8. Townscape and Visual Impact

Appendix 8.1: Maps, Viewpoint and townscape photographs including AVR images



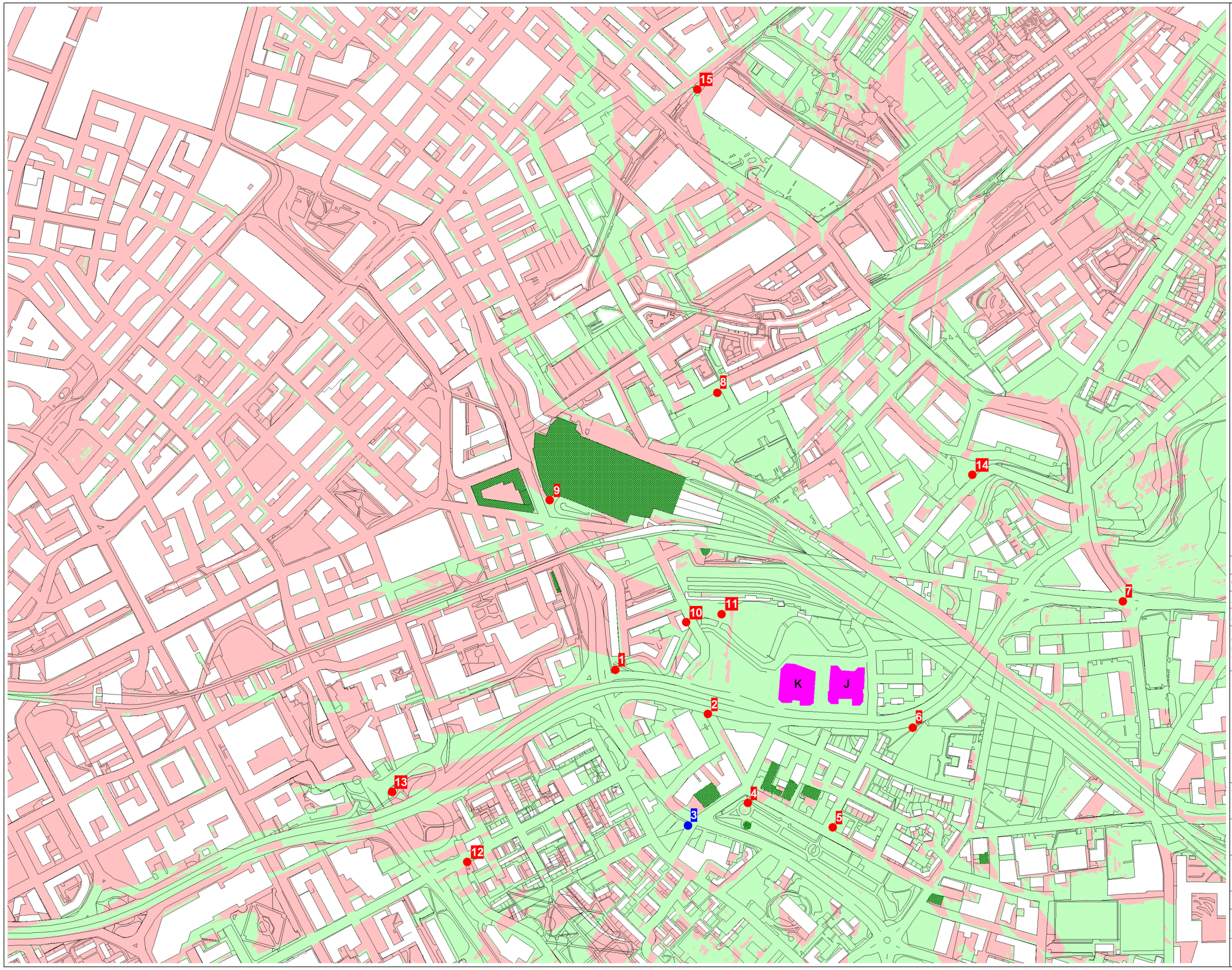
MAYFIELD

Townscape and Visual Impact Assessment:
MAPs, VIEWPOINT AND TOWNSCAPE PHOTOGRAPHS INCLUDING AVR IMAGES

APPENDIX 8.1

Chris Burnett Associates

16 12 24



Key

- footprints of proposed buildings
- Grade II Listed Building
- townscape viewpoint
- heritage viewpoint
- building(s) visible
- building(s) not visible
- OS Local Vector building footprints and/or DSM no data values

(NB Viewshed analysis is calculated from the top of the buildings to locations 1.6m above the DSM data taking into account a normal earth surface curvature correction.)

0.0 60.0 120.0
metres

Date	Details	Revision
03/05/24	Additional viewpoint locations.	-01
24/09/24	Additional viewpoint location.	-02
28/11/24	Removal of viewpoint location 16.	-03

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CHRIS BURNETT associates
Landscape Architects
White House Farm
Shocklach, Malpas
Chester SY14 7BN
Tel: 01829 250646
Fax: 01829 250527
Mob: 07809 029810
chris@chrisburnettassociates.co.uk
www.chrisburnettassociates.co.uk

Client **Landsec U&I**

Project **Mayfield Plot 1b, Manchester**

Title **Viewshed Analysis, Listed Buildings & Provisional Viewpoint Locations**

Scale **1:6,000 @ A3**

Date	Drawn	Checked
28/11/24	JHD	CB

Reference **MP1bVIA24.03** Revision **-03**

N

Retail Core
Northern Quarter
Ancoats
New Islington
Central Business District
Civic Quarter
Chinatown
KAMPUS
Piccadilly
Medlock Valley
The Village
Petersfield
Mayfield
North Campus
First Street
Corridor
Ardwick and Longsight
K
J
1
2
3
4
5
6
7
8
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15

Key

- footprints of proposed buildings
- Residential Neighbourhood Area
- Townscape Character Area
- townscape viewpoint location
- heritage viewpoint location

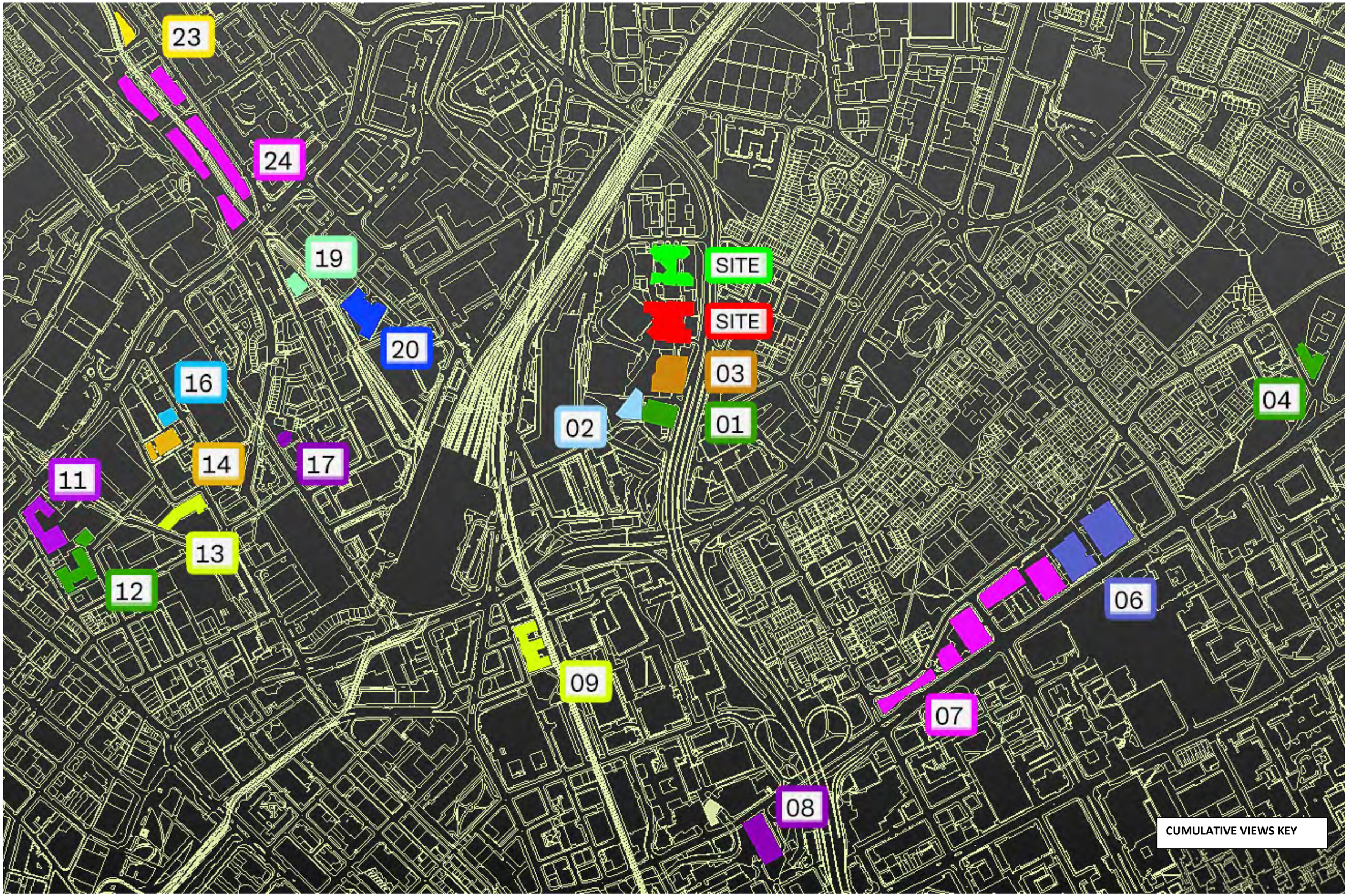
Date	Details	Revision
28/11/24	Removal of viewpoint location 16.	-01

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Client	Landsec U&I
Project	Mayfield Plot 1b, Manchester
Title	Viewpoint Locations and Character Areas
Scale	1:6,000 @ A3

Date	Drawn	Checked
28/11/24	JHD	CB

Reference: MP1bVIA24.03 Revision: -01


23
24
19
20
16
14
17
11
13
12
02
SITE
SITE
03
01
04
06
09
07
08
CUMULATIVE VIEWS KEY


BARING STREET
KX65 ONJ


BARING STREET
KX65 ONJ


BARING STREET
KX65 ONJ














Office/Studio


Office/Studio


Office/Studio


Plantforce
Visitor On Security
Protect These Premises
0800 111 44 79


Plantforce
Vision On Security
Protect These Premises
0800 111 44 79
smas


Plantforce
Vision On Security
Protect These Premises
0800 111 44 79
smas











Mancunian Way

NIGHTIME cumulative

6


Celebrating the true heroes of Britain
global
currys


Celebrating the true heroes of Britain
TSB
global
currys


Celebrating the true heroes of Britain.
TSB
global
currys
currys
Zones
Central
Universities












SEXUALS...!
SW14 0LV


EXUALS...!
MAYFIELD PARK
SM4 DLV


EXUALS...!
MAYFIELD PARK
SW14 0LV








JUSTIN
CLOSE


JUSTIN
CLOSE


JUSTIN
CLOSE








Danger
Drop
below


Danger
Drop
below


Danger
Drop
below


ALDI
M&S


Residence
ALDI
GO
M&S
outlet


Residence Inn
ALDI
GO
M&S
OUTLET

Appendix 8.2: Visualisation methodology

APPENDIX TVIA S1 TOWNSCAPE AND VISUAL IMPACT ASSESSMENT: VISUAL REPRESENTATION OF DEVELOPMENT PROPOSALS

Introduction

Recent guidance published by the Landscape Guidance in October 2019, LI Technical Guidance Note 06/19 Visual Representation of Development Proposals, recommends that not only TVIA Representative Viewpoints are agreed with the competent authority, Manchester City Council, (MCC) in this case, but also the methodology used in the Visual Representation of Development Proposals itself is agreed.

This advice note seeks to explain why, and seek agreement for, the need for specialist lens equipment in the preparation of Verified Views for tall buildings.

AVR TYPE

TYPE 4 PHOTOMONTAGE / PHOTOWIRE (SURVEY/ SCALE VERIFIABLE)

This is the most sophisticated form of visualization and judged to be the most appropriate level in these circumstances where the planning application is supported by a full EIA and the subject is a tall building.

As LI Technical Guidance note 06 / 19 states:

'*Type 4 photomontages and / or photowires require the use of equipment and processes which provide quantifiable verification data, such that they may be checked for accuracy (as per industry-standard 'AVRs' or 'Verified Views'). Precise survey of features and viewpoint / camera locations may be included where warranted. Type 4 visualisations represent the highest level of accuracy and verifiability for use in the most demanding of situations'*

and

'Type 4 visualisations are photomontages or photowires, produced using quantifiable data, with procedural transparency and appropriate levels of accuracy. This involves using a defined camera / lens combination and establishing the camera location with sufficient locational accuracy to enable accurate scaling and location of the 3D model within the view. In addition, the print presentation size can be determined to provide binocular image scaling when appropriate.'

The guidance states that a 50mm lens should be used '**unless there are exceptional circumstances**' we believe that the assessment of a tall building in a townscape setting is an exceptional circumstance where a wide angle tilt shift lens is justified. This is because:

- The height of the building will inevitably mean that the top of the building is often cut off if a standard 50mm lens is used as the ridgeline is often more than 18˚from the horizontal
- Often close up views are necessary to assess the effect of the Proposed Development on the immediate streetscape, often in areas of tight urban grain

- Skylines and clusters of tall buildings are an important part of a TVIA where the insertion of a new tall building into an existing cluster or, as a new feature on the skyline or horizon, is an essential part of understanding its contextual fit.

For these reasons we are proposing to use a Canon EOS 5D Mark IV with sensor size 36 x 24mm lens

This is not without precedent as most TVIAs produced as part of EIAs for Tall Buildings in Manchester to date have used this equipment effectively to demonstrate accurately and verifiably the visual and townscape effects of a tall building on the townscape and views. As Technical Guidance note 06 / 19 notes:

'If the site / setting cannot be captured with the 50mm lens (e.g. close, tall buildings), consider alternative lenses. If a 50mm FL lens cannot capture the view in landscape or portrait orientation (for example, if the highest point of the development is approaching 18° above horizontal) the use of wider-angled prime lenses should be considered, working through the following sequence of fixed lenses in this order: 35mm FL > 28mm FL > 24mm FL > 24mm FL Tilt-Shift'

PRESENTATION AND VIEWING DISTANCE

An equally important feature of the new guidance is how the images are presented and how they are viewed. Again, the guidance offers some useful advice which we propose to follow in this instance.

Research by the LI Working Group in the preparation of this guidance, carried out across several cities, suggests that, in mid- to smaller-scale landscapes / townscapes, an enlargement around halfway between 100% and 150% results in a binocular relationship between the presented image and reality…… notwithstanding the above, SNH considers that consistent use of 150% enlargement is beneficial

So, in these circumstances we propose to present each image, consisting of baseline, proposed and cumulative for each viewpoint is presented as an A3 PDF which then be viewed digitally or printed, if necessary, at A2 to obtain a 141% enlargement to achieve the recommended enlargement ratio. Each image when printed should be viewed, again as stated in the guidance, at a comfortable arm's length.

Chris Burnett Associates May 2024
Landscape Architects

Appendix 8.3 AVR Methodology

OUR STUDIO
ACCURATE VISUAL REPRESENTATION (AVR) METHODOLOGY
2024

INTRODUCTION

This document outlines Our Studio's process for verified imagery. It describes the process from commission through to completion of wireline, massing and fully rendered views.

In drafting this methodology, guidance has been taken from relevant sections of the Landscape Institute Technical Guidance Note 06/19 - Visual Representation of Development Proposals. Where appropriate we have also taken guidance from the London Plan 2011 Implementation Framework (March 2012) London View Management Framework Supplementary planning Guidance: Appendix C: Accurate Visual Representations.

Prior to commencement, the series of views are chosen by the project team. This would usually be completed with the assistance of a townscape planning specialist - Our Studio would recommend that this is undertaken, especially if the views are intended to form part of an Environment Impact Assessment Report.

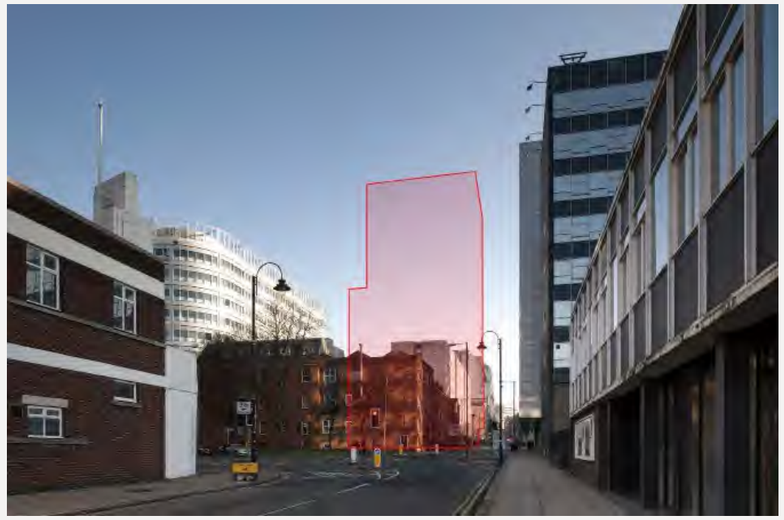
The disciplines employed are of the highest possible levels of accuracy and photo-realism which are achievable with today's standards of architectural photography and computer-generated models.

The process is divided into a number of stages, once the viewpoints have been chosen. These are summarised as follows:

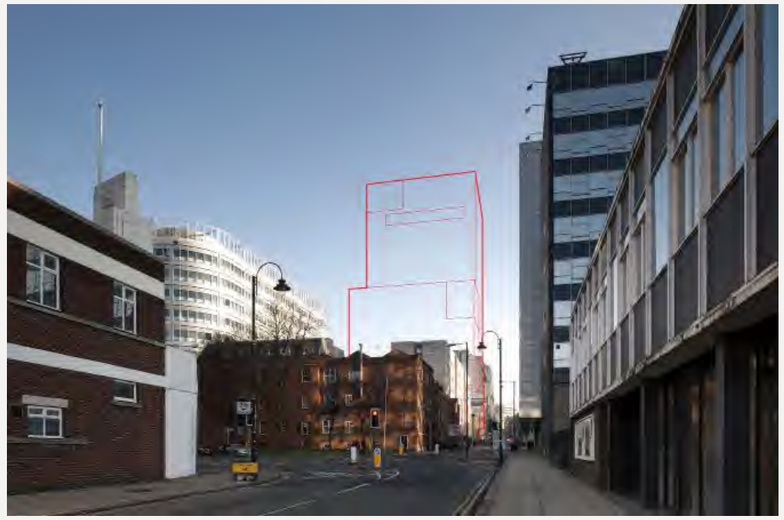
Stage 1 - Commissioning of photography
Stage 2 - Commissioning of Survey
Stage 3 - 3D Modelling of scheme
Stage 4 - Integration of photography and survey data to form the alignment
Stage 5 - Adding scheme and rendering
Stage 6 - Completion of final image



AVR LEVELS RELATING TO TYPE 4 VISUALISATION



LEVEL 0 - Location and size of proposal



LEVEL 1 - Location, size and degree of visibility of proposal



LEVEL 2 - As level 1 + description of architectural form



LEVEL 3 - As level 2 + use of materials

STAGE 1
PHOTOGRAPHY

After consultation with the Local Authorities, the chosen views are typically scoped out in the form of draft photographs and marked on an Ordanance Survey (OS) map. Our Studio will then brief the professional photographer on each viewpoint.

At each of the chosen viewpoints, a photograph of the actual view is taken recording its position on the ground (by photography as well as inserting a survey pin into the ground). This assists the survey team with identifying the camera position and measuring co-ordinates.

The Photography is taken using a full frame digital camera placed vertically above the chosen point at a standard height of 1.6m. This is typically achieved using a plumbline vertically beneath the centre of the lens.

Our photographer uses a lens with a known field-of-view (FOV) and sets the camera on a levelled tripod. High quality lenses are used to ensure minimum distortion. Within each study or series of images, the photographer will aim to use a consistent lens. This is typically a 24mm perspective control lens for a local view which equates to 73.7 degrees angle of view. However, for mid-distant views a 50mm lens may typically be used.

The Photographer notes the time and date of each shot (which is always captured in the EXIF metadata) - this enables any lighting conditions to be replicated later on in the process.

Our photographers use a range of full frame architectural cameras with the following high-resolution, digital lenses:
24mm, 28mm, 35mm, 50mm

Using perspective control shift may be required in Townscape views.
The digital chip dimensions are 36mm x 24mm.



Camera location map



Camera position



Final photo

STAGE 2
SURVEY

For each agreed photo viewpoint location an instructional document is released to the survey subcontractor. The surveyor is instructed (by means of a marked up photograph) to record a range of reference points that would enable a very high degree of accuracy.

These points should be centred on the location of the candidate scheme, and be varied throughout the depth of the view - ie near, mid-distant and far points. The points can then be measured by the survey team and will be recorded in terms of their Easting, Northing and height in relation to Ordanance Survey (OS datum)

The survey team also replicate the position of the camera in order to survey points on the horizon of the photograph. These can be used later in the process to remove any rotational errors in the photo.

Survey Equipment Required
• Global Positioning System (GPS)
• Total Station (with good reflectorless EDM range)

Field Survey Methodology
• Camera Locations - To establish the position of a viewpoint, the surveyor sets up a GPS on it and records enough points to ensure a high level of accuracy.
• Reference points - The surveyor sets up two temporary stations (TBMs) within view of each reference point and establishes their location using the GPS. Once these co-ordinates have been established, the surveyor sets up a Total Station on the TBMs and takes 3 reflectorless survey shots to the reference point in question.
Note: Where GPS positioning is not possible near to the required survey point - due to poor signal, for instance - the surveyor set up his TBMs at the nearest position possible and traversed traditionally to a position where he could survey the point.

Data Processing & Delivery
GPS data is processed through to acquire the surveyed points in the form of a delimited text file containing OSGB36 co-ordinates. Plus a 3D point cloud and camera position that can be imported into our 3D software.



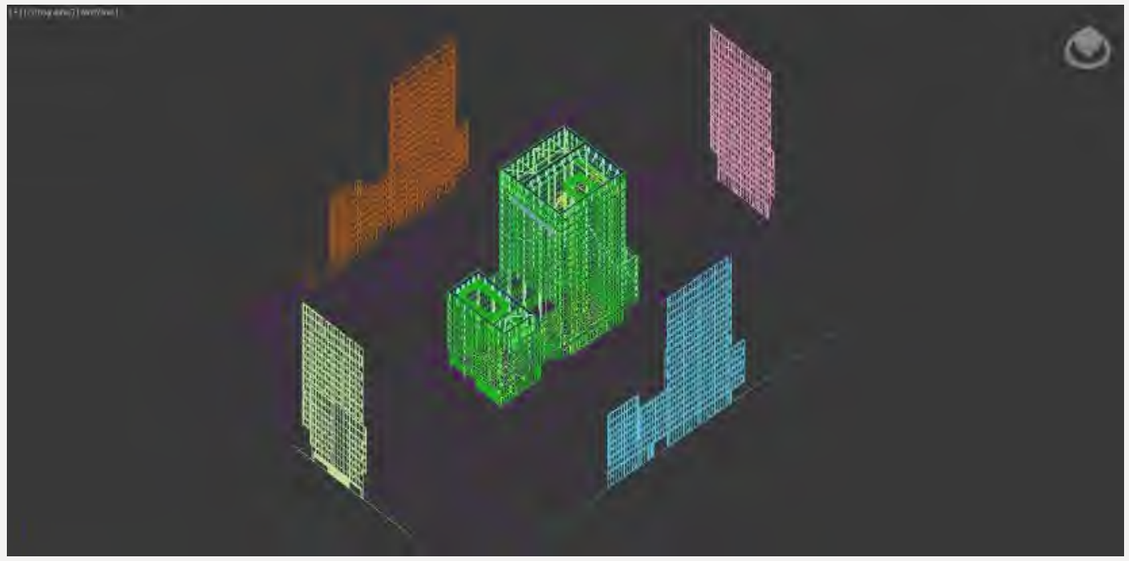
Survey points

STAGE 3
MODELLING OF THE SCHEME

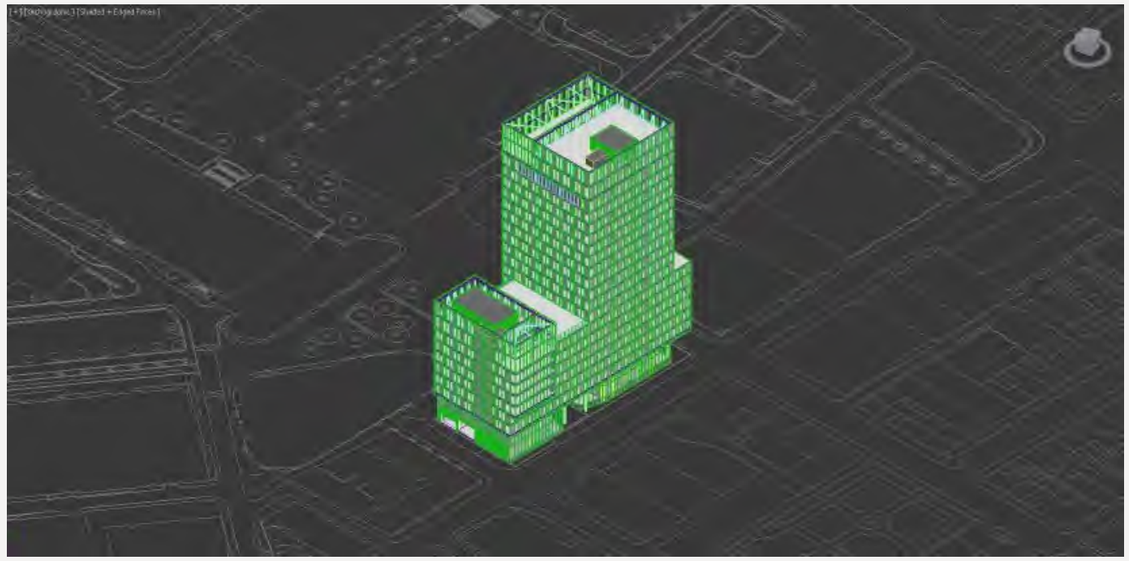
Within 3DSMax software, the scheme is either modelled from drawings supplied as dwgs by the architects or a detailed model will be supplied by the architect usually in the form of a Revit model. The model can be constructed in a number of ways dependent on the type of image being produced. The requirement is often for initial views, to study the form of the scheme and its impact on the surrounding environment - here, a block model is usually appropriate to allow all parties to assess the scheme.

From here a detailed model is often commissioned to progress to fully rendered certified imagery.

The model is setup in the 3D Virtual environment in relation to OS plan so that it can be integrated with the survey information.



DWG elevations and plans are imported to enable accurate modelling.



Orthographic view of detailed model

STAGE 4
INTEGRATION OF PHOTOGRAPHY, AND SURVEY DATA TO FORM THE ALIGNMENT

The first three stages are now brought together to create the alignment, within the 3D software.

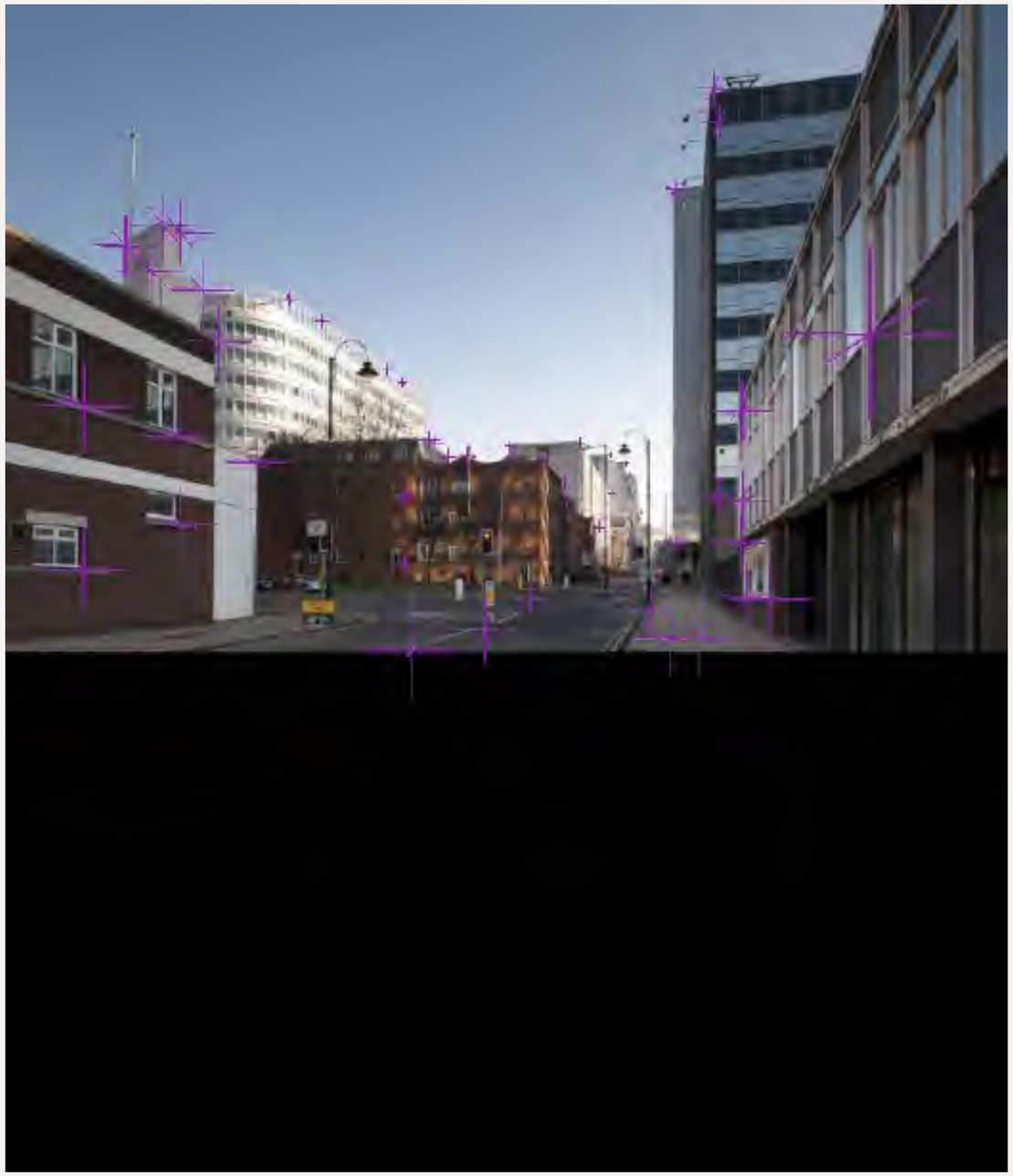
Firstly, the photography is brought into the 3D software, in the form of a background so that the surveyed information can be aligned to it ie camera-matching. A couple of stages are completed to accomplish this.

1. The photo is brought into ' Adobe Photoshop' editing software. Any rotational inaccuracies from the photo are removed. This is completed by using the surveyed horizon information and rotating the image accordingly.

2. Any 'shift' applied by the photographer using the perspective control lens needs to be addressed. Vertical shift is applied to allow the photographer to photograph tall buildings whilst keeping the camera level, and hence the verticals of the image vertical. It has the effect of 'shifting' the horizon off the centre of the image. To use the photography within the 3D software, the horizon has to be returned to the centre of the image - this is done by adding a blank area to the top or bottom.

Secondly, the survey data is brought into the 3D software. Returned to Our Studio as a database document, the Easting, Northing and height co-ordinates that can be imported so that they form points in 3-dimensional space. The virtual camera is also located, using the OS data reference returned to Our Studio.

Lastly, the camera is adjusted so that the surveyed points line up with the background photography. The field-of-view (FOV) is entered according to the lens the photographer used and the location of the camera's 'target' is adjusted in the X and Y plane (ie not vertically) so that the points align with the features surveyed.



3D software viewport showing background photography aligned with survey data points.

STAGE 5
ADDING SCHEME AND RENDERING

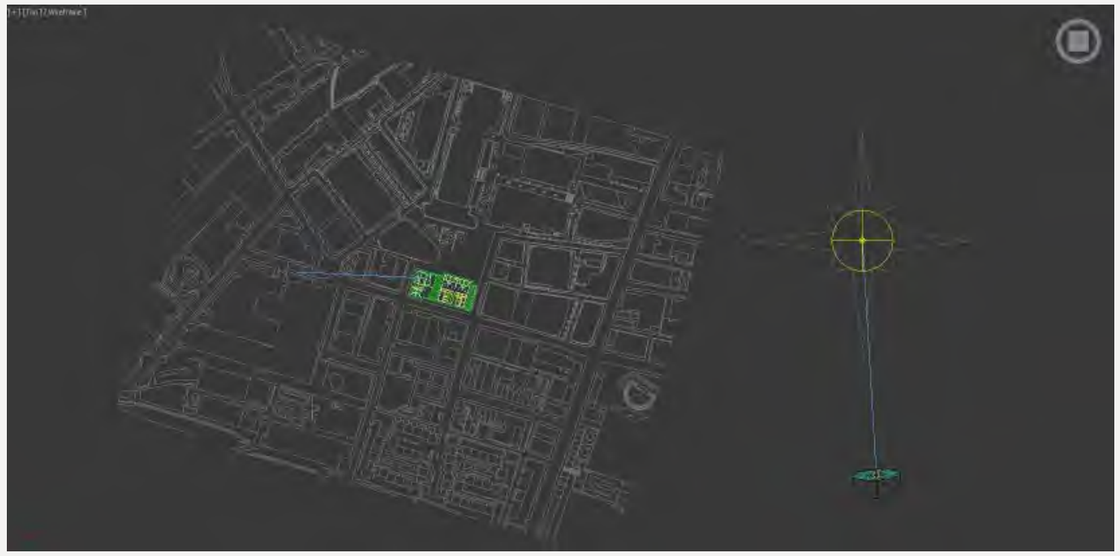
Upon completion of the camera alignment the 3D model (as described in stage 3) is brought into the 3D virtual environment in relation to OS datum.

Lighting is then setup in the 3D virtual environment to match the sunlight conditions at the time the source photograph was taken.

In order to assist a more qualitative assessment of the proposals, the output image needs to be a photo-realistic reflection of what the proposed scheme would look like once constructed. The process of transforming the wireframe 3D scheme model into one that can be used to create a photo-realistic image is called texturing.

Prior to rendering, Our Studio requires details from the architect regarding the proposed materials (e.g. type of glass, steel, aluminium etc.) to be utilised. This information is used to produce the appearance and qualities in the image that most closely relates to the real materials to be used.

The 3D model is then rendered in the 3D software at the same resolution as the photograph.



3d software showing top view of model aligned with OS plan including camera location and sun-light setup.



3d software showing view from camera with photo background and model in position.

OUR STUDIO
NORTHSPRING
SUITE 5D
70 SPRING GARDENS
MANCHESTER
M2 2BQ

Tel +44 161 237 1900
Email hello@ourstudioltd.com

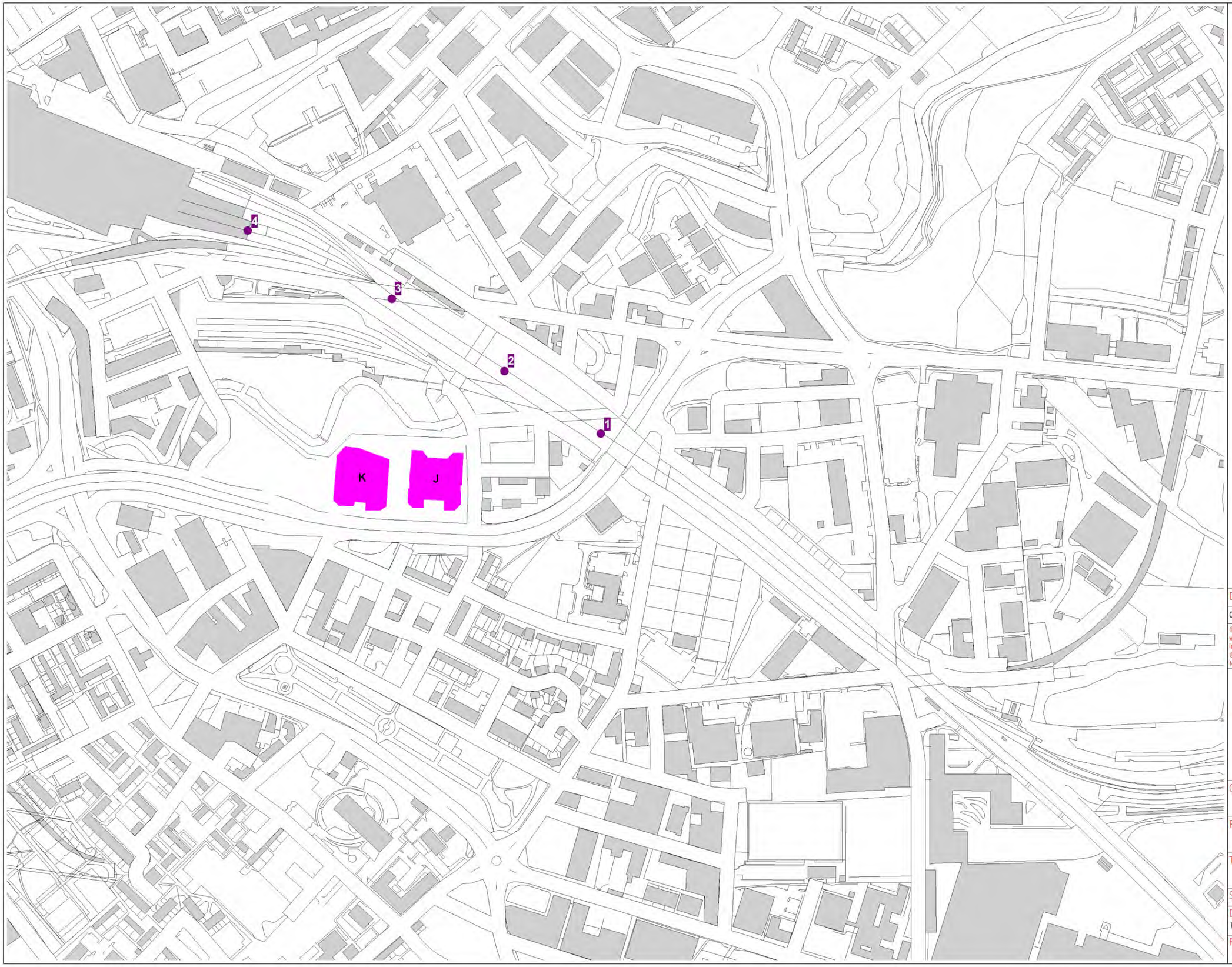
OUR STUDIO



APPENDIX 8.4

Chris Burnett Associates/ Shedkm

12 12 24



Key

footprints of proposed buildings

kinetic viewpoint location

0.0 40.0 80.0
metres

Date	Details	Revision
03/05/24	Revised viewpoint locations.	-01

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CHRIS BURNETT ASSOCIATES
Landscape Architects
White House Farm
Stoddesdon, Malpas
Cheshire SY14 7BN
Tel: 01829 250445
Fax: 01829 250557
Mob: 07506 028810
chris@chrisburnettassociates.co.uk
www.chrisburnettassociates.co.uk

Client **Landsec U&I**

Project **Mayfield Plot 1b, Manchester**

Title **Kinetic Viewpoint Locations**

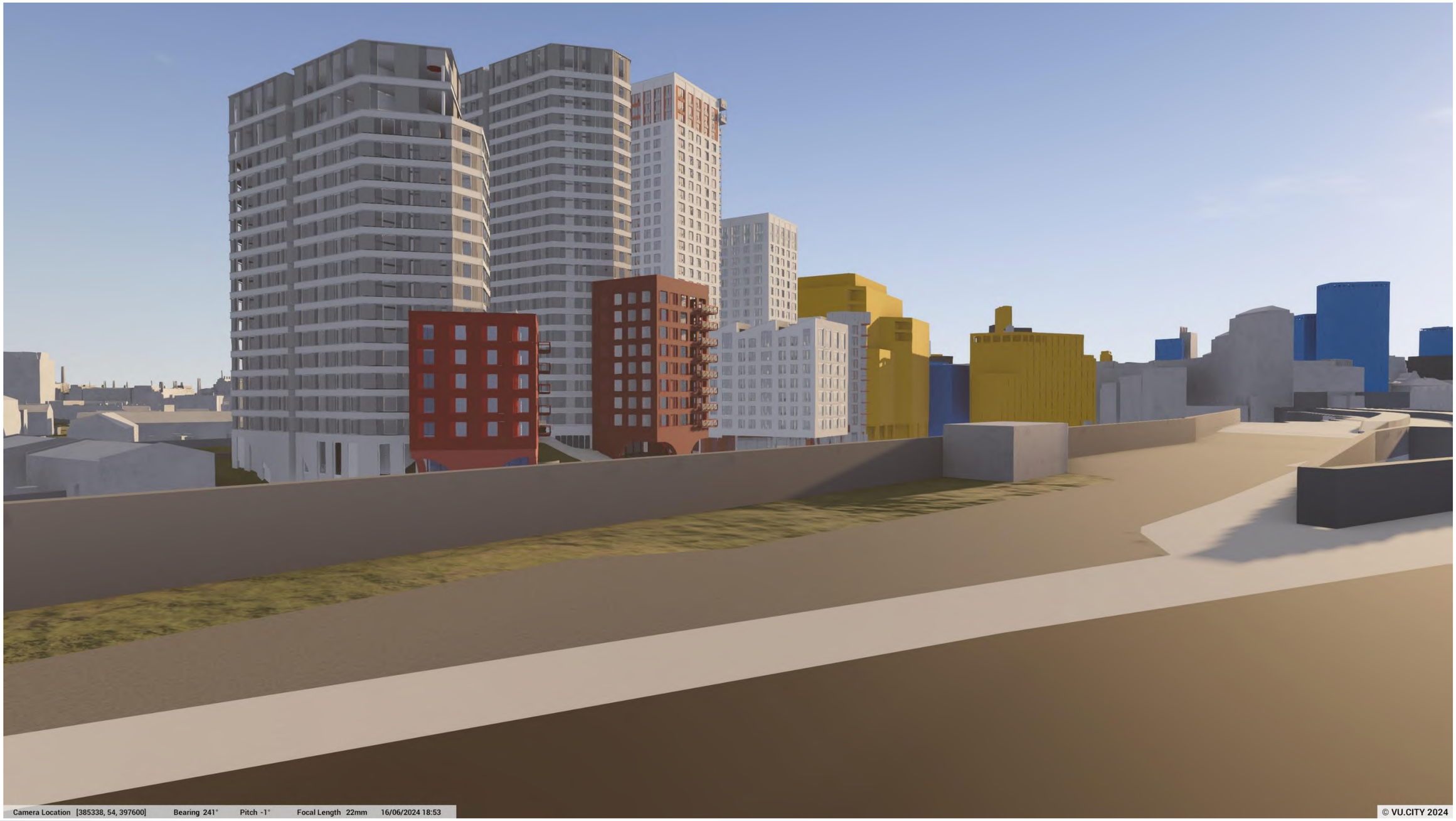
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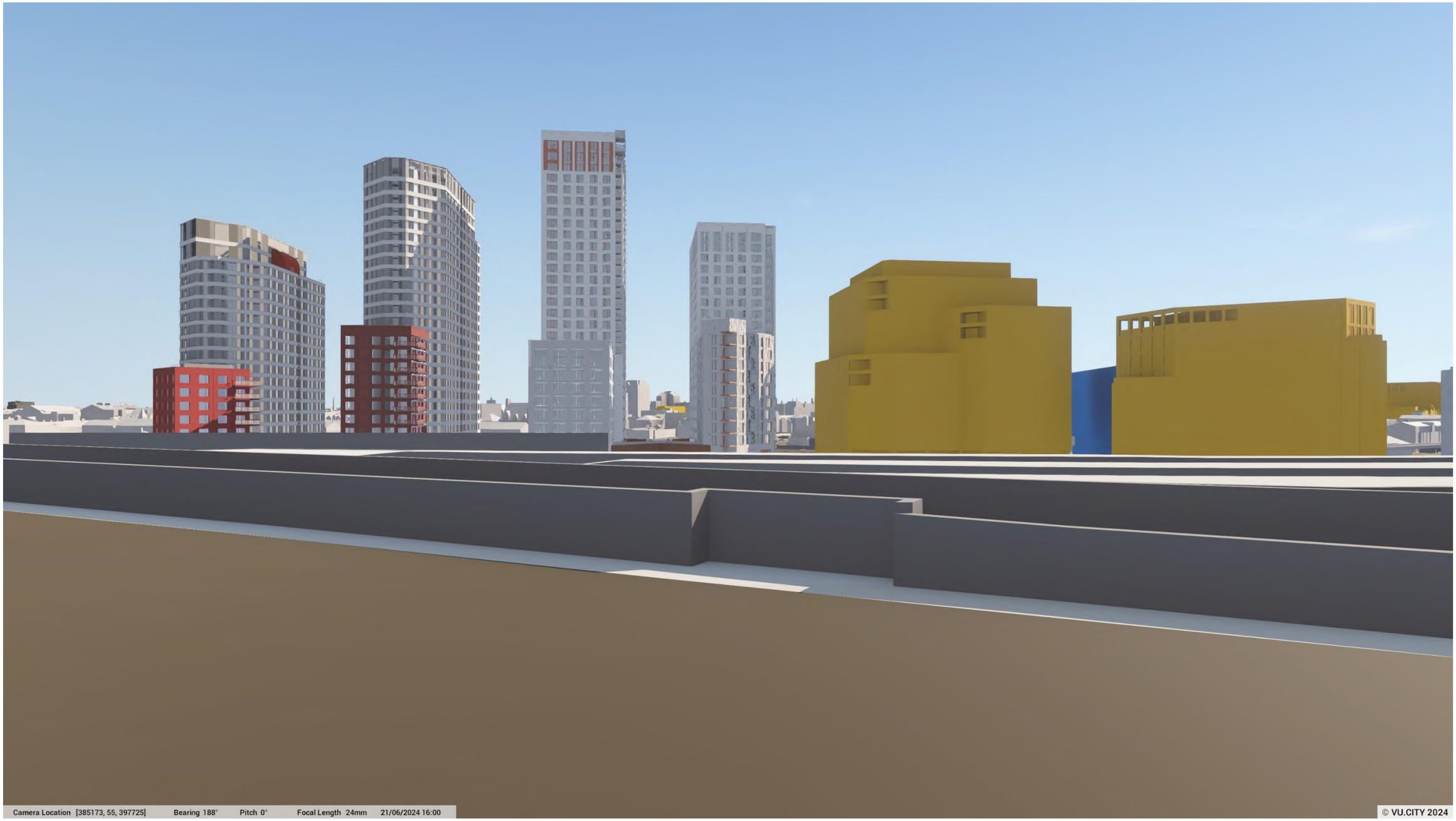
Date	Drawn	Checked
13/12/24	JHD	CB

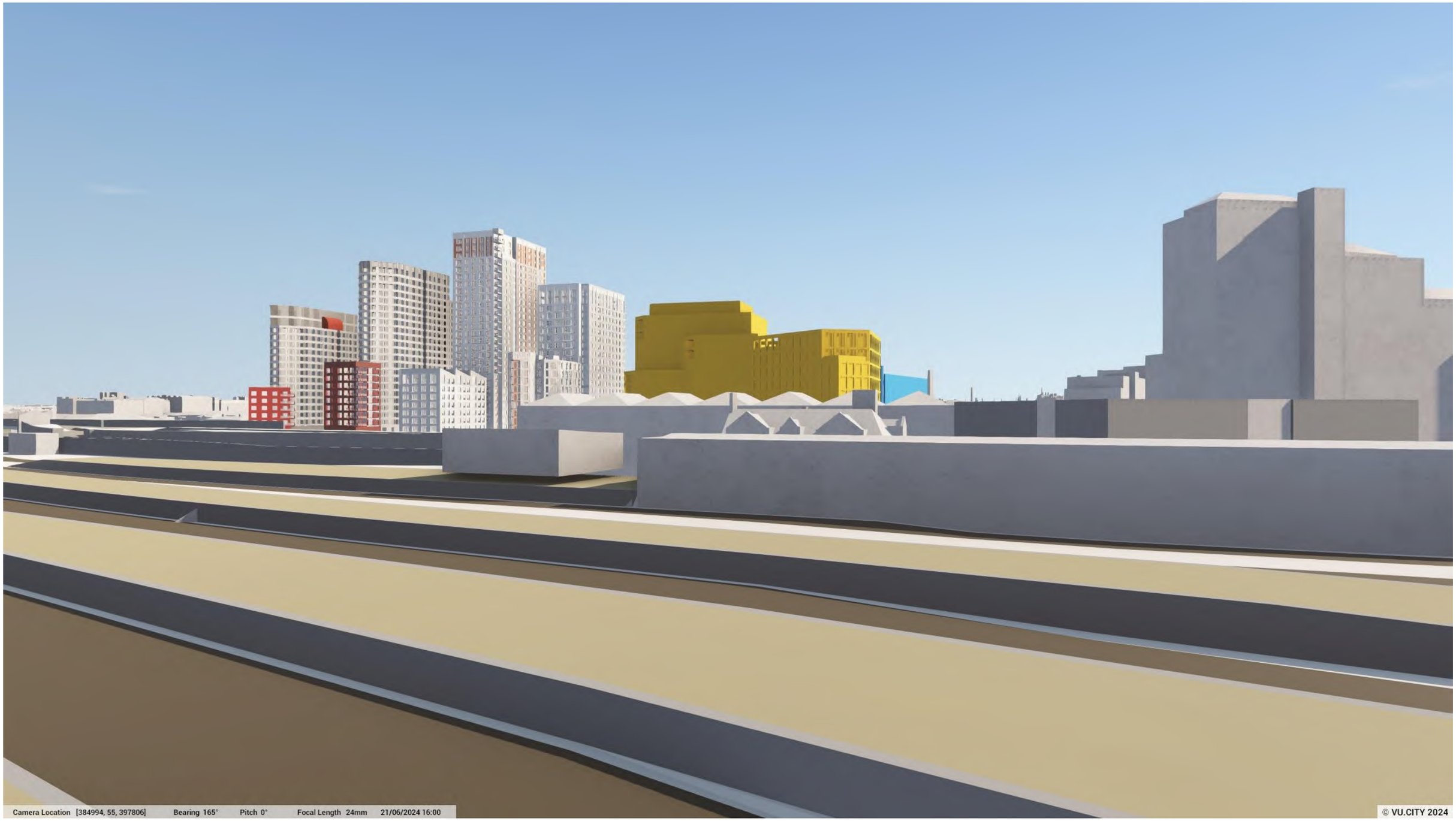
Reference **MP1bVIA24.05** Revision **-01**

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© VU.CITY 2024


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Camera Location [385173, 55, 397725] Bearing 188° Pitch 0° Focal Length 24mm 21/06/2024 16:00
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Camera Location [384994, 55, 397806] Bearing 165° Pitch 0° Focal Length 24mm 21/06/2024 16:00
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