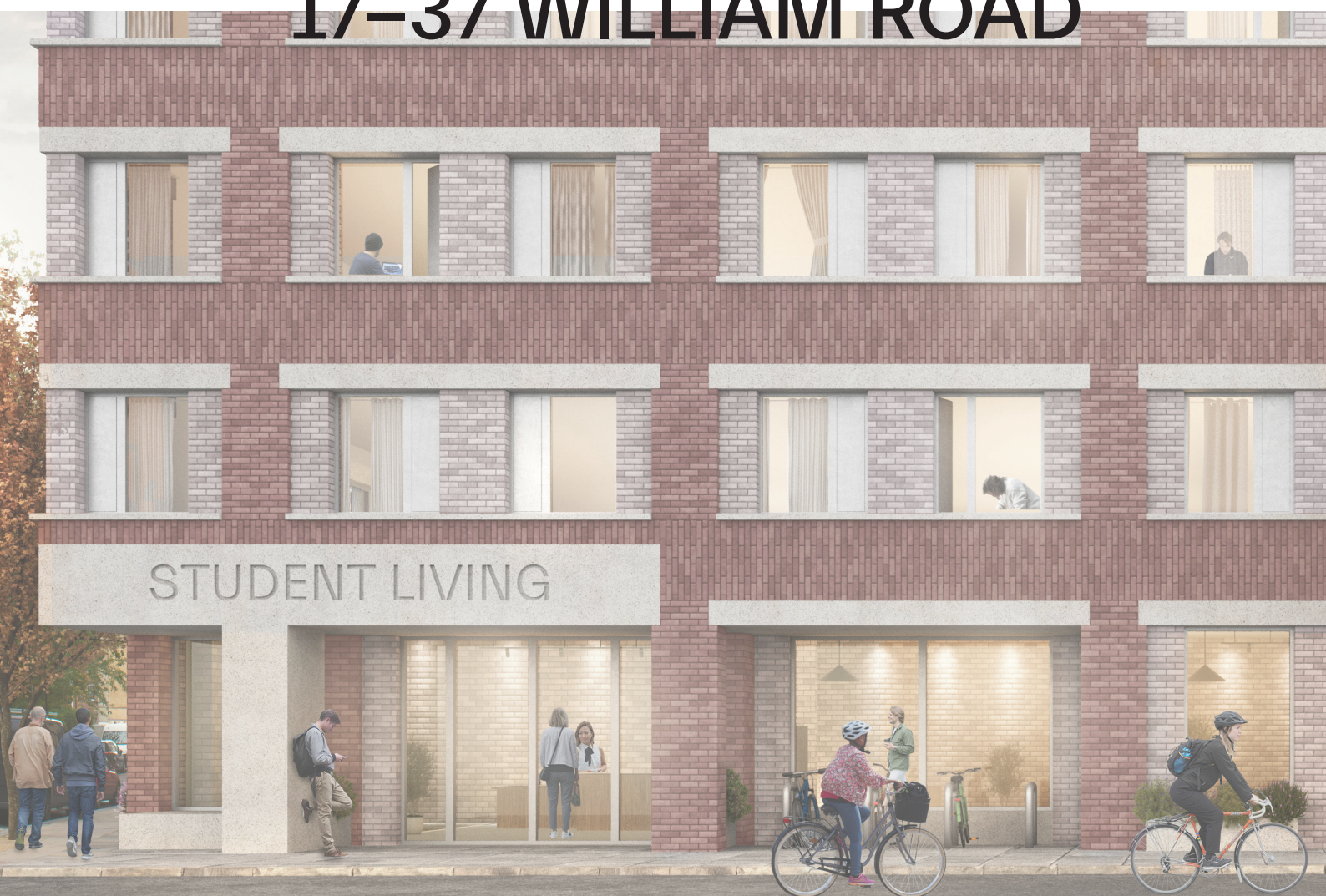


17-37 WILLIAM ROAD



EUSTON ONE, WILLIAM ROAD LONDON BOROUGH OF CAMDEN

DAYLIGHT AND SUNLIGHT REPORT

DIRECTOR: LIAM DUNFORD

CLIENT: EUSTON ONE LIMITED

DATE: OCTOBER 2020

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PROJECT: P2073

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Appendices

- Appendix 1:** Drawings
- Appendix 2:** Technical Analysis with balcony provision in place
- Appendix 3:** Technical Analysis without balcony provision in place

1 Introduction

- 1.1 This report relates to the Morris + Company Architects Proposed Scheme for the redevelopment of Euston One, William Road insofar as it affects the daylight and sunlight amenity to the surrounding residential properties.
- 1.2 The Local Authority will be informed in this by the BRE document entitled Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice 2011 (the BRE guidelines). This document is the principal guidance in this area and sets out the methodology for measuring light and recommends what it considers to be permitted or unobtrusive levels of change.
- 1.3 The BRE guidelines are not mandatory, though local planning authorities and planning inspectors will consider the suitability of a proposed scheme for a site within the context of BRE guidance. Consideration will be given to the urban context within which a scheme is located and the daylight and sunlight will be one of a number of planning considerations which the local authority will weigh.

Sources of Information

In the process of compiling this report, the following sources of information have been used:

Point 2 Surveyors
Site Photography

ZMapping Ltd
3D Photogrammetry Model (received 20/03/19)

Morris + Company
Proposed 3D Model (received 12/10/20)
A295-MCO-XX-ZZ-M3-A-Architecture.dwg

2 Methodology

- 2.1 It is usual to assess daylight and sunlight in relation to the guidelines set out in the 2011 Building Research Establishment (BRE) Report 'Site layout planning for daylight and sunlight - A guide to good practice' by Paul Littlefair. This document is most widely accepted by planning authorities as the means by which to judge the acceptability of a scheme. One of the primary sources for the BRE Report is the more detailed guidance contained within 'British Standard 8206 Part 2:2008'.
- 2.2 In relation to the properties surrounding a site, usually the local planning authority will only be concerned with the impact to main habitable accommodation (i.e. living rooms, bedrooms and kitchens) within residential properties.
- 2.3 To determine whether a neighbouring existing building may be adversely affected, the initial test provided by the BRE is to establish if any part of the proposal subtends an angle of more than 25° from the lowest window serving the existing building. If this is the case then there may be an adverse effect, and more detailed calculations are required to quantify the extent of any impact.
- 2.4 The BRE guidelines provide two principal measures of daylight for assessing the impact on properties neighbouring a site, namely Vertical Sky Component (VSC) and No-Sky Line (NSL). They also detail a third measure of daylight which is primarily used for assessing amenity within proposed accommodation, namely Average Daylight Factor (ADF).
- 2.5 In terms of sunlight we examine the BRE Annual Probable Sunlight Hours (APSH); and in relation to sunlight amenity to gardens and amenity spaces, we apply the quantitative BRE overshadowing guidance.
- 2.6 These measures of daylight and sunlight are discussed in the following paragraphs.

Diffuse Daylight

- 2.7 **Vertical Sky Component (VSC)** – VSC is a measure of the direct skylight reaching a point from an overcast sky. It is the ratio of the illuminance at a point on a given vertical plane to the illuminance at a point on a horizontal plane due to an unobstructed sky.
- 2.8 For existing buildings, the BRE guideline is based on the loss of VSC at a point at the centre of a window, on the outer plane of the wall.
- 2.9 The BRE guidelines state that if the VSC at the centre of a window is less than 27%, and it is less than 0.8 times its former value (i.e. the proportional reduction is greater than 20%), then the reduction in skylight will be noticeable, and the existing building may be adversely affected.

- 2.10 **No-Sky Line (NSL)** - NSL is a measure of the distribution of daylight within a room. It maps out the region within a room where light can penetrate directly from the sky, and therefore accounts for the size of and number of windows by simple geometry.
- 2.11 The BRE suggest that the area of the working plane within a room that can receive direct skylight should not be reduced to less than 0.8 times its former value (i.e. the proportional reduction in area should not be greater than 20%).
- 2.12 **Average Daylight Factor (ADF)** - ADF is a measure of the overall amount of diffuse daylight within a room. It is the average of the daylight factors across the working plane within a room. This equates to the ratio of the average illuminance across the working plane, to the illuminance due to an unobstructed sky.
- 2.13 In addition to accounting for external obstructions, the ADF accounts for the number of windows and their size in relation to the size of the room, the window transmittance and the reflectance of the internal walls, floor and ceiling.
- 2.14 While the ADF can be calculated from first principles using a lighting simulation software suite such as Radiance, in simple situations it can be approximated using the empirical formula detailed in both British Standard 8206 Part 2:2008 and Appendix C of the BRE Report.
- 2.15 Both the BRE Report and BS 8206 Part 2:2008 provide guidance for acceptable ADF values in the presence of supplementary electric lighting, depending on the room use. These are 1.0% for a bedroom, 1.5% for a living room and 2.0% for a kitchen.

Sunlight

- 2.16 **Annual Probable Sunlight Hours (APSH)** - In relation to sunlight, the BRE recommends that the APSH received at a given window in the proposed case should be at least 25% of the total available, including at least 5% in winter.
- 2.17 Where the proposed values fall short of these, and the absolute loss is greater than 4%, then the proposed values should not be less than 0.8 times their previous value in each period (i.e. the proportional reductions should not be greater than 20%).
- 2.18 The BRE guidelines state that '...all main living rooms of dwellings, and conservatories, should be checked if they have a window facing within 90 degrees of due south. Kitchens and bedrooms are less important, although care should be taken not to block out too much sun'.
- 2.19 The APSH figures are calculated for each window, and where a room is served by more than one window the contribution of each is accounted for in the overall figures for the room. The acceptability criteria are applied to overall room based figures.

3 Standard Survey Limitations

- 3.1 Although we have undertaken as detailed an inspection as possible, we are required by our professional indemnity insurers to notify you that our report is based upon the Standard Terms and Conditions provided along with our fee proposal. Our understanding of the existing massing, including the surrounding context was established from the sources of information details within Section 3.
- 3.2 In addition to our standard limitations the following limitations and assumptions also apply.
- Best estimates were made in establishing building use (residential or commercial) and room uses; generally, these were made from external observations and recourse to planning records where available.
 - When floor plans of surrounding properties were not available, room depths have been assumed from external observations. Where no indicators of room depth were available a standard of 4m, 6m or 8m depths have been used.

4 Setting Appropriate Daylight Targets

4.1 The BRE daylight and sunlight guidance was established in relation to a sub-urban environment.

4.2 As such, the default nationwide BRE numerical criteria are based on 25-degree development angles, which are frequently inappropriate, and indeed unachievable, in urban areas.

4.3 This is openly acknowledged by the BRE, and in its introduction, the BRE guide itself urges that the guidelines be interpreted flexibly:

4.4 *“The advice given here is not mandatory.....Although it gives numerical guidelines these should be interpreted flexibly.....For example in an historic city centre, or in an area with modern high rise buildings, a higher degree of obstruction may be unavoidable....”*

4.5 This is also acknowledged in the National Planning Policy Framework February 2019 (“NPPF”) where it states at paragraph 123(c):

*“local planning authorities should refuse applications which they consider fail to make efficient use of land, taking into account the policies in this Framework. In this context, **when considering applications for housing, authorities should take a flexible approach in applying policies or guidance relating to daylight and sunlight** [emphasis added], where they would otherwise inhibit making efficient use of a site (as long as the resulting scheme would provide acceptable living standards).”*

4.6 It has been held at Appeal for the development of the Land at Edgware Road, Church Street, Paddington Green and Newcastle Place; Application Nos. 03/03464/CAC, 03/03466/CAC, 03/03463/FULL and 03/03465/FULL) that ‘noticeable’ is not to be equated with ‘unacceptable’. The following extract from the inspector’s report gives pragmatic guidance on the interpretation of the default BRE criteria:

*“13.103 According to the BRE Guide, a Vertical Sky Component (VSC) of 27% will give the potential for good interior diffuse daylighting. A reduction in VSC to less than both 27% and 80% of its former value will be noticeable. **‘Noticeable’, however, is not to be equated with ‘unacceptable’** [emphasis added]. And, as its introduction acknowledges, the Guide is just that - ‘although it gives numerical guidelines, these should be interpreted flexibly because natural lighting is only one of many factors in site layout design’. That is true in urban areas especially, where VSCs very much lower than 27% do not seem to diminish the attraction of some popular residential areas.”*

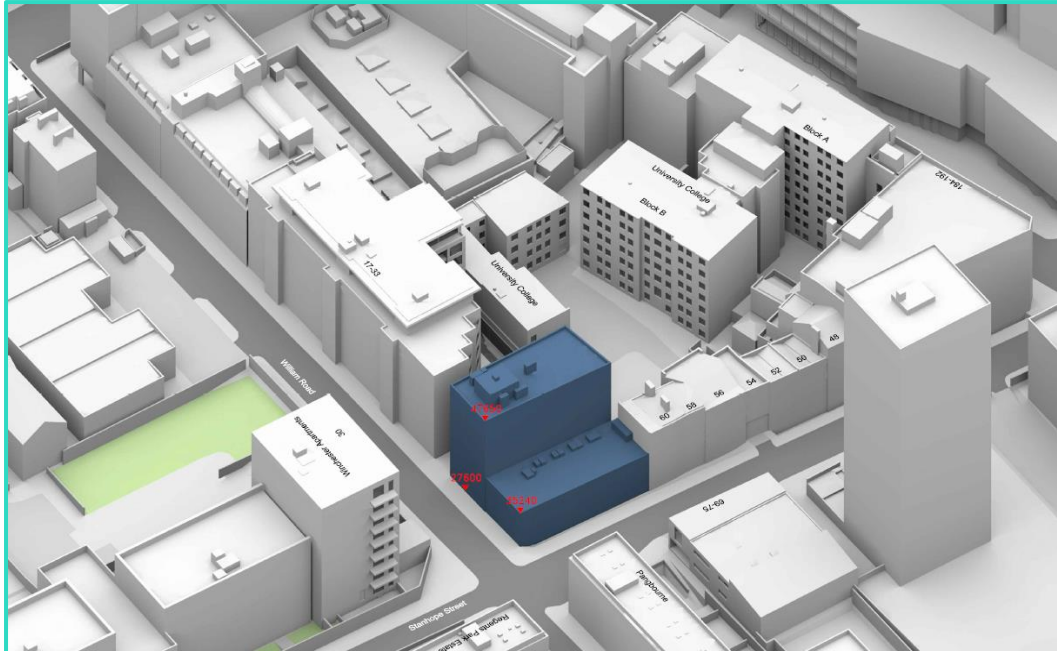
- 4.7 Appendix F of the BRE guidelines provides advice on setting alternative targets for access to daylight and sunlight. In relation to the default targets it says; *“These values are purely advisory and different targets may be used.....for example, in a mews in a historic city centre, a typical obstruction angle might be close to 40 degrees. This would correspond to a VSC of 18%, which could be used as a target.”*
- 4.8 In relation to considering alternative targets, Appendix F of the BRE guidelines states that:
- “In assessing the loss of light to an existing building, the VSC is generally recommended as the appropriate parameter to use. This is because VSC depends only on obstruction, and is therefore a measure of the daylit environment as a whole.”* In accordance with this, in assessing the proposal, primary consideration is given to the VSC figures.
- 4.9 In many urban areas development angles of 40 degrees, or more, are common and a VSC of 18% has been a reasonable and accepted level of daylight in many desirable urban areas for well over a century.
- 4.10 In recent years the need to make best use of available land means that the redevelopment of previously comparatively low rise, low density sites has required an increase in density, with corresponding increases in typical development angles and reductions in daylight. In many recent developments, therefore, angles greater than 40 degrees are not uncommon.
- 4.11 The Mayor of London; Housing; Supplementary Planning Guidance Document March 2016 (‘The London Plan’) states at paragraph 1.3.45 and 1.3.46, that:
- (1.3.45) *“Guidelines should be applied sensitively to higher density development, especially in opportunity areas, town centres, large sites and accessible locations, where BRE advice suggests considering the use of alternative targets. This should take into account local circumstances; the need to optimise housing capacity; and scope for the character and form of an area to change over time.”*
- (1.3.46) *“Decision makers should recognise that fully optimising housing potential on large sites may necessitate standards which depart from those presently experienced but which still achieve satisfactory levels of residential amenity and avoid unacceptable harm.”*

- 4.12 The inspectorate considered the above Guidance in the Whitechapel Estate Appeal (Reference: APP/E5900/W/17/3171437); they stated that that:

*“The figures show that a proportion of residual **Vertical Sky Component (‘VSC’) values in the mid-teens have been found acceptable in major developments across London** [emphasis added]. This echoes the Mayor’s endorsement in the pre- SPG decision at Monmouth House, Islington that VSC values in the **mid-teens are acceptable in an inner urban environment. They also show a smaller proportion in the bands below 15%** [emphasis added]. Even if there were some discrepancy in the appellants’ figures for this lower band at Whitechapel Central, which is disputed, **the VSC outcomes for the appeal proposal would in general be very similar to those of the other major schemes** [emphasis added]. The appeal proposal would therefore appear to be in compliance with the LP as amplified by the SPG and as it is being interpreted by the Mayor. The GLA responses to the planning application did not raise any concern about neighbours’ amenity.”*

- 4.13 Therefore, taking into consideration the intention of the London Plan, NPPF, flexibility of the default BRE Guidance and the above referenced decisions in relation other Major Developments, **we consider a general VSC target of 15% is appropriate in relation to the this context, with a smaller proportion in bands below 15%.**

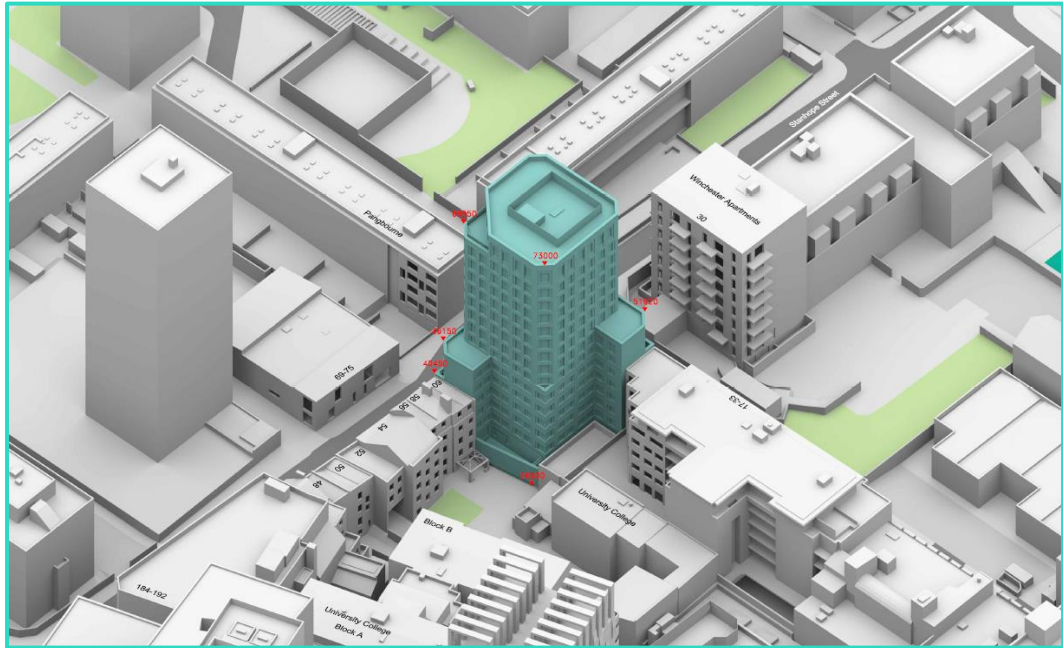
5 The Site



Drawing Number: P2073/08- 3D View - Existing Building

- 5.1 Our understanding of the site location and existing building(s) that occupy the site are illustrated in drawing numbers P2073/08 and located within Appendix 1.

6 The Proposal



Drawing Number: P2073/30 – 3D View – Proposed Scheme

- 6.1 Our understanding of the proposed scheme is illustrated in drawings P2073/30 located within Appendix 1.

7 The Surrounding Properties

7.1 The following surrounding properties contain residential accommodation and, due to their proximity to the development site, have been assessed in terms of the effects of the proposed development upon their daylight and sunlight amenity:

- 1) 48-60 Stanhope Street
- 2) Regents Park Estate
- 3) Winchester Apartments
- 4) 17-33 William Road

7.2 The location of these properties can be identified by way of their numerical reference on the plan below:



Identification drawing ("the Plan")

7.3 Detailed results for each window/room assessed can be found in Appendix 2 (with balconies in place) and Appendix 3 (without the balcony in place) and are summarised below.

1) 48-60 Stanhope Street

- 7.4 South of the site and referenced '1' on the Plan, these properties are identified as containing residential accommodation. We have managed to source layouts for 50 & 52 Stanhope Street. We have not managed to source layouts for the remainder of the properties thus the internal configurations have been assumed from external observation. Our analysis considers the effect on 38 windows serving 34 site facing rooms.

Daylight

- 7.5 All changes in VSC and NSL as a result of the Development to all windows and rooms in these properties are less than 20% their existing level and will be unnoticeable to the occupants. In fact, about 50% of the windows actually experience small improvements as a result of the Development.

Sunlight

- 7.6 All rooms which have a window orientated within 90 degrees due south experience unnoticeable changes in APSH.

2) Regents Park Estate

- 7.7 West & north-west of the site and referenced '2' on the Plan, these properties are identified as containing residential accommodation. We have managed to source layouts for the properties which have been incorporated into our analysis model. Our analysis considers the effect on 24 windows serving 20 site facing rooms.

Daylight

- 7.8 All changes in VSC and NSL as a result of the Development to all windows and rooms in these properties are less than 20% their existing level and will be unnoticeable to the occupants.

Sunlight

- 7.9 All rooms which have a window orientated within 90 degrees due south experience unnoticeable changes in APSH.

3) Winchester Apartments

- 7.10 North of the site and referenced '3' on the Plan, this property is identified as containing residential accommodation. We have managed to source layouts for the property which have been incorporated into our analysis model. Our analysis considers the effect on 76 windows serving 44 site facing rooms.
- 7.11 This property comprises multiple balconies that cut skylight from the top part of the sky being received in the window below.
- 7.12 In accordance with BRE Guidance, we have run an additional assessment where the balconies have been removed from the calculation to understand whether the effects on this property are influenced by the presence of the balcony.
- 7.13 With the balconies in place, of the 76 windows assessed, 33 experience unnoticeable changes in VSC, 18 windows between 20-30%, 18 windows between 30-40% and 7 windows greater than 40% loss. In terms of NSL, of the 44 rooms assessed 18 experience unnoticeable changes, 3 rooms between 20-30%, 5 between 30%-40% and 18 rooms greater than 40%.
- 7.14 With the balconies removed, of the 76 windows assessed, 33 experience unnoticeable changes in VSC, 22 windows between 20-30%, 20 windows between 30-40% and one window experiences a greater than 40% loss. In terms of NSL, of the 44 rooms assessed 18 experience unnoticeable changes, 3 rooms between 20-30%, 6 between 30%-40% and 17 rooms greater than 40%.
- 7.15 In terms of retained daylight levels, with the balcony in place a large proportion of rooms have at least one main window that continues to retain above 15% VSC. Without the balconies in place, all rooms have at least one main window that retains at least 16% VSC, surpassing the alternate daylight target.
- 7.16 Notwithstanding there are some noticeable changes in daylight to this property, 'noticeable' should not be equated to 'unacceptable'. Importantly, when turning to retained daylight levels, all rooms retain VSC levels upward of 16.3%, although the vast majority are considerably higher than this. Within a central London urban area, it is widely accepted (and endorsed by the Greater London Authority) that a VSC of 15% will provide acceptable levels of daylight.

Sunlight

- 7.17 In terms of sunlight, all rooms continue to receive very good levels of APSH with the development in place.

4) 17-33 William Road

- 7.18 East of the site and referenced '4' on the Plan, this property is identified as containing residential accommodation. We have managed to source layouts for the property which have been incorporated into our analysis model. Our analysis considers the effect on 53 windows serving 46 site facing rooms.
- 7.19 Of the 53 windows, the proportional reduction of VSC to 45 are less than 20% and will be unnoticeable. Of the remaining 8 windows, the proportional losses are either between 20% and 30%, which only marginally exceeds default BRE Guidance, or, the actual loss in VSC is very small (less than 3%) but because the existing value is already low, appears as a disproportionate percentage change; in reality the changes are unlikely to be noticeable the occupant. This is reaffirmed by all 46 rooms experiencing proportional reductions in NSL less than 20%, which will be unnoticeable.

Sunlight

- 7.20 All rooms which have a window orientated within 90 degrees due south experience unnoticeable changes in APSH.

8 Conclusion

- 8.1 Morris + Company and Point 2 Surveyors have worked closely to develop a level of massing that optimises the site potential while safeguarding daylight and sunlight to the surrounding residential context. Of the surrounding properties, only Winchester Apartments experiences some 'noticeable' changes in daylight as a result of the Development however, notwithstanding there are some noticeable changes, with reference to previous appeal decisions that should not be equated to 'unacceptable' and importantly the retained levels of daylight are commensurate (and largely better than) and typical urban landscape can therefore be considered on balance.
- 8.2 We fully support this planning application in terms of daylight and sunlight amenity.

Appendix 1:

Drawings



Sources: ZMapping Ltd
3D Photogrammetry Model (received 20/03/19)

Boyes Rees Architects Ltd.
Proposed 3D Model (received 19/06/19)
MASSING 16 Storeys 2.85m Student.skp
MASSING 16 Storeys 3m Student.skp

Key: Existing Buildings
Proposed Scheme

Project: William Road
London

Title: Site Plan
Existing Buildings

Scheme Confirmed:

Date:

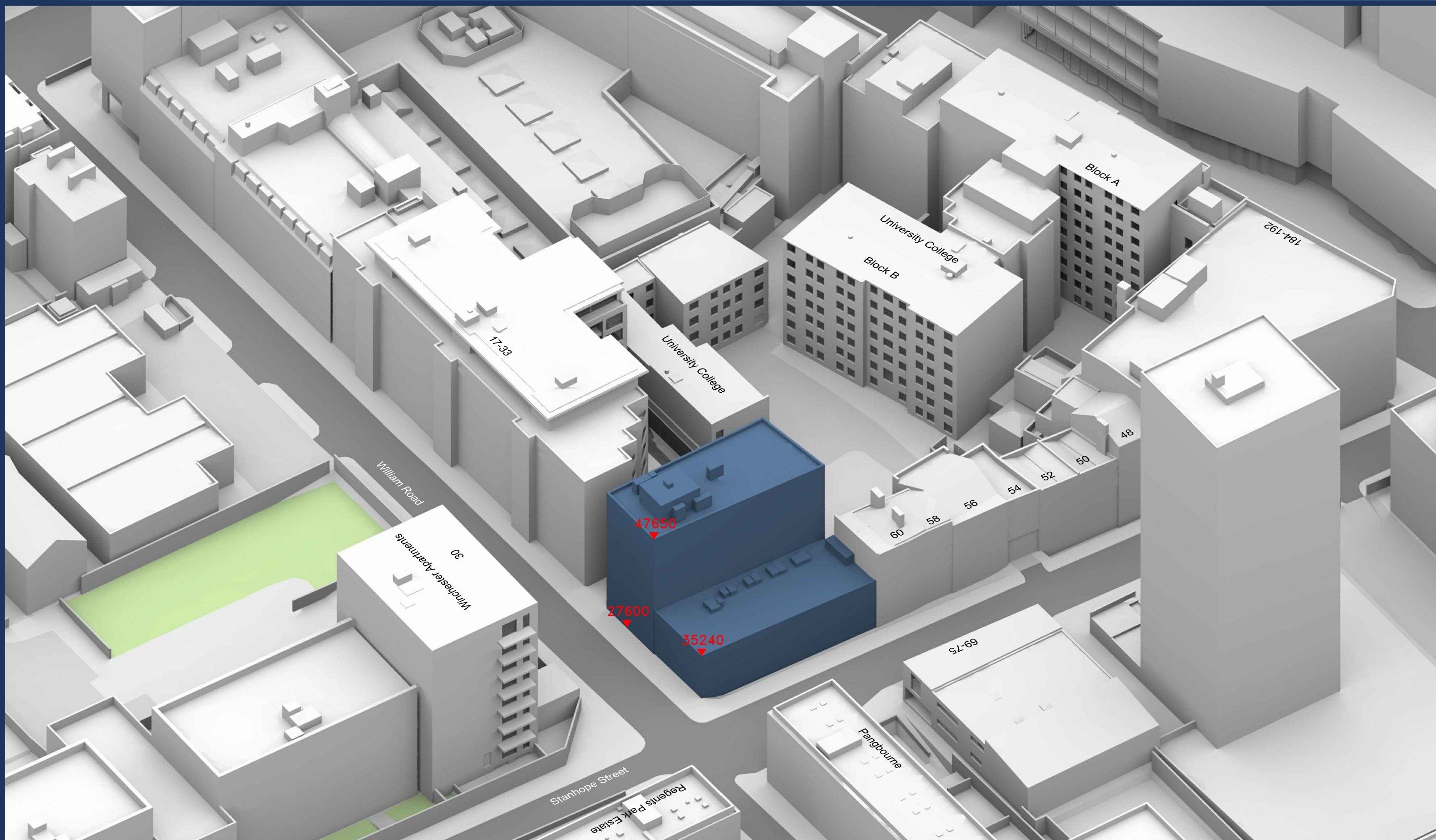
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Date:
June 19

Dwg No:
P2073/07

Rel:
02



Sources: ZMapping Ltd
3D Photogrammetry Model (received 20/03/19)

Boyes Rees Architects Ltd.
Proposed 3D Model (received 19/06/19)
MASSING 16 Storeys 2.85m Student.skp
MASSING 16 Storeys 3m Student.skp

Key: Existing Buildings
Proposed Scheme

All Heights in mm AOD

Scheme Confirmed:

Date:

Project: William Road
London

Drawn By:
BW

Scale:
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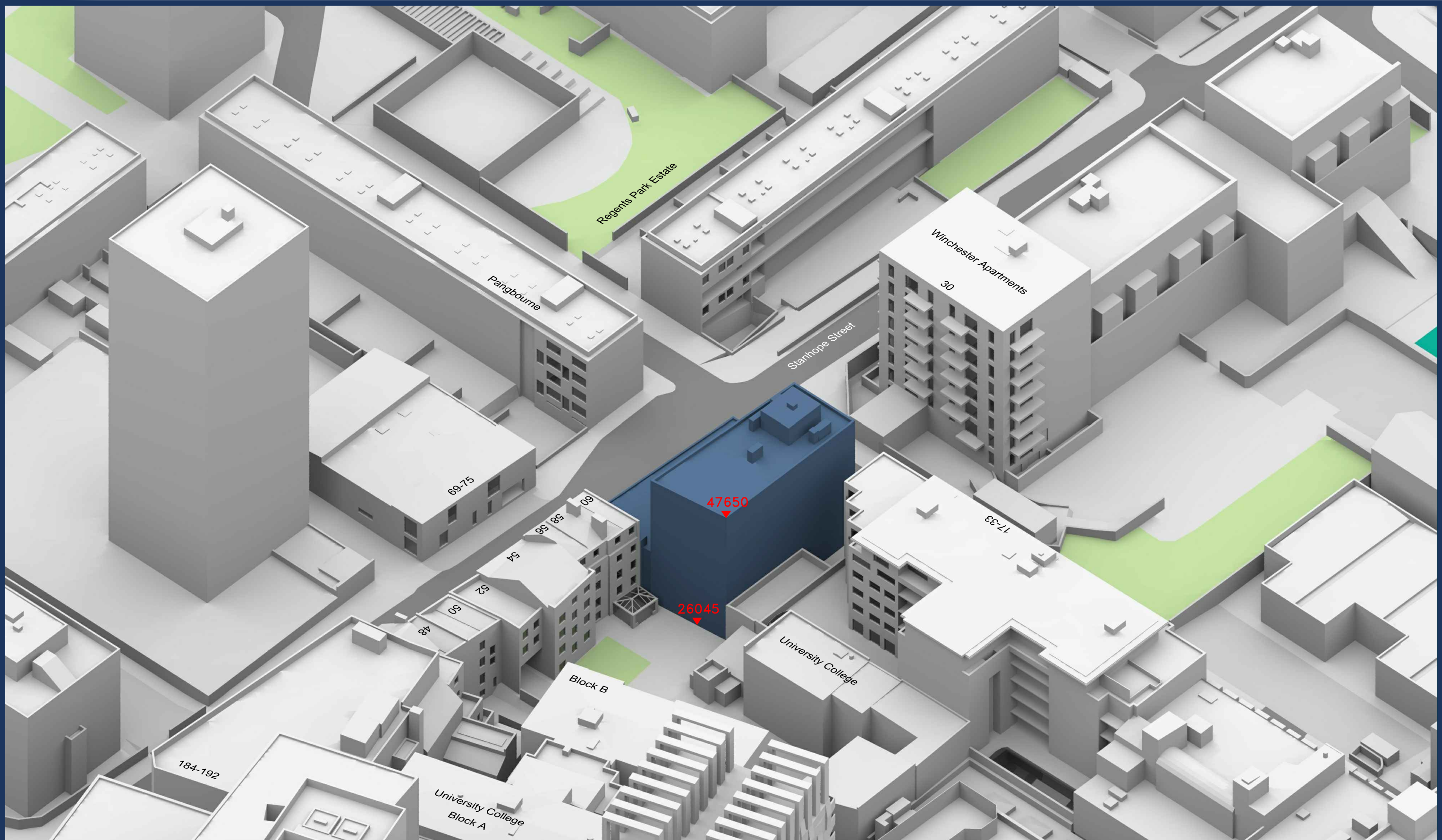
Date:
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Title: 3D View
Existing Buildings

Dwg No:
P2073/08

Rel:
02





Sources: ZMapping Ltd
3D Photogrammetry Model (received 20/03/19)

Boyce Rees Architects Ltd.
Proposed 3D Model (received 19/06/19)
MASSING 16 Storeys 2.85m Student.skp
MASSING 16 Storeys 3m Student.skp

Key: Existing Buildings
Proposed Scheme

All Heights in mm AOD

Scheme Confirmed:

Date:

Project: William Road
London

Drawn By:
BW

Scale:
NTS @ A3

Date:
June 19

Title: 3D View
Existing Buildings

Dwg No:
P2073/09

Rel:
02





Sources: ZMapping Ltd
3D Photogrammetry Model (received 20/03/19)

Morris + Company
Proposed 3D Model (received 12/10/20)
A295-MCO-XX-ZZ-M3-A-Architecture.dwg

Key: Existing Buildings
 Proposed Scheme

Project: William Road
London

Title: Site Plan
Proposed Scheme 12/10/20

Scheme Confirmed:

Date:

Drawn By:
AG

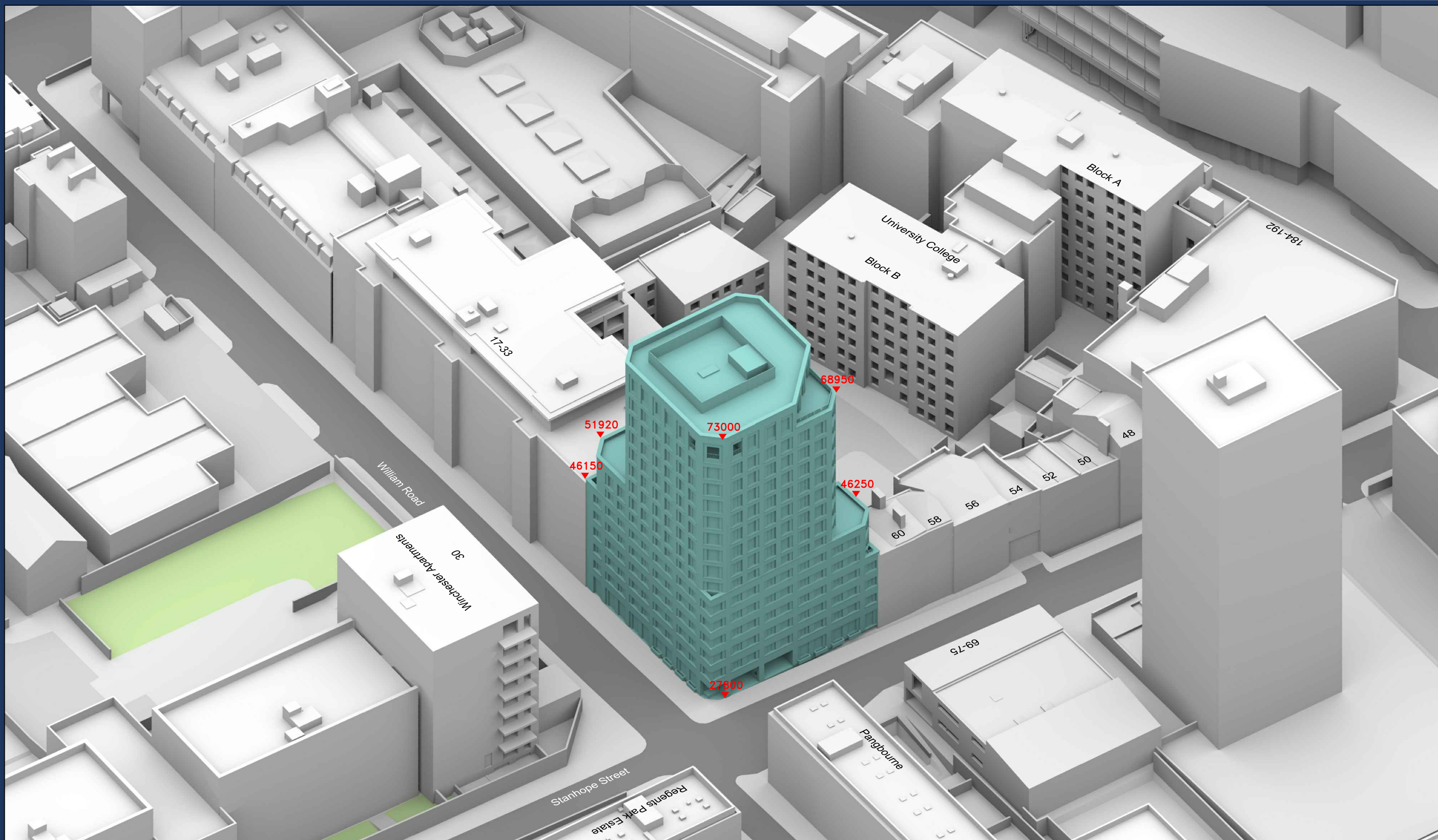
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Oct 20

Dwg No:
P2073/28

Rel:
05





Sources: ZMapping Ltd
3D Photogrammetry Model (received 20/03/19)

Morris + Company
Proposed 3D Model (received 12/10/20)
A295-MCO-XX-ZZ-M3-A-Architecture.dwg

Key:  Existing Buildings
 Proposed Scheme

All Heights in mm AOD

Scheme Confirmed:

Date:

Project: William Road
London

Drawn By:
AG

Scale:
NTS @ A3

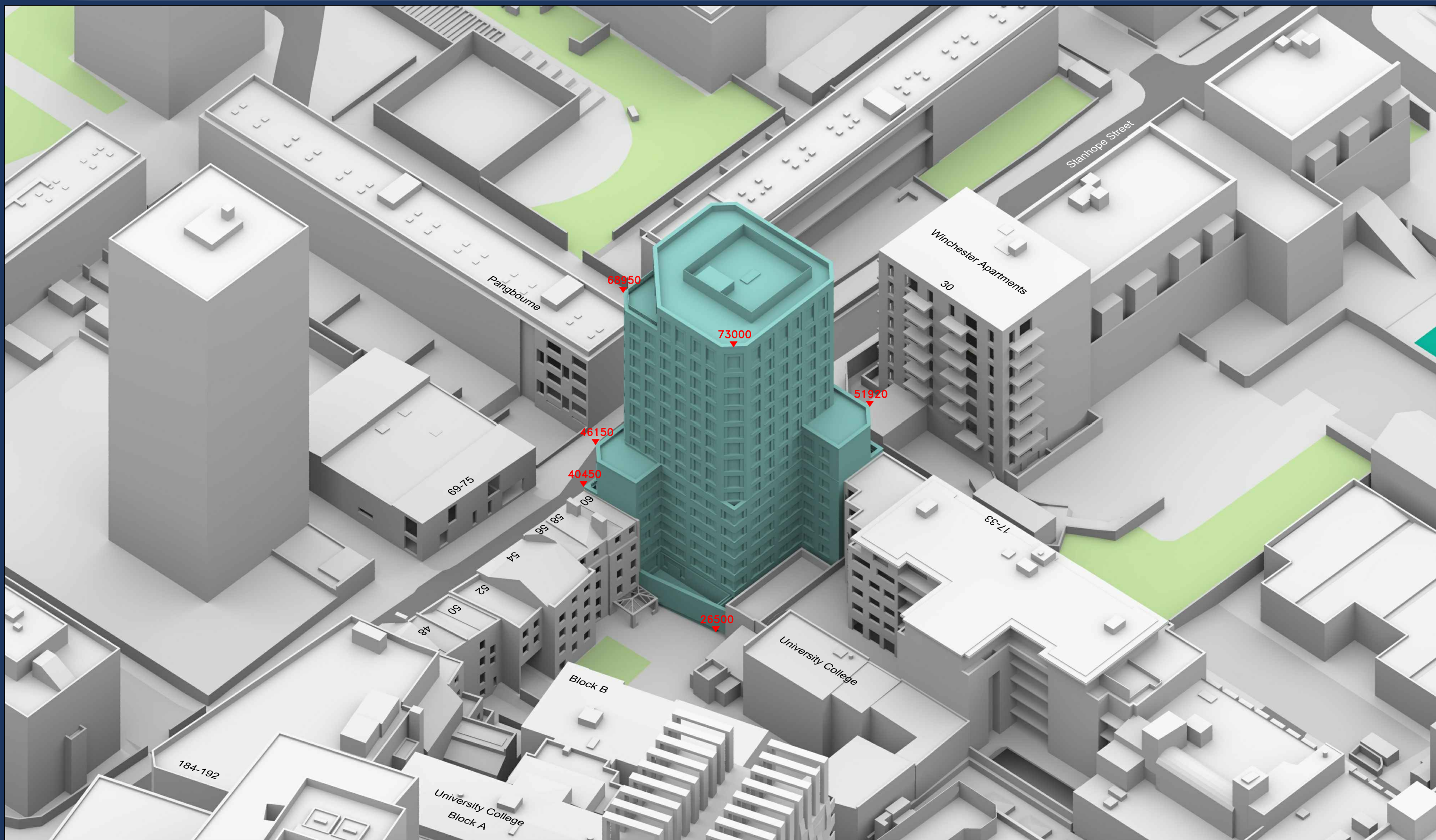
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Title: 3D View
Proposed Scheme 12/10/20

Dwg No:
P2073/29

Rel:
05





Sources: ZMapping Ltd
3D Photogrammetry Model (received 20/03/19)

Morris + Company
Proposed 3D Model (received 12/10/20)
A295-MCO-XX-ZZ-M3-A-Architecture.dwg

Key:  Existing Buildings
 Proposed Scheme

All Heights in mm AOD

Project: William Road
London

Title: 3D View
Proposed Scheme 12/10/20

Scheme Confirmed:

Date:

Drawn By:
AG

Scale:
NTS @ A3

Date:
Oct 20

Dwg No:
P2073/30

Rel:
05

