
Former Boddington's Site, Phase 2 / Manchester

Accurate Visual Representations

1.0 Introduction

Introduction

2.0 Views

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3.0 Appendices

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1.0 Introduction

Views

Appendices

Introduction

This study contains a number of photographic locations for the assessment of the Proposed Development by Assael Architecture at the Former Boddington’s Site, Phase 2, Manchester. It consists of a series of views presented as three images showing a photograph of the existing condition alongside an Accurate Visual Representation of the proposal, and proposal with cumulative condition. These comparative views are designed to test the visibility and appearance of the project from a range of publicly accessible locations around the site. The views have been prepared by Assael Visuals.

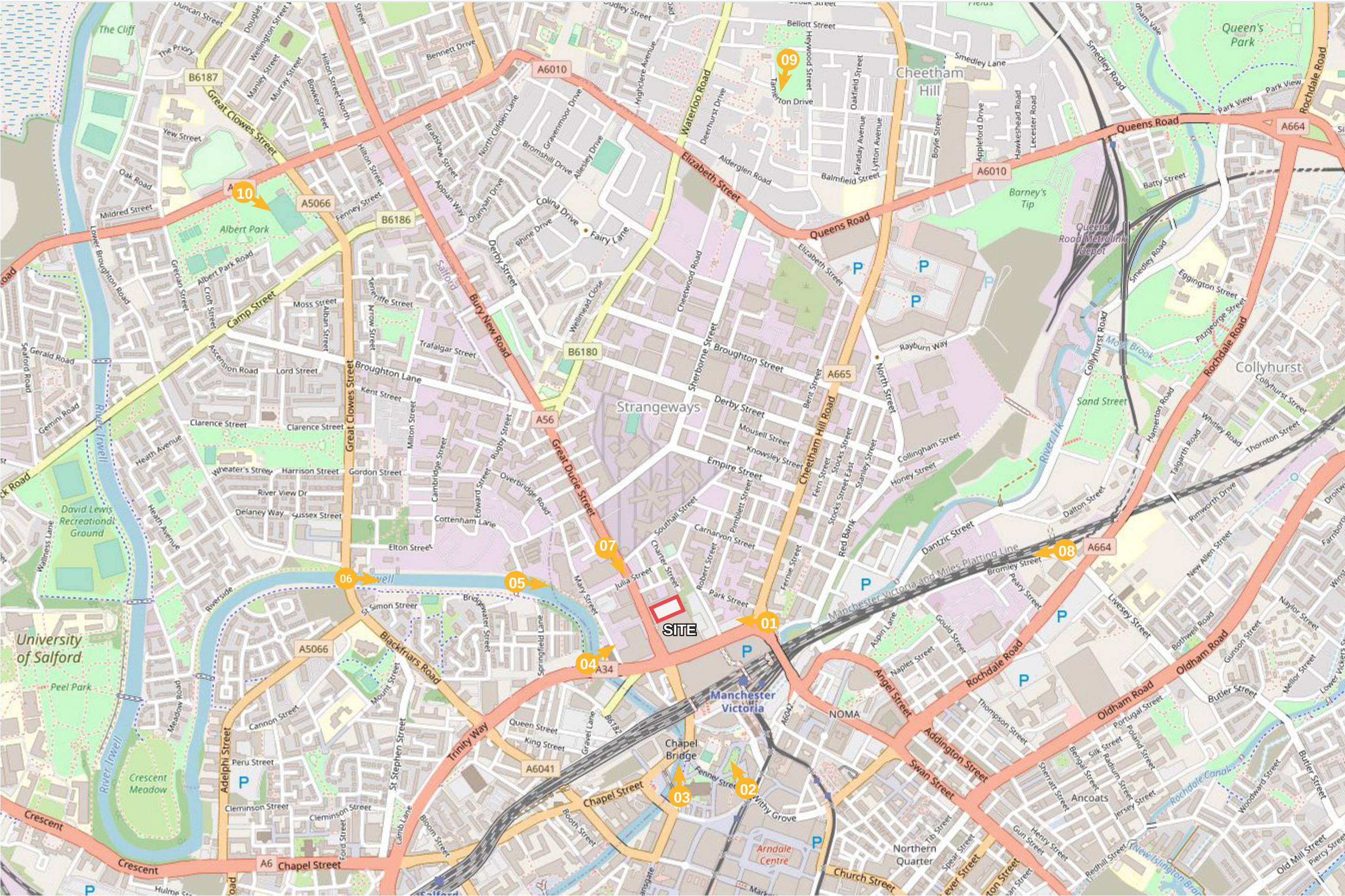
The list of views included in the study were selected by the project team and discussed with the local authority. The full list of views is shown in thumbnail form in the next section together with a map showing their locations.

Within the study “Architect” refers to Assael Architecture, “Visualiser” refers to Assael Visuals and “Surveyor” refers to Chris Partington Land Surveyors. An AVR Statement and Methodology can be found in the appendix at the end of this document.

Introduction

2.0 Views

Appendices



View location map



VP 01 - Junction of Trinity Way with Cheetham Hill Road



VP 02 - Junction of Fennel Street with Corporation



VP 03 - Junction of Victoria Street with Cathedral Yard



VP 04 - Wellington Bridge, Trinity Way



VP 05 - River Irwell Footbridge



VP 06 - Broughton Road Bridge



VP 07 - Junction of Langston Street with Ducie Street



VP 08 - Bromley Street, near junction with Rochdale Road



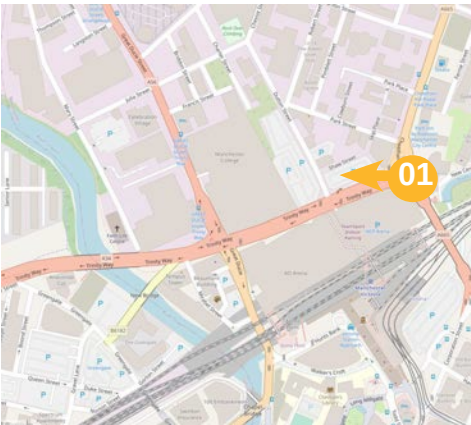
VP 09 - Bignor Street Park



VP 10 - Albert Park

VP 01 - Junction of Trinity Way with Cheetham Hill Road

Level of detail	
Landscape Institute	Type 4
LVMF	AVR Level 1
Camera location	
Northing:	399220.143 m
Easting:	384078.711 m
Height of nail:	41.259 m
Camera height :	1.6m above nail
Bearing:	270 W
Distance to site:	253 m
Photography details	
Camera:	Canon 5DSR
Lens:	Canon TS-E 24mm
Horizontal FOV:	74 degrees
Projection:	Single frame planar
Date and time	
Date of photograph:	06/10/2021
Time of photograph:	13:27

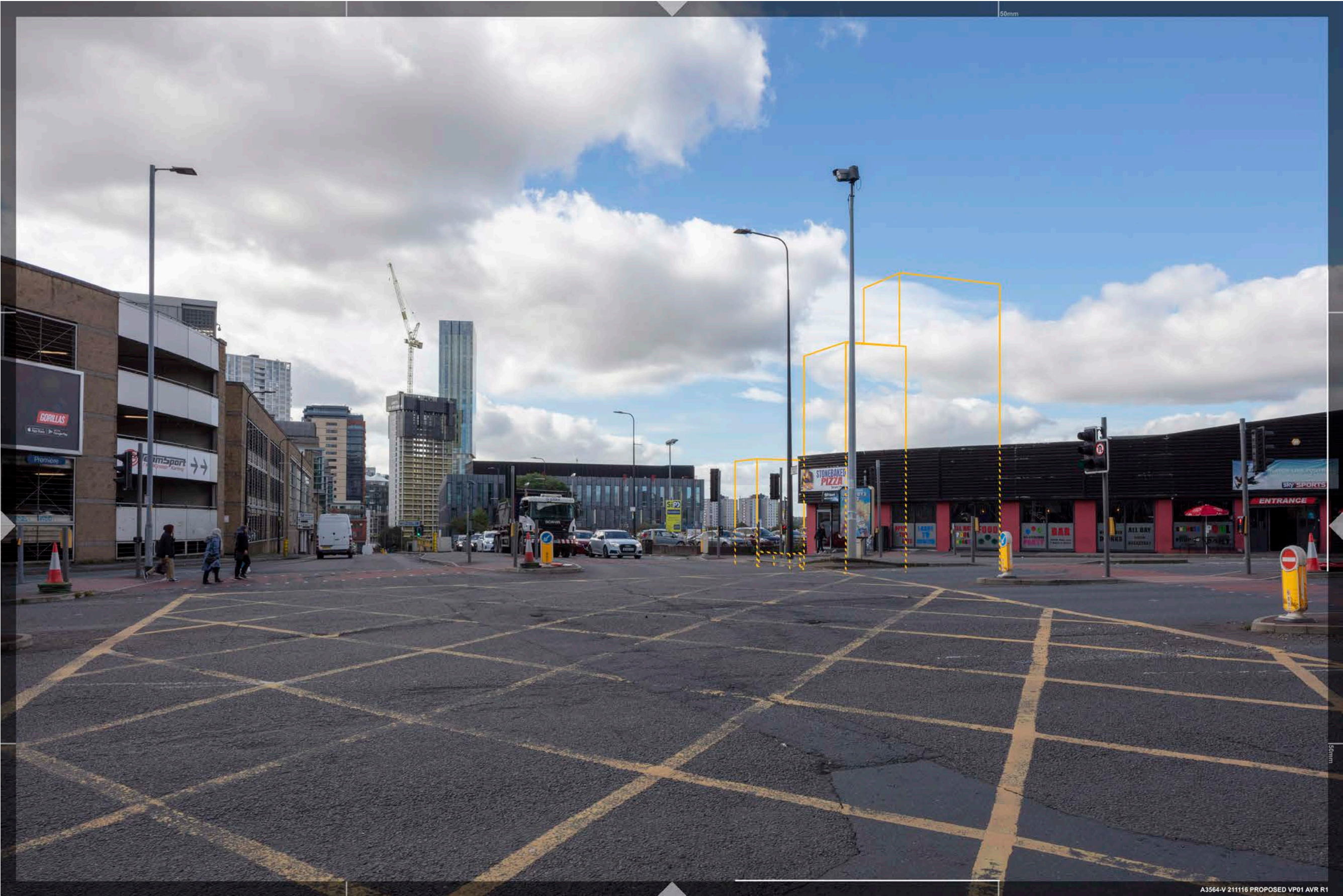


Existing

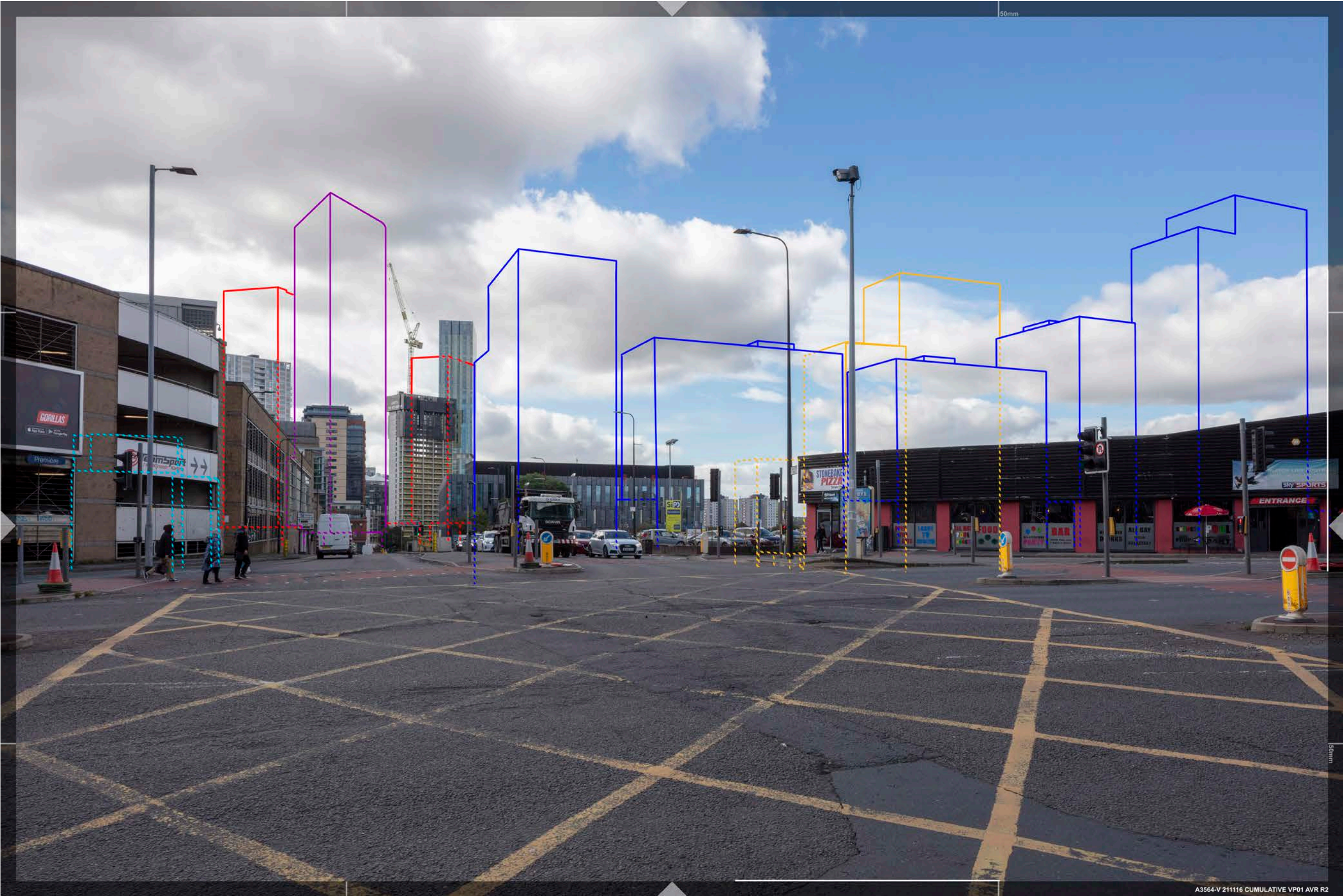


A3564-V 211006 EXISTING VP01 AVR R1

Proposed

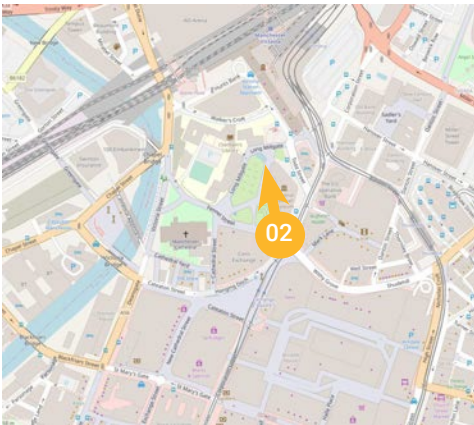


Cumulative schemes

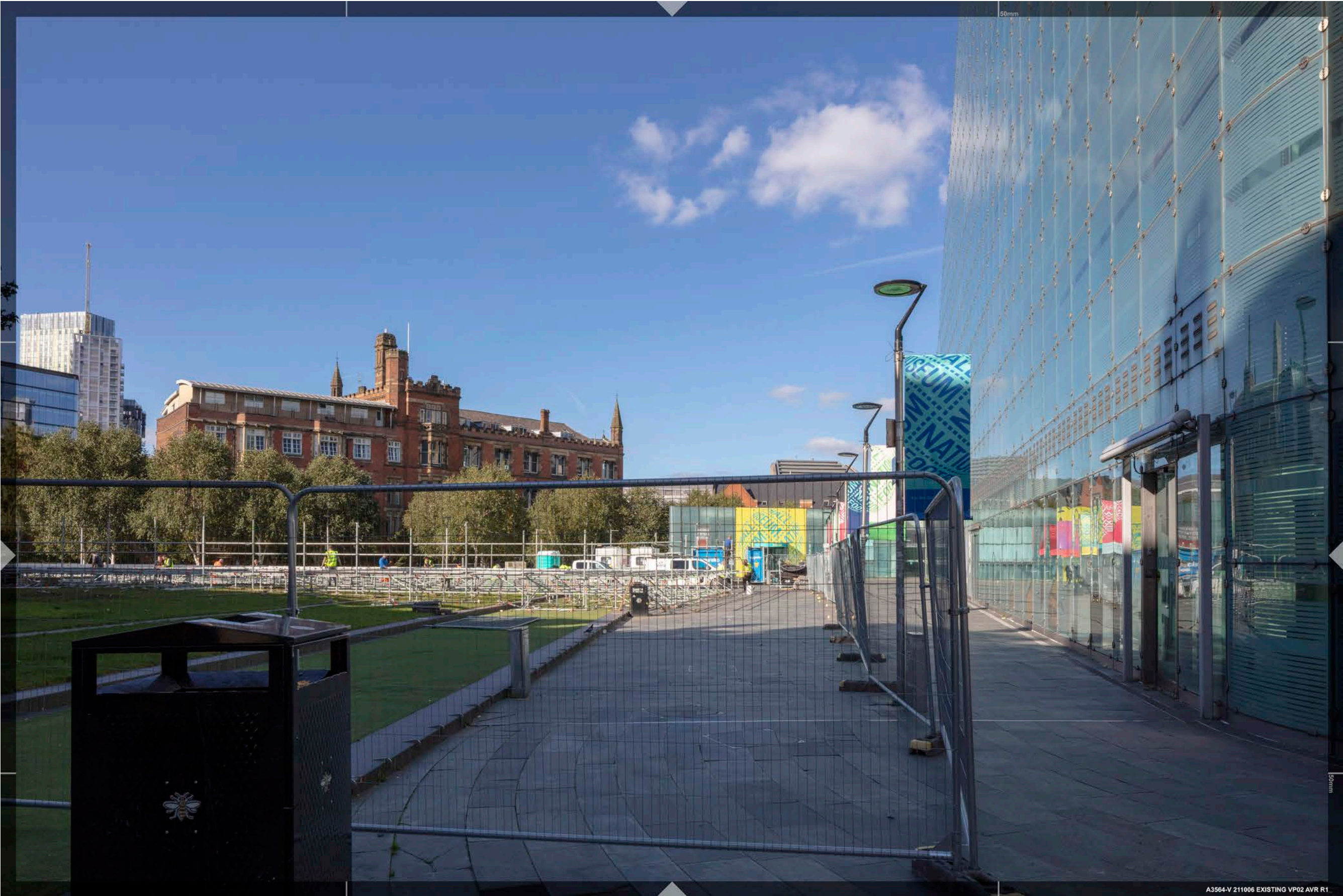


VP 02 - Junction of Fennel Street with Corporation

Level of detail	
Landscape Institute	Type 4
LVMF	AVR Level 3
Camera location	
Northing:	398753.282 m
Easting:	384022.906 m
Height of nail:	35.83 m
Camera height :	1.6m above nail
Bearing:	344 N
Distance to site:	535 m
Photography details	
Camera:	Canon 5DSR
Lens:	Canon TS-E 24mm
Horizontal FOV:	74 degrees
Projection:	Single frame planar
Date and time	
Date of photograph:	06/10/2021
Time of photograph:	14:35

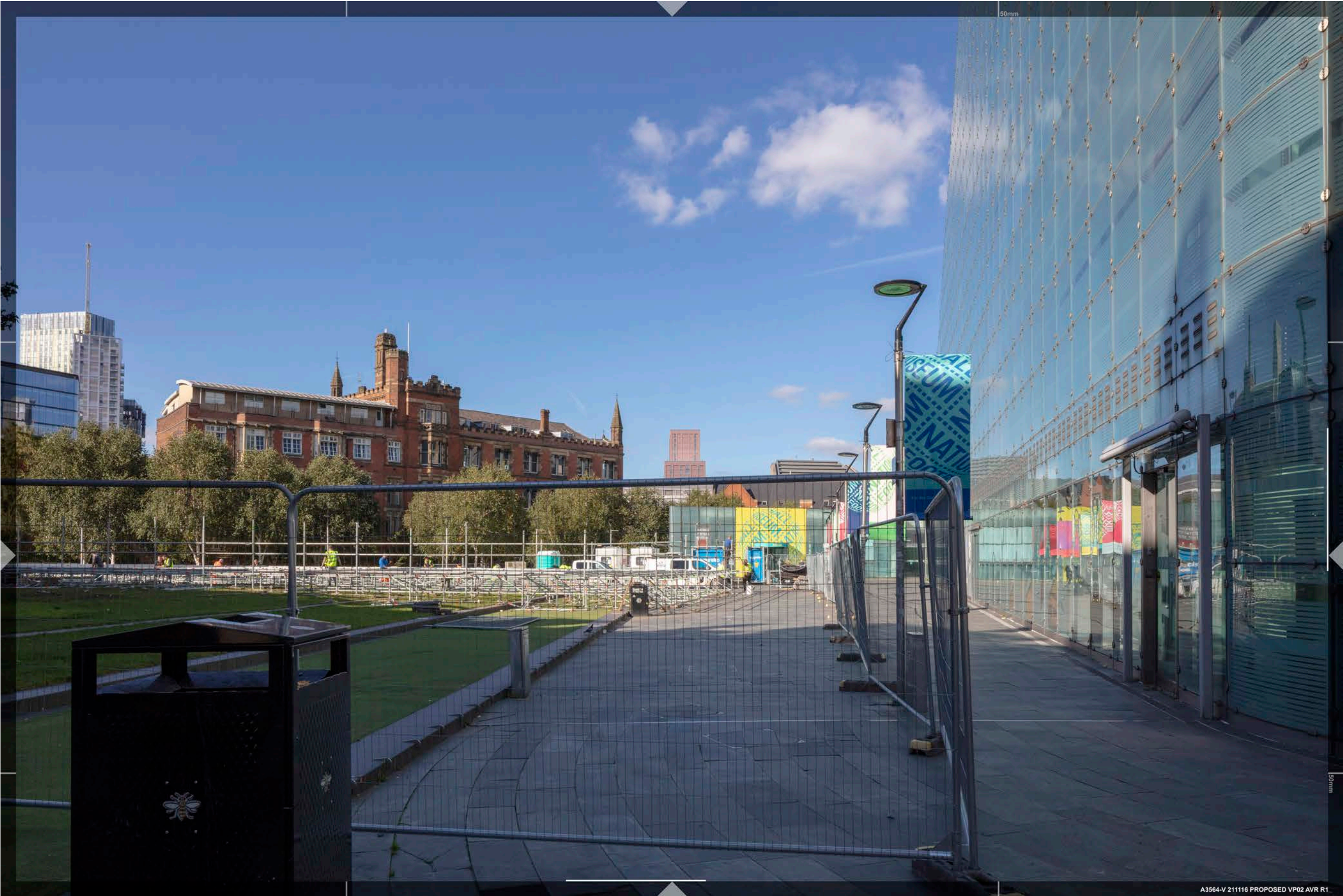


Existing



A3564-V 211006 EXISTING VP02 AVR R1

Proposed



A3964-V 211116 PROPOSED VP02 AVR R1

Cumulative schemes

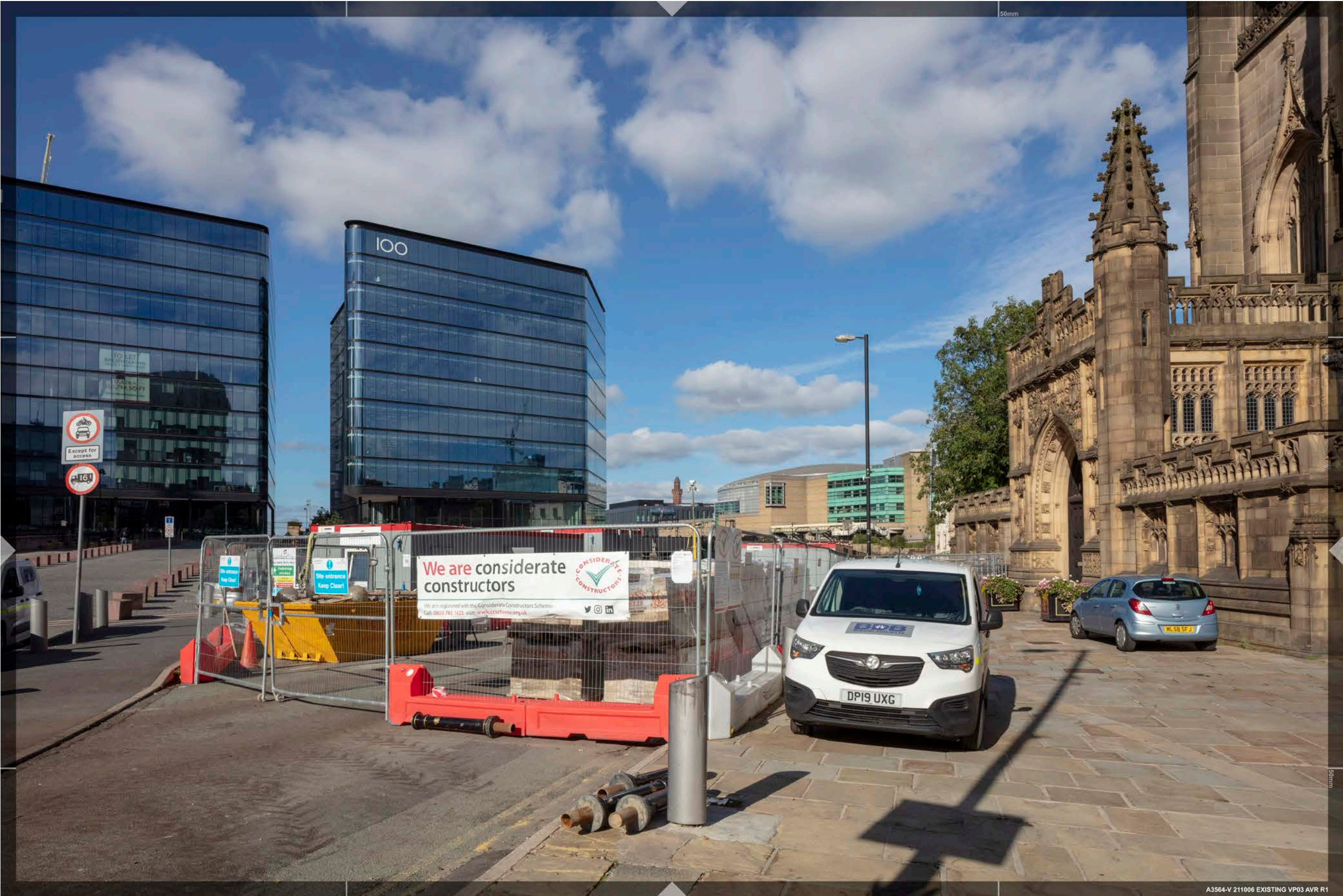


VP 03 - Junction of Victoria Street with Cathedral Yard

Level of detail	
Landscape Institute	Type 4
LVMF	AVR Level 3
Camera location	
Northing:	398721.012 m
Easting:	383831.882 m
Height of nail:	32.988 m
Camera height :	1.6m above nail
Bearing:	355 N
Distance to site:	515 m
Photography details	
Camera:	Canon 5DSR
Lens:	Canon TS-E 24mm
Horizontal FOV:	74 degrees
Projection:	Single frame planar
Date and time	
Date of photograph:	06/10/2021
Time of photograph:	14:27

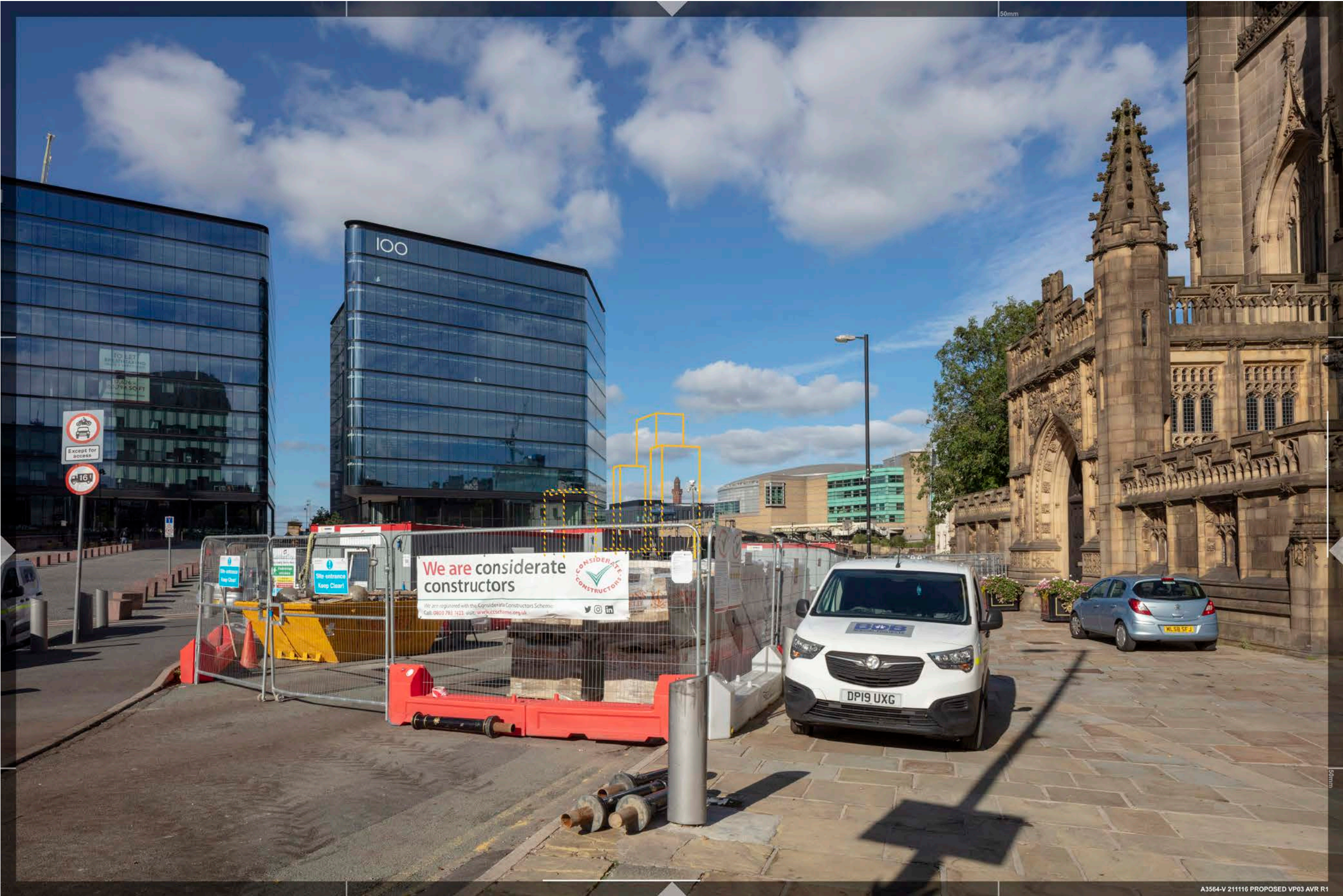


Existing



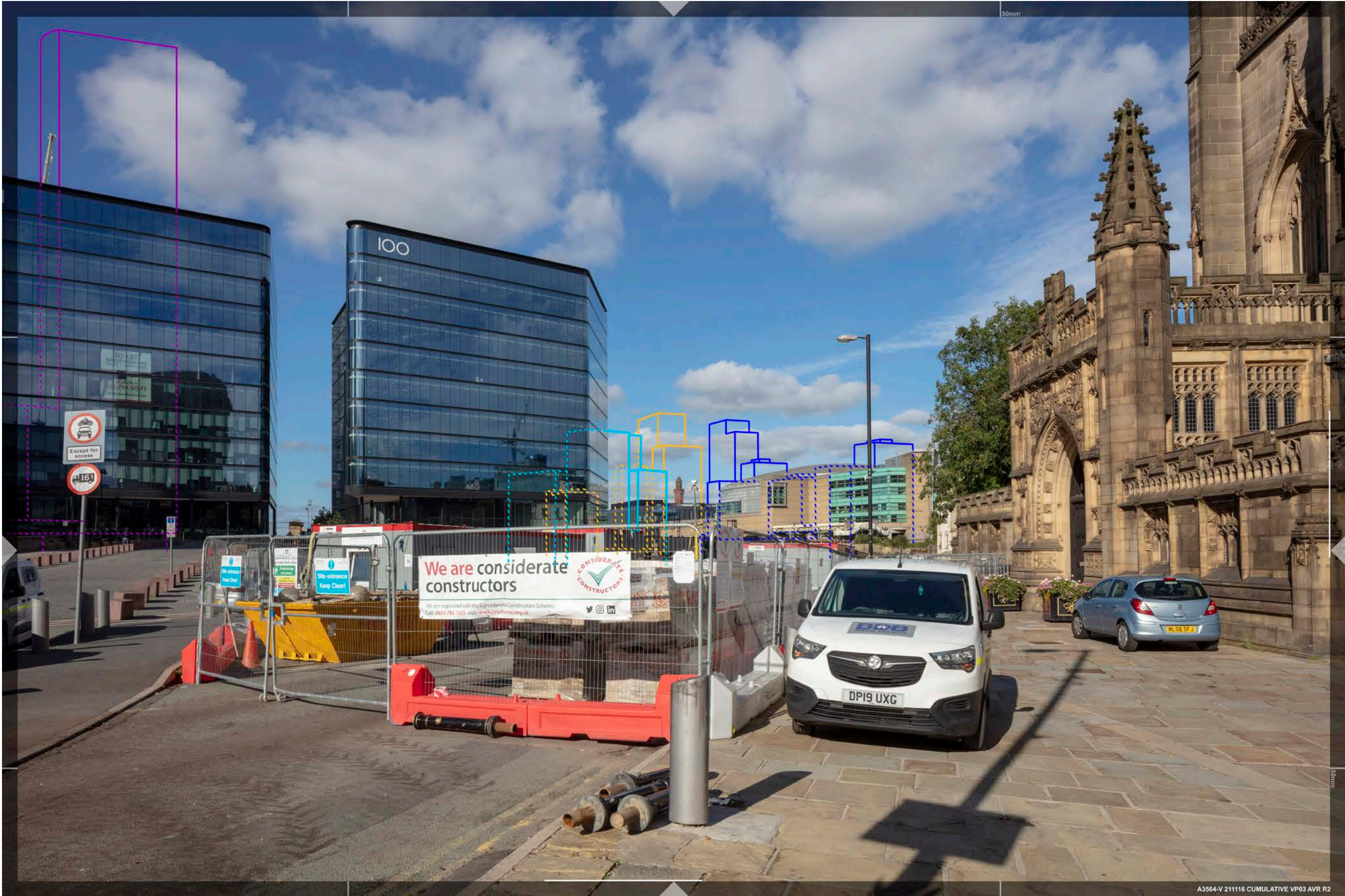
A3564-V 211006 EXISTING VP03 AVR R1

Proposed



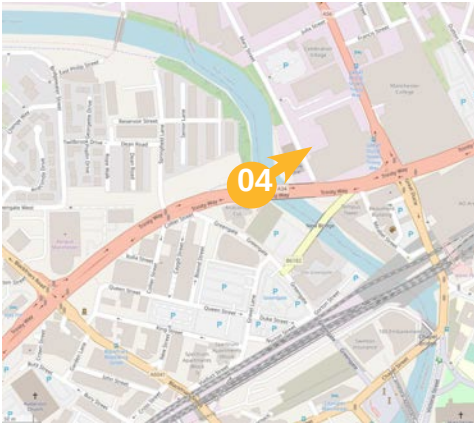
A3564-V 211116 PROPOSED VP03 AVR R1

Cumulative schemes



VP 04 - Wellington Bridge, Trinity Way

Level of detail	
Landscape Institute	Type 4
LVMF	AVR Level 3
Camera location	
Northing:	399092.924 m
Easting:	383545.802 m
Height of nail:	31.368 m
Camera height :	1.6m above nail
Bearing:	71 E
Distance to site:	247 m
Photography details	
Camera:	Canon 5DSR
Lens:	Canon TS-E 24mm
Horizontal FOV:	74 degrees
Projection:	Single frame planar
Date and time	
Date of photograph:	06/10/2021
Time of photograph:	13:49



Existing



A3564-V 211006 EXISTING VP04 AVR R1

Proposed



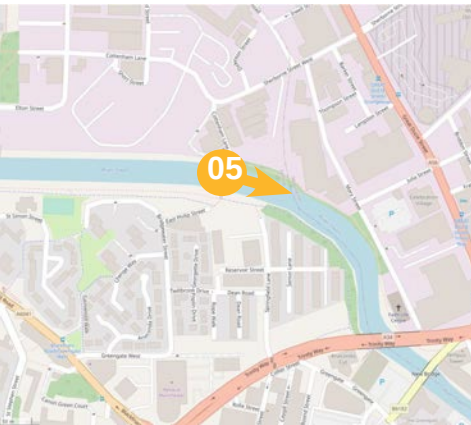
A3564-V 211116 PROPOSED VP04 AVR R1

Cumulative schemes



VP 05 - River Irwell Footbridge

Level of detail	
Landscape Institute	Type 4
LVMF	AVR Level 1
Camera location	
Northing:	399329.491 m
Easting:	383370.698 m
Height of nail:	29.782 m
Camera height :	1.6m above nail
Bearing:	90 E
Distance to site:	336 m
Photography details	
Camera:	Canon 5DSR
Lens:	Canon TS-E 24mm
Horizontal FOV:	74 degrees
Projection:	Single frame planar
Date and time	
Date of photograph:	06/10/2021
Time of photograph:	13:58

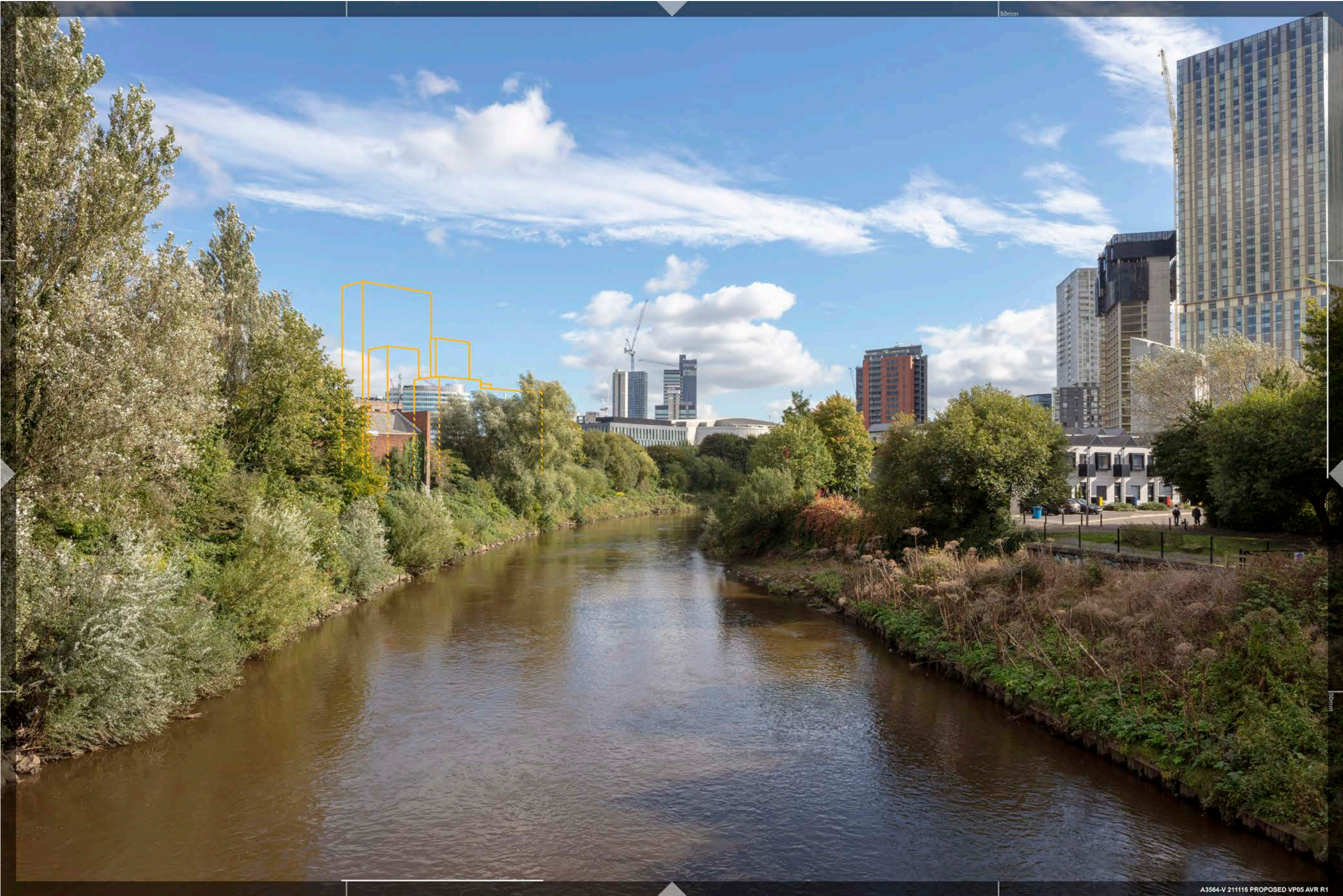


Existing

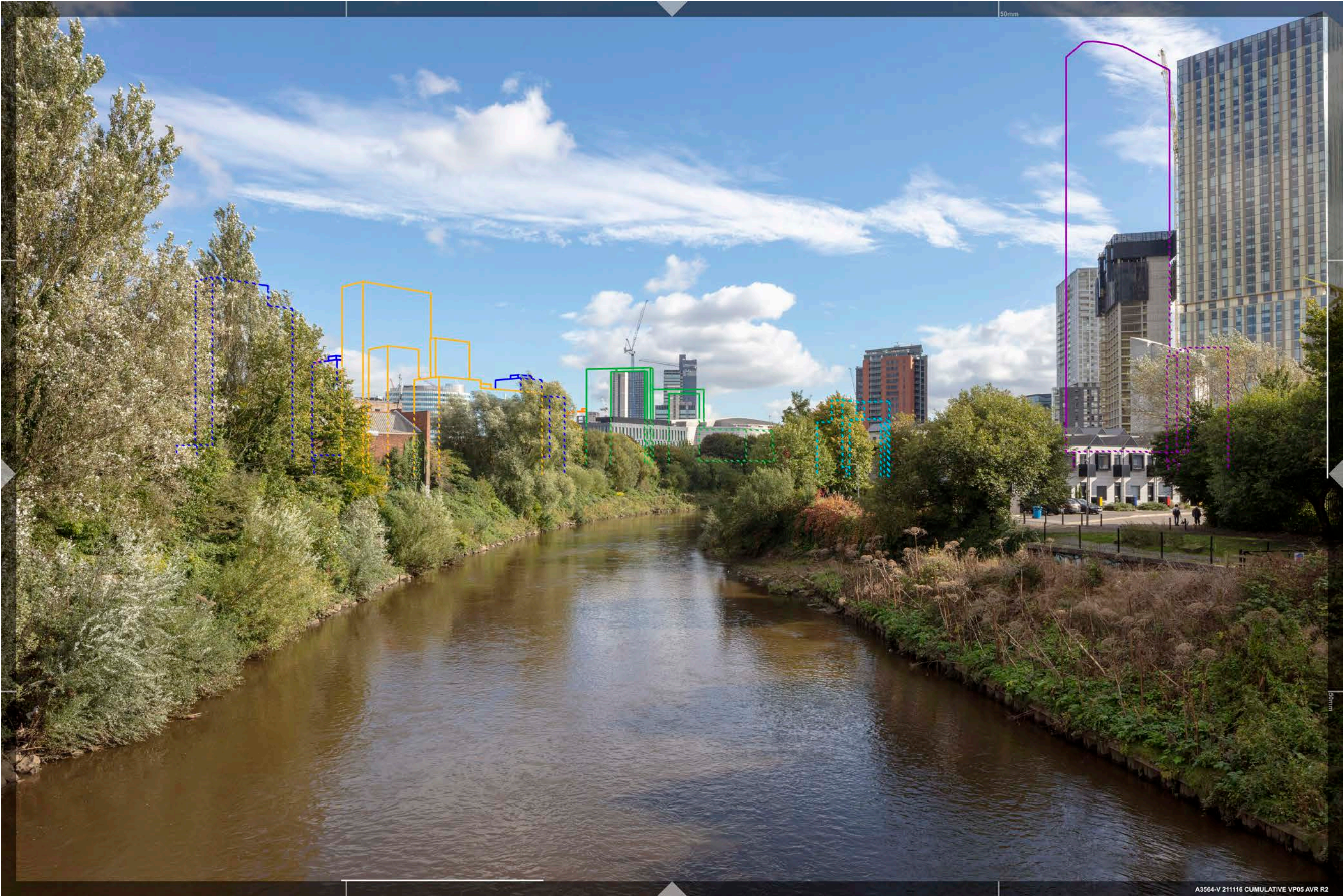


A3564-V 211006 EXISTING VP05 AVR R1

Proposed



Cumulative schemes



VP 06 - Broughton Road Bridge

Level of detail	
Landscape Institute	Type 4
LVMF	AVR Level 1
Camera location	
Northing:	399349.419 m
Easting:	382889.658 m
Height of nail:	28.841 m
Camera height :	1.6m above nail
Bearing:	66 NE
Distance to site:	847 m
Photography details	
Camera:	Canon 5DSR
Lens:	Canon TS-E 24mm
Horizontal FOV:	74 degrees
Projection:	Single frame planar
Date and time	
Date of photograph:	06/10/2021
Time of photograph:	14:06



Existing



A3564-V 211006 EXISTING VP06 AVR R1

Proposed

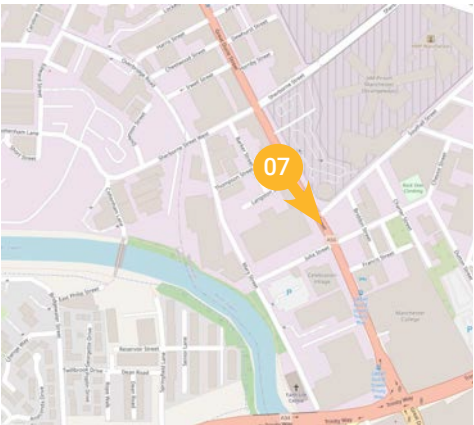


Cumulative schemes



VP 07 - Junction of Langston Street with Ducie Street

Level of detail	
Landscape Institute	Type 4
LVMF	AVR Level 3
Camera location	
Northing:	399445.61 m
Easting:	383617.735 m
Height of nail:	28.178 m
Camera height :	1.6m above nail
Bearing:	134 SE
Distance to site:	212 m
Photography details	
Camera:	Canon 5DSR
Lens:	Canon TS-E 24mm
Horizontal FOV:	74 degrees
Projection:	Single frame planar
Date and time	
Date of photograph:	06/10/2021
Time of photograph:	13:38



Existing



A3564-V 211006 EXISTING VP07 AVR R1

Proposed



Cumulative schemes

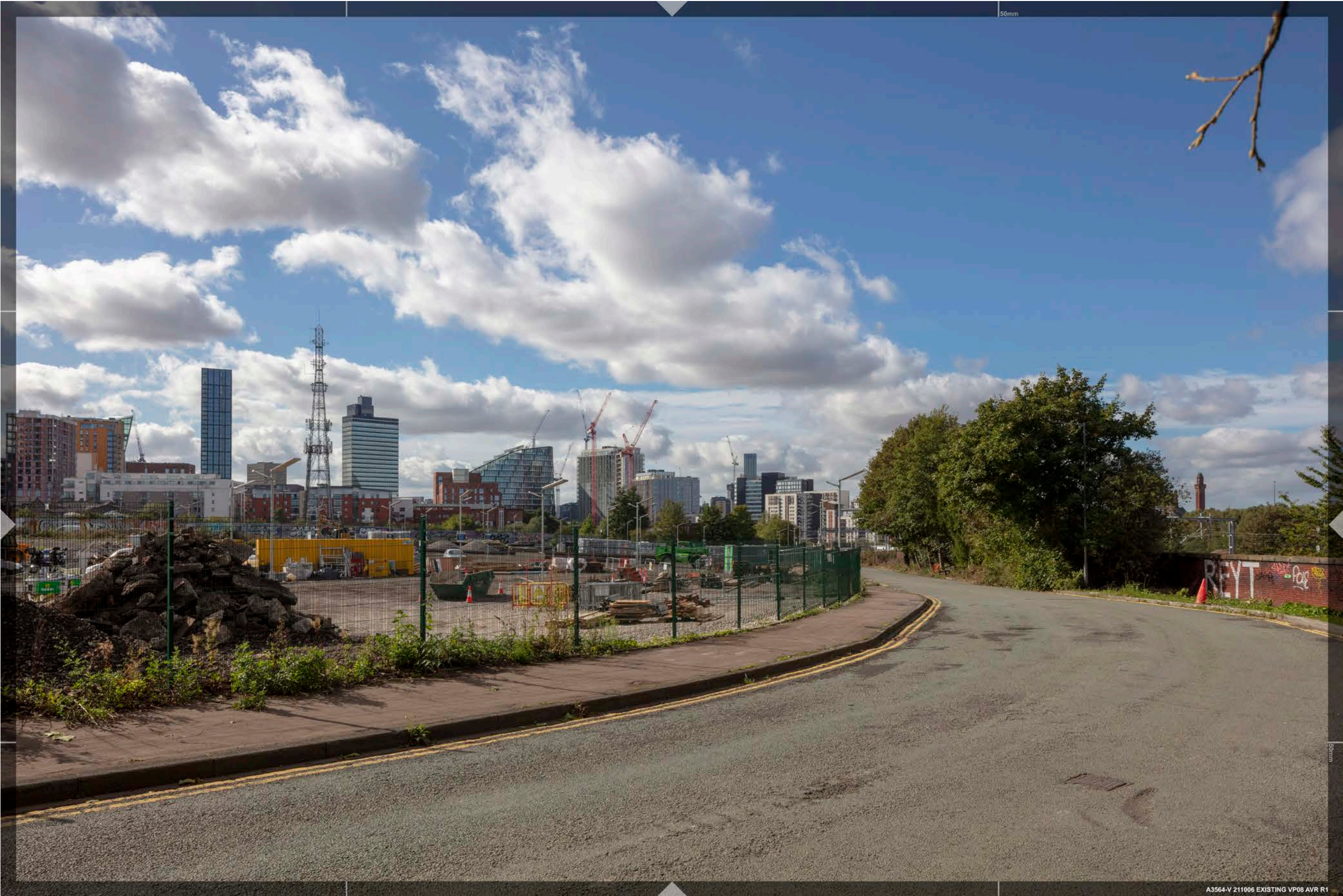


VP 08 - Bromley Street, near junction with Rochdale Road

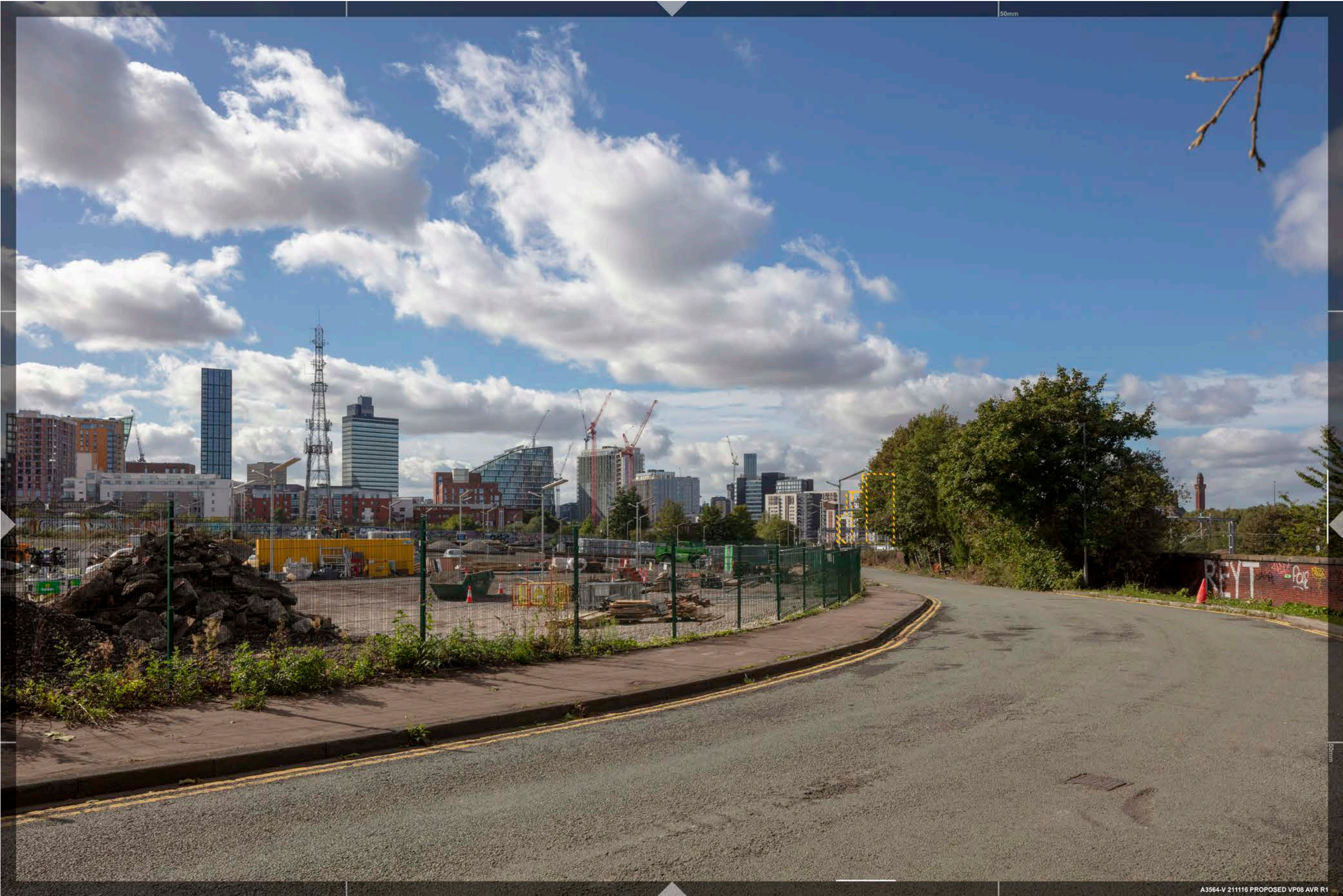
Level of detail	
Landscape Institute	Type 4
LVMF	AVR Level 1
Camera location	
Northing:	399404.836 m
Easting:	384920.187 m
Height of nail:	51.98 m
Camera height :	1.6m above nail
Bearing:	254 W
Distance to site:	1104 m
Photography details	
Camera:	Canon 5DSR
Lens:	Canon TS-E 24mm
Horizontal FOV:	74 degrees
Projection:	Single frame planar
Date and time	
Date of photograph:	06/10/2021
Time of photograph:	13:05



Existing



Proposed

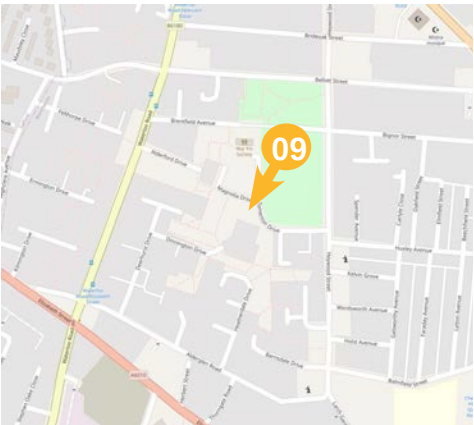


Cumulative schemes



VP 09 - Bignor Street Park

Level of detail	
Landscape Institute	Type 4
LVMF	AVR Level 1
Camera location	
Northing:	400808.369 m
Easting:	384147.384 m
Height of nail:	63.572 m
Camera height :	1.6m above nail
Bearing:	202 SW
Distance to site:	1552 m
Photography details	
Camera:	Canon 5DSR
Lens:	Canon TS-E 24mm
Horizontal FOV:	74 degrees
Projection:	Single frame planar
Date and time	
Date of photograph:	06/10/2021
Time of photograph:	12:48



Existing



Proposed



Cumulative schemes



VP 10 - Albert Park

Level of detail	
Landscape Institute	Type 4
LVMF	AVR Level 1
Camera location	
Northing:	400459.0438
Easting:	382601.9218
Height of nail:	32.947
Camera height :	1.6m above nail
Bearing:	133 SE
Distance to site:	1656 m
Photography details	
Camera:	Canon 5DSR
Lens:	Canon TS-E 24mm
Horizontal FOV:	74 degrees
Projection:	Single frame planar
Date and time	
Date of photograph:	06/10/2021
Time of photograph:	12:26



Existing



A3564-V 211006 EXISTING VP10 AVR R1

Proposed



A3564-V 211116 PROPOSED VP10 AVR R1

Cumulative schemes



Introduction

Views

3.0 Appendices

3.1 Accurate Visual Representations

3.1.1 The views within this study have been created as Accurate Visual Representations (AVRs) using a consistent methodology and approach to rendering. Appendix D of the London View Management Framework: Revised Supplementary Planning Guidance (March 2012), and defines an AVR as:

“An AVR is a static or moving image which shows the location of a proposed development as accurately as possible; it may also illustrate the degree to which the development will be visible, its detailed form or the proposed use of materials. An AVR must be prepared following a well-defined and verifiable procedure and can therefore be relied upon by assessors to represent fairly the selected visual properties of a proposed development. AVRs are produced by accurately combining images of the proposed building (typically created from a three-dimensional computer model) with a representation of its context; this usually being a photograph, a video sequence, or an image created from a second computer model built from survey data. AVRs can be presented in a number of different ways, as either still or moving images, in a variety of digital or printed formats.”

3.1.2 The existing scene is captured using carefully taken large format photography. The proposed development is represented as an accurate photomontage, a computer generated image placed within the baseline photograph.

3.1.3 In producing this AVR study the following has been determined:

- The field of view
- Proposed development representation
- AVR documentation

3.2 The field of view

- 3.2.1
- The Field of View is captured using a choice of telephoto, standard or wide-angle lens based on the requirements for assessment, which may vary from view to view.
- 3.2.2
- For the most part a lens selection that provides a comfortable Viewing Distance is required. Photographers refer to this as a “standard” or “normal” lens. In practice this means the use of a lens with a 35mm equivalent focal length of between about 40mm and 58mm.
- 3.2.3
- There are three situations where constraining the study to a standard lens would not provide the assessor with the relevant information to properly assess the proposed development in its surroundings.
- 3.2.4
- Firstly, where the relationship being assessed is distant, the observer would tend naturally to focus closely on it. At this point the observer might be studying as little as 5 to 10 degrees in plan. The printing technology and image resolution of a print limit the amount of detail that can be resolved on paper when compared to the real world, hence in this situation it is appropriate to make use of a telephoto lens.
- 3.2.5
- Secondly, where the wider context of the view must be considered and in making the assessment a viewer would naturally make use of peripheral vision in order to understand the whole setting. A print has a fixed extent, which constrains the angle of view available to the viewer, and hence it is logical to use a wide-angle lens in these situations in order to include additional context in the print.
- 3.2.6
- Thirdly where the viewing point is studied at rest and the eye is free to roam over a very wide field of view and the whole setting of the view can be examined by turning the head. In these situations it is appropriate to provide a panorama comprising of a number of photographs placed side by side.
- 3.2.7
- For some views, two of these scenarios might be appropriate, and hence the study may include two versions of the same view with different fields of view.

3.3 Proposed development representation - AVR Classification

- 3.3.1
- AVRs are classified according to their purpose using Levels 0 to 4. These are defined in detail in Appendix C of the London View Management Framework: Supplementary Planning Guidance (March 2012)).
 - AVR Level 0 - Location and size of proposal
 - AVR Level 1 - Location, size and degree of visibility of proposal
 - AVR Level 2 - As level 1 + description of architectural form
 - AVR Level 3 - As level 2 + use of materials
- 3.3.2
- In practice the majority of photography based AVRs are either AVR 3 (commonly referred to as “fully rendered” or “photoreal”) or AVR 1 (commonly referred to as “wireline”).
- 3.3.3
- The purpose of a wireline view is to accurately indicate the location and degree of visibility of the proposed development in the context of the existing condition and potentially in the context of other proposed schemes.
- 3.3.4
- Level 1 AVRs use a single line profile to indicate the profile of a scheme. Key edges lines are sometimes added to help understand the massing. The width of the profile line is selected to ensure that the diagram is clear, and is always drawn inside the true profile. Different coloured lines may be used in order to distinguish between proposed and consented status, or between different schemes. Where more than one scheme is represented in outline form the outlines will obscure each other as if the schemes were opaque. Trees or other foliage will not obscure the outline of schemes behind them. This is because the transparency of trees varies with the seasons, and the practical difficulties of representing a solid line behind a filigree of branches. Elements of a temporary nature (e.g. cars, tower cranes, people) will similarly not obscure the outlines.
- 3.3.5
- Level 3 AVRs are produced to represent the likely appearance of the proposed development under the lighting conditions found in the photograph. A detailed 3D model is created to show the geometry, materiality and the size and shape of shadows cast by the sun.
- 3.3.6
- Where the proposed development is shown at night-time, the lightness of the scheme and the treatment of the materials are best judged by the visualiser given the intended lighting strategy and the ambient lighting conditions in the background photograph. The exact lighting levels are not based on photometric calculations and therefore the resulting AVRs are assessed by the Architect and Lighting Designer as being a reasonable interpretation of the concept lighting strategy.

3.4 AVR documentation

- 3.4.1
- An overall plan showing the location and view number for each view is included at the beginning of this study. The site boundary for the proposal is highlighted.
- 3.4.2
- For each of the views within this study the existing baseline photography is followed by the proposed development AVR and cumulative condition.
- 3.4.3
- The existing view is accompanied by a plan view showing the location and direction of the baseline photograph.
- 3.4.4
- Text indicates the Northings and Eastings and height above Newlyn Datum for the camera position. Date and time of day for the image is also shown.
- 3.4.5
- The rationale behind why some AVRs are fully rendered and some are wireline is based on the distance from the site; the identified sensitivity of the view; and whether the inter-visibility between the site and the viewpoint is prevented by built form or vegetation.
- 3.4.6
- For AVR 1 wirelines, where permanent structures, trees and foliage and or other temporary obstacles obscure the proposed development, a dashed line indicates its position. Where the proposed development is visible, the scheme is shown with a solid line. Key lines may be added to assist the viewer with form.
- 3.4.7
- Crop marks in the border around each photograph allow the view to be precisely cropped to a 50mm lens. The photography is captured at a sufficient resolution such that an image cropped to a 50mm lens will print to a reasonable level of detail and without distortion at A3 for on-site assessment. With large developments at close proximity, it is not always possible to capture the entire extent of the proposal within a single frame.
- 3.4.8
- Lens shift is indicated with arrows in the border. In some instances where the view has been shifted vertically to include architectural features and or relevant surrounding context, it may result in a portion of the 50mm crop being dropped from the bottom of the frame. In these instances, care is taken to ensure where possible that the proposal is kept within the cropped zone.
- 3.4.9
- An individual reference number is added to the bottom right hand corner of each AVR and its corresponding existing baseline image. The reference number is broken down as follows: project number, existing or date of model in view, virtual camera number and revision number (specific to the dated model).

3.5 Overview of methodology

- 3.5.1 This study was carried out by Assael Visuals by combining computer generated images of the proposed development with large format photographs at key strategic locations around the site as agreed with the project team.
- 3.5.2 The methodology employed by Assael Visuals is compliant with Appendix D of the London View Management Framework: Revised Supplementary Planning Guidance (March 2012), and follows guidance, where relevant to this urban context, from the Landscape Institute Technical Guidance Note 06/19 for Visual Representation of Development Proposals (17 September 2019).
- 3.5.3 The project team, in consultation with the Local Authority, defined a series of locations where the proposed building might have a significant visual effect. Once the project team had agreed the exact locations, a photograph was taken which formed the basis of the study. The surveyor established the precise location of the camera.
- 3.5.4 A number of features on existing structures visible from the camera location were surveyed. Using these points, Assael Visuals has determined the appropriate parameters to permit a view of the computer model to be generated which exactly overlays the appropriate photograph.
- 3.5.5 Each photograph has then been divided into foreground and background elements to determine which parts of the current context should be shown in front of the proposed development and which behind. When combined with the computer-generated image these give an accurate impression of the impact of the proposed development on the selected view in terms of scale, location and use of materials (AVR Level 3).

Spatial framework

- 3.5.6 Northings and Eastings based on OSGB36 (National Grid) reference framework have been assembled into a consistent spatial framework, expressed in a grid coordinate system with a local plan origin. The vertical datum of this framework is equivalent to Ordnance Survey (OS) Newlyn Datum.
- 3.5.7 In this study Vectorworks was used by the Architects to produce the model. An FBX was supplied and imported into 3ds Max. The imported FBX files are positioned accurately both in plan and in overall height in accordance with the spatial framework using information provided by the Architects.

Photographic process

- 3.5.8 From each selected Assessment Point, a series of large format photographs were taken with a camera height of 1.6m.
- 3.5.9 Consideration was given for the selection of lens taking townscape context and proximity to site into account for each of the viewpoint locations. In this study all viewpoints have been photographed using a 24mm lens in order to capture the proposal within its urban setting.
- 3.5.10 Camera settings were set to manual to ensure the photography was captured correctly and without any auto adjustments.
- 3.5.11 The centre point of the tripod was marked and a digital photograph showing the camera and tripod in situ was taken to allow the surveyor to return to its location.

- 3.5.12 Measurements and field notes were also taken to record the camera location, lens used, target point, date, time of day, and overhead conditions.

Photograph preparation

- 3.5.13 From the set of photographs taken from each assessment point, one single photograph was selected for use in the study. This choice was made on the combination of sharpness, exposure and appropriate lighting.
- 3.5.14 The selected photograph was then corrected to remove any barrel distortion from the lens using lens correction software.

Surveying points

- 3.5.15 For each selected Assessment Point a survey brief was prepared, consisting of the Assessment Point study sheet and a marked up photograph indicating alignment points to be surveyed. Care was taken to ensure that a good spread of alignment points was selected, including points close to the camera and close to the target.

Chris Partington Land Surveyors executed surveying

- 3.5.16 The existing camera viewpoint was located each time then another point was installed to create a baseline for the survey. Each point location was recorded using Leica GPS RTK method to ensure all data is in the same coordinate system – OSGB36-15. This method ensures accuracy of 10-20mm in position and level.
- 3.5.17 The survey of required details was then carried out utilising the established survey baseline to position the data. The required details were observed with the total station via reflectorless laser observations.
- 3.5.18 All survey data was then imported and analysed within dedicated survey processing software Leica Smartnet) to calculate a final coordinate solution for each control point.
- 3.5.19 The surveyor amalgamated the resulting survey points into a single data set. This data set was supplied as a spreadsheet with a set of coordinates transformed and re-projected into OSGB36 (National Grid) coordinates.

Photographic alignment

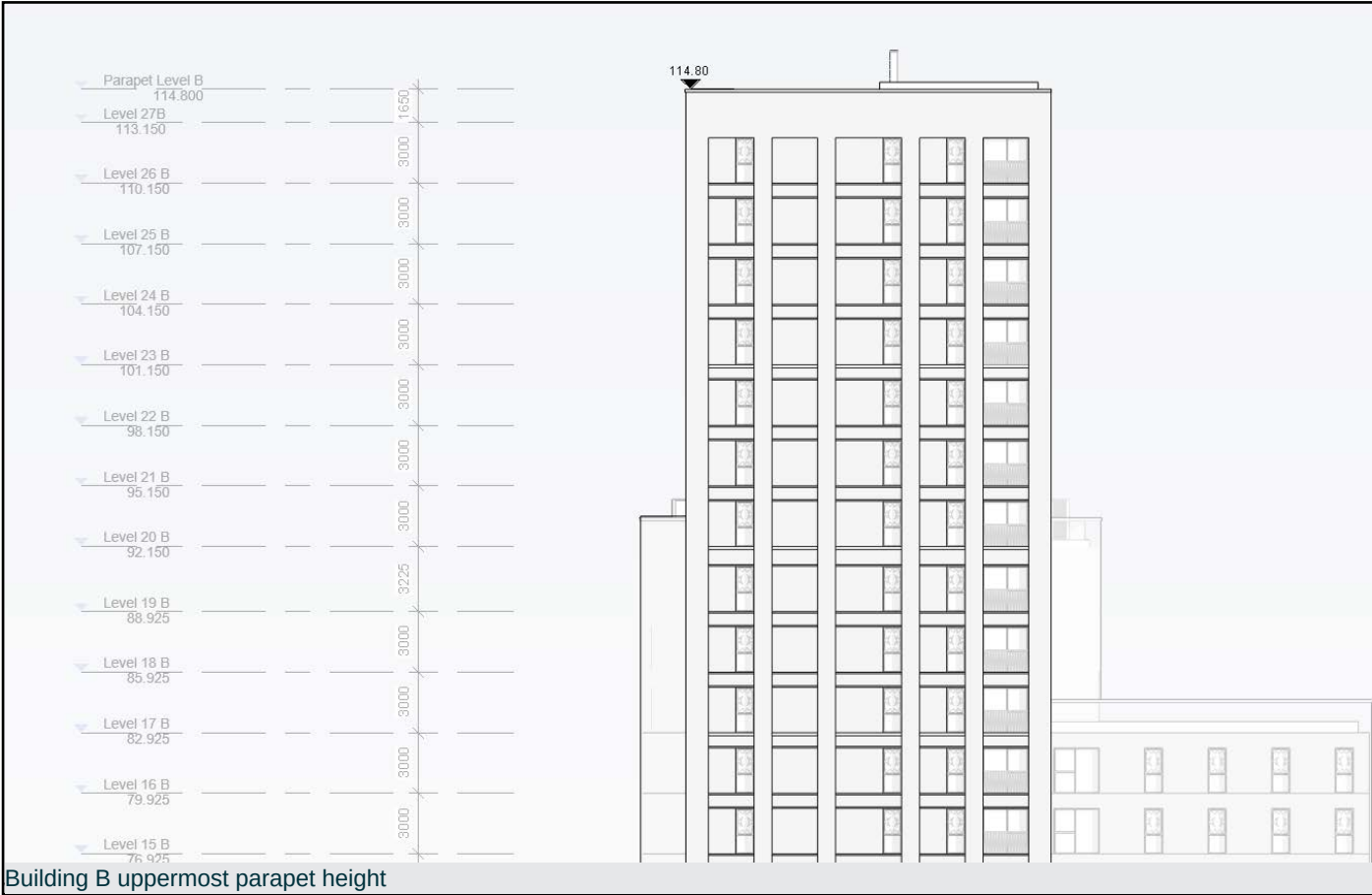
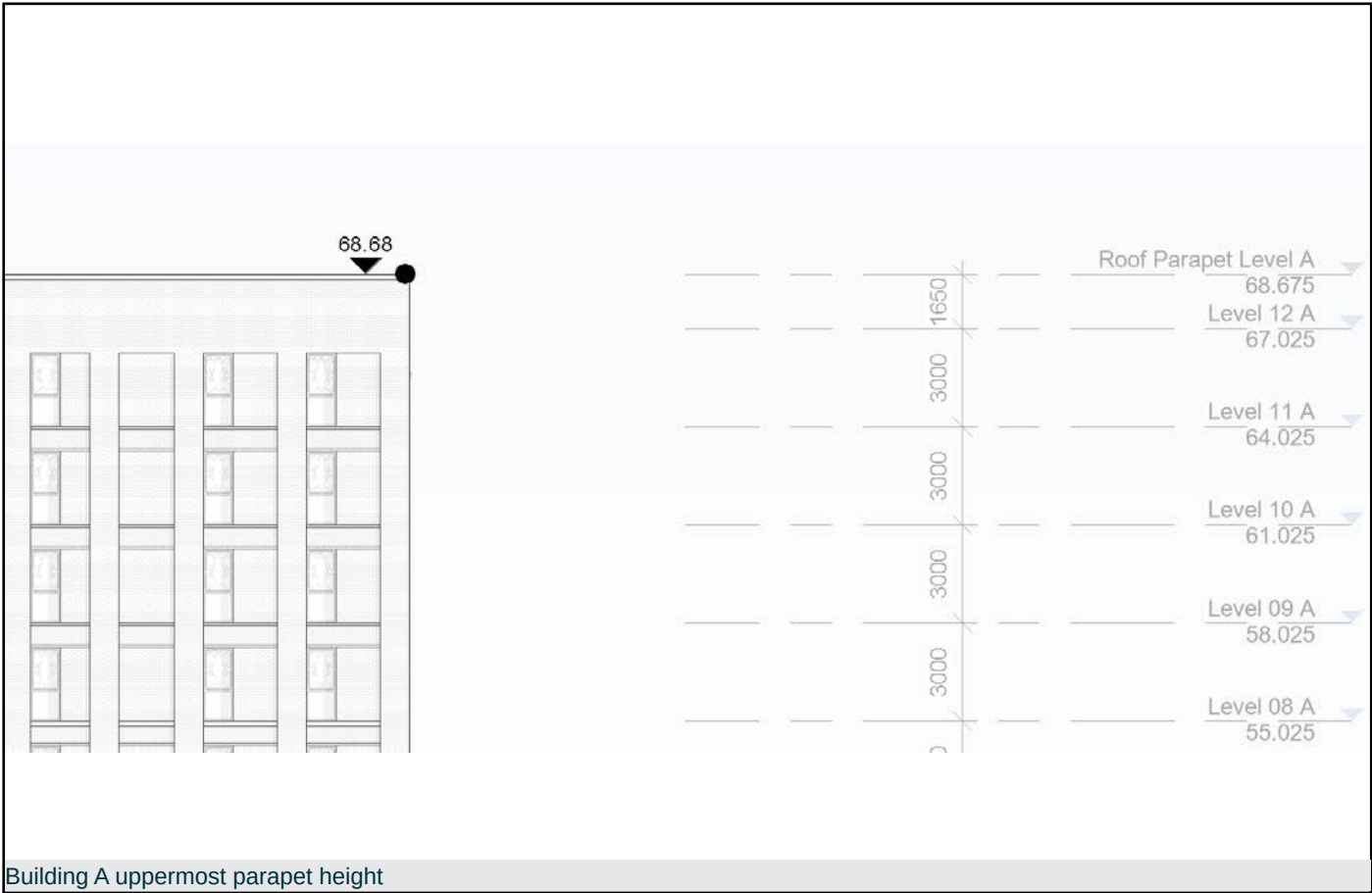
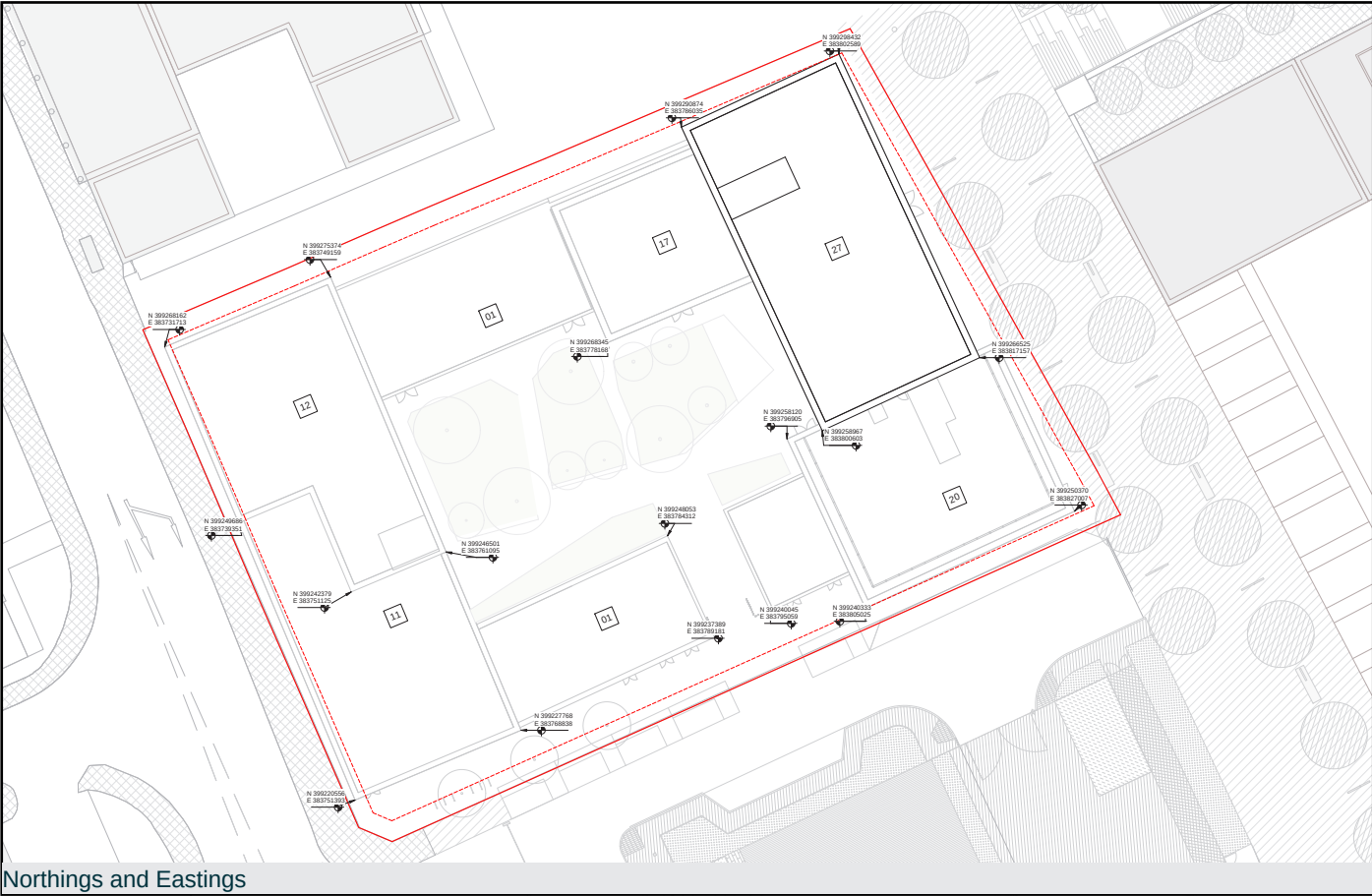
- 3.5.20 This data was then placed into the spatial framework within the visualisation software and crosshairs attached to each point as a visual aid for the visualiser.
- 3.5.21 A virtual camera was created within the visualisation system using the surveyed camera location, recorded target point and FOV based on the camera and lens combination selected for the shot.
- 3.5.22 The annotated photograph was attached as a background to this view, to assist the visualiser in aligning the surveyed point cloud to each corresponding background point.
- 3.5.23 Using this virtual camera, a rendering was created of the alignment model at a resolution to match the baseline photograph. This was overlaid onto the baseline photograph to assess the accuracy of the alignment. When using wide-angle lens observations outside the circle of distortion are given less weighting.

Final rendering

- 3.5.24 The 3D model supplied by the project team is to a level of detail for the AVR type required.
- 3.5.25 Its location within the spatial framework is cross-checked.
- 3.5.26 A context model is placed around the proposed development to generate shadows and assist with determining occlusion in postproduction.
- 3.5.27 Textures and lighting are applied to best represent the materials selected for planning and the lighting conditions shown in the baseline image.
- 3.5.28 Where the proposed development is shown at night-time, the lightness of the scheme and the treatment of the materials are best judged by the visualiser given the intended lighting strategy and the ambient lighting conditions in the background photograph.
- 3.5.29 The final render is produced to the same resolution as the baseline image. Multi pass renders are also taken to help the visualiser enhance the final render in postproduction. These passes may include Material ID, Reflection, Refraction, Depth and Ambient Occlusion passes.
- 3.5.30 3ds Max and the Corona render engine was used to produce the computer generated imagery.

Postproduction

- 3.5.31 The final render is loaded into a template file, which matches the specific camera and lens type used to take the baseline image. This template has an annotated border that shows crop marks for a 50mm lens and arrows to indicate any lens shift
- 3.5.32 Using site photos and 3D context, the amount of occlusion for each view is calculated. Areas of the proposed development not visible from each viewpoint are then masked out of sight. The scheme is then enhanced using the multi pass renders to bring the final image to a degree of “photo reality”, assessed by the project team as being a reasonable interpretation of the proposed development.
- 3.5.33 An individual reference number is added to the bottom right hand corner of each AVR and its corresponding existing baseline image. The reference number is broken down as follows: project number, existing or date of model in view, virtual camera number, and revision number (specific to the dated model).





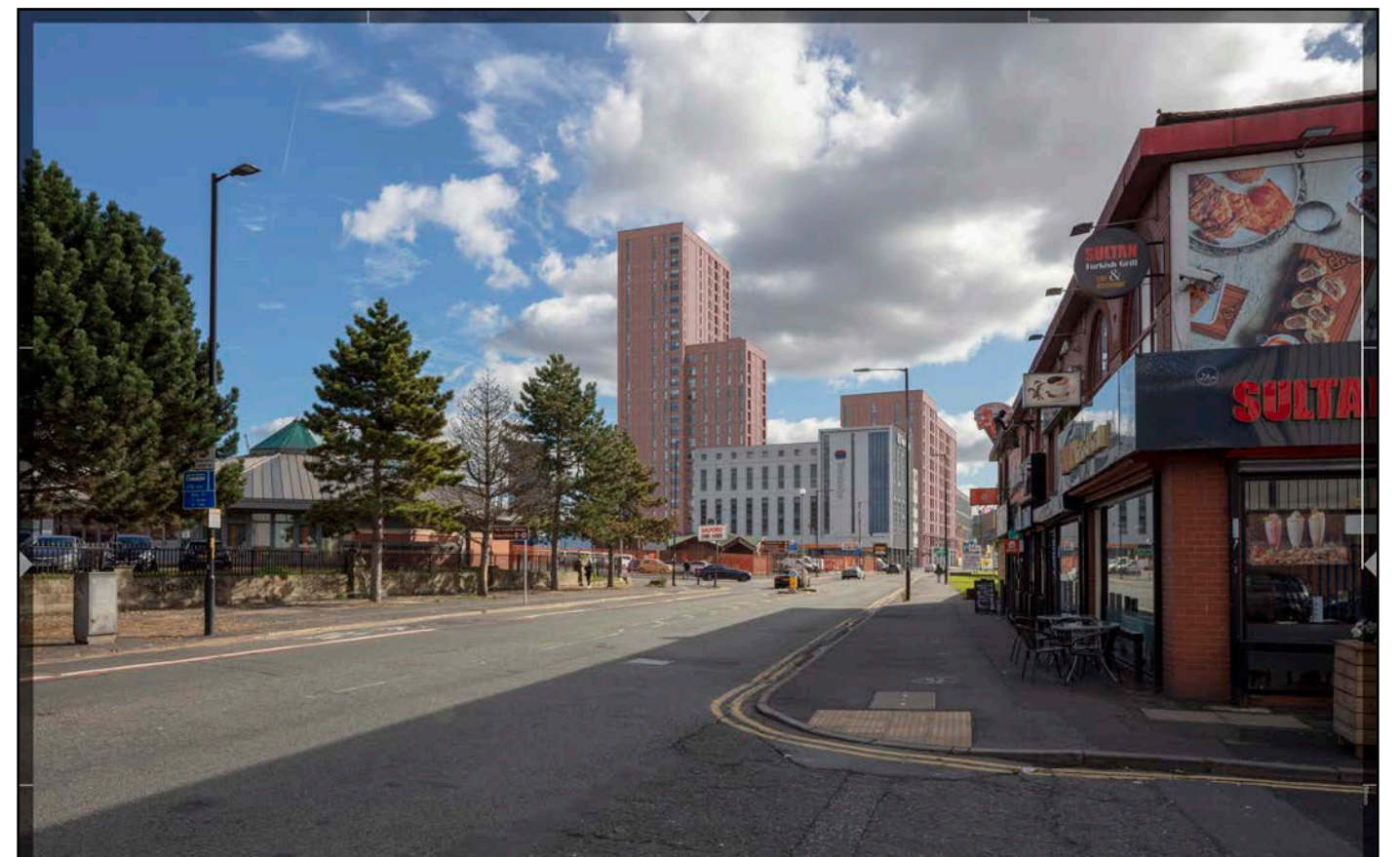
Virtual camera aligned using surveyed point cloud and background image



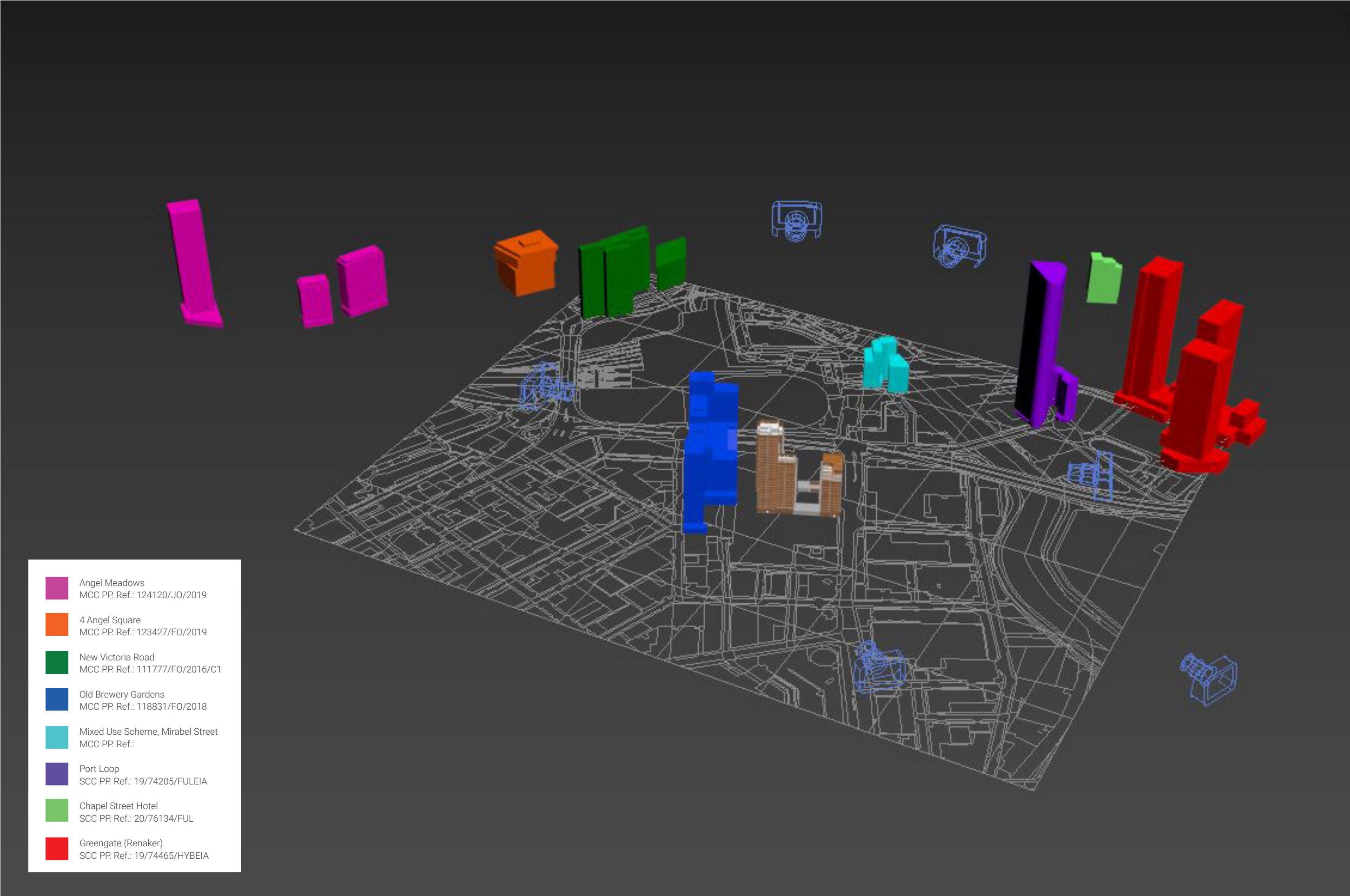
Areas for occlusion determined and masked out. Colour adjustments made



Textures and lighting applied to scene and rendered image produced



Annotated border added to finished AVR



- Angel Meadows
MCC PP. Ref.: 124120/JO/2019
- 4 Angel Square
MCC PP. Ref.: 123427/FO/2019
- New Victoria Road
MCC PP. Ref.: 111777/FO/2016/C1
- Old Brewery Gardens
MCC PP. Ref.: 118831/FO/2018
- Mixed Use Scheme, Mirabel Street
MCC PP. Ref.:
- Port Loop
SCC PP. Ref.: 19/74205/FULEIA
- Chapel Street Hotel
SCC PP. Ref.: 20/76134/FUL
- Greengate (Renaker)
SCC PP. Ref.: 19/74465/HYBEIA

Assael

Assael Visuals

123 Upper Richmond Road
London SW15 2TL

+44 (0)207 736 7744
info@assael.co.uk
www.assael.co.uk

Document control form

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Client	Clarion Housing Group
Document status	R1
Date of issue	03 December 2021
Prepared by	Rob Brown - Head of Visualisation

Checked by

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Status	Revision	Date issued	Prepared by	Checked by
P1	R1	03/12/2021	RB	