

APPENDIX 9.6

TECHNICAL VISUALISATIONS

Deansgate South, Manchester

December 2020



I N F I N I T E 3 D

Infinite 3D Ltd.
Kingsley House
13 Westbourne Road
West Kirby
Wirral
CH48 4DG

Viewpoint Overview



VP-01



VP-02



VP-03



VP-04



VP-05



VP-06

Viewpoint Overview



VP-07



VP-08



VP-09



VP-10



VP-11



VP-12

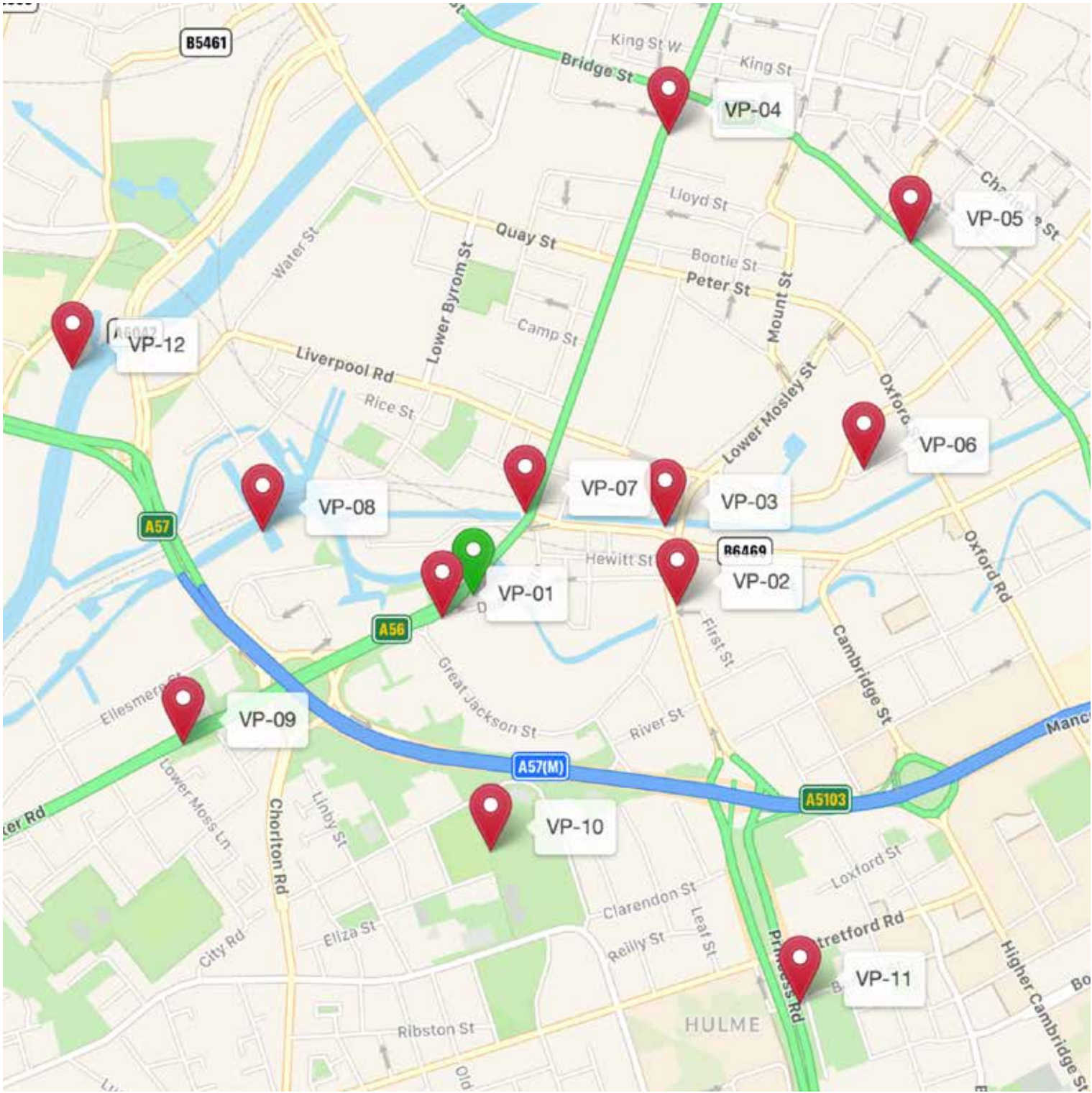
Viewpoint Overview

View	Type	Easting	Northing	Height (m)
VP-01	AVR3 Type 4	383239.782	397396.952	32.582
VP-02	AVR3 Type 4	383628.301	397413.956	34.046
VP-03	AVR3 Type 4	383608.137	397546.927	36.587
VP-04	AVR3 Type 4	383617.909	398190.880	36.723
VP-05	AVR0 Type 4	384015.074	398009.975	43.291
VP-06	AVR0 Type 4	383937.664	397638.601	37.575
VP-07	AVR3 Type 4	383377.540	397568.204	34.053
VP-08	AVR3 Type 4	382944.004	397538.705	28.524
VP-09	AVR3 Type 4	382812.935	397190.536	33.298
VP-10	AVR3 Type 4	383319.876	397012.701	34.752
VP-11	AVR0 Type 4	383829.193	396760.327	37.038
VP-12	AVR3 Type 4	382632.226	397808.729	24.843

Notes

All images taken using a full frame Canon 5D MKIV camera, with a 24mm or 50mm focal length lens.
The heights shown above are the sum of: viewpoint height above sea level + height of the centre of camera sensor from the floor.

Viewpoint Overview



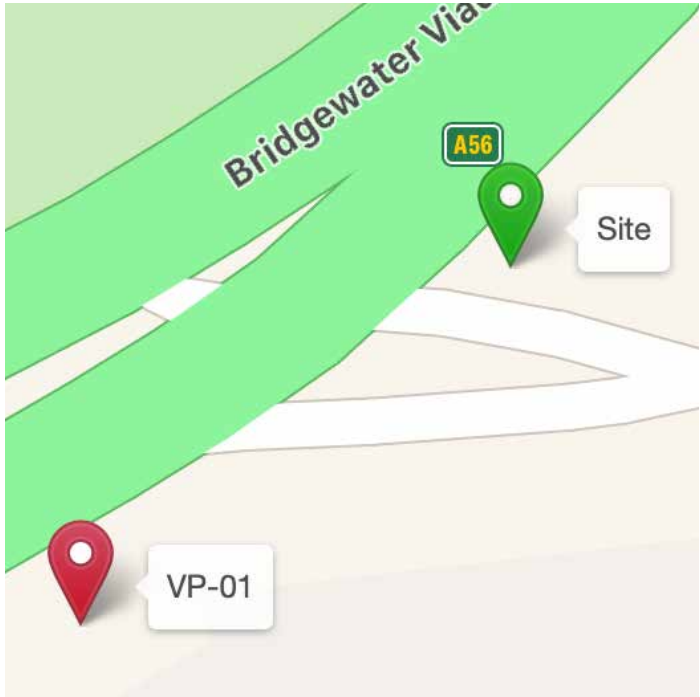
VP-01



Existing View



Survey Points



View Location



Camera Position



Camera Position

National Grid Reference:	383239.782E 397396.952N
Camera Height:	32.582 m
Focal Length:	24mm
HFOV:	74°
AVR Level:	AVR3 Type 4
Date:	25/11/20
Time:	15:15

View Details

VP-01



AVR3 Type 4

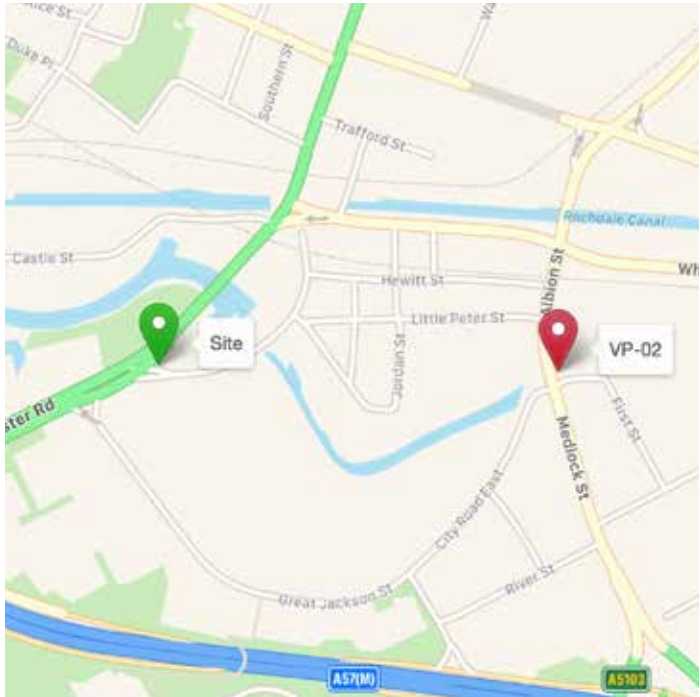
VP-02



Existing View



Survey Points



View Location



Camera Position



Camera Position

National Grid Reference:	383628.301E 397413.956N
Camera Height:	34.046 m
Focal Length:	24mm
HFOV:	74°
AVR Level:	AVR3 Type 4
Date:	25/11/20
Time:	13:02

View Details



AVR3 Type 4

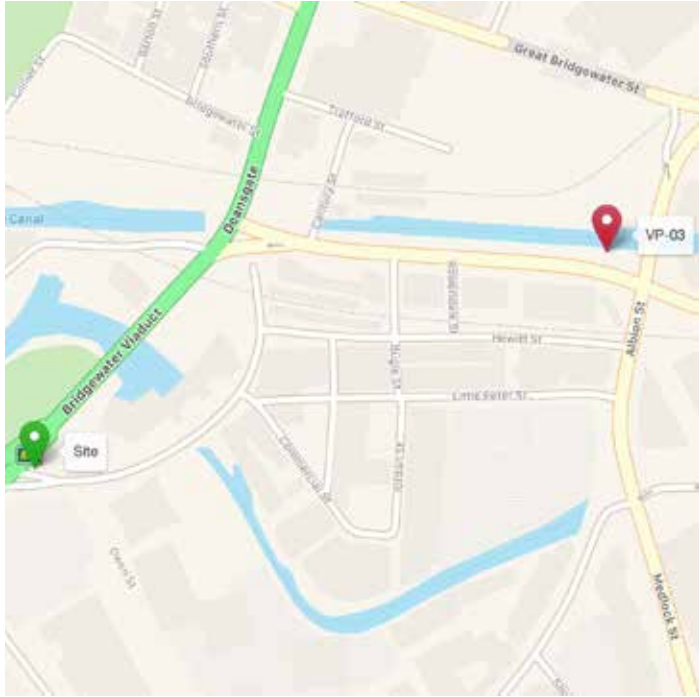
VP-03



Existing View



Survey Points



View Location



Camera Position



Camera Position

National Grid Reference:	383608.137E 397546.927N
Camera Height:	36.587 m
Focal Length:	24mm
HFOV:	74°
AVR Level:	AVR3 Type 4
Date:	25/11/20
Time:	12:44

View Details



AVR3 Type 4

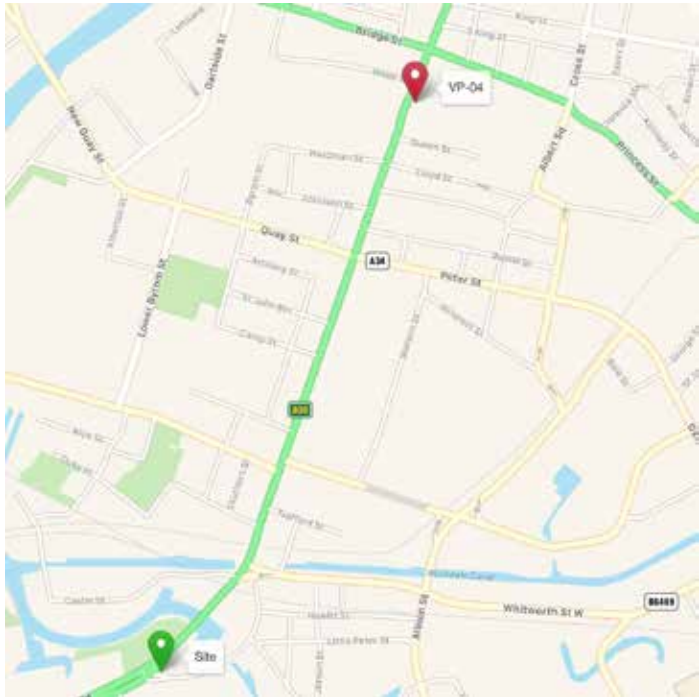
VP-04



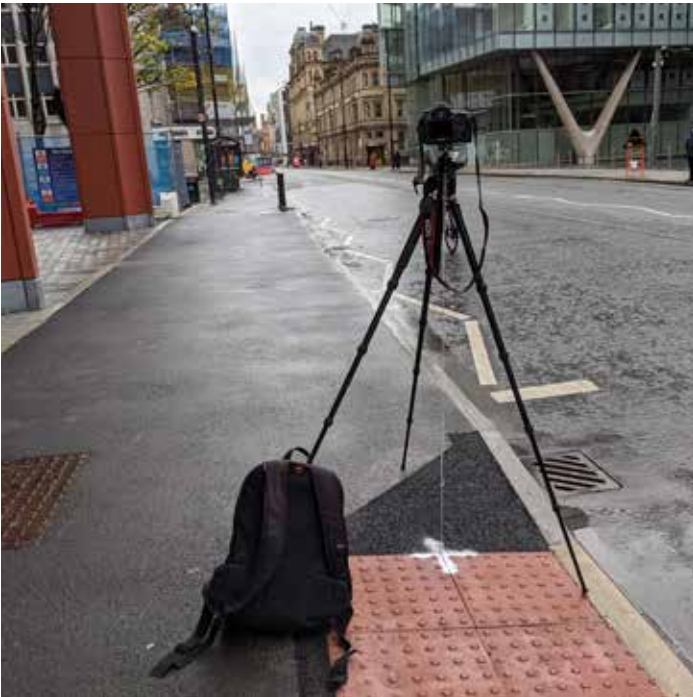
Existing View



Survey Points



View Location



Camera Position



Camera Position

National Grid Reference:	383617.909E 398190.880N
Camera Height:	36.723 m
Focal Length:	24mm
HFOV:	74°
AVR Level:	AVR3 Type 4
Date:	25/11/20
Time:	11:26

View Details



AVR3 Type 4

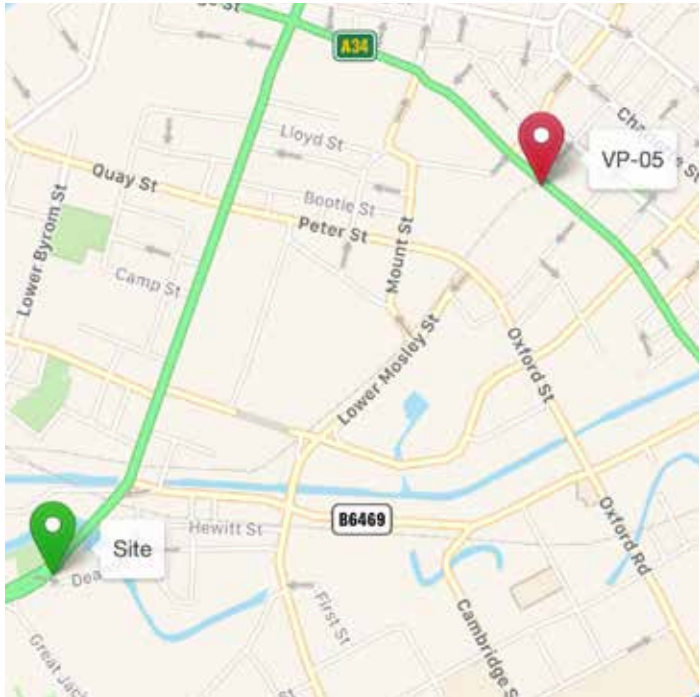
VP-05



Existing View



Survey Points



View Location



Camera Position



Camera Position

National Grid Reference:	384015.074E 398009.975N
Camera Height:	43.291 m
Focal Length:	50mm
HFOV:	40°
AVR Level:	AVR0 Type 4
Date:	25/11/20
Time:	11:54

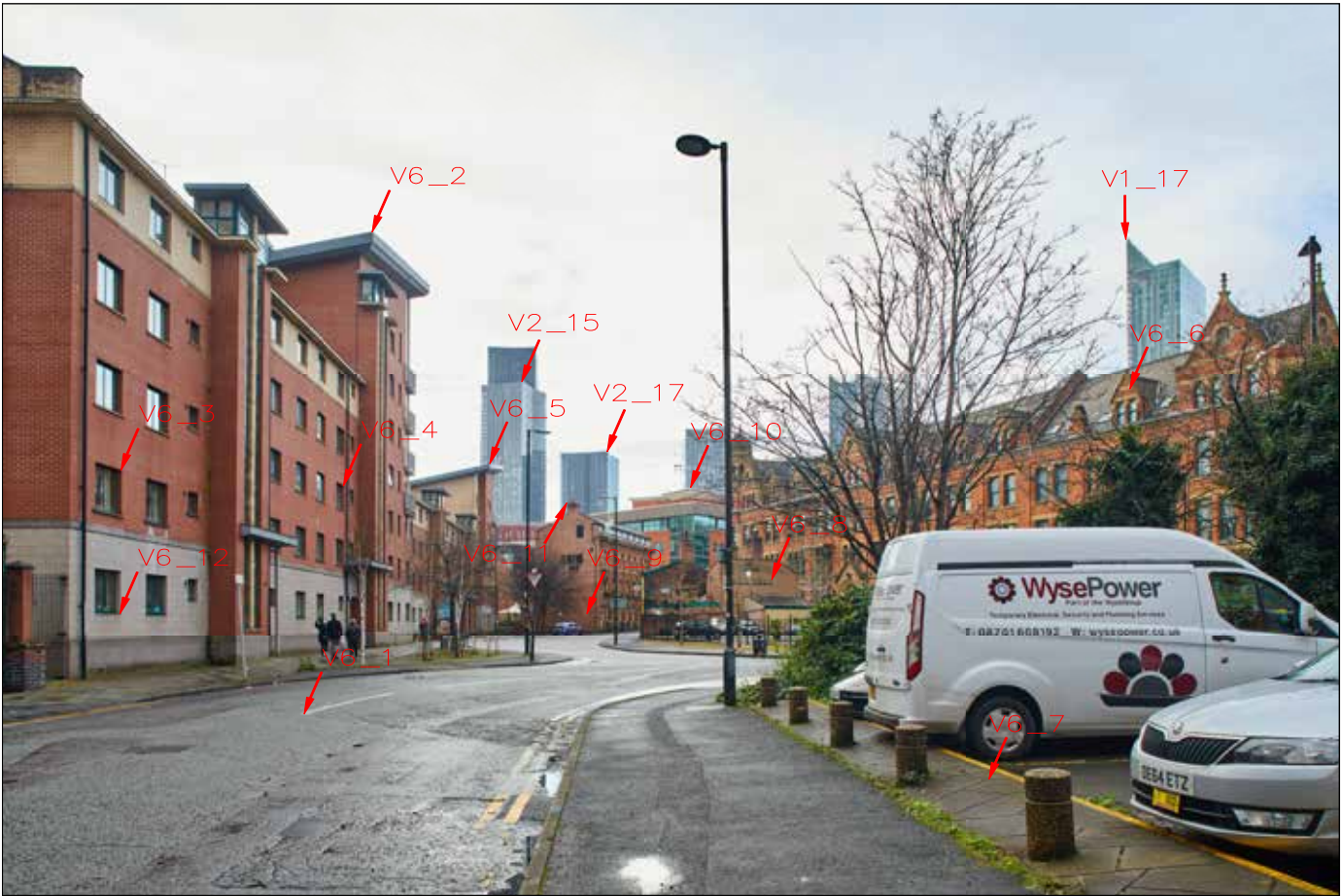
View Details



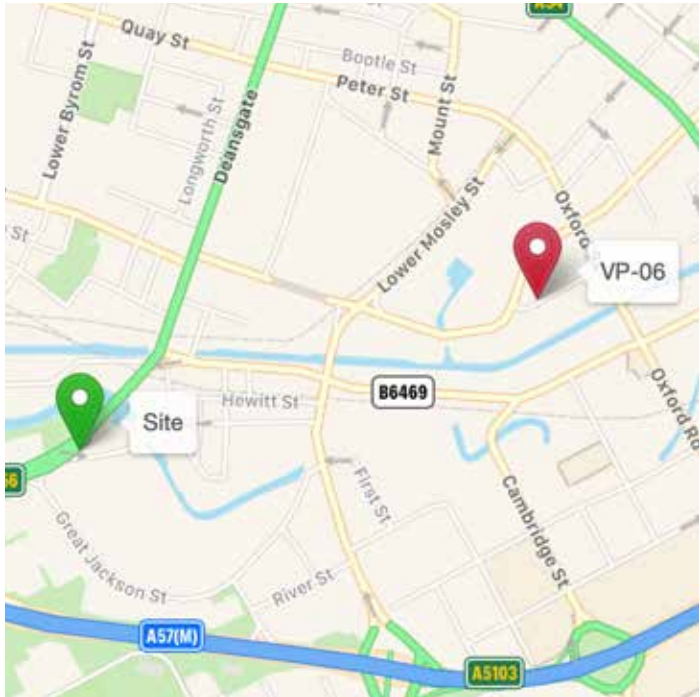
AVR0 Type 4



Existing View



Survey Points



View Location



Camera Position



Camera Position

National Grid Reference:	383937.664E 397638.601N
Camera Height:	37.575 m
Focal Length:	24mm
HFOV:	74°
AVR Level:	AVR0 Type 4
Date:	25/11/20
Time:	12:24

View Details



AVR0 Type 4

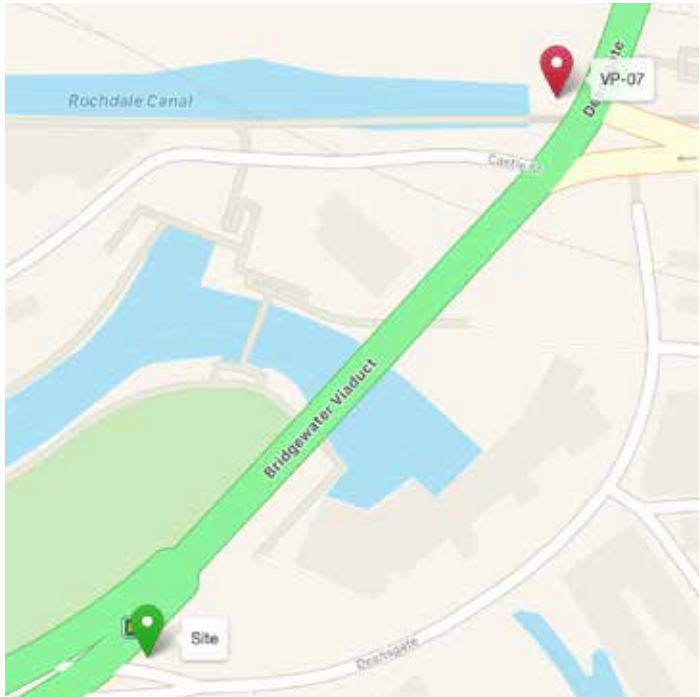
VP-07



Existing View



Survey Points



View Location



Camera Position



Camera Position

National Grid Reference:	383377.540E 397568.204N
Camera Height:	34.053 m
Focal Length:	24mm
HFOV:	74°
AVR Level:	AVR3 Type 4
Date:	25/11/20
Time:	15:07

View Details



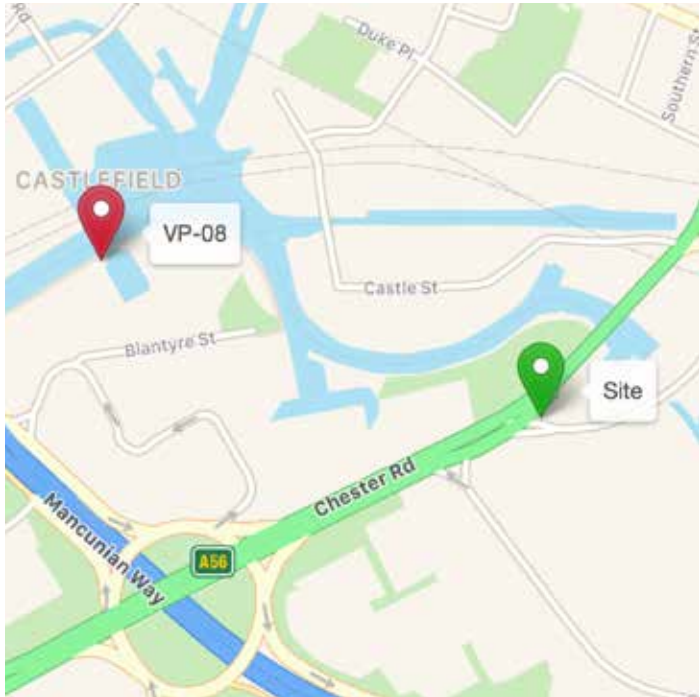
AVR3 Type 4



Existing View



Survey Points



View Location



Camera Position



Camera Position

National Grid Reference:	382944.004E 397538.705N
Camera Height:	28.524 m
Focal Length:	24mm
HFOV:	74°
AVR Level:	AVR3 Type 4
Date:	25/11/20
Time:	14:29

View Details



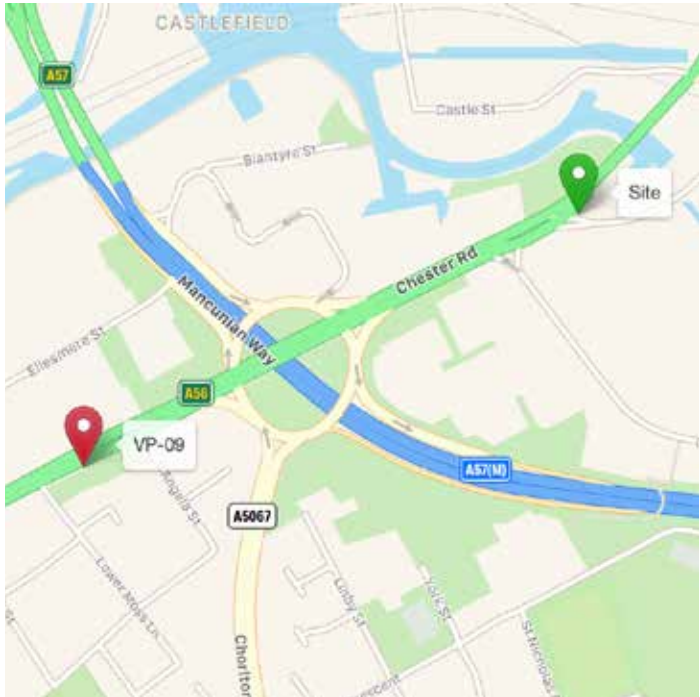
AVR3 Type 4



Existing View



Survey Points



View Location



Camera Position



Camera Position

National Grid Reference:	382812.935E 397190.536N
Camera Height:	33.298 m
Focal Length:	24mm
HFOV:	74°
AVR Level:	AVR3 Type 4
Date:	25/11/20
Time:	14:05

View Details



AVR3 Type 4

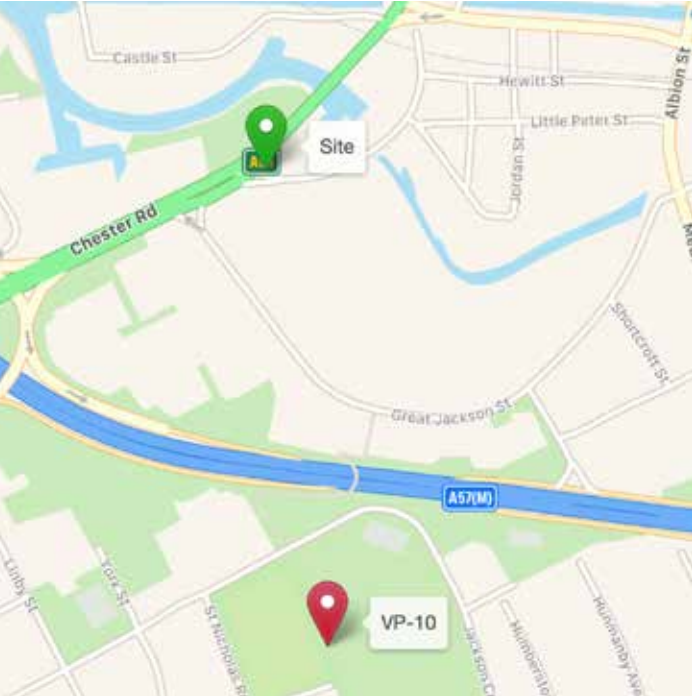
VP-10



Existing View



Survey Points



View Location



Camera Position



Camera Position

National Grid Reference:	383319.876E 397012.701N
Camera Height:	34.752 m
Focal Length:	24mm
HFOV:	74°
AVR Level:	AVR3 Type 4
Date:	25/11/20
Time:	13:49

View Details

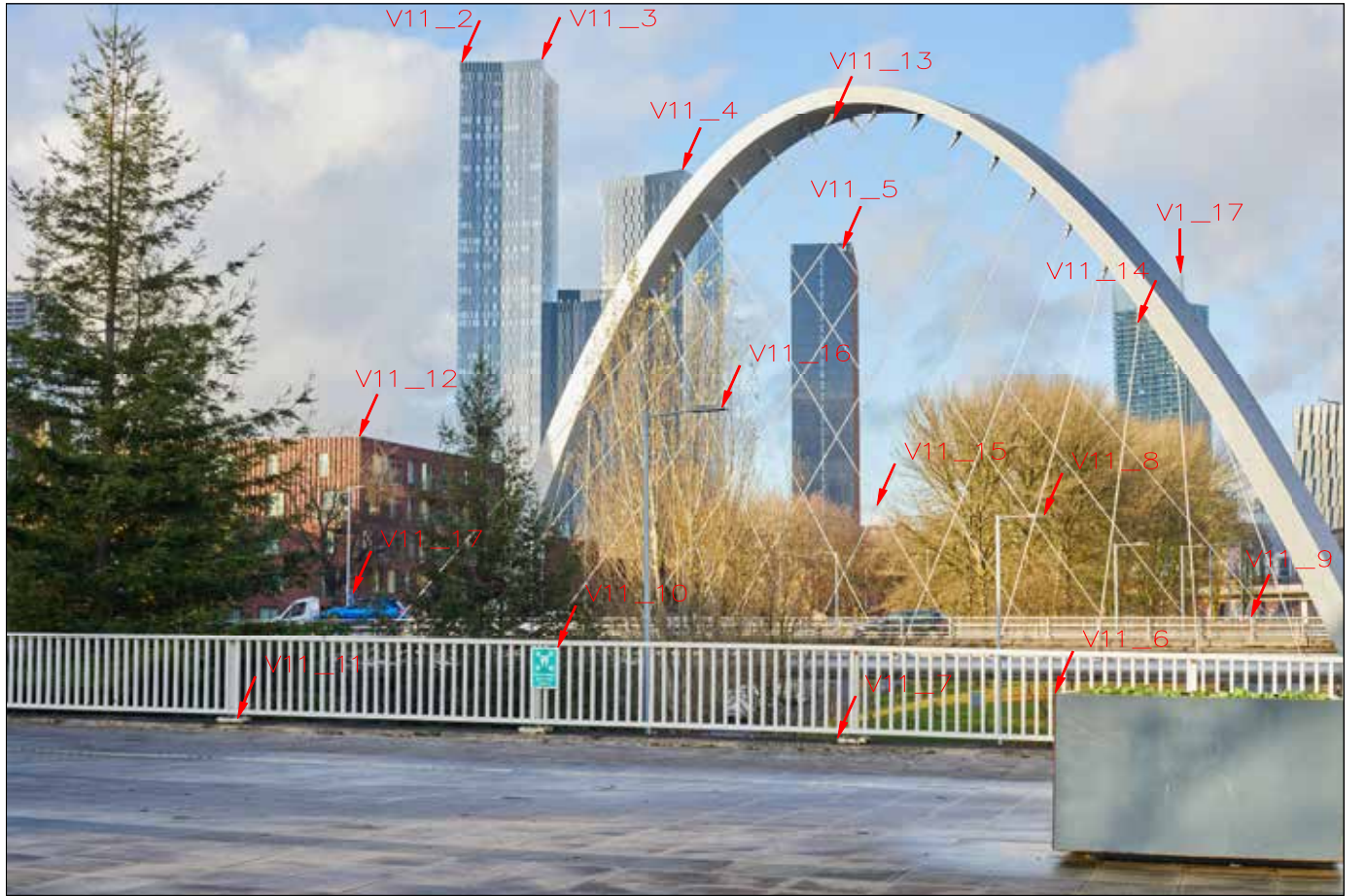


AVR3 Type 4

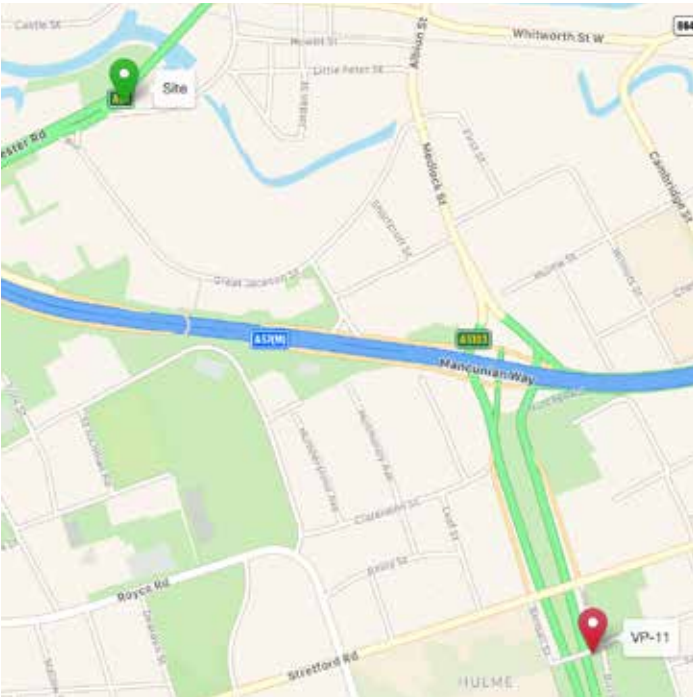
VP-11



Existing View



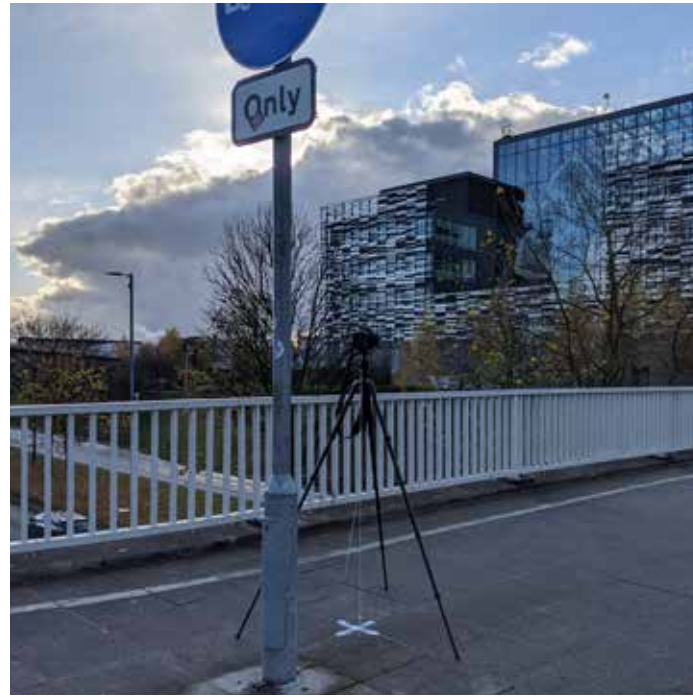
Survey Points



View Location



Camera Position



Camera Position

National Grid Reference:	383829.193E 396760.327N
Camera Height:	37.038 m
Focal Length:	50mm
HFOV:	40°
AVR Level:	AVR0 Type 4
Date:	25/11/20
Time:	13:28

[View Details](#)

VP-11

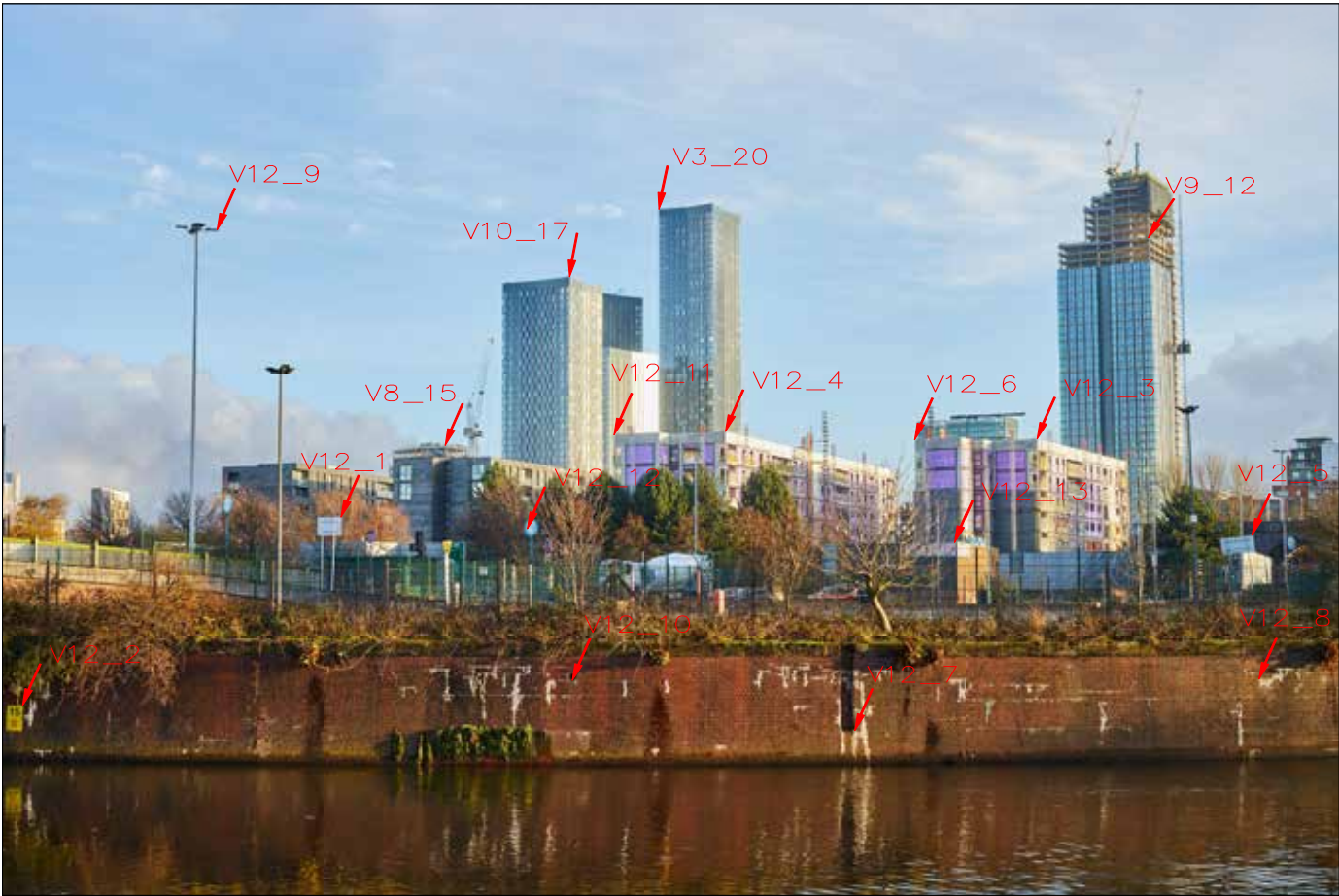


AVR0 Type 4

VP-12



Existing View



Survey Points



View Location



Camera Position



Camera Position

National Grid Reference:	382632.226E 397808.729N
Camera Height:	37.038 m
Focal Length:	50mm
HFOV:	40°
AVR Level:	AVR3 Type 4
Date:	25/11/20
Time:	14:45

View Details

VP-12



AVR3 Type 4

Methodology

Overview:

Infinite 3D uses a methodology for the provision of Visually Verified Montages (VVM) that is in accordance with relevant sections of: The Landscape Institute/IEMA Guidelines for Landscape and Visual Impact Assessment; Landscape Institute Advice Note 06/19 (for use of photography in landscape and visual assessment). We also liaise with relevant council and/or local authorities in accordance with their preferred approaches, to ensure a tailored and suitable approach that meets the ranging needs of the various assessors.

By way of the following methodology, Infinite 3D will source digital photographs from pre-specified and agreed locations with the client, with respect to all relevant context and with adequate number of physical features present to be surveyed. Following this, a trusted surveyor will visit these same locations, armed with all reference information to faithfully reproduce accurately the position of the camera. With a known camera position, data points are obtained by the surveyors that, when passed to our modelling team, enable them to accurately align the position of the proposed scheme with the existing context within a measurable degree of accuracy.

Site Visit & Photography:

Viewpoints having been discussed and agreed between Infinite 3D and the respective client, so as to fairly assess the impact of the proposed scheme on its surrounding areas, Infinite 3D's in-house architectural photographers will travel to the agreed viewpoints. For each agreed location, photographs are taken using the following professional camera system:

- Canon EOS 5DsR digital SLR with a full-frame sensor size of 36x24mm (equivalent to a 35mm still image frame) capturing images at 50.6 megapixels (8,688x5,792 pixels)
- A tripod, fixed height at eye level and oriented so that the horizontal axis of the sensor is aligned with the horizon. This creates a two-point perspective, whereby the lens axis is pointed at the horizon, meaning the top and bottom edge of the sensor is parallel to the horizon.
- A Canon 24mm F3.5L – EFII lens. Chosen to best represent and accurately reflect what is visible from each location on site, and to show the proposed scheme in its full context. A ‘shift lens’, or ‘perspective control lens’ allows the photographer to control the framing of the image. In a two-point perspective set up, as above, a shift lens allows the relative position of the lens axis to the sensor to be adjusted so that framing and composition changes can be made whilst still maintaining the perspective. In real terms, this allows the horizon line to move toward the lower part of the frame, or sensor, and reveal taller objects above it, which would otherwise be cropped out if using a conventional lens.
- A Canon 50mm F1.8 – EF STM lens. To be used in accordance with LVIA, Landscape Institute, and various agency guidelines with regards to optimum print/viewing distances.
- Ideally and ordinarily shot at ISO 100, with an aperture, focus distance and shutter speed decided to best render all parts of the viewpoint scene in focus and visible.

At suitable print output, this system is capable of resolving all the detail in a scene reasonably observable by a person with average vision if they were standing at the location of the camera.

All images are captured in the native camera RAW format, to ensure maximum tonal and colour resolution is retained in the image processing stage. Choices of aperture and focus distance are set to ‘infinity’ to render all parts of the scene, from foreground to distance, ‘in focus’.

Supplementary photographs may be taken to create HDR (high dynamic range) images for environment and reflection maps used in the CGI stage.

Digital photography is used to provide an efficient, expedited approach which allows for on-the-go analysis by the photographer, whilst also digitally recording important EXIF (exchangeable image file format) metadata in the digital file, which will later be used by both surveyor and CGI artist (shutter speed, focal length, ISO speed, time/date of photograph, etc.)

On site, the photographer is provided with a reconnaissance viewpoint photograph of each viewpoint, a marked location on an OS map, and viewpoint marker photograph. Additional information, such as preferred time of day, weather conditions and position of sun, at any given viewpoint, are also supplied, the photographer will set up the camera in accordance with the following operational procedures, repeated for each viewpoint:

- Viewpoint being identified, the photographer verifies the location by cross-referencing it with the supplementary information provided by the client/Infinite 3D team.

- The camera is mounted on a tripod at eye-level and oriented so that the horizontal axis of the sensor is aligned with the horizon.

- The photographer checks and sets (if necessary) the preferred camera settings as detailed above, where appropriate.

- A plumb line is dropped from the tripod to accurately determine the exact location of the lens' point of no parallax. This point is marked on the ground with semi-permanent paint, so as to be easily located by the surveyor.

- This point is measured from a fixed, recognisable point of context in relation to the scene on site. This measurement is recorded so as to enable accurate recreation of tripod position, if necessary, in the future.

- An accurate measurement of the height from the point of no parallax to the ground survey point is recorded.

- The time and date of each photograph is recorded. This should tally with the EXIF metadata from the image itself.

- Photographs of the tripod position, camera ‘in situ’, entire set up within the context of the site/viewpoint, are taken, which provides additional context and information to accompany each viewpoint in the final document.

- Photographs of the backplate (digital screen) of the camera are taken on a GPS enabled smartphone. These supplementary images are representative of the viewpoint itself, with the camera settings showing, for verification of both setup and tripod location. Supplementary images are also taken to record the levelled status of the camera (parallel with the horizon, or to record if there has been any panning), and the position of the shift for the appropriate lenses.

These steps are repeated for any supplementary views from the same location, and across the set of viewpoints, per location.

After the site visit, the RAW camera images are converted, by a proprietary software (Capture One) into ‘lossless RGB’ files, where the tonality and colour balance are faithfully matched, by the photographer, to the lighting conditions of the time of capture. This is achieved with the aid of the reference information gathered on the day. These images are then suitable for use in 2D image editing and 3D modelling applications.

Camera, lens and technical parameters that help with the alignment of the virtual cameras are included in the EXIF metadata for each photograph. This is matched and recorded to include any intentional offset by way of use of a ‘shift lens’ having been used.

Surveyor:

In order for the images to be ‘verified’, image-specific 3D referenced data points are required. Infinite 3D outsource the surveyance work to a trusted partner, currently:

Warner Surveyors
Unit 22
Theale Lakes Business Park Moulden Way
Reading
RG7 4GB

Prior to their arrival on site, the surveyors are provided with the same reconnaissance photography, ordnance survey markup, and location plan that the photographer had access to. They are also issued the location reference supplementary photographs obtained by the photographer, as well as the ‘image for use’, so as to faithfully recreate the viewpoint for capture of data points, per location.

Prior to their visit to site, the surveyor will liaise with Infinite 3D and/or the client, to identify potential data points to observe. Generally, these are at least 15 in number, with 5 close to the surveyor (foreground), 5 in the middle ground, and 5 in the far ground. The chosen points must be fixed and permanent and should cover a wide and even spread of points within the photo.

If the site is in an area in which insufficient fixed control points can be recorded, then graduated surveying poles are placed and surveyed. The photographer is then required to take two identically located photos, one with the poles and one without.

The latest surveying technology is used to calculate the camera position(s) and several fixed control points that appear on the recon photo. The fixed control points are surveyed using traditional surveying techniques. Specifically, for the viewpoint markers, the latest technology obtains National Grid coordinates in real time, making use of appropriate satellite networks. An internet connection is established over a GPRS network, which receives any necessary corrections from a reference station. These techniques make use of theodolites and reflector-less laser technology.

The surveyor on site will carry out the following, simplified, methodology:

- Having located the camera viewpoint (or location marker as marked by the photographer), it is the surveyor’s responsibility to accurately set up to reflect this position on the ground, for the preservation of accuracy.

- Establish site control (minimum 2 points) geo-referenced to OS grid and height datum, using Leica Smartrover GPS.

- Set up Leica TS16 or equivalent Total Station (TS) and set backsight orientation.

- Observe detail points using reflector-less EDM capability, or IR capability to prism.

- Observe camera position using either GPS or TS.

- Far ground points will be observed either by intersection (described below) or travelling closer to the target and repeating above steps.

Their intersection bearing and distance method is as follows:

- 2 inter-visible ‘baseline’ points must be established by GPS or TS methods and baseline distance between points must be known and recorded.

- Observe angle to target point from both baseline points (having set orientation to second baseline point).

- Calculation of the intersection (target) point can be made and recorded.

Baseline distance must be of sufficient length to avoid ‘skinny’ triangles containing acute angles resulting in poor or questionable geometry. Short baselines should be avoided.

All associated, recorded survey information is then imported into a CAD programme, which translates and represents the information in 3D space. This 3D space, along with the marked photograph identifying the surveyed data points, makes the space ready for ‘camera matching’.

Camera Matching:

The next stage in the assessment is to match the virtual cameras in the 3D space with the cameras of the real world, by making use of the data points collected by the surveyor, aligned with the real-world points from the base layer photograph.

This part of the process is technical and quantitative in its nature and is designed to ensure accuracy as to where the model sits relative to the context of the photograph, as well as to preserve the scale of the proposal. In this sense it is objectively verifiable.

To create the virtual cameras, the following steps should be heeded:

- Cameras must match the physical properties of the ‘real world’ camera. This should be the case across the variety of lenses used, if appropriate. These physical properties should match faithfully the height of the no-parallax point, the focal length, ISO speed, etc.

- Cameras should be introduced to a coordinated location, individually, based on the GPS data provided by the surveyor.

- The 3D markers should then be introduced to the 3D world, based on the data provided on the fixed, observable, ‘real world’ foreground, midground and far ground points.

- The digital photograph should be introduced. If all data is correct, camera is matched correctly and reproduced faithfully, then the 3D visual markers will align with their photographic counterparts.

- This entire process should then be checked by another senior architectural visualiser, in accordance with best practice.

3D Model:

In order to accurately reflect the impact of a proposed scheme on its surroundings, it is naturally essential to have an accurate 3D model. The model created should be a direct reproduction of the designer's proposal, created using specialised software from conversations, drawings and DWG files supplied by the client. A combination of these things, along with the site survey/plan, forms the basis on which the 3D model is created. Following creation of the 3D model, all plans are again overlaid to check accurate reproduction.

This phase of modelling can be completed prior to, or indeed separate from, the photographic and survey operations. However, in the introduction of the model to the matched photograph, sufficient care should be paid to ensure accuracy in representation. This is achievable by matching of the 3D data points, assuming that the camera matching process was accurate.

Using global lighting techniques within the modelling software, the time of day and date of the photograph can be introduced, as well as the weather conditions, to best represent the 'real world' conditions at the time of photograph capture. This helps create a model that looks and feels natural within its photographic surroundings in the final output, assuming that this level of detail has been discussed for render.

Once the 3D model has been introduced to the matched, 3D space, it is crucial to check again the aspect ratios, the alignment of data points, the faithful representation of the 'real world' camera settings, the photographic information, the no-parallax point and the geographic location of the camera.

Once the process of camera matching and the introduction of the 3D model is complete, each of the viewpoints can be rendered out. Infinite 3D render using the Corona engine.

Post-production:

Following the successful rendering of the 3D model from each viewpoint, the model can then be superimposed onto the respective base photographs. Infinite 3D use Photoshop to facilitate this stage of the process. From here, minor adjustments can be made tonally and in colour correction, however it is imperative that no physical correction or distortion is made to the base photograph of 3D rendered image, as this will create an inaccurate montage image.

Any elements from the built environment in the surroundings of the proposal that should sit in front of the scheme are cropped and superimposed over the 3D rendering to represent what the proposal would look like once completed on site in context.

Once any final aesthetic touches are made to the image, whilst still preserving the realistic feel of the building in its proposed site, the final, verified, photomontage image can be output in the appropriate format ready to be supplied to the client and included in a method statement document with appropriate supporting evidence and reference documents.

Conclusion:

All of these steps are taken to ensure the accurate representation of future proposed works to as high a degree of accuracy as the process allows, in terms of mass and scale. This methodology, if applied correctly, should be independently verifiable by a third-party in order to reach the same conclusionary viewpoint, data and image. This is all to provide a fair and precise portrayal of how the proposed scheme may impact on its surroundings, to support further application.



Viewpoint: Viewpoint 01: Looking North East from Deansgate.	Photograph Parameters: Time of photograph: 15:15 Date of photograph: 25/11/2020 Camera: Canon 5D MKIV Lens: Canon TS-E 24mm f/3.5L II Horizontal Field of View: 74°	Camera Location: Grid reference: 383239.782E, 397396.952N Elevation (AOD): 31.212m Camera height above ground level: 1.37m	Notes: For photograph locations refer to 'View-point Location Map'.	Legend:	 Project: Deansgate South	Existing View Paper Size: A3 (420mmx297mm) Image Size: 390mmx260mm Date: 11/12/2020
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Viewpoint: Viewpoint 01: Looking North East from Deansgate.	Photograph Parameters: Time of photograph: 15:15 Date of photograph: 25/11/2020 Camera: Canon 5D MKIV Lens: Canon TS-E 24mm f/3.5L II Horizontal Field of View: 74°	Camera Location: Grid reference: 383239.782E, 397396.952N Elevation (AOD): 31.212m Camera height above ground level: 1.37m	Notes: • Photomontage is Visualisation Type 4/ AVR Level 3. • For photograph locations refer to 'View-point Location Map'.	Legend:	 INFINITE 3D Project: Deansgate South	Photomontage Paper Size: A3 (420mmx297mm) Image Size: 390mmx260mm Date: 11/12/2020
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<u>Viewpoint:</u> Viewpoint 01: Looking North East from Deansgate.	<u>Photograph Parameters:</u> Time of photograph: 15:15 Date of photograph: 25/11/2020 Camera: Canon 5D MKIV Lens: Canon TS-E 24mm f/3.5L II Horizontal Field of View: 74°	<u>Camera Location:</u> Grid reference: 383239.782E, 397396.952N Elevation (AOD): 31.212m Camera height above ground level: 1.37m	<u>Notes:</u> • Photomontage is Visualisation Type 4/ AVR Level 3. • For photograph locations refer to 'View- point Location Map'.	<u>Legend:</u> 126668-FO-2020 125833-FO-2019 (Conflict) 125804-FO-2019 123261-FO-2019 121462-FO-2018t (Conflict) 116850-FO-2017 111003-FO- 2016-C1	 <u>Project:</u> Deansgate South	Consented <u>Paper Size:</u> A3 (420mmx297mm) <u>Image Size:</u> 390mmx260mm <u>Date:</u> 11/12/2020
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<u>Viewpoint:</u> Viewpoint 02: Looking West from Medlock Street, just North of the junction with First Street.	<u>Photograph Parameters:</u> Time of photograph: 13:02 Date of photograph: 25/11/2020 Camera: Canon 5D MKIV Lens: Canon TS-E 24mm f/3.5L II Horizontal Field of View: 74°	<u>Camera Location:</u> Grid reference: 383628.301E, 397413.956N Elevation (AOD): 32.676m Camera height above ground level: 1.37m	<u>Notes:</u> For photograph locations refer to 'View-point Location Map'.	<u>Legend:</u>	 Project: Deansgate South	Existing View Paper Size: A3 (420mmx297mm) Image Size: 390mmx260mm Date: 11/12/2020
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<u>Viewpoint:</u> Viewpoint 02: Looking West from Medlock Street, just North of the junction with First Street.	<u>Photograph Parameters:</u> Time of photograph: 13:02 Date of photograph: 25/11/2020 Camera: Canon 5D MKIV Lens: Canon TS-E 24mm f/3.5L II Horizontal Field of View: 74°	<u>Camera Location:</u> Grid reference: 383628.301E, 397413.956N Elevation (AOD): 32.676 m Camera height above ground level: 1.37m	<u>Notes:</u> • Photomontage is Visualisation Type 4/ AVR Level 3. • For photograph locations refer to 'View-point Location Map'.	<u>Legend:</u>	 <u>Project:</u> Deansgate South	Photomontage <u>Paper Size:</u> A3 (420mmx297mm) <u>Image Size:</u> 390mmx260mm <u>Date:</u> 11/12/2020
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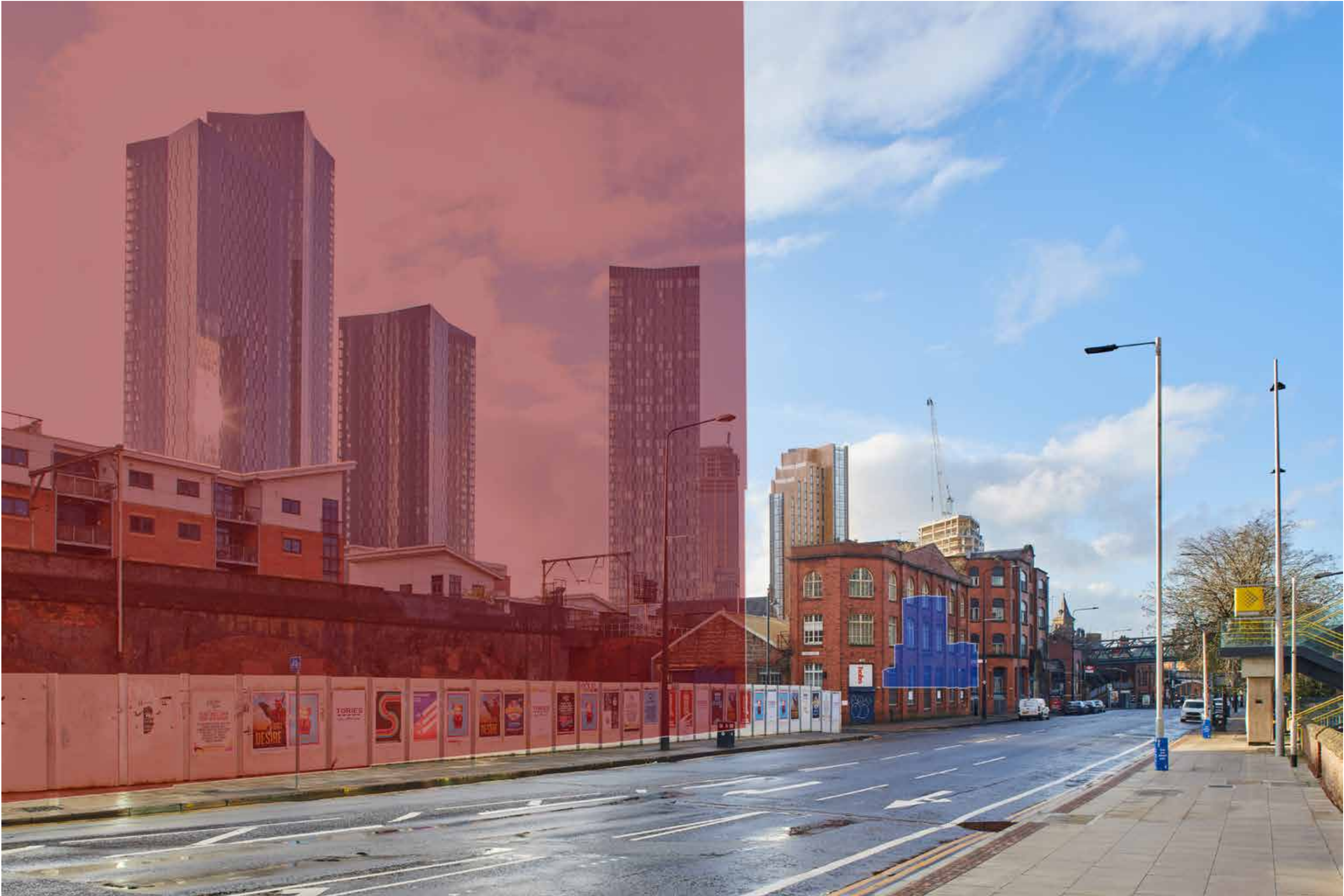
<u>Viewpoint:</u> Viewpoint 02: Looking West from Medlock Street, just North of the junction with First Street.	<u>Photograph Parameters:</u> Time of photograph: 13:02 Date of photograph: 25/11/2020 Camera: Canon 5D MKIV Lens: Canon TS-E 24mm f/3.5L II Horizontal Field of View: 74°	<u>Camera Location:</u> Grid reference: 383628.301E, 397413.956N Elevation (AOD): 32.676 m Camera height above ground level: 1.37m	<u>Notes:</u> • Photomontage is Visualisation Type 4/ AVR Level 3. • For photograph locations refer to 'View- point Location Map'.	<u>Legend:</u> 126668-FO-2020 125833-FO-2019 (Conflict) 125804-FO-2019 123261-FO-2019 121462-FO-2018t (Conflict) 116850-FO-2017 111003-FO- 2016-C1	 INFINITE 3D <u>Project:</u> Deansgate South	Consented <u>Paper Size:</u> A3 (420mmx297mm) <u>Image Size:</u> 390mmx260mm <u>Date:</u>11/12/2020
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<u>Viewpoint:</u> Viewpoint 03: Looking South West, West from Albion Street near the crossroads with Whitfield Street West.	<u>Photograph Parameters:</u> Time of photograph: 12:44 Date of photograph: 25/11/2020 Camera: Canon 5D MKIV Lens: Canon TS-E 24mm f/3.5L II Horizontal Field of View: 74°	<u>Camera Location:</u> Grid reference: 383608.137E, 397546.927N Elevation (AOD): 35.217m Camera height above ground level: 1.37m	<u>Notes:</u> For photograph locations refer to 'View-point Location Map'.	<u>Legend:</u>	 <u>Project:</u> Deansgate South	Existing View <u>Paper Size:</u> A3 (420mmx297mm) <u>Image Size:</u> 390mmx260mm <u>Date:</u>11/12/2020
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<u>Viewpoint:</u> Viewpoint 03: Looking South West, West from Albion Street near the crossroads with Whitfield Street West.	<u>Photograph Parameters:</u> Time of photograph: 12:44 Date of photograph: 25/11/2020 Camera: Canon 5D MKIV Lens: Canon TS-E 24mm f/3.5L II Horizontal Field of View: 74°	<u>Camera Location:</u> Grid reference: 383608.137E, 397546.927N Elevation (AOD): 35.217m Camera height above ground level: 1.37m	<u>Notes:</u> • Photomontage is Visualisation Type 4/ AVR Level 3. • For photograph locations refer to 'View-point Location Map'.	<u>Legend:</u>	 <u>Project:</u> Deansgate South	Photomontage <u>Paper Size:</u> A3 (420mmx297mm) <u>Image Size:</u> 390mmx260mm <u>Date:</u> 11/12/2020
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<u>Viewpoint:</u> Viewpoint 03: Looking South West, West from Albion Street near the crossroads with Whitfield Street West.	<u>Photograph Parameters:</u> Time of photograph: 12:44 Date of photograph: 25/11/2020 Camera: Canon 5D MKIV Lens: Canon TS-E 24mm f/3.5L II Horizontal Field of View: 74°	<u>Camera Location:</u> Grid reference: 383608.137E, 397546.927N Elevation (AOD): 35.217m Camera height above ground level: 1.37m	<u>Notes:</u> • Photomontage is Visualisation Type 4/ AVR Level 3. • For photograph locations refer to 'View-point Location Map'.	<u>Legend:</u> 126668-FO-2020 125833-FO-2019 (Conflict) 125804-FO-2019 123261-FO-2019 121462-FO-2018t (Conflict) 116850-FO-2017 111003-FO-2016-C1	 <u>Project:</u> Deansgate South	Consented <u>Paper Size:</u> A3 (420mmx297mm) <u>Image Size:</u> 390mmx260mm <u>Date:</u>11/12/2020
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<u>Viewpoint:</u> Viewpoint 04: Looking South, South West along the A56 from near Wood Street.	<u>Photograph Parameters:</u> Time of photograph: 11:26 Date of photograph: 25/11/2020 Camera: Canon 5D MKIV Lens: Canon TS-E 24mm f/3.5L II Horizontal Field of View: 74°	<u>Camera Location:</u> Grid reference: 383617.909E, 398190.880N Elevation (AOD): 35.353m Camera height above ground level: 1.37m	<u>Notes:</u> For photograph locations refer to 'View-point Location Map'.	<u>Legend:</u>	 Project: Deansgate South	Existing View Paper Size: A3 (420mmx297mm) Image Size: 390mmx260mm Date: 11/12/2020
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<u>Viewpoint:</u> Viewpoint 04: Looking South, South West along the A56 from near Wood Street.	<u>Photograph Parameters:</u> Time of photograph: 11:26 Date of photograph: 25/11/2020 Camera: Canon 5D MKIV Lens: Canon TS-E 24mm f/3.5L II Horizontal Field of View: 74°	<u>Camera Location:</u> Grid reference: 383617.909E, 398190.880N Elevation (AOD): 35.353m Camera height above ground level: 1.37m	<u>Notes:</u> • Photomontage is Visualisation Type 4/ AVR Level 3. • For photograph locations refer to 'View- point Location Map'.	<u>Legend:</u>	 <u>Project:</u> Deansgate South	Photomontage <u>Paper Size:</u> A3 (420mmx297mm) <u>Image Size:</u> 390mmx260mm <u>Date:</u>11/12/2020
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<u>Viewpoint:</u> Viewpoint 04: Looking South, South West along the A56 from near Wood Street.	<u>Photograph Parameters:</u> Time of photograph: 11:26 Date of photograph: 25/11/2020 Camera: Canon 5D MKIV Lens: Canon TS-E 24mm f/3.5L II Horizontal Field of View: 74°	<u>Camera Location:</u> Grid reference: 383617.909E, 398190.880N Elevation (AOD): 35.353m Camera height above ground level: 1.37m	<u>Notes:</u> • Photomontage is Visualisation Type 4/ AVR Level 3. • For photograph locations refer to 'View-point Location Map'.	<u>Legend:</u> 126668-FO-2020 125833-FO-2019 (Conflict) 125804-FO-2019 123261-FO-2019 121462-FO-2018t (Conflict) 116850-FO-2017 111003-FO-2016-C1	 <u>Project:</u> Deansgate South Consented <u>Paper Size:</u> A3 (420mmx297mm) <u>Image Size:</u> 390mmx260mm <u>Date:</u>11/12/2020
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Viewpoint: Viewpoint 05: Looking South West from St. Peter's Square Tram station.	Photograph Parameters: Time of photograph: 11:54 Date of photograph: 25/11/2020 Camera: Canon 5D MKIV Lens: Canon EF 50mm f/1.8 STM Horizontal Field of View: 40°	Camera Location: Grid reference: 384015.074E, 398009.975N Elevation (AOD): 41.921m Camera height above ground level: 1.37m	Notes: • For photograph locations refer to 'View-point Location Map'.	Legend:	 Project: Deansgate South	Existing View Paper Size: A3 (420mmx297mm) Image Size: 390mmx260mm Date: 11/12/2020
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Viewpoint: Viewpoint 05: Looking South West from St. Peters Square Tram station.	Photograph Parameters: Time of photograph: 11:54 Date of photograph: 25/11/2020 Camera: Canon 5D MKIV Lens: Canon EF 50mm f/1.8 STM Horizontal Field of View: 40°	Camera Location: Grid reference: 384015.074E, 398009.975N Elevation (AOD): 41.921m Camera height above ground level: 1.37m	Notes: • Photomontage is Visualisation Type 4 / AVR Level 0. • For photograph locations refer to 'View-point Location Map'.	Legend:	 Project: Deansgate South	Photomontage Paper Size: A3 (420mmx297mm) Image Size: 390mmx260mm Date: 11/12/2020
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<u>Viewpoint:</u> Viewpoint 05: Looking South West from St. Peters Square Tram station.	<u>Photograph Parameters:</u> Time of photograph: 11:54 Date of photograph: 25/11/2020 Camera: Canon 5D MKIV Lens: Canon EF 50mm f/1.8 STM Horizontal Field of View: 40°	<u>Camera Location:</u> Grid reference: 384015.074E, 398009.975N Elevation (AOD): 41.921m Camera height above ground level: 1.37m	<u>Notes:</u> • Photomontage is Visualisation Type 4 / AVR Level 0. • For photograph locations refer to 'View-point Location Map'.	<u>Legend:</u> 126668-FO-2020 125833-FO-2019 (Conflict) 125804-FO-2019 123261-FO-2019 121462-FO-2018t (Conflict) 116850-FO-2017 111003-FO-2016-C1	 <u>Project:</u> Deansgate South Consented <u>Paper Size:</u> A3 (420mmx297mm) <u>Image Size:</u> 390mmx260mm <u>Date:</u> 11/12/2020
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Viewpoint: Viewpoint 06: Looking West from Great Bridgewater Street.	Photograph Parameters: Time of photograph: 12:24 Date of photograph: 25/11/2020 Camera: Canon 5D MKIV Lens: Canon TS-E 24mm f/3.5L II Horizontal Field of View: 74°	Camera Location: Grid reference: 383937.664E, 397638.601N Elevation (AOD): 36.205m Camera height above ground level: 1.37m	Notes: For photograph locations refer to 'View-point Location Map'.	Legend:	 Project: Deansgate South	Existing View Paper Size: A3 (420mmx297mm) Image Size: 390mmx260mm Date: 11/12/2020
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<u>Viewpoint:</u> Viewpoint 06: Looking West from Great Bridgewater Street.	<u>Photograph Parameters:</u> Time of photograph: 12:24 Date of photograph: 25/11/2020 Camera: Canon 5D MKIV Lens: Canon TS-E 24mm f/3.5L II Horizontal Field of View: 74°	<u>Camera Location:</u> Grid reference: 383937.664E, 397638.601N Elevation (AOD): 36.205m Camera height above ground level: 1.37m	<u>Notes:</u> • Photomontage is Visualisation Type 4 / AVR Level 0. • For photograph locations refer to 'View-point Location Map'.	<u>Legend:</u>	 <u>Project:</u> Deansgate South	Photomontage <u>Paper Size:</u> A3 (420mmx297mm) <u>Image Size:</u> 390mmx260mm <u>Date:</u> 11/12/2020
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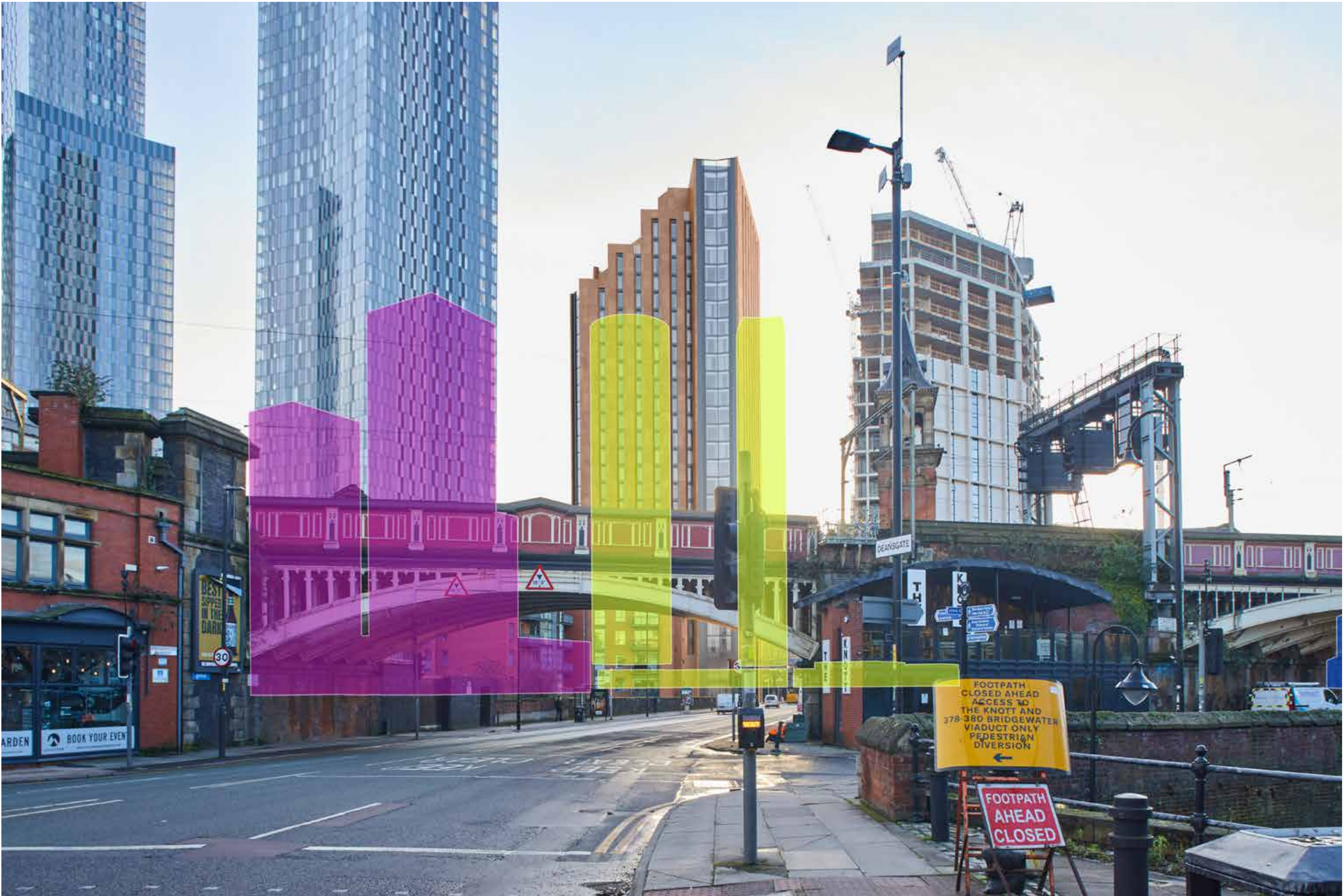
Viewpoint: Viewpoint 06: Looking West from Great Bridgewater Street.	Photograph Parameters: Time of photograph: 12:24 Date of photograph: 25/11/2020 Camera: Canon 5D MKIV Lens: Canon TS-E 24mm f/3.5L II Horizontal Field of View: 74°	Camera Location: Grid reference: 383937.664E, 397638.601N Elevation (AOD): 36.205m Camera height above ground level: 1.37m	Notes: • Photomontage is Visualisation Type 4 / AVR Level 0. • For photograph locations refer to 'Viewpoint Location Map'.	Legend: 126668-FO-2020 125833-FO-2019 (Conflict) 125804-FO-2019 123261-FO-2019 121462-FO-2018t (Conflict) 116850-FO-2017 111003-FO-2016-C1	INFINITE 3D Project: Deansgate South	Consented Paper Size: A3 (420mmx297mm) Image Size: 390mmx260mm Date: 11/12/2020
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<u>Viewpoint:</u> Viewpoint 07: Looking South West down Deansgate from bridge over Rochdale Canal.	<u>Photograph Parameters:</u> Time of photograph: 15:07 Date of photograph: 25/11/2020 Camera: Canon 5D MKIV Lens: Canon TS-E 24mm f/3.5L II Horizontal Field of View: 74°	<u>Camera Location:</u> Grid reference: 383377.540E, 397568.204N Elevation (AOD): 32.683m Camera height above ground level: 1.37m	<u>Notes:</u> For photograph locations refer to 'View-point Location Map'.	<u>Legend:</u>	 <u>Project:</u> Deansgate South	Existing View <u>Paper Size:</u> A3 (420mmx297mm) <u>Image Size:</u> 390mmx260mm <u>Date:</u>11/12/2020
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Viewpoint: Viewpoint 07: Looking South West down Deansgate from bridge over Rochdale Canal.	Photograph Parameters: Time of photograph: 15:07 Date of photograph: 25/11/2020 Camera: Canon 5D MKIV Lens: Canon TS-E 24mm f/3.5L II Horizontal Field of View: 74°	Camera Location: Grid reference: 383377.540E, 397568.204N Elevation (AOD): 32.683m Camera height above ground level: 1.37m	Notes: • Photomontage is Visualisation Type 4 / AVR Level 3. • For photograph locations refer to 'View-point Location Map'.	Legend:	 INFINITE 3D Project: Deansgate South	Photomontage Paper Size: A3 (420mmx297mm) Image Size: 390mmx260mm Date: 11/12/2020
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<u>Viewpoint:</u> Viewpoint 07: Looking South West down Deansgate from bridge over Rochdale Canal.	<u>Photograph Parameters:</u> Time of photograph: 15:07 Date of photograph: 25/11/2020 Camera: Canon 5D MKIV Lens: Canon TS-E 24mm f/3.5L II Horizontal Field of View: 74°	<u>Camera Location:</u> Grid reference: 383377.540E, 397568.204N Elevation (AOD): 32.683m Camera height above ground level: 1.37m	<u>Notes:</u> • Photomontage is Visualisation Type 4 / AVR Level 3. • For photograph locations refer to 'View- point Location Map'.	<u>Legend:</u> 126668-FO-2020 125833-FO-2019 (Conflict) 125804-FO-2019 123261-FO-2019 121462-FO-2018t (Conflict) 116850-FO-2017 111003-FO- 2016-C1	INFINITE 3D <u>Project:</u> Deansgate South Consented Paper Size: A3 (420mmx297mm) Image Size: 390mmx260mm Date: 11/12/2020
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Viewpoint: Viewpoint 08: Looking East from the Canal footpath near Blantyre Street.	Photograph Parameters: Time of photograph: 14:29 Date of photograph: 25/11/2020 Camera: Canon 5D MKIV Lens: Canon TS-E 24mm f/3.5L II Horizontal Field of View: 74°	Camera Location: Grid reference: 382944.004E, 397538.705N Elevation (AOD): 27.154m Camera height above ground level: 1.37m	Notes: • For photograph locations refer to 'View- point Location Map'.	Legend:	 INFINITE 3D Project: Deansgate South	Existing View Paper Size: A3 (420mmx297mm) Image Size: 390mmx260mm Date: 11/12/2020
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Viewpoint: Viewpoint 08: Looking East from the Canal footpath near Blantyre Street.	Photograph Parameters: Time of photograph: 14:29 Date of photograph: 25/11/2020 Camera: Canon 5D MKIV Lens: Canon TS-E 24mm f/3.5L II Horizontal Field of View: 74°	Camera Location: Grid reference: 382944.004E, 397538.705N Elevation (AOD): 27.154m Camera height above ground level: 1.37m	Notes: • Photomontage is Visualisation Type 4 / AVR Level 3. • For photograph locations refer to 'View-point Location Map'.	Legend:	 INFINITE 3D Project: Deansgate South	Photomontage Paper Size: A3 (420mmx297mm) Image Size: 390mmx260mm Date: 11/12/2020
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Viewpoint: Viewpoint 08: Looking East from the Canal footpath near Blantyre Street.	Photograph Parameters: Time of photograph: 14:29 Date of photograph: 25/11/2020 Camera: Canon 5D MKIV Lens: Canon TS-E 24mm f/3.5L II Horizontal Field of View: 74°	Camera Location: Grid reference: 382944.004E, 397538.705N Elevation (AOD): 27.154m Camera height above ground level: 1.37m	Notes: • Photomontage is Visualisation Type 4 / AVR Level 3. • For photograph locations refer to 'View-point Location Map'.	Legend: 126668-FO-2020 125833-FO-2019 (Conflict) 125804-FO-2019 123261-FO-2019 121462-FO-2018t (Conflict) 116850-FO-2017 111003-FO-2016-C1	 Project: Deansgate South	Consented Paper Size: A3 (420mmx297mm) Image Size: 390mmx260mm Date: 11/12/2020
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<u>Viewpoint:</u> Viewpoint 09: Looking North East up the A56 between the junctions of Angela Street and Lower Moss Lane.	<u>Photograph Parameters:</u> Time of photograph: 14:05 Date of photograph: 25/11/2020 Camera: Canon 5D MKIV Lens: Canon TS-E 24mm f/3.5L II Horizontal Field of View: 74°	<u>Camera Location:</u> Grid reference: 382812.935E, 397190.536N Elevation (AOD): 31.928m Camera height above ground level: 1.37m	<u>Notes:</u> For photograph locations refer to 'View-point Location Map'.	<u>Legend:</u>	 Project: Deansgate South	Existing View Paper Size: A3 (420mmx297mm) Image Size: 390mmx260mm Date: 11/12/2020
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<u>Viewpoint:</u> Viewpoint 09: Looking North East up the A56 between the junctions of Angela Street and Lower Moss Lane.	<u>Photograph Parameters:</u> Time of photograph: 14:05 Date of photograph: 25/11/2020 Camera: Canon 5D MKIV Lens: Canon TS-E 24mm f/3.5L II Horizontal Field of View: 74°	<u>Camera Location:</u> Grid reference: 382812.935E, 397190.536N Elevation (AOD): 31.928m Camera height above ground level: 1.37m	<u>Notes:</u> • Photomontage is Visualisation Type 4 / AVR Level 3. • For photograph locations refer to 'View-point Location Map'.	<u>Legend:</u>	 <u>Project:</u> Deansgate South	Photomontage <u>Paper Size:</u> A3 (420mmx297mm) <u>Image Size:</u> 390mmx260mm <u>Date:</u> 11/12/2020
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<u>Viewpoint:</u> Viewpoint 09: Looking North East up the A56 between the junctions of Angela Street and Lower Moss Lane.	<u>Photograph Parameters:</u> Time of photograph: 14:05 Date of photograph: 25/11/2020 Camera: Canon 5D MKIV Lens: Canon TS-E 24mm f/3.5L II Horizontal Field of View: 74°	<u>Camera Location:</u> Grid reference: 382812.935E, 397190.536N Elevation (AOD): 31.928m Camera height above ground level: 1.37m	<u>Notes:</u> • Photomontage is Visualisation Type 4 / AVR Level 3. • For photograph locations refer to 'View-point Location Map'.	<u>Legend:</u> 126668-FO-2020 125833-FO-2019 (Conflict) 125804-FO-2019 123261-FO-2019 121462-FO-2018t (Conflict) 116850-FO-2017 111003-FO-2016-C1	<u>Project:</u> Deansgate South	Consented <u>Paper Size:</u> A3 (420mmx297mm) <u>Image Size:</u> 390mmx260mm <u>Date:</u> 11/12/2020
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<u>Viewpoint:</u> Viewpoint 10: Looking North from Hulme Park.	<u>Photograph Parameters:</u> Time of photograph: 13:49 Date of photograph: 25/11/2020 Camera: Canon 5D MKIV Lens: Canon TS-E 24mm f/3.5L II Horizontal Field of View: 74°	<u>Camera Location:</u> Grid reference: 383319.876E, 397012.701N Elevation (AOD): 33.382m Camera height above ground level: 1.37m	<u>Notes:</u> For photograph locations refer to 'View-point Location Map'.	<u>Legend:</u>	 Project: Deansgate South	Existing View Paper Size: A3 (420mmx297mm) Image Size: 390mmx260mm Date: 11/12/2020
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<u>Viewpoint:</u> Viewpoint 10: Looking North from Hulme Park.	<u>Photograph Parameters:</u> Time of photograph: 13:49 Date of photograph: 25/11/2020 Camera: Canon 5D MKIV Lens: Canon TS-E 24mm f/3.5L II Horizontal Field of View: 74°	<u>Camera Location:</u> Grid reference: 383319.876E, 397012.701N Elevation (AOD): 33.382m Camera height above ground level: 1.37m	<u>Notes:</u> • Photomontage is Visualisation Type 4 / AVR Level 3. • For photograph locations refer to 'View-point Location Map'.	<u>Legend:</u>	 INFINITE 3D <u>Project:</u> Deansgate South	Photomontage <u>Paper Size:</u> A3 (420mmx297mm) <u>Image Size:</u> 390mmx260mm <u>Date:</u>11/12/2020
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<u>Viewpoint:</u> Viewpoint 10: Looking North from Hulme Park.	<u>Photograph Parameters:</u> Time of photograph: 13:49 Date of photograph: 25/11/2020 Camera: Canon 5D MKIV Lens: Canon TS-E 24mm f/3.5L II Horizontal Field of View: 74°	<u>Camera Location:</u> Grid reference: 383319.876E, 397012.701N Elevation (AOD): 33.382m Camera height above ground level: 1.37m	<u>Notes:</u> • Photomontage is Visualisation Type 4 / AVR Level 3. • For photograph locations refer to 'View-point Location Map'.	<u>Legend:</u> 126668-FO-2020 125833-FO-2019 (Conflict) 125804-FO-2019 123261-FO-2019 121462-FO-2018t (Conflict) 116850-FO-2017 111003-FO-2016-C1	 <u>Project:</u> Deansgate South	Consented Paper Size: A3 (420mmx297mm) Image Size: 390mmx260mm Date: 11/12/2020
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<u>Viewpoint:</u> Viewpoint 11: Looking North West from Bonsall Street.	<u>Photograph Parameters:</u> Time of photograph: 13:28 Date of photograph: 25/11/2020 Camera: Canon 5D MKIV Lens: Canon EF 50mm f/1.8 STM Horizontal Field of View: 40°	<u>Camera Location:</u> Grid reference: 383829.193E, 396760.327N Elevation (AOD): 35.668m Camera height above ground level: 1.37m	<u>Notes:</u> For photograph locations refer to 'View-point Location Map'.	<u>Legend:</u>	 Project: Deansgate South	Existing View Paper Size: A3 (420mmx297mm) Image Size: 390mmx260mm Date: 11/12/2020
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<u>Viewpoint:</u> Viewpoint 11: Looking North West from Bonsall Street.	<u>Photograph Parameters:</u> Time of photograph: 13:28 Date of photograph: 25/11/2020 Camera: Canon 5D MKIV Lens: Canon EF 50mm f/1.8 STM Horizontal Field of View: 40°	<u>Camera Location:</u> Grid reference: 383829.193E, 396760.327N Elevation (AOD): 35.668m Camera height above ground level: 1.37m	<u>Notes:</u> • Photomontage is Visualisation Type 4 / AVR Level 0. • For photograph locations refer to 'View-point Location Map'.	<u>Legend:</u>	 Project: Deansgate South	Photomontage Paper Size: A3 (420mmx297mm) Image Size: 390mmx260mm Date: 11/12/2020
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<u>Viewpoint:</u> Viewpoint 11: Looking North West from Bonsall Street.	<u>Photograph Parameters:</u> Time of photograph: 13:28 Date of photograph: 25/11/2020 Camera: Canon 5D MKIV Lens: Canon EF 50mm f/1.8 STM Horizontal Field of View: 40°	<u>Camera Location:</u> Grid reference: 383829.193E, 396760.327N Elevation (AOD): 35.668m Camera height above ground level: 1.37m	<u>Notes:</u> • Photomontage is Visualisation Type 4 / AVR Level 0. • For photograph locations refer to 'View-point Location Map'.	<u>Legend:</u> 126668-FO-2020 125833-FO-2019 (Conflict) 125804-FO-2019 123261-FO-2019 121462-FO-2018t (Conflict) 116850-FO-2017 111003-FO-2016-C1	 INFINITE 3D Project: Deansgate South	Consented Paper Size: A3 (420mmx297mm) Image Size: 390mmx260mm Date: 11/12/2020
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<u>Viewpoint:</u>	<u>Photograph Parameters:</u>	<u>Camera Location:</u>	<u>Notes:</u>	<u>Legend:</u>		Existing View
Viewpoint 12: Looking South East from Irwell River Park.	Time of photograph: 14:45 Date of photograph: 25/11/2020 Camera: Canon 5D MKIV Lens: Canon EF 50mm f/1.8 STM Horizontal Field of View: 40°	Grid reference: 382632.226E, 397808.729N Elevation (AOD): 23.473m Camera height above ground level: 1.37m	For photograph locations refer to 'View-point Location Map'.			<u>Paper Size:</u> A3 (420mmx297mm)
					<u>Project:</u>	<u>Image Size:</u> 390mmx260mm
					Deansgate South	<u>Date:</u> 11/12/2020



<u>Viewpoint:</u> Viewpoint 12: Looking South East from Irwell River Park.	<u>Photograph Parameters:</u> Time of photograph: 14:45 Date of photograph: 25/11/2020 Camera: Canon 5D MKIV Lens: Canon EF 50mm f/1.8 STM Horizontal Field of View: 40°	<u>Camera Location:</u> Grid reference: 382632.226E, 397808.729N Elevation (AOD): 23.473m Camera height above ground level: 1.37m	<u>Notes:</u> • Photomontage is Visualisation Type 4 / AVR Level 3. • For photograph locations refer to 'View-point Location Map'.	<u>Legend:</u>	 <u>Project:</u> Deansgate South	Photomontage <u>Paper Size:</u> A3 (420mmx297mm) <u>Image Size:</u> 390mmx260mm <u>Date:</u>11/12/2020
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<u>Viewpoint:</u> Viewpoint 12: Looking South East from Irwell River Park.	<u>Photograph Parameters:</u> Time of photograph: 14:45 Date of photograph: 25/11/2020 Camera: Canon 5D MKIV Lens: Canon EF 50mm f/1.8 STM Horizontal Field of View: 40°	<u>Camera Location:</u> Grid reference: 382632.226E, 397808.729N Elevation (AOD): 23.473m Camera height above ground level: 1.37m	<u>Notes:</u> • Photomontage is Visualisation Type 4 / AVR Level 3. • For photograph locations refer to 'View-point Location Map'.	<u>Legend:</u> 126668-FO-2020 125833-FO-2019 (Conflict) 125804-FO-2019 123261-FO-2019 121462-FO-2018t (Conflict) 116850-FO-2017 111003-FO-2016-C1	 INFINITE 3D Project: Deansgate South	Consented Paper Size: A3 (420mmx297mm) Image Size: 390mmx260mm Date: 11/12/2020
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