Architects on 16/07/2021.

Massing Legend

Existing

Proposed

 All heights in m AOD

ROL Legend

Room Area (Measured Layout)

Existing No Sky Area

Proposed No Sky Area

Area of Loss/Gain

REV:	NOTES:	DRWN:	DATE:

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

CLIENT:
 Property Alliance Group Limited

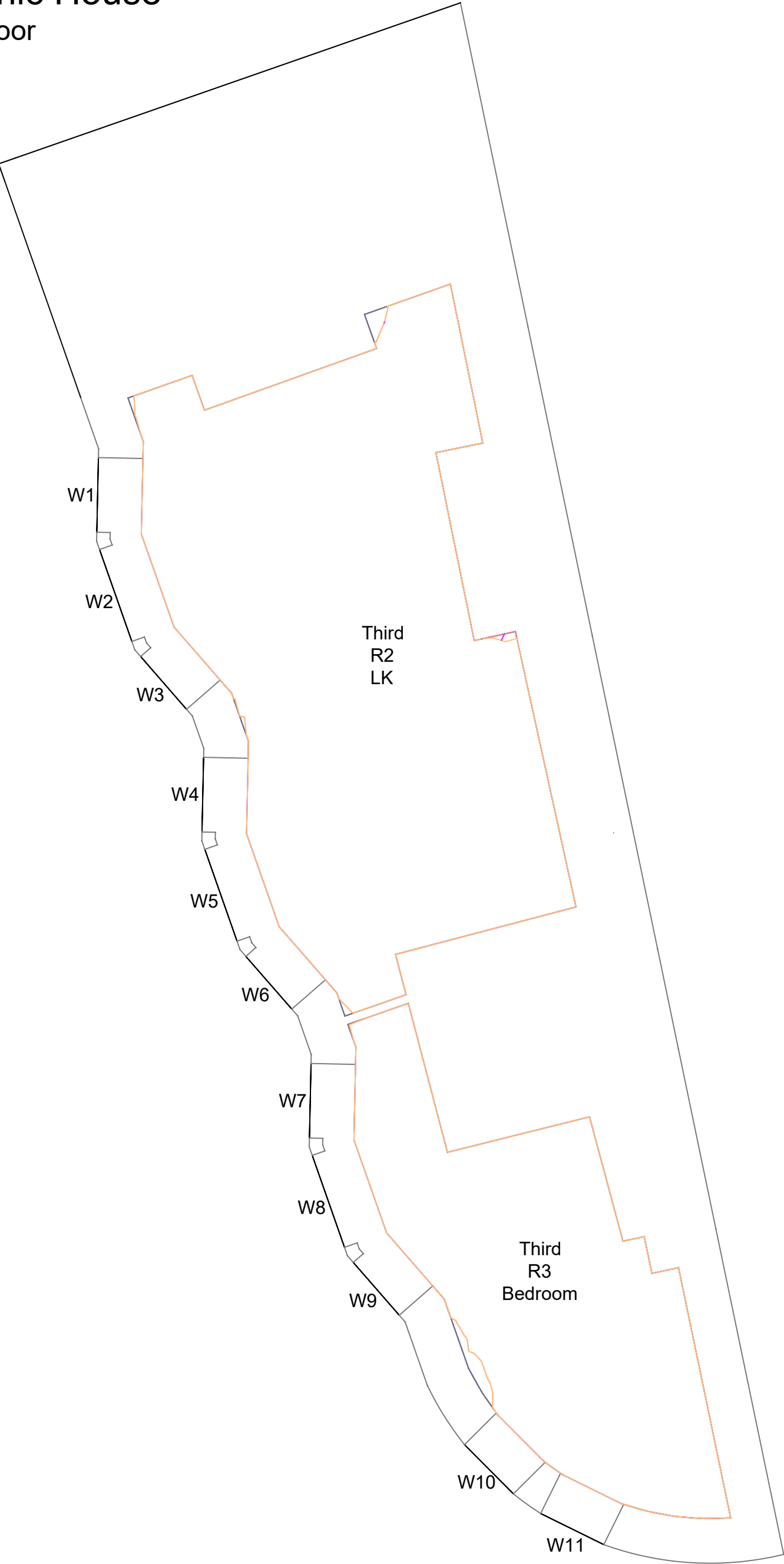
PROJECT:
 Renaissance Hotel
 Deansgate
 Manchester

DRAWING TITLE:
 Contour Plots
 Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	GSH
1:50	19.07.2021	CHECKED:	DMH

DRAWING NUMBER:	REV:
2571_MA-11	.

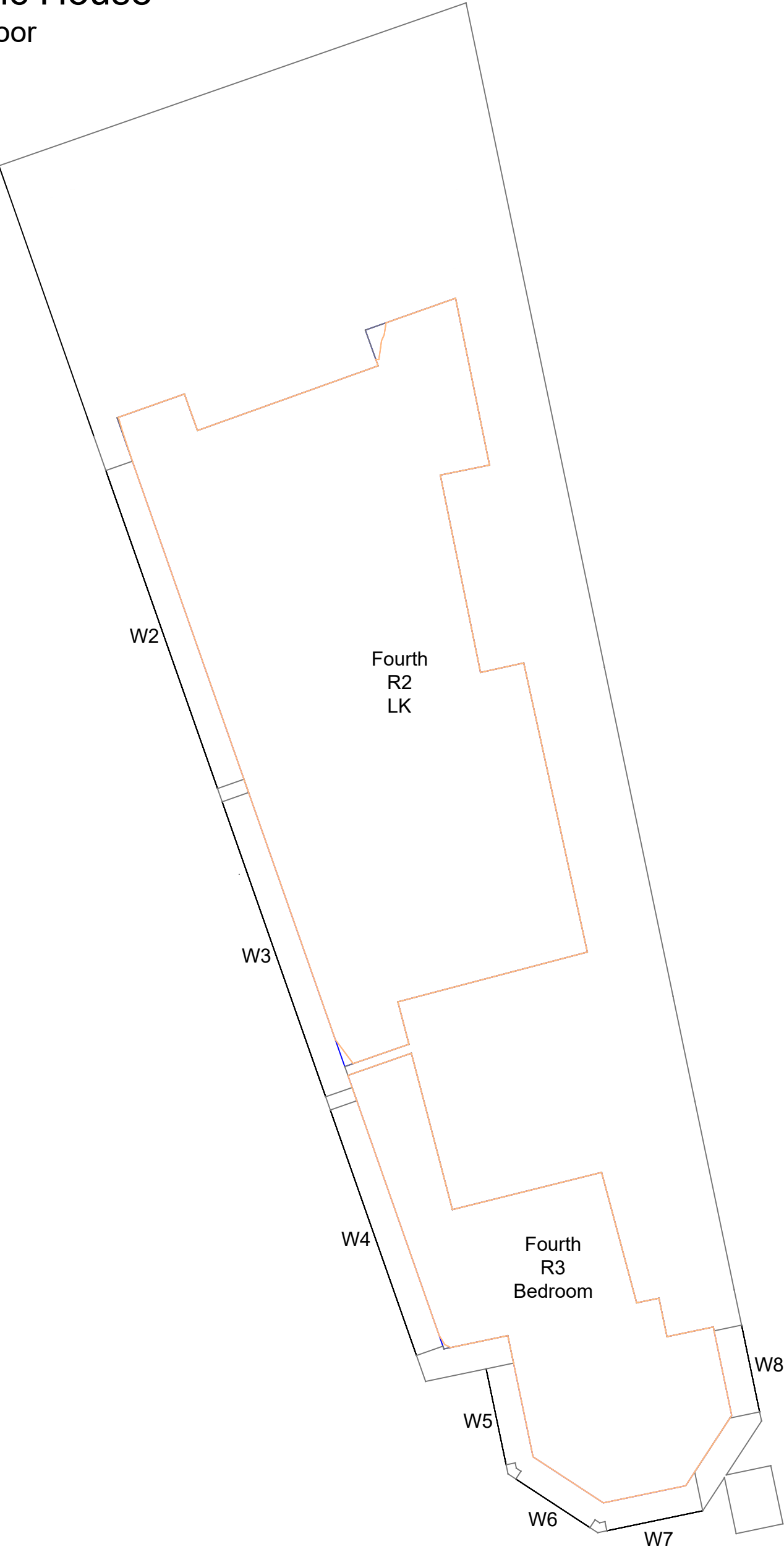
Britannic House
Third Floor



1:50



Britannic House
Fourth Floor



1:50



NOTES:
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discrepancy occurs between specification and
drawings the supervising officer must be notified.

Analysis
Produced using Waldram Tools
MBS Survey Software Ltd (www.mbs-software.co.uk)
Existing Model & Surrounding Model
Existing Site derived from a supplied 3D ZMAP model.

Neighbouring Buildings internal room layouts, window
positions/dimensions and massing derived from both
the ZMAP data and 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 - "150_B2
Model_G+26.dwg"
Supplied by Jon Matthews Architects on 16/07/2021.

Massing Legend

Existing
Proposed

All heights in m AOD

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

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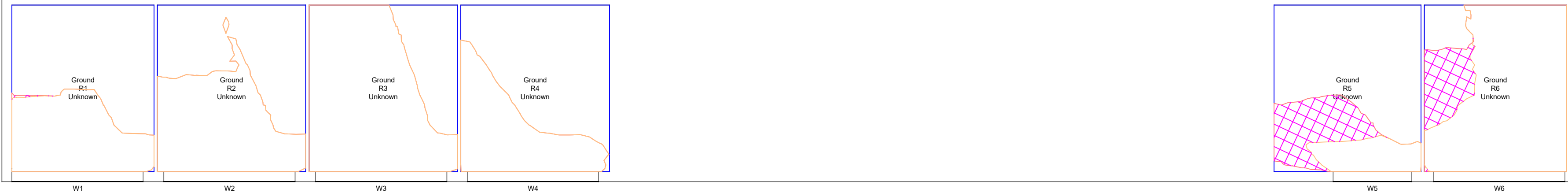
PROJECT:
Renaissance Hotel
Deansgate
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	GSH
1:50	19.07.2021	CHECKED:	DMH

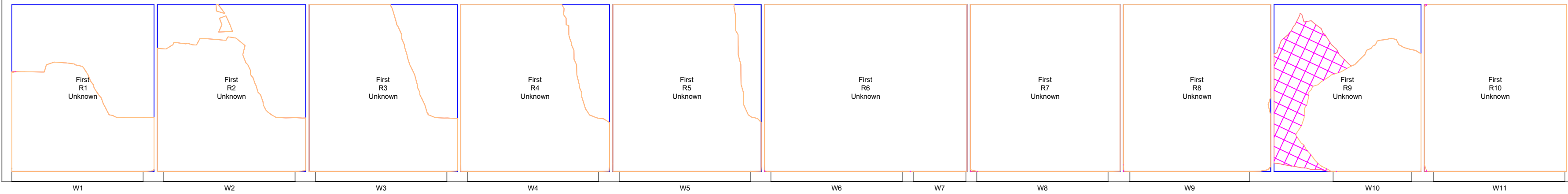
DRAWING NUMBER:	REV:
2571_MA-12	.

North Tower
Ground Floor



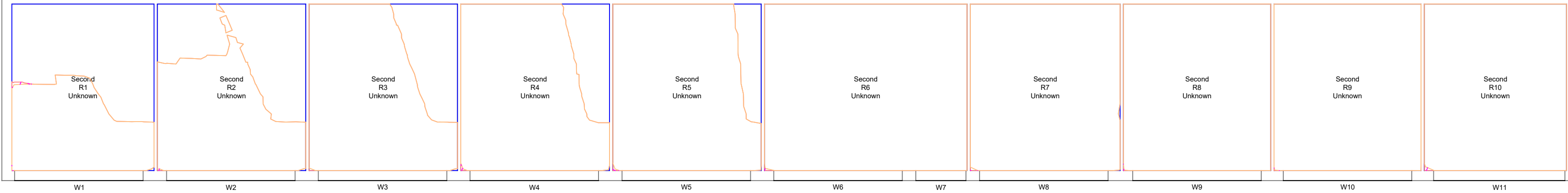
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North Tower
First Floor



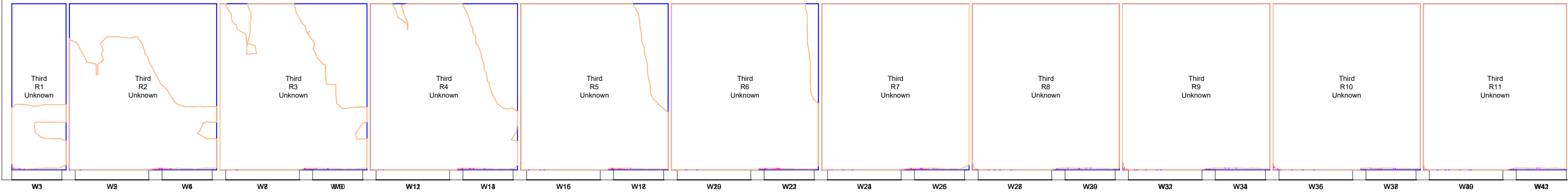
1:100

North Tower
Second Floor



1:100

North Tower
Third Floor



1:100

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

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

Existing Model & Surrounding Model
Existing Site derived from a supplied 3D ZMAP model.

Neighbouring Buildings internal room layouts, window
positions/dimensions and massing derived from both
the ZMAP data and 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 - "150_B2
Model_G+26.dwg"

Supplied by Jon Matthews Architects on 16/07/2021.

Massing Legend

Existing
Proposed

All heights in m AOD

ROL 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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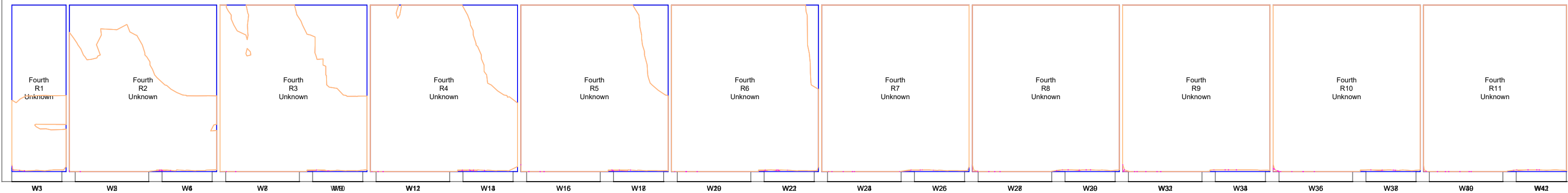
PROJECT:
Renaissance Hotel
Deansgate
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	GSH
1:100	19.07.2021	CHECKED:	DMH

DRAWING NUMBER: 2571_MA-13	REV: .
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North Tower
Fourth Floor



1:100



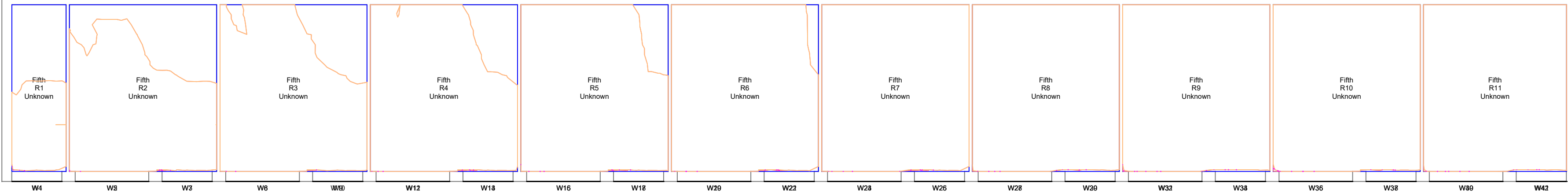
NOTES:
No dimensions are to be scaled from this drawing.
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Analysis
Produced using Waldram Tools
MBS Survey Software Ltd (www.mbs-software.co.uk)
Existing Model & Surrounding Model
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Maps and Google Earth.
Proposed Model
Proposed scheme massing - "150_B2
Model_G+26.dwg"
Supplied by Jon Matthews Architects on 16/07/2021.

North Tower
Fifth Floor



1:100



Massing Legend

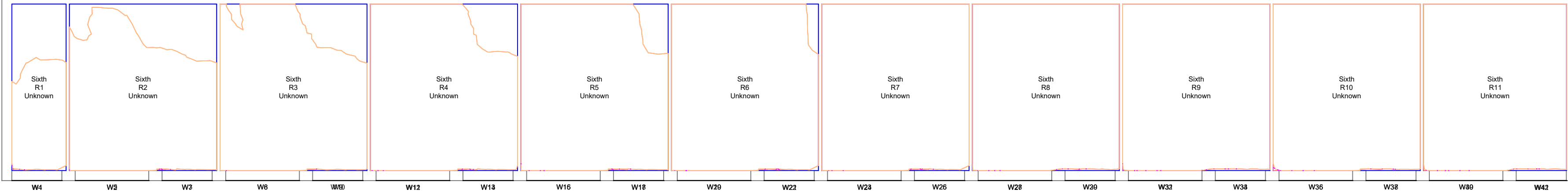
Existing
Proposed

All heights in m AOD

ROL Legend

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

North Tower
Sixth Floor



1:100



REV:	NOTES:	DRWN:	DATE:

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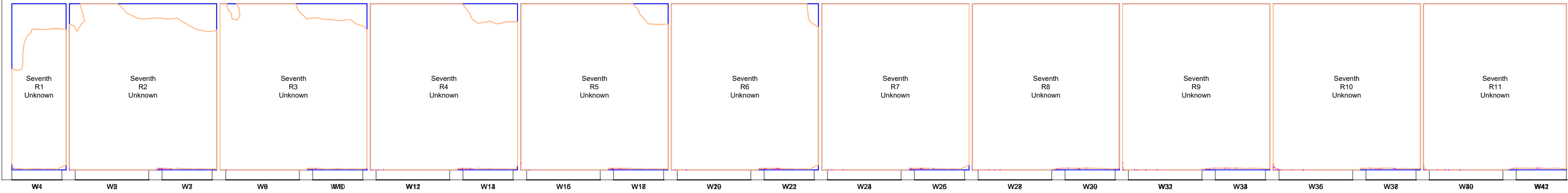
PROJECT:
Renaissance Hotel
Deansgate
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	GSH
1:100	19.07.2021	CHECKED:	DMH

DRAWING NUMBER:	REV:
2571_MA-14	.

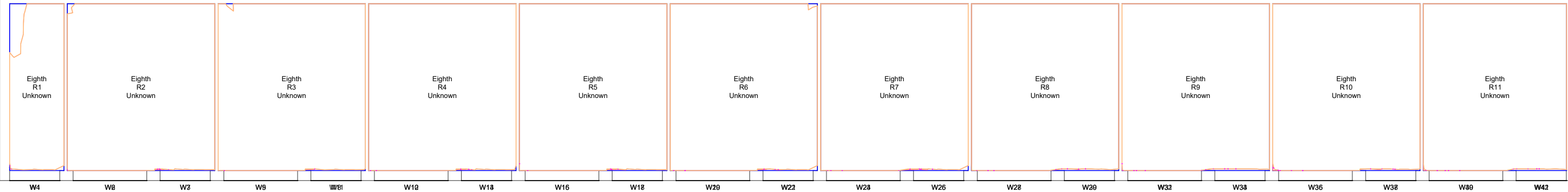
North Tower
Seventh Floor



1:100

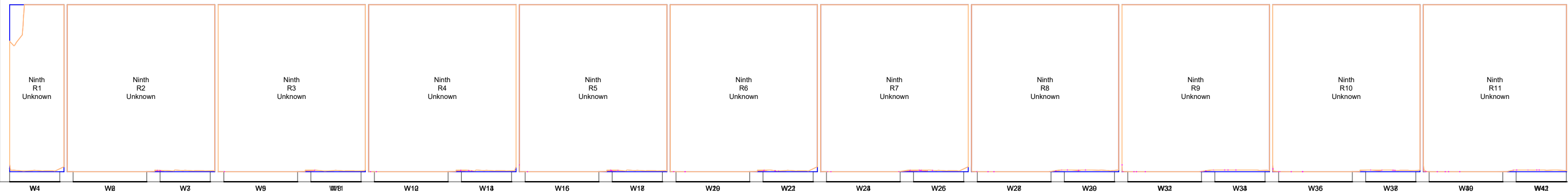


North Tower
Eighth Floor



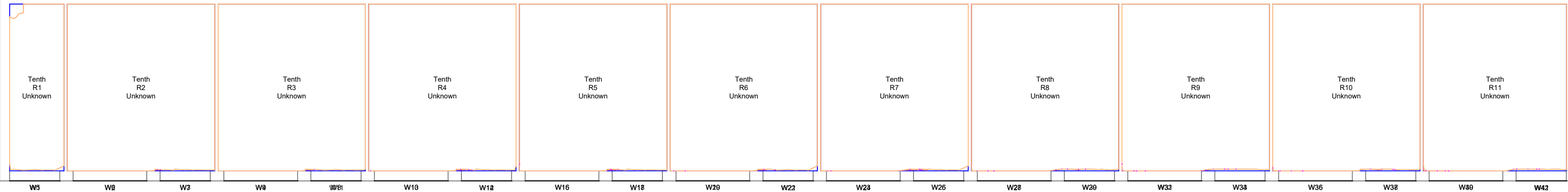
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North Tower
Ninth Floor



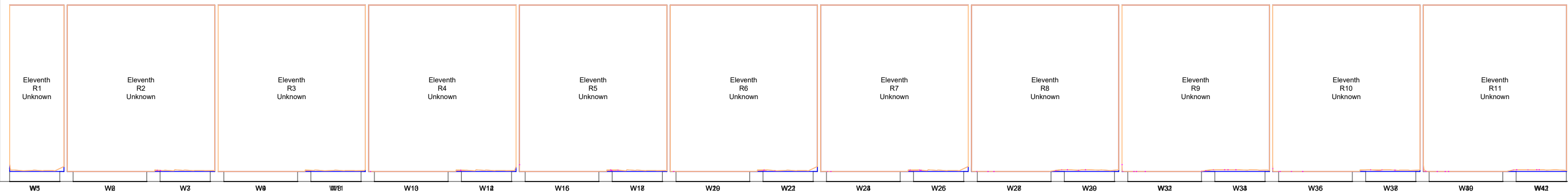
1:100

North Tower
Tenth Floor



1:100

North Tower
Eleventh Floor



1:100

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

Analysis
Produced using Waldram Tools
MBS Survey Software Ltd (www.mbs-software.co.uk)
Existing Model & Surrounding Model
Existing Site derived from a supplied 3D ZMAP model.

Neighbouring Buildings internal room layouts, window
positions/dimensions and massing derived from both
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portal.

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

Proposed Model
Proposed scheme massing - "150_B2
Model_G+26.dwg"
Supplied by Jon Matthews Architects on 16/07/2021.

Massing Legend

Existing
Proposed

All heights in m AOD

ROL 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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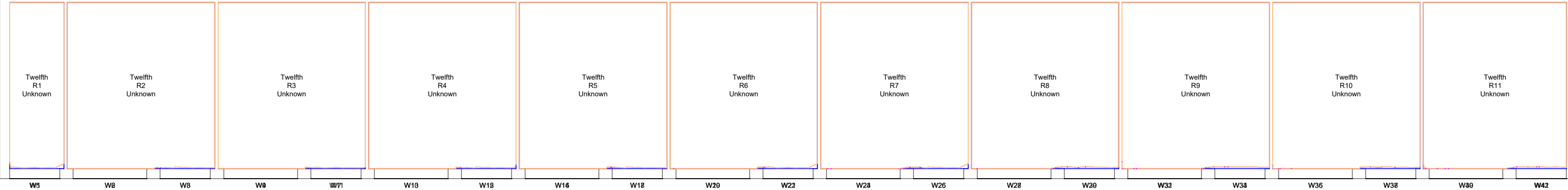
PROJECT:
Renaissance Hotel
Deansgate
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	GSH
1:100	19.07.2021	CHECKED:	DMH

DRAWING NUMBER: 2571_MA-15	REV: .
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North Tower
Twelfth Floor



1:100



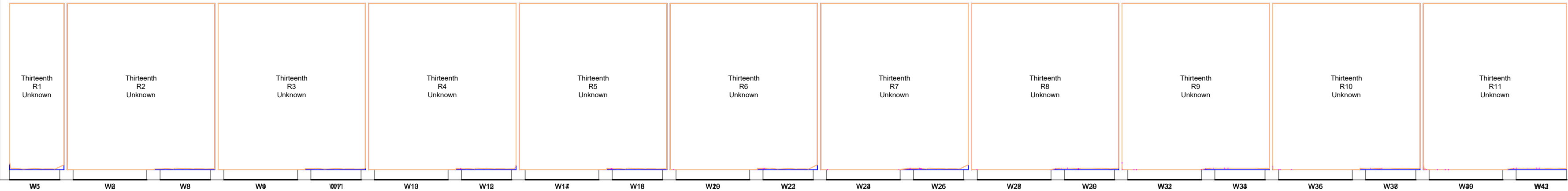
NOTES:
No dimensions are to be scaled from this drawing.
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Analysis
Produced using Waldram Tools
MBS Survey Software Ltd (www.mbs-software.co.uk)
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Proposed Model
Proposed scheme massing - "150_B2
Model_G+26.dwg"
Supplied by Jon Matthews Architects on 16/07/2021.

North Tower
Thirteenth Floor



1:100



Massing Legend

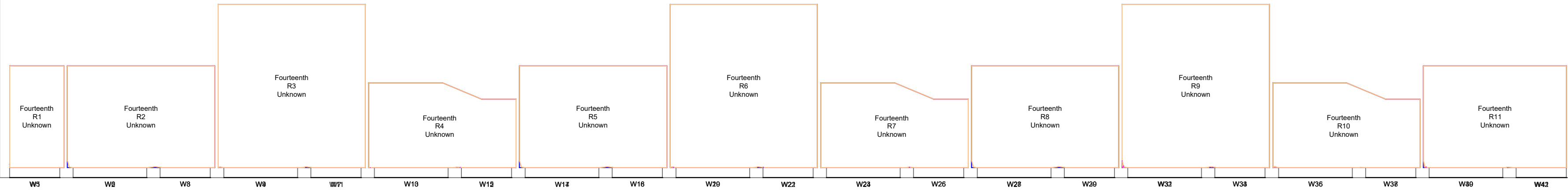
Existing
Proposed

All heights in m AOD

ROL Legend

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

North Tower
Fourteenth Floor



1:100



REV:	NOTES:	DRWN:	DATE:

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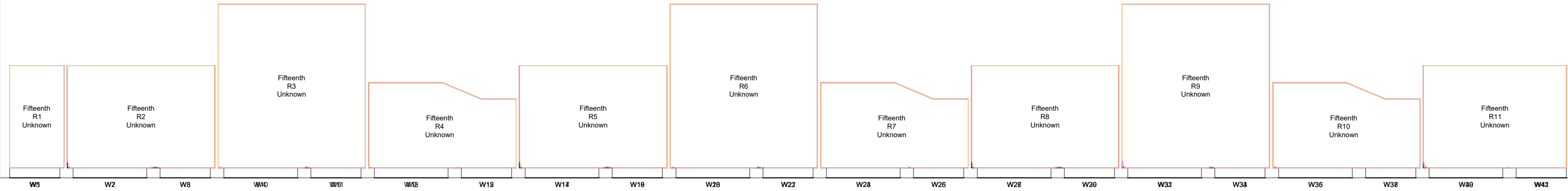
PROJECT:
Renaissance Hotel
Deansgate
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	GSH
1:100	19.07.2021	CHECKED:	DMH

DRAWING NUMBER:	REV:
2571_MA-16	.

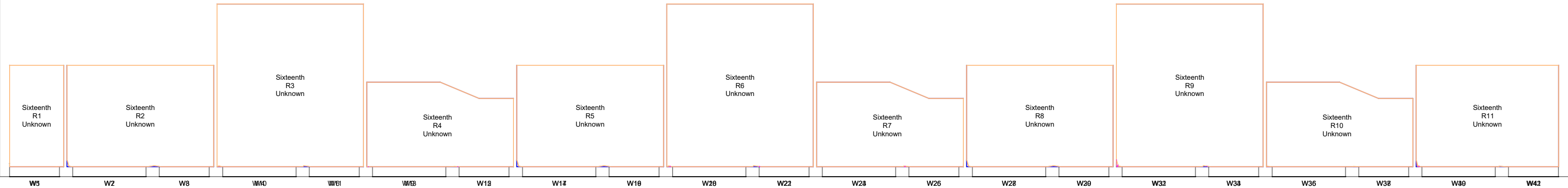
North Tower
Fifteenth Floor



1:100

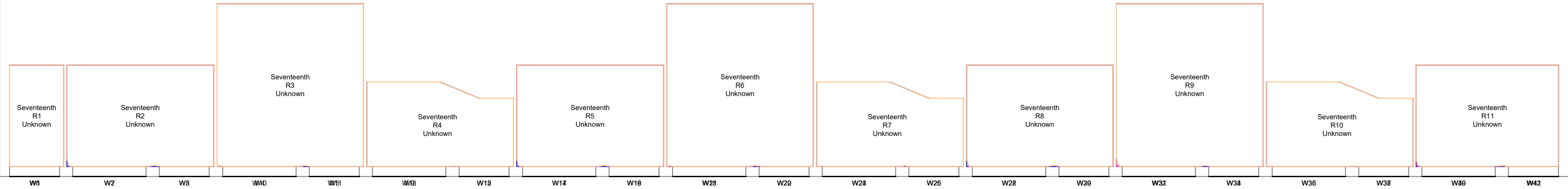


North Tower
Sixteenth Floor



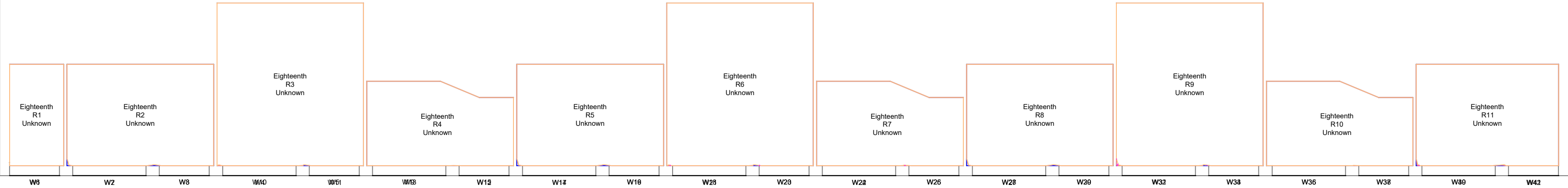
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North Tower
Seventeenth Floor



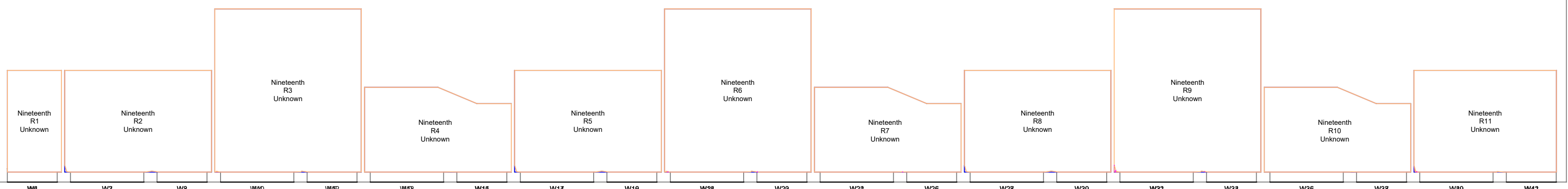
1:100

North Tower
Eighteenth Floor



1:100

North Tower
Nineteenth Floor



1:100

NOTES:
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Analysis
Produced using Waldram Tools
MBS Survey Software Ltd (www.mbs-software.co.uk)
Existing Model & Surrounding Model
Existing Site derived from a supplied 3D ZMAP model.

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Maps and Google Earth.

Proposed Model
Proposed scheme massing - "150_B2
Model_G+26.dwg"
Supplied by Jon Matthews Architects on 16/07/2021.

Massing Legend

Existing
Proposed

All heights in m AOD

ROL 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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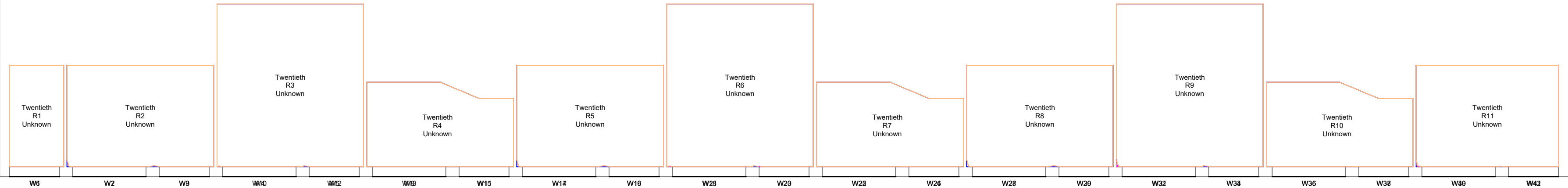
PROJECT:
Renaissance Hotel
Deansgate
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	GSH
1:100	19.07.2021	CHECKED:	DMH

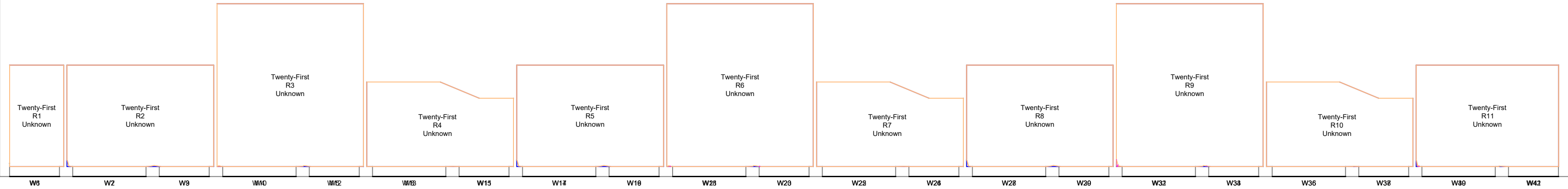
DRAWING NUMBER: 2571_MA-17	REV: .
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North Tower
Twentieth Floor



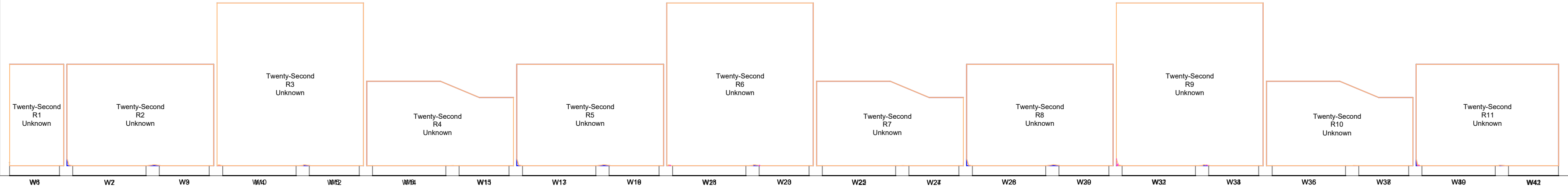
1:100

North Tower
Twenty-First Floor



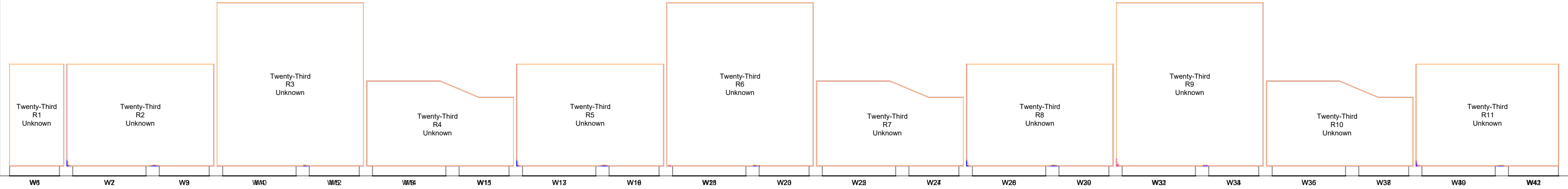
1:100

North Tower
Twenty-Second Floor



1:100

North Tower
Twenty-Third Floor



1:100

NOTES:
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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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Maps and Google Earth.

Proposed Model
Proposed scheme massing - "150_B2
Model_G+26.dwg"
Supplied by Jon Matthews Architects on 16/07/2021.

Massing Legend

Existing
Proposed

All heights in m AOD

ROL 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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chartered building surveyors

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

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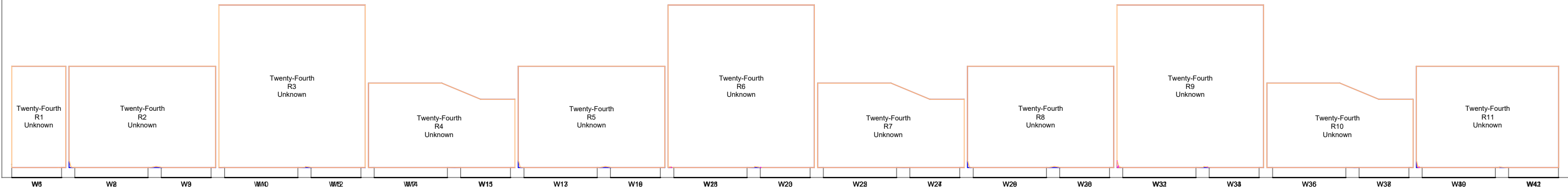
PROJECT:
Renaissance Hotel
Deansgate
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	GSH
1:100	19.07.2021	CHECKED:	DMH

DRAWING NUMBER:	REV:
2571_MA-18	.

North Tower
Twenty-Fourth Floor



1:100



NOTES:
No dimensions are to be scaled from this drawing.
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discrepancy occurs between specification and
drawings the supervising officer must be notified.

Analysis
Produced using Waldram Tools
MBS Survey Software Ltd (www.mbs-software.co.uk)
Existing Model & Surrounding Model
Existing Site derived from a supplied 3D ZMAP model.

Neighbouring Buildings internal room layouts, window
positions/dimensions and massing derived from both
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Proposed Model
Proposed scheme massing - "150_B2
Model_G+26.dwg"
Supplied by Jon Matthews Architects on 16/07/2021.

Massing Legend

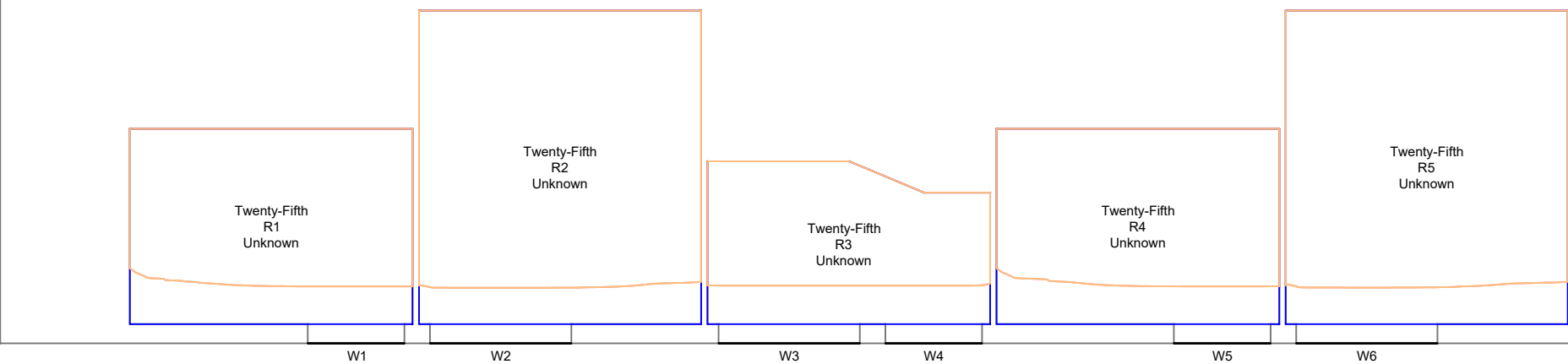
Existing
Proposed

All heights in m AOD

ROL Legend

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

North Tower
Twenty-Fifth Floor



1:100



REV:	NOTES:	DRWN:	DATE:


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CLIENT:
Property Alliance Group Limited

PROJECT:
Renaissance Hotel
Deansgate
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2: 1:100	DATE: 19.07.2021	DRAWN: GSH
CHECKED: DMH		

DRAWING NUMBER: 2571_MA-19	REV: .
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Appendix 5: Baseline vs Proposed APSH Results

Project Name: Renaissance Hotel, Deansgate, Manchester Project No.: 2571 Report Title: Daylight & Sunlight - Neighbour Analysis														
Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	Window Attribute	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
North Tower - Premier Inn														
Ground	R1	Commercial	Unknown	W1		30	20		10.00	0.67	5	1	4.00	0.20
	R2	Commercial	Unknown	W2		31	21		10.00	0.68	4	1	3.00	0.25
	R3	Commercial	Unknown	W3		28	21		7.00	0.75	2	1	1.00	0.50
	R4	Commercial	Unknown	W4		9	9		0.00	1.00	0	0	0.00	1.00
	R5	Commercial	Unknown	W5		19	5		14.00	0.26	3	1	2.00	0.33
	R6	Commercial	Unknown	W6		35	16		19.00	0.46	6	2	4.00	0.33
First	R1	Commercial	Unknown	W1		35	25		10.00	0.71	7	3	4.00	0.43
	R2	Commercial	Unknown	W2		34	23		11.00	0.68	6	2	4.00	0.33
	R3	Commercial	Unknown	W3		36	25		11.00	0.69	6	2	4.00	0.33
	R4	Commercial	Unknown	W4		42	29		13.00	0.69	10	6	4.00	0.60
	R5	Commercial	Unknown	W5		46	32		14.00	0.70	11	7	4.00	0.64
	R6	Commercial	Unknown	W6 W7		47	34		13.00	0.72	9	7	2.00	0.78
	R7	Commercial	Unknown	W8		47	33		14.00	0.70	8	5	3.00	0.63
	R8	Commercial	Unknown	W9		44	29		15.00	0.66	6	5	1.00	0.83
	R9	Commercial	Unknown	W10		37	19		18.00	0.51	5	1	4.00	0.20
	R10	Commercial	Unknown	W11		50	32		18.00	0.64	6	2	4.00	0.33
Second	R1	Commercial	Unknown	W1		35	25		10.00	0.71	6	2	4.00	0.33
	R2	Commercial	Unknown	W2		38	28		10.00	0.74	5	1	4.00	0.20
	R3	Commercial	Unknown	W3		38	27		11.00	0.71	6	2	4.00	0.33
	R4	Commercial	Unknown	W4		47	35		12.00	0.74	10	6	4.00	0.60
	R5	Commercial	Unknown	W5		48	35		13.00	0.73	11	7	4.00	0.64
	R6	Commercial	Unknown	W6 W7		54	39		15.00	0.72	13	9	4.00	0.69
	R7	Commercial	Unknown	W8		54	37		17.00	0.69	13	7	6.00	0.54
	R8	Commercial	Unknown	W9		52	34		18.00	0.65	12	7	5.00	0.58
	R9	Commercial	Unknown	W10		53	36		17.00	0.68	12	7	5.00	0.58
	R10	Commercial	Unknown	W11		57	40		17.00	0.70	11	7	4.00	0.64
Third	R1	Commercial	Unknown	W1 W3		31	25		6.00	0.81	6	3	3.00	0.50
	R2	Commercial	Unknown	W2 W4 W5 W6		41	32		9.00	0.78	6	3	3.00	0.50
	R3	Commercial	Unknown	W7 W8 W9 W10		45	35		10.00	0.78	6	2	4.00	0.33
	R4	Commercial	Unknown	W11 W12 W13 W14		48	38		10.00	0.79	9	5	4.00	0.56
	R5	Commercial	Unknown	W15 W16 W17 W18		49	37		12.00	0.76	10	6	4.00	0.60
	R6	Commercial	Unknown	W19 W20 W21 W22		52	40		12.00	0.77	10	6	4.00	0.60
	R7	Commercial	Unknown	W23 W24 W25 W26		55	41		14.00	0.75	12	8	4.00	0.67
	R8	Commercial	Unknown	W27 W28 W29 W30		59	43		16.00	0.73	15	9	6.00	0.60
	R9	Commercial	Unknown	W31 W32 W33		59	40		19.00	0.68	14	6	8.00	0.43

Project Name: Renaissance Hotel, Deansgate, Manchester Project No.: 2571 Report Title: Daylight & Sunlight - Neighbour Analysis													
Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	Window Attribute	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
	R10	Commercial	Unknown	W34 W35 W36 W37 W38		62	43	19.00	0.69	17	9	8.00	0.53
	R11	Commercial	Unknown	W39 W40 W41 W42		65	44	21.00	0.68	17	9	8.00	0.53
Fourth	R1	Commercial	Unknown	W1 W3		37	30	7.00	0.81	7	3	4.00	0.43
	R2	Commercial	Unknown	W2 W4 W5 W6		46	37	9.00	0.80	7	3	4.00	0.43
	R3	Commercial	Unknown	W7 W8 W9 W10		47	37	10.00	0.79	7	3	4.00	0.43
	R4	Commercial	Unknown	W11 W12 W13 W14		52	41	11.00	0.79	11	6	5.00	0.55
	R5	Commercial	Unknown	W15 W16 W17 W18		55	43	12.00	0.78	12	7	5.00	0.58
	R6	Commercial	Unknown	W19 W20 W21 W22		56	43	13.00	0.77	11	6	5.00	0.55
	R7	Commercial	Unknown	W23 W24 W25 W26		59	44	15.00	0.75	14	9	5.00	0.64
	R8	Commercial	Unknown	W27 W28 W29 W30		61	45	16.00	0.74	15	9	6.00	0.60
	R9	Commercial	Unknown	W31 W32 W33 W34		62	43	19.00	0.69	15	7	8.00	0.47
	R10	Commercial	Unknown	W35 W36 W37 W38		66	46	20.00	0.70	18	9	9.00	0.50
	R11	Commercial	Unknown	W39 W40 W41 W42		66	45	21.00	0.68	17	9	8.00	0.53
Fifth	R1	Commercial	Unknown	W1 W4		41	35	6.00	0.85	8	5	3.00	0.63
	R2	Commercial	Unknown	W2 W3 W5 W7		49	40	9.00	0.82	8	4	4.00	0.50
	R3	Commercial	Unknown	W6 W8 W9 W10		52	41	11.00	0.79	8	3	5.00	0.38
	R4	Commercial	Unknown	W11 W12 W13 W14		57	46	11.00	0.81	12	7	5.00	0.58
	R5	Commercial	Unknown	W15 W16 W17 W18		59	48	11.00	0.81	14	9	5.00	0.64
	R6	Commercial	Unknown	W19 W20 W21 W22		58	45	13.00	0.78	12	7	5.00	0.58
	R7	Commercial	Unknown	W23 W24 W25		62	48	14.00	0.77	15	10	5.00	0.67

Project Name: Renaissance Hotel, Deansgate, Manchester
Project No.: 2571
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	Window Attribute	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
	R8	Commercial	Unknown	W26 W27 W28 W29 W30		65	48	17.00	0.74	16	9	7.00	0.56
	R9	Commercial	Unknown	W31 W32 W33 W34		65	46	19.00	0.71	15	7	8.00	0.47
	R10	Commercial	Unknown	W35 W36 W37 W38		68	50	18.00	0.74	18	10	8.00	0.56
	R11	Commercial	Unknown	W39 W40 W41 W42		68	49	19.00	0.72	17	9	8.00	0.53
Sixth	R1	Commercial	Unknown	W1 W4		44	38	6.00	0.86	9	5	4.00	0.56
	R2	Commercial	Unknown	W2 W3 W5 W7		53	44	9.00	0.83	10	6	4.00	0.60
	R3	Commercial	Unknown	W6 W8 W9 W10		57	48	9.00	0.84	10	6	4.00	0.60
	R4	Commercial	Unknown	W11 W12 W13 W14		60	49	11.00	0.82	13	8	5.00	0.62
	R5	Commercial	Unknown	W15 W16 W17 W18		61	50	11.00	0.82	14	9	5.00	0.64
	R6	Commercial	Unknown	W19 W20 W21 W22		64	49	15.00	0.77	14	7	7.00	0.50
	R7	Commercial	Unknown	W23 W24 W25 W26		68	54	14.00	0.79	16	10	6.00	0.63
	R8	Commercial	Unknown	W27 W28 W29 W30		68	51	17.00	0.75	17	10	7.00	0.59
	R9	Commercial	Unknown	W31 W32 W33 W34		68	49	19.00	0.72	17	8	9.00	0.47
	R10	Commercial	Unknown	W35 W36 W37 W38		72	53	19.00	0.74	20	11	9.00	0.55
	R11	Commercial	Unknown	W39 W40 W41 W42		70	51	19.00	0.73	18	10	8.00	0.56
Seventh	R1	Commercial	Unknown	W1 W4		48	42	6.00	0.88	10	6	4.00	0.60
	R2	Commercial	Unknown	W2 W3 W5 W7		59	50	9.00	0.85	12	8	4.00	0.67
	R3	Commercial	Unknown	W6 W8 W9 W10		59	50	9.00	0.85	11	7	4.00	0.64
	R4	Commercial	Unknown	W11 W12 W13 W14		62	53	9.00	0.85	13	9	4.00	0.69
	R5	Commercial	Unknown	W15 W16 W17		66	55	11.00	0.83	14	9	5.00	0.64

Project Name: Renaissance Hotel, Deansgate, Manchester
Project No.: 2571
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	Window Attribute	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
	R6	Commercial	Unknown	W18 W19 W20 W21 W22		68	55	13.00	0.81	16	9	7.00	0.56
	R7	Commercial	Unknown	W23 W24 W25 W26		70	55	15.00	0.79	18	11	7.00	0.61
	R8	Commercial	Unknown	W27 W28 W29 W30		72	55	17.00	0.76	19	11	8.00	0.58
	R9	Commercial	Unknown	W31 W32 W33 W34		72	53	19.00	0.74	19	10	9.00	0.53
	R10	Commercial	Unknown	W35 W36 W37 W38		75	55	20.00	0.73	21	11	10.00	0.52
	R11	Commercial	Unknown	W39 W40 W41 W42		74	54	20.00	0.73	20	11	9.00	0.55
Eighth	R1	Commercial	Unknown	W1 W4		54	48	6.00	0.89	14	10	4.00	0.71
	R2	Commercial	Unknown	W2 W3 W6 W7		62	53	9.00	0.85	14	10	4.00	0.71
	R3	Commercial	Unknown	W5 W8 W9 W11		66	57	9.00	0.86	14	10	4.00	0.71
	R4	Commercial	Unknown	W10 W12 W13 W14		69	60	9.00	0.87	16	12	4.00	0.75
	R5	Commercial	Unknown	W15 W16 W17 W18		71	61	10.00	0.86	17	13	4.00	0.76
	R6	Commercial	Unknown	W19 W20 W21 W22		72	60	12.00	0.83	18	12	6.00	0.67
	R7	Commercial	Unknown	W23 W24 W25 W26		72	58	14.00	0.81	19	12	7.00	0.63
	R8	Commercial	Unknown	W27 W28 W29 W30		74	58	16.00	0.78	19	11	8.00	0.58
	R9	Commercial	Unknown	W31 W32 W33 W34		74	55	19.00	0.74	19	10	9.00	0.53
	R10	Commercial	Unknown	W35 W36 W37 W38		76	57	19.00	0.75	21	12	9.00	0.57
	R11	Commercial	Unknown	W39 W40 W41 W42		75	56	19.00	0.75	21	13	8.00	0.62
Ninth	R1	Commercial	Unknown	W1 W4		61	56	5.00	0.92	15	12	3.00	0.80
	R2	Commercial	Unknown	W2 W3 W6 W7		68	61	7.00	0.90	15	12	3.00	0.80
	R3	Commercial	Unknown	W5 W8 W9		71	63	8.00	0.89	17	14	3.00	0.82

Project Name: Renaissance Hotel, Deansgate, Manchester
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Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	Window Attribute	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	Winter Suns Lost	Winter Pr/Ex
	R4	Commercial	Unknown	W10 W12 W13 W14	W11	71	62	9.00	0.87	17	13	4.00	0.76
	R5	Commercial	Unknown	W15 W16 W17 W18		73	64	9.00	0.88	18	14	4.00	0.78
	R6	Commercial	Unknown	W19 W20 W21 W22		75	64	11.00	0.85	20	15	5.00	0.75
	R7	Commercial	Unknown	W23 W24 W25 W26		76	62	14.00	0.82	21	14	7.00	0.67
	R8	Commercial	Unknown	W27 W28 W29 W30		76	61	15.00	0.80	21	14	7.00	0.67
	R9	Commercial	Unknown	W31 W32 W33 W34		77	60	17.00	0.78	22	14	8.00	0.64
	R10	Commercial	Unknown	W35 W36 W37 W38		78	59	19.00	0.76	23	14	9.00	0.61
	R11	Commercial	Unknown	W39 W40 W41 W42		76	57	19.00	0.75	22	14	8.00	0.64
Tenth	R1	Commercial	Unknown	W1 W5		69	64	5.00	0.93	20	17	3.00	0.85
	R2	Commercial	Unknown	W2 W3 W6 W7		75	70	5.00	0.93	20	17	3.00	0.85
	R3	Commercial	Unknown	W4 W8 W9 W11		76	69	7.00	0.91	21	18	3.00	0.86
	R4	Commercial	Unknown	W10 W12 W13 W14		73	65	8.00	0.89	18	15	3.00	0.83
	R5	Commercial	Unknown	W15 W16 W17 W18		75	67	8.00	0.89	20	17	3.00	0.85
	R6	Commercial	Unknown	W19 W20 W21 W22		76	67	9.00	0.88	21	17	4.00	0.81
	R7	Commercial	Unknown	W23 W24 W25 W26		79	66	13.00	0.84	23	17	6.00	0.74
	R8	Commercial	Unknown	W27 W28 W29 W30		78	64	14.00	0.82	22	15	7.00	0.68
	R9	Commercial	Unknown	W31 W32 W33 W34		80	62	18.00	0.78	24	15	9.00	0.63
	R10	Commercial	Unknown	W35 W36 W37 W38		81	62	19.00	0.77	25	16	9.00	0.64
	R11	Commercial	Unknown	W39 W40 W41 W42		78	59	19.00	0.76	23	15	8.00	0.65

Project Name: Renaissance Hotel, Deansgate, Manchester Project No.: 2571 Report Title: Daylight & Sunlight - Neighbour Analysis													
Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	Window Attribute	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
Eleventh	R1	Commercial	Unknown	W1 W5		72	67	5.00	0.93	22	19	3.00	0.86
	R2	Commercial	Unknown	W2 W3 W6 W7		79	74	5.00	0.94	23	20	3.00	0.87
	R3	Commercial	Unknown	W4 W8 W9 W11		80	75	5.00	0.94	24	21	3.00	0.88
	R4	Commercial	Unknown	W10 W12 W13 W14		80	72	8.00	0.90	24	21	3.00	0.88
	R5	Commercial	Unknown	W15 W16 W17 W18		79	71	8.00	0.90	23	20	3.00	0.87
	R6	Commercial	Unknown	W19 W20 W21 W22		79	70	9.00	0.89	23	19	4.00	0.83
	R7	Commercial	Unknown	W23 W24 W25 W26		80	69	11.00	0.86	24	18	6.00	0.75
	R8	Commercial	Unknown	W27 W28 W29 W30		80	66	14.00	0.83	24	17	7.00	0.71
	R9	Commercial	Unknown	W31 W32 W33 W34		82	64	18.00	0.78	26	17	9.00	0.65
	R10	Commercial	Unknown	W35 W36 W37 W38		82	64	18.00	0.78	26	17	9.00	0.65
	R11	Commercial	Unknown	W39 W40 W41 W42		81	63	18.00	0.78	25	17	8.00	0.68
Twelfth	R1	Commercial	Unknown	W1 W5		76	71	5.00	0.93	26	23	3.00	0.88
	R2	Commercial	Unknown	W2 W3 W6 W8		84	79	5.00	0.94	28	25	3.00	0.89
	R3	Commercial	Unknown	W4 W7 W9 W11		83	78	5.00	0.94	27	24	3.00	0.89
	R4	Commercial	Unknown	W10 W12 W13 W15		81	75	6.00	0.93	25	22	3.00	0.88
	R5	Commercial	Unknown	W14 W16 W17 W18		79	71	8.00	0.90	23	20	3.00	0.87
	R6	Commercial	Unknown	W19 W20 W21 W22		81	72	9.00	0.89	25	21	4.00	0.84
	R7	Commercial	Unknown	W23 W24 W25 W26		81	72	9.00	0.89	25	21	4.00	0.84
	R8	Commercial	Unknown	W27 W28 W29 W30		81	68	13.00	0.84	25	19	6.00	0.76
	R9	Commercial	Unknown	W31 W32 W33 W34		83	68	15.00	0.82	27	19	8.00	0.70

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Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	Window Attribute	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
	R10	Commercial	Unknown	W35 W36 W37 W38		84	68	16.00	0.81	26	20	8.00	0.71
	R11	Commercial	Unknown	W39 W40 W41 W42		83	65	18.00	0.78	27	19	8.00	0.70
Thirteenth	R1	Commercial	Unknown	W1 W5		78	73	5.00	0.94	28	25	3.00	0.89
	R2	Commercial	Unknown	W2 W3 W6 W8		84	79	5.00	0.94	28	25	3.00	0.89
	R3	Commercial	Unknown	W4 W7 W9 W11		84	79	5.00	0.94	28	25	3.00	0.89
	R4	Commercial	Unknown	W10 W12 W13 W15		83	78	5.00	0.94	27	24	3.00	0.89
	R5	Commercial	Unknown	W14 W16 W17 W18		83	77	6.00	0.93	27	24	3.00	0.89
	R6	Commercial	Unknown	W19 W20 W21 W22		83	75	8.00	0.90	27	24	3.00	0.89
	R7	Commercial	Unknown	W23 W24 W25 W26		83	74	9.00	0.89	27	23	4.00	0.85
	R8	Commercial	Unknown	W27 W28 W29 W30		83	72	11.00	0.87	27	21	6.00	0.78
	R9	Commercial	Unknown	W31 W32 W33 W34		84	71	13.00	0.85	28	22	6.00	0.79
	R10	Commercial	Unknown	W35 W36 W37 W38		85	72	13.00	0.85	29	23	6.00	0.79
	R11	Commercial	Unknown	W39 W40 W41 W42		85	70	15.00	0.82	29	23	6.00	0.79
North Tower - City Heights Apartments													
Fourteenth	R1	Residential	Unknown	W1 W5		78	74	4.00	0.95	28	25	3.00	0.89
	R2	Residential	Unknown	W2 W3 W6 W8		84	80	4.00	0.95	28	25	3.00	0.89
	R3	Residential	Unknown	W4 W7 W9 W11		84	79	5.00	0.94	28	25	3.00	0.89
	R4	Residential	Unknown	W10 W12 W13 W15		84	79	5.00	0.94	28	25	3.00	0.89
	R5	Residential	Unknown	W14 W16 W17 W18		84	78	6.00	0.93	28	25	3.00	0.89
	R6	Residential	Unknown	W19 W20 W21 W22		84	78	6.00	0.93	28	25	3.00	0.89
	R7	Residential	Unknown	W23 W24 W25 W26		84	75	9.00	0.89	28	24	4.00	0.86

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	R8	Residential	Unknown	W27 W28 W29 W30		84	74	10.00	0.88	28	22	6.00	0.79
	R9	Residential	Unknown	W31 W32 W33 W34		84	73	11.00	0.87	28	22	6.00	0.79
	R10	Residential	Unknown	W35 W36 W37 W38		85	73	12.00	0.86	29	23	6.00	0.79
	R11	Residential	Unknown	W39 W40 W41 W42		85	70	15.00	0.82	29	23	6.00	0.79
Fifteenth	R1	Residential	Unknown	W1 W5		78	74	4.00	0.95	28	25	3.00	0.89
	R2	Residential	Unknown	W2 W3 W7 W8		84	80	4.00	0.95	28	25	3.00	0.89
	R3	Residential	Unknown	W4 W6 W10 W11		84	80	4.00	0.95	28	25	3.00	0.89
	R4	Residential	Unknown	W9 W12 W13 W15		84	79	5.00	0.94	28	25	3.00	0.89
	R5	Residential	Unknown	W14 W16 W17 W19		84	78	6.00	0.93	28	25	3.00	0.89
	R6	Residential	Unknown	W18 W20 W21 W22		84	78	6.00	0.93	28	25	3.00	0.89
	R7	Residential	Unknown	W23 W24 W25 W26		84	78	6.00	0.93	28	25	3.00	0.89
	R8	Residential	Unknown	W27 W28 W29 W30		84	76	8.00	0.90	28	24	4.00	0.86
	R9	Residential	Unknown	W31 W32 W33 W34		84	73	11.00	0.87	28	22	6.00	0.79
	R10	Residential	Unknown	W35 W36 W37 W38		85	73	12.00	0.86	29	23	6.00	0.79
	R11	Residential	Unknown	W39 W40 W41 W42		85	73	12.00	0.86	29	23	6.00	0.79
Sixteenth	R1	Residential	Unknown	W1 W5		78	74	4.00	0.95	28	25	3.00	0.89
	R2	Residential	Unknown	W2 W3 W7 W8		84	80	4.00	0.95	28	25	3.00	0.89
	R3	Residential	Unknown	W4 W6 W10 W11		84	80	4.00	0.95	28	25	3.00	0.89
	R4	Residential	Unknown	W9 W12 W13 W15		84	80	4.00	0.95	28	25	3.00	0.89
	R5	Residential	Unknown	W14 W16 W17 W19		84	79	5.00	0.94	28	25	3.00	0.89

Project Name: Renaissance Hotel, Deansgate, Manchester Project No.: 2571 Report Title: Daylight & Sunlight - Neighbour Analysis													
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	R6	Residential	Unknown	W18 W20 W21 W22		84	78	6.00	0.93	28	25	3.00	0.89
	R7	Residential	Unknown	W23 W24 W25 W26		84	78	6.00	0.93	28	25	3.00	0.89
	R8	Residential	Unknown	W27 W28 W29 W30		84	77	7.00	0.92	28	24	4.00	0.86
	R9	Residential	Unknown	W31 W32 W33 W34		84	74	10.00	0.88	28	22	6.00	0.79
	R10	Residential	Unknown	W35 W36 W37 W38		85	74	11.00	0.87	29	23	6.00	0.79
	R11	Residential	Unknown	W39 W40 W41 W42		85	73	12.00	0.86	29	23	6.00	0.79
Seventeenth	R1	Residential	Unknown	W1 W6		78	74	4.00	0.95	28	25	3.00	0.89
	R2	Residential	Unknown	W2 W3 W7 W8		84	80	4.00	0.95	28	25	3.00	0.89
	R3	Residential	Unknown	W4 W5 W10 W11		84	80	4.00	0.95	28	25	3.00	0.89
	R4	Residential	Unknown	W9 W12 W13 W15		84	80	4.00	0.95	28	25	3.00	0.89
	R5	Residential	Unknown	W14 W16 W17 W19		84	80	4.00	0.95	28	25	3.00	0.89
	R6	Residential	Unknown	W18 W20 W21 W22		84	79	5.00	0.94	28	25	3.00	0.89
	R7	Residential	Unknown	W23 W24 W25 W26		84	78	6.00	0.93	28	25	3.00	0.89
	R8	Residential	Unknown	W27 W28 W29 W30		84	77	7.00	0.92	28	24	4.00	0.86
	R9	Residential	Unknown	W31 W32 W33 W34		84	74	10.00	0.88	28	22	6.00	0.79
	R10	Residential	Unknown	W35 W36 W37 W38		85	75	10.00	0.88	29	23	6.00	0.79
	R11	Residential	Unknown	W39 W40 W41 W42		85	74	11.00	0.87	29	23	6.00	0.79
Eighteenth	R1	Residential	Unknown	W1 W6		78	74	4.00	0.95	28	25	3.00	0.89
	R2	Residential	Unknown	W2 W3 W7 W8		84	80	4.00	0.95	28	25	3.00	0.89
	R3	Residential	Unknown	W4 W5 W10 W11		84	80	4.00	0.95	28	25	3.00	0.89

Project Name: Renaissance Hotel, Deansgate, Manchester
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Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	Window Attribute	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
	R4	Residential	Unknown	W9 W12 W13 W15		84	80	4.00	0.95	28	25	3.00	0.89
	R5	Residential	Unknown	W14 W16 W17 W19		84	80	4.00	0.95	28	25	3.00	0.89
	R6	Residential	Unknown	W18 W20 W21 W23		84	80	4.00	0.95	28	25	3.00	0.89
	R7	Residential	Unknown	W22 W24 W25 W26		84	79	5.00	0.94	28	25	3.00	0.89
	R8	Residential	Unknown	W27 W28 W29 W30		84	78	6.00	0.93	28	25	3.00	0.89
	R9	Residential	Unknown	W31 W32 W33 W34		84	77	7.00	0.92	28	24	4.00	0.86
	R10	Residential	Unknown	W35 W36 W37 W38		85	75	10.00	0.88	29	23	6.00	0.79
	R11	Residential	Unknown	W39 W40 W41 W42		85	75	10.00	0.88	29	23	6.00	0.79
Nineteenth	R1	Residential	Unknown	W1 W6		78	75	3.00	0.96	28	25	3.00	0.89
	R2	Residential	Unknown	W2 W3 W7 W8		84	81	3.00	0.96	28	25	3.00	0.89
	R3	Residential	Unknown	W4 W5 W10 W12		84	80	4.00	0.95	28	25	3.00	0.89
	R4	Residential	Unknown	W9 W11 W13 W15		84	80	4.00	0.95	28	25	3.00	0.89
	R5	Residential	Unknown	W14 W16 W17 W19		84	80	4.00	0.95	28	25	3.00	0.89
	R6	Residential	Unknown	W18 W20 W21 W23		84	80	4.00	0.95	28	25	3.00	0.89
	R7	Residential	Unknown	W22 W24 W25 W26		84	80	4.00	0.95	28	25	3.00	0.89
	R8	Residential	Unknown	W27 W28 W29 W30		84	79	5.00	0.94	28	25	3.00	0.89
	R9	Residential	Unknown	W31 W32 W33 W34		84	77	7.00	0.92	28	24	4.00	0.86
	R10	Residential	Unknown	W35 W36 W37 W38		85	76	9.00	0.89	29	23	6.00	0.79
	R11	Residential	Unknown	W39 W40 W41 W42		85	75	10.00	0.88	29	23	6.00	0.79
Twentieth	R1	Residential	Unknown	W1 W6		78	75	3.00	0.96	28	25	3.00	0.89

Project Name: Renaissance Hotel, Deansgate, Manchester
Project No.: 2571
Report Title: Daylight & Sunlight - Neighbour Analysis

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	Window Attribute	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
	R2	Residential	Unknown	W2 W3 W7 W9		84	81	3.00	0.96	28	25	3.00	0.89
	R3	Residential	Unknown	W4 W5 W10 W12		84	81	3.00	0.96	28	25	3.00	0.89
	R4	Residential	Unknown	W8 W11 W13 W15		84	80	4.00	0.95	28	25	3.00	0.89
	R5	Residential	Unknown	W14 W16 W17 W19		84	80	4.00	0.95	28	25	3.00	0.89
	R6	Residential	Unknown	W18 W20 W21 W23		84	80	4.00	0.95	28	25	3.00	0.89
	R7	Residential	Unknown	W22 W24 W25 W26		84	80	4.00	0.95	28	25	3.00	0.89
	R8	Residential	Unknown	W27 W28 W29 W30		84	80	4.00	0.95	28	25	3.00	0.89
	R9	Residential	Unknown	W31 W32 W33 W34		84	78	6.00	0.93	28	24	4.00	0.86
	R10	Residential	Unknown	W35 W36 W37 W38		85	76	9.00	0.89	29	23	6.00	0.79
	R11	Residential	Unknown	W39 W40 W41 W42		85	76	9.00	0.89	29	23	6.00	0.79
Twenty-First	R1	Residential	Unknown	W1 W6		78	75	3.00	0.96	28	25	3.00	0.89
	R2	Residential	Unknown	W2 W3 W7 W9		84	81	3.00	0.96	28	25	3.00	0.89
	R3	Residential	Unknown	W4 W5 W10 W12		84	81	3.00	0.96	28	25	3.00	0.89
	R4	Residential	Unknown	W8 W11 W13 W15		84	81	3.00	0.96	28	25	3.00	0.89
	R5	Residential	Unknown	W14 W16 W17 W19		84	81	3.00	0.96	28	25	3.00	0.89
	R6	Residential	Unknown	W18 W20 W21 W23		84	80	4.00	0.95	28	25	3.00	0.89
	R7	Residential	Unknown	W22 W24 W25 W26		84	80	4.00	0.95	28	25	3.00	0.89
	R8	Residential	Unknown	W27 W28 W29 W30		84	80	4.00	0.95	28	25	3.00	0.89
	R9	Residential	Unknown	W31 W32 W33 W34		84	80	4.00	0.95	28	25	3.00	0.89

Project Name: Renaissance Hotel, Deansgate, Manchester Project No.: 2571 Report Title: Daylight & Sunlight - Neighbour Analysis													
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	R10	Residential	Unknown	W35 W36 W37 W38		85	80	5.00	0.94	29	25	4.00	0.86
	R11	Residential	Unknown	W39 W40 W41 W42		85	76	9.00	0.89	29	23	6.00	0.79
Twenty-Second	R1	Residential	Unknown	W1 W6		78	75	3.00	0.96	28	25	3.00	0.89
	R2	Residential	Unknown	W2 W3 W7 W9		84	81	3.00	0.96	28	25	3.00	0.89
	R3	Residential	Unknown	W4 W5 W10 W12		84	81	3.00	0.96	28	25	3.00	0.89
	R4	Residential	Unknown	W8 W11 W14 W15		84	81	3.00	0.96	28	25	3.00	0.89
	R5	Residential	Unknown	W13 W16 W17 W19		84	81	3.00	0.96	28	25	3.00	0.89
	R6	Residential	Unknown	W18 W20 W21 W23		84	81	3.00	0.96	28	25	3.00	0.89
	R7	Residential	Unknown	W22 W24 W25 W27		84	81	3.00	0.96	28	25	3.00	0.89
	R8	Residential	Unknown	W26 W28 W29 W30		84	80	4.00	0.95	28	25	3.00	0.89
	R9	Residential	Unknown	W31 W32 W33 W34		84	80	4.00	0.95	28	25	3.00	0.89
	R10	Residential	Unknown	W35 W36 W37 W38		85	80	5.00	0.94	29	25	4.00	0.86
	R11	Residential	Unknown	W39 W40 W41 W42		85	79	6.00	0.93	29	24	5.00	0.83
Twenty-Third	R1	Residential	Unknown	W1 W6		78	77	1.00	0.99	28	27	1.00	0.96
	R2	Residential	Unknown	W2 W3 W7 W9		84	83	1.00	0.99	28	27	1.00	0.96
	R3	Residential	Unknown	W4 W5 W10 W12		84	82	2.00	0.98	28	26	2.00	0.93
	R4	Residential	Unknown	W8 W11 W14 W15		84	81	3.00	0.96	28	25	3.00	0.89
	R5	Residential	Unknown	W13 W16 W17 W19		84	81	3.00	0.96	28	25	3.00	0.89
	R6	Residential	Unknown	W18 W20 W21 W23		84	81	3.00	0.96	28	25	3.00	0.89
	R7	Residential	Unknown	W22 W24 W25 W27		84	81	3.00	0.96	28	25	3.00	0.89

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	R8	Residential	Unknown	W26 W28 W29 W30		84	81	3.00	0.96	26	25	3.00	0.89
	R9	Residential	Unknown	W31 W32 W33 W34		84	80	4.00	0.95	28	25	3.00	0.89
	R10	Residential	Unknown	W35 W36 W37 W38		85	80	5.00	0.94	29	25	4.00	0.86
	R11	Residential	Unknown	W39 W40 W41 W42		85	79	6.00	0.93	29	24	5.00	0.83
Twenty-Fourth	R1	Residential	Unknown	W1 W6		78	77	1.00	0.99	28	27	1.00	0.96
	R2	Residential	Unknown	W2 W3 W8 W9		85	84	1.00	0.99	28	27	1.00	0.96
	R3	Residential	Unknown	W4 W5 W10 W12		85	84	1.00	0.99	28	27	1.00	0.96
	R4	Residential	Unknown	W7 W11 W14 W15		85	84	1.00	0.99	28	27	1.00	0.96
	R5	Residential	Unknown	W13 W16 W17 W19		85	84	1.00	0.99	28	27	1.00	0.96
	R6	Residential	Unknown	W18 W20 W21 W23		85	82	3.00	0.96	28	25	3.00	0.89
	R7	Residential	Unknown	W22 W24 W25 W27		85	82	3.00	0.96	28	25	3.00	0.89
	R8	Residential	Unknown	W26 W28 W29 W30		85	82	3.00	0.96	28	25	3.00	0.89
	R9	Residential	Unknown	W31 W32 W33 W34		85	82	3.00	0.96	28	25	3.00	0.89
	R10	Residential	Unknown	W35 W36 W37 W38		86	83	3.00	0.97	29	26	3.00	0.90
	R11	Residential	Unknown	W39 W40 W41 W42		86	81	5.00	0.94	29	25	4.00	0.86
Twenty-Fifth	R1	Residential	Unknown	W1		87	86	1.00	0.99	29	28	1.00	0.97
	R2	Residential	Unknown	W2		87	86	1.00	0.99	29	28	1.00	0.97
	R3	Residential	Unknown	W3 W4		87	86	1.00	0.99	29	28	1.00	0.97
	R4	Residential	Unknown	W5		87	86	1.00	0.99	29	28	1.00	0.97
	R5	Residential	Unknown	W6		87	86	1.00	0.99	29	28	1.00	0.97
Britannic Buildings													
First	R2	Residential	LK	W2 W3 W4 W5 W6 W7		40	30	10.00	0.75	5	5	0.00	1.00

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	R3	Residential	Bedroom	W8 W9 W10 W11 W12		47	33	14.00	0.70	0	0	0.00	1.00
Second	R2	Residential	LK	W2 W3 W4 W5 W6 W7		40	30	10.00	0.75	6	6	0.00	1.00
	R3	Residential	Bedroom	W8 W9 W10 W11 W12		52	38	14.00	0.73	5	5	0.00	1.00
Third	R2	Residential	LK	W1 W2 W3 W4 W5 W6		38	28	10.00	0.74	5	5	0.00	1.00
	R3	Residential	Bedroom	W7 W8 W9 W10 W11		57	45	12.00	0.79	10	10	0.00	1.00
Fourth	R2	Residential	LK	W2 W3		37	27	10.00	0.73	6	6	0.00	1.00
	R3	Residential	Bedroom	W4 W5 W6 W7 W8		88	76	12.00	0.86	21	21	0.00	1.00