



DAYLIGHT & SUNLIGHT

**IMPACT ON NEIGHBOURING
PROPERTIES**

**68 – 70 Oldham Street; 61 Spear
Street, Manchester**

21 November 2022

GIA No: 1665

PROJECT DATA:

Client **Jadebricks Manchester Limited**
Architect **SimpsonHaugh Architects**
Project Title **68 - 70 Oldham Street; 61 Spear Street, Manchester**
Project Number **1665**

REPORT DATA:

Report Title **Impact on Neighbouring Properties**
GIA Department **Daylight & Sunlight**
Dated **21 November 2022**
Prepared by **SW**
Checked by **MB**
Type **Client Issue**

Revisions	No:	Date:	Notes:	Signed:

Client:

Jadebricks Manchester Limited

Issue Date:

November 2022

Document References:

1665-sw-22-1121(DaySun Report)
Principles of Daylight and Sunlight
Existing Drawings: 1665-REL01-IS01-001 to 1665-REL01-IS01-003
Proposed Drawings: 1665-REL01-IS01-004 to 1665-REL01-IS01-006
Result and Window Maps

Author for and Behalf of GIA:

Sam Wallis

Authorisation for GIA:



This report is intended solely for Jadebricks Manchester Limited and may contain confidential information. The Liability of this Report extends to Jadebricks Manchester Limited and their duly appointed advisors. No part or whole of its contents may be disclosed to or relied upon by any Third Parties without the consent of this Practice. This report is accurate as at the date of publication but does not take into account anything that has happened since the date of this report.

Section	Page
1.0 Executive Summary	1-3
2.0 Instructions	4
3.0 Introduction	5-6
4.0 Sources of Information	7
5.0 Assumptions	8
6.0 The Site	9
7.0 The Proposal	10
8.0 The Surrounding Properties	11
9.0 Alternative Baseline	12
10.0 Results	13-19
11.0 Conclusions	20

Appended to this report:

Appendix 01	-	Principles of Daylight and Sunlight
Appendix 02	-	Existing Drawings
Appendix 03	-	Proposed Drawings
Appendix 04	-	Results and Window Maps

1.0 Executive Summary

We have undertaken a daylight and sunlight assessment for the proposed development on 68 – 70 Oldham Street; 61 Spear Street, Manchester.

We have completed technical analyses using the methodologies set out within the Building Research Establishment Guidelines entitled 'Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice (2022)'.

Baseline Compliance Levels

The current daylight and sunlight levels received by the surrounding residential receptors in the baseline scenario are summarised in the table below:

Name/Address of Building	Percentage of Windows that Achieve 27% VSC Daylight	Percentage of Rooms that Achieve 80% NSL Daylight	Percentage of Rooms that Achieve 25% APSH Sunlight
99 Oldham Street	9/15 (60%)	6/15 (40%)	10/10 (100%)
76-82 Oldham Street	73/130 (56%)	63/76 (83%)	31/34 (91%)

These baseline results demonstrate a high level of compliance due to the current open nature of the existing site.

The assessment of baseline levels to the surrounding properties considers whether a window/room already meets the BRE criteria in the existing scenario only, whilst the BRE guide states that a window/room should not be reduced by any more than 0.8 times its former value (a 20% reduction) in the proposed scenario. As such, as the VSC target is 27%, if a window in the baseline has 25% VSC, it will be classed as not meeting the BRE targets. In the proposed scenario, if the same window is reduced to 24%, it will be classed as meeting the VSC target as it is within 0.8 times its former value. Therefore, some windows/rooms may not meet the target criteria in the baseline but will in the proposed scenario.

Assessment One - Impact from Proposed Development (Using the Existing Buildings as the Baseline)

We have undertaken an assessment of the proposed development using the existing building as the baseline. When comparing the impact of the proposed design to the current situation (i.e. the existing building), the impacts on the surrounding residential buildings are summarised in the table below.

Name/Address of Building	Percentage of Windows Compliant for VSC Daylight	Percentage of Rooms Compliant for NSL Daylight	Percentage of Rooms Compliant for APSH Sunlight
99 Oldham Street	15/15 (100%)	15/15 (100%)	10/10 (100%)
76-82 Oldham Street	31/130 (24%)	12/76 (16%)	13/34 (38%)

It is inevitable when constructing buildings in an urban environment that alterations in daylight and sunlight to surrounding properties can occur, particularly where a site is underdeveloped for the emerging development context. It is well-established and accepted that the BRE Guidelines, which set out the numerical benchmark for daylight and sunlight assessments, are predicated on a relatively low-rise suburban environment. The National Planning Practice Guidance (NPPG) – Making Efficient Use of Land published on 29 November 2016, updated June 2021, Paragraph 007 Reference ID: 66-007-20190722 states:

“All developments should maintain acceptable living standards. What this means in practice, in relation to assessing appropriate levels of sunlight and daylight, will depend to some extent on the context for the development as well as its detailed design. For example, in areas of high-density historic buildings, or city centre locations where tall modern buildings predominate, lower daylight and sunlight levels at some windows may be unavoidable if new developments are to be in keeping with the general form of their surroundings.”

Assessment Two - Impact from Proposed Development (Using a Mirrored Massing as the Baseline)

We have undertaken a further assessment using a massing equal to 76-82 Oldham Street as the baseline. This analysis considers what the compliance rates would be if the proposed development matched the height and mass of 76-82 Oldham Street. The results for 76-82 Oldham Street are summarised in the table below:

Name/Address of Building	Percentage of Windows Compliant for VSC Daylight	Percentage of Rooms Compliant for NSL Daylight	Percentage of Rooms Compliant for APSH Sunlight
76-82 Oldham Street	63/130 (49%)	22/76 (34%)	27/34 (79%)

Summary of Findings

99 Oldham Street will fully comply with the criteria set out in the BRE Guide.

The impacts to 76-82 Oldham Street are deemed to be acceptable, for the following reasons:

- Not all the windows and rooms are affected, approximately 22% of the apartments in 76-82 Oldham Street, and only those fronting Warwick Street;
- Around half (40/76) of the rooms that do not meet the VSC targets are bedrooms;
- Around half (40/76) of the rooms that do not meet the NSL targets are bedrooms;
- The overall difference in daylight levels between a mirrored massing, and the proposed development, would only marginally be noticeable.
- The city centre context of the site and emerging density of development means that higher deviations are inevitable to make efficient use of the site, and for the proposed development to match the scale and height of development in the immediate surrounding area; and
- The retained level of daylight in 76-82 Oldham Street is commensurate with other similar developments in the city centre.

Overall, considering the limited impacts in the number of apartments, and the location and context of the site, the impact and level of retained daylight and sunlight to the surrounding residential buildings is considered acceptable.

2.0 Instructions

GIA have been instructed by Jadebricks Manchester Limited to undertake detailed technical assessments to understand the potential daylight and sunlight changes that the proposed development on 68 – 70 Oldham Street; 61 Spear Street, Manchester, will have upon the surrounding residential properties.

The daylight and sunlight review within this report considers residential properties only as they are recognised by the Building Research Establishment (BRE 2022) as having the highest expectation for natural light when compared to other uses, such as commercial. The criteria suggested within the BRE have been used to understand and compare the existing levels of light, and the light achieved subsequent to the development of the proposed scheme.

3.0 Introduction

Daylight and Sunlight

The technical analysis that forms the basis of this report has been predicated against the methodologies set out within the Building Research Establishment Guidelines entitled '*Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice (2022)*'. The guidelines in question are precisely that: guidelines which provide a recommendation to inform site layout and design. They are not mandatory, nor do they form a planning policy and their interpretation may be treated flexibly depending on the specifics of each site.

The BRE Guidelines provide two methodologies for a daylight assessment in existing surrounding residential properties, namely;

- The Vertical Sky Component (VSC); and
- The No Sky Line (NSL).

There is one methodology for a sunlight assessment, denoted as Annual Probable Sunlight Hours (APSH).

For existing residential properties, the following table provides a summary of the criteria set out within the BRE Guidelines for daylight and sunlight.

Method	BRE Criteria
VSC	A window may be adversely affected if its VSC measured at the center of the window is less than 27% and less than 0.8 times its former value.
NSL	A room may be adversely affected if the daylight distribution (NSL) is reduced beyond 0.8 times its existing area.
APSH	A window may be adversely affected if a point at the center of the window receives for the whole year, less than 25% of the APSH including at least 5% of the APSH during the winter months (21 September to 21 March) and less than 0.8 times its former sunlight hours during either period, and for existing neighboring buildings, if there is a reduction in total APSH which is greater than 4%.

The National Planning Practice Guidance (NPPG) – Making Efficient Use of Land published on 29 November 2016, updated June 2021, Paragraph 007 Reference ID: 66-007-20190722 states:

"All developments should maintain acceptable living standards. What this means in practice, in relation to assessing appropriate levels of sunlight and daylight, will depend to some extent on the context for the development as well as its detailed design. For example, in areas of high-density historic buildings, or city centre locations where tall modern buildings predominate, lower daylight and sunlight levels at some windows may be unavoidable if new developments are to be in keeping with the general form of their surroundings."

It is important that the location and nature of the development site and its surroundings are considered when determining the significance of any impacts identified.

The emphasis placed on development in the area has led to a number of schemes coming forward in the locality and, with increased height and density, deviations from the published BRE criteria may be unavoidable.

Appendix 01 of this report elaborates on the mechanics of each of the above assessment criteria, explains the appropriateness of their use, and the parameters of each specific recommendation.

4.0 Sources of Information

In compiling this report, we have used the following information:

GIA

Site photographs

FIND Maps

OS Map

Vertex Modelling

Baseline model

SimpsonHaugh Architects

IR04-20220726 (proposed model)

Manchester Planning Portal

Full plans for 76-82 Oldham Street

5.0 Assumptions

- a) All residential buildings have been identified by reference to the Valuation Office Agency (VOA) search and/or external observation.
- b) We have not sought access to the adjoining properties, thus have made reasonable assumptions as to the internal layouts of the rooms behind the fenestration based upon the building form and architecture, unless information was available publicly. This is normal practice where access to adjoining properties is not available. Unless the building form dictates otherwise, we assume a standard 4.2m deep room (14ft) for residential properties.
- c) Floor levels have been assumed for the adjoining properties. This dictates the level of the working plane which is relevant for the No Skyline assessment.

6.0 The Site

The site is bounded by Oldham Street to the north west, the existing neighbouring building to the south east, Spear Street to the south west, and Warwick Street to the north east.

The drawing extract below shows the existing site:

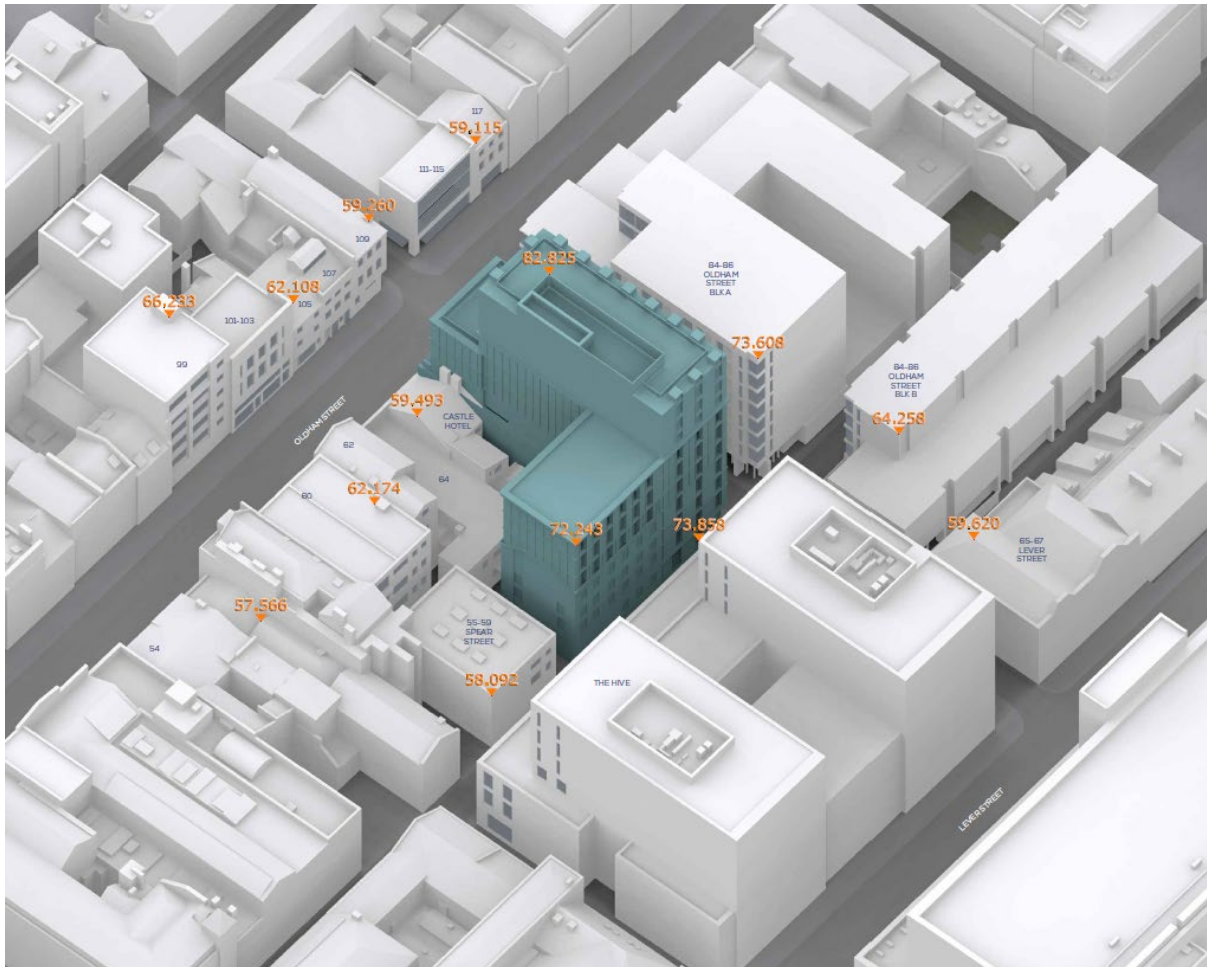


Our understanding of the existing building and the surrounding context is depicted on GIA drawings 1665-REL01-IS01-01, 1665-REL01-IS01-02 and 1665-REL01-IS01-03 within Appendix 02. These buildings on the site form the baseline for Assessment One.

7.0 The Proposal

GIA's understanding of the proposed scheme is illustrated in drawings 1665-REL01-IS01-04, 1665-REL01-IS01-05 and 1665-REL01-IS01-06 shown within Appendix 03.

Our analysis of this option is based on the proposed scheme massing models produced by SimpsonHaugh Architects, received on 26 July 2022.



8.0 Surrounding Properties

We have created a three-dimensional computer model of the site and the surrounding properties to allow for a detailed daylight and sunlight assessment.

The daylight and sunlight review within this report considers existing and consented residential properties only, as they are recognised by the Building Research Establishment (BRE 2022) as having the highest expectation for natural light when compared to other uses, such as commercial.

The benchmark condition of the site allows us to calculate the daylight and sunlight conditions within the neighbouring buildings. From this, we can then compare them with the conditions within these properties, assuming the current proposed development is in place.

The pertinent residential accommodation, which is relevant for a daylight and sunlight assessment, is set out in the table below:

Name/Address of Building	Position in Relation to the Development
99 Oldham Street	North west
76-82 Oldham Street	East

9.0 Alternative Baseline

The BRE acknowledges that the published values are purely advisory, and different targets may be used based on the special requirements of the proposed development or its location. The proposed development site is currently a vacant building in need of repurposing, in a city centre, and in an area of emerging significantly increased density. It would therefore be unreasonable for the existing surrounding buildings to maintain the same levels of daylight and sunlight that they currently receive, and these represent the type of special requirements contemplated by the BRE Guide.

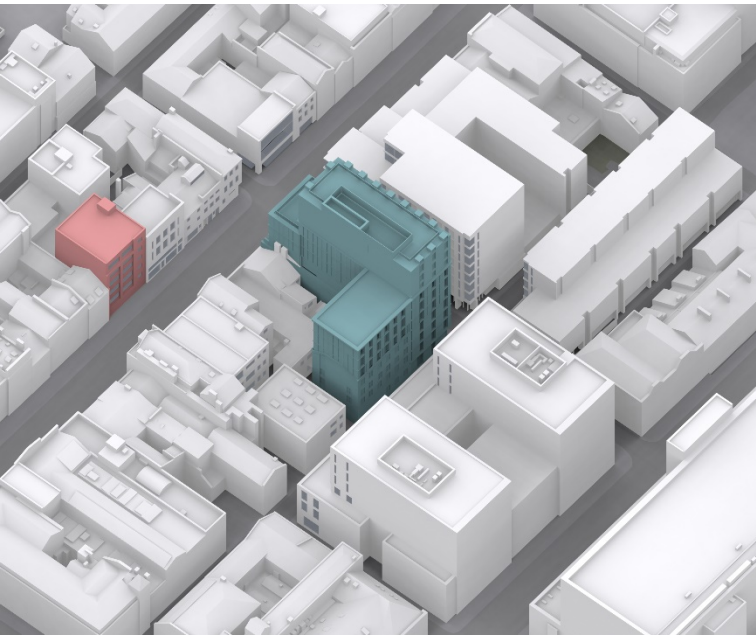
Appendix F of the BRE Guide states that alternative targets may be generated from the layout dimensions of the existing development, or they may be derived from considering the internal layout and daylighting needs of the proposed development itself. For example, sometimes there may be an extant planning permission for a site, but a developer wants to change the design, and the extant permission can be used as the baseline to understand the difference in impact from the extant permission and the new proposal. In assessing the loss of light to existing windows nearby, a local authority may allow the targets for the permitted scheme to be used as alternative benchmarks. This is not the only approach to setting alternative targets and whatever baseline is chosen; it is important that they should be self-consistent.

Paragraph F5 of the BRE Guide explains an approach which may be adopted in cases where an existing building has windows that are unusually close to the site boundary and taking more than their fair share of light. To ensure that a new development matches the height and proportions of existing buildings, the VSC, daylight distribution, and APSH targets for these windows could be set to those for a 'mirror-image' building of the same height and size, an equal distance away on the other side of the boundary. This approach, and the use of alternative baselines, has been accepted on several significant developments throughout the city centre.

We have undertaken an analysis considering alternative baselines. In our view, this is a much more robust approach than the current existing buildings. The alternative baseline utilised a mirror massing of 76-82 Oldham Street on the development site.

10.0 Results

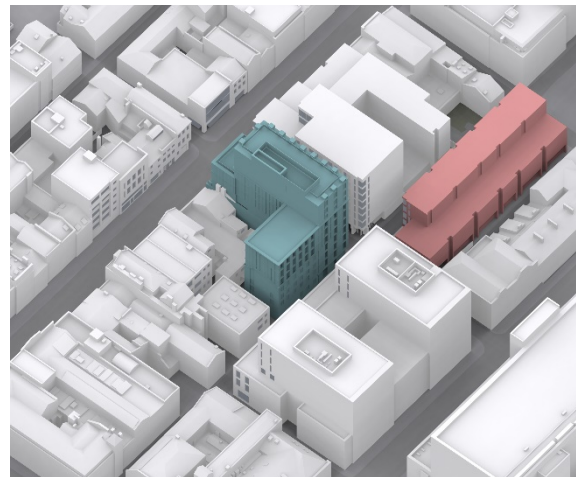
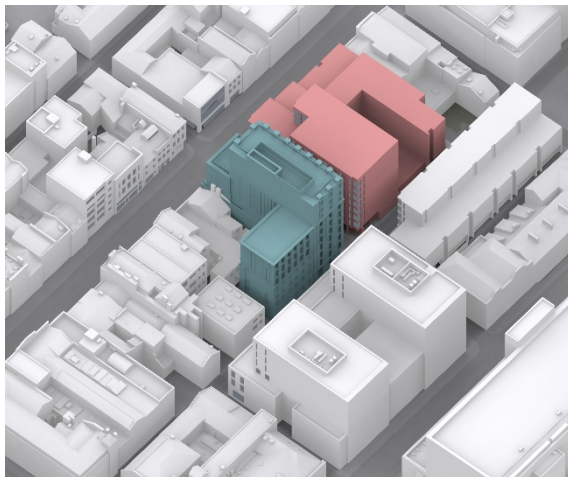
99 Oldham Street



Name/Address of Building	Percentage of Windows Compliant for VSC Daylight	Percentage of Rooms Compliant for NSL Daylight	Percentage of Rooms Compliant for APSH Sunlight
Assessment One - Impact from Proposed Development (Using Existing Baseline)			
99 Oldham Street	15/15 (100%)	15/15 (100%)	10/10 (100%)

99 Oldham Street will fully comply with the BRE Guide, and as such the impact is considered wholly acceptable.

76-82 Oldham Street



Name/Address of Building	Percentage of Windows Compliant for VSC Daylight	Percentage of Rooms Compliant for NSL Daylight	Percentage of Rooms Compliant for APSH Sunlight
Baseline Compliance Levels			
76-82 Oldham Street	73/130 (56%)	63/76 (83%)	31/34 (91%)
Assessment One - Impact from Proposed Development (Using Existing Baseline)			
76-82 Oldham Street	31/130 (24%)	12/76 (16%)	13/34 (38%)
Assessment Two - Impact from Proposed Development (Using Mirrored Baseline)			
76-82 Oldham Street	63/130 (49%)	22/76 (34%)	27/34 (79%)

Due to the proximity of 76-82 Oldham Street to the proposed development, it is apparent that any development that matches the scale and height of the emerging density in the area is going to result in losses to daylight and sunlight, as evidenced in the results associated with assessment one. To understand whether or not these impacts are acceptable, and whether or not the levels of retained daylight and sunlight is appropriate for the context of the proposed development, we have undertaken a further assessment using the mirrored baseline methodology explained in Section 9.0 of this report, and advocated in Appendix F of the BRE Guide.

The average VSC in 76-82 Oldham Street with a development on the site that matches the height and mass of 76-82 Oldham Street would be 14.4% VSC. The average VSC within 76-82 Oldham Street with the proposed development built out will be 11.1% VSC.

The BRE criteria states that reductions or changes of 0.8 times the former value would not be appreciable by an occupant. The difference between the VSC daylight levels with a development on the site that matches the height and mass of 76-82 Oldham Street, and the proposed development is 0.77 times. As such, the average difference in levels would only just be perceptible to an occupant.

The average NSL in 76-82 Oldham Street with a development on the site that matches the height and mass of 76-82 Oldham Street would be 41.3%. The average NSL within 76-82 Oldham Street with the proposed development built out will be 26.7%. The living kitchen diners in 76-82 Oldham Street are deep and single aspect. These layouts make it difficult for adjacent developments to maintain open views of sky to the rear of the rooms.

The impact to 76-82 Oldham Street is predominantly along the Warwick Street elevation. There are three single aspect apartments on each floor that will suffer the largest adverse impacts. Overall, the number of impacted apartments (22 out of 100) is low in the context of 76-82 Oldham Street.

There will be very little appreciable difference in the level of APSH sunlight in 76-82 Oldham Street as a result of the proposed development.

As previously discussed, it also is essential that the location and nature of the development site and surrounding is considered when determining the significance of any impacts identified. The BRE Guide is very clear that the targets provided are not mandatory. The location of the development could be deemed to be special circumstances in which the planning authority may wish to use different target values. This scope and view should also be followed through to the sensitivity of the surrounding receptors. There should be an expectation that a higher degree of obstruction is inevitable in an area with modern high-rise buildings.

The images below illustrate the streetscapes and built form of some of London's most typical and highly valued locations. Whilst not Manchester, they demonstrate that these buildings would not be permitted today in planning terms if BRE's daylight and sunlight guidance were stringently applied. In a similar vein, it would be difficult to reproduce such built form in new developments given the common interpretation of BRE guidance.

The first image of each pair shows the existing street, and the second of the pair shows the extent of development that would have been permitted, in order to comply with the published BRE targets.

Image 1: Shoreditch



Image 2: Covent Garden



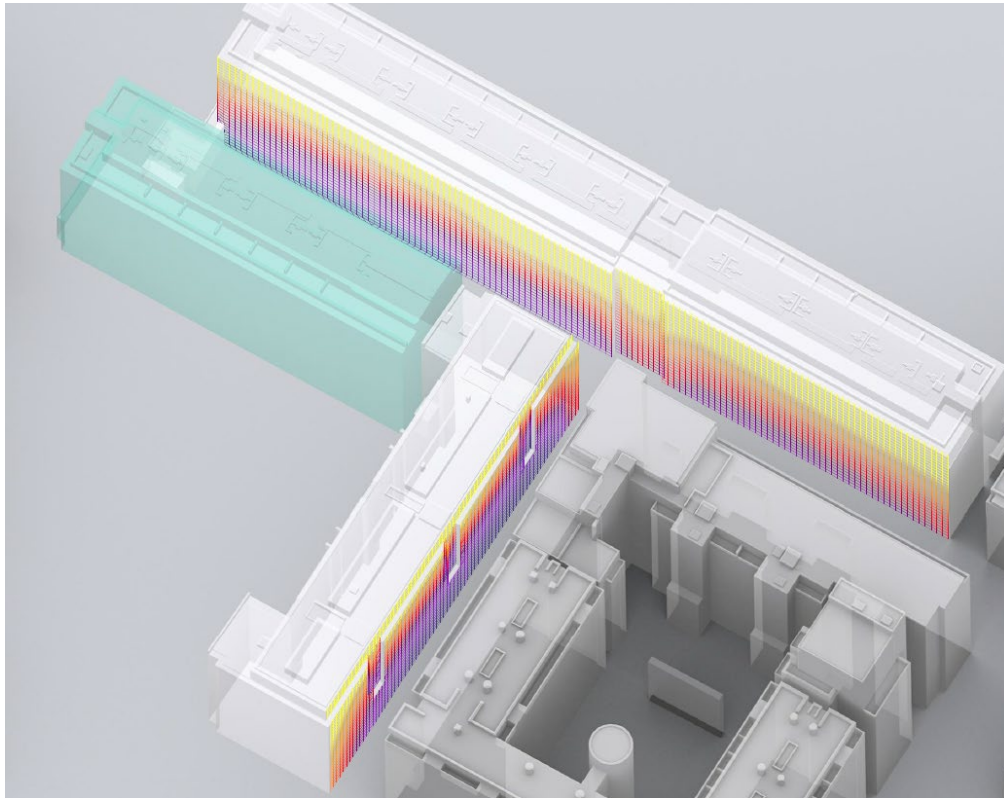
Image 3: Westminster



GIA have previously researched the retained VSC daylight levels in established, successful residential areas in the city centres of Manchester and Salford. These are detailed below. The streets chosen all include successful residential buildings and are recognised as positive urban environments that people choose to live in. The average VSC levels were calculated using either detailed VSC analyses, or VSC façade renders, which calculate the VSC levels across the whole facades. Only the elevations that closely interface with adjacent development have been considered. It is implied that the other elevations in these buildings will achieve significantly better daylight levels.

NSL daylight is dependent on the room layout, and so we have not been able to undertake the same detailed analysis. APSH sunlight is influenced by orientation and so direct comparisons could not be achieved.

An example of how the analysis is undertaken is shown below, using the interface of the existing residential properties in Castlefield:



The results of our assessments are summarised in the table below, along with the average VSC level of 76-82 Oldham Street:

Address	Retained VSC Level
Boxworks, Castlefield, Manchester	5.1%
MoHo, Castlefield, Manchester	6.4%
Abito, Greengate, Salford	7.5%
Anvil Street, McIntosh Village, Manchester	8%
Hill Quays, Great Jackson Street, Manchester	10%
Lockes Yard, Manchester	11%
Frank Street, McIntosh Village, Manchester	11%
76-82 Oldham Street	11.1%
Sorting Office, Greengate, Salford	12.4%
Lumiere, Great Jackson Street, Manchester	12.5%
Worsley Street/Burton Place, Castlefield	13.6%
One Greengate, Greengate, Salford	14.1%
Deansgate Quay, Great Jackson Street, Manchester	15%
Tempus Tower, Greengate, Salford	20%
Leftbank Apartments	20.7%

Anaconda Cut, Greengate, Salford	21%
The Residence, Greengate, Salford	21%

The impacts to 76-82 Oldham Street are deemed to be acceptable, for the following reasons:

- Not all the windows and rooms are affected, approximately 22% of the apartments in 76-82 Oldham Street, and only those fronting Warwick Street;
- Around half (40/76) of the rooms that do not meet the VSC targets are bedrooms;
- Around half (40/76) of the rooms that do not meet the NSL targets are bedrooms;
- The overall difference in daylight levels between a mirrored massing, and the proposed development, would only marginally be noticeable.
- The city centre context of the site and emerging density of development means that higher deviations are inevitable to make efficient use of the site, and for the proposed development to match the scale and height of development in the immediate surrounding area; and
- The retained level of daylight in 76-82 Oldham Street is commensurate with other similar developments in the city centre.

Overall, considering the limited impacts in the number of apartments, and the location and context of the site, the impact and level of retained daylight to 76-82 Oldham Street is considered acceptable.

11.0 Conclusions

We have undertaken a daylight and sunlight assessment for the proposed development on 68 – 70 Oldham Street; 61 Spear Street, Manchester.

Overall, considering the nature of the development and the context of the site, the overall impact of the scheme on the surrounding residential properties is considered wholly acceptable.

Appendix 01

Principles of Daylight and Sunlight

Principles of Daylight and Sunlight

Background

The quality of amenity and open spaces is often stipulated within planning policy for protection or enhancement and is often a concern for adjoining properties and other interested parties.

Historically the department of environment provided guidance in the issues, and in this country, this role has now been taken on by the building research establishment (BRE), the British standards institutions (BSI) and the chartered institute of building services engineers (CIBSE). Fortunately they have collaborated in many areas, to provide as much unified advice as possible in the form of industry best practice.

Many local planning authorities consider daylight and sunlight an important factor for determining planning applications. Policies refer to both the protection of daylight and sunlight amenity within existing properties as well as the creation of proposed dwellings with high levels of daylight and sunlight amenities.

In terms of considering what is material local authorities typically refer to the BRE guidelines and apply their criteria set out within. The guidelines were originally produced out in 1991, but superseded by the BRE guidelines (2011) *site layout planning for daylight and sunlight*.

Where developers are seeking to maximise their development value, it is often in the area of daylight and sunlight issues that they may seek to push the boundaries. Particularly in London, there is a priority on the creation of more housing and thus resulting in the densification of urban areas. Local authorities vary in their attitude of how flexible they can be with the degree of impact on the daylight and sunlight amenity enjoyed by neighbouring owners and it is one factor among many planning aspects considered when determining an application. In city centres where high density is common, the protection of amenity is more challenging and there are many factors that need to be taken into account: each case has to be considered on its own merits.

The BRE Guidelines

The guidelines are typically referred to for daylight and sunlight amenity issues, however they were not intended to be used as an instrument of planning policy. In the introduction of 'Site Layout Planning for Daylight and Sunlight (2011)', section 1.6 (page 1), states that:-

"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 lighting is only one of many factors in site layout design (see Section 5). In special circumstances the developer or Planning Authority may wish to use different target values. For example, in an historic city centre, or in an area with modern high rise buildings, a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings".

Again, the paragraph 2.2.3 (page 7) of the document states:-

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

Principles of Daylight and Sunlight

The numerical criteria suggested by the BRE are therefore designed to provide industry advice/guidance to plan/design with daylight in mind. Alternative values may be appropriate in certain circumstances such as highly dense urban areas around London, for e.g. The approach to creating alternative criteria is detailed within Appendix F of the BRE.

Measurement and Criteria for Daylight and Sunlight as set out in the BRE Guidelines

The BRE guidelines state that they are;

"intended for use for rooms in adjoining dwellings where daylight is required, including living rooms, kitchens and bedroom. Windows to bathrooms, toilets, garages need not be analysed."

They are therefore primarily designed to be used for residential properties however, the BRE guidelines continue to state that they may be applied to any existing non-residential buildings where there may be a reasonable expectation of daylight including; schools, hospitals, hostels, small workshop and some offices.

Daylight

In the first instance, if a proposed development falls beneath a 25 degree angle taken from the centre point of the lowest window, then the BRE suggests that no further analysis is required as there will be adequate sky light (i.e. sky visibility). This rule is applied when considering the scope of any assessments.

The BRE guidelines provide two methods for calculating daylight to existing surrounding properties:

- Vertical Sky Component (VSC)
- No Sky Line (NSL) also referred to as daylight distribution

A further method, the Average Daylight Factor (ADF) is provided for calculating daylight within proposed properties. However, it is sometimes applied as a supplementary assessment for existing surrounding properties.

Each method is described below:

Vertical Sky Component

Methodology

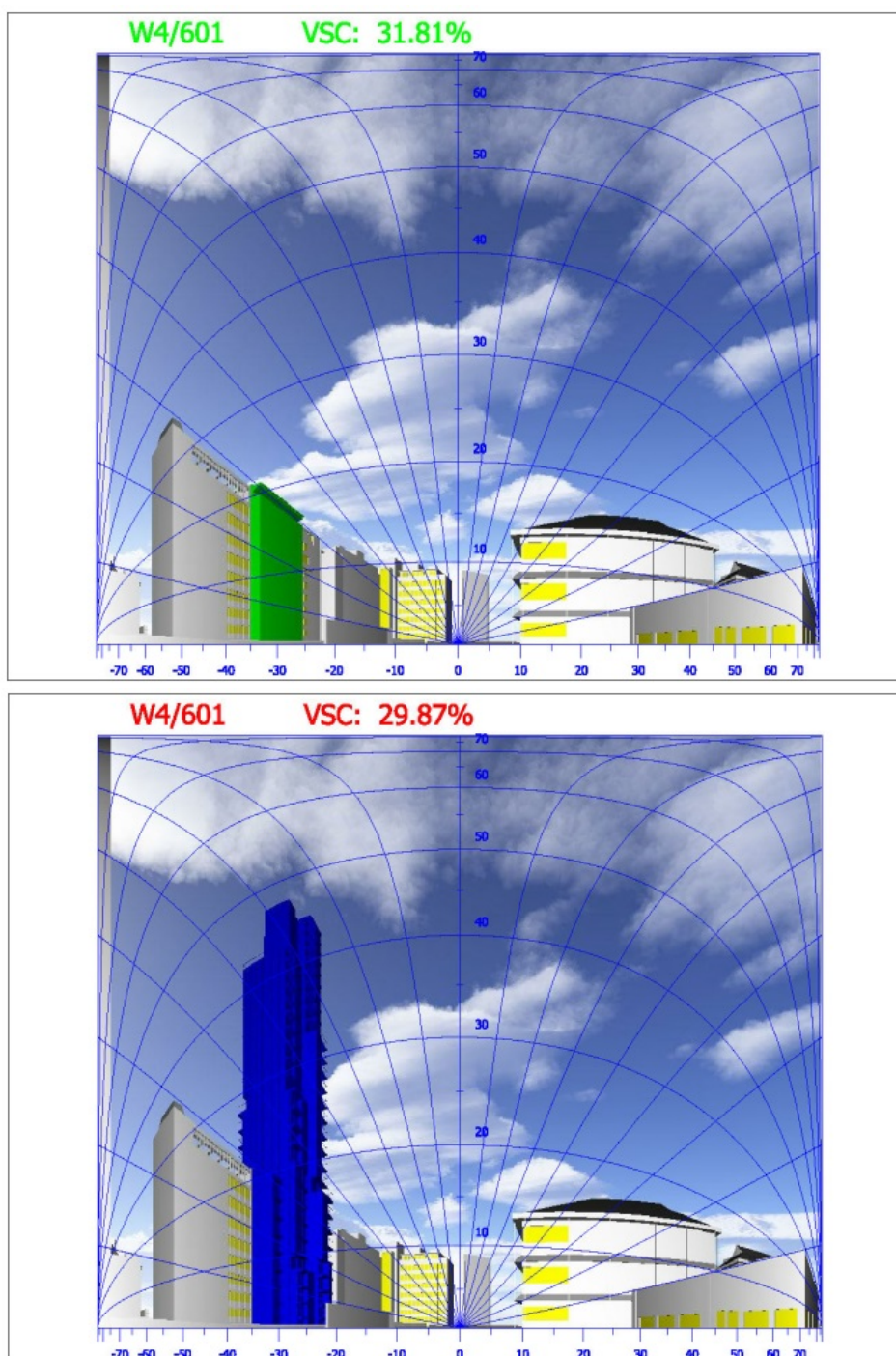
This is defined in the BRE as:-

"Ratio of that part of illuminance, at a point on a given vertical plane that is received directly from a CIE standard overcast sky, to illuminate on a horizontal plane due to an unobstructed hemisphere of this sky."

This statement means, in practice that if one had a totally unobstructed view of the sky, looking in a single direction, then just under 40% of the complete hemisphere would be visible. The measurement of this vertical sky component is undertaken using two indicators, namely a skylight indicator and a transparent direction finder.

Principles of Daylight and Sunlight

Alternatively a further method of measuring the VSC, which is easier to understand both in concept and analysis, is often more precise and can deal with more complex instructions, is that of the Waldram diagram.



The point of reference is the same as for the skylight indicator, at the centre of the outward window face. Effectively a snap shot is taken from that point of the sky in front of the window, before and after the obstruction is put in place together with all the relevant obstructions to it, i.e. the buildings.

Principles of Daylight and Sunlight

An unobstructed sky from that point of reference would give a vertical sky component of 39.6%, corresponding to 50% of the hemisphere, and therefore the purpose of the diagram is to discover how much sky remains once obstructions exist in front of that point.

Criteria

The BRE Handbook provides criteria for:

- (a) New Development
- (b) Existing Buildings
- (c) Adjoining Development Land

- (a) New Development

Paragraph 2.1.21 of the BRE states that:

"Obstructions can limit access to light from the sky. This can be checked by measuring or calculating the angle of visible sky 'theta', angle of obstruction or Vertical Sky Component (VSC) at the centre of the lowest window where daylight is required. If VSC is:

- at least 27% ('theta' is greater than 65 degrees, obstruction angle less than 25 degrees) conventional window design will usually give reasonable results.
- between 15% and 27 % ('theta' is between 45 degrees and 65 degrees, obstruction angle between 25 degrees and 45 degrees) special measures (larger windows, changes to room layout) are usually needed to provide adequate daylight.
- between 5% and 15% ('theta' is between 25 degrees and 45 degrees, obstruction angle between 45 degrees and 65 degrees) it is very difficult to provide adequate daylight unless very large windows are used.
- less than 5% ('theta' less than 25 degrees, obstruction angle more than 65 degrees) it is often impossible to achieve reasonable daylight, even if the whole window wall is glazed."

- (b) Existing Buildings

Para 2.2.21 (page 11) of the BRE states:

"If any part of a new building or extension measured in a vertical section perpendicular to a main window wall of an existing building, from the centre of the lowest window, subtends an angle of more than 25 degree to the horizontal, then the diffuse daylighting of the existing building may be adversely affected. This will be the case if the vertical sky component measured at the centre of an existing main window is less than 27%, and less than 0.8 times its former value".

The VSC provide a quick and simple test which looks to give an early indication of the potential for light at the window face. However considered in isolation, it does not, in any fashion, indicate the quality of actual light within a space. It does not take into account the window size, the room size or room use. It helps by indicating that if there is an appreciable amount of sky visible from a given point there will be a reasonable potential for daylighting.

Principles of Daylight and Sunlight

(c) Adjoining Development Land

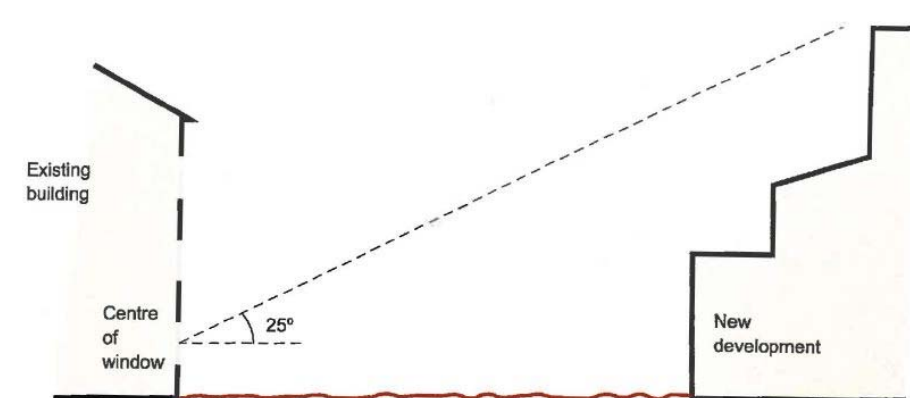
Paragraph 2.3.10 of the BRE guidelines states:

"in broad general terms, a development site next to a proposed new building will retain the potential for good diffuse daylighting provided that on each common boundary:

- (a) no new building, measured in a vertical section perpendicular to the boundary, from a point 1.6m above ground level, subtends an angle of more than 43 degrees to the horizontal;*
- (b) or, if (a) is not satisfied, then all points 16m above the boundary line are within 4m (measured along the boundary) of a point which has a VSC (looking towards the new building(s)) of 17% or more 2m above ground level are within 4m (measured sideways) of a point which has a vertical sky component of 27% or more.*

Alternative VSC criteria as per Appendix F of the BRE guidelines

The 27% VSC target criteria is based upon a sub-urban type environment whereby a 25 degree line was taken from the centre point on a ground floor window as shown below:



However, in city centre locations and urban areas where density levels are increasing, these values may not be considered appropriate. The BRE guidelines provide that *"different targets may be used based on the special requirements of the proposed development or its location"* (paragraph F1).

Appendix F of the BRE suggests several approaches as to how alternative targets may be considered including:

- Consented scheme – use of an extant planning permission to establish alternative benchmark criteria for VSC and APSH. It is not appropriate to treat a permitted scheme in the same manner as an existing building and allow a 20% reduction beyond this. If the levels of daylight and sunlight retained are similar to a previously consented scheme then it follows these levels should be considered acceptable again, notwithstanding other planning considerations.
- Mirror massing – to ensure a development matches the height and proportions of existing buildings, the VSC and APSH targets could be set to those of a mirror image of the same height and size, an equal distance away from the boundary (paragraph F5).
- Consider surrounding context and existing obstruction angles as well as spacing to height ratios.

Principles of Daylight and Sunlight

In addition, due to the requirements for external amenity space within local planning policies, many residential buildings are served by balconies. Balconies can restrict the view of the sky dome whereby even the modest obstruction may result in a large relative impact on the VSC. The BRE guidelines therefore provide that an assessment can be carried out comparing the levels of VSC with and without the balconies in place for both the existing and proposed scenarios, to establish whether it is the presence of the balcony or the size of the new obstruction that is the main factor in the loss of light (paragraph 2.2.11).

No Sky Line

Methodology

The NSL method is a measure of the distribution of daylight at the working plane within a room. The 'working plane' means a horizontal 'desktop' plane 0.85m in height for residential properties. The NSL divides those areas of the working plane which can receive direct sky light from those which cannot. If a significant area of the working plane lies beyond the NSL (i.e. it receives no direct sky light), then the distribution of daylight in the room will be poor and supplementary electric lighting may be required.

It is similar to the VSC approach in that a reduction of 0.8 times in the area of sky visibility at the working plane may be deemed to be noticeable. It is however, very dependent upon knowing the actual room layouts or having a reasonable understanding of the likely layouts.

It is assessed by plotting the area of a room which can see the sky and which cannot, referred to as the NSL contour or daylight distribution contour. The contours assist in helping to understand the way the daylight is distributed within a room and the comparisons of existing and limitations of proposed circumstances within neighbouring properties. Like the VSC method, it relates to the amount of visible sky but does not consider the room use in its criteria, it is simply a test to assess the change in position of the No Sky Line, between the existing and proposed situation. It does take into account the number and size of windows to a room, but does not give any quantitative or qualitative assessment of the light in the rooms, only where sky can or cannot be seen.

Criteria

BS 8206 Part 2 (para 5.7) that the:

"uniformity of daylight is considered to be unsatisfactory if a significant part of the working plane (normally more than 20%) lies behind the no-sky line".

Therefore, it is implied that an NSL of at least 80% would be considered satisfactory in regards to deep rooms which are lit by windows on one side, the BRE Guidelines state (para, 2.2.10):

In regards to the alteration as a result of a proposed development or obstruction the BRE provide that the daylight may be adversely affected if *"the area of the working plane in a room which can receive direct skylight is reduced to less than 0.8 times its former value."*

Principles of Daylight and Sunlight

Average Daylight Factor

Methodology

The Average Daylight Factor (ADF) is defined within the 2011 BRE Guidelines as:

'a ratio of total daylight flux incident on a reference area to the total area of the reference area, expressed as a percentage of outdoor luminance on a horizontal plane, due to an unobstructed sky of assumed or known luminance distribution'.

Whilst the BRE guidelines provide this measure as a tool to understand daylight within proposed dwellings not existing dwellings, if room layouts are known it can provide a useful supplementary measure of daylight and is often requested by many local authorities.

The ADF method of assessment considers:

- The diffuse visible transmittance of the glazing to the room in question (i.e. how much light gets through the window glass). A transmittance value of 0.8% is assumed for single glazing and 0.65% for double glazed windows;
- The net glazed area of the window in question;
- The total area of the room surfaces (ceiling, walls, floor and windows); and
- The angle of visible sky reaching the window(s) in question

In addition, the ADF method makes allowance for the average reflectance of the internal surfaces of the room and of external obstruction (assumed to be 0.5 unless otherwise stated).

Criteria

The criteria for ADF is taken from the British Standard 8206 part II which gives the following criteria based on the room use:

- Bedroom – 1% ADF
- Living room – 1.5% ADF
- Kitchen – 2% ADF

Where a room has multiple uses such as a living kitchen diner (LKD) or a studio apartment, the highest value is taken so in these cases the required ADF is 2%.

Sunlight

Methodology

The BS 8206 part 2 (section 5.2) states that:

"Provided that the entry of sunlight is properly controlled, it is generally welcome in most buildings in the UK. Dissatisfaction can arise as much from the permanent exclusion of sunlight as from its excess. The provision of sunlight is important in dwellings, particularly during winter months. Sunlight is especially valued in habitable rooms used for long periods during the day."

Principles of Daylight and Sunlight

Sunlight is measured using a sun indicator which contains 100 spots, each representing 1% of Annual Probable Sunlight Hours (APSH). Where no obstruction exists the total APSH would amount to 1486 hours and therefore each spot equates to 14.86 hours of the total annual sunlight hours.

The number of spots is calculated for both the whole year and also during the winter period (21st September to 21st March) prior to an obstruction and after the obstruction is put in place. This provides a percentage of APSH for each of the time periods for each window assessed. The 2011 BRE Guidelines note that:

- *"In housing, the main requirement for sunlight is in living rooms, where it is valued at any time of day, but especially in the afternoon."*
- *"all main living rooms of dwellings...should be checked if they have a window facing within 90° of due south. Kitchens and bedrooms are less important, although care should be taken not to block too much sun"; and*
- *"If the main living room to a dwelling has a main window facing within 90° of due north, but a secondary window facing within 90° of due south, sunlight to the secondary window should be checked."*
- *"...a south facing window will, in general, receive most sunlight, while a north facing one will receive it only on a handful of occasions. East and west facing windows will receive sunlight only at certain times of day".*

When a room has multiple windows, not all may have a southerly orientation however, these windows may contribute to the levels of sunlight within a given room even if by 1-2% APSH. As well as the assessment on a window basis the BRE guidelines provide that an assessment can be undertaken on a room basis.

Whilst the emphasis of the BRE guidelines is in regards to living rooms, it is not always possible to determine the room uses within all of the properties assessed and therefore typically all windows or all rooms with windows facing within 90 degrees of due south and facing the site are assessed.

Criteria

The BRE provide that for existing buildings a window maybe adversely affected if a point at the centre of a window receives:

- Less than 25% of the APSH during the whole year, of which 5% APSH must be in the winter period; and
- Receives less than 0.8 times its former sunlight hours in either time period; and
- Has a reduction in sunlight for the whole year more than 4% APSH.

In terms of the assessment on a room basis the criteria applied is the same.

For proposed buildings the BRE provide (paragraph 3.1.15) that a dwelling or building which has a particular requirement for sunlight will appear reasonably sunlit provided:

- At least one main window faces within 90 degrees of due south; and

Principles of Daylight and Sunlight

- Centre of one main living room window can receive 25% of APSH including 5% APSH in the winter months.

It continues that where groups of dwellings are planned the layout should aim to maximise the number of living rooms that meet the above recommendations.

Overshadowing

As well as daylight and sunlight amenity to neighbouring dwellings, planning policy often refers to the levels of overshadowing to amenity areas such as parks, public squares, playgrounds etc. The BRE guidelines provide two methods of calculation in regards to overshadowing which are as follows:

Sun Hours on Ground

Methodology

This method of overshadowing assessment uses the sun on ground indicator to determine the areas which receive direct sunlight and those which do not. This method applies to both new and existing areas of amenity space. The BRE Guidelines suggest that the Spring Equinox (21st March) is a suitable date for the assessment as this is the midpoint of the sun's position throughout the year. Using specialist software, the path of the sun is tracked to determine where the sun would reach the ground and where it would not.

Criteria

The BRE guidelines recommend that at least half of an amenity space should receive at least 2 hours of direct sunlight on March 21st. In regards to existing spaces where the existing sunlit area is less than half of the area, the area which receives 2 hours of sunlight should not be reduced by more than 20% (it should retain 0.8 times its former value).

Transient Overshadowing

The BRE guidelines suggest that where large buildings are proposed which may affect a number of gardens or open spaces, it is useful to plot a shadow plan to illustrate the location of shadows at different times of the day and year. For the purpose of this assessment, shadow has been mapped at the following times of the year:

- 21st March (spring equinox)
- 21st June (Summer solstice)
- 21st December (winter solstice)

The September equinox is not assessed as this would provide the same results as those for March 21st.

For each of these dates the overshadowing is calculated at hourly intervals throughout the day however some images may not be present given the early sun set during the winter period.

The BRE guidelines do not provide any criteria for transient overshadowing. Therefore the analysis provides a description of where additional shadow is cast as a result of a development with professional judgement to determine the effect comparing the shadow resulting from the proposed development against that of the existing site.

Principles of Daylight and Sunlight

Light pollution and Solar Glare

Light pollution is defined as any light emitting from artificial sources into spaces where it is not wanted for example from offices into neighbouring residential properties where it could cause a nuisance. The ILP Guidance notes provide details of how to measure light pollution and criteria based on the urban density of the respective area to determine the acceptability of the light levels.

Solar glare is particularly important at pedestrian and road junctions as well as along railway lines where the glare can cause a temporary blinding of drivers or pedestrians. Glare can occur from reflective materials such as glazed areas or metal cladding on the facades. This assessment is therefore undertaken from viewpoints surrounding the site at junctions and positioned at the driver's eye level. Focal points are dictated by the location of signals or oncoming traffic.

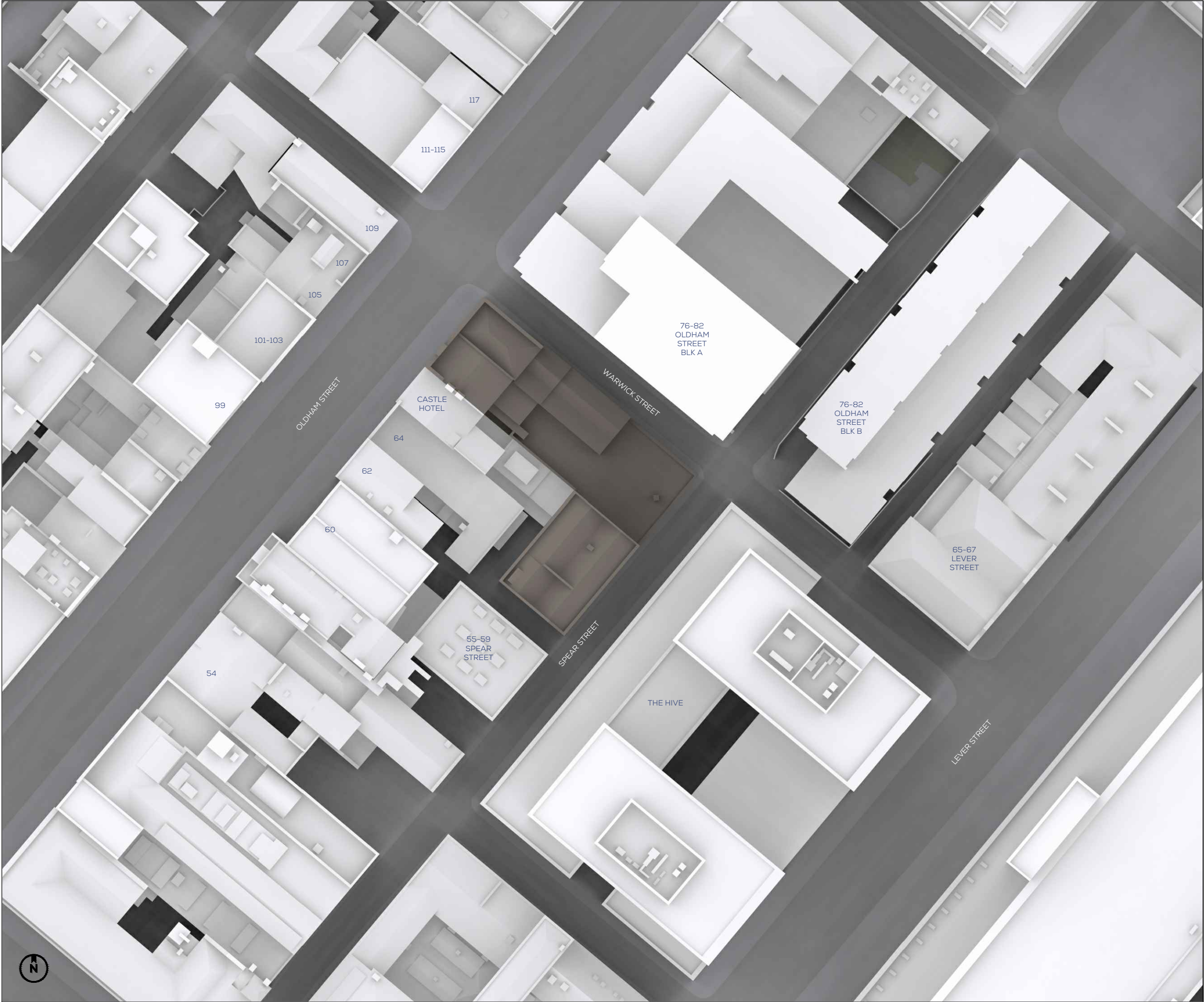
Other Amenity Considerations

Daylight and sunlight is one factor among many under the heading of residential amenity considerations for any given development design or planning application; others include:

- outlook
- sense of enclosure
- privacy
- access to outdoor space e.g. balconies or communal garden/courtyard

Appendix 02

Existing Drawings



SOURCES OF INFORMATION

IR02-20220725-Vertex
IR03-Research
IR04-20220726-Proposed Model

ALL INFORMATION DISPLAYED IS SUBJECT TO A COMPLETE VERIFIABLE SITE SURVEY BEING UNDERTAKEN. GIA TAKES NO RESPONSIBILITY ON THE ACCURACY OR RELIABILITY OF THE DISPLAYED DATA SINCE A VERIFIED SITE SURVEY WAS NOT MADE AVAILABLE PRIOR TO THE GENERATION OF SUCH INFORMATION.

NOTES:
EXISTING SCENARIO SHOWN IN SEPIA

N.B. DO NOT SCALE OFF THIS DRAWING

PROJECT:
68-70 OLDHAM STREET,
MANCHESTER

DRAWING NAME:
PLAN VIEW EXISTING

DWN BY	SCALE	CHK BY	STATUS	DATE
SP	NTS	MB	-	JUL22
PROJ No.	REL No.	IS No.	DWG No.	REV No.
1665	01	01	01	-



SOURCES OF INFORMATION

IR02-20220725-Vertex
IR03-Research
IR04-20220726-Proposed Model

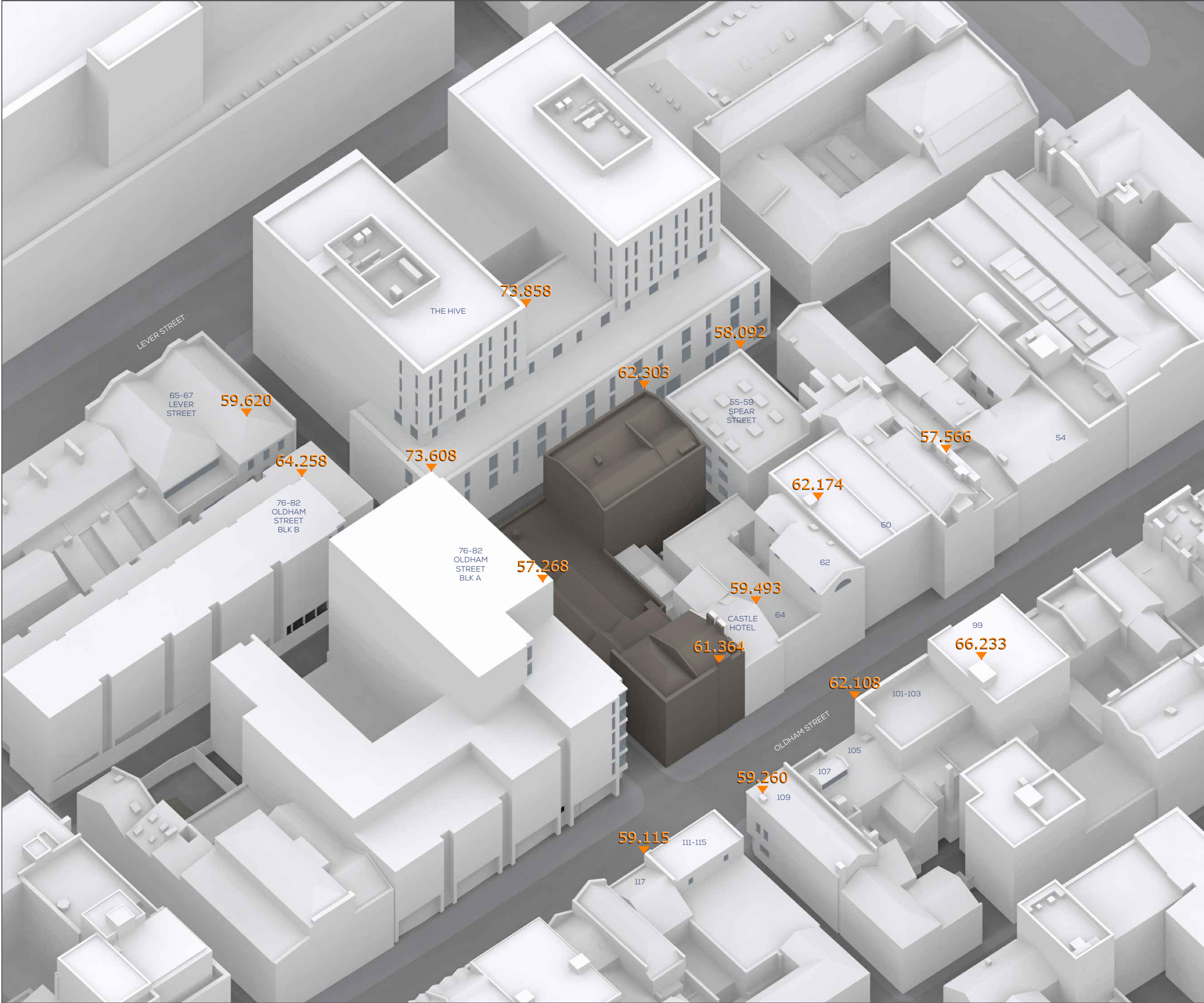
ALL INFORMATION DISPLAYED IS SUBJECT TO A COMPLETE VERIFIABLE SITE SURVEY BEING UNDERTAKEN. GIA TAKES NO RESPONSIBILITY ON THE ACCURACY OR RELIABILITY OF THE DISPLAYED DATA SINCE A VERIFIED SITE SURVEY WAS NOT MADE AVAILABLE PRIOR TO THE GENERATION OF SUCH INFORMATION.

NOTES:
EXISTING SCENARIO SHOWN IN SEPIA

N.B. DO NOT SCALE OFF THIS DRAWING
PROJECT:
68-70 OLDHAM STREET,
MANCHESTER

DRAWING NAME:
3D VIEW EXISTING

DWN BY	SCALE	CHK BY	STATUS	DATE
SP	NTS	MB	-	JUL22
PROJ No.	REL No.	IS No.	DWG No.	REV No.
1665	01	01	02	-



SOURCES OF INFORMATION

IR02-20220725-Vertex
IR03-Research
IR04-20220726-Proposed Model

ALL INFORMATION DISPLAYED IS SUBJECT TO A COMPLETE VERIFIABLE SITE SURVEY BEING UNDERTAKEN. GIA TAKES NO RESPONSIBILITY ON THE ACCURACY OR RELIABILITY OF THE DISPLAYED DATA SINCE A VERIFIED SITE SURVEY WAS NOT MADE AVAILABLE PRIOR TO THE GENERATION OF SUCH INFORMATION.

NOTES:
EXISTING SCENARIO SHOWN IN SEPIA

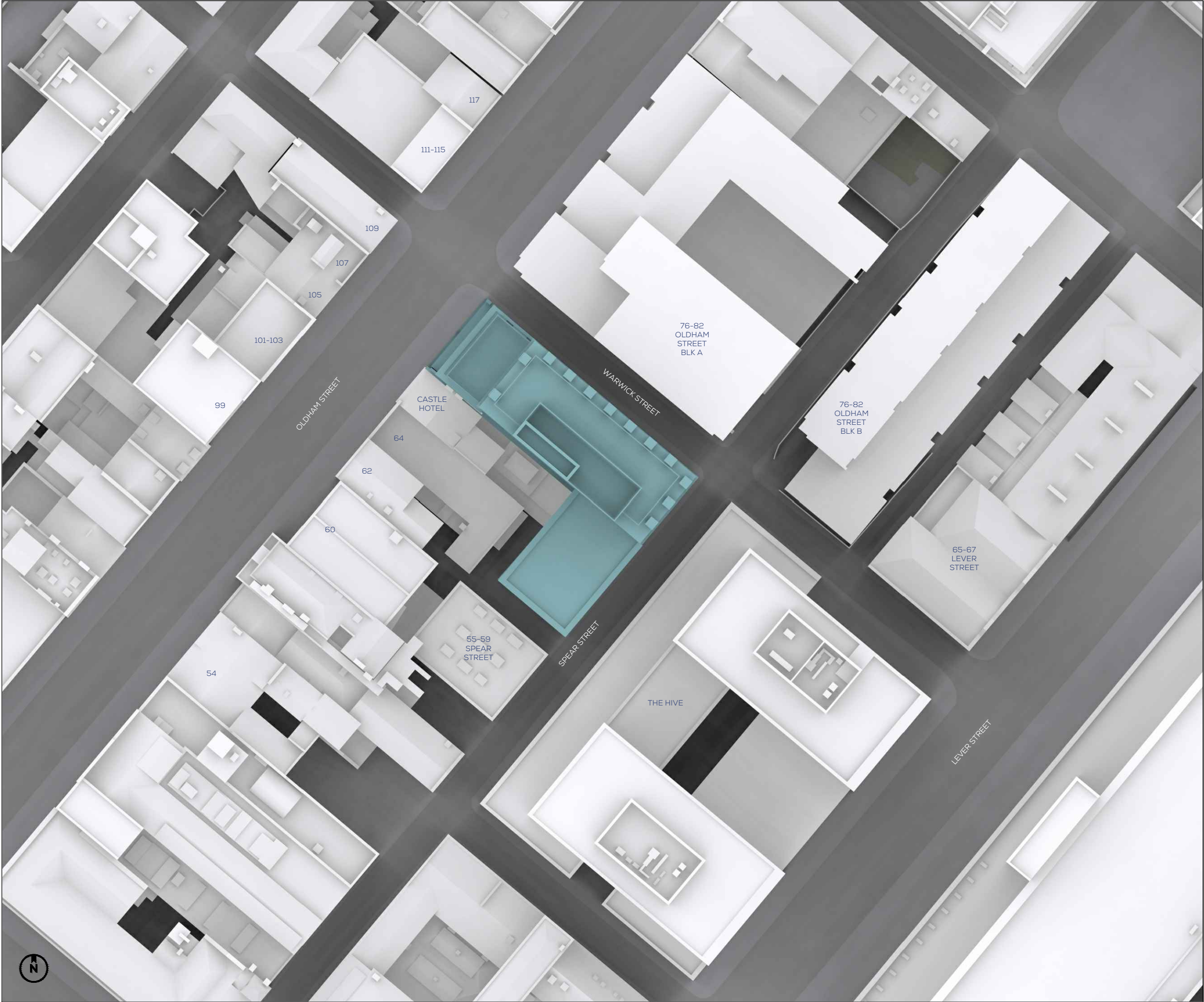
N.B. DO NOT SCALE OFF THIS DRAWING
PROJECT:
68-70 OLDHAM STREET,
MANCHESTER

DRAWING NAME:
3D VIEW EXISTING

DWN BY	SCALE	CHK BY	STATUS	DATE
SP	NTS	MB	-	JUL22
PROJ No.	REL No.	IS No.	DWG No.	REV No.
1665	01	01	03	-

Appendix 03

Proposed Drawings



SOURCES OF INFORMATION

IR02-20220725-Vertex
IR03-Research
IR04-20220726-Proposed Model

ALL INFORMATION DISPLAYED IS SUBJECT TO A COMPLETE VERIFIABLE SITE SURVEY BEING UNDERTAKEN. GIA TAKES NO RESPONSIBILITY ON THE ACCURACY OR RELIABILITY OF THE DISPLAYED DATA SINCE A VERIFIED SITE SURVEY WAS NOT MADE AVAILABLE PRIOR TO THE GENERATION OF SUCH INFORMATION.

NOTES:
PROPOSED SCHEME SHOWN IN TEAL

N.B. DO NOT SCALE OFF THIS DRAWING

PROJECT:
**68-70 OLDHAM STREET,
MANCHESTER**

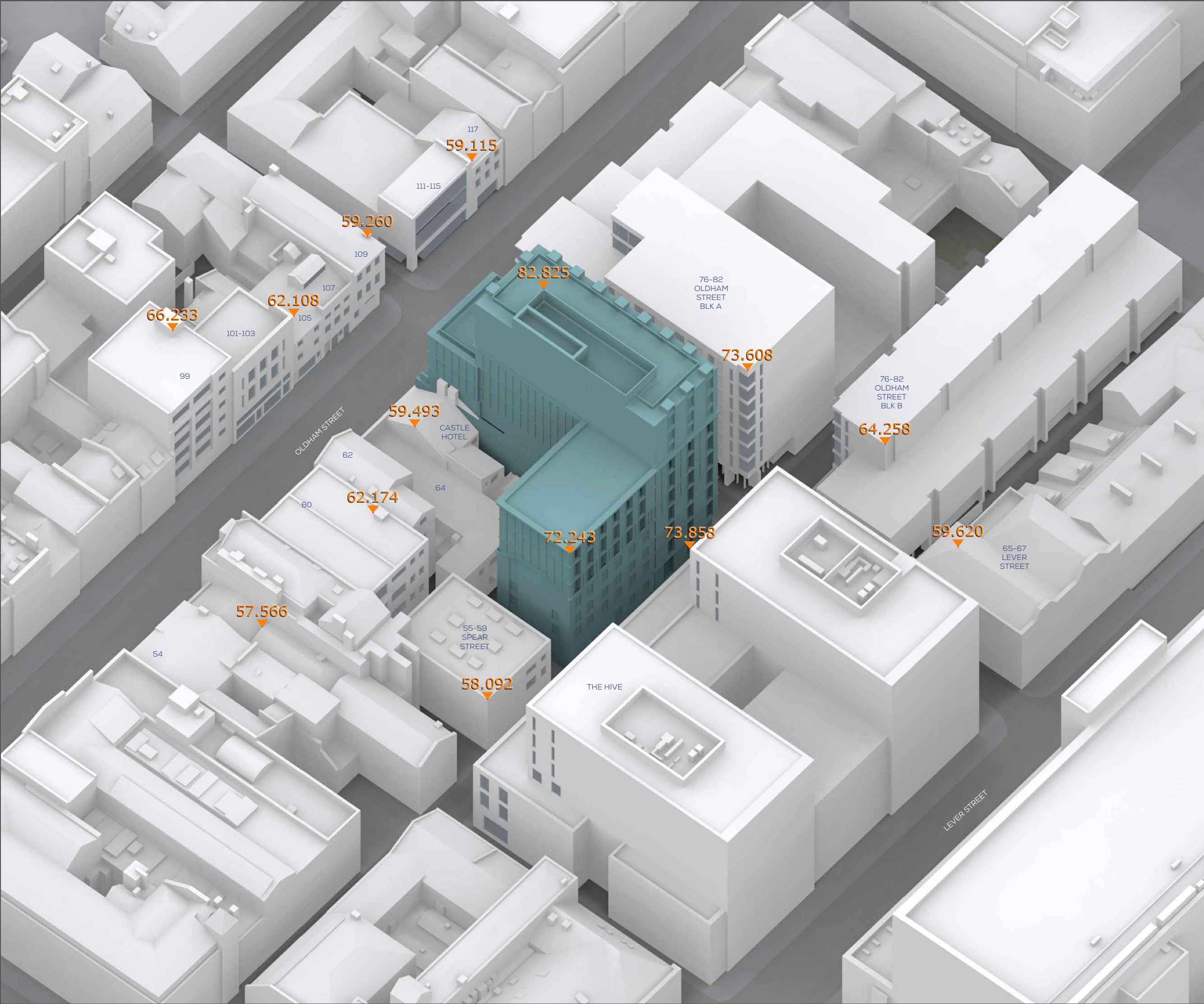
DRAWING NAME:
PLAN VIEW PROPOSED

DWN BY	SCALE	CHK BY	STATUS	DATE
SP	NTS	MB	-	JUL22
PROJ No.	REL No.	IS No.	DWG No.	REV No.
1665	01	01	04	-

gia

2 Commercial St.
Manchester
M15 4RQ
t 0161 672 5101
mail@gia.uk.com
www.gia.uk.com

MANCHESTER • LONDON



SOURCES OF INFORMATION

IR02-20220725-Vertex
IR03-Research
IR04-20220726-Proposed Model

ALL INFORMATION DISPLAYED IS SUBJECT TO A COMPLETE VERIFIABLE SITE SURVEY BEING UNDERTAKEN. GIA TAKES NO RESPONSIBILITY ON THE ACCURACY OR RELIABILITY OF THE DISPLAYED DATA SINCE A VERIFIED SITE SURVEY WAS NOT MADE AVAILABLE PRIOR TO THE GENERATION OF SUCH INFORMATION.

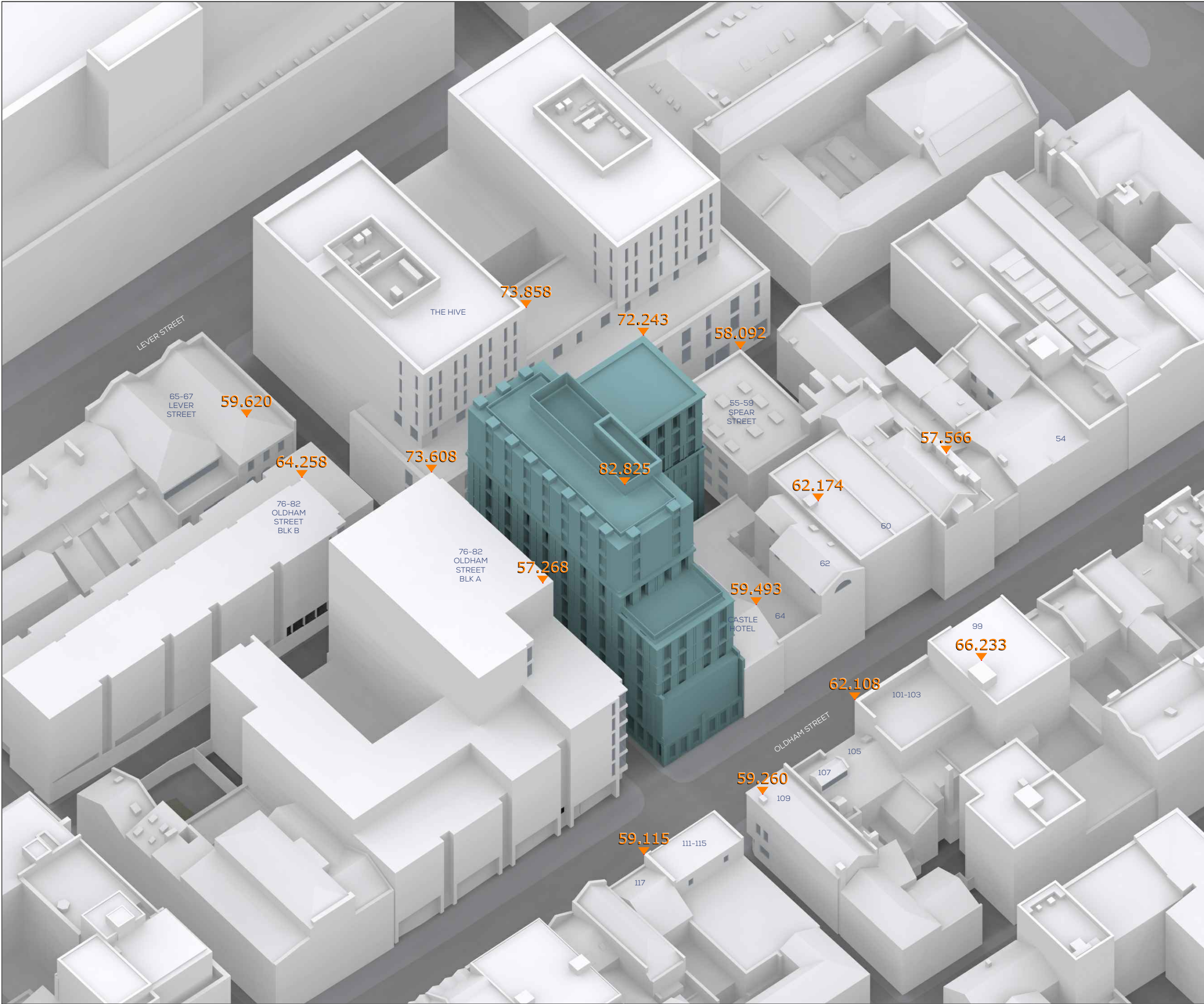
NOTES:
PROPOSED SCHEME SHOWN IN TEAL

N.B. DO NOT SCALE OFF THIS DRAWING

PROJECT:
68-70 OLDHAM STREET,
MANCHESTER

DRAWING NAME:
3D VIEW PROPOSED

DWN BY	SCALE	CHK BY	STATUS	DATE
SP	NTS	MB	-	JUL22
PROJ No.	REL No.	IS No.	DWG No.	REV No.
1665	01	01	05	-



SOURCES OF INFORMATION

IR02-20220725-Vertex
IR03-Research
IR04-20220726-Proposed Model

ALL INFORMATION DISPLAYED IS SUBJECT TO A COMPLETE VERIFIABLE SITE SURVEY BEING UNDERTAKEN. GIA TAKES NO RESPONSIBILITY ON THE ACCURACY OR RELIABILITY OF THE DISPLAYED DATA SINCE A VERIFIED SITE SURVEY WAS NOT MADE AVAILABLE PRIOR TO THE GENERATION OF SUCH INFORMATION.

NOTES:
PROPOSED SCHEME SHOWN IN TEAL

N.B. DO NOT SCALE OFF THIS DRAWING

PROJECT:
68-70 OLDHAM STREET,
MANCHESTER

DRAWING NAME:
3D VIEW PROPOSED

DWN BY	SCALE	CHK BY	STATUS	DATE
SP	NTS	MB	-	JUL22
PROJ No.	REL No.	IS No.	DWG No.	REV No.
1665	01	01	06	-

Appendix 04

Results and Window Maps

					VSC (WINDOW)					NSL					APSH (ROOM)						
FLOOR	ROOM	PROPERTY	ROOM	WINDOW	EX.	PR.	LOSS	LOSS	MEETS	EX.	PR.	LOSS	LOSS	MEETS	EX.		PR.		LOSS %		MEETS
		TYPE	USE		%	%		%	CRITERIA	%	%	SQM	%	CRITERIA	ANNUAL	WINTER	ANNUAL	WINTER	ANNUAL	WINTER	CRITERIA
99 OLDHAM STREET																					
F00	R1 (3)	RESIDENTIAL	LKD	W1/F00	20.7	19	1.7	8.2%	YES	30.3	25.6	1.5	15.5%	YES	34	7	32	7	5.9%	0.0%	YES
	R2 (3)	RESIDENTIAL	LKD	W2/F00	21.7	19.3	2.4	11.1%	YES	38.2	27.6	2.7	27.7%	NO	40	9	37	9	7.5%	0.0%	YES
	R3	RESIDENTIAL	BEDROOM	W3/F00	21.6	18.5	3.1	14.4%	YES	54.6	40.3	1.8	26.3%	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A
F01	R1 (3)	RESIDENTIAL	LKD	W1/F01	24.8	22.8	2	8.1%	YES	37.7	33.7	1.3	10.7%	YES	41	10	38	10	7.3%	0.0%	YES
	R2 (3)	RESIDENTIAL	LKD	W2/F01	25.7	23	2.7	10.5%	YES	50	40.1	2.5	19.8%	YES	48	13	43	13	10.4%	0.0%	YES
	R3	RESIDENTIAL	BEDROOM	W3/F01	25.5	22.2	3.3	12.9%	YES	69.7	58.5	1.4	16.1%	YES	N/A	N/A	N/A	N/A	N/A	N/A	
F02	R1 (3)	RESIDENTIAL	LKD	W1/F02	29.7	27.1	2.6	8.8%	YES	57.4	56.5	0.3	1.5%	YES	56	17	50	17	10.7%	0.0%	YES
	R2 (3)	RESIDENTIAL	LKD	W2/F02	29.7	26.7	3	10.1%	YES	70.4	68	0.6	3.3%	YES	55	18	49	17	10.9%	5.6%	YES
	R3	RESIDENTIAL	BEDROOM	W3/F02	29.4	25.9	3.5	11.9%	YES	98.9	90.2	1.1	8.8%	YES	N/A	N/A	N/A	N/A	N/A	N/A	N/A
F03	R1 (3)	RESIDENTIAL	LKD	W1/F03	27.8	25.1	2.7	9.7%	YES	78.9	78.8	0.0	0.2%	YES	51	20	46	20	9.8%	0.0%	YES
	R2 (3)	RESIDENTIAL	LKD	W2/F03	27.6	24.5	3.1	11.2%	YES	81.6	80.6	0.2	1.2%	YES	50	20	44	20	12.0%	0.0%	YES
	R3	RESIDENTIAL	BEDROOM	W3/F03	32	28.6	3.4	10.6%	YES	98.9	96.4	0.3	2.5%	YES	N/A	N/A	N/A	N/A	N/A	N/A	N/A
F04	R1 (3)	RESIDENTIAL	LKD	W1/F04	35.1	32.8	2.3	6.6%	YES	84.5	84.1	0.1	0.4%	YES	64	21	59	21	7.8%	0.0%	YES
	R2 (3)	RESIDENTIAL	LKD	W2/F04	34.4	31.8	2.6	7.6%	YES	90.2	88.6	0.4	1.8%	YES	62	21	57	21	8.1%	0.0%	YES
	R3	RESIDENTIAL	BEDROOM	W3/F04	33.6	30.7	2.9	8.6%	YES	98.9	98.9	0.0	0.0%	YES	N/A	N/A	N/A	N/A	N/A	N/A	N/A
76-82 OLDHAM STREET BLK A																					
F01	R1	RESIDENTIAL	LKD	W1/F01	13.7	13.7	0	0.0%	YES	92.1	68.9	5.5	25.2%	NO	56	5	34	4	39.3%	20.0%	YES
			LKD	W14/F01	20.3	3.2	17.1	84.2%	NO												
			LKD	W15/F01	20.1	6.5	13.6	67.7%	NO												
			LKD	W16/F01	16.4	16.4	0	0.0%	YES												
	R2	RESIDENTIAL	LKD	W2/F01	27.2	27.2	0	0.0%	YES	98	98.1	0.0	0.0%	YES	42	6	26	4	38.1%	33.3%	NO
			LKD	W3/F01	29	29	0	0.0%	YES												
			LKD	W4/F01	17.5	15.4	2.1	12.0%	YES												
			LKD	W5/F01	13	8.7	4.3	33.1%	NO												
	R3	RESIDENTIAL	BEDROOM	W6/F01	13.6	0.3	13.3	97.8%	NO	59.5	3	7.3	94.9%	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	R4	RESIDENTIAL	LKD	W7/F01	17	0	17	100.0%	NO	63.2	0.5	12.9	99.1%	NO	30	5	0	0	100.0%	100.0%	NO
	R5	RESIDENTIAL	BEDROOM	W8/F01	19.5	0	19.5	100.0%	NO	82.3	0.3	8.2	99.6%	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	R6 (3)	RESIDENTIAL	LKD	W9/F01	23.7	1.3	22.4	94.5%	NO	65.7	0.3	14.8	99.5%	NO	46	5	2	0	95.7%	100.0%	NO
	R7	RESIDENTIAL	BEDROOM	W10/F01	20.4	0.1	20.3	99.5%	NO	91.1	0.2	7.6	99.7%	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	R8 (3)	RESIDENTIAL	LKD	W11/F01	23.6	1.3	22.3	94.5%	NO	72.1	1.8	15.4	97.5%	NO	46	5	2	0	95.7%	100.0%	NO

					VSC (WINDOW)					NSL					APSH (ROOM)							
FLOOR	ROOM	PROPERTY	ROOM	WINDOW	EX.	PR.	LOSS	LOSS	MEETS	EX.	PR.	LOSS	LOSS	MEETS	EX.		PR.		LOSS %		MEETS	
		TYPE	USE	%	%		%	CRITERIA	%			%	SQM	%	CRITERIA	ANNUAL	WINTER	ANNUAL	WINTER	ANNUAL		WINTER
76-82 OLDHAM STREET BLK A (CONTINUED)																						
	R9	RESIDENTIAL	BEDROOM	W12/F01	19.8	0.5	19.3	97.5%	NO	92.2	1.9	7.7	98.0%	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	R10	RESIDENTIAL	BEDROOM	W13/F01	19.2	1	18.2	94.8%	NO	94.6	9	6.0	90.5%	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
F02	R1	RESIDENTIAL	LKD	W1/F02	16.9	16.9	0	0.0%	YES	97.5	73.6	5.6	24.5%	NO	61	5	38	4	37.7%	20.0%	YES	
			LKD	W14/F02	23.5	3.9	19.6	83.4%	NO													
			LKD	W15/F02	23	7.6	15.4	67.0%	NO													
			LKD	W16/F02	19.9	19.9	0	0.0%	YES													
	R2	RESIDENTIAL	LKD	W2/F02	31.1	31.1	0	0.0%	YES	99.8	99.1	0.2	0.7%	YES	54	10	29	4	46.3%	60.0%	NO	
		LKD	W3/F02	32.8	32.9	-0.1	-0.3%	YES														
		LKD	W4/F02	23.9	17.6	6.3	26.4%	NO														
		LKD	W5/F02	20.4	10.8	9.6	47.1%	NO														
	R3	RESIDENTIAL	BEDROOM	W6/F02	21.5	0.7	20.8	96.7%	NO	80.8	4.1	9.9	94.9%	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	R4	RESIDENTIAL	LKD	W7/F02	24.8	0.2	24.6	99.2%	NO	98.2	1.5	19.9	98.4%	NO	47	13	0	0	100.0%	100.0%	NO	
	R5	RESIDENTIAL	BEDROOM	W8/F02	26.8	0.1	26.7	99.6%	NO	90.2	1.2	8.9	98.7%	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	R6 (3)	RESIDENTIAL	LKD	W9/F02	30.8	1.6	29.2	94.8%	NO	98.3	0.7	22.1	99.3%	NO	58	13	4	1	93.1%	92.3%	NO	
	R7	RESIDENTIAL	BEDROOM	W10/F02	26.3	0.1	26.2	99.6%	NO	91.1	0.2	7.6	99.7%	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	R8 (3)	RESIDENTIAL	LKD	W11/F02	29.1	1.7	27.4	94.2%	NO	83.9	2.8	17.8	96.6%	NO	57	10	4	1	93.0%	90.0%	NO	
	R9	RESIDENTIAL	BEDROOM	W12/F02	24.1	0.6	23.5	97.5%	NO	93	1.9	7.7	98.0%	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	R10	RESIDENTIAL	BEDROOM	W13/F02	22.8	1.4	21.4	93.9%	NO	94.6	9.4	5.9	90.0%	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
F03	R1	RESIDENTIAL	LKD	W1/F03	20.6	20.6	0	0.0%	YES	100	78.6	5.0	21.3%	NO	69	8	44	5	36.2%	37.5%	YES	
			LKD	W14/F03	26.6	4.7	21.9	82.3%	NO													
			LKD	W15/F03	26.1	8.8	17.3	66.3%	NO													
			LKD	W16/F03	23.7	23.6	0.1	0.4%	YES													
	R2	RESIDENTIAL	LKD	W2/F03	33.7	33.7	0	0.0%	YES	99.8	99.2	0.2	0.6%	YES	65	20	32	5	50.8%	75.0%	YES	
		LKD	W3/F03	35.3	35.3	0	0.0%	YES														
		LKD	W4/F03	32.2	20.3	11.9	37.0%	NO														
		LKD	W5/F03	31.3	13.8	17.5	55.9%	NO														
	R3	RESIDENTIAL	BEDROOM	W6/F03	29.8	1.6	28.2	94.6%	NO	91.4	7	10.9	92.4%	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	R4	RESIDENTIAL	LKD	W7/F03	28.6	0.5	28.1	98.3%	NO	98.3	2.4	19.7	97.6%	NO	55	18	0	0	100.0%	100.0%	NO	
	R5	RESIDENTIAL	BEDROOM	W8/F03	29.7	0.1	29.6	99.7%	NO	90.3	3.2	8.7	96.4%	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	R6 (3)	RESIDENTIAL	LKD	W9/F03	33.8	2.1	31.7	93.8%	NO	98.5	0.7	22.2	99.3%	NO	65	17	4	1	93.8%	94.1%	NO	
	R7	RESIDENTIAL	BEDROOM	W10/F03	28.8	0.1	28.7	99.7%	NO	91	0.2	7.6	99.7%	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

					VSC (WINDOW)					NSL					APSH (ROOM)						
FLOOR	ROOM	PROPERTY	ROOM	WINDOW	EX.	PR.	LOSS	LOSS	MEETS	EX.	PR.	LOSS	LOSS	MEETS	EX.		PR.		LOSS %		MEETS
		TYPE	USE		%	%		%	CRITERIA	%	%	SQM	%	CRITERIA	ANNUAL	WINTER	ANNUAL	WINTER	ANNUAL	WINTER	CRITERIA
76-82 OLDHAM STREET BLK A (CONTINUED)																					
	R8 (3)	RESIDENTIAL	LKD	W11/F03	32.2	2.1	30.1	93.5%	NO	98.7	4.1	20.8	95.9%	NO	63	15	4	1	93.7%	93.3%	NO
	R9	RESIDENTIAL	BEDROOM	W12/F03	27	0.8	26.2	97.0%	NO	93	1.9	7.7	97.9%	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	R10	RESIDENTIAL	BEDROOM	W13/F03	25.9	1.8	24.1	93.1%	NO	94.6	9.4	5.9	90.1%	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A
F04	R1	RESIDENTIAL	LKD	W1/F04	24.6	24.6	0	0.0%	YES	100	87.9	2.8	12.1%	YES	81	15	52	9	35.8%	40.0%	YES
			LKD	W14/F04	29.4	5.8	23.6	80.3%	NO												
			LKD	W15/F04	29	10.4	18.6	64.1%	NO												
			LKD	W16/F04	27.6	27.6	0	0.0%	YES												
	R2	RESIDENTIAL	LKD	W2/F04	34.4	34.4	0	0.0%	YES	99.8	99.2	0.1	0.6%	YES	67	22	36	5	46.3%	77.3%	YES
			LKD	W3/F04	36.1	36.1	0	0.0%	YES												
			LKD	W4/F04	33.9	22.5	11.4	33.6%	NO												
			LKD	W5/F04	33.2	15.9	17.3	52.1%	NO												
	R3	RESIDENTIAL	BEDROOM	W6/F04	31.5	3.4	28.1	89.2%	NO	91.5	14	10.0	84.7%	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	R4	RESIDENTIAL	LKD	W7/F04	30	11	28.9	96.3%	NO	98.3	3.4	19.5	96.6%	NO	56	19	0	0	100.0%	100.0%	NO
	R5	RESIDENTIAL	BEDROOM	W8/F04	31.2	0.4	30.8	98.7%	NO	90.3	7.9	8.2	91.2%	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	R6 (3)	RESIDENTIAL	LKD	W9/F04	35.6	2.7	32.9	92.4%	NO	98.6	1.1	22.1	98.9%	NO	69	21	5	2	92.8%	90.5%	NO
	R7	RESIDENTIAL	BEDROOM	W10/F04	30.6	0.4	30.2	98.7%	NO	91.2	1.3	7.5	98.5%	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	R8 (3)	RESIDENTIAL	LKD	W11/F04	34.7	2.8	31.9	91.9%	NO	98.8	4.7	20.7	95.3%	NO	67	19	5	2	92.5%	89.5%	NO
	R9	RESIDENTIAL	BEDROOM	W12/F04	29.5	1.3	28.2	95.6%	NO	93	2.5	7.7	97.3%	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	R10	RESIDENTIAL	BEDROOM	W13/F04	28.7	2.5	26.2	91.3%	NO	94.6	10.1	5.9	89.4%	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A
F05	R1	RESIDENTIAL	LKD	W1/F05	27.5	27.5	0	0.0%	YES	100	93.9	1.4	6.1%	YES	87	20	59	14	32.2%	30.0%	YES
			LKD	W14/F05	31	7.1	23.9	77.1%	NO												
			LKD	W15/F05	30.9	12.1	18.8	60.8%	NO												
			LKD	W16/F05	30.7	30.6	0.1	0.3%	YES												
	R2	RESIDENTIAL	LKD	W2/F05	34.6	34.6	0	0.0%	YES	99.8	99.8	0.0	0.0%	YES	67	22	42	6	37.3%	72.7%	YES
			LKD	W3/F05	36.5	36.5	0	0.0%	YES												
			LKD	W4/F05	34.8	25.7	9.1	26.1%	NO												
			LKD	W5/F05	33.9	19.5	14.4	42.5%	NO												
	R3	RESIDENTIAL	BEDROOM	W6/F05	32.3	7.2	25.1	77.7%	NO	91.5	40.9	6.5	55.3%	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	R4	RESIDENTIAL	LKD	W7/F05	30.7	1.9	28.8	93.8%	NO	98.3	3.8	19.4	96.2%	NO	56	19	3	0	94.6%	100.0%	NO
	R5	RESIDENTIAL	BEDROOM	W8/F05	32	11	30.9	96.6%	NO	92.6	11.1	10.2	88.0%	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	R6	RESIDENTIAL	BEDROOM	W9/F05	36.7	3.6	33.1	90.2%	NO	97.3	4.1	7.5	95.8%	NO		N/A	N/A	N/A	N/A	N/A	N/A

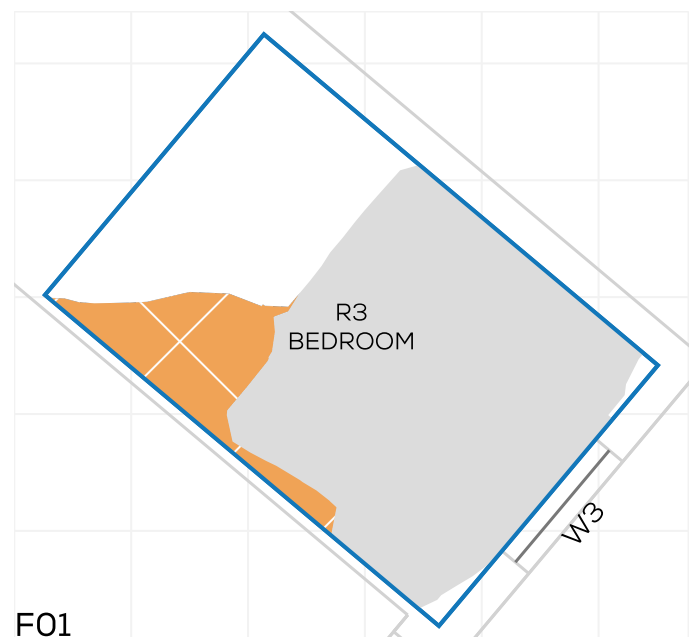
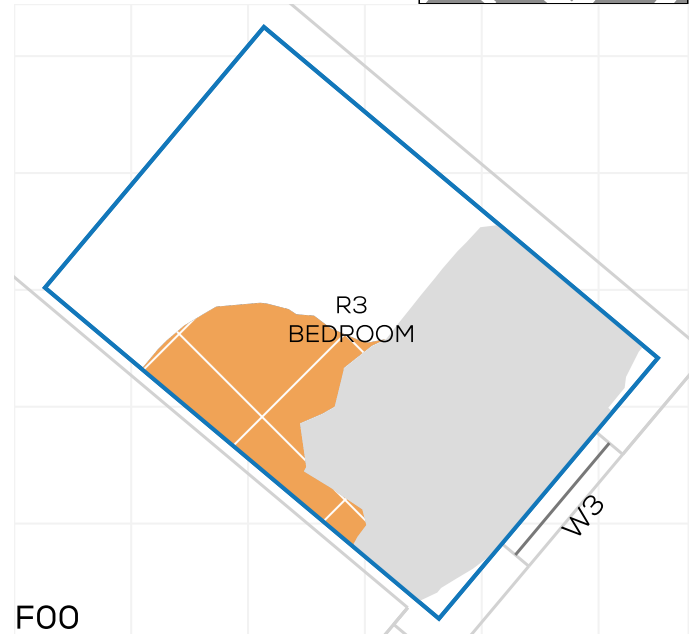
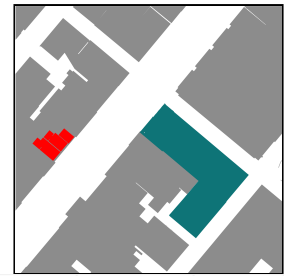
					VSC (WINDOW)					NSL					APSH (ROOM)						
FLOOR	ROOM	PROPERTY	ROOM	WINDOW	EX.	PR.	LOSS	LOSS	MEETS	EX.	PR.	LOSS	LOSS	MEETS	EX.		PR.		LOSS %		MEETS
		TYPE	USE		%	%		%	CRITERIA	%	%	SQM	%	CRITERIA	ANNUAL	WINTER	ANNUAL	WINTER	ANNUAL	WINTER	
76-82 OLDHAM STREET BLK A (CONTINUED)																					
	R7	RESIDENTIAL	BEDROOM	W10/F05	31.5	1	30.5	96.8%	NO	94.2	2.2	7.7	97.6%	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	R8 (3)	RESIDENTIAL	LKD	W11/F05	36	3.6	32.4	90.0%	NO	86.1	4.6	25.8	94.6%	NO	70	22	7	3	90.0%	86.4%	NO
	R9	RESIDENTIAL	BEDROOM	W12/F05	30.8	2	28.8	93.5%	NO	93	2.9	7.6	96.8%	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	R10	RESIDENTIAL	BEDROOM	W13/F05	30.2	3.4	26.8	88.7%	NO	94.6	10.4	5.9	89.0%	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A
F06	R1	RESIDENTIAL	LKD	W1/F06	29.5	29.5	0	0.0%	YES	100	94.1	1.4	5.9%	YES	92	25	64	19	30.4%	24.0%	YES
			LKD	W11/F06	32.4	8.8	23.6	72.8%	NO												
			LKD	W12/F06	32.6	14.3	18.3	56.1%	NO												
			LKD	W13/F06	33	32.9	0.1	0.3%	YES												
	R2	RESIDENTIAL	UNKNOWN	W2/F06	24.1	16.6	7.5	31.1%	NO	100	99.9	0.0	0.1%	YES	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			UNKNOWN	W3/F06	31.3	22.1	9.2	29.4%	NO												
			UNKNOWN	W4/F06	34.9	34.8	0.1	0.3%	YES												
	R3	RESIDENTIAL	BEDROOM	W5/F06	32.6	2.3	30.3	92.9%	NO	92.4	21.3	8.6	77.0%	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	R4	RESIDENTIAL	BEDROOM	W6/F06	37.4	5	32.4	86.6%	NO	97.3	12.4	6.8	87.3%	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	R5	RESIDENTIAL	BEDROOM	W7/F06	32.3	2.1	30.2	93.5%	NO	94.2	10.8	6.9	88.5%	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	R6 (3)	RESIDENTIAL	LKD	W8/F06	37	5	32	86.5%	NO	86.9	6.6	25.5	92.4%	NO	73	25	9	3	87.7%	88.0%	NO
	R7	RESIDENTIAL	BEDROOM	W9/F06	31.8	3.3	28.5	89.6%	NO	93	9.2	7.1	90.1%	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	R8	RESIDENTIAL	BEDROOM	W10/F06	31.4	4.8	26.6	84.7%	NO	94.6	17.3	5.4	81.7%	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A
F07	R1	RESIDENTIAL	LKD	W1/F07	31.2	31.2	0	0.0%	YES	100	94.2	1.4	5.8%	YES	94	27	66	21	29.8%	22.2%	YES
			LKD	W11/F07	33.6	11.2	22.4	66.7%	NO												
			LKD	W12/F07	34.1	17.1	17	49.9%	NO												
			LKD	W13/F07	35.1	35	0.1	0.3%	YES												
	R2	RESIDENTIAL	UNKNOWN	W2/F07	27.6	21	6.6	23.9%	NO	100	100	0.0	0.0%	YES	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			UNKNOWN	W3/F07	35.1	26.9	8.2	23.4%	NO												
			UNKNOWN	W4/F07	34.9	34.9	0	0.0%	YES												
	R3	RESIDENTIAL	BEDROOM	W5/F07	33	4.3	28.7	87.0%	NO	92.4	17.5	9.1	81.1%	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	R4	RESIDENTIAL	BEDROOM	W6/F07	38	7.1	30.9	81.3%	NO	97.4	18.3	6.3	81.2%	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	R5	RESIDENTIAL	BEDROOM	W7/F07	32.9	4	28.9	87.8%	NO	94.2	14.3	6.7	84.8%	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	R6 (3)	RESIDENTIAL	LKD	W8/F07	37.8	7.2	30.6	81.0%	NO	87.2	7.3	25.4	91.7%	NO	73	25	13	3	82.2%	88.0%	NO
	R7	RESIDENTIAL	BEDROOM	W9/F07	32.7	5.2	27.5	84.1%	NO	93	11.8	6.9	87.3%	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	R8	RESIDENTIAL	BEDROOM	W10/F07	32.5	7	25.5	78.5%	NO	94.6	19.5	5.2	79.3%	NO		N/A	N/A	N/A	N/A	N/A	N/A

					VSC (WINDOW)					NSL					APSH (ROOM)						
FLOOR	ROOM	PROPERTY	ROOM	WINDOW	EX.	PR.	LOSS	LOSS	MEETS	EX.	PR.	LOSS	LOSS	MEETS	EX.		PR.		LOSS %		MEETS
		TYPE	USE		%	%		%	CRITERIA	%	%	SQM	%	CRITERIA	ANNUAL	WINTER	ANNUAL	WINTER	ANNUAL	WINTER	CRITERIA
76-82 OLDHAM STREET BLK B																					
F01	R1	RESIDENTIAL	LKD	W1/F01	4	3.5	0.5	12.5%	YES	75.4	47.1	6.9	37.5%	NO	31	4	18	3	41.9%	25.0%	NO
			LKD	W2/F01	5.7	3.1	2.6	45.6%	NO												
			LKD	W3/F01	15.5	9.6	5.9	38.1%	NO												
			LKD	W4/F01	14	7.8	6.2	44.3%	NO												
	R2	RESIDENTIAL	BEDROOM	W5/F01	9.9	5.7	4.2	42.4%	NO	54.4	25.5	3.0	53.1%	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	R3	RESIDENTIAL	BEDROOM	W6/F01	7.7	5.1	2.6	33.8%	NO	42.3	25.9	1.4	38.7%	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	R4 (3)	RESIDENTIAL	LKD	W7/F01	4.8	3.8	1	20.8%	NO	13.1	10.9	0.7	16.9%	YES	8	0	6	0	25.0%	0.0%	YES
LKD			W8/F01	6.1	4.3	1.8	29.5%	NO													
F02	R1	RESIDENTIAL	LKD	W1/F02	5	4.5	0.5	10.0%	YES	75.6	48.9	6.6	35.4%	NO	41	6	27	4	34.1%	33.3%	NO
			LKD	W2/F02	6.8	4	2.8	41.2%	NO												
			LKD	W3/F02	19	12.7	6.3	33.2%	NO												
			LKD	W4/F02	18.3	11.7	6.6	36.1%	NO												
	R2	RESIDENTIAL	BEDROOM	W5/F02	14.9	9.3	5.6	37.6%	NO	89.6	55.7	3.5	37.9%	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	R3	RESIDENTIAL	BEDROOM	W6/F02	11.5	7.6	3.9	33.9%	NO	78.3	53.9	2.1	31.1%	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	R4 (3)	RESIDENTIAL	LKD	W7/F02	7.5	5.3	2.2	29.3%	NO	30.1	14.1	5.1	53.1%	NO	18	0	11	0	38.9%	0.0%	NO
LKD			W8/F02	8.3	5.7	2.6	31.3%	NO													
F03	R1	RESIDENTIAL	LKD	W1/F03	6.4	5.8	0.6	9.4%	YES	75.7	50.5	6.2	33.3%	NO	46	8	33	7	28.3%	12.5%	YES
			LKD	W2/F03	8.2	5.3	2.9	35.4%	NO												
			LKD	W3/F03	21.8	15.3	6.5	29.8%	NO												
			LKD	W4/F03	22.7	15.8	6.9	30.4%	NO												
F04	R1	RESIDENTIAL	LKD	W1/F04	8.4	7.8	0.6	7.1%	YES	76.3	52.6	5.8	31.1%	NO	49	10	37	9	24.5%	10.0%	YES
			LKD	W2/F04	10.3	7.4	2.9	28.2%	NO												
			LKD	W3/F04	24.4	17.9	6.5	26.6%	NO												
			LKD	W4/F04	25.1	18.4	6.7	26.7%	NO												

NSL CONTOURS

PROJECT: 1665 - 68-70 OLDHAM STREET, MANCH
 REPORT TITLE: EXISTING VS. PROPOSED
 ADDRESS: 99 OLDHAM STREET
 DATE: 21/11/2022
 SCHEME IR: IR04
 DRAWING No.: 1665-REL01-IS01-DD1

KEY:
 GAIN
 LOSS
 MAINTAINED LIT AREA
 1 METRE GRID

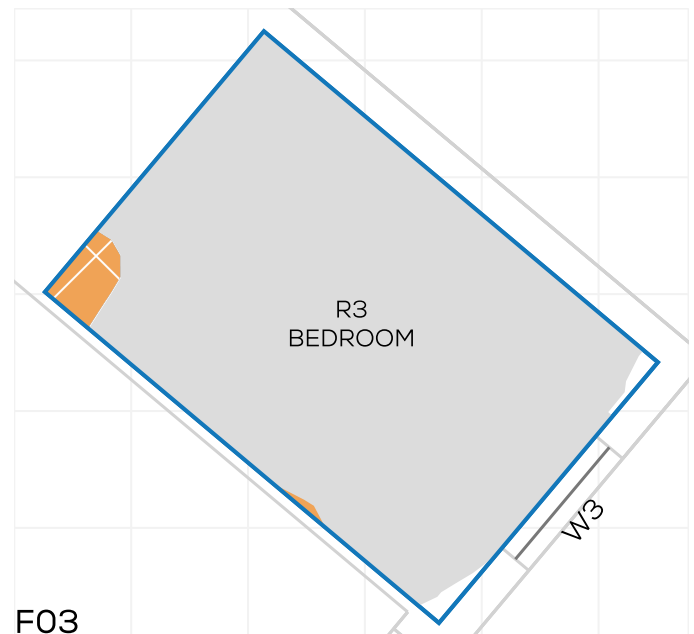
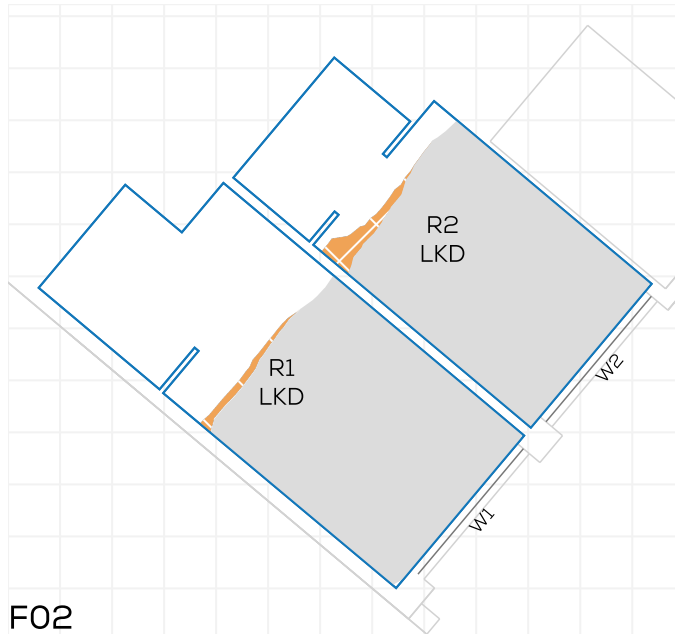


FLOOR	ROOM	PROPERTY TYPE	ROOM USE	ROOM AREA-sqm	EXISTING %	PROPOSED %	LOSS-sqm	LOSS %
99 OLDHAM STREET								
F00	R1	RESIDENTIAL	LKD	32.5	30.3	25.6	1.5	15.5
F00	R2	RESIDENTIAL	LKD	25.6	38.2	27.6	2.7	27.7
F00	R3	RESIDENTIAL	BEDROOM	12.8	54.6	40.3	1.8	26.3
F01	R1	RESIDENTIAL	LKD	32.5	37.7	33.7	1.3	10.7
F01	R2	RESIDENTIAL	LKD	25.6	50	40.1	2.5	19.8
F01	R3	RESIDENTIAL	BEDROOM	12.8	69.7	58.5	1.4	16.1

NSL CONTOURS

PROJECT: 1665 - 68-70 OLDHAM STREET, MANCH
 REPORT TITLE: EXISTING VS. PROPOSED
 ADDRESS: 99 OLDHAM STREET
 DATE: 21/11/2022
 SCHEME IR: IR04
 DRAWING No.: 1665-REL01-IS01-DD2

KEY:
 GAIN
 LOSS
 MAINTAINED LIT AREA
 1 METRE GRID



FLOOR	ROOM	PROPERTY TYPE	ROOM USE	ROOM AREA-sqm	EXISTING %	PROPOSED %	LOSS-sqm	LOSS %
99 OLDHAM STREET								
F02	R1	RESIDENTIAL	LKD	32.5	57.4	56.5	0.3	1.5
F02	R2	RESIDENTIAL	LKD	25.6	70.4	68	0.6	3.3
F02	R3	RESIDENTIAL	BEDROOM	12.8	98.9	90.2	1.1	8.8
F03	R1	RESIDENTIAL	LKD	32.5	78.9	78.8	0.0	0.2
F03	R2	RESIDENTIAL	LKD	25.6	81.6	80.6	0.2	1.2
F03	R3	RESIDENTIAL	BEDROOM	12.8	98.9	96.4	0.3	2.5

PROJECT: 1665 - 68-70 OLDHAM STREET, MANCH
 REPORT TITLE: EXISTING VS. PROPOSED
 ADDRESS: 99 OLDHAM STREET
 DATE: 21/11/2022
 SCHEME IR: IR04
 DRAWING No.: 1665-REL01-IS01-DD3

KEY:
 GAIN
 LOSS
 MAINTAINED LIT AREA
 1 METRE GRID



F04

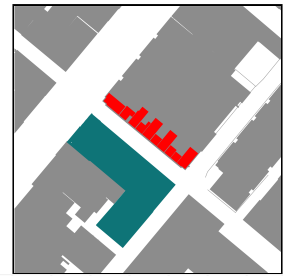
FLOOR	ROOM	PROPERTY TYPE	ROOM USE	ROOM AREA-sqm	EXISTING %	PROPOSED %	LOSS-sqm	LOSS %
99 OLDHAM STREET								
F04	R1	RESIDENTIAL	LKD	32.5	84.5	84.1	0.1	0.4
F04	R2	RESIDENTIAL	LKD	25.6	90.2	88.6	0.4	1.8
F04	R3	RESIDENTIAL	BEDROOM	12.8	98.9	98.9	0.0	0

NSL CONTOURS



PROJECT: 1665 - 68-70 OLDHAM STREET, MANCH
 REPORT TITLE: EXISTING VS. PROPOSED
 ADDRESS: 76-82 OLDHAM STREET BLK A
 DATE: 21/11/2022
 SCHEME IR: IR04
 DRAWING No.: 1665-REL01-IS01-DD4

KEY:
 GAIN
 LOSS
 MAINTAINED LIT AREA
 1 METRE GRID



F01

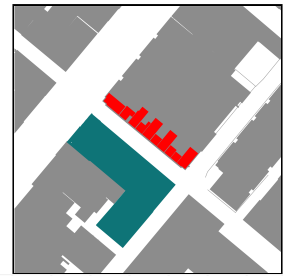
FLOOR	ROOM	PROPERTY TYPE	ROOM USE	ROOM AREA-sqm	EXISTING %	PROPOSED %	LOSS-sqm	LOSS %
76-82 OLDHAM STREET BLK A								
F01	R1	RESIDENTIAL	LKD	23.5	92.1	68.9	5.5	25.2
F01	R2	RESIDENTIAL	LKD	24.4	98	98.1	0.0	0
F01	R3	RESIDENTIAL	BEDROOM	12.9	59.5	3	7.3	94.9
F01	R4	RESIDENTIAL	LKD	20.6	63.2	0.5	12.9	99.1
F01	R5	RESIDENTIAL	BEDROOM	10.0	82.3	0.3	8.2	99.6
F01	R6	RESIDENTIAL	LKD	22.7	65.7	0.3	14.8	99.5
F01	R7	RESIDENTIAL	BEDROOM	8.3	91.1	0.2	7.6	99.7
F01	R8	RESIDENTIAL	LKD	21.9	72.1	1.8	15.4	97.5
F01	R9	RESIDENTIAL	BEDROOM	8.5	92.2	1.9	7.7	98
F01	R10	RESIDENTIAL	BEDROOM	7.0	94.6	9	6.0	90.5

NSL CONTOURS



PROJECT: 1665 - 68-70 OLDHAM STREET, MANCH
 REPORT TITLE: EXISTING VS. PROPOSED
 ADDRESS: 76-82 OLDHAM STREET BLK A
 DATE: 21/11/2022
 SCHEME IR: IR04
 DRAWING No.: 1665-REL01-IS01-DD5

KEY:
 GAIN
 LOSS
 MAINTAINED LIT AREA
 1 METRE GRID



F02

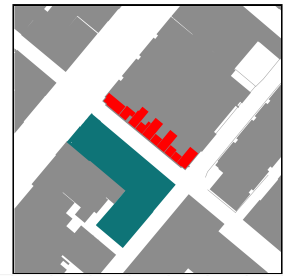
FLOOR	ROOM	PROPERTY TYPE	ROOM USE	ROOM AREA-sqm	EXISTING %	PROPOSED %	LOSS-sqm	LOSS %
76-82 OLDHAM STREET BLK A								
F02	R1	RESIDENTIAL	LKD	23.5	97.5	73.6	5.6	24.5
F02	R2	RESIDENTIAL	LKD	24.4	99.8	99.1	0.2	0.7
F02	R3	RESIDENTIAL	BEDROOM	12.9	80.8	4.1	9.9	94.9
F02	R4	RESIDENTIAL	LKD	20.6	98.2	1.5	19.9	98.4
F02	R5	RESIDENTIAL	BEDROOM	10.0	90.2	1.2	8.9	98.7
F02	R6	RESIDENTIAL	LKD	22.7	98.3	0.7	22.1	99.3
F02	R7	RESIDENTIAL	BEDROOM	8.3	91.1	0.2	7.6	99.7
F02	R8	RESIDENTIAL	LKD	21.9	83.9	2.8	17.8	96.6
F02	R9	RESIDENTIAL	BEDROOM	8.5	93	1.9	7.7	98
F02	R10	RESIDENTIAL	BEDROOM	7.0	94.6	9.4	5.9	90

NSL CONTOURS



PROJECT: 1665 - 68-70 OLDHAM STREET, MANCH
 REPORT TITLE: EXISTING VS. PROPOSED
 ADDRESS: 76-82 OLDHAM STREET BLK A
 DATE: 21/11/2022
 SCHEME IR: IR04
 DRAWING No.: 1665-REL01-IS01-DD6

KEY:
 GAIN
 LOSS
 MAINTAINED LIT AREA
 1 METRE GRID



F03

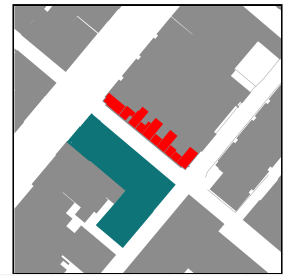
FLOOR	ROOM	PROPERTY TYPE	ROOM USE	ROOM AREA-sqm	EXISTING %	PROPOSED %	LOSS-sqm	LOSS %
76-82 OLDHAM STREET BLK A								
F03	R1	RESIDENTIAL	LKD	23.5	100	78.6	5.0	21.3
F03	R2	RESIDENTIAL	LKD	24.4	99.8	99.2	0.2	0.6
F03	R3	RESIDENTIAL	BEDROOM	12.9	91.4	7	10.9	92.4
F03	R4	RESIDENTIAL	LKD	20.6	98.3	2.4	19.7	97.6
F03	R5	RESIDENTIAL	BEDROOM	10.0	90.3	3.2	8.7	96.4
F03	R6	RESIDENTIAL	LKD	22.7	98.5	0.7	22.2	99.3
F03	R7	RESIDENTIAL	BEDROOM	8.3	91	0.2	7.6	99.7
F03	R8	RESIDENTIAL	LKD	21.9	98.7	4.1	20.8	95.9
F03	R9	RESIDENTIAL	BEDROOM	8.5	93	1.9	7.7	97.9
F03	R10	RESIDENTIAL	BEDROOM	7.0	94.6	9.4	5.9	90.1

NSL CONTOURS



PROJECT: 1665 - 68-70 OLDHAM STREET, MANCH
 REPORT TITLE: EXISTING VS. PROPOSED
 ADDRESS: 76-82 OLDHAM STREET BLK A
 DATE: 21/11/2022
 SCHEME IR: IR04
 DRAWING No.: 1665-REL01-IS01-DD7

KEY:
 GAIN
 LOSS
 MAINTAINED LIT AREA
 1 METRE GRID

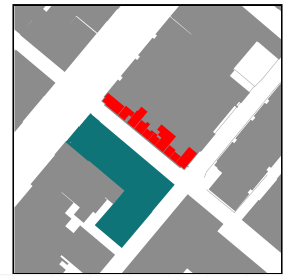


F04

FLOOR	ROOM	PROPERTY TYPE	ROOM USE	ROOM AREA-sqm	EXISTING %	PROPOSED %	LOSS-sqm	LOSS %
76-82 OLDHAM STREET BLK A								
F04	R1	RESIDENTIAL	LKD	23.5	100	87.9	2.8	12.1
F04	R2	RESIDENTIAL	LKD	24.4	99.8	99.2	0.1	0.6
F04	R3	RESIDENTIAL	BEDROOM	12.9	91.5	14	10.0	84.7
F04	R4	RESIDENTIAL	LKD	20.6	98.3	3.4	19.5	96.6
F04	R5	RESIDENTIAL	BEDROOM	10.0	90.3	7.9	8.2	91.2
F04	R6	RESIDENTIAL	LKD	22.7	98.6	1.1	22.1	98.9
F04	R7	RESIDENTIAL	BEDROOM	8.3	91.2	1.3	7.5	98.5
F04	R8	RESIDENTIAL	LKD	21.9	98.8	4.7	20.7	95.3
F04	R9	RESIDENTIAL	BEDROOM	8.5	93	2.5	7.7	97.3
F04	R10	RESIDENTIAL	BEDROOM	7.0	94.6	10.1	5.9	89.4

PROJECT: 1665 - 68-70 OLDHAM STREET, MANCH
 REPORT TITLE: EXISTING VS. PROPOSED
 ADDRESS: 76-82 OLDHAM STREET BLK A
 DATE: 21/11/2022
 SCHEME IR: IR04
 DRAWING No.: 1665-REL01-IS01-DD8

KEY:
 GAIN
 LOSS
 MAINTAINED LIT AREA
 1 METRE GRID



F05

FLOOR	ROOM	PROPERTY TYPE	ROOM USE	ROOM AREA-sqm	EXISTING %	PROPOSED %	LOSS-sqm	LOSS %
76-82 OLDHAM STREET BLK A								
F05	R1	RESIDENTIAL	LKD	23.5	100	93.9	1.4	6.1
F05	R2	RESIDENTIAL	LKD	24.4	99.8	99.8	0.0	0
F05	R3	RESIDENTIAL	BEDROOM	12.9	91.5	40.9	6.5	55.3
F05	R4	RESIDENTIAL	LKD	20.6	98.3	3.8	19.4	96.2
F05	R5	RESIDENTIAL	BEDROOM	12.5	92.6	11.1	10.2	88
F05	R6	RESIDENTIAL	BEDROOM	8.0	97.3	4.1	7.5	95.8
F05	R7	RESIDENTIAL	BEDROOM	8.3	94.2	2.2	7.7	97.6
F05	R8	RESIDENTIAL	LKD	31.7	86.1	4.6	25.8	94.6
F05	R9	RESIDENTIAL	BEDROOM	8.5	93	2.9	7.6	96.8
F05	R10	RESIDENTIAL	BEDROOM	7.0	94.6	10.4	5.9	89

NSL CONTOURS



PROJECT: 1665 - 68-70 OLDHAM STREET, MANCH
 REPORT TITLE: EXISTING VS. PROPOSED
 ADDRESS: 76-82 OLDHAM STREET BLK A
 DATE: 21/11/2022
 SCHEME IR: IR04
 DRAWING No.: 1665-REL01-IS01-DD9

KEY:
 GAIN
 LOSS
 MAINTAINED LIT AREA
 1 METRE GRID



F06

FLOOR	ROOM	PROPERTY TYPE	ROOM USE	ROOM AREA-sqm	EXISTING %	PROPOSED %	LOSS-sqm	LOSS %
76-82 OLDHAM STREET BLK A								
F06	R1	RESIDENTIAL	LKD	23.5	100	94.1	1.4	5.9
F06	R2	RESIDENTIAL	UNKNOWN	9.2	100	99.9	0.0	0.1
F06	R3	RESIDENTIAL	BEDROOM	12.1	92.4	21.3	8.6	77
F06	R4	RESIDENTIAL	BEDROOM	8.0	97.3	12.4	6.8	87.3
F06	R5	RESIDENTIAL	BEDROOM	8.3	94.2	10.8	6.9	88.5
F06	R6	RESIDENTIAL	LKD	31.7	86.9	6.6	25.5	92.4
F06	R7	RESIDENTIAL	BEDROOM	8.5	93	9.2	7.1	90.1
F06	R8	RESIDENTIAL	BEDROOM	7.0	94.6	17.3	5.4	81.7

NSL CONTOURS



PROJECT: 1665 - 68-70 OLDHAM STREET, MANCH
 REPORT TITLE: EXISTING VS. PROPOSED
 ADDRESS: 76-82 OLDHAM STREET BLK A
 DATE: 21/11/2022
 SCHEME IR: IR04
 DRAWING No.: 1665-REL01-IS01-DD10

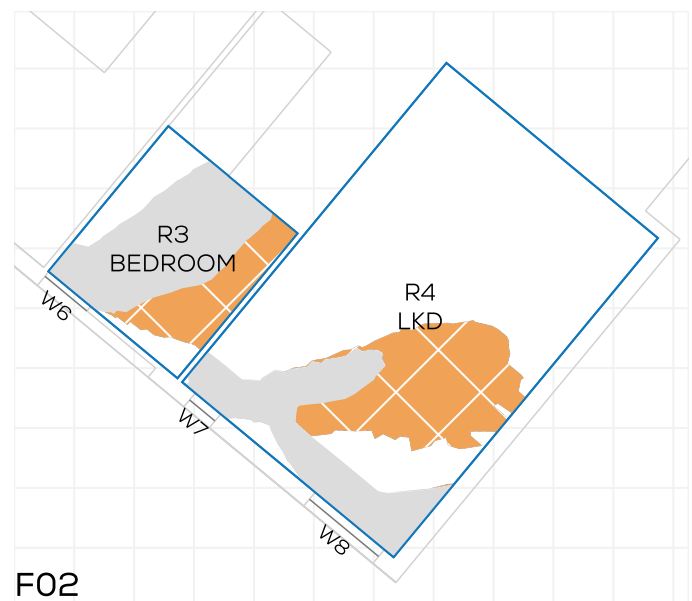
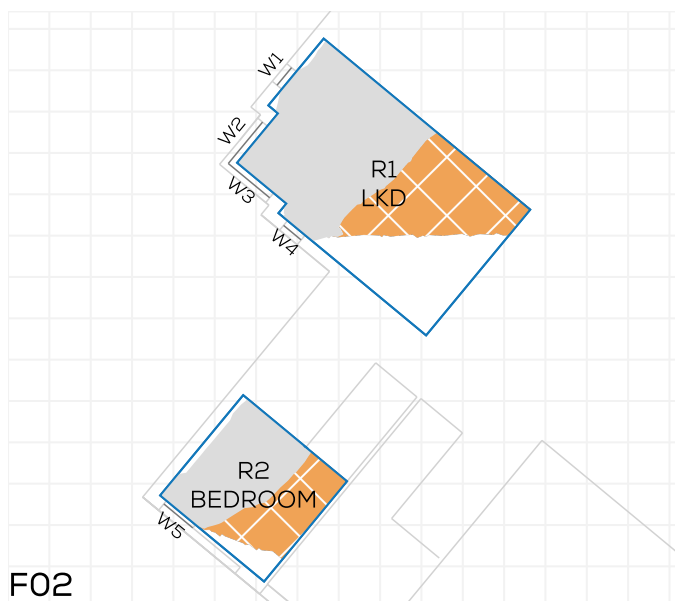
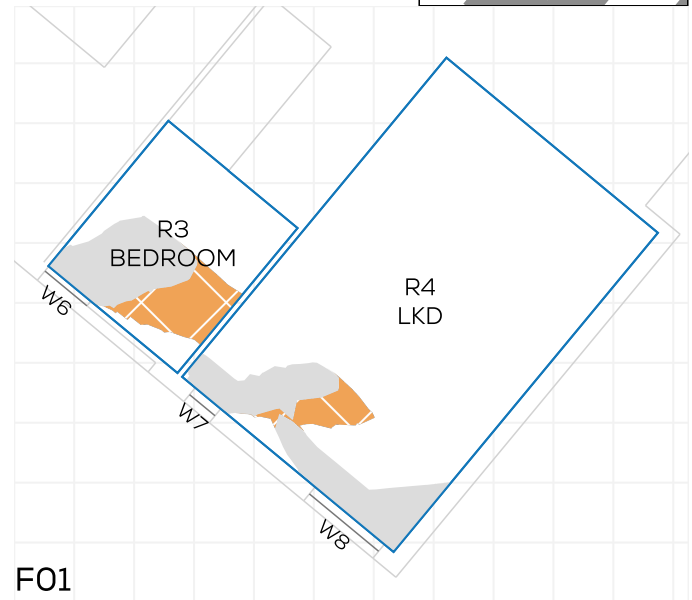
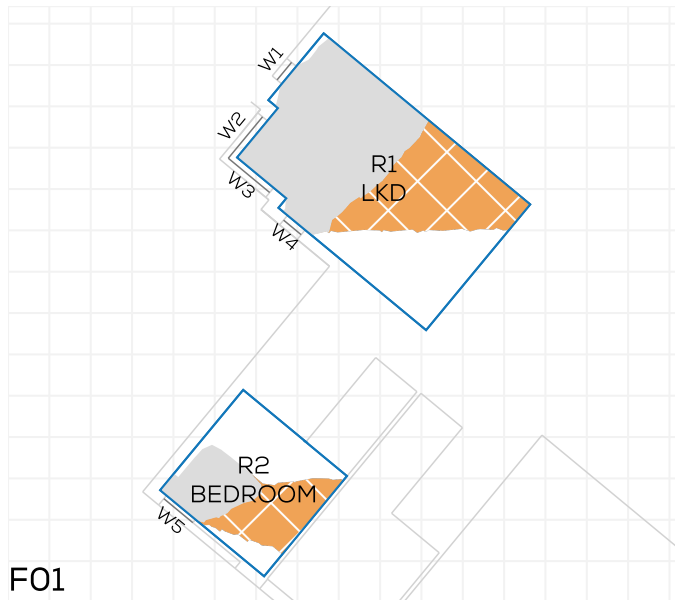
KEY:
 GAIN
 LOSS
 MAINTAINED LIT AREA
 1 METRE GRID



FLOOR	ROOM	PROPERTY TYPE	ROOM USE	ROOM AREA-sqm	EXISTING %	PROPOSED %	LOSS-sqm	LOSS %
76-82 OLDHAM STREET BLK A								
F07	R1	RESIDENTIAL	LKD	23.5	100	94.2	1.4	5.8
F07	R2	RESIDENTIAL	UNKNOWN	9.2	100	100	0.0	0
F07	R3	RESIDENTIAL	BEDROOM	12.1	92.4	17.5	9.1	81.1
F07	R4	RESIDENTIAL	BEDROOM	8.0	97.4	18.3	6.3	81.2
F07	R5	RESIDENTIAL	BEDROOM	8.3	94.2	14.3	6.7	84.8
F07	R6	RESIDENTIAL	LKD	31.7	87.2	7.3	25.4	91.7
F07	R7	RESIDENTIAL	BEDROOM	8.5	93	11.8	6.9	87.3
F07	R8	RESIDENTIAL	BEDROOM	7.0	94.6	19.5	5.2	79.3

PROJECT: 1665 - 68-70 OLDHAM STREET, MANCH
 REPORT TITLE: EXISTING VS. PROPOSED
 ADDRESS: 76-82 OLDHAM STREET BLK B
 DATE: 21/11/2022
 SCHEME IR: IR04
 DRAWING No.: 1665-REL01-IS01-DD11

KEY:
 GAIN
 LOSS
 MAINTAINED LIT AREA
 1 METRE GRID



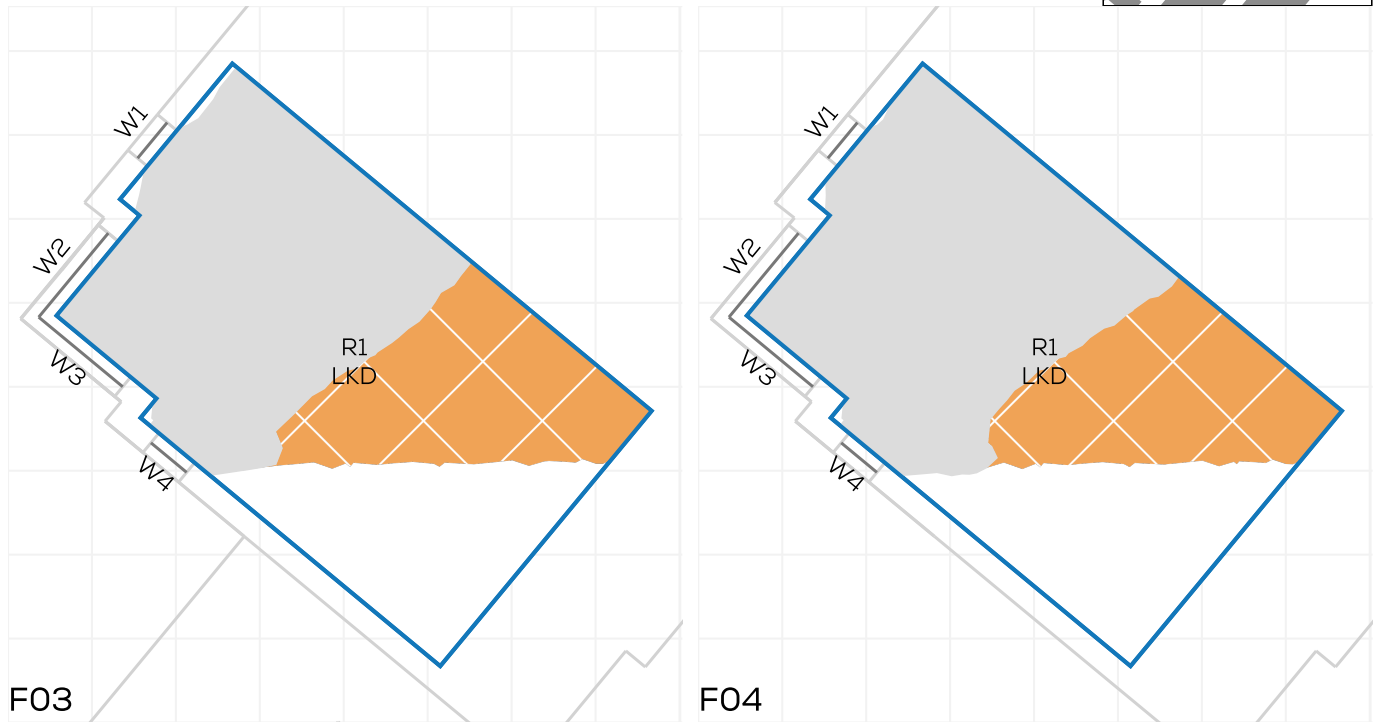
FLOOR	ROOM	PROPERTY TYPE	ROOM USE	ROOM AREA-sqm	EXISTING %	PROPOSED %	LOSS-sqm	LOSS %
76-82 OLDHAM STREET BLK B								
F01	R1	RESIDENTIAL	LKD	24.6	75.4	47.1	6.9	37.5
F01	R2	RESIDENTIAL	BEDROOM	10.3	54.4	25.5	3.0	53.1
F01	R3	RESIDENTIAL	BEDROOM	8.8	42.3	25.9	1.4	38.7
F01	R4	RESIDENTIAL	LKD	31.7	13.1	10.9	0.7	16.9
F02	R1	RESIDENTIAL	LKD	24.6	75.6	48.9	6.6	35.4
F02	R2	RESIDENTIAL	BEDROOM	10.3	89.6	55.7	3.5	37.9
F02	R3	RESIDENTIAL	BEDROOM	8.8	78.3	53.9	2.1	31.1
F02	R4	RESIDENTIAL	LKD	31.7	30.1	14.1	5.1	53.1

NSL CONTOURS



PROJECT: 1665 - 68-70 OLDHAM STREET, MANCH
 REPORT TITLE: EXISTING VS. PROPOSED
 ADDRESS: 76-82 OLDHAM STREET BLK B
 DATE: 21/11/2022
 SCHEME IR: IR04
 DRAWING No.: 1665-REL01-IS01-DD12

KEY:
 GAIN
 LOSS
 MAINTAINED LIT AREA
 1 METRE GRID



FLOOR	ROOM	PROPERTY TYPE	ROOM USE	ROOM AREA-sqm	EXISTING %	PROPOSED %	LOSS-sqm	LOSS %
76-82 OLDHAM STREET BLK B								
F03	R1	RESIDENTIAL	LKD	24.6	75.7	50.5	6.2	33.3
F04	R1	RESIDENTIAL	LKD	24.6	76.3	52.6	5.8	31.1



For further details please contact us on:

LONDON

T 020 7202 1400

E mail@gia.uk.com

The Whitehouse
Belvedere Road
London SE1 8GA

MANCHESTER

T 0161 672 5100

E manchester@gia.uk.com

2 Commercial Street
Manchester
M15 4RQ

BELFAST

T 02892 449 674

E belfast@gia.uk.com

River House
48-60 High Street
Belfast BT1 2BE

BRISTOL

T 0117 374 1504

E bristol@gia.uk.com

33 Bristol
Colston Avenue
Bristol BS1 4UA

DUBLIN

T 020 7202 1400

E hello@giasurveyors.ie

77 Lower Camden Street
Dublin Ireland
D02 XE80