

Daylight and Sunlight Amenity Impact Assessment Report

Proposed Residential Development
Downley Drive
Manchester

Prepared for: Great Places Housing Association

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1. Executive Summary

- 1.1.1 Great Places Housing Association has developed a proposal for the development of a parcel of land on Downley Drive, in New Islington / Ancoats, at the north eastern edge of Manchester City Centre.
- 1.1.2 Gray Scanlan Hill is appointed to evaluate the daylight and sunlight amenity impact of the Proposed Development on those key parts of the surrounding built environment.
- 1.1.3 This Report confirms our assessment methodology, findings and opinions.
- 1.1.4 We have used the provisions set out in the Building Research Establishment (“BRE”) design guidance *Site Layout Planning for Daylight & Sunlight: A Guide to Good Practice*, which is recognised as the industry standard, technically robust, methodology for appraising daylight and sunlight amenity impact in the built environment.
- 1.1.5 The BRE Guidance primarily seeks to promote the daylight and sunlight impact assessment of neighbouring buildings of residential use; it highlights the consideration of daylight and sunlight to living rooms and daylight to bedrooms and family kitchens.
- 1.1.6 The provisions / numerical targets of the BRE Guidance are not mandatory, and they should be applied flexibly for development of sites within and at the edge of the City Centre, commercially influenced areas or areas where greater density is sought / encouraged by planning policy.
- 1.1.7 To facilitate the flexible application of the BRE Guidance, it 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.
- 1.1.8 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:
- 11-25 Woodward Place;
 - Burgess House & Avro House, St Vincent Street;
 - Engels House, St Vincent Street;
 - 11 & 12 Downley Drive;
 - 13, 14, 15 & 17 Kingham Drive; and

- 22 – 28 Woodward Street Development.

- 1.1.9 This Report also documents the impact of the Proposed Development on the sunlight amenity of the gardens associated with the Downley Drive & Kingham Drive properties.
- 1.1.10 The Site and these neighbouring receptors are within New Islington, which is in turn identified as part of the City Centre in Manchester City Council planning policy.
- 1.1.11 On that basis, increased density of development is appropriate to the Site, and the flexibility noted by the BRE Guidance when appraising impacts of neighbouring receptors in environments of increased density, such those within or at the edge of City Centres, is warranted and appropriate.

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 to the edge of City Centre context.
- 1.1.13 Despite some measured reductions in Vertical Sky Component (“VSC”) levels, the significant majority (96%, or 282 windows) of the 293 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 4 Windows (1.5%) would achieve VSC values that are within an Acceptable Tolerance of the BRE targets, given their location at the edge of the City Centre.
- 1.1.15 7 windows (2.5%) of the 293 windows appraised would not achieve a VSC that is within an Acceptable Tolerance of the BRE targets. 6 of these windows are predominantly small windowpanes within or above doors, and inherently limited in their capacity for daylight by projecting porches. The other window (Ground Floor R4 of Engels House, and positioned below a balcony) serves a Living / Kitchen / Dining Room (“LKD”), and achieves a VSC of 20%.
- 1.1.16 Of the 189 rooms appraised, 183 (97%) would pass the BRE’s No Sky Line (“NSL”) test, experiencing either no reductions in daylight distribution, or reductions that would not be noticeable to the room occupants.

- 1.1.17 6 rooms (3%), located within Avro House and Engels House, would experience a reduction in NSL that could be noticeable to the room occupants.
- 1.1.18 Notwithstanding, we consider that these results are appropriate to the edge of City Centre context, for the following reasons:
- The windows that do not achieve acceptable tolerance values account for a very small minority of windows, for each receptor and as a proportion of the total appraised.
 - The rooms which experience reductions in NSL that could be noticeable to the room occupants also account for a very small minority of rooms appraised.
 - The 6 rooms that do not pass the BRE's NSL test are located in Avro House and Engels House. Notwithstanding that reductions in daylight distribution would be noticeable to the occupants, these rooms would continue to receive direct daylight to the majority of their respective areas.
 - All neighbouring buildings have design features that place an inherent limitation on these windows and rooms capacity to receive daylight. These features include projecting balconies, porches and large eaves above windows, and elevational recesses within which windows are set. These design features have the effect of reducing sky visibility to these neighbouring windows, limiting daylight amenity in the Baseline Condition and increasing sensitivity to new mass in the vicinity.
 - A number of these windows do directly overlook the Site directly. On the basis that the Site is currently free of any massing, these windows enjoy a relatively unobstructed outlook uncommon for a location at the edge of the City Centre. This is an outlook that is unlikely to endure given the Site has been subject to a number of approved planning applications in recent years, signifying the Site's suitability for development.
- 1.1.19 Overall, the impact of the Proposed Development on the daylight amenity of these neighbouring receptors is therefore considered to be appropriate and non-significant, given the New Islington location of the Site at the edge of the City Centre.

Sunlight Amenity Impact

- 1.1.20 In the Proposed Condition 142 rooms (<99%) of the 143 rooms appraised would continue to achieve the BRE's Winter and Annual sunlight targets, or experience reductions in sunlight that would not be noticeable to the room occupants (acceptable to the BRE on the basis that Proposed values remain at least 0.8x of Baseline values).
- 1.1.21 On that basis, the Proposed Development will not have a material impact on sunlight amenity of Engels House, Avro House & Burgess House, 11 & 12 Downley Drive, 22-28 Woodward Street Development and no.s 13, 14 and 15 Kingham Drive.
- 1.1.22 A single room (<1% of total rooms appraised) in 17 Kingham Drive would achieve the BRE's criteria for Annual sunlight but not Winter sunlight. This room is served by a window oriented at more than 90 degrees from due south and, is not likely to be a habitable room (and therefore not of high sensitivity). Notwithstanding, we consider the impact of the Proposed Development on 17 Kingham Drive to be appropriate and non-significant, given the location at the edge of the City Centre and inherent limitation due to the north west facing orientation of the window.
- 1.1.23 The rear gardens of the Downley Drive and Kingham Drive receptors have been identified as Time in Sun receptors and appraised accordingly.
- 1.1.24 5 of the 6 gardens would continue to achieve the BRE target of 2 Hours Time in Sun to at least 50% of each garden's area. One garden would receive 2 hours Time in Sun to <50% of its area, however, this reduction is very small (of <1%), and is therefore permitted by the BRE on the basis that it would not be noticeable to the occupants.
- 1.1.25 The impact of the Proposed Development on neighbouring external amenity spaces is therefore considered to be non-significant.

2. Introduction

2.1 Background and Instructions

- 2.1.1 Great Places Housing Association (“Great Places”) has developed a proposal for the development of a parcel of land on Downley Drive, in New Islington / Ancoats, at the north eastern edge of Manchester City Centre.
- 2.1.2 Gray Scanlan Hill is appointed to evaluate the daylight and sunlight amenity impact of the Proposed Development on those key parts of the surrounding built environment.
- 2.1.3 This Report confirms our assessment methodology, findings and opinions.

2.2 Scope of this Report

- 2.2.1 For reasons explained elsewhere in this Report, our appraisal is based on the provisions of the Building Research Establishment’s (“BRE”) *Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice*. The BRE Guidance provides an objective means for evaluating daylight and sunlight amenity impacts in the built environment.
- 2.2.2 For reasons that will become apparent as this Report progresses, the Site facing windows and habitable rooms of the following neighbouring buildings, identified edged red on the plan below, are identified as key receptors and have been daylight and sunlight amenity impact appraised:
- 11-25 Woodward Place;
 - Burgess House & Avro House, St Vincent Street;
 - Engels House, St Vincent Street;
 - 11 & 12 Downley Drive;
 - 13, 14, 15 & 17 Kingham Drive; and
 - 22 – 28 Woodward Street Development.



2.2.3 We have also identified the external amenity areas associated with the Downley Drive and Kingham Drive as sunlight receptors worthy of review.

2.2.4 We have undertaken a daylight and sunlight technical analysis and have measured, using computerised 3D massing simulations of the Site and its surroundings and specialist computer software, the amount of daylight and/or sunlight that is available to the abovementioned receptors, both as existing / Baseline and as Proposed.

2.3 Professional Experience

2.3.1 This appraisal has been overseen by Mike Scanlan, who is a Director at Gray Scanlan Hill. He has, over the course of the last 18 years, specialised in advising and representing his Clients on various third-party development issues, including rights of light (common law), daylight and sunlight and overshadowing amenity assessments (for Town & Country Planning), the Party Wall etc Act 1996 and access to land / airspace negotiations.

2.3.2 He commenced his training at building surveying consultancy, Malcolm Hollis, until August 2005 when he became a founding Director of Gray Scanlan Hill, where he has continued to provide third party development consultancy advice to Clients.

2.3.3 He has advised both developers and neighbouring adjoining owners on the “light” impact of proposed developments. He has also accepted instructions to advise Local Authorities on the practical application of the BRE Guidance.

- 2.3.4 A member of the Royal Institution of Chartered Surveyors (“RICS”), he has frequently lectured on third party development issues to fellow property professionals as part of numerous regional CPD programmes and conferences.

2.4 The Site

- 2.4.1 The Site is bounded by St Vincent Street and the Rochdale Canal to the north, edges of existing dwellings on Woodward Place to the west, Downley Drive to the south and Kingham Drive to the east. The western portion of the Site is currently open and secured by fencing, comprising predominantly of overgrown shrubland with a limited amount of hard standing. The eastern portion of the Site comprises open grassland with a limited number of trees. An unadopted path cuts through the Site from St Vincent Street to the north to Downley Drive to the south.
- 2.4.2 It is located within New Islington at the edge of Manchester City Centre.
- 2.4.3 The Site’s immediate surroundings are of predominantly of residential use, with some areas of open land and the Rochdale Canal to the north.
- 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 will deliver sixty-eight Affordable Homes, comprising of twenty-three houses of 2-3 storeys and forty-five apartments within a four-storey building, alongside associated landscaping, boundary treatments, car parking, and cycle parking.
- 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 Bluesky; and
 - A 3D model of the Proposed Development prepared by Buttress 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 following planning applications downloaded from Manchester City Council's Planning Public Access System:
- Burgess House, Avro House & Engels House - MCC Ref. 102074/FO/2013/N1;
 - Woodward Street Development – MCC Ref. 123887/FO/2019 and 126727/JO/2020;
 - 14 Kingham Drive – MCC Ref. 102483/FH/2013/N1.
- 2.6.5 We have also based our room arrangement assumptions for the Woodward Place dwellings on Plans available from the FAT Architecture website.
- 2.6.6 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
- 2.6.7 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.
- 2.6.8 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”) 2019 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 within the bounds of the City Centre 'Fringe', as defined in Policy CC1, at the edge of Manchester City Centre.
- 3.2.7 The Site falls within the bounds of New Islington, as identified within the later Ancoats and New Islington Neighbourhood Development Framework (NDF) Update document, dated 2016. This document updates the 2014 NDF and includes within those updates a reference to the Manchester City Centre Strategic Plan 2015-2018 (adopted 2016). This document notes that there is an extended City Centre boundary, expanded to include the areas of Ancoats and New Islington amongst others.
- 3.2.8 In this regard, material impacts of development on the daylight and sunlight amenity of receptors in this area should be considered appropriate and acceptable if those impacts, and residual daylight and sunlight amenity levels, are considered in line with and appropriate to the City Centre – an area typical of increased building height density.
- 3.2.9 The increased density sought in this area, coupled with the flexible approach to residential daylight and sunlight amenity typically applied elsewhere both within and at the edge of Manchester City Centre does, in our opinion, justify the flexible application of the BRE Guidance on this Site.
- 3.2.10 Policy EC3 – The Regional Centre identifies that housing will also be an appropriate use within the Regional Centre, and it notes that should complement the development of mixed use employment areas. Subject to site and location details, Policy EC3 notes that the Regional Centre will generally be a location where higher density residential development is appropriate.
- 3.2.11 Policy H4 – East Manchester notes that East Manchester will, over the lifetime of the Core Strategy, accommodate around 30% of new residential development. It outlines that priority will be given to family housing and other high value, high quality development where this can be sustained. High density housing will be permitted within the parts of East Manchester that fall within the Regional Centre which are adjacent to the City Centre, including New Islington.
- 3.2.12 Policy DM1 – Development Management – confirms that all developments should have regard to a number of issues, such as the effects on amenity, including light.

- 3.2.13 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.
- 3.2.14 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.
- 3.2.15 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.
- 3.2.16 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.

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 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 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:
- 11-25 Woodward Place;
 - Burgess House & Avro House, St Vincent Street;
 - Engels House, St Vincent Street;
 - 11 & 12 Downley Drive;
 - 13, 14, 15 & 17 Kingham Drive; and
 - 22 – 28 Woodward Street Development.

- 5.2.4 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.
- 5.2.5 Window reference plans of the principal elevations of the neighbouring buildings considered as part of the Report can be found at Appendix 2.
- 5.2.6 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.
- 5.2.7 For certain neighbouring buildings we have appraised window panes within front and rear doors and fanlights above them, on the understanding that the doors open directly into a habitable space.
- 5.2.8 Not all of the above neighbouring buildings need to be sunlight 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 more 90 degrees of due south do not need to be sunlight impact appraised.
- 5.2.9 There are a number of external amenity areas close enough to the Site that would justify a “time in sun” impact assessment. These are the rear gardens associated with 11 & 12 Downley Drive and 13, 14, 15, & 17 Kingham Drive.

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)
11-25 Woodward Place	57 windows (53%)	51 windows (47%)
Burgess House & Avro House	28 windows (80%)	7 windows (20%)
Engels House	48 windows (86%)	8 windows (14%)
11 & 12 Downley Drive	13 windows (48%)	14 windows (52%)
13, 14, 15 & 17 Kingham Drive;	21 windows (47%)	24 windows (53%)
22 – 28 Woodward Street Development	22 windows (100%)	0 windows (0%)

5.3.4 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.

5.3.5 The windows of the neighbouring receptors are predominantly well daylit, the majority (65%) achieving the BRE's aspirational VSC target of 27% in the Baseline Condition.

5.3.6 A total of 104 windows (35%) of those appraised do not achieve the BRE's aspirational targets in the Baseline condition. This is predominantly attributable to windows being positioned either below projecting balconies, eaves or porches, or set within elevational recesses, all of which inherently limit the daylight potential.

5.3.7 Further, there are windows within Avro House that directly overlook the neighbouring mass of Engels House, limiting their capacity to receive daylight in the Baseline Condition.

Table 2 – Summary of Baseline APSH Results

Receptors	BRE Pass ($\geq 5\%$ & 25% APSH)	BRE Fail ($< 5\%$ &/or $<25\%$ APSH)
11-25 Woodward Place	N/A – North facing windows	
Avro House & Burgess House	26 rooms (100%)	0 rooms (0%)
Engels House	49 rooms (91%)	5 rooms (9%)
11 & 12 Downley Drive	11 rooms (65%)	6 rooms (35%)
13, 14, 15 & 17 Kingham Drive	15 rooms (50%)	15 rooms (50%)
22 – 28 Woodward Street Development	15 rooms (94%)	1 room (6%)

5.3.8 There are windows / rooms that do not achieve the BRE's Winter and Annual PSH targets in the Baseline Condition. The majority of these, serving rooms in Downley Drive and Kingham Drive, are orientated more than 90 degrees from due south, and on that basis have a significant and inherently limited capacity to receive sunlight.

5.3.9 Within Engels House, the windows / rooms that do not achieve the Winter or Annual PSH target are located below a projecting balcony structure. Within the Woodward Street Development to the north east there are windows positioned adjacent to a projecting portion of the building which, in the same vein as a projecting balcony, places an inherent limitation on their capacity to receive direct sunlight 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 built up urban environment such as within or at the edge of a City Centre.

- 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%. We consider this to be acceptable level of amenity in a built up urban environment such as City Centres or areas at the edge of City Centres.
- 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 result is lower than the Acceptable Tolerance Alternative Target.
- 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.

11 – 25 Woodward Place

11 – 25 Woodward Place is part of a two storey residential terrace. It is located to the south west of the Site and separated from it by the Woodward Place highway.

It has windows within its Woodward Place elevation which overlook the Site directly, and others through which the Proposed Development will be seen once constructed.

The rooms overlooking the Site are a mixture of habitable uses – Living / Kitchen / Dining Rooms (“LKDs”) and Bedrooms.



Daylight Amenity Impact

108 individual windows have been appraised, serving 46 habitable rooms.

In the Baseline condition 57 windows (53%) appraised achieve the 27% VSC target.

51 windows (47%) do not achieve the 27% target in the Baseline Condition. These windows are typically set within an elevational recess, either overlooking another part of the Woodward Place terrace or flanked on both sides, placing an inherent limitation on daylight amenity.

Notwithstanding some small measured reductions in the extent to which the sky would continue to be seen over the Site, 107 windows (99%) would continue to either achieve the 27% VSC target in the proposed condition or experience reductions in existing VSC values 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.

The remaining single window would achieve a VSC of 19%, being circa 0.7x Baseline value. This window serves a living room which is also served by a second window that does achieve the BRE target. The light impact to the Site facing windows is mitigated by the room being dual aspect.

All of the 46 rooms (100%) appraised would also pass the BRE’s NSL test, either experiencing no reduction in NSL, or very minor reductions in NSL that would not be noticeable to the room occupants.

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

Sunlight Amenity Impact

The Woodward Place terrace is located to the south of the Site. Its windows are either north facing or, where orientated within 90 degrees of due south, not overlooking the Site directly.

On that basis, the Proposed Development will have no significant impact on the sunlight amenity of the rooms of Woodward Place.

Burgess House & Avro House

Avro House and Burgess House are adjoining apartment buildings located to the west of the Site and separated from it by St Vincent Street.

Avro House has windows within its eastern elevation which overlook the Site directly. The windows of Burgess House do not overlook the Site directly, however the Proposed Development will be seen through them once constructed.

The rooms overlooking the Site are a mixture of habitable uses – Living / Kitchen / Dining Rooms (“LKDs”) and Bedrooms.



Daylight Amenity Impact

35 individual windows have been appraised, serving 26 habitable rooms.

In the Baseline condition a majority of windows appraised (80%, or 28 windows in total) achieve the 27% VSC target.

7 windows (20%) of the 35 appraised do not achieve the 27% target in the Baseline Condition. Within Avro House, these windows are directly overlooking the neighbouring mass of Engels House, limiting the sky visibility the windows receive. Within Burgess House the windows are positioned within the lightwell, which also places an inherent limitation on their capacity to receive daylight.

Notwithstanding small, general reductions in the extent to which the sky would continue to be seen over the Site, 33 windows (94%) would continue to either achieve the 27% VSC target in the proposed condition or experience reductions in existing VSC values 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 window (3%) would achieve a VSC value of between 24%, which we consider to be within an acceptable tolerance of the BRE's daylight targets given the edge of City Centre context of the Site.

The 1 remaining window (3%), located at ground floor level of Avro House, would achieve a VSC of 20%. We consider this to be appropriate, given the edge of City Centre context, for the following reasons:

- This window is positioned directly below a projecting balcony. The design feature places an inherent limitation on the capacity of this window to receive daylight.
- The room served by this window is also served by another window that would achieve the BRE criteria.

24 rooms (92%) of the 26 appraised would pass the BRE's NSL test, experiencing a reduction or movement in the NSL that would not be noticeable to the room occupants.

2 rooms (8%) located at ground floor level of Avro House would not pass the BRE's NSL test, experiencing reductions in Baseline NSL that would be noticeable to the rooms' occupants. Of these, one room is an LKD and the other is a bedroom which, in accordance with the BRE Guidance is a receptor of lower daylight sensitivity.

Notwithstanding these less than aspirational NSL results, we consider that the impact of the Proposed Development on daylight amenity of these rooms – and Burgess House and Avro House as a whole – is appropriate and balanced given the edge of City Centre context, for the following reasons:

- These rooms represent a small statistical minority (8%) of those rooms appraised. The impact is therefore localised rather than commonplace / widespread.
- Despite reductions in NSL that could be noticed by room occupants, these rooms will continue to receive direct daylight to the majority of their area (67% and 73%), and will therefore, in our professional opinion, remain adequately daylight.

On the basis that the windows and rooms of this neighbouring building that do not achieve the BRE targets are a small statistical minority of all those appraised, Avro House and Burgess House will, in our opinion, remain daylight to a level considered adequate and acceptable for a building at the edge of the City Centre.

On the basis that residential development of higher density is considered to be appropriate within the Regional Centre as noted in Policy EC3, we consider these impacts to be appropriate and non-significant.

Sunlight Amenity Impact

26 individual rooms have been sunlight appraised, served by 35 individual windows.

25 rooms (96%) achieve both the 25% Annual and 5% Winter APSH targets in the Baseline condition. 1 room would achieve the Annual PSH target but not the Winter PSH target.

The Proposed Development would result in a general reduction in both Annual and Winter APSH levels. Notwithstanding, all 26 rooms (100%) would continue to achieve the BRE's Winter and Annual sunlight targets, or experience reductions that would not be noticeable to the room occupants (acceptable to the BRE on the basis that Proposed values remain at least 0.8x of Baseline values)

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

11 & 12 Downley Drive

No.s 11 & 12 Downley Drive end of terrace dwellings located to the east of the Site.

They have windows within their side elevations which overlook the Site directly, and windows on the front and rear through which the Proposed Development will be seen once constructed.



Daylight Amenity Impact

27 individual windows have been appraised, serving 17 habitable rooms.

In the Baseline condition a minority of windows appraised (48%, or 13 windows in total) achieve the 27% VSC target.

14 windows (52%) do not achieve the 27% target in the Baseline Condition. These windows are positioned either beneath a projecting porch or, at first floor level, set directly beneath projecting eaves. In effect, the design of these dwellings places a significant inherent limitation on these windows' capacity to receive direct daylight.

Notwithstanding small, general reductions in the extent to which the sky would continue to be seen over the Site, 26 windows (96%) would continue to either achieve the 27% VSC target in the proposed condition or experience reductions in existing VSC values 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.

The remaining window (4%) is a pane within a door to 12 Downley Drive. Given the small size of the pane and very low Baseline value of 2.7% VSC, the reduction to circa 2% in the Proposed Condition is not a material or significant effect on daylight amenity of the room.

All 17 rooms (100%) appraised would pass the BRE's NSL test, experiencing either no reduction in NSL or, where a measurable reduction is present, the movement in NSL would not be noticeable to the room occupants.

On the basis all rooms pass the NSL test, and that all main windows to rooms achieve VSC targets (or experience reductions acceptable to the BRE), this neighbouring building will, in our opinion, remain daylit to a level considered adequate and acceptable for the edge of City Centre location.

On the basis that residential development of higher density is considered to be appropriate within the Regional Centre as noted in Policy EC3, we consider these impacts to be appropriate and non-significant.

Sunlight Amenity Impact

17 individual rooms have been sunlight appraised, served by 27 individual windows.

11 rooms (65%) achieve the 25% Annual and 5% Winter APSH targets in the Baseline condition. 6 rooms (35%) – four in 11 Downley Drive and two in 12 Downley Drive – achieve neither the Winter nor the Annual PSH targets in the Baseline Condition.

The Proposed Development would result in a general reduction in APSH levels. Notwithstanding these reductions, all 17 rooms (100%) would continue to achieve both the BRE's Winter and Annual sunlight targets, or experience reductions that would not be noticeable to the room occupants (acceptable to the BRE on the basis that Proposed values remain at least 0.8x of Baseline values)

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.

Sunlight to External Amenity Spaces

The gardens of 11 and 12 Downley Drive have been appraised as external amenity spaces.

In the Baseline condition, the garden of 11 Downley Drive achieves 2 hours of direct sunlight to 64 % of its area. The garden of 12 Downley Drive achieves 2 hours of direct sunlight to 53 % of its area.

In the Proposed condition the garden of 11 Downley Drive would experience no reduction in the area that receives 2 hours of direct sunlight. The garden of 12 Downley Drive would experience a small reduction in area receiving 2 hours of direct sunlight. Both gardens would pass the BRE's Time in Sun test, each continuing to achieve 2 hours of direct sunlight to at least 50% of their respective areas.

Both external amenity spaces would therefore continue to appear adequately sunlit throughout the year. The impact that the Proposed Development would have on the sunlight amenity of these neighbouring external amenity spaces is considered to be appropriate and non-significant.

13, 14, 15 & 17 Kingham Drive

No.s 13, 14, 15 and 17 Kingham Drive are two storey terraced dwellings located to the east of the Site.

They have windows within their side elevations which overlook the Site directly, and windows on the front and rear through which the Proposed Development will be seen once constructed.



Daylight Amenity Impact

45 individual windows have been appraised, serving 30 habitable rooms.

In the Baseline condition a minority of windows appraised (47%, or 21 windows in total) achieve the 27% VSC target.

24 windows (53%) do not achieve the 27% target in the Baseline Condition. At ground floor level these windows are positioned overlooking a neighbouring porch, in effect placing them within an elevational recess. Where positioned at first floor level, these windows are set directly beneath projecting eaves. In effect, the design of the Kingham Drive terraces place a significant inherent limitation on these windows' capacity to receive direct daylight.

Notwithstanding small, general reductions in the extent to which the sky would continue to be seen over the Site, 41 windows (91%) would continue to either achieve the 27% VSC target in the proposed condition or experience reductions in existing VSC values 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.

Of the remaining 4 windows (9%), one achieves a VSC of 24.97%, which we consider to be within an Acceptable tolerance of the BRE target. The room served by this window is also served by a roof light achieving a very high VSC of 83%. This room would also pass the NSL test.

The remaining three windows are narrow fanlights above the doors (and therefore immediately below projecting porches) of no.s 13, 15 and 17 Kingham Drive. Given the small size of these panes and very low Baseline VSC values, the reductions of circa 2% VSC in the Proposed Condition is not a material or significant effect on daylight amenity of the room served.

All 30 rooms (100%) appraised would pass the BRE's NSL test, experiencing either no reduction in NSL or, where a measurable reduction will be experienced, the movement in NSL would not be noticeable to the room occupants.

On the basis that residential development of higher density is considered to be appropriate within the Regional Centre as noted in Policy EC3, we consider these impacts to be appropriate and non-significant.

Sunlight Amenity Impact

30 individual rooms have been sunlight appraised, served by 45 individual windows.

15 rooms (50%) achieve the 25% Annual and 5% Winter APSH targets in the Baseline condition. 15 rooms (50%) – across all four properties – achieve neither the winter nor the annual PSH targets in the Baseline Condition. These windows are orientated greater than 90 degrees from due south, and therefore have limited expectation of / capacity to receive direct sunlight.

The Proposed Development would result in a general reduction in APSH levels. Notwithstanding these reductions, 29 rooms (97%) would continue to achieve both the BRE's Winter and Annual sunlight targets, or experience reductions that would not be noticeable to the room occupants (acceptable to the BRE on the basis that Proposed values remain at least 0.8x of Baseline values)

1 room (3%) would achieve the BRE criterion for Annual APSH, but would not achieve the BRE's Winter PSH target. This room is served by a north west facing window, and achieves a Winter PSH of 2% in the Baseline Condition, reduced to 1% in the Proposed Condition. We consider this impact to be non-significant, given the orientation of the window and very low Baseline values.

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.

Sunlight to External Amenity Spaces

The gardens of 13, 14, 15 and 17 Kingham Drive Drive have been appraised as external amenity spaces.

In the Baseline condition, the gardens of achieve 2 hours of direct sunlight to 76%, 43%, 76% and 79% of their respective areas.

In the Proposed condition the gardens 13, 14, and 15 Kingham Drive would experience no reduction in area that receives 2 hours of direct sunlight. 17 Kingham Drive would experience a reduction amounting to of <1% of the area that receives 2 hours of Time in Sun.

On that basis, the external amenity spaces of 13, 14, 15 & 17 Kingham Drive would therefore continue to appear adequately sunlit throughout the year, or experience no noticeable reduction in sunlit area.

The impact that the Proposed Development would have on the sunlight amenity of these neighbouring external amenity spaces is, in our opinion, considered to be non-significant.

Engels House, St Vincent Street

Engels House is an apartment building located to the west of the Site and separated from it by St Vincent Street.

It has windows within its east elevation which overlook the Site directly. The Proposed Development will be seen through these windows once constructed.

The rooms overlooking the Site are a mixture of habitable uses – Living / Kitchen / Dining Rooms (“LKDs”) and Bedrooms.



Daylight Amenity Impact

56 individual windows have been appraised, serving 54 habitable rooms.

In the Baseline condition a majority of windows appraised (86%, or 48 windows in total) achieve the 27% VSC target.

8 windows (14%) do not achieve the 27% target in the Baseline Condition. These windows are either set within an elevational recess, positioned beneath a balcony or directly overlooking the mass of the neighbouring Avro House. In effect, these design features of Engels House all place an inherent limitation on these windows’ capacity to receive direct daylight.

Notwithstanding general reductions in the extent to which the sky would continue to be seen over the Site, 53 windows (95%) would continue to either achieve the 27% VSC target in the proposed condition or experience reductions in existing VSC values 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.

2 windows (3%) would achieve a VSC values of 22% and 26.9%, which we consider to be within an acceptable tolerance of the BRE’s daylight targets given the edge of City Centre context of the Site.

The remaining window (2%), serving a living room (Ground Floor, Room 4) would achieve a VSC value of circa 20.8%, which is 0.75x of the Baseline value. This window is positioned below the projecting balcony to the room above. In our opinion, this room will remain well daylit despite the presence of a projecting balcony above the window that limits daylight amenity. These results are only marginally outside of – and unlikely to be materially different to – the acceptable tolerance VSC target of 21.6%. Further, the room served by this window will pass the BRE’s NSL test.

50 rooms (93%) of the 54 appraised would pass the BRE’s NSL test, experiencing either no reduction in NSL, or movement in the NSL that would not be noticeable to the room occupants.

4 rooms (7%) would not pass the BRE’s NSL test, experiencing reductions in Baseline NSL that would be noticeable to the rooms’ occupants. Of these, 3 rooms are bedrooms (of lower daylight sensitivity) and 1 is an LKD. Notwithstanding that reductions in NSL to these rooms would be noticeable to the occupants, all 4 rooms would continue to receive direct daylight to the majority of each room’s area.

We consider that the impact of the Proposed Development on daylight amenity of these rooms – and the Engels House as a whole – is appropriate and balanced given the edge of City Centre context, for the following reasons:

- The 4 rooms that do not meet the BRE's NSL test criterium and single window that does not achieve the acceptable tolerance VSC target – all located at ground floor level – represent a small statistical minority of Engels House. The impact is therefore localised rather than widespread.
- A number of the windows serving these rooms are positioned either below a projecting balcony, or directly overlooking the significant neighbouring mass of Avro House. Both of these factors place an inherent limitation on the capacity to receive direct daylight.

Sunlight Amenity Impact

54 individual rooms have been sunlight appraised, served by 56 individual windows.

49 rooms (91%) achieve both the 25% Annual and 5% Winter APSH targets in the Baseline condition. 5 rooms (9%) achieve neither the Annual nor Winter sunlight target in the Baseline Condition.

The Proposed Development would result in a general reduction in both Annual and Winter APSH levels. Notwithstanding these reductions, all 54 rooms (100%) would continue to achieve the BRE's Winter and Annual sunlight targets, or experience reductions in existing APSH values 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.

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.

22-26 Woodward Street Development

No.s 22-26 of the new Woodward Street Development, are located to the north east of the Site. They are currently under construction.

They have windows within their front elevations which overlook the Site directly, serving a mixture of living rooms and bedrooms.

The rooms overlooking the Site are a mixture of habitable uses – Living / Kitchen / Dining Rooms (“LKDs”) and Bedrooms.



Daylight Amenity Impact

22 individual windows have been appraised, serving 16 habitable rooms.

In the Baseline condition all windows appraised achieve the BRE's 27% VSC target.

Notwithstanding small, general reductions in the extent to which the sky would continue to be seen over the Site, all 22 windows (100%) would continue to either achieve the 27% VSC target in the Proposed Condition or experience reductions in existing VSC values 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.

All 16 rooms (100%) appraised would pass the BRE's NSL test, the majority experiencing no reduction in NSL or, where a measurable reduction will be experienced, the movement in NSL 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 non-significant.

Sunlight Amenity Impact

16 individual rooms have been sunlight appraised, served by 21 individual windows.

15 rooms (94%) achieve the 25% Annual and 5% Winter APSH targets in the Baseline condition. 1 room (6%) – achieves neither the winter nor the annual PSH targets in the Baseline Condition, due to being served by a north west facing window.

The Proposed Development would result in some general reductions in Annual and Winter PSH levels. Notwithstanding these reductions, all 16 rooms (100%) would continue to achieve both the BRE's Winter and Annual sunlight targets, or experience reductions that would not be noticeable to the room occupants (acceptable to the BRE on the basis that Proposed values remain at least 0.8x of Baseline values).

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

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 contextual model.
Neighbouring Buildings internal room layouts, window positions/dimensions and massing derived from both the context model 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 - "Downley Drive Context model_IBraghiroli - 3D View CAD_19-02-2021.dwg"
Supplied by Buttress on 19/02/2021.

Massing Legend

Existing

Proposed

All heights in m AOD

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:
Great Places Housing Group

PROJECT:
Downley Drive
Manchester

DRAWING TITLE:
Plan View
Existing Site

SCALE @ A2: NTS	DATE: 30.03.2021	DRAWN: GSH
	CHECKED:	DMH

DRAWING NUMBER: 2793_MA-01	REV: .
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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 contextual model.
Neighbouring Buildings internal room layouts, window positions/dimensions and massing derived from both the context model 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 - "Downley Drive Context model_IBraghioli - 3D View CAD_19-02-2021.dwg"
Supplied by Buttrell on 19/02/2021.

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:
Great Places Housing Group

PROJECT:
Downley Drive
Manchester

DRAWING TITLE:
Plan View
Proposed Site

SCALE @ A2: NTS	DATE: 30.03.2021	DRAWN: GSH
	CHECKED:	DMH

DRAWING NUMBER: 2793_MA-01	REV: .
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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 contextual
model.
Neighbouring Buildings internal room layouts, window
positions/dimensions and massing derived from both
the context model 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 - "Downley Drive Context
model_IBraghirol - 3D View CAD_19-02-2021.dwg"
Supplied by Buttriss on 19/02/2021.

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:
Great Places Housing Group

PROJECT:
Downley Drive
Manchester

DRAWING TITLE:
3D View 1
Existing Site

SCALE @ A2: NTS	DATE: 30.03.2021	DRAWN: GSH
	CHECKED:	DMH

DRAWING NUMBER: 2793_MA-03	REV: .
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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 contextual
model.
Neighbouring Buildings internal room layouts, window
positions/dimensions and massing derived from both
the context model 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 - "Downley Drive Context
model_IBraghiroli - 3D View CAD_19-02-2021.dwg"
Supplied by Buttriss on 19/02/2021.

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:
Great Places Housing Group

PROJECT:
Downley Drive
Manchester

DRAWING TITLE:
3D View 1
Proposed Site

SCALE @ A2: NTS	DATE: 30.03.2021	DRAWN: GSH
	CHECKED:	DMH

DRAWING NUMBER: 2793_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 contextual
model.
Neighbouring Buildings internal room layouts, window
positions/dimensions and massing derived from both
the context model 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 - "Downley Drive Context
model_IBraghioli - 3D View CAD_19-02-2021.dwg"
Supplied by Buttress on 19/02/2021.

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:
Great Places Housing Group

PROJECT:
Downley Drive
Manchester

DRAWING TITLE:
3D View 2
Existing Site

SCALE @ A2: NTS	DATE: 30.03.2021	DRAWN: GSH
	CHECKED:	DMH

DRAWING NUMBER: 2793_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 contextual
model.
Neighbouring Buildings internal room layouts, window
positions/dimensions and massing derived from both
the context model 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 - "Downley Drive Context
model_IBraghioli - 3D View CAD_19-02-2021.dwg"
Supplied by Buttress on 19/02/2021.

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:
Great Places Housing Group

PROJECT:
Downley Drive
Manchester

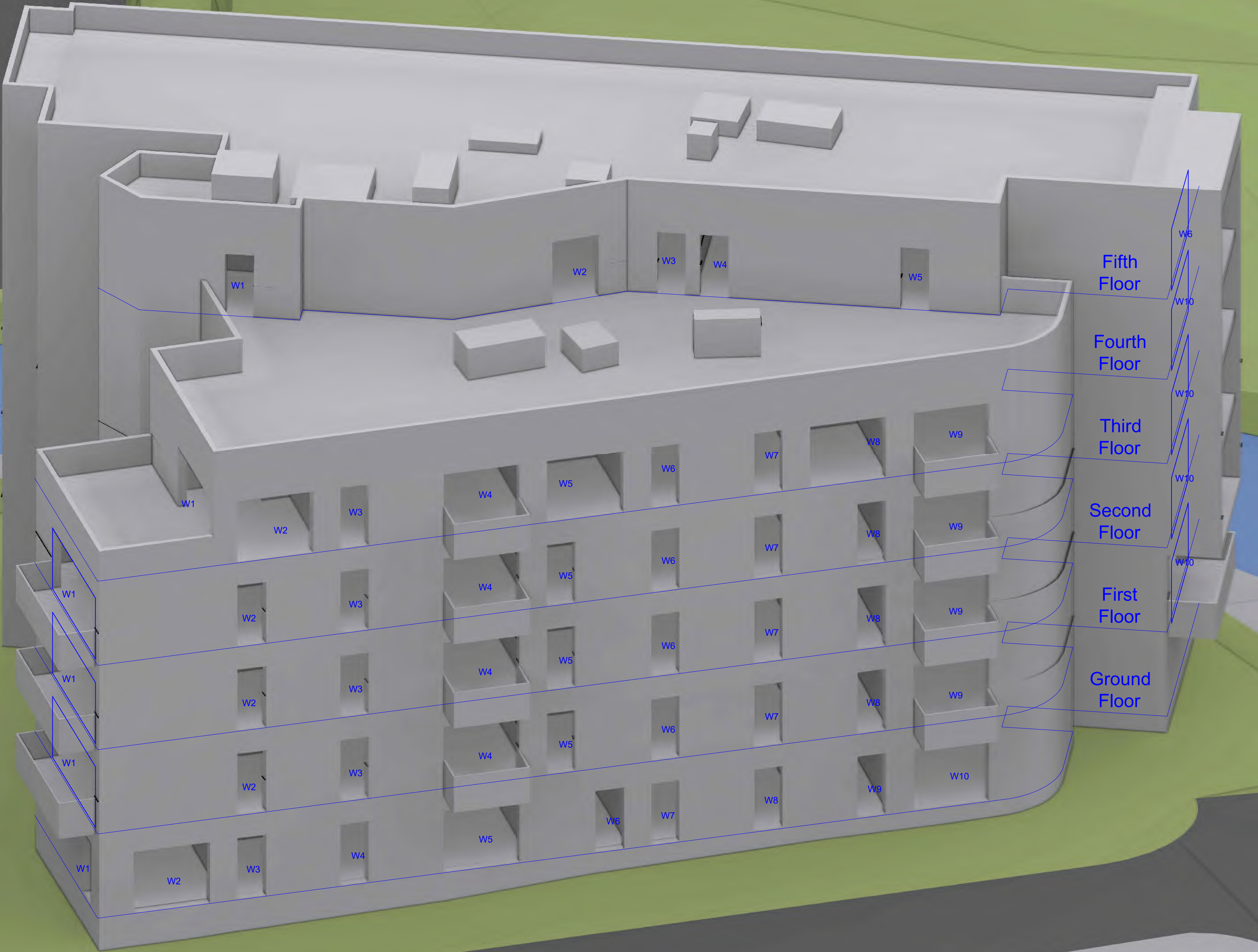
DRAWING TITLE:
3D View 2
Proposed Site

SCALE @ A2: NTS	DATE: 30.03.2021	DRAWN: GSH
CHECKED:		DMH

DRAWING NUMBER: 2793_MA-05	REV: .
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Appendix 2: Window Reference Plans

Engels House
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 contextual
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 - "Downley Drive Context
model_IBraghiroli - 3D View CAD_19-02-2021.dwg"
Supplied by Buttress on 19/02/2021.

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

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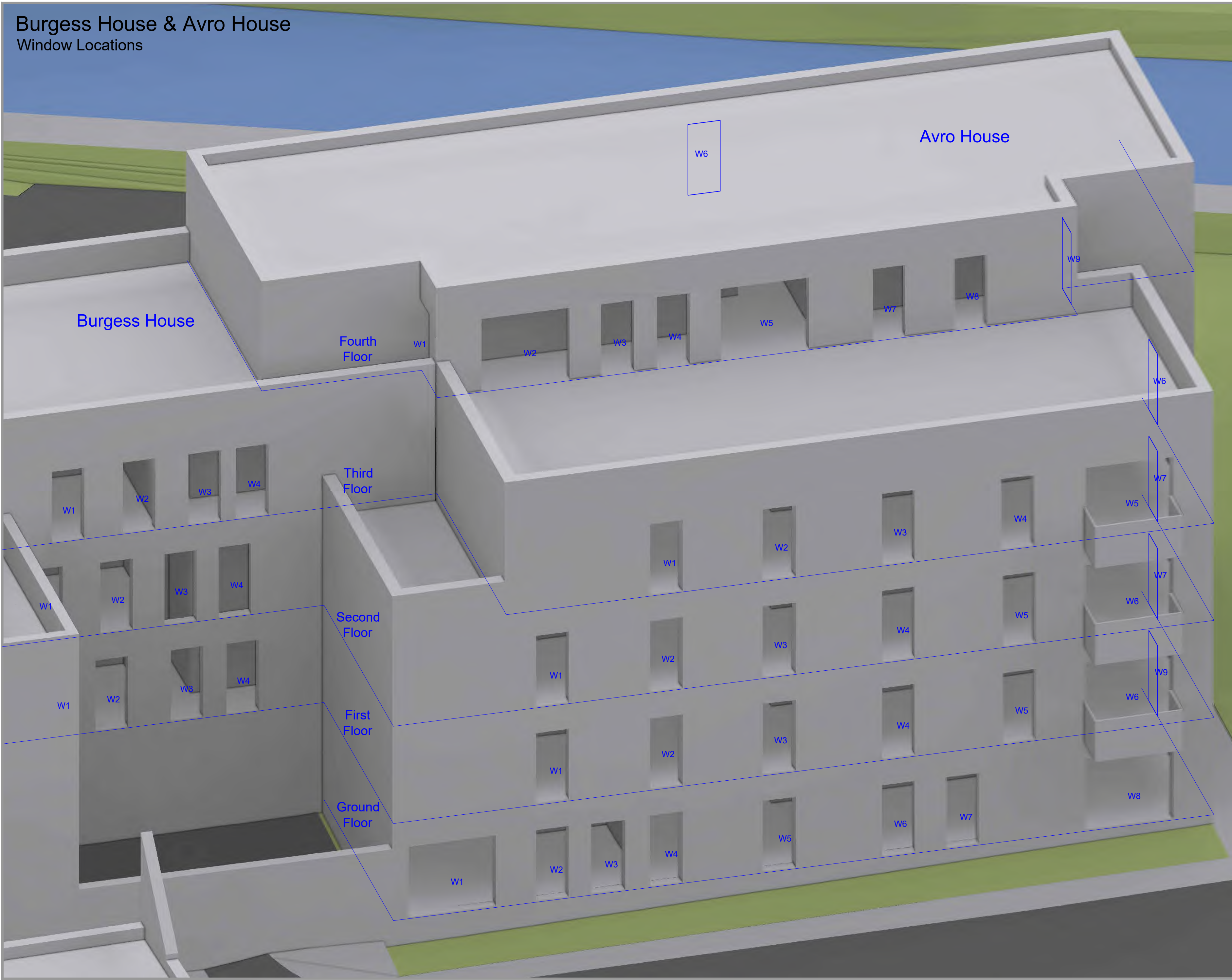
PROJECT:
Downley Drive
Manchester

DRAWING TITLE:
Window Location Plan

SCALE @ A2: NTS	DATE: 30.03.2021	DRAWN: GSH
	CHECKED:	DMH

DRAWING NUMBER: 2793_MA-15	REV: .
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Burgess House & Avro House
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 contextual
model.
Neighbouring Buildings internal room layouts, window
positions/dimensions and massing derived from both
the context model 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 - "Downley Drive Context
model_IBraghiroli - 3D View CAD_19-02-2021.dwg"
Supplied by Buttress on 19/02/2021.

Massing Legend

Existing

Proposed

All heights in m AOD

REV:	NOTES:	DRWN:	DATE:



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CLIENT:
Great Places Housing Group

PROJECT:
Downley Drive
Manchester

DRAWING TITLE:
Window Location Plan

SCALE @ A2: NTS	DATE: 30.03.2021	DRAWN: GSH
	CHECKED:	DMH

DRAWING NUMBER: 2793_MA-16	REV: .
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11-25 Woodward Place
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 contextual
model.
Neighbouring Buildings internal room layouts, window
positions/dimensions and massing derived from both
the context model 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 - "Downley Drive Context
model_IBraghiroli - 3D View CAD_19-02-2021.dwg"
Supplied by Buttress on 19/02/2021.

Massing Legend

Existing

Proposed

All heights in m AOD

11-25 Woodward Place
Window Locations



REV:	NOTES:	DRWN:	DATE:

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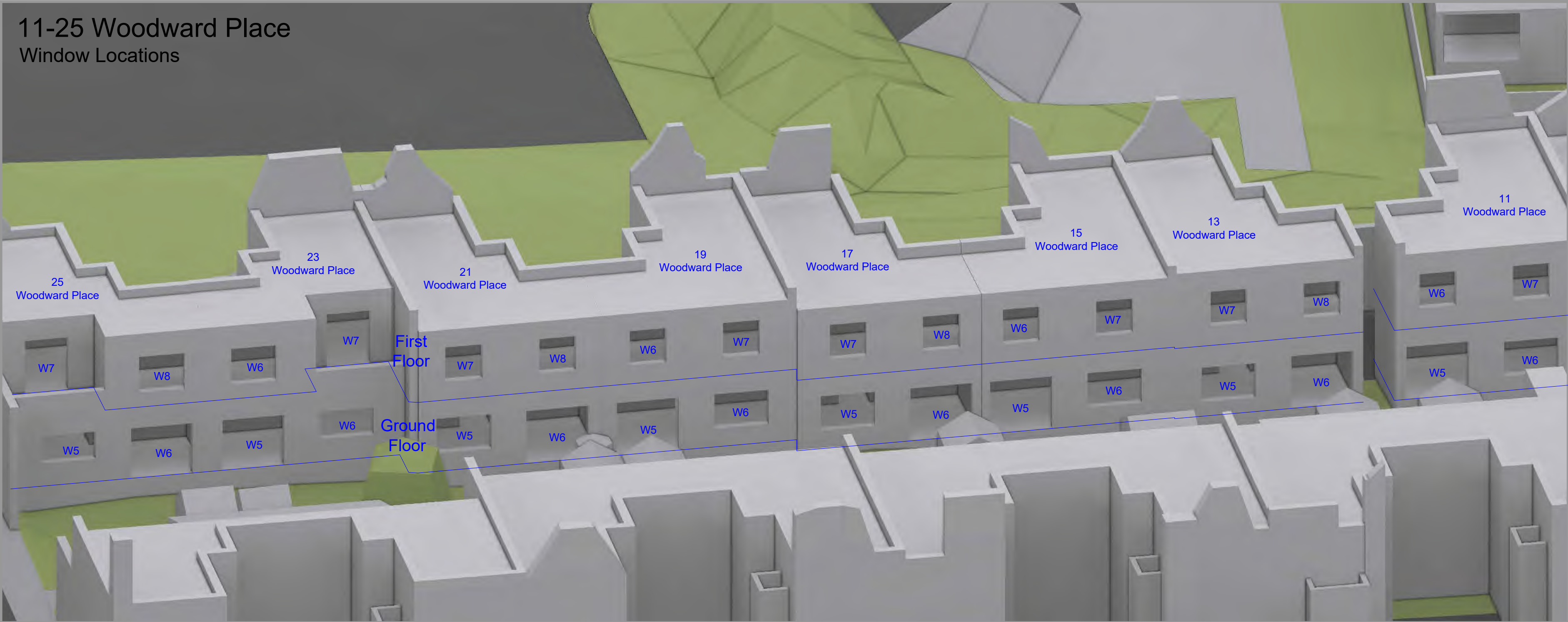
PROJECT:
Downley Drive
Manchester

DRAWING TITLE:
Window Location Plan

SCALE @ A2: NTS	DATE: 30.03.2021	DRAWN: GSH
CHECKED:		DMH

DRAWING NUMBER: 2793_MA-17	REV: •
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11-25 Woodward Place
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 contextual
model.
Neighbouring Buildings internal room layouts, window
positions/dimensions and massing derived from both
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have been made based on site photography, Bing
Maps and Google Earth.
Proposed Model
Proposed scheme massing - "Downley Drive Context
model_IBraghiroli - 3D View CAD_19-02-2021.dwg"
Supplied by Buttress on 19/02/2021.

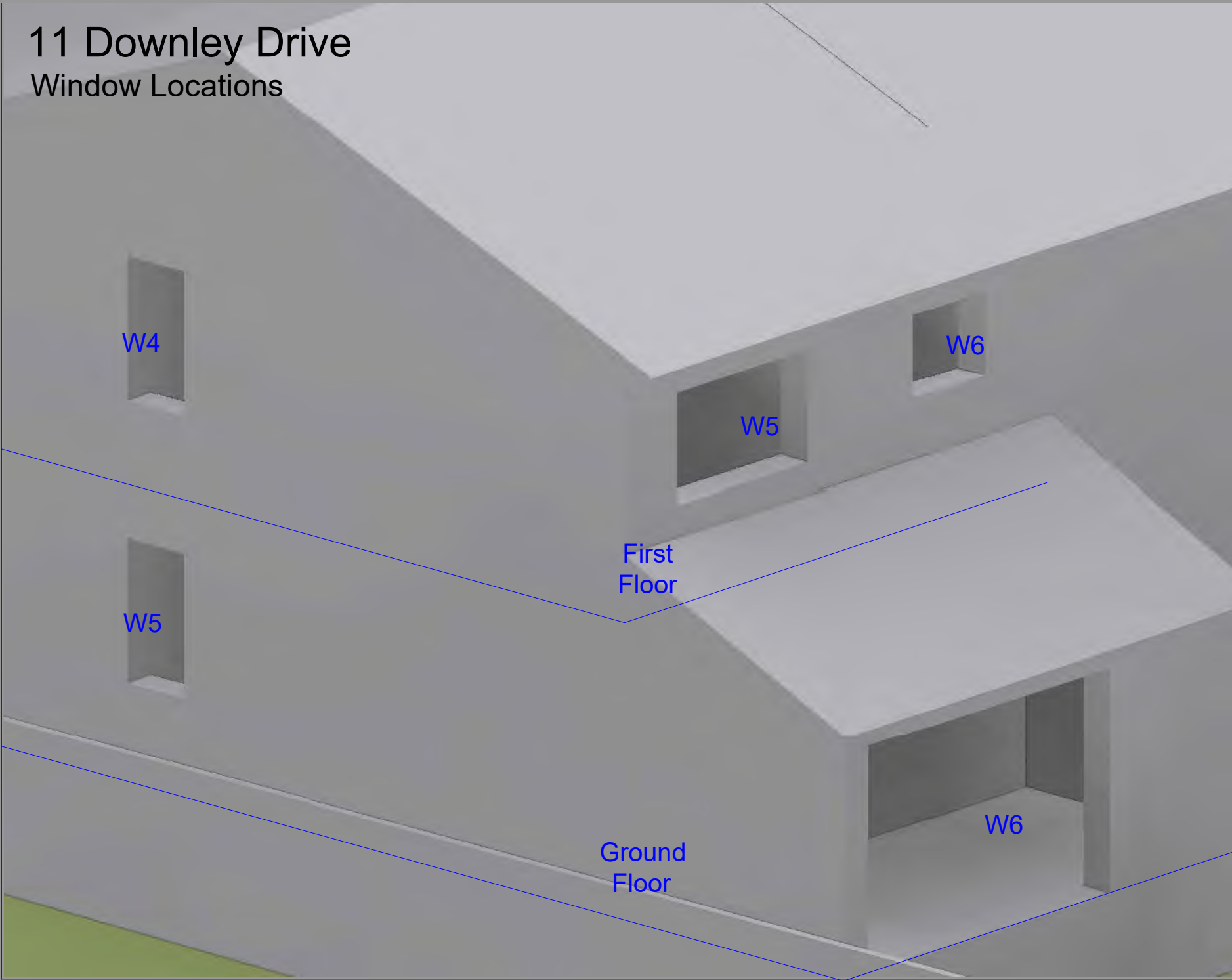
Massing Legend

Existing

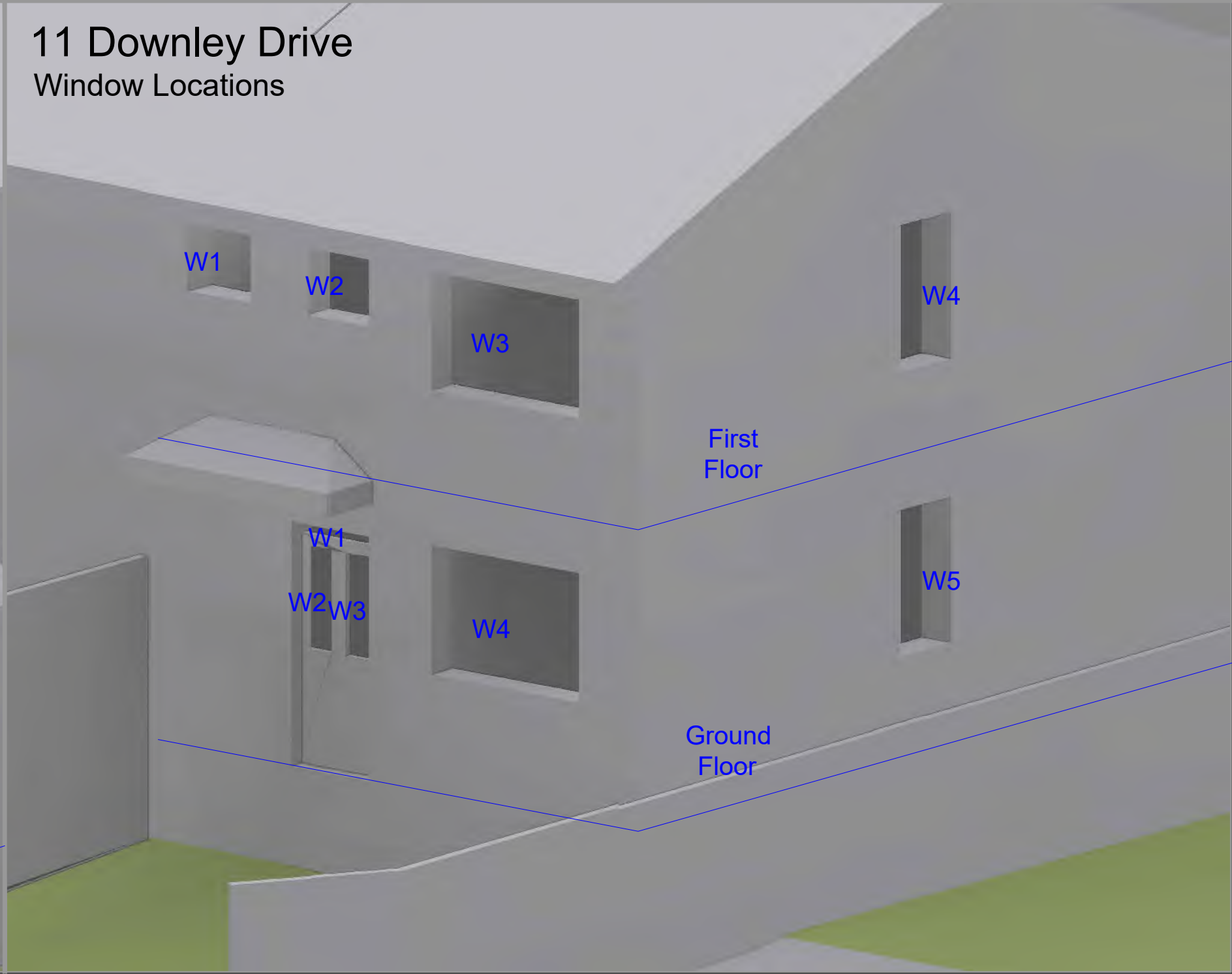
Proposed

All heights in m AOD

11 Downley Drive
Window Locations



11 Downley Drive
Window Locations



REV:	NOTES:	DRWN:	DATE:

grayscanlanhill
chartered building surveyors

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CLIENT:
Great Places Housing Group

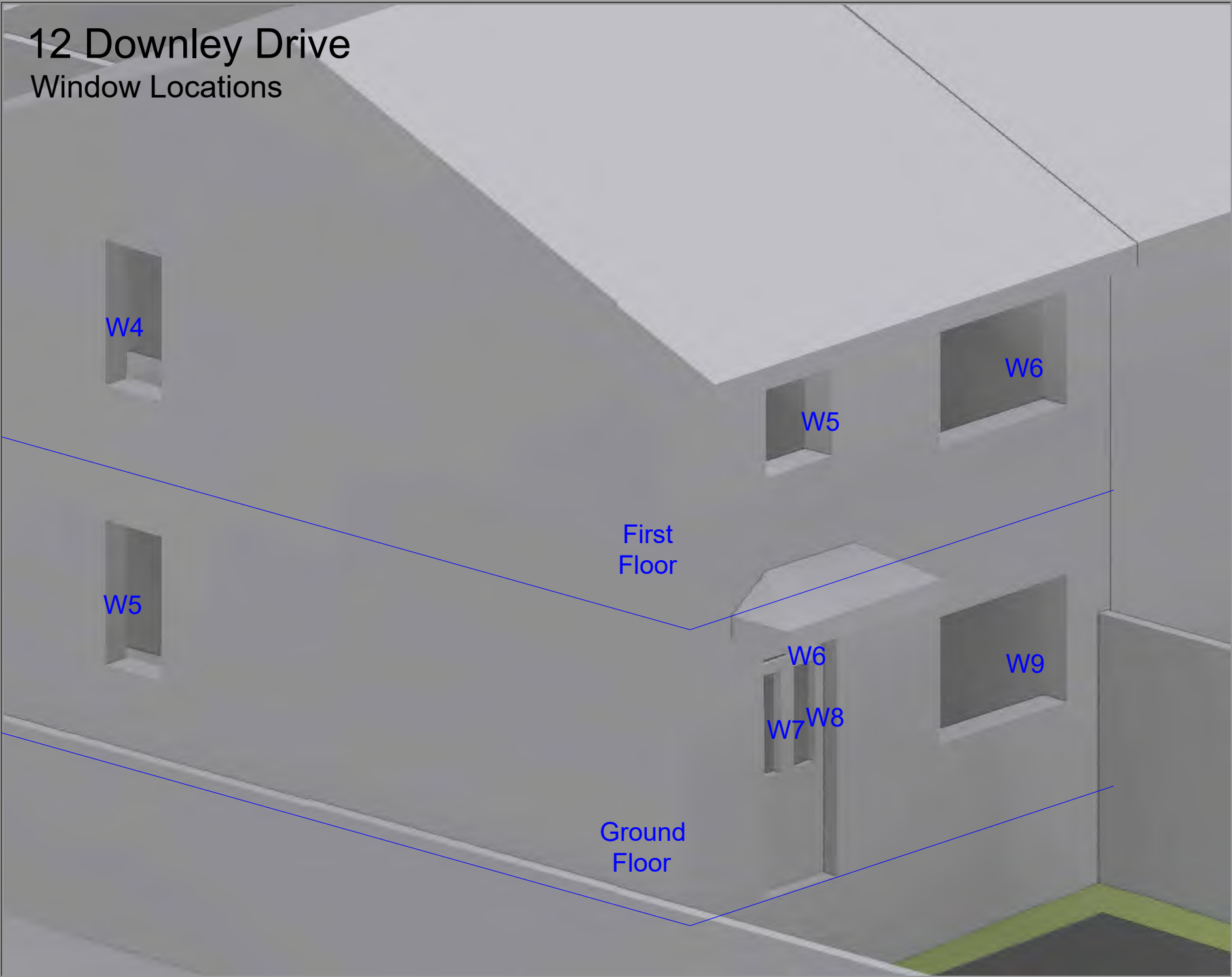
PROJECT:
Downley Drive
Manchester

DRAWING TITLE:
Window Location Plan

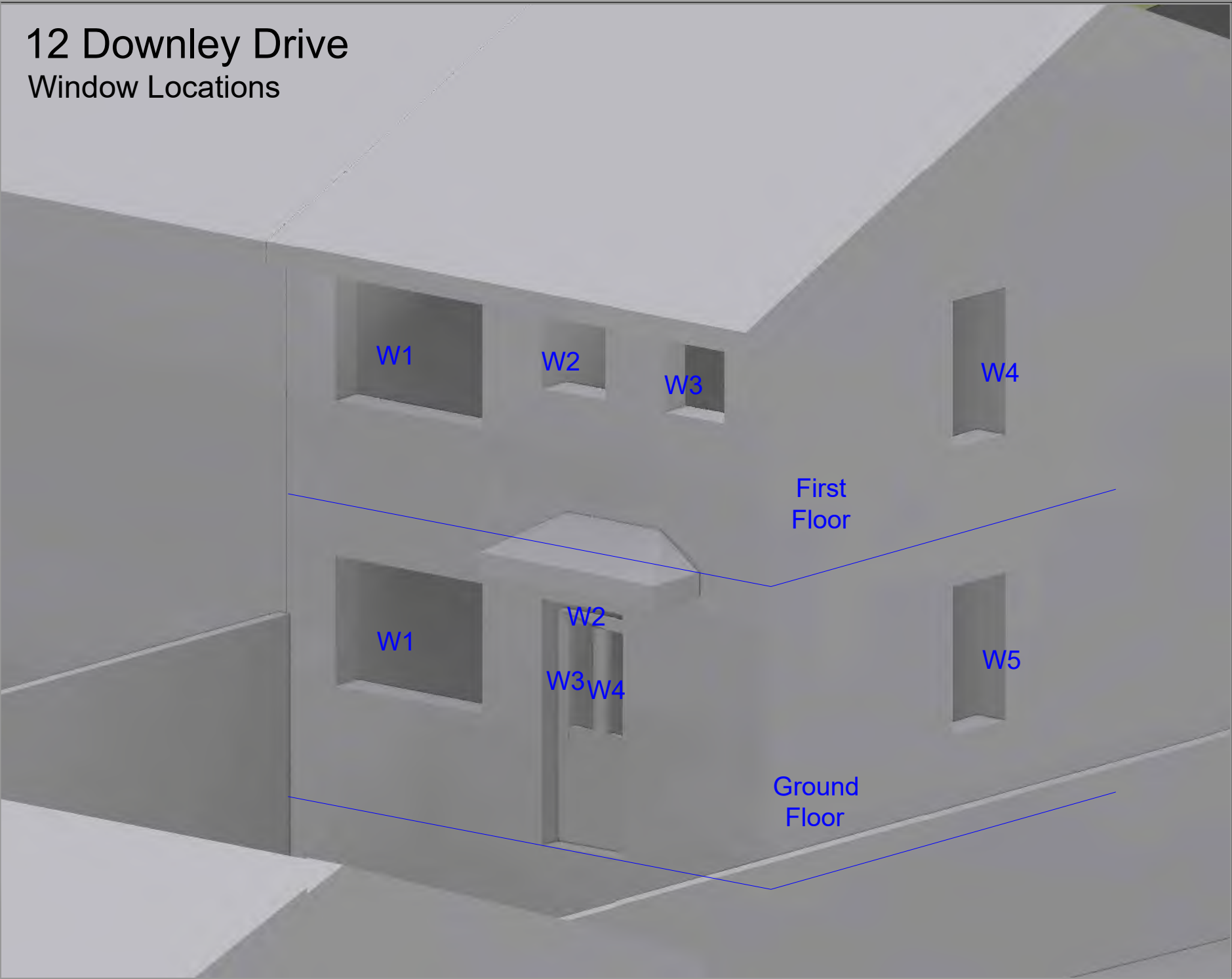
SCALE @ A2: NTS	DATE: 30.03.2021	DRAWN: GSH
CHECKED: DMH		

DRAWING NUMBER: 2793_MA-18	REV: .
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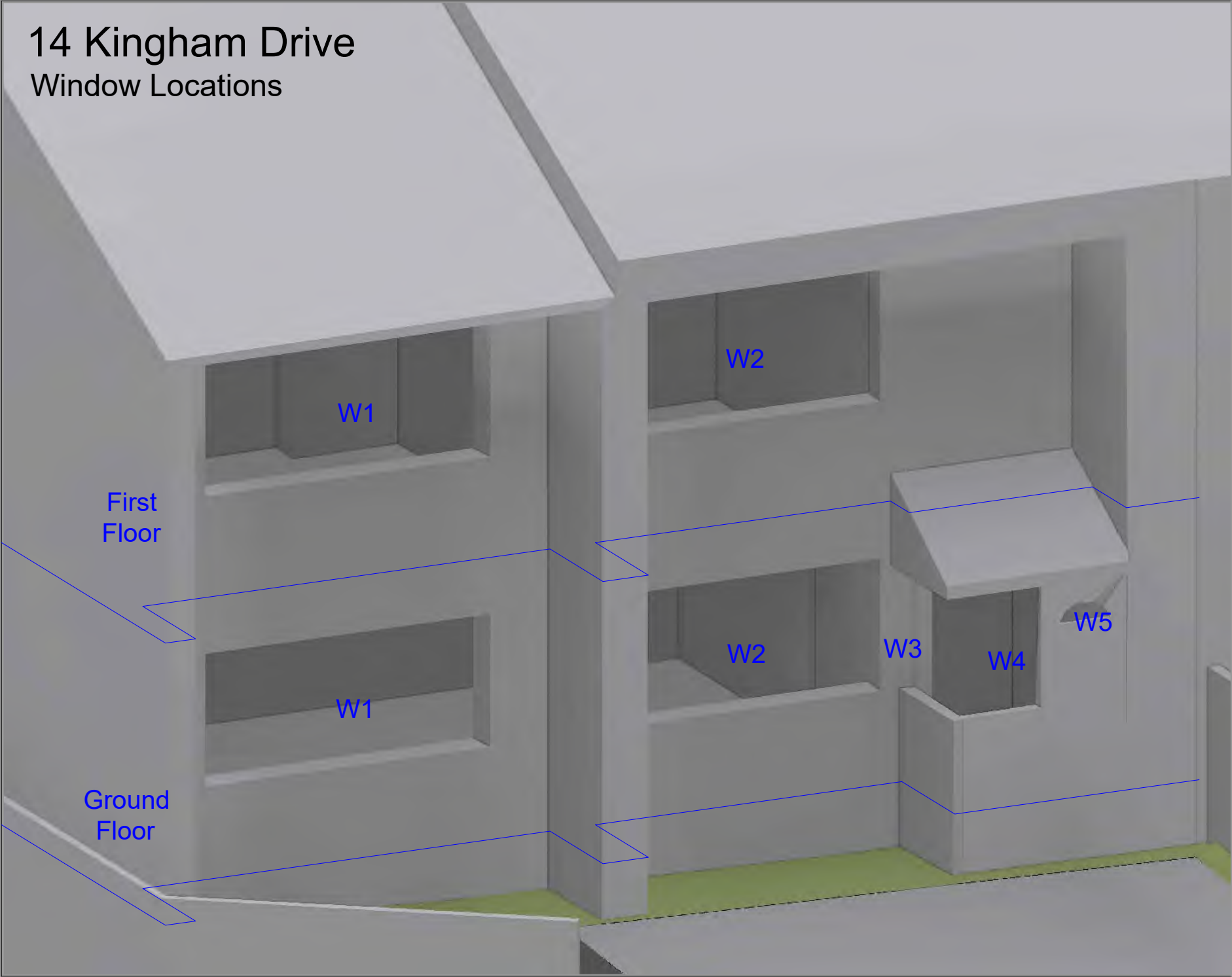
12 Downley Drive
Window Locations



12 Downley Drive
Window Locations



14 Kingham Drive
Window Locations



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 contextual
model.
Neighbouring Buildings internal room layouts, window
positions/dimensions and massing derived from both
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portal.
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have been made based on site photography, Bing
Maps and Google Earth.
Proposed Model
Proposed scheme massing - "Downley Drive Context
model_IBraghiroli - 3D View CAD_19-02-2021.dwg"
Supplied by Buttress on 19/02/2021.

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:
Great Places Housing Group

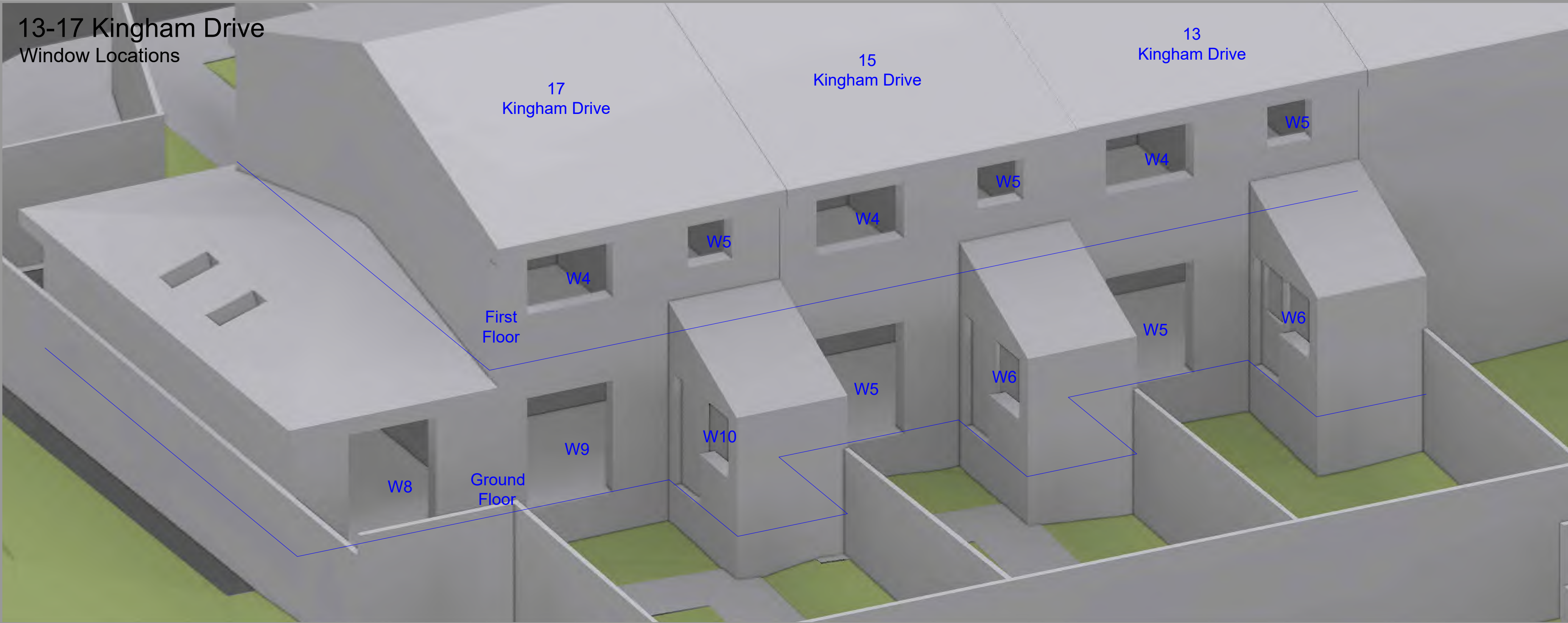
PROJECT:
Downley Drive
Manchester

DRAWING TITLE:
Window Location Plan

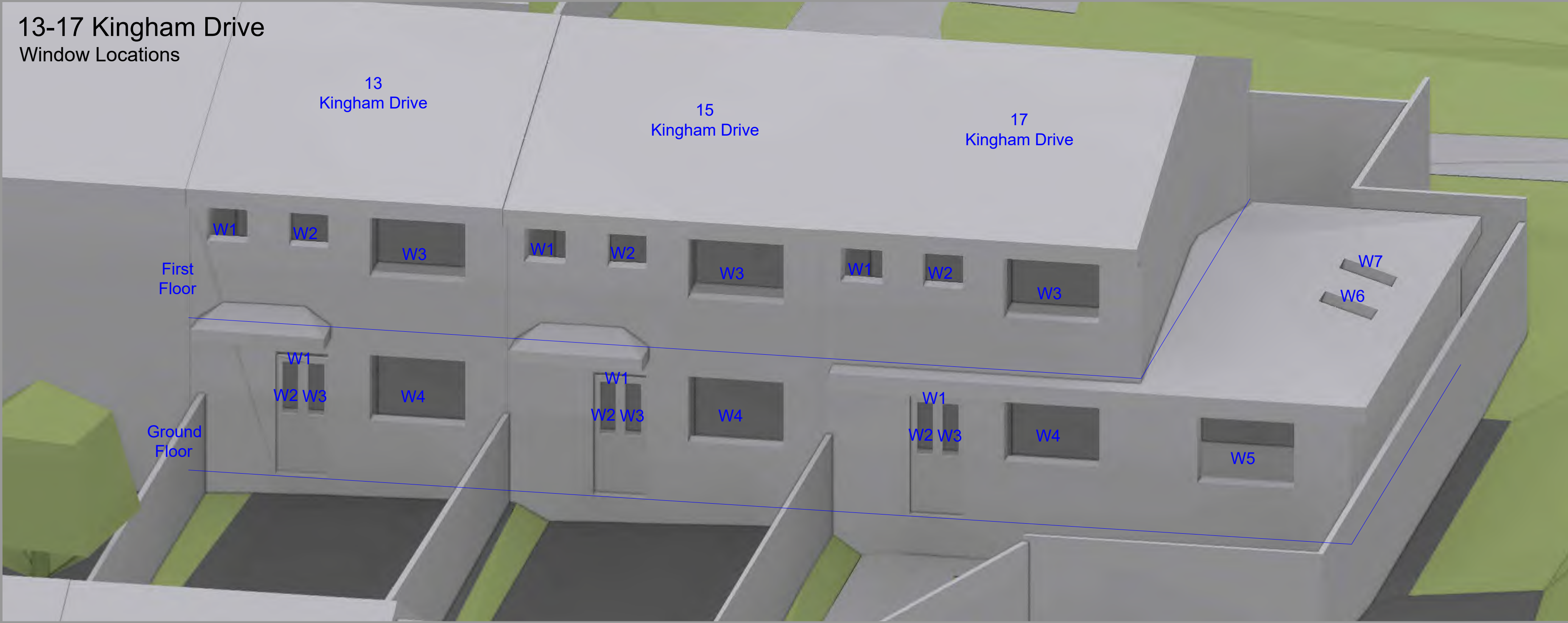
SCALE @ A2: NTS	DATE: 30.03.2021	DRAWN: GSH
	CHECKED: DMH	

DRAWING NUMBER: 2793_MA-19	REV: .
-------------------------------	-----------

13-17 Kingham Drive
Window Locations



13-17 Kingham Drive
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 contextual
model.
Neighbouring Buildings internal room layouts, window
positions/dimensions and massing derived from both
the context model 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 - "Downley Drive Context
model_IBraghioli - 3D View CAD_19-02-2021.dwg"
Supplied by Buttress on 19/02/2021.

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:
Great Places Housing Group

PROJECT:
Downley Drive
Manchester

DRAWING TITLE:
Window Location Plan

SCALE @ A2: NTS	DATE: 30.03.2021	DRAWN: GSH
	CHECKED:	DMH

DRAWING NUMBER: 2793_MA-20	REV: .
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Woodward Street Development 22-26
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 contextual
model.
Neighbouring Buildings internal room layouts, window
positions/dimensions and massing derived from both
the context model 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 - "Downley Drive Context
model_IBraghirol - 3D View CAD_19-02-2021.dwg"
Supplied by Buttress on 19/02/2021.

Massing Legend

Existing
Proposed

All heights in m AOD

Woodward Street Development 27-28
Window Locations



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:
Great Places Housing Group

PROJECT:
Downley Drive
Manchester

DRAWING TITLE:
Window Location Plan

SCALE @ A2:	DATE:	DRAWN:	GSH
NTS	30.03.2021	CHECKED:	DMH

DRAWING NUMBER:	REV:
2793_MA-21	.

Appendix 3: Baseline vs Proposed VSC Results

Project Name: Downley Drive
Project No.: 2793
Report Title: Daylight & Sunlight - Neighbour Analysis
Date of Analysis: 30/03/2021

Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.	Window Ref.	Window Attribute	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex	
Avro House											
Ground	R1		Residential	LKD	W1		35.40	30.41	4.99	0.86	
	R2		Residential	Bedroom	W2		35.80	29.81	5.99	0.83	
					W3		35.90	29.39	6.51	0.82	
	R3		Residential	Bedroom	W4		36.02	29.02	7.00	0.81	
	R4		Residential	Bedroom	W5		36.11	28.35	7.76	0.79	
	R5		Residential	Bedroom	W6		36.02	27.69	8.33	0.77	
					W7		35.70	27.12	8.57	0.76	
	R6		Residential	LKD	W8		28.76	20.01	8.75	0.70	
					W9		14.06	12.73	1.33	0.91	
	First	R1		Residential	Bedroom	W1		37.95	33.78	4.17	0.89
		R2		Residential	Bedroom	W2		38.10	33.14	4.96	0.87
R3			Residential	Bedroom	W3		38.16	32.58	5.58	0.85	
R4			Residential	Bedroom	W4		38.05	32.00	6.05	0.84	
R5			Residential	Bedroom	W5		36.77	30.39	6.39	0.83	
R6			Residential	LKD	W6		30.73	24.29	6.44	0.79	
					W7		16.83	15.80	1.03	0.94	
Second		R1		Residential	Bedroom	W1		39.28	37.22	2.06	0.95
		R2		Residential	Bedroom	W2		39.29	36.84	2.45	0.94
		R3		Residential	Bedroom	W3		39.27	36.49	2.78	0.93
		R4		Residential	Bedroom	W4		39.17	36.11	3.06	0.92
		R5		Residential	Bedroom	W5		38.01	34.72	3.29	0.91
	R6		Residential	LKD	W6		31.73	28.30	3.43	0.89	
					W7		20.41	19.75	0.66	0.97	
	Third	R1		Residential	Bedroom	W1		39.49	39.34	0.15	1.00
		R2		Residential	Bedroom	W2		39.48	39.29	0.19	1.00
		R3		Residential	Bedroom	W3		39.47	39.24	0.23	0.99
		R4		Residential	Bedroom	W4		39.47	39.15	0.31	0.99
		R5		Residential	LKD	W5		39.46	39.07	0.39	0.99
W6							24.53	24.38	0.15	0.99	
Burgess House											
First		R1		Residential	Bedroom	W1		20.88	19.78	1.10	0.95
						W2		23.75	22.63	1.12	0.95
Second		R1		Residential	Bedroom	W1		23.43	22.93	0.50	0.98
						W2		29.63	29.10	0.54	0.98
Third		R1		Residential	Bedroom	W1		38.70	38.68	0.01	1.00
	W2						38.22	38.21	0.01	1.00	
11 Downley Drive											
Ground	R1		Residential	Unknown	W1		7.05	5.67	1.37	0.81	
					W2		23.89	22.24	1.65	0.93	

Project Name: Downley Drive
Project No.: 2793
Report Title: Daylight & Sunlight - Neighbour Analysis
Date of Analysis: 30/03/2021

Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.	Window Ref.	Window Attribute	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
					W3		24.79	23.46	1.33	0.95
	R2		Residential	Unknown	W4		35.12	33.23	1.88	0.95
	R3		Residential	Unknown	W5		35.33	29.65	5.68	0.84
	R4		Residential	Unknown	W6		31.80	31.49	0.32	0.99
First	R1		Residential	Unknown	W1		23.98	22.82	1.16	0.95
					W2		24.02	22.78	1.23	0.95
	R2		Residential	Unknown	W3		30.82	29.43	1.40	0.95
	R3		Residential	Unknown	W4		36.36	32.82	3.54	0.90
	R4		Residential	Unknown	W5		29.74	29.48	0.26	0.99
	R5		Residential	Unknown	W6		26.81	26.66	0.15	0.99
12 Downley Drive										
Ground	R1		Residential	Unknown	W1		33.16	32.04	1.11	0.97
	R2		Residential	Unknown	W2		2.74	1.93	0.81	0.70
					W3		20.37	19.17	1.20	0.94
					W4		20.00	19.44	0.55	0.97
					W5		35.77	30.75	5.02	0.86
	R3		Residential	Unknown	W6		4.15	3.50	0.65	0.84
					W7		21.45	20.75	0.70	0.97
					W8		21.22	19.99	1.23	0.94
	R4		Residential	Unknown	W9		34.52	33.43	1.09	0.97
First	R1		Residential	Unknown	W1		30.53	29.33	1.20	0.96
	R2		Residential	Unknown	W2		24.87	23.56	1.31	0.95
					W3		25.07	23.66	1.41	0.94
					W4		36.72	33.27	3.46	0.91
	R3		Residential	Unknown	W5		29.07	28.30	0.78	0.97
	R4		Residential	Unknown	W6		31.44	30.82	0.62	0.98
13 Kingham Drive										
Ground	R1		Residential	Unknown	W1		6.01	4.47	1.54	0.74
					W2		22.77	20.27	2.50	0.89
					W3		23.53	21.78	1.75	0.93
	R2		Residential	Unknown	W4		33.75	30.89	2.86	0.92
	R3		Residential	Unknown	W5		26.12	25.65	0.47	0.98
	R4		Residential	Unknown	W6		16.60	15.59	1.01	0.94
					W7		20.60	19.55	1.06	0.95
First	R1		Residential	Unknown	W1		23.15	21.25	1.90	0.92
					W2		23.21	21.17	2.05	0.91
	R2		Residential	Unknown	W3		30.02	27.63	2.39	0.92
	R3		Residential	Unknown	W4		30.78	29.98	0.80	0.97
	R4		Residential	Unknown	W5		27.80	27.16	0.65	0.98
14 Kingham Drive										
Ground	R1		Residential	Living Room	W1		30.14	29.34	0.80	0.97

Project Name: Downley Drive
Project No.: 2793
Report Title: Daylight & Sunlight - Neighbour Analysis
Date of Analysis: 30/03/2021

Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.	Window Ref.	Window Attribute	VSC Existing	VSC Proposed	VSC Lost	Pr/Ex
					W2		28.86	28.67	0.19	0.99
	R2		Residential	Circulation	W3		14.08	11.57	2.51	0.82
					W4		34.50	33.39	1.11	0.97
					W5		32.83	31.86	0.97	0.97
First	R1		Residential	Bedroom	W1		18.40	17.83	0.57	0.97
	R2		Residential	Bedroom	W2		18.24	18.11	0.13	0.99
15 Kingham Drive										
Ground	R1		Residential	Unknown	W1		6.46	4.42	2.05	0.68
					W2		23.27	19.80	3.46	0.85
					W3		24.05	21.45	2.61	0.89
	R2		Residential	Unknown	W4		34.56	30.54	4.02	0.88
	R3		Residential	Unknown	W5		26.55	25.77	0.77	0.97
	R4		Residential	Unknown	W6		20.42	19.12	1.30	0.94
First	R1		Residential	Unknown	W1		23.45	20.83	2.61	0.89
					W2		23.51	20.67	2.84	0.88
	R2		Residential	Unknown	W3		30.37	27.04	3.33	0.89
	R3		Residential	Unknown	W4		30.85	29.73	1.12	0.96
	R4		Residential	Unknown	W5		27.89	26.97	0.92	0.97
17 Kingham Drive										
Ground	R1		Residential	Unknown	W1		1.99	0.90	1.09	0.45
					W2		25.65	20.87	4.78	0.81
					W3		25.69	21.89	3.80	0.85
	R2		Residential	Unknown	W4		29.56	24.02	5.54	0.81
	R3		Residential	Unknown	W5		31.89	24.97	6.92	0.78
					W6		89.17	83.01	6.15	0.93
	R4		Residential	Unknown	W7		89.14	83.39	5.75	0.94
					W8		31.45	29.75	1.69	0.95
	R5		Residential	Unknown	W9		31.35	29.12	2.22	0.93
	R6		Residential	Unknown	W10		23.82	20.73	3.08	0.87
First	R1		Residential	Unknown	W1		23.79	20.16	3.63	0.85
					W2		23.89	19.93	3.96	0.83
	R2		Residential	Unknown	W3		30.80	26.10	4.70	0.85
	R3		Residential	Unknown	W4		30.91	29.40	1.51	0.95
	R4		Residential	Unknown	W5		27.91	26.63	1.28	0.95
11 Woodward Place										
Ground	R1		Residential	Living Room	W1		28.27	26.14	2.13	0.92
					W2		20.98	20.82	0.16	0.99
	R2		Residential	KD	W3		8.37	7.96	0.42	0.95
					W4		20.13	19.11	1.02	0.95
					W5		30.70	30.70	0.00	1.00
					W6		31.61	31.61	0.00	1.00
First	R1		Residential	Bedroom	W1		37.05	35.67	1.38	0.96

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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
					W2		30.90	30.28	0.63	0.98
	R2		Residential	Circulation	W3		22.78	21.62	1.16	0.95
					W4		24.65	24.16	0.49	0.98
	R3		Residential	Bedroom	W5		25.76	24.66	1.10	0.96
					W6		36.95	36.95	0.00	1.00
	R4		Residential	Bedroom	W7		36.98	36.98	0.00	1.00
13 Woodward Place										
Ground	R1		Residential	KD	W1		19.24	19.06	0.18	0.99
					W2		8.03	8.03	0.00	1.00
					W5		30.64	30.64	0.00	1.00
					W6		30.13	30.13	0.00	1.00
	R2		Residential	Living Room	W3		11.76	11.76	0.00	1.00
					W4		35.77	31.73	4.04	0.89
First	R1		Residential	Bedroom	W1		25.49	25.00	0.49	0.98
					W8		36.84	36.84	0.00	1.00
	R2		Residential	Circulation	W2		24.66	24.66	0.00	1.00
					W3		23.40	23.09	0.31	0.99
	R3		Residential	Bedroom	W4		28.62	28.62	0.00	1.00
					W5		37.40	35.18	2.21	0.94
					W6		37.37	34.99	2.38	0.94
	R4		Residential	Bedroom	W7		36.88	36.88	0.00	1.00
15 Woodward Place										
Ground	R1		Residential	Living Room	W1		27.58	22.85	4.73	0.83
					W2		17.69	17.67	0.02	1.00
	R2		Residential	KD	W3		5.95	5.95	0.00	1.00
					W4		17.46	16.28	1.18	0.93
					W5		30.04	30.04	0.00	1.00
					W6		31.07	31.07	0.00	1.00
First	R1		Residential	Bedroom	W1		37.19	34.30	2.89	0.92
					W2		29.67	29.37	0.31	0.99
	R2		Residential	Circulation	W3		22.57	20.83	1.74	0.92
					W4		23.03	22.85	0.19	0.99
	R3		Residential	Bedroom	W5		24.71	23.20	1.51	0.94
					W6		36.69	36.69	0.00	1.00
	R4		Residential	Bedroom	W7		36.83	36.83	0.00	1.00
17 Woodward Place										
Ground	R1		Residential	KD	W1		16.95	15.81	1.14	0.93
					W2		5.48	5.38	0.09	0.98
					W5		30.61	30.61	0.00	1.00
					W6		29.66	29.66	0.00	1.00
	R2		Residential	Living Room	W3		8.20	8.20	0.00	1.00
					W4		35.34	30.30	5.04	0.86
First	R1		Residential	Bedroom	W1		25.22	23.78	1.44	0.94
					W8		36.58	36.58	0.00	1.00
	R2		Residential	Circulation	W2		23.55	23.31	0.25	0.99
					W3		23.65	21.95	1.70	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
	R3		Residential	Bedroom	W4		27.84	27.40	0.44	0.98
					W5		37.05	34.26	2.79	0.92
					W6		36.97	34.44	2.52	0.93
	R4		Residential	Bedroom	W7		36.47	36.47	0.00	1.00
19 Woodward Place										
Ground	R1		Residential	Living Room	W1		26.88	22.89	3.99	0.85
					W2		17.65	17.61	0.04	1.00
	R2		Residential	KD	W3		6.01	5.75	0.26	0.96
					W4		17.56	17.22	0.34	0.98
					W5		30.17	30.17	0.00	1.00
					W6		31.32	31.32	0.00	1.00
First	R1		Residential	Bedroom	W1		36.81	34.38	2.42	0.93
					W2		28.80	28.60	0.19	0.99
	R2		Residential	Circulation	W3		22.49	21.65	0.84	0.96
					W4		22.82	22.69	0.14	0.99
	R3		Residential	Bedroom	W5		24.47	23.57	0.90	0.96
					W6		36.67	36.67	0.00	1.00
	R4		Residential	Bedroom	W7		36.82	36.82	0.00	1.00
21 Woodward Place										
Ground	R1		Residential	KD	W1		17.09	16.88	0.21	0.99
					W2		5.39	5.27	0.12	0.98
					W5		30.75	30.75	0.00	1.00
					W6		29.79	29.79	0.00	1.00
	R2		Residential	Living Room	W3		8.23	8.23	0.00	1.00
					W4		34.28	28.39	5.89	0.83
First	R1		Residential	Living Room	W1		25.14	23.99	1.15	0.95
					W8		36.44	36.44	0.00	1.00
	R2		Residential	Circulation	W2		23.47	23.08	0.39	0.98
					W3		23.76	22.46	1.30	0.95
	R3		Residential	Bedroom	W4		27.54	26.80	0.74	0.97
					W5		36.24	33.43	2.81	0.92
					W6		36.04	32.74	3.30	0.91
	R4		Residential	Bedroom	W7		36.22	36.22	0.00	1.00
23 Woodward Place										
Ground	R1		Residential	Living Room	W1		26.68	19.45	7.22	0.73
					W2		16.11	16.11	0.00	1.00
	R2		Residential	KD	W3		6.55	6.55	0.00	1.00
					W4		17.50	16.61	0.89	0.95
					W5		30.40	30.40	0.00	1.00
					W6		30.73	30.73	0.00	1.00
First	R1		Residential	Bedroom	W1		35.68	31.40	4.27	0.88
					W2		28.30	28.15	0.15	0.99
	R2		Residential	Unknown	W3		21.55	20.04	1.51	0.93
					W4		21.95	21.91	0.05	1.00
					W7		25.74	25.74	0.00	1.00
	R3		Residential	Bedroom	W5		24.18	22.73	1.46	0.94
					W6		35.86	35.86	0.00	1.00

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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	
25 Woodward Place											
Ground	R1		Residential	KD	W1		17.60	16.31	1.29	0.93	
					W2		6.47	6.30	0.17	0.97	
					W5		29.54	29.54	0.00	1.00	
					W6		30.19	30.19	0.00	1.00	
	R2		Residential	Living Room	W3		8.23	8.23	0.00	1.00	
					W4		31.02	26.56	4.46	0.86	
First	R1		Residential	Bedroom	W1		25.41	23.81	1.60	0.94	
					W8		35.36	35.36	0.00	1.00	
	R2		Residential	Unknown	W2		22.98	22.31	0.67	0.97	
					W3		23.77	21.65	2.12	0.91	
					W7		29.62	29.62	0.00	1.00	
	R3		Residential	Bedroom	W4		28.95	27.51	1.44	0.95	
					W5		33.64	30.70	2.94	0.91	
					W6		33.04	30.36	2.68	0.92	
	Engels House										
	Ground	R1		Residential	LKD	W1		14.85	12.91	1.94	0.87
						W2		35.19	28.10	7.09	0.80
R2			Residential	Bedroom	W3		34.82	27.98	6.84	0.80	
R3			Residential	Bedroom	W4		34.06	27.39	6.67	0.80	
R4			Residential	LKD	W5		27.86	20.82	7.04	0.75	
R5			Residential	Bedroom	W6		35.01	27.32	7.69	0.78	
R6			Residential	Bedroom	W7		35.67	27.81	7.87	0.78	
R7			Residential	Bedroom	W8		35.98	28.05	7.93	0.78	
R8			Residential	Bedroom	W9		34.24	26.94	7.29	0.79	
R9			Residential	LKD	W10		28.72	22.19	6.54	0.77	
First	R1		Residential	LKD	W1		14.73	13.61	1.12	0.92	
	R2		Residential	Bedroom	W2		37.68	32.22	5.46	0.86	
	R3		Residential	Bedroom	W3		37.00	31.55	5.45	0.85	
	R4		Residential	LKD	W4		30.51	24.87	5.64	0.82	
	R5		Residential	Bedroom	W5		35.98	30.10	5.88	0.84	
	R6		Residential	Bedroom	W6		37.91	31.78	6.13	0.84	
	R7		Residential	Bedroom	W7		38.07	31.85	6.22	0.84	
	R8		Residential	Bedroom	W8		36.42	30.50	5.92	0.84	
	R9		Residential	LKD	W9		31.02	25.51	5.50	0.82	
	R10		Residential	LKD	W10		24.10	22.11	1.99	0.92	
Second	R1		Residential	LKD	W1		19.42	18.96	0.46	0.98	
	R2		Residential	Bedroom	W2		39.21	36.22	2.99	0.92	
	R3		Residential	Bedroom	W3		38.55	35.50	3.05	0.92	

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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
	R4		Residential	LKD	W4		31.81	28.70	3.11	0.90
	R5		Residential	Bedroom	W5		37.15	33.98	3.17	0.91
	R6		Residential	Bedroom	W6		38.93	35.60	3.33	0.91
	R7		Residential	Bedroom	W7		38.92	35.55	3.37	0.91
	R8		Residential	Bedroom	W8		37.17	33.91	3.26	0.91
	R9		Residential	LKD	W9		31.72	28.64	3.08	0.90
	R10		Residential	LKD	W10		21.93	20.66	1.27	0.94
Third	R1		Residential	LKD	W1		34.45	34.45	0.00	1.00
	R2		Residential	Bedroom	W2		39.34	39.16	0.18	1.00
	R3		Residential	Bedroom	W3		38.83	38.62	0.21	0.99
	R4		Residential	LKD	W4		31.87	31.60	0.27	0.99
	R5		Residential	Bedroom	W5		37.43	37.13	0.31	0.99
	R6		Residential	Bedroom	W6		39.17	38.79	0.38	0.99
	R7		Residential	Bedroom	W7		39.16	38.70	0.46	0.99
	R8		Residential	Bedroom	W8		37.46	36.93	0.53	0.99
	R9		Residential	LKD	W9		31.79	31.22	0.57	0.98
	R10		Residential	LKD	W10		22.05	21.44	0.60	0.97
Fourth	R1		Residential	LKD	W1		38.85	38.85	0.00	1.00
					W2		39.45	39.42	0.03	1.00
	R2		Residential	Bedroom	W3		39.45	39.41	0.04	1.00
	R3		Residential	LKD	W4		39.44	39.40	0.04	1.00
	R4		Residential	Bedroom	W5		39.43	39.37	0.06	1.00
	R5		Residential	Bedroom	W6		39.43	39.36	0.06	1.00
	R6		Residential	Bedroom	W7		39.41	39.34	0.07	1.00
	R7		Residential	Bedroom	W8		39.41	39.33	0.09	1.00
	R8		Residential	LKD	W9		39.41	39.31	0.09	1.00
	R9		Residential	LKD	W10		20.81	20.70	0.11	0.99
Fifth	R1		Residential	Unknown	W1		37.86	37.86	0.00	1.00
	R2		Residential	Unknown	W2		38.18	38.18	0.00	1.00
	R3		Residential	Unknown	W3		37.86	37.86	0.00	1.00
	R4		Residential	Unknown	W4		38.11	38.11	0.00	1.00
	R5		Residential	Unknown	W5		38.86	38.86	0.00	1.00
	R6		Residential	LKD	W6		23.83	23.83	0.00	1.00

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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
Ground	R2		Residential	KD	W2	W3	37.92	37.43	0.49	0.99
							36.97	35.01	1.96	0.95
First	R1		Residential	Bedroom	W1		38.85	38.60	0.25	0.99
	R2		Residential	Bedroom	W2		38.09	36.59	1.50	0.96
	R3		Residential	Bathroom	W3		29.58	28.65	0.93	0.97
Woodward Street Development No 23										
Ground	R2		Residential	Living Room	W2		34.88	33.25	1.63	0.95
First	R1		Residential	Bedroom	W1		37.29	35.98	1.30	0.97
					W2		37.34	36.08	1.26	0.97
Woodward Street Development No 24										
Ground	R2		Residential	KD	W3		36.53	34.99	1.54	0.96
First	R2		Residential	Bedroom	W2		37.81	36.62	1.19	0.97
Woodward Street Development No 25										
Ground	R1		Residential	Living Room	W1		35.59	34.20	1.39	0.96
First	R1		Residential	Bedroom	W1		37.69	36.63	1.05	0.97
					W2		37.68	36.67	1.01	0.97
Woodward Street Development No 26										
Ground	R2		Residential	Living Room	W2		35.46	34.28	1.18	0.97
First	R1		Residential	Bedroom	W1		37.66	36.72	0.94	0.97
					W2		37.65	36.75	0.90	0.98
Woodward Street Development No 27										
Ground	R2		Residential	KD	W2		27.23	26.11	1.13	0.96
					W3		36.33	35.75	0.58	0.98
First	R1		Residential	Bedroom	W1		27.20	27.03	0.17	0.99
	R2		Residential	Bedroom	W2		37.81	37.35	0.46	0.99
Woodward Street Development No 28										
Ground	R2		Residential	KD	W3		36.80	36.36	0.44	0.99
First	R2		Residential	Bedroom	W2		38.08	37.73	0.35	0.99

Appendix 4: Baseline vs Proposed NSL Contour Plots

Project Name: Downley Drive Project No.: 2793 Report Title: Daylight Distribution - Neighbour Analysis									
Floor Ref.	Room Ref.	Room Attribute	Room Use.	Room Area m2	Lit Area m2 Existing	Existing % lit	Lit Area m2 Proposed	Proposed % lit	Pr/Ex
Avro House									
Ground	R1		LKD	25.18	25.12	100%	25.12	100%	1.00
Ground	R2		Bedroom	10.59	10.52	99%	10.35	98%	0.98
Ground	R3		Bedroom	14.08	12.65	90%	10.27	73%	0.81
Ground	R4		Bedroom	13.88	12.95	93%	10.14	73%	0.78
Ground	R5		Bedroom	19.25	17.86	93%	17.04	89%	0.95
Ground	R6		LKD	31.11	27.83	89%	20.71	67%	0.74
First	R1		Bedroom	10.59	9.86	93%	9.86	93%	1.00
First	R2		Bedroom	14.08	12.65	90%	12.59	89%	1.00
First	R3		Bedroom	13.88	12.95	93%	12.95	93%	1.00
First	R4		Bedroom	11.49	10.56	92%	10.56	92%	1.00
First	R5		Bedroom	7.39	7.16	97%	7.16	97%	1.00
First	R6		LKD	31.11	27.85	90%	24.78	80%	0.89
Second	R1		Bedroom	10.59	9.86	93%	9.86	93%	1.00
Second	R2		Bedroom	14.08	12.65	90%	12.65	90%	1.00
Second	R3		Bedroom	13.88	12.95	93%	12.95	93%	1.00
Second	R4		Bedroom	11.49	10.56	92%	10.56	92%	1.00
Second	R5		Bedroom	7.39	7.16	97%	7.16	97%	1.00
Second	R6		LKD	31.11	27.85	90%	27.60	89%	0.99
Third	R1		Bedroom	14.08	12.65	90%	12.65	90%	1.00
Third	R2		Bedroom	13.88	12.95	93%	12.95	93%	1.00
Third	R3		Bedroom	11.49	10.56	92%	10.56	92%	1.00
Third	R4		Bedroom	7.39	7.16	97%	7.16	97%	1.00
Third	R5		LKD	31.11	27.85	90%	27.85	90%	1.00
11 Downley Drive									
Ground	R1		Unknown	6.69	6.36	95%	6.36	95%	1.00
Ground	R2		Unknown	7.42	7.40	100%	7.40	100%	1.00
Ground	R3		Unknown	4.68	4.14	89%	4.14	89%	1.00
Ground	R4		Unknown	10.23	10.06	98%	9.94	97%	0.99
First	R1		Unknown	6.69	5.85	87%	5.85	87%	1.00
First	R2		Unknown	7.42	7.40	100%	7.40	100%	1.00
First	R3		Unknown	4.68	4.14	89%	4.14	88%	1.00
First	R4		Unknown	7.72	7.68	99%	7.68	99%	1.00
First	R5		Unknown	6.40	6.05	95%	6.05	95%	1.00
12 Downley Drive									
Ground	R1		Unknown	7.42	7.38	99%	7.38	99%	1.00
Ground	R2		Unknown	6.69	6.45	96%	6.45	96%	1.00
Ground	R3		Unknown	6.38	6.27	98%	6.27	98%	1.00
Ground	R4		Unknown	7.72	7.66	99%	7.66	99%	1.00
First	R1		Unknown	7.42	7.40	100%	7.40	100%	1.00
First	R2		Unknown	6.69	6.35	95%	6.35	95%	1.00
First	R3		Unknown	6.38	6.04	95%	6.04	95%	1.00
First	R4		Unknown	7.72	7.66	99%	7.66	99%	1.00
13 Kingham Drive									
Ground	R1		Unknown	6.69	6.36	95%	6.36	95%	1.00
Ground	R2		Unknown	7.94	7.90	100%	7.90	100%	1.00
Ground	R3		Unknown	14.93	12.02	81%	11.83	79%	0.98
Ground	R4		Unknown	3.08	3.08	100%	3.08	100%	1.00
First	R1		Unknown	6.69	5.85	87%	5.85	87%	1.00
First	R2		Unknown	7.94	7.91	100%	7.90	100%	1.00
First	R3		Unknown	8.23	8.18	99%	8.18	99%	1.00
First	R4		Unknown	6.40	6.05	95%	6.05	95%	1.00
14 Kingham Drive									
Ground	R1		Living Room	24.92	24.80	100%	24.80	100%	1.00
Ground	R2		Circulation	5.58	5.52	99%	5.52	99%	1.00
First	R1		Bedroom	12.24	12.12	99%	12.10	99%	1.00
First	R2		Bedroom	7.81	7.81	100%	7.81	100%	1.00
15 Kingham Drive									
Ground	R1		Unknown	6.69	6.36	95%	6.35	95%	1.00
Ground	R2		Unknown	7.94	7.90	100%	7.90	100%	1.00
Ground	R3		Unknown	14.93	12.01	80%	11.20	75%	0.93
Ground	R4		Unknown	3.08	3.05	99%	3.05	99%	1.00
First	R1		Unknown	6.69	5.83	87%	5.83	87%	1.00
First	R2		Unknown	7.94	7.90	100%	7.89	99%	1.00

Project Name: Downley Drive
Project No.: 2793
Report Title: Daylight Distribution - Neighbour Analysis

Floor Ref.	Room Ref.	Room Attribute	Room Use.	Room Area m2	Lit Area m2 Existing	Existing % lit	Lit Area m2 Proposed	Proposed % lit	Pr/Ex
First	R3		Unknown	8.23	8.19	99%	8.19	99%	1.00
First	R4		Unknown	6.40	6.05	95%	6.05	95%	1.00
17 Kingham Drive									
Ground	R1		Unknown	6.69	6.36	95%	5.64	84%	0.89
Ground	R2		Unknown	7.49	7.29	97%	7.28	97%	1.00
Ground	R3		Unknown	13.61	13.55	100%	13.55	100%	1.00
Ground	R4		Unknown	13.62	13.58	100%	13.55	99%	1.00
Ground	R5		Unknown	14.48	13.35	92%	13.09	90%	0.98
Ground	R6		Unknown	3.08	3.06	99%	3.06	99%	1.00
First	R1		Unknown	6.69	5.83	87%	5.83	87%	1.00
First	R2		Unknown	7.49	7.46	100%	7.45	99%	1.00
First	R3		Unknown	7.78	7.74	99%	7.74	99%	1.00
First	R4		Unknown	6.40	6.05	95%	6.05	95%	1.00
11 Woodward Place									
Ground	R1		Living Room	11.46	11.44	100%	11.44	100%	1.00
Ground	R2		KD	28.08	27.62	98%	27.57	98%	1.00
First	R1		Bedroom	11.46	11.37	99%	11.37	99%	1.00
First	R2		Circulation	7.19	6.39	89%	6.39	89%	1.00
First	R3		Bedroom	11.67	11.67	100%	11.67	100%	1.00
First	R4		Bedroom	11.67	11.47	98%	11.47	98%	1.00
13 Woodward Place									
Ground	R1		KD	28.21	26.68	95%	26.68	95%	1.00
Ground	R2		Living Room	11.81	11.67	99%	11.67	99%	1.00
First	R1		Bedroom	11.67	11.67	100%	11.67	100%	1.00
First	R2		Circulation	7.07	6.38	90%	6.38	90%	1.00
First	R3		Bedroom	11.81	11.81	100%	11.81	100%	1.00
First	R4		Bedroom	11.67	11.44	98%	11.44	98%	1.00
15 Woodward Place									
Ground	R1		Living Room	11.88	11.85	100%	11.85	100%	1.00
Ground	R2		KD	29.43	27.79	94%	27.79	94%	1.00
First	R1		Bedroom	11.88	11.81	99%	11.81	99%	1.00
First	R2		Circulation	7.00	6.45	92%	6.45	92%	1.00
First	R3		Bedroom	12.36	12.36	100%	12.36	100%	1.00
First	R4		Bedroom	12.36	12.14	98%	12.14	98%	1.00
17 Woodward Place									
Ground	R1		KD	29.08	27.48	94%	27.48	94%	1.00
Ground	R2		Living Room	12.13	12.02	99%	12.02	99%	1.00
First	R1		Bedroom	12.19	12.19	100%	12.19	100%	1.00
First	R2		Circulation	6.95	6.39	92%	6.39	92%	1.00
First	R3		Bedroom	12.13	12.12	100%	12.12	100%	1.00
First	R4		Bedroom	12.19	11.99	98%	11.99	98%	1.00
19 Woodward Place									
Ground	R1		Living Room	12.38	12.35	100%	12.35	100%	1.00
Ground	R2		KD	28.98	27.50	95%	27.49	95%	1.00
First	R1		Bedroom	12.38	12.31	99%	12.31	99%	1.00
First	R2		Circulation	6.84	6.46	94%	6.46	94%	1.00
First	R3		Bedroom	12.34	12.34	100%	12.34	100%	1.00
First	R4		Bedroom	12.34	12.15	98%	12.15	98%	1.00
21 Woodward Place									
Ground	R1		KD	28.72	27.28	95%	27.26	95%	1.00
Ground	R2		Living Room	12.62	12.45	99%	12.41	98%	1.00
First	R1		Living Room	12.21	12.21	100%	12.21	100%	1.00
First	R2		Circulation	6.79	6.42	95%	6.42	95%	1.00
First	R3		Bedroom	12.62	12.59	100%	12.59	100%	1.00
First	R4		Bedroom	12.21	12.02	98%	12.02	98%	1.00
23 Woodward Place									
Ground	R1		Living Room	13.20	13.16	100%	12.74	97%	0.97
Ground	R2		KD	33.60	32.54	97%	32.54	97%	1.00
First	R1		Bedroom	13.20	13.15	100%	13.15	100%	1.00
First	R2		Unknown	16.47	16.32	99%	16.32	99%	1.00
First	R3		Bedroom	11.65	11.65	100%	11.65	100%	1.00
25 Woodward Place									
Ground	R1		KD	33.99	33.03	97%	33.03	97%	1.00
Ground	R2		Living Room	13.05	12.81	98%	12.81	98%	1.00

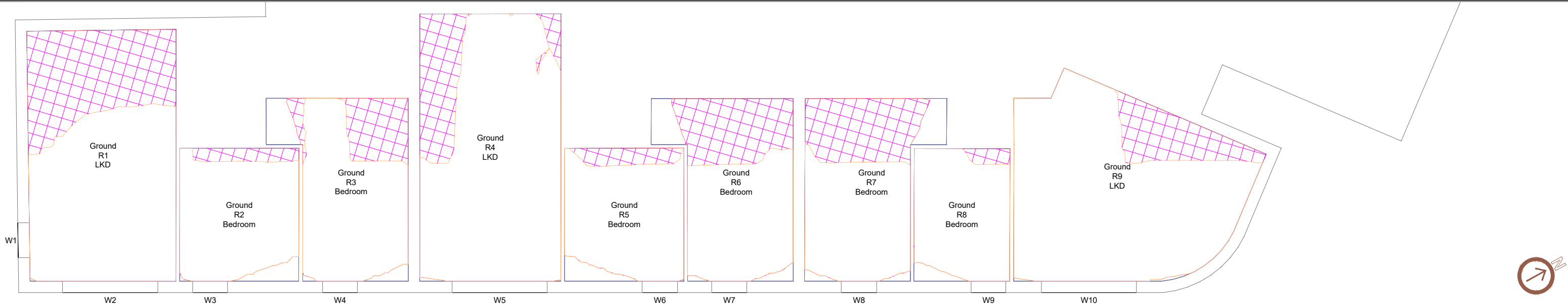
Project Name: Downley Drive Project No.: 2793 Report Title: Daylight Distribution - Neighbour Analysis									
Floor Ref.	Room Ref.	Room Attribute	Room Use.	Room Area m2	Lit Area m2 Existing	Existing % lit	Lit Area m2 Proposed	Proposed % lit	Pr/Ex
First	R1		Bedroom	10.94	10.94	100%	10.94	100%	1.00
First	R2		Unknown	16.84	16.81	100%	16.81	100%	1.00
First	R3		Bedroom	13.05	13.00	100%	13.00	100%	1.00
Burgess House									
First	R1		Bedroom	11.45	10.65	93%	10.65	93%	1.00
Second	R1		Bedroom	11.45	11.20	98%	11.20	98%	1.00
Third	R1		Bedroom	11.45	11.07	97%	11.07	97%	1.00
Engels House									
Ground	R1		LKD	25.31	25.30	100%	16.24	64%	0.64
Ground	R2		Bedroom	10.81	10.23	95%	9.27	86%	0.91
Ground	R3		Bedroom	14.35	13.17	92%	10.19	71%	0.77
Ground	R4		LKD	25.80	25.75	100%	21.30	83%	0.83
Ground	R5		Bedroom	10.83	10.18	94%	9.00	83%	0.88
Ground	R6		Bedroom	14.33	13.20	92%	8.44	59%	0.64
Ground	R7		Bedroom	14.33	13.27	93%	8.44	59%	0.64
Ground	R8		Bedroom	8.68	8.30	96%	7.85	90%	0.95
Ground	R9		LKD	27.20	27.12	100%	23.36	86%	0.86
First	R1		LKD	25.31	24.90	98%	24.86	98%	1.00
First	R2		Bedroom	10.81	10.23	95%	10.23	95%	1.00
First	R3		Bedroom	14.35	13.17	92%	13.12	91%	1.00
First	R4		LKD	25.80	25.75	100%	23.75	92%	0.92
First	R5		Bedroom	10.83	10.29	95%	10.29	95%	1.00
First	R6		Bedroom	14.33	13.20	92%	13.14	92%	1.00
First	R7		Bedroom	14.33	13.27	93%	13.21	92%	1.00
First	R8		Bedroom	8.68	8.30	96%	8.30	96%	1.00
First	R9		LKD	27.20	27.12	100%	27.12	100%	1.00
First	R10		LKD	25.22	24.91	99%	24.82	98%	1.00
Second	R1		LKD	25.31	25.00	99%	25.00	99%	1.00
Second	R2		Bedroom	10.81	10.23	95%	10.23	95%	1.00
Second	R3		Bedroom	14.35	13.17	92%	13.17	92%	1.00
Second	R4		LKD	25.80	25.75	100%	25.75	100%	1.00
Second	R5		Bedroom	10.83	10.29	95%	10.29	95%	1.00
Second	R6		Bedroom	14.33	13.20	92%	13.19	92%	1.00
Second	R7		Bedroom	14.33	13.27	93%	13.27	93%	1.00
Second	R8		Bedroom	8.68	8.30	96%	8.30	96%	1.00
Second	R9		LKD	27.20	27.12	100%	27.12	100%	1.00
Second	R10		LKD	25.22	23.43	93%	23.43	93%	1.00
Third	R1		LKD	25.31	25.25	100%	25.25	100%	1.00
Third	R2		Bedroom	10.81	10.23	95%	10.23	95%	1.00
Third	R3		Bedroom	14.35	13.17	92%	13.17	92%	1.00
Third	R4		LKD	25.80	25.75	100%	25.75	100%	1.00
Third	R5		Bedroom	10.83	10.29	95%	10.29	95%	1.00
Third	R6		Bedroom	14.33	13.20	92%	13.20	92%	1.00
Third	R7		Bedroom	14.33	13.28	93%	13.28	93%	1.00
Third	R8		Bedroom	8.68	8.30	96%	8.30	96%	1.00
Third	R9		LKD	27.20	27.12	100%	27.12	100%	1.00
Third	R10		LKD	25.22	23.43	93%	23.43	93%	1.00
Fourth	R1		LKD	14.53	14.53	100%	14.53	100%	1.00
Fourth	R2		Bedroom	14.35	13.18	92%	13.18	92%	1.00
Fourth	R3		LKD	25.80	25.75	100%	25.75	100%	1.00
Fourth	R4		Bedroom	10.83	10.83	100%	10.83	100%	1.00
Fourth	R5		Bedroom	14.33	13.20	92%	13.20	92%	1.00
Fourth	R6		Bedroom	14.33	13.27	93%	13.27	93%	1.00
Fourth	R7		Bedroom	8.68	8.68	100%	8.68	100%	1.00
Fourth	R8		LKD	27.20	27.12	100%	27.12	100%	1.00
Fourth	R9		LKD	25.22	23.43	93%	23.43	93%	1.00
Fifth	R1		Unknown	7.25	6.99	96%	6.99	96%	1.00
Fifth	R2		Unknown	15.42	15.30	99%	15.30	99%	1.00
Fifth	R3		Unknown	7.99	7.88	99%	7.88	99%	1.00
Fifth	R4		Unknown	7.99	7.87	98%	7.87	98%	1.00
Fifth	R5		Unknown	13.91	13.26	95%	13.26	95%	1.00
Fifth	R6		LKD	25.22	23.45	93%	23.45	93%	1.00
Woodward Street Development No 22									
Ground	R2		KD	14.35	14.35	100%	14.35	100%	1.00

Project Name: Downley Drive
Project No.: 2793
Report Title: Daylight Distribution - Neighbour Analysis

Floor Ref.	Room Ref.	Room Attribute	Room Use.	Room Area m2	Lit Area m2 Existing	Existing % lit	Lit Area m2 Proposed	Proposed % lit	Pr/Ex
First	R1		Bedroom	12.44	10.49	84%	10.37	83%	0.99
First	R2		Bedroom	12.44	12.37	99%	12.28	99%	0.99
Woodward Street Development No 23									
Ground	R2		Living Room	15.16	14.90	98%	14.90	98%	1.00
First	R1		Bedroom	14.97	14.63	98%	14.63	98%	1.00
Woodward Street Development No 24									
Ground	R2		KD	14.35	14.29	100%	14.29	100%	1.00
First	R2		Bedroom	12.42	12.36	99%	12.36	99%	1.00
Woodward Street Development No 25									
Ground	R1		Living Room	16.10	15.86	99%	15.86	99%	1.00
First	R1		Bedroom	15.88	15.55	98%	15.55	98%	1.00
Woodward Street Development No 26									
Ground	R2		Living Room	16.10	15.88	99%	15.88	99%	1.00
First	R1		Bedroom	15.88	15.57	98%	15.57	98%	1.00
Woodward Street Development No 27									
Ground	R2		KD	14.35	14.29	100%	14.29	100%	1.00
First	R1		Bedroom	12.44	9.70	78%	9.70	78%	1.00
First	R2		Bedroom	12.44	12.37	99%	12.37	99%	1.00
Woodward Street Development No 28									
Ground	R2		KD	14.35	14.29	100%	14.29	100%	1.00
First	R2		Bedroom	12.44	12.37	99%	12.37	99%	1.00

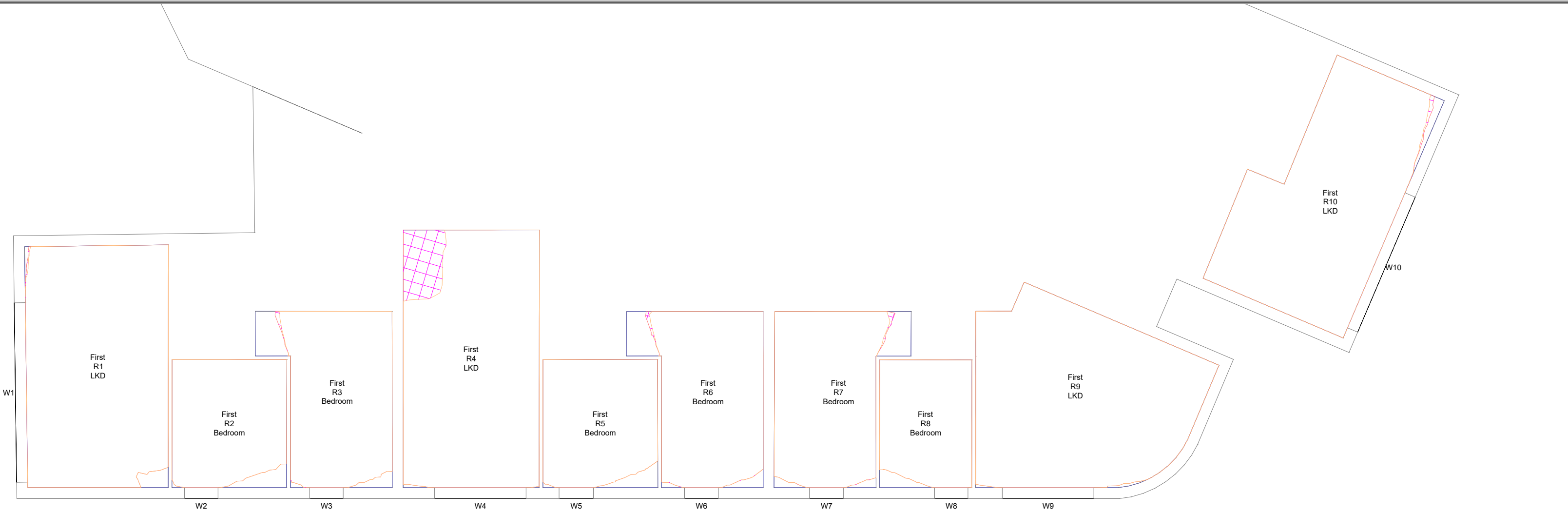
Engels House
Ground Floor

1:100



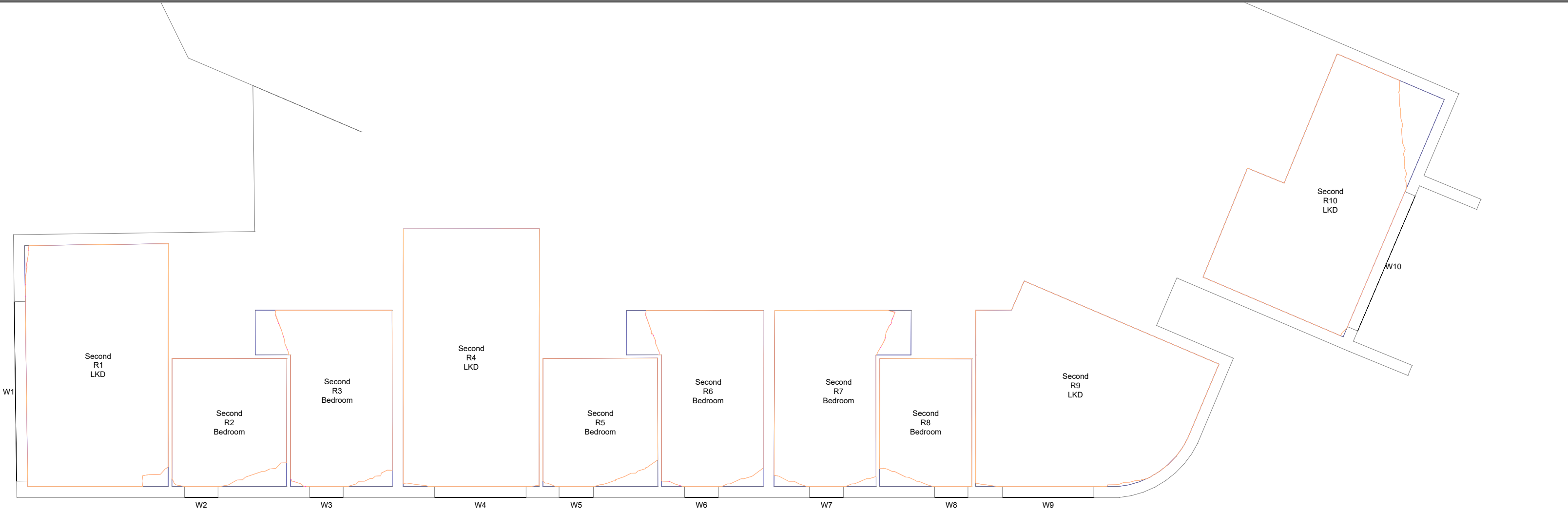
Engels House
First Floor

1:100



Engels House
Second 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 contextual
model.
Neighbouring Buildings internal room layouts, window
positions/dimensions and massing derived from both
the context model 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 - "Downley Drive Context
model_IBraghiroli - 3D View CAD_19-02-2021.dwg"
Supplied by Buttriss on 19/02/2021.

Massing Legend

Existing
Proposed

All heights in m AOD

DD Legend

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

REV:	NOTES:	DRWN:	DATE:

grayscanlanhill
chartered building surveyors

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CLIENT:
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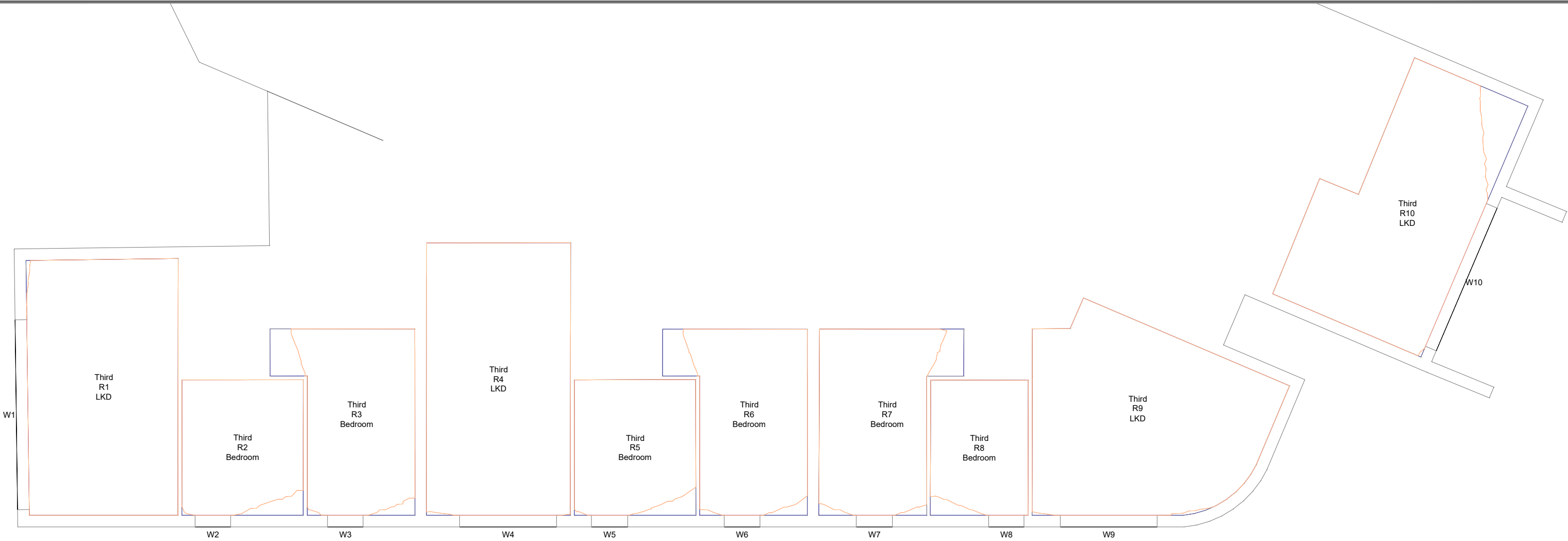
PROJECT:
Downley Drive
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2: 1:100	DATE: 30.03.2021	DRAWN: GSH
	CHECKED: DMH	

DRAWING NUMBER: 2793_MA-07	REV: .
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Engels House
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
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Analysis
Produced using Waldram Tools
MBS Survey Software Ltd (www.mbs-software.co.uk)

Existing Model & Surrounding Model
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Neighbouring Buildings internal room layouts, window
positions/dimensions and massing derived from both
the context model 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 - "Downley Drive Context
model_IBraghiroli - 3D View CAD_19-02-2021.dwg"
Supplied by Buttres on 19/02/2021.

Massing Legend

Existing
Proposed

All heights in m AOD

DD Legend

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

REV:	NOTES:	DRWN:	DATE:

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chartered building surveyors

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CLIENT:
Great Places Housing Group

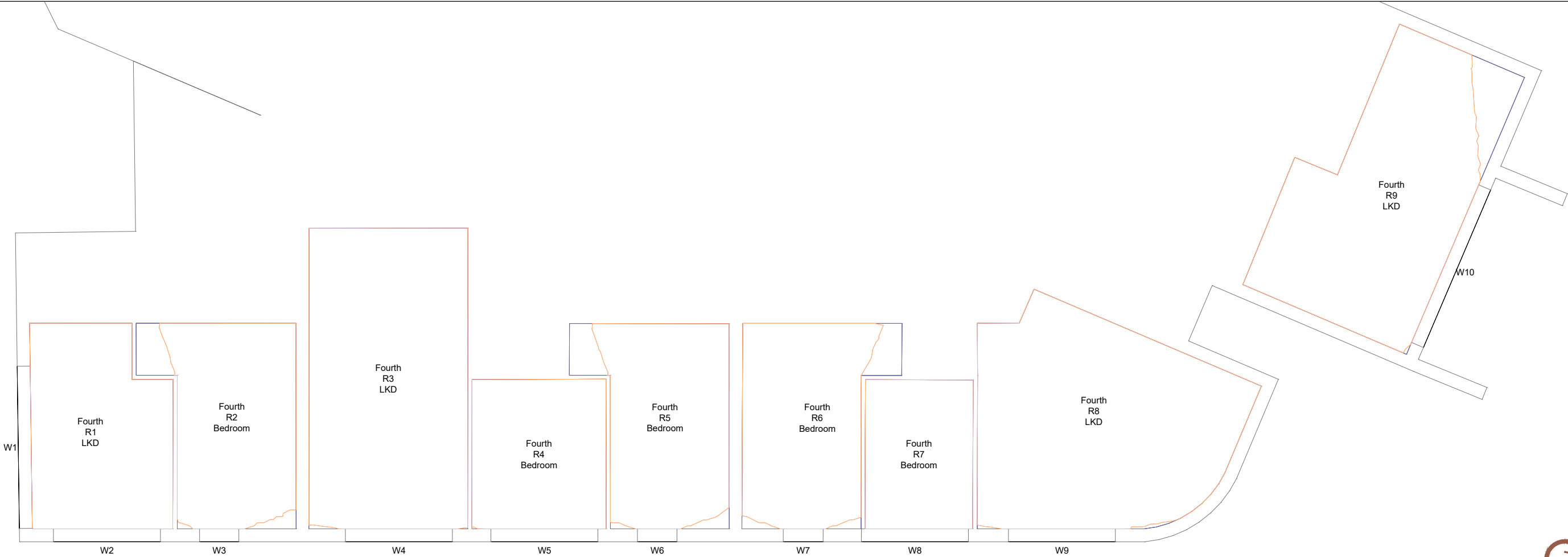
PROJECT:
Downley Drive
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2: 1:100	DATE: 30.03.2021	DRAWN: GSH
	CHECKED: DMH	

DRAWING NUMBER: 2793_MA-08	REV: .
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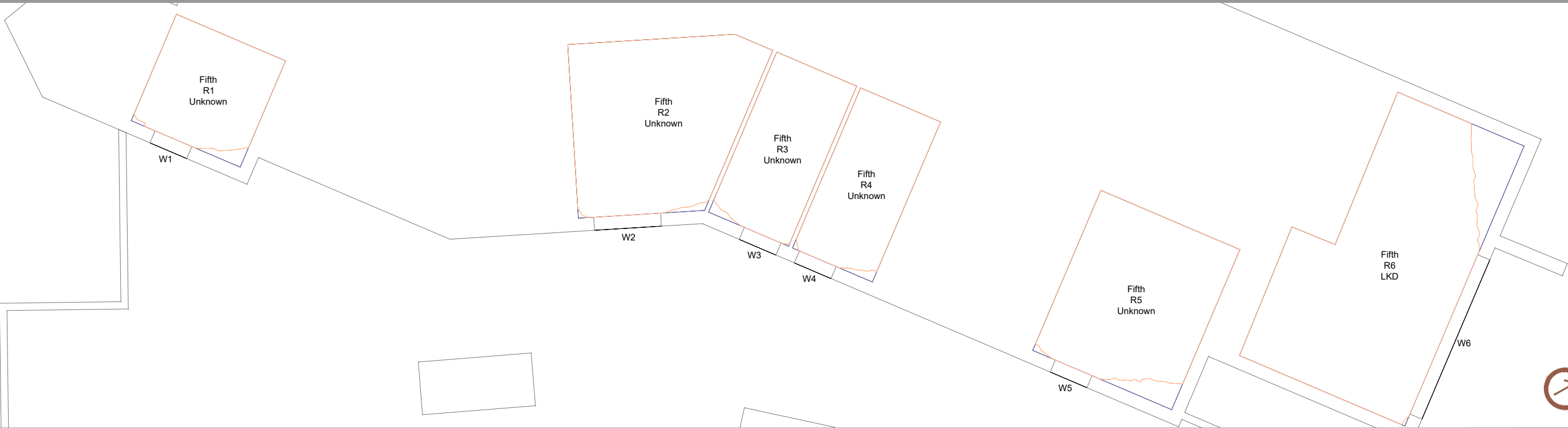
Engels House
Fourth Floor



1:100



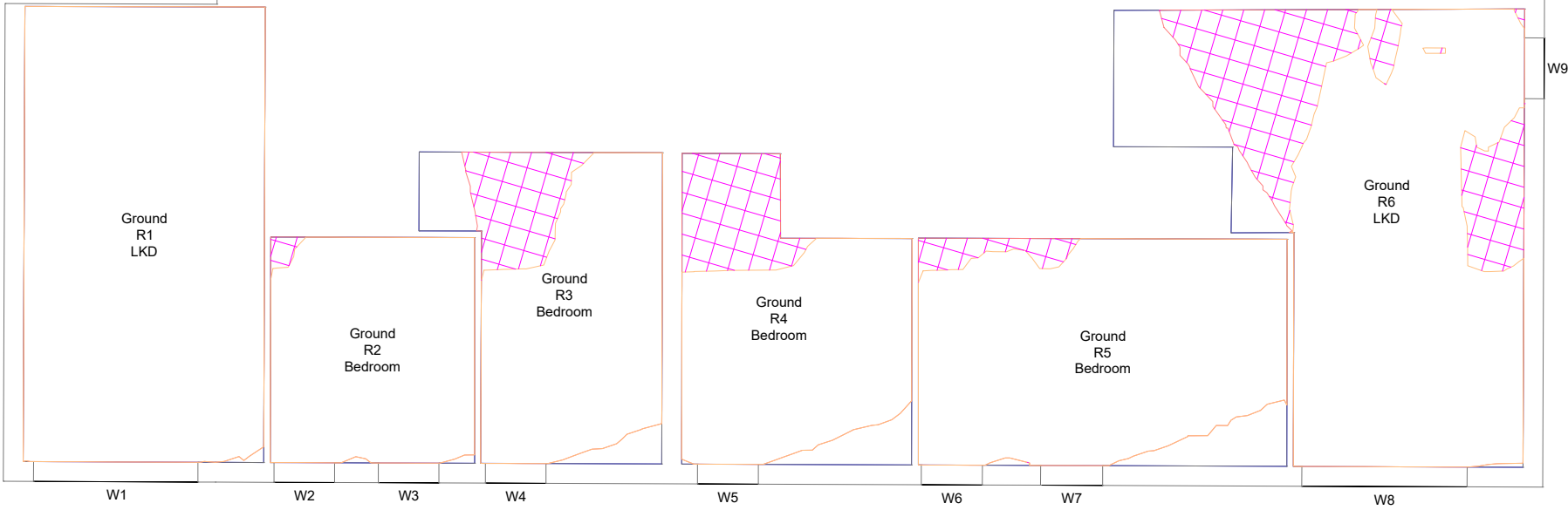
Engels House
Fifth Floor



1:100

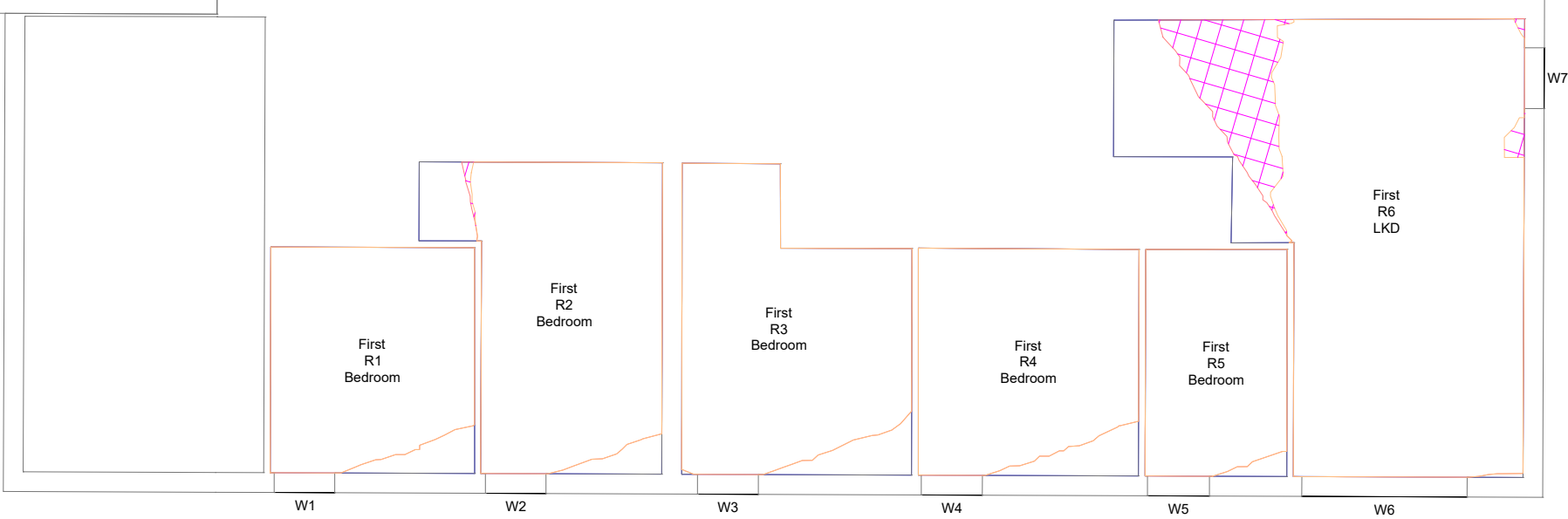


Avro House
Ground Floor



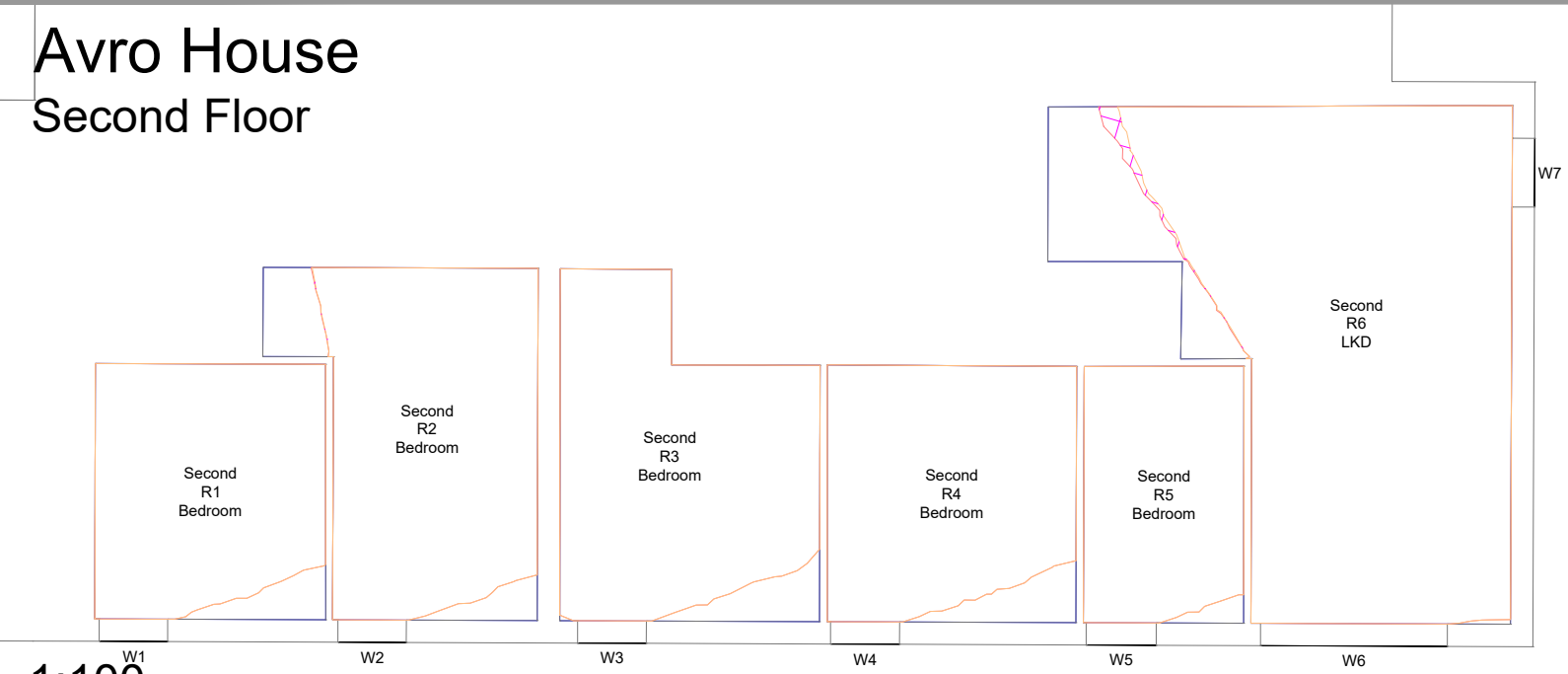
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Avro House
First Floor



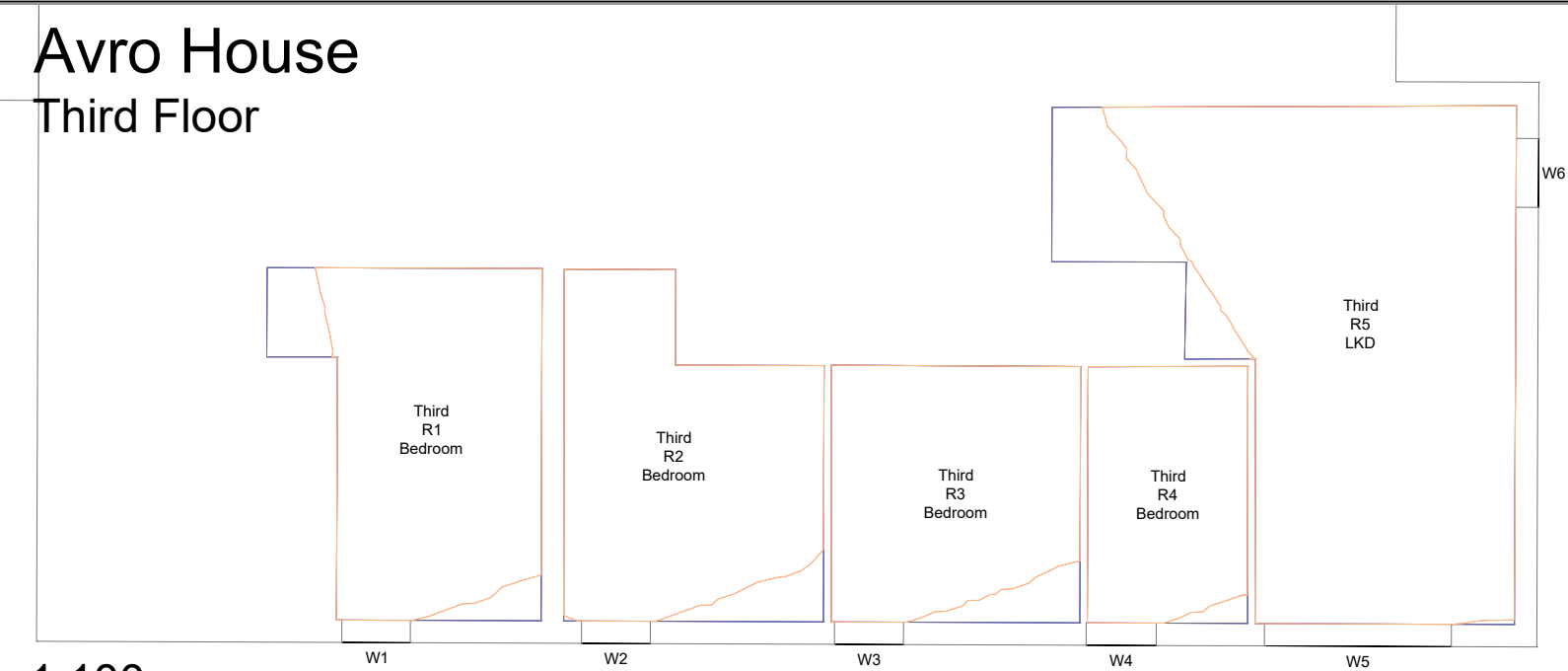
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Avro House
Second Floor



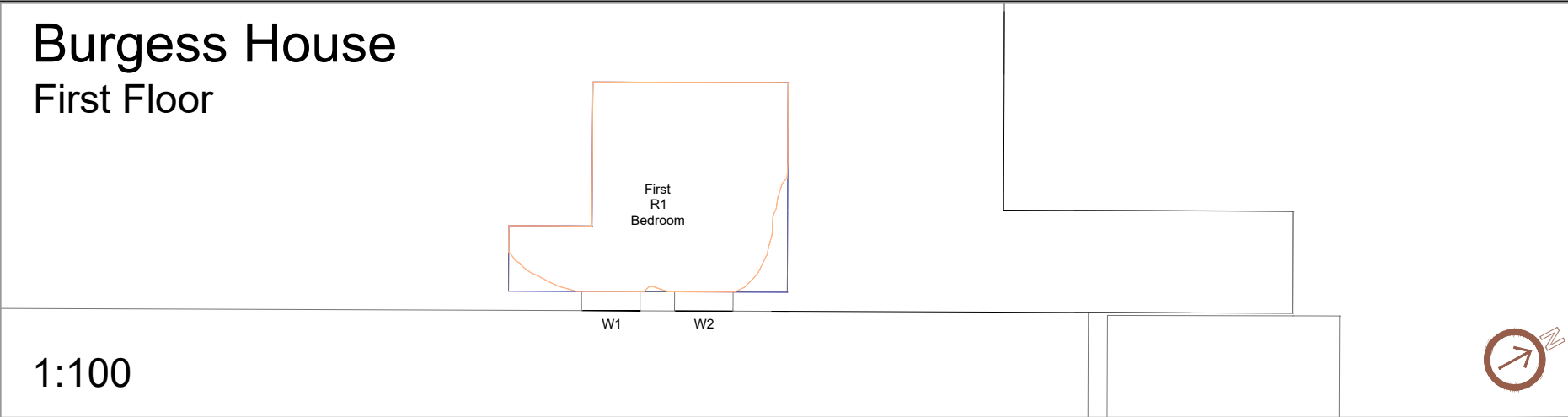
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Avro House
Third Floor



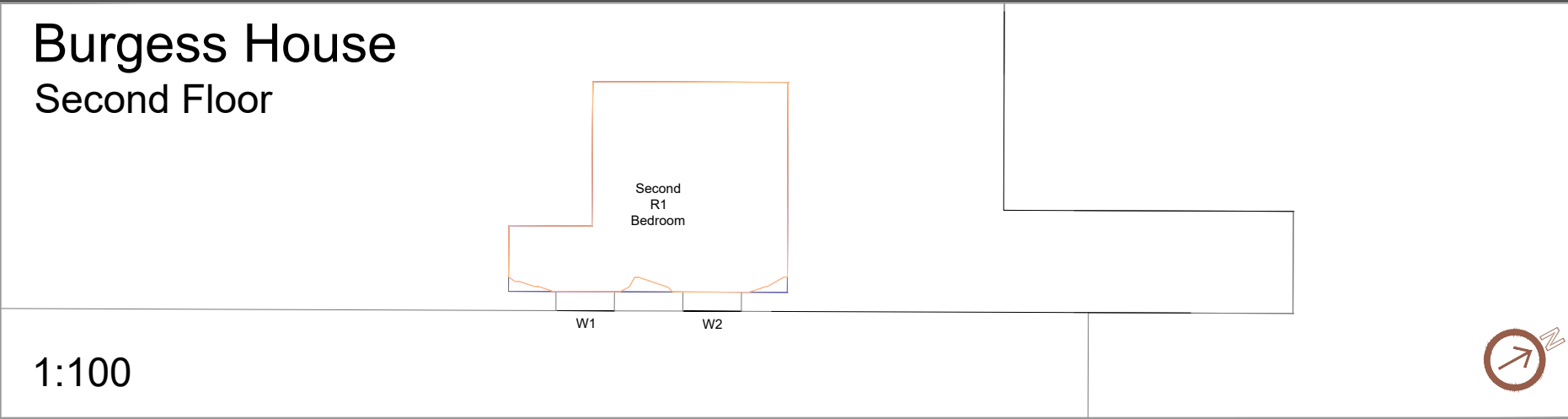
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Burgess House
First Floor



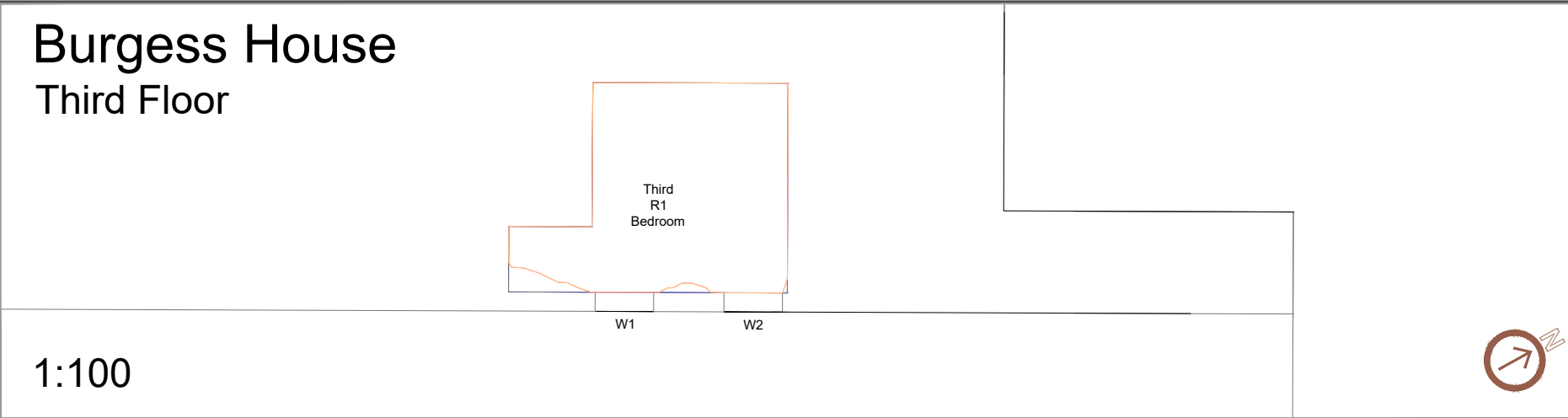
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Burgess House
Second Floor



1:100

Burgess House
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 contextual
model.
Neighbouring Buildings internal room layouts, window
positions/dimensions and massing derived from both
the context model and plans found on the planning
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Where plans/elevations were unavailable assumptions
have been made based on site photography, Bing
Maps and Google Earth.
Proposed Model
Proposed scheme massing - "Downley Drive Context
model_IBraghiroli - 3D View CAD_19-02-2021.dwg"
Supplied by Buttriss on 19/02/2021.

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

REV:	NOTES:	DRWN:	DATE:

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

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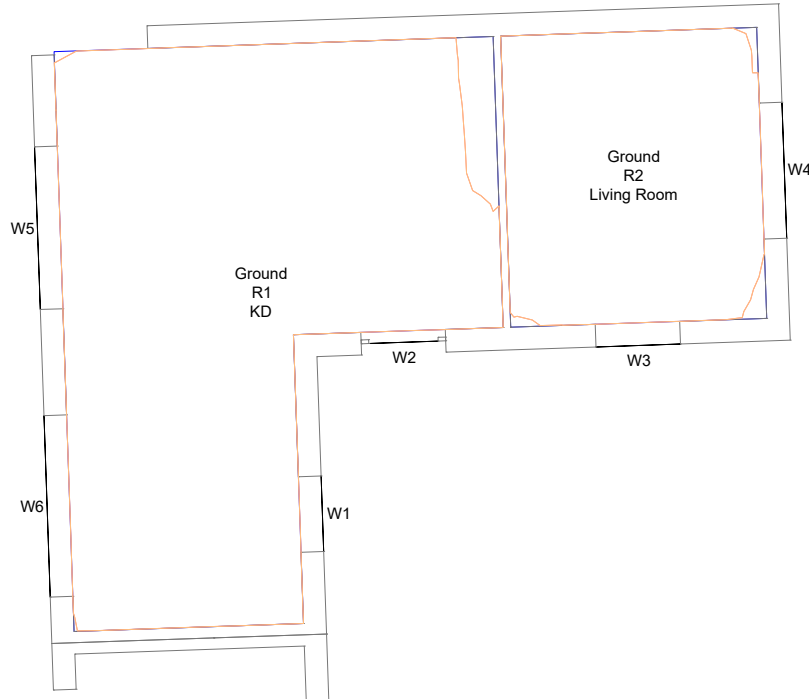
PROJECT:
Downley Drive
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	GSH
1:100	30.03.2021	CHECKED:	DMH

DRAWING NUMBER:	REV:
2793_MA-09	.

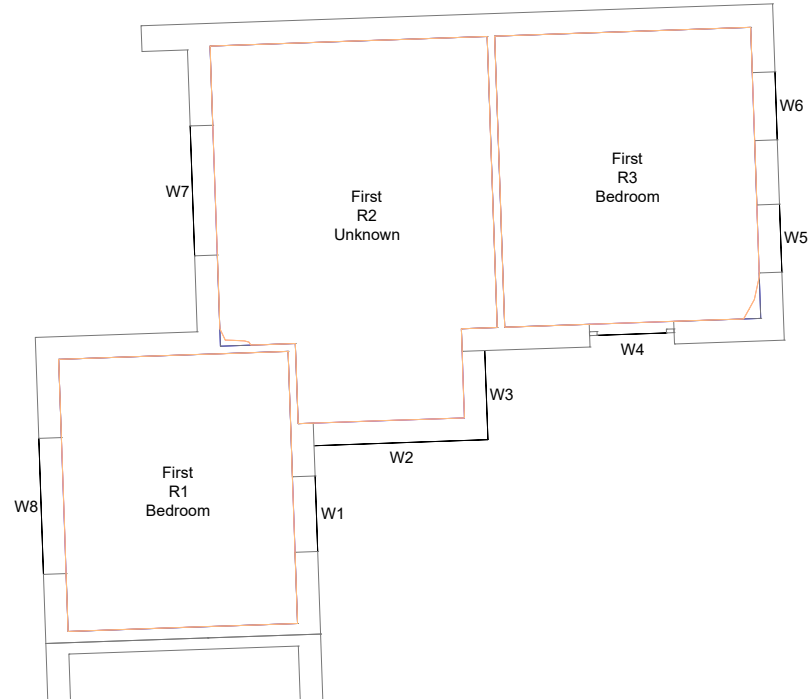
25 Woodward Place
Ground Floor



1:100



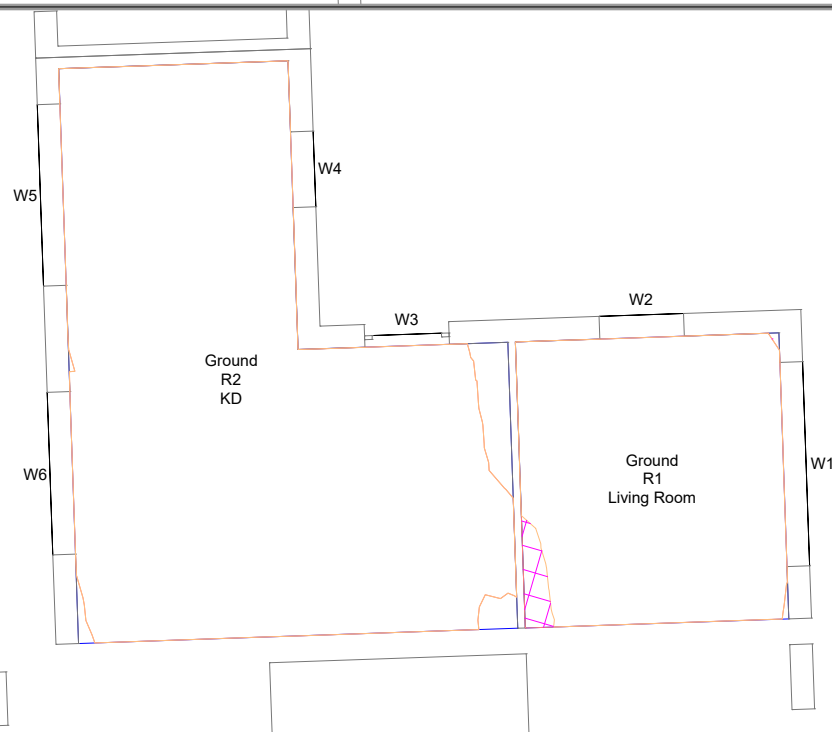
25 Woodward Place
First Floor



1:100



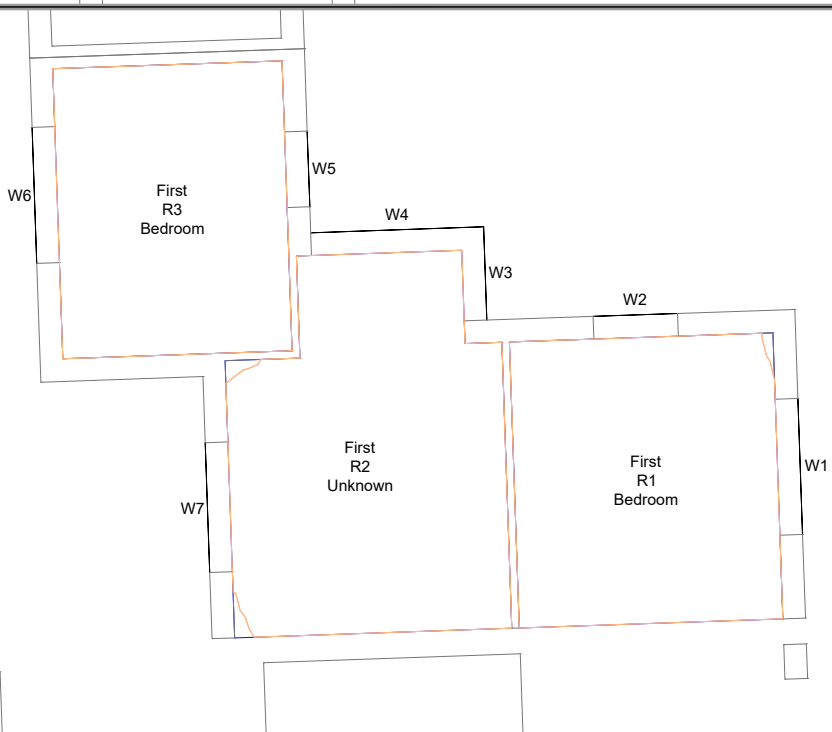
23 Woodward Place
Ground Floor



1:100



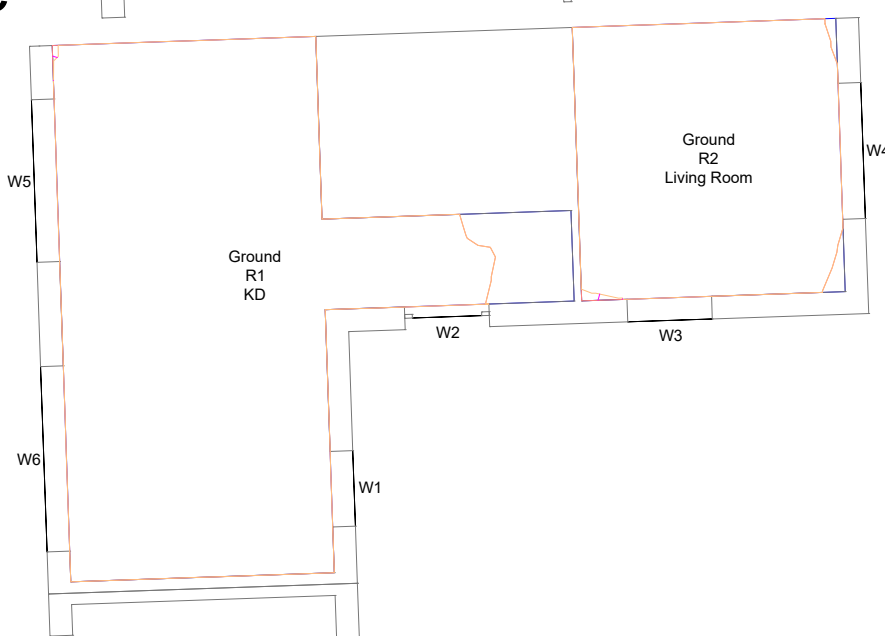
23 Woodward Place
First Floor



1:100



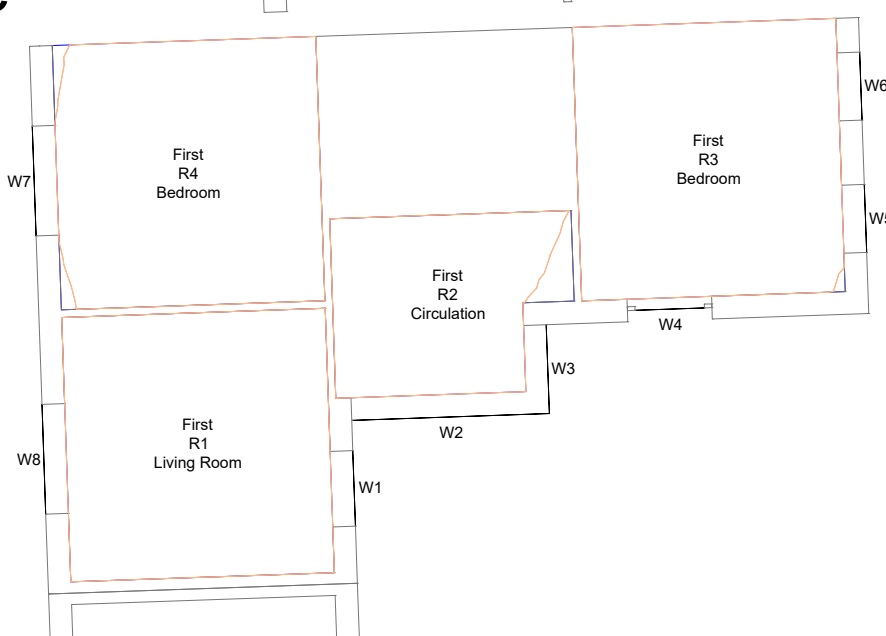
21 Woodward Place
Ground Floor



1:100



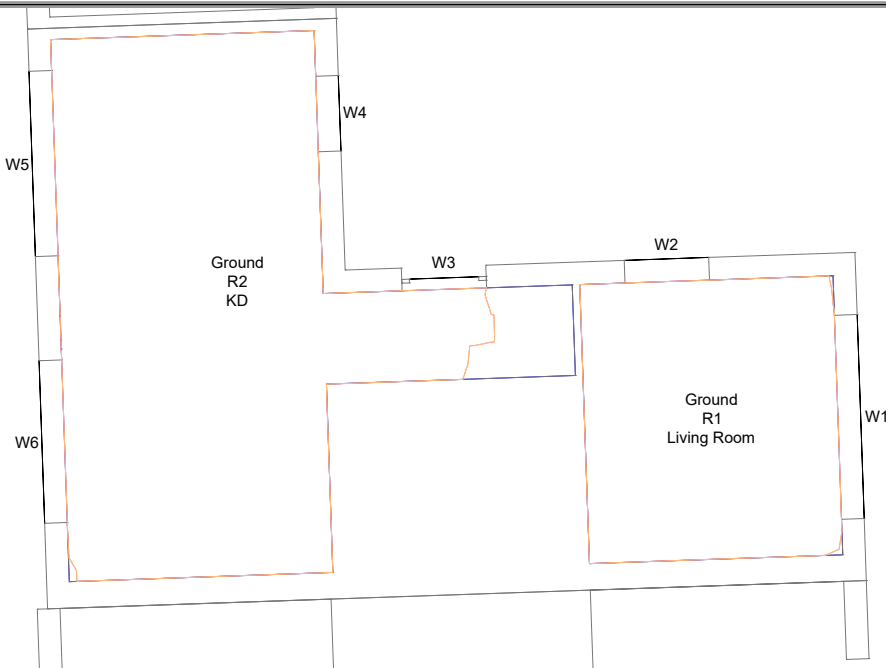
21 Woodward Place
First Floor



1:100



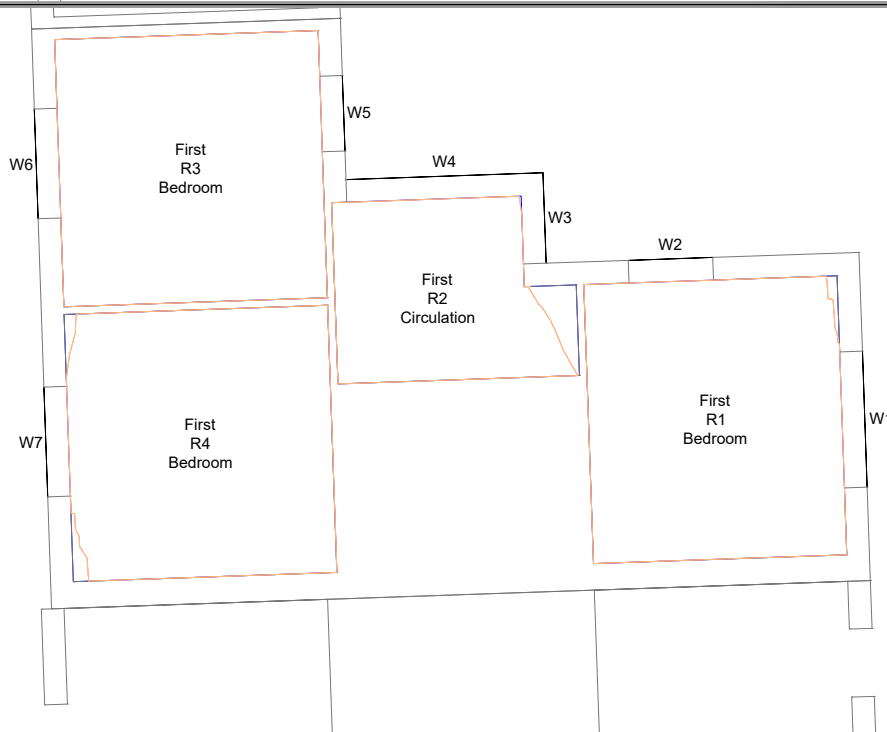
19 Woodward Place
Ground Floor



1:100



19 Woodward Place
First 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 contextual
model.
Neighbouring Buildings internal room layouts, window
positions/dimensions and massing derived from both
the context model 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 - "Downley Drive Context
model_IBraghiroli - 3D View CAD_19-02-2021.dwg"
Supplied by Buttress on 19/02/2021.

Massing Legend

Existing

Proposed

All heights in m AOD

DD Legend

Room Area (Measured Layout)

Existing No Sky Line

Proposed No Sky Line

Area of Loss/Gain

REV:	NOTES:	DRWN:	DATE:

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

CLIENT:
Great Places Housing Group

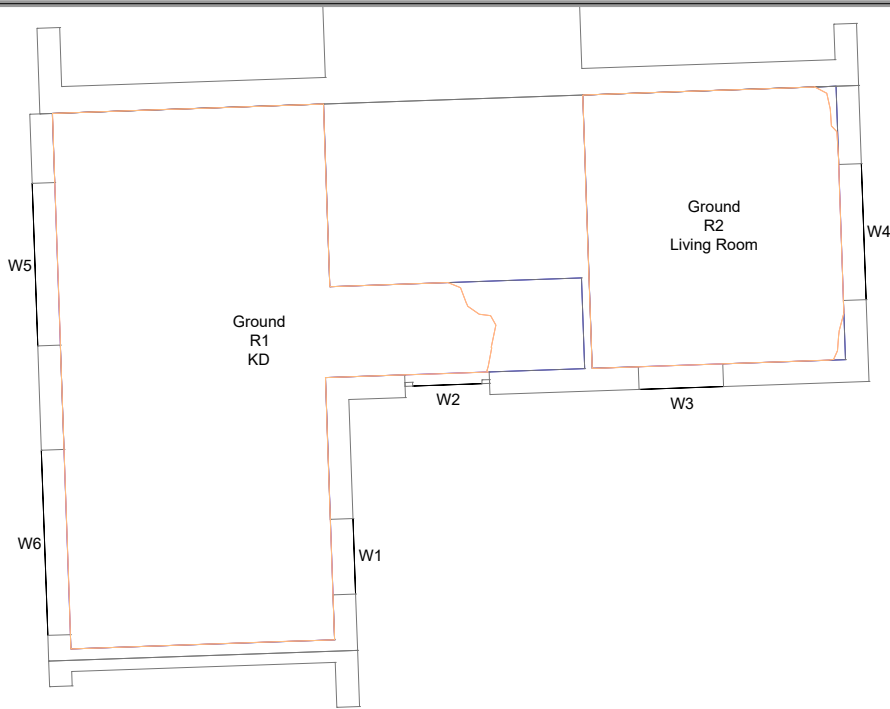
PROJECT:
Downley Drive
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	GSH
1:100	30.03.2021	CHECKED:	DMH

DRAWING NUMBER: 2793_MA-10	REV: .
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17 Woodward Place
Ground Floor



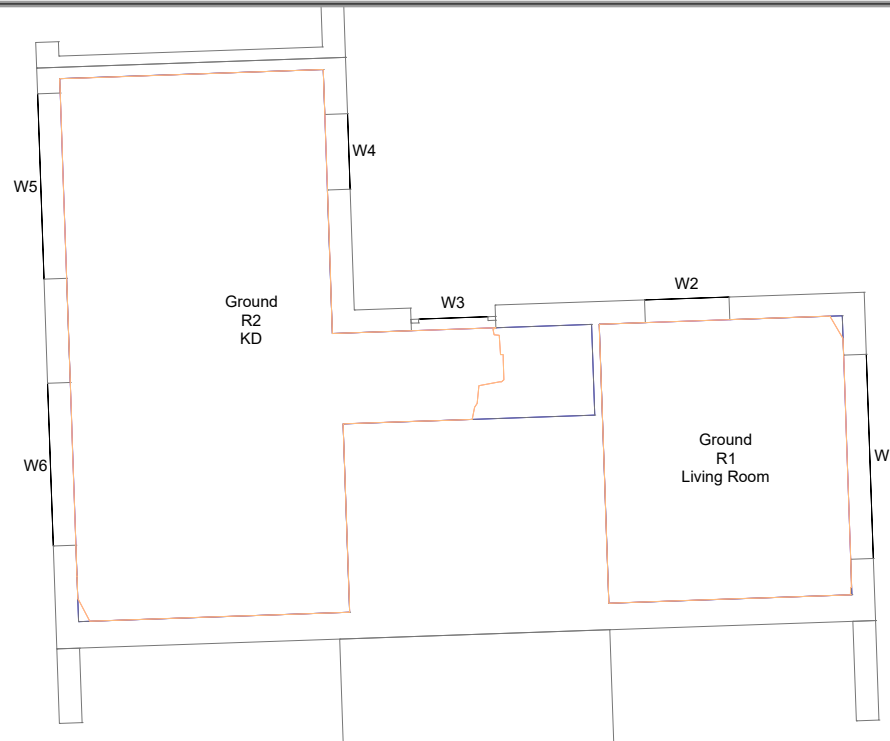
1:100

17 Woodward Place
First Floor



1:100

15 Woodward Place
Ground Floor



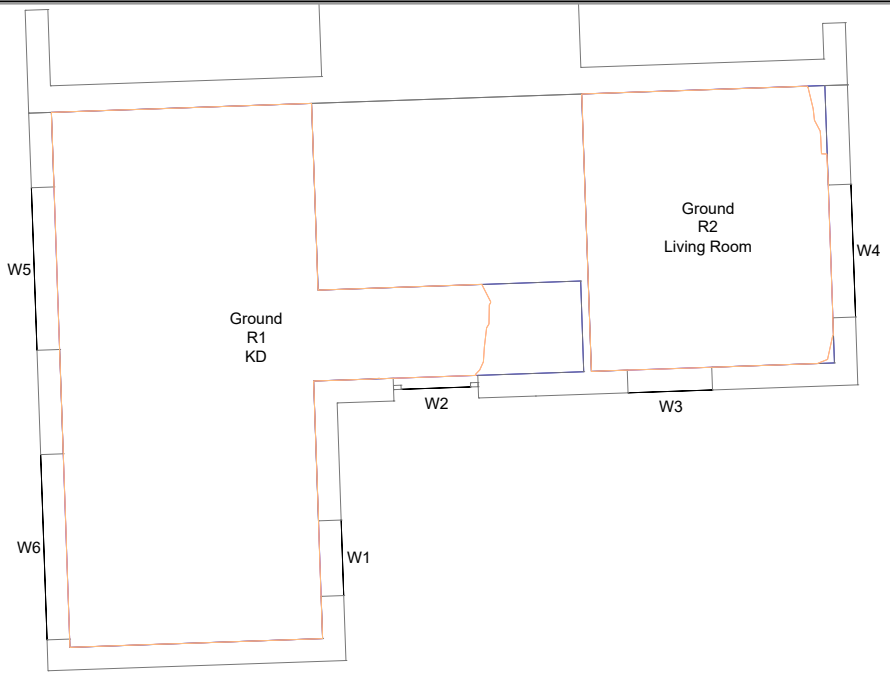
1:100

15 Woodward Place
First Floor



1:100

13 Woodward Place
Ground Floor



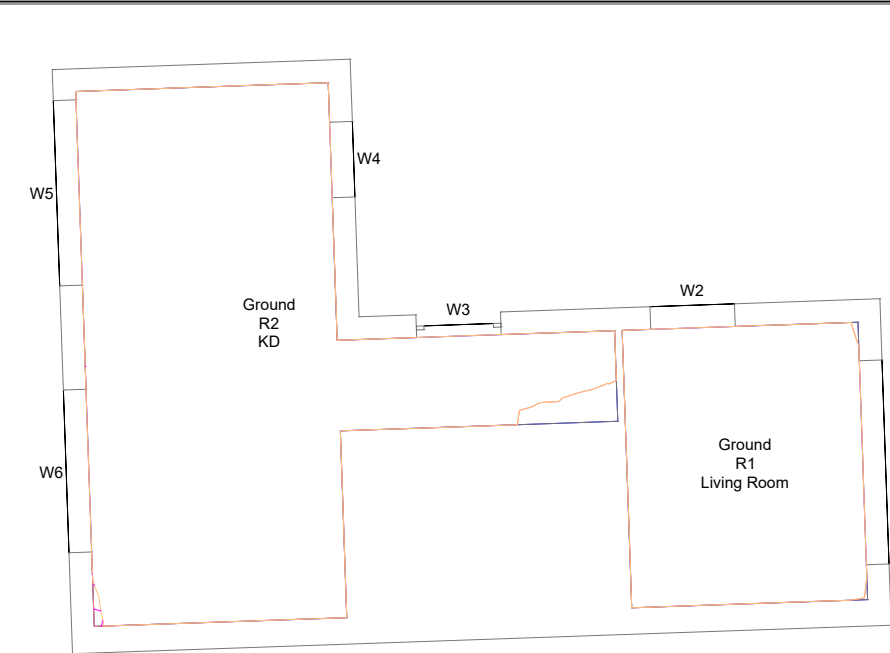
1:100

13 Woodward Place
First Floor



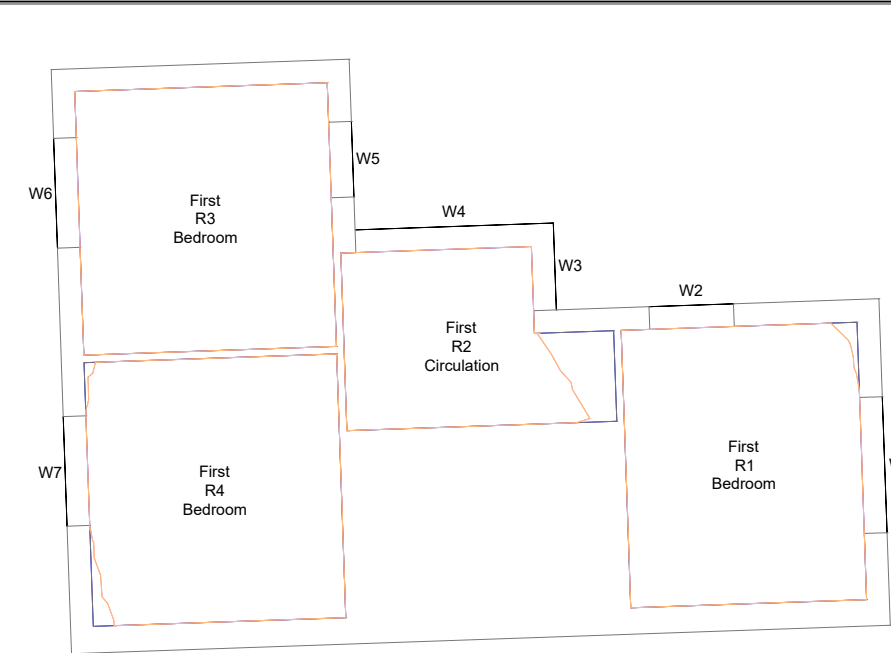
1:100

11 Woodward Place
Ground Floor



1:100

11 Woodward Place
First 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 contextual
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Neighbouring Buildings internal room layouts, window
positions/dimensions and massing derived from both
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Maps and Google Earth.
Proposed Model
Proposed scheme massing - "Downley Drive Context
model_IBraghiroli - 3D View CAD_19-02-2021.dwg"
Supplied by Buttriss on 19/02/2021.

Massing Legend

Existing
Proposed

All heights in m AOD

DD Legend

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

REV:	NOTES:	DRWN:	DATE:

grayscanlanhill
chartered building surveyors

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CLIENT:
Great Places Housing Group

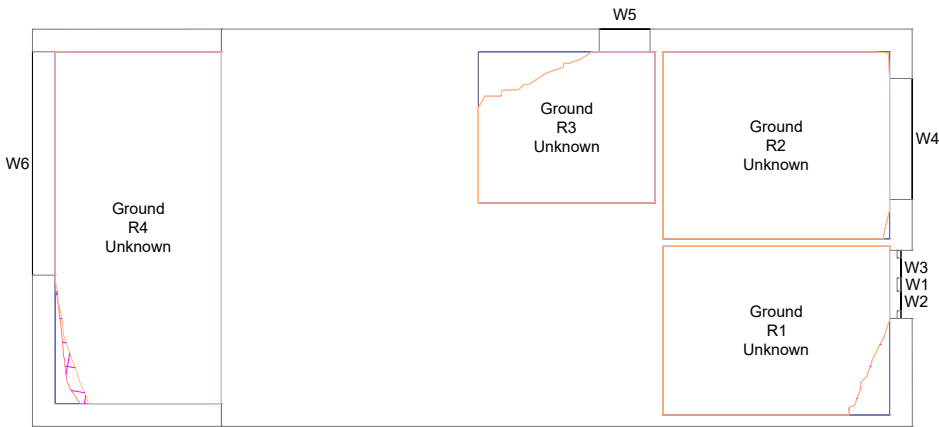
PROJECT:
Downley Drive
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2: 1:100	DATE: 30.03.2021	DRAWN: GSH
CHECKED: DMH		

DRAWING NUMBER: 2793_MA-11	REV: .
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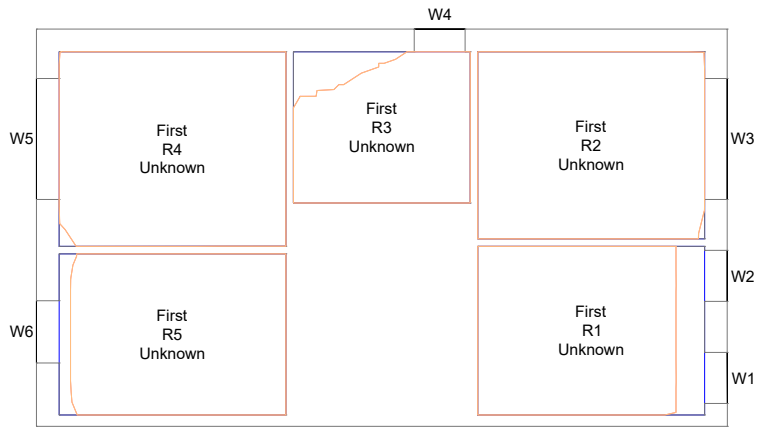
11 Downley Drive
Ground Floor



1:100



11 Downley Drive
First 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.

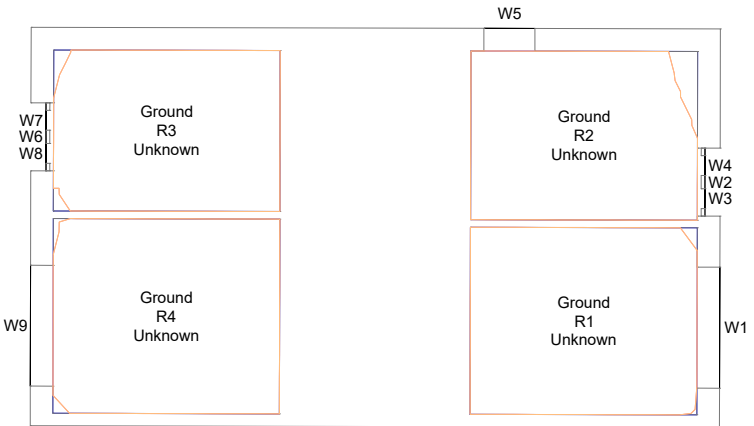
Analysis
Produced using Waldram Tools
MBS Survey Software Ltd (www.mbs-software.co.uk)

Existing Model & Surrounding Model
Existing Site derived from a supplied 3D contextual
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Neighbouring Buildings internal room layouts, window
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have been made based on site photography, Bing
Maps and Google Earth.

Proposed Model
Proposed scheme massing - "Downley Drive Context
model_IBraghiroli - 3D View CAD_19-02-2021.dwg"
Supplied by Buttress on 19/02/2021.

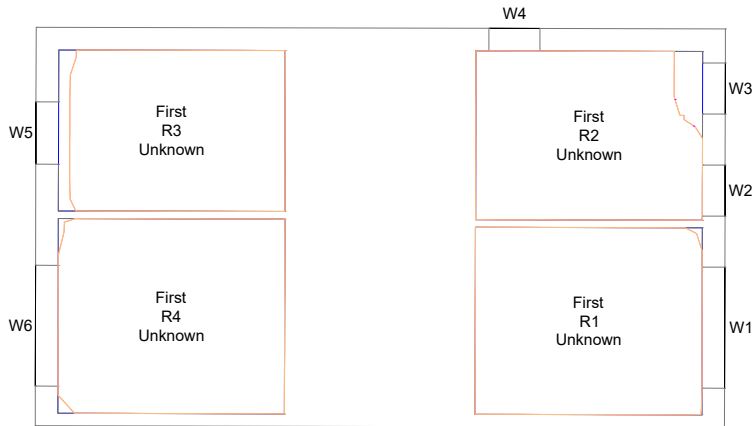
12 Downley Drive
Ground Floor



1:100



12 Downley Drive
First Floor



1:100



Massing Legend

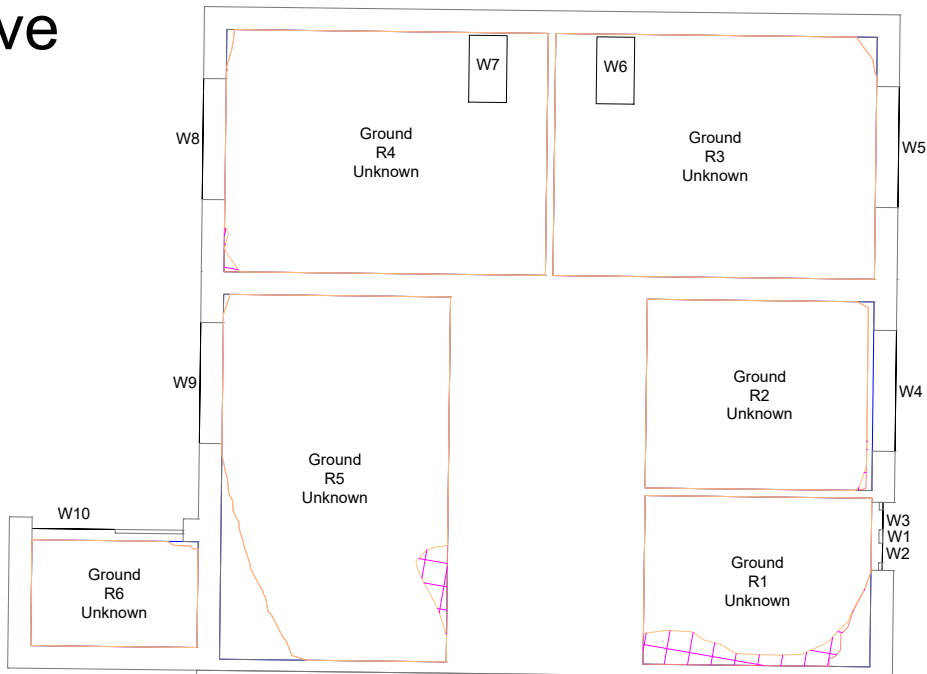
Existing
Proposed

All heights in m AOD

DD Legend

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

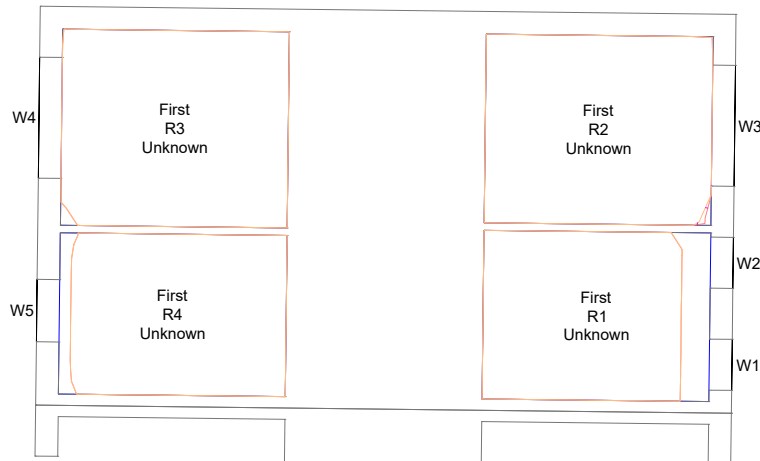
17 Kingham Drive
Ground Floor



1:100



17 Kingham Drive
First Floor



1:100



REV: NOTES: DRWN: DATE:

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chartered building surveyors

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15 Kingham Drive
Ground Floor



1:100



15 Kingham Drive
First Floor



1:100



CLIENT:
Great Places Housing Group

PROJECT:
Downley Drive
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2: 1:100 DATE: 30.03.2021 DRAWN: GSH CHECKED: DMH

DRAWING NUMBER: 2793_MA-12 REV: .

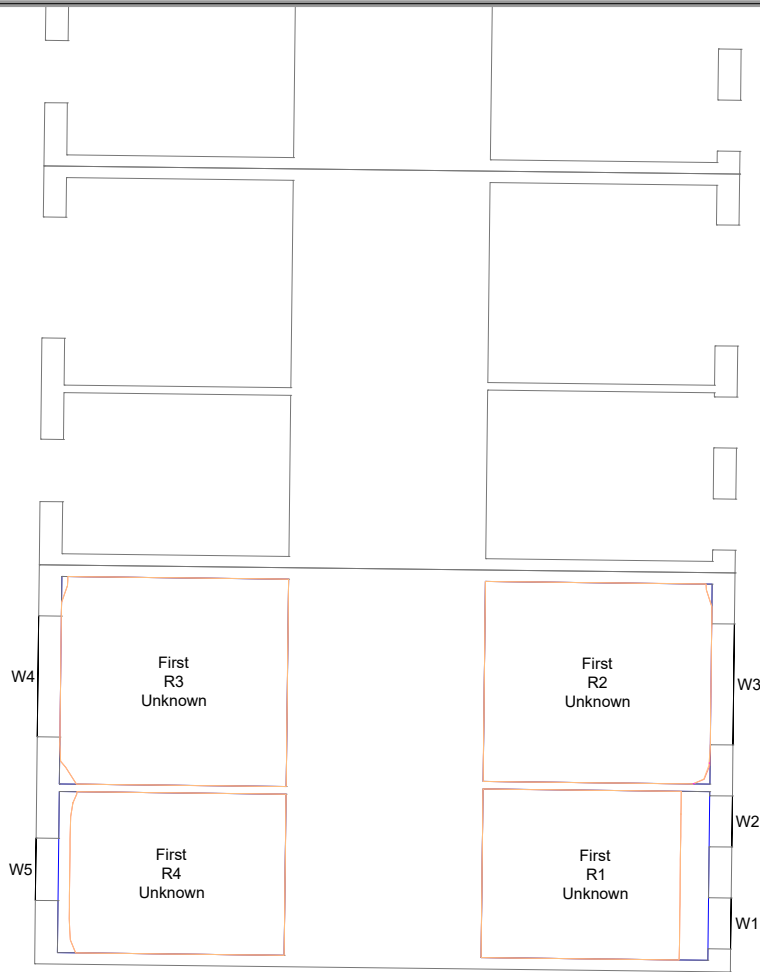
13 Kingham Drive
Ground Floor



1:100



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

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Maps and Google Earth.

Proposed Model
Proposed scheme massing - "Downley Drive Context
model_IBraghiroli - 3D View CAD_19-02-2021.dwg"
Supplied by Buttress on 19/02/2021.

Massing Legend

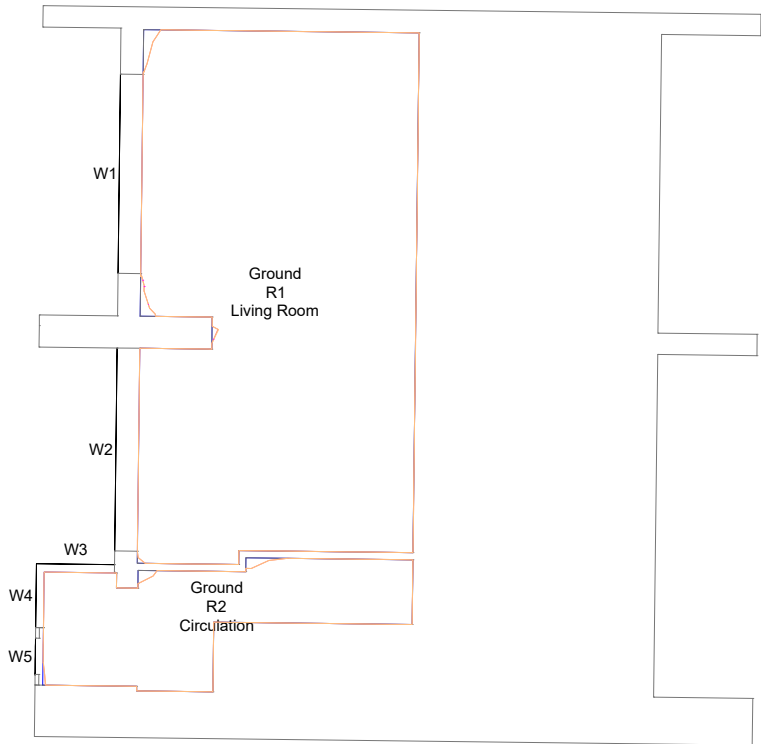
Existing
Proposed

All heights in m AOD

DD Legend

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

14 Kingham Drive
Ground Floor



1:100



14 Kingham Drive
First Floor



1:100



REV:	NOTES:	DRWN:	DATE:

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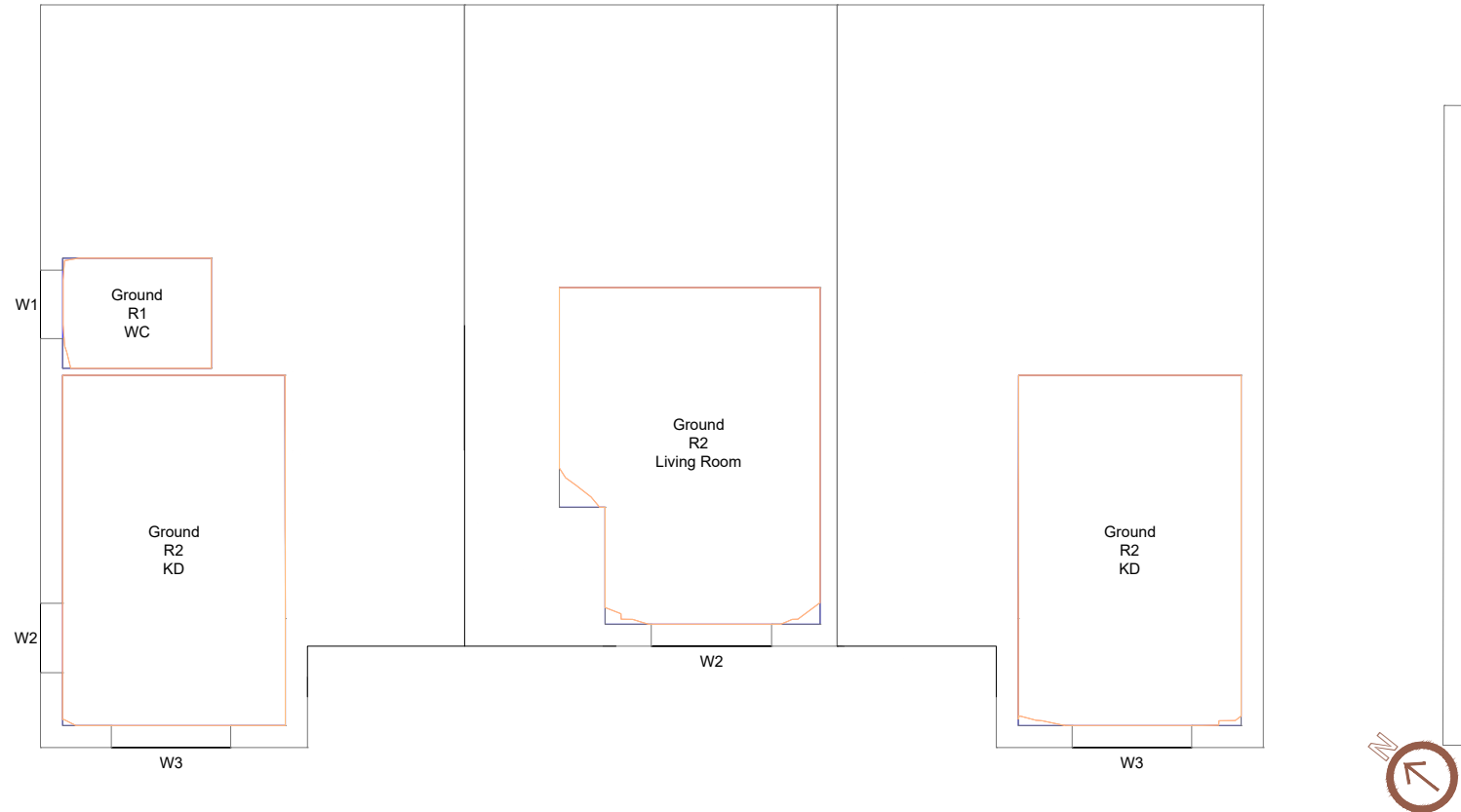
PROJECT:
Downley Drive
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2: 1:100	DATE: 30.03.2021	DRAWN: GSH
CHECKED: DMH		

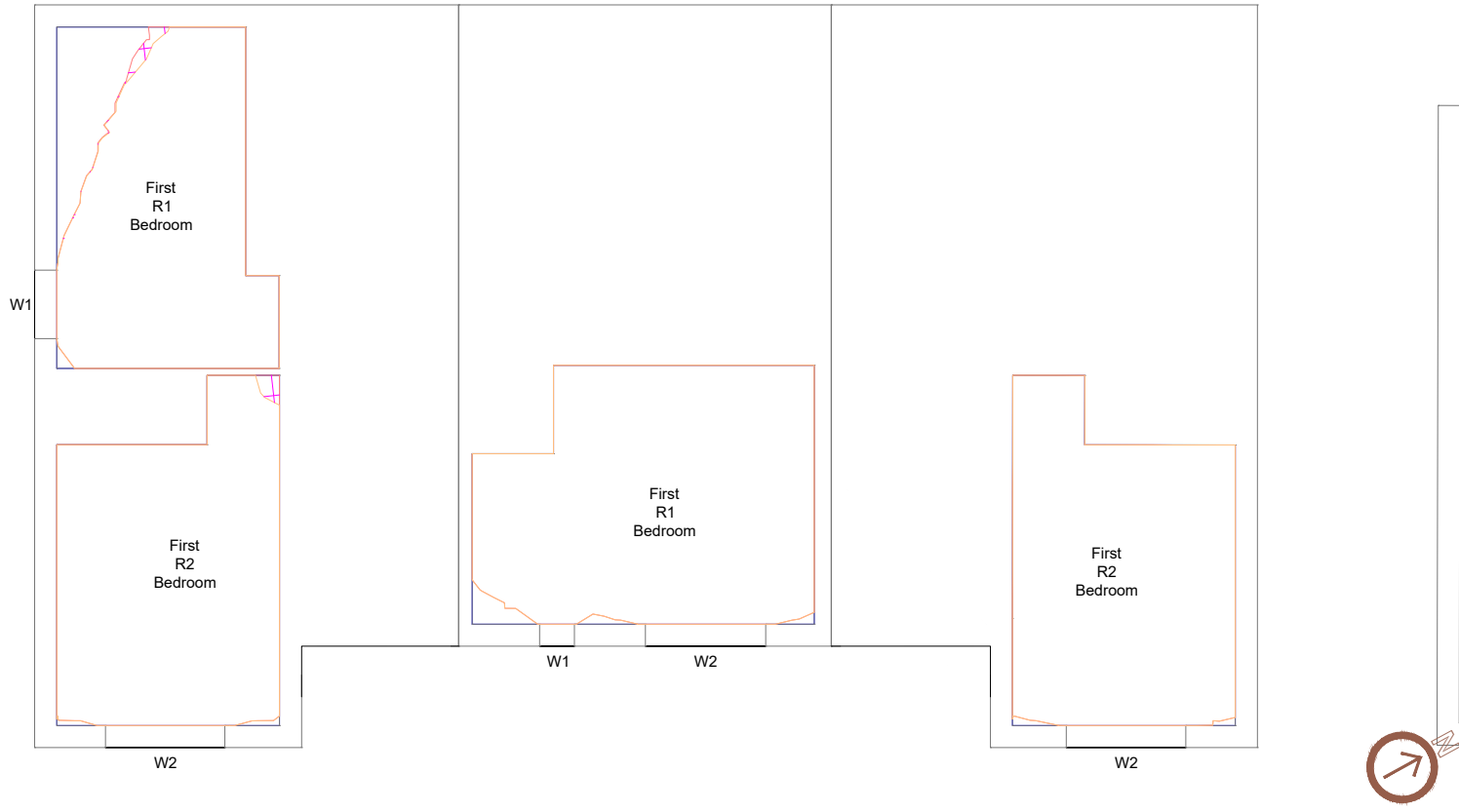
DRAWING NUMBER: 2793_MA-13	REV: .
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Woodward Street Development 22-24
Ground Floor



1:100

Woodward Street Development 22-24
First 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 contextual
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Neighbouring Buildings internal room layouts, window
positions/dimensions and massing derived from both
the context model 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 - "Downley Drive Context
model_IBraghiroli - 3D View CAD_19-02-2021.dwg"
Supplied by Buttriss on 19/02/2021.

Massing Legend

Existing
Proposed

All heights in m AOD

DD Legend

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

REV:	NOTES:	DRWN:	DATE:

grayscanlanhill
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The Old Post Office, 63 Newton Street, Manchester, M1 1ET
Tel: 0161 835 2101
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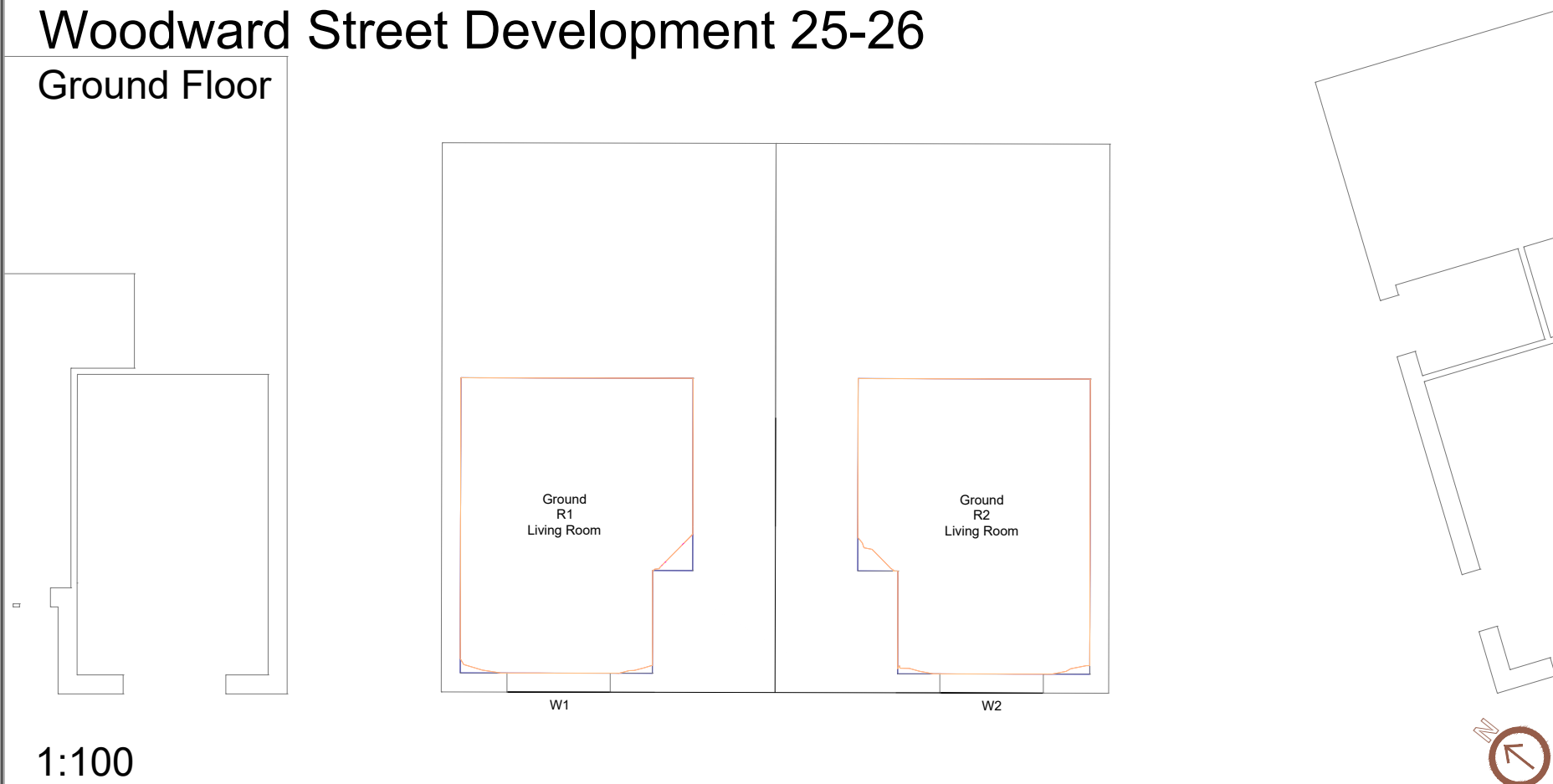
PROJECT:
Downley Drive
Manchester

DRAWING TITLE:
Contour Plots
Daylight Distribution

SCALE @ A2:	DATE:	DRAWN:	GSH
1:100	30.03.2021	CHECKED:	DMH

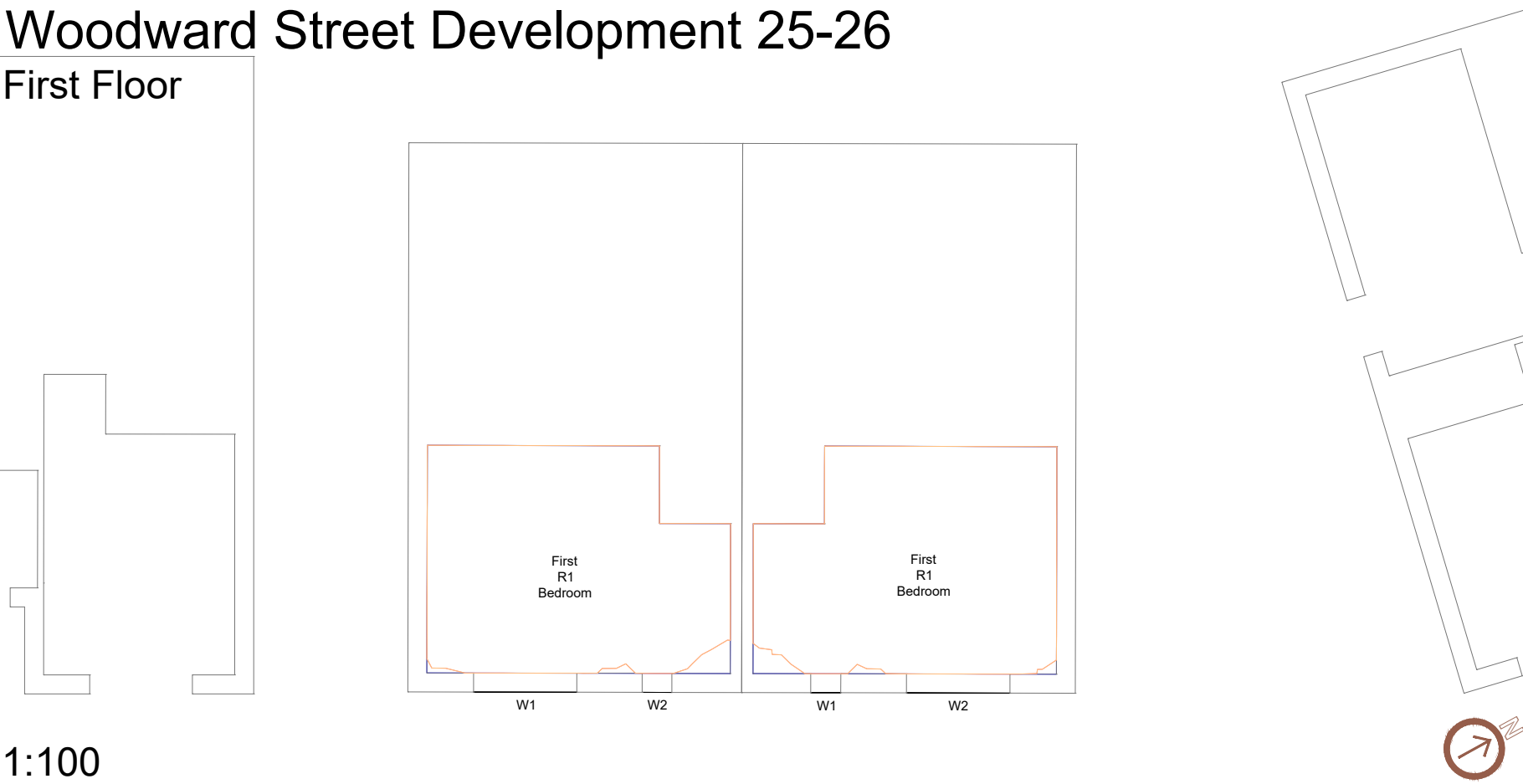
DRAWING NUMBER: 2793_MA-14	REV: .
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Woodward Street Development 25-26
Ground Floor



1:100

Woodward Street Development 25-26
First Floor



1:100

Woodward Street Development 27-28
Ground Floor



1:100

Woodward Street Development 27-28
First Floor



1:100

Appendix 5: Baseline vs Proposed APSH Results

Project Name: Downley Drive
Project No.: 2793
Report Title: Daylight & Sunlight - Neighbour Analysis
Date of Analysis: 30/03/2021

Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.	Window Ref.	Window Attribute	Total Suns per Room Annual Existing	Total Suns per Room Annual Proposed	Annual Pr/Ex	Total Suns per Room Winter Existing	Total Suns per Room Winter Proposed	Winter Pr/Ex
Avro House												
Ground	R1		Residential	LKD	W1		64	56	0.88	20	19	0.95
	R2		Residential	Bedroom	W2 W3		67	57	0.85	23	21	0.91
	R3		Residential	Bedroom	W4		66	55	0.83	23	19	0.83
	R4		Residential	Bedroom	W5		64	52	0.81	21	16	0.76
	R5		Residential	Bedroom	W6 W7		64	53	0.83	21	17	0.81
	R6		Residential	LKD	W8 W9		58	47	0.81	23	16	0.70
First	R1		Residential	Bedroom	W1		67	62	0.93	23	21	0.91
	R2		Residential	Bedroom	W2		67	60	0.90	23	19	0.83
	R3		Residential	Bedroom	W3		67	60	0.90	23	19	0.83
	R4		Residential	Bedroom	W4		66	60	0.91	23	19	0.83
	R5		Residential	Bedroom	W5		67	59	0.88	23	19	0.83
	R6		Residential	LKD	W6 W7		58	51	0.88	23	18	0.78
Second	R1		Residential	Bedroom	W1		67	65	0.97	23	22	0.96
	R2		Residential	Bedroom	W2		67	64	0.96	23	21	0.91
	R3		Residential	Bedroom	W3		67	64	0.96	23	21	0.91
	R4		Residential	Bedroom	W4		67	64	0.96	23	21	0.91
	R5		Residential	Bedroom	W5		67	64	0.96	23	21	0.91
	R6		Residential	LKD	W6 W7		59	57	0.97	23	22	0.96
Third	R1		Residential	Bedroom	W1		67	67	1.00	23	23	1.00
	R2		Residential	Bedroom	W2		67	67	1.00	23	23	1.00
	R3		Residential	Bedroom	W3		67	67	1.00	23	23	1.00
	R4		Residential	Bedroom	W4		67	67	1.00	23	23	1.00
	R5		Residential	LKD	W5 W6		67	67	1.00	23	23	1.00
Burgess House												
First	R1		Residential	Bedroom	W1 W2		28	26	0.93	4	4	1.00
Second	R1		Residential	Bedroom	W1 W2		44	44	1.00	5	5	1.00
Third	R1		Residential	Bedroom	W1 W2		66	66	1.00	23	23	1.00
11 Downley Drive												
Ground	R1		Residential	Unknown	W1 W2 W3		9	9	1.00	1	1	1.00
	R2		Residential	Unknown	W4		14	14	1.00	1	1	1.00
	R3		Residential	Unknown	W5		29	26	0.90	4	4	1.00
	R4		Residential	Unknown	W6		71	69	0.97	19	19	1.00
First	R1		Residential	Unknown	W1 W2		8	8	1.00	1	1	1.00
	R2		Residential	Unknown	W3		11	11	1.00	1	1	1.00
	R3		Residential	Unknown	W4		31	29	0.94	6	6	1.00
	R4		Residential	Unknown	W5		66	64	0.97	24	24	1.00
	R5		Residential	Unknown	W6		58	56	0.97	22	22	1.00
12 Downley Drive												
Ground	R1		Residential	Unknown	W1		17	17	1.00	1	1	1.00

Project Name: Downley Drive Project No.: 2793 Report Title: Daylight & Sunlight - Neighbour Analysis Date of Analysis: 30/03/2021												
Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.	Window Ref.	Window Attribute	Total Suns per Room Annual Existing	Total Suns per Room Annual Proposed	Annual Pr/Ex	Total Suns per Room Winter Existing	Total Suns per Room Winter Proposed	Winter Pr/Ex
	R2		Residential	Unknown	W2 W3 W4 W5		41	39	0.95	6	6	1.00
	R3		Residential	Unknown	W6 W7 W8		50	49	0.98	25	25	1.00
	R4		Residential	Unknown	W9		74	72	0.97	24	24	1.00
First	R1		Residential	Unknown	W1		12	12	1.00	1	1	1.00
	R2		Residential	Unknown	W2 W3 W4		41	39	0.95	7	7	1.00
	R3		Residential	Unknown	W5		61	59	0.97	24	24	1.00
	R4		Residential	Unknown	W6		67	66	0.99	25	25	1.00
13 Kingham Drive												
Ground	R1		Residential	Unknown	W1 W2 W3		8	8	1.00	1	1	1.00
	R2		Residential	Unknown	W4		13	13	1.00	1	1	1.00
	R3		Residential	Unknown	W5		51	51	1.00	17	17	1.00
	R4		Residential	Unknown	W6 W7		23	23	1.00	4	4	1.00
First	R1		Residential	Unknown	W1 W2		9	9	1.00	1	1	1.00
	R2		Residential	Unknown	W3		10	10	1.00	1	1	1.00
	R3		Residential	Unknown	W4		65	65	1.00	25	25	1.00
	R4		Residential	Unknown	W5		60	60	1.00	24	24	1.00
14 Kingham Drive												
Ground	R1		Residential	Living Room	W1 W2		63	62	0.98	21	21	1.00
	R2		Residential	Circulation	W3 W4 W5		76	72	0.95	25	25	1.00
First	R1		Residential	Bedroom	W1		32	32	1.00	20	20	1.00
	R2		Residential	Bedroom	W2		30	30	1.00	20	20	1.00
15 Kingham Drive												
Ground	R1		Residential	Unknown	W1 W2 W3		8	8	1.00	1	1	1.00
	R2		Residential	Unknown	W4		13	13	1.00	1	1	1.00
	R3		Residential	Unknown	W5		51	49	0.96	17	15	0.88
	R4		Residential	Unknown	W6		20	18	0.90	2	2	1.00
First	R1		Residential	Unknown	W1 W2		10	10	1.00	1	1	1.00
	R2		Residential	Unknown	W3		11	11	1.00	1	1	1.00
	R3		Residential	Unknown	W4		65	65	1.00	25	25	1.00
	R4		Residential	Unknown	W5		59	59	1.00	24	24	1.00
17 Kingham Drive												
Ground	R1		Residential	Unknown	W1 W2 W3		9	9	1.00	1	1	1.00
	R2		Residential	Unknown	W4		9	9	1.00	1	1	1.00
	R3		Residential	Unknown	W5 W6		62	59	0.95	12	9	0.75
	R4		Residential	Unknown	W7		74	70	0.95	25	21	0.84

Project Name: Downley Drive
Project No.: 2793
Report Title: Daylight & Sunlight - Neighbour Analysis
Date of Analysis: 30/03/2021

Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.	Window Ref.	Window Attribute	Total Suns per Room Annual Existing	Total Suns per Room Annual Proposed	Annual Pr/Ex	Total Suns per Room Winter Existing	Total Suns per Room Winter Proposed	Winter Pr/Ex
	R5		Residential	Unknown	W8	W9	61	55	0.90	17	13	0.76
	R6		Residential	Unknown		W10	20	17	0.85	2	1	0.50
First	R1		Residential	Unknown	W1	W2	10	10	1.00	1	1	1.00
	R2		Residential	Unknown		W3	11	11	1.00	1	1	1.00
	R3		Residential	Unknown		W4	64	62	0.97	25	24	0.96
	R4		Residential	Unknown		W5	59	58	0.98	24	24	1.00
Engels House												
Ground	R1		Residential	LKD	W1	W2	72	60	0.83	21	15	0.71
	R2		Residential	Bedroom		W3	62	51	0.82	19	14	0.74
	R3		Residential	Bedroom		W4	62	50	0.81	19	14	0.74
	R4		Residential	LKD		W5	56	44	0.79	21	15	0.71
	R5		Residential	Bedroom		W6	53	42	0.79	18	12	0.67
	R6		Residential	Bedroom		W7	55	44	0.80	18	12	0.67
	R7		Residential	Bedroom		W8	56	49	0.88	17	13	0.76
	R8		Residential	Bedroom		W9	60	52	0.87	19	14	0.74
	R9		Residential	LKD		W10	55	44	0.80	20	14	0.70
First	R1		Residential	LKD		W1	43	42	0.98	18	17	0.94
	R2		Residential	Bedroom		W2	65	62	0.95	21	21	1.00
	R3		Residential	Bedroom		W3	65	62	0.95	21	21	1.00
	R4		Residential	LKD		W4	59	54	0.92	23	21	0.91
	R5		Residential	Bedroom		W5	52	46	0.88	21	18	0.86
	R6		Residential	Bedroom		W6	58	52	0.90	19	16	0.84
	R7		Residential	Bedroom		W7	63	59	0.94	21	18	0.86
	R8		Residential	Bedroom		W8	65	60	0.92	22	19	0.86
	R9		Residential	LKD		W9	57	52	0.91	22	19	0.86
	R10		Residential	LKD		W10	17	14	0.82	4	4	1.00
Second	R1		Residential	LKD		W1	53	52	0.98	20	19	0.95
	R2		Residential	Bedroom		W2	67	63	0.94	23	21	0.91
	R3		Residential	Bedroom		W3	67	64	0.96	23	22	0.96
	R4		Residential	LKD		W4	59	55	0.93	23	21	0.91
	R5		Residential	Bedroom		W5	52	48	0.92	21	19	0.90
	R6		Residential	Bedroom		W6	59	55	0.93	19	17	0.89
	R7		Residential	Bedroom		W7	65	62	0.95	21	19	0.90
	R8		Residential	Bedroom		W8	66	63	0.95	22	20	0.91
	R9		Residential	LKD		W9	58	55	0.95	22	20	0.91
	R10		Residential	LKD		W10	9	8	0.89	0	0	1.00
Third	R1		Residential	LKD		W1	79	79	1.00	24	24	1.00
	R2		Residential	Bedroom		W2	67	67	1.00	23	23	1.00
	R3		Residential	Bedroom		W3	67	67	1.00	23	23	1.00
	R4		Residential	LKD		W4	59	59	1.00	23	23	1.00
	R5		Residential	Bedroom		W5	52	52	1.00	21	21	1.00
	R6		Residential	Bedroom		W6	63	63	1.00	19	19	1.00

Project Name: Downley Drive Project No.: 2793 Report Title: Daylight & Sunlight - Neighbour Analysis Date of Analysis: 30/03/2021												
Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.	Window Ref.	Window Attribute	Total Suns per Room Annual Existing	Total Suns per Room Annual Proposed	Annual Pr/Ex	Total Suns per Room Winter Existing	Total Suns per Room Winter Proposed	Winter Pr/Ex
	R7		Residential	Bedroom	W7		65	65	1.00	21	21	1.00
	R8		Residential	Bedroom	W8		67	67	1.00	23	23	1.00
	R9		Residential	LKD	W9		59	58	0.98	23	23	1.00
	R10		Residential	LKD	W10		9	9	1.00	0	0	1.00
Fourth	R1		Residential	LKD	W1 W2		100	100	1.00	29	29	1.00
	R2		Residential	Bedroom	W3		67	67	1.00	23	23	1.00
	R3		Residential	LKD	W4		67	67	1.00	23	23	1.00
	R4		Residential	Bedroom	W5		67	67	1.00	23	23	1.00
	R5		Residential	Bedroom	W6		67	67	1.00	23	23	1.00
	R6		Residential	Bedroom	W7		67	67	1.00	23	23	1.00
	R7		Residential	Bedroom	W8		67	67	1.00	23	23	1.00
	R8		Residential	LKD	W9		67	67	1.00	23	23	1.00
	R9		Residential	LKD	W10		9	9	1.00	0	0	1.00
Fifth	R1		Residential	Unknown	W1		77	77	1.00	27	27	1.00
	R2		Residential	Unknown	W2		65	65	1.00	22	22	1.00
	R3		Residential	Unknown	W3		69	69	1.00	23	23	1.00
	R4		Residential	Unknown	W4		73	73	1.00	24	24	1.00
	R5		Residential	Unknown	W5		76	76	1.00	26	26	1.00
	R6		Residential	LKD	W6		9	9	1.00	0	0	1.00
Woodward Street Development No 22												
Ground	R2		Residential	KD	W2 W3		73	71	0.97	25	24	0.96
First	R1		Residential	Bedroom	W1		22	22	1.00	1	1	1.00
	R2		Residential	Bedroom	W2		73	72	0.99	25	25	1.00
Woodward Street Development No 23												
Ground	R2		Residential	Living Room	W2		63	62	0.98	17	17	1.00
First	R1		Residential	Bedroom	W1 W2		72	72	1.00	24	24	1.00
Woodward Street Development No 24												
Ground	R2		Residential	KD	W3		71	70	0.99	23	23	1.00
First	R2		Residential	Bedroom	W2		73	73	1.00	25	25	1.00
Woodward Street Development No 25												
Ground	R1		Residential	Living Room	W1		66	66	1.00	18	18	1.00
First	R1		Residential	Bedroom	W1 W2		73	73	1.00	25	25	1.00
Woodward Street Development No 26												
Ground	R2		Residential	Living Room	W2		71	71	1.00	23	23	1.00
First	R1		Residential	Bedroom	W1 W2		73	73	1.00	25	25	1.00
Woodward Street Development No 27												
Ground	R2		Residential	KD	W2 W3		78	77	0.99	25	25	1.00
First	R1		Residential	Bedroom	W1		28	28	1.00	6	6	1.00
	R2		Residential	Bedroom	W2		79	78	0.99	26	26	1.00
Woodward Street Development No 28												
Ground	R2		Residential	KD	W3		78	77	0.99	25	25	1.00
First	R2		Residential	Bedroom	W2		79	78	0.99	26	26	1.00

Appendix 6: 2 Hour Time in Sun Results

Downley & Kingham Drive
Amenity Existing

1:100

Downley & Kingham Drive
Amenity Proposed

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 contextual
model.
Neighbouring Buildings internal room layouts, window
positions/dimensions and massing derived from both
the context model 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 - "Downley Drive Context
model_IBraghirol - 3D View CAD_19-02-2021.dwg"
Supplied by Buttriss on 19/02/2021.

Massing Legend

Existing

Proposed

All heights in m AOD

Amenity Legend

Area analysed

Area with more than 2 Hours direct sunlight

Area with less than 2 Hours direct sunlight

Percentage of area with more than 2 Hours direct sunlight

REV:	NOTES:	DRWN:	DATE:



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

CLIENT:
Great Places Housing Group

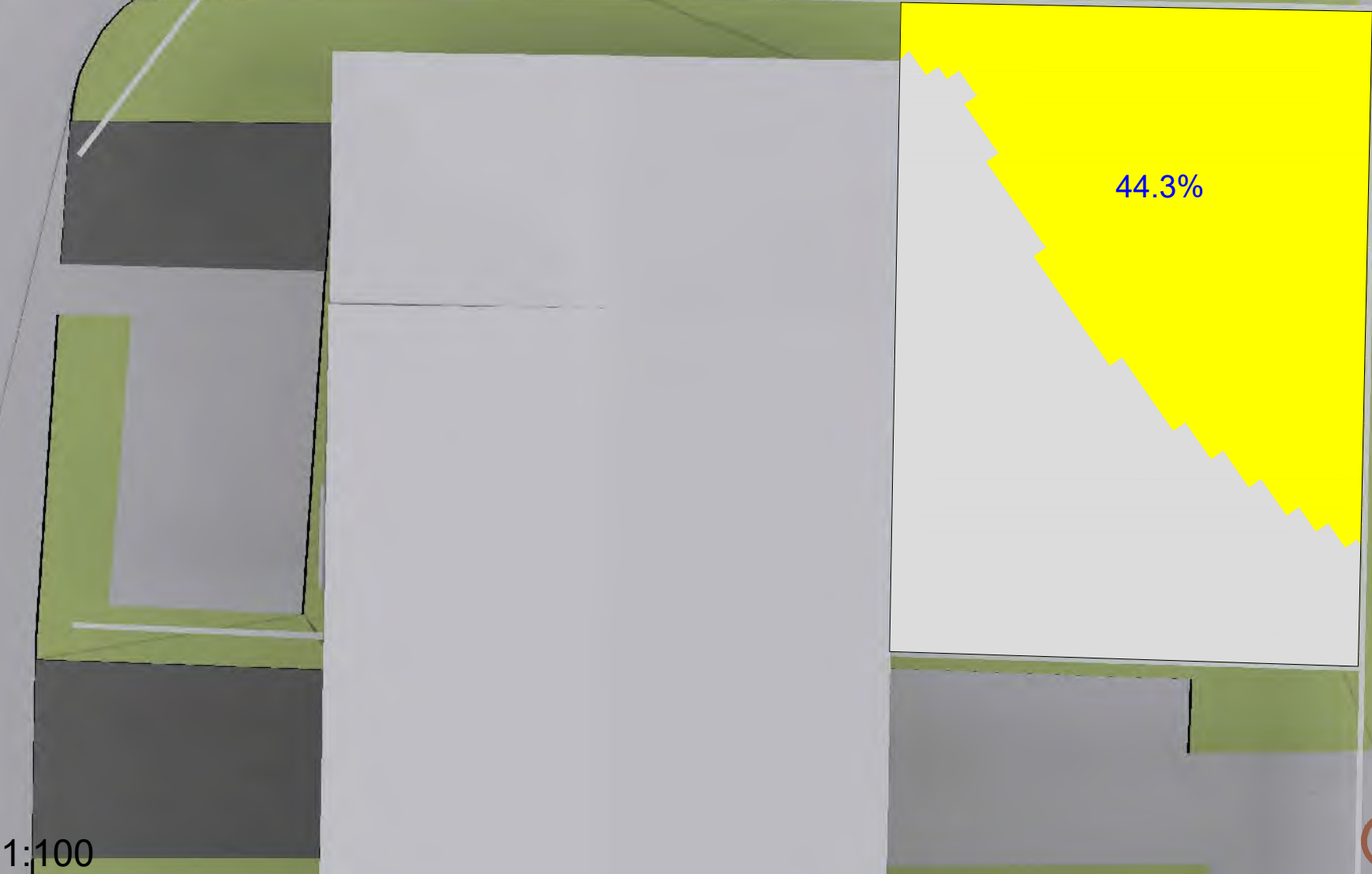
PROJECT:
Downley Drive
Manchester

DRAWING TITLE:
Amenity Spaces

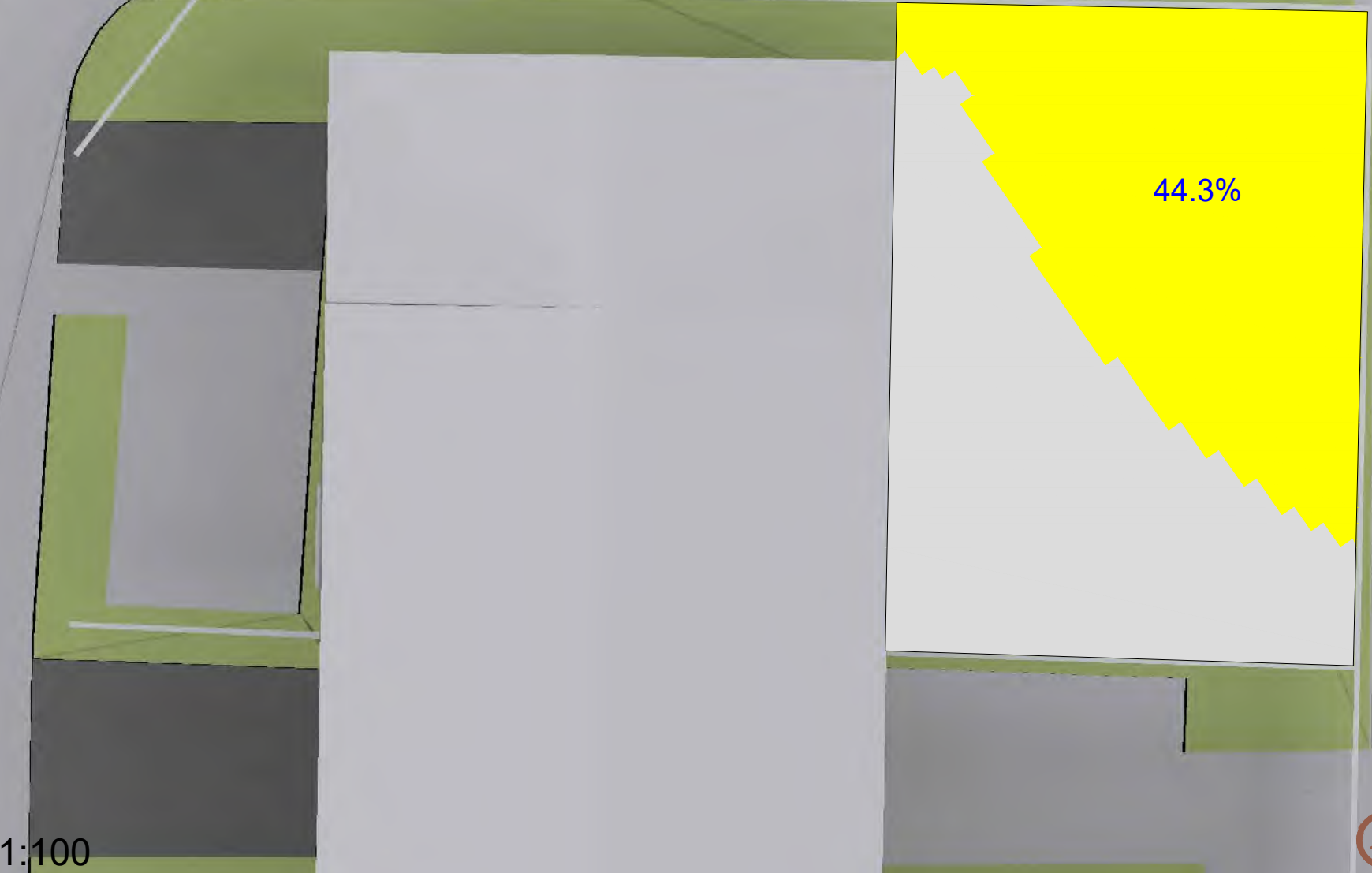
SCALE @ A2:	DATE:	DRAWN:	GSH
1:100	30.03.2021	CHECKED:	DMH

DRAWING NUMBER:	REV:
2793_MA-22	.

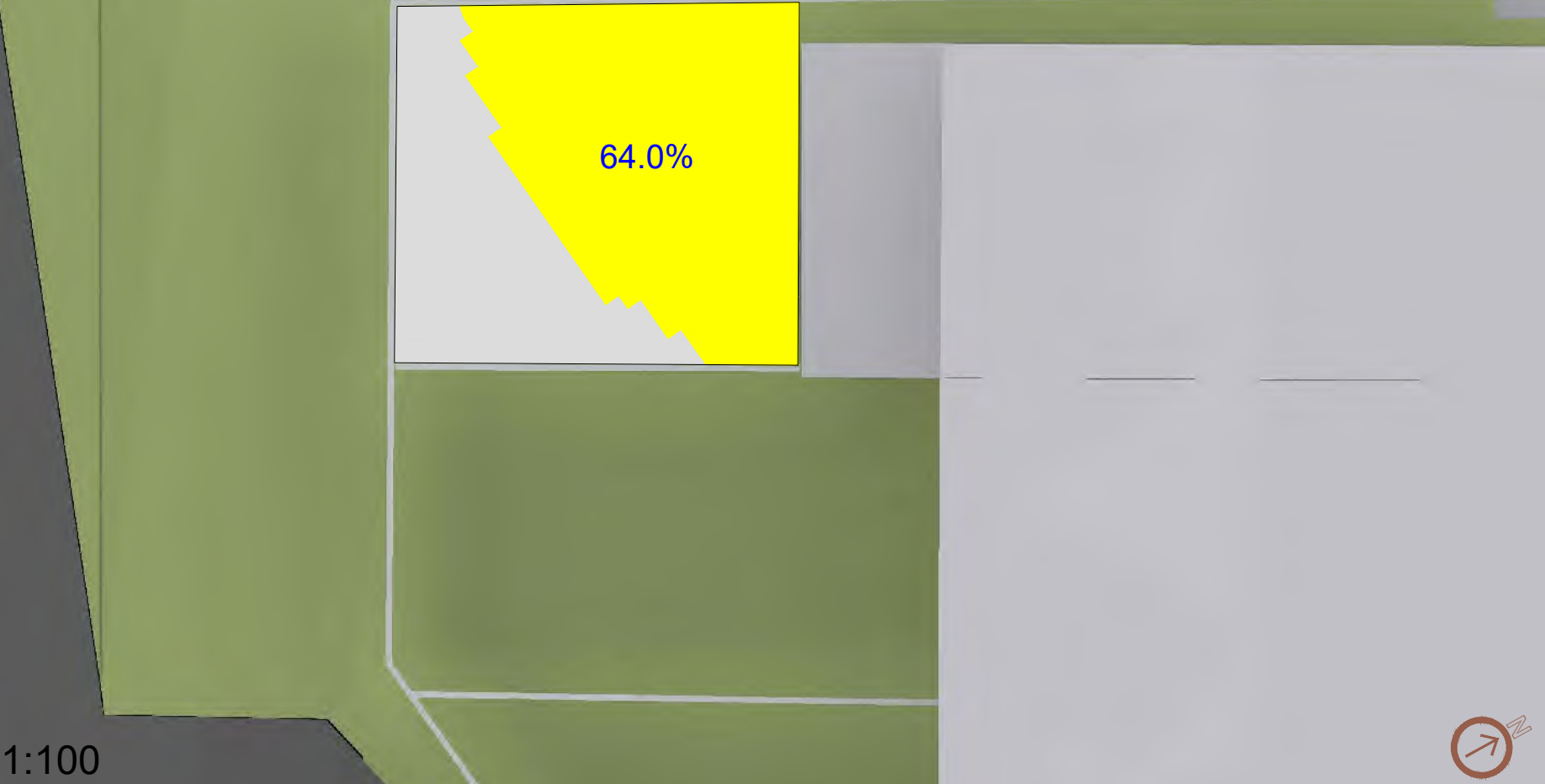
14 Kingham Drive
Amenity Existing



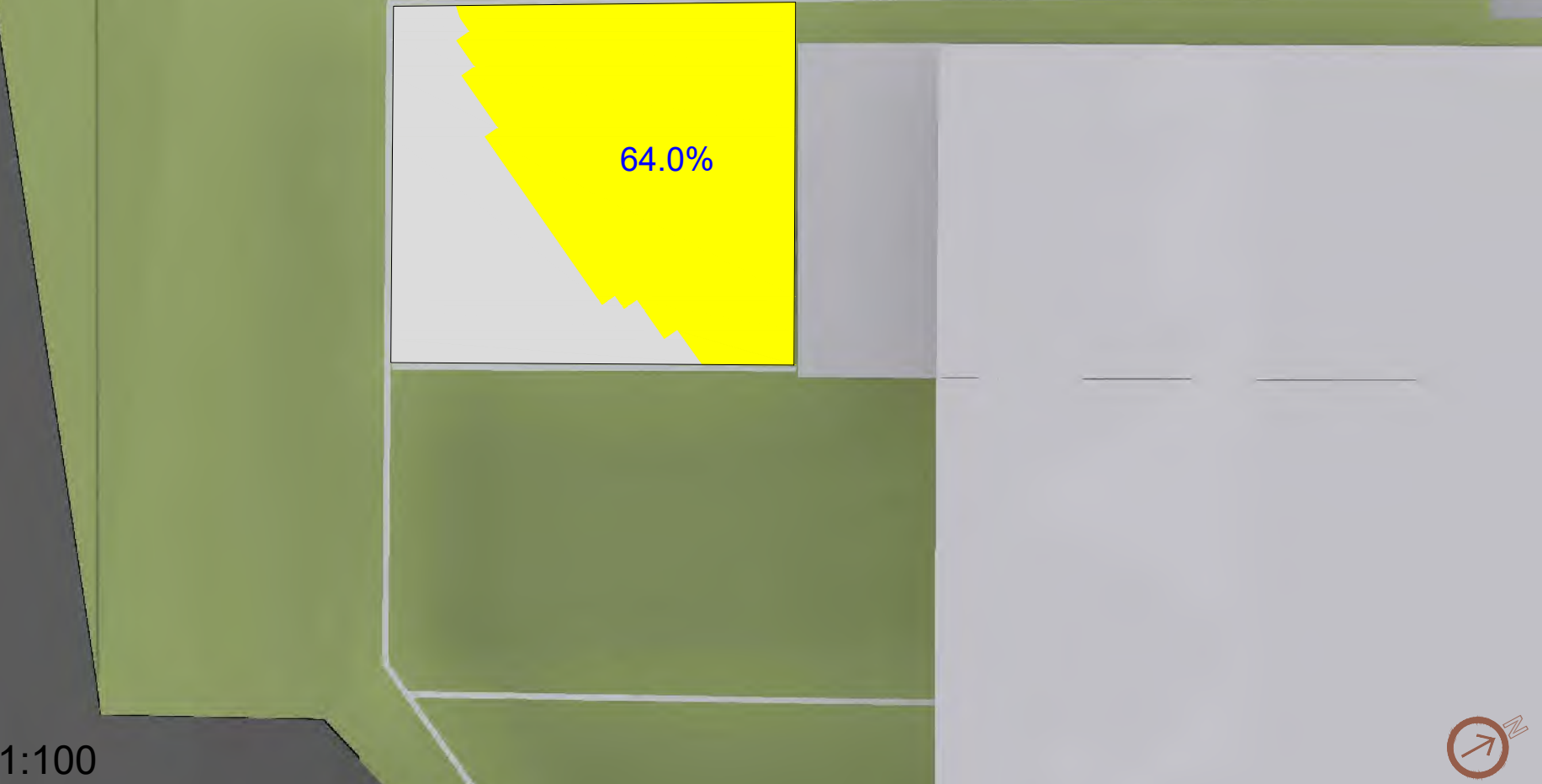
14 Kingham Drive
Amenity Proposed



11 Downley Drive
Amenity Existing



11 Downley Drive
Amenity Proposed



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 contextual
model.
Neighbouring Buildings internal room layouts, window
positions/dimensions and massing derived from both
the context model 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 - "Downley Drive Context
model_IBraghirol - 3D View CAD_19-02-2021.dwg"
Supplied by Buttriss on 19/02/2021.

Massing Legend

Existing
Proposed

All heights in m AOD

Amenity Legend

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

REV:	NOTES:	DRWN:	DATE:

grayscanlanhill
chartered building surveyors

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

CLIENT:
Great Places Housing Group

PROJECT:
Downley Drive
Manchester

DRAWING TITLE:
Amenity Spaces

SCALE @ A2: 1:100	DATE: 30.03.2021	DRAWN: GSH
	CHECKED: DMH	

DRAWING NUMBER: 2793_MA-23	REV: .
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