# Appendix 3 Visualiser Methodology.

# **1** Viewpoint Locations



Contains OS data  $\ensuremath{\mathbb{C}}$  Crown copyright and database right 2024

## Legend



Viewpoint location

Site Boundary

# **2** Viewpoint Data

VP	Description	Direction (looking)	Visualisation Level & Type	Distance to site boundary	Easting	Northing	Ground AOD	Date / Time	Camera Height	Camera	Lens	Focal Length	Horizon	Projection	HFoV
01	West End Road / Wood Lane, looking north-east	NE	AVR3 - Type4	16.5m	509381.33	186808.94	45.87	23/08/2024 / 13:13	1.65m	Canon EOS 5DS (35mm)	Canon TS-E 24mm F/3.5L	24mm	Central	Planar	74°
06	Kings Lodge / West End Road, looking south-east	SE	AVR3 - Type4	102.0m	509425.39	187068.72	48.43	23/08/2024 /16:15	1.65m	Canon EOS 5DS (35mm)	Canon TS-E 24mm F/3.5L	24mm	Central	Planar	74° / 40° *
08	Eversley Crescent / Willow Grove, looking west	W	AVR3 - Type4	52.0m	509557.68	186965.58	43.59	23/08/2024 / 12:07	1.65m	Canon EOS 5DS (35mm)	Canon TS-E 24mm F/3.5L	24mm	Central	Planar	74°

\* Additional 40° Horizontal Field of View (HFov) enlargement/crop provided. Equivalent to a 50mm lens (full-frame 35mm camera).

# **View 1** West End Road / Wood Lane, looking north-east Baseline and View Data



VP	Description	Direction (looking)	Visualisation Level & Type	Distance to site boundary	Easting	Northing	Ground AOD	Date / Time	Camera Height	Camera	Lens	Focal Length	Horizon	Projection	HFoV
01	West End Road / Wood Lane, looking north-east	NE	AVR3 - Type4	16.5m	509381.33	186808.94	45.87	23/08/2024 / 13:13	1.65m	Canon EOS 5DS (35mm)	Canon TS-E 24mm F/3.5L	24mm	Central	Planar	74°





View 1 — Proposed AVR3-Type4



Scale this bar to 10cm for 96% digital on-screen viewing.

# **View 6** Kings Lodge / West End Road, looking south-east Baseline and View Data



VP	Description	Direction (looking)	Visualisation Level & Type	Distance to site boundary	Easting	Northing	Ground AOD	Date / Time	Camera Height	Camera	Lens	Focal Length	Horizon	Projection	HFoV
06	Kings Lodge / West End Road, looking south-east	SE	AVR3 - Type4	102.0m	509425.39	187068.72	48.43	23/08/2024 /16:15	1.65m	Canon EOS 5DS (35mm)	Canon TS-E 24mm F/3.5L	24mm	Central	Planar	74° / 40° *

\* Additional 40° Horizontal Field of View (HFov) enlargement/crop provided. Equivalent to a 50mm lens (full-frame 35mm camera).



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View 6 — Proposed AVR3-Type4





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# **View 8** Eversley Crescent / Willow Grove, looking west Baseline and View Data



VP	Description	Direction (looking)	Visualisation Level & Type	Distance to site boundary	Easting	Northing	Ground AOD	Date / Time	Camera Height	Camera	Lens	Focal Length	Horizon	Projection	HFoV
08	Eversley Crescent / Willow Grove, looking west	W	AVR3 - Type4	52.0m	509557.68	186965.58	43.59	23/08/2024 / 12:07	1.65m	Canon EOS 5DS (35mm)	Canon TS-E 24mm F/3.5L	24mm	Central	Planar	74°



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een viewing Scale this bar to 10cm for 96% digital on-

Page - 15

## **4 Project Specific, Technical Methodology**

This section should be read in conjunction with the 'Technical Methodology' overview in Appendix A.

**AVR Consultant:** Preconstruct Ltd

Preconstruct Project Number: 5320

**Client:** Chase New Homes

Architect: CMYK (Planning and Design) Ltd

Landscape Architect: The Landscape Partnership Ltd

Planning Consultant: Iceni Projects

**Coordinate System** 

OS GB 36

**Preconstruct Project Offset** -509450E, -186911N

Visualisation Type (LI)

Type 4

#### **Viewpoints Selection**

The viewpoint locations were identified by Iceni Projects based on fieldwork and reference to relevant policy and guidance.

Please see the accompanying Heritage & Townscape Visual Impact Assessment for further details.

### **AVR** Level and Treatment Notes

#### AVR3 / Rendered

Development depicted as 'photorealistic' including the application of materials.

Occluded areas of the development are masked out.

### Demolished / Removed

'To be demolished' elements are painted out. And newly 'revealed' elements are approximated and 'painted in' using site photography, digital mapping services and LIDAR data.

### Method for — calculating OS viewpoint location

Bespoke viewpoint survey. (Accuracy — typically better than  $\pm 0.2m$ ) Method for — target point alignment / camera matching Bespoke viewpoint survey and supporting LIDAR point cloud data.

(Accuracy of feature alignment — typically better than ±0.3m)

Method for — placing proposed model (horizontally)

Digital model geolocated using OS references in architectural, landscape and survey plans, including: - SITE SURVEYA.dwg.DWG (received: 03/09/2024)

### Method for — placing proposed models (vertically)

The digital model of each individual building was positioned at the proposed AOD height using the FFL heights from the 'Levels' Stategy Layout' and other accompanying drawings - supplied to us in the Drainage Strategy Report. FRA Drainage Strategy Report - Rev PO2.pdf (received: 02/09/2024)

#### Lens and Image Format Choices

#### 24mm / Single Frame / 73.7° HFoV / 96% @ A1

This format was selected to show a representative and informative view of the development, and its context, for the close-range views. The focal length allowed for the capturing of both the height and width of the development and its context. This would not be adequately captured with narrower focal lengths or alternative panoramic formats.

### 50mm Equivalent (24mm Enlarged/Cropped to 50mm) / Single Frame / 39.6° HFoV / 100% @ A3

This is a supporting format offering a 50mm equivalent focallength for the 24mm views (where appropriate). It is supplied as an additional image page where a 24mm lens selection is made (for the purposes of capturing context) but the proposed development would still fit within a 50mm (27° HFoV x 18.2° VFoV) frame. All listed focal lengths relate to a Full Frame Sensor (FFS) camera format.

Where applicable image enlargement values, and their corresponding printed page sizes, are shown on each 'Baseline' and 'Proposed' page. Pages should be viewed at a comfortable arm's length. Additionally, a digital scale is shown on some pages to assist with on-screen viewing.

#### **Photography Equipment**

Lens - Canon TS-E 24mm F/3.5L 24mm prime lens) Tripod - Innorel Tripod Head - Fanotec Leveler Tripod Head - Leofoto Nodal Slide Misc - Street Marking Paint / Marker Pen Misc - Survey Nails / Pegs

**Architectural Design Information Received** The depiction of the development, and its materiality, was directed and reviewed by the architect.

The architect provided a digital Autodesk 3DSMax model of the development: - The Barn Hotel 001.max (received: 03/09/2024)

#### Landscape Design Information Received

reference, including:

at: Year 15.

#### **Tree Removal Notes**

Tree removal was outlined in the landscape plan: - B22138.101G Landscape Proposals.dwg (received: 09/08/2024) With supporting comments and direction given directly from the client and landscape architect.

Camera - Canon EOS 5DS (Full Frame Sensor / 35mm) (No T/S function was used. Therefore, this replicates a standard

Tripod Head - Koolehaoda Panoramic head/rotator. Misc - Camera Mounted Spirit Level / In-Camera Digital Level

The depiction of the development landscaping and planting was directed and reviewed by the landscape architect. The landscape architect provided 2D drawings and additional

- B22138.101G Landscape Proposals.dwg (received: 09/08/2024)

Proposed trees and hedges (size and leaf coverage) are depicted

(Sizes and growth rates provided by the landscape architect).

This section should be read in conjunction with the 'Project Specific, Technical Methodology' found in Section 4.

#### Introduction

The process of creating Accurate Visual Representations (AVRs) was carried out by Preconstruct Ltd. Preconstruct was founded in 2003 and are specialists in Architectural Visualisation.

Accurate Visual Representations (AVRs) are also known as: Verified Views; Verified Images; Verified Visual Images (VVI); Visually Verifiable Montages (VVM).

AVRs are photomontages that depict digital 3D models of proposed developments accurately, and at the correct scale, within their proposed setting. They use survey data and follow a technical methodology to ensure precision and credibility.

Preconstruct use a methodology that aligns with the relevant sections of: The Landscape Institute/IEMA - Guidelines for Landscape and Visual Impact Assessment (3rd edition 2013); The Landscape Institute - Visual Representation of Development Proposals - Technical Guidance Note (Sept 2019); and the London View Management Framework Supplementary Planning Guidance: Appendix C: Accurate Visual Representations (March 2012).

The AVRs in this document are classified as 'Type 4' and demonstrate high levels of accuracy. The AVR 'Levels' in this document range from 1 to 3. A summary of both the 'Type' and 'Level' classifications can be found in Appendix C.

#### **Viewpoint Selection**

Viewpoint selection is typically made by the planning consultant in dialogue with the relevant planning authority and follows relevant policy and guidance. Views are identified using a combination of approaches including: fieldwork; Zone of Theoretical Visibility (ZTV) studies; digital mapping observations; and exploration of digital models such as VUCITY or Zmapping.

The views in this document will often accompany a Landscape (or Townscape) Visual Impact Assessment (LVIA / TVIA). These documents will contain further details on each viewpoint assessment.

#### Photography

The photographer is instructed using a detailed map, and often preliminary scoping photography and/or digital model views.

Every effort is made to shoot the photography under good lighting

and visibility conditions, working within the constraints of the project timeline.

For each viewpoint a high resolution photograph is taken with a Full Frame Sensor (FFS / 35mm) digital camera. The camera is set at 1.65m above the ground on a tripod to represent an average observer's eye-level. This height is only deviated from if there is foreground obstruction such as a wall, fence or bridge barrier. The camera is levelled using a combination of bubbled tripod head, camera-mounted spirit level and in-camera digital level. Photographs are taken in manual mode — balancing shutter speed, aperture size and ISO to make the photos well exposed, sharp and with as little noise as possible.

The photographer records and pins the camera location using phone GPS, aerial photography and digital mapping observations. They also photograph the tripod in position. The location is marked typically with a nail/peg and paint. Where applicable, we instruct a subcontracted surveyor to revisit these locations to record accurate viewpoint positions and survey contextual reference points, as seen in the view/photograph.

#### **Panoramic Photography**

Panoramic photography is shot using a 50mm lens in portrait orientation on a panoramic tripod head. A rotational index of 15° or less (allowing an approximate overlap of 50%) is used to capture a series of individual frames that can be stitched to form a panoramic image. The portrait orientation allows for greater flexibility during stitching and image correction. The portrait orientation also allows for the horizontal optical axis (horizon) to be highered or lowered (via the crop location). This is useful for tall developments or context with extreme height variations.

#### Lens Selection, Focal Lengths and Image Formats

Please note the following for all references within this document:

- All focal lengths listed relate to a Full Frame Sensor (FFS) camera format.
- HFoV = Horizontal Field of View
- VFoV = Vertical Field of View

There is no definitive lens or field of view choice suitable for all planning photomontages. All lens and format choices have been made in good faith to make the views informative and consistent, and never to mislead the viewer. We strongly recommend that all parties use the AVRs as a complement to on-site assessment, not a replacement.

The focal length choice is often led by preliminary scoping

photography taken by the planning consultant. When selecting a focal length and image format, a sensible balance must be struck that depicts the proposed development clearly but also captures it within the important peripheral context of its environment. We also aim to create consistency across viewpoints (in the same project) by using a limited range of formats to make the viewpoints easier to assess and understand.

#### Use of 50mm (FFS) Lens

For rural settings and for mid-range to long-range views, a 50mm lens is preferred. This allows for a range of suitable format options, including:

50mm Landscape, Single Frame

39.6° HFoV x 27°VFoV (slight lens variations apply) 100% @ A3 - Image size: 390mm x 260mm Suitable for mid-range to long-range views

50mm Landscape, (Enlarged/Cropped to 75mm Equivalent) 27° HFoV x 18.2° VFoV (slight lens variations apply) 150% @ A3 - Image size: 390mm x 260mm Suitable for long-range views

90°HFoV x 27° VFoV 96% @ A1-width / 2 x A3 side-by-side -Image size: 820mm x 250mm (/height as appropriate) Suitable for wide baseline images, or for depicting large/linear developments, such as masterplans, housing schemes and cityscapes etc.

### 50mm Stitched Panoramic Image - Planar Projection

60°HFoV x 27° VFoV 100% @ A1-width / 2 x A3 side-by-side Image size: 625 mm × 260mm Suitable for mid-range to long-range views Note that similar FoV and format variations can be achieved using single frames with wider lenses without the need for stitching (such as 24mm and 35mm).

### 50mm Stitched Panoramic Image - Planar Projection

53.5°HFoV x 18.2° VFoV 150% @ A1-width / 2 x A3 side-by-side -Image size: 820mm x 250mm (/height as appropriate) Suitable for mid-range to long-range views Note that similar FoV and format variations can be achieved using single frames with wider lenses without the need for stitching (such as 24mm and 35mm).

#### 50mm Stitched Panoramic Image - Cylindrical Projection

#### Use of Wider Angle Lenses

For urban settings, close-range and often mid-range views, wider lens choices are necessary. The full width and height of a development must be considered, along with the important peripheral context of its environment — in many case this includes tall trees and/or multi-storey buildings. In the urban setting it is also important to give the viewer a good perceptual grounding of where the photographer was standing.

Our standard selection of wider lens choices includes:

#### 35mm Landscape, Single Frame

54.4° HFoV x 37.8° VFoV (slight lens variations apply) 24mm Landscape, Single Frame 73.7° HFoV x 53.1° VFoV (slight lens variations apply) 24mm Landscape, Tilt/Shift, Single Frame 73.7° HFoV x 53.1° VFoV (slight lens variations apply) (28mm lenses are excluded to keep equipment weight manageable.)

For views that require capturing an HFoV greater than 73.7° (24mm), multiple overlapping or butted frames from the same viewpoint may be presented.

Where a wider lens choice is made for the purposes of capturing context, but the proposed development would still fit within a 50mm (27° HFoV x 18.2° VFoV) single frame, a supporting crop/ enlargement is often included on an additional page - this is a 50mm equivalent (100% @ A3 - 390mm x 260mm).

#### Use of 24mm Tilt Shift (T/S) Lens

The Tilt Shift (T/S) lens (and large format cameras with a 'shift' ability) are long-time staples of architectural visualisation and photography, especially within urban settings. The used of T/S lenses is referenced in Appendix 13, page 54 of The Landscape Institute - Visual Representation of Development Proposals -Technical Guidance Note (Sept 2019).

We only ever use a T/S lens with the 'shift' function, never 'tilt'. It is used in good faith to make views more informative, and never to wrongly accentuate elements such as sky.

Where the 24mm T/S lens is selected it is only used with either: 1) No T/S function (therefore replicating a standard prime lens). Here the view is annotated 'Horizon - Central' within the view data tables on the 'Baseline and View Data' pages. The red arrows in the FoV scale on either side of the view (marking the horizon line / optical axis) are central.

2) Only with an upwards 'shift' function. Here the view is annotated 'Horizon - Lowered' within the view data tables on the 'Baseline and View Data' pages. The red arrows in the FoV scale, on either side of the frame, (marking the horizon line / optical axis) are lowered.

This upwards 'shift' function (2) is only used in the case of one or more of the following reasons:

- The proposed development is tall and important elements would extend off the top of a non-shifted view.
- Important surrounding context, such as tall buildings or trees, would extend off the top of a non-shifted view.
- The upper portions of the view are more informative than the lower portions (often the lower portions of an non-shifted view are large areas of plain road or landscape, whereas the upper portions are relevant buildings or context).

Using an upwards 'shift' function is favoured over non-shifted portrait format images. This is because portrait views would include a large amount of non-essential content on the lower half of the frame and also miss important horizontal context on either side of the frame. A cohesive landscape approach also provides greater consistency of HFoVs across the project viewpoints, as well as making the presentation of useful enlargement values more practical.

#### Photography — Baseline Post Production

Each baseline photograph has basic colour correction applied. The aim is to give a balanced impression of the scene as the photographer experienced it.

The processing is applied to the 16bit RAW file using either Adobe Lightroom or Adobe Photoshop (Camera Raw). This includes, but is not limited to, adjustments in; colour temperature and tint; levels such as exposure and contrast; shadow and highlight recovery; sky recovery through the use of gradient corrections and AI masking; and other post processing effects such as sharpening and noise reduction.

The intent of post production is to remain minimal and true to the scene with no cloning out of features etc. However, occasionally a temporary obstruction, such as a vehicle or person, may be removed (through multi-frame compositing) if it obstructs the development or forms a significant distraction.

For panoramic views, frame sequences are stitched together in PTGui and exported as cylindrical or planar projections, with the desired field of view (depending on the project's needs).

For 'shifted' views shot with a Tilt/Shift lens, non-shifted and shifted shots are often stitched vertically (planar method), and then cropped back to their original format. This allows the amount of shift used to be chosen once the development is compositied in place and therefore kept to a minimum.

#### Surveying

We have 2 typical approaches for the collection and use of survey data for the accurate calculation of viewpoint locations and contextual reference points (target points for camera matching). For some projects, a hybrid methodology is used. For further project specific information, see Section 4.

**Contextual Reference Points** Accuracy — typically better than ±0.2m

A survey subcontractor is instructed to carry out a bespoke field survey for each viewpoint. They are issued: marked-up baseline photographs, maps and tripod location photographs. For each viewpoint, the surveyor records the viewpoint location, photograph centre line (the camera bearing) and a range of contextual reference points.

#### Typical Equipment

GPS - Leica Viva GS16 GNSS Smart Antenna, or Geomax Zenith 40. Total Station - Leica (various models) 1' accuracy with 1000m reflectorless laser.

Viewpoint (Camera) Locations

The camera positions are used as setup points for the total station. Using a the GPS receiver the surveyor records the locations. 2-4 control stations are used for long distance accuracy and to identify outliers. Where GPS positioning is not possible from the exact camera position, the surveyor works back from an alternative GPS location.

### **Contextual Reference Points**

From each viewpoint, 10-20 contextual reference points (fixed details visible in the baseline photograph) are measured using a Total Station - reflectorless laser. Example reference points include features on: surround buildings, street markings and street furniture etc. Common contextual reference points are observed from different setup points to check and increase accuracy. For longrange views, where suitable reference points are too far from the station, additional closer-up set-ups are used.

## Survey Approach 1: Bespoke Survey for Viewpoint Locations &

#### **Data Processing and Delivery**

Data is processed using Leica GeoOffice and TerraModel, or similar. All survey points are recorded in OSGB36 grid and datum. Each point is numbered and its coordinates provided as a baseline photograph mark-up and data tables.

#### Survey Approach 2: Publicly Available LIDAR Data Accuracy — typically better than ±2.0m

This approach primarily uses point cloud LIDAR Data sourced via The Department for Environment Food & Rural Affairs.

A LIDAR point cloud forms a replacement (or supplement) to contextual reference points captured through bespoke survey (see Approach 1). While individual features in the point cloud can be less accurate than an individual point from a bespoke field survey, the dense spread of points across the entire scene makes accurate camera matching possible.

Viewpoints locations are calculated and fine-tuned by crossreferencing several sources including: phone GPS by photographer, digital mapping 'pin' by photographer, tripod photographs, feature observations on aerial photography, LIDAR data, OS data and georeferenced digital mapping services.

This method is most frequently used when: viewpoint locations are impractical to visit with full survey equipment such as: isolated rural locations, hill tops and muddy paths etc; viewpoint locations are a long way from the proposed development site and therefore a precise location is less critical for an accurate camera match; or when additional viewpoints are commissioned after a bespoke survey has already been completed.

#### Survey Approach: Hybrid

For some projects a hybrid of both survey approaches (1 & 2) is used. For example, a bespoke survey is commissioned but this is supplemented with LIDAR data for improved camera matching and occlusion calculations. Or, a bespoke survey is commissioned for close-range views and LIDAR data is used for long-range where viewpoint location accuracy is less important for a good camera match.

#### **Digital 3D Modelling**

A 3D digital model of the proposed development is generally supplied by the project architect. If a model isn't available, we create a model from provided .dwg drawings in Autodesk 3ds Max. Proposed landscaping elements, trees and vegetation are also added to reflect .dwg plans and supporting information supplied by the landscape architect. Where applicable (for AVR3 / Rendered), materials and textures are applied to the model to reflect reference provided by the design team. Later the architect and landscape architect check the final 'Proposed' views to make sure that details are interpreted correctly.

We create a georeferenced 3D scene in 3ds Max. This brings together all the necessary layered assets in the same coordinated system (typically OSGB36). For example: proposed development model, proposed landscape model, and proposed trees and vegetation. An X & Y offset is used to bring the proposed development closer to the origin in 3ds Max — this improves software accuracy.

The proposed elements are typically positioned (horizontally) using a OS referenced .dwg plan showing the proposed development footprint, and vertically by cross-referencing several AOD heights from elevations or sections (.pdf or .dwg).

#### Camera Matching, Compositing & Verification

The survey data (including: viewpoint locations, camera bearings and contextual reference points) is imported into the georeferenced 3D scene (in 3ds Max) using a proprietary script. Where applicable, supporting LIDAR point cloud data is also imported. At each viewpoint location a virtual camera is created with the correct bearing.

Point cloud renders (made up of the surveyed contextual reference points and LIDAR data) are made for each viewpoint. Using Adobe Photoshop the baseline photography and point cloud renders are composited together and accurately aligned. Our preferred render engine is Chaos Group Vray.

An example of a composite view showing the multiple layers of image data used for a typical alignment can be found in Appendix B. Additional examples are available on request.

More renders are made, and the alignment repeated for the proposed layers e.g. development model, landscape model, trees and vegetation etc. For AVR3s / Rendered, an accurate sun position is set-up to correspond with the time stamp in the meta data of each photograph.

In Photoshop, the layered renders are composited with the baseline photography. Compositing techniques include: applying visual treatments such as wirelines and hatching; masking-out occluded elements; shading renders to bed them in; painting out demolished elements; and painting in 'revealed' elements.

#### Field of View (FoV) Frames

Views within this document are annotated with a FoV frame/ scale. The red arrows indicate the vertical and horizontal points of perspective (Optical Axis). Each graticule/marker on the scale represents 1°. The numbers on the horizonal scale should be read in pairs. E.g. the space between the two markers  $|40^\circ|$  and  $40^\circ|$  has a total HFoV of 40°. Accuracy is estimated to be within 1° to 3°, to allow for rounding errors and lens variations.

#### Image Enlargement and Viewing Distance

The 'Image Enlargement' values and 'Viewing Distance' (as per specified in the Landscape Institute (LI) - Technical Guidance Note 06/19 - Sep 2019) are relevant to printed documentation.

Image enlargement values, and their corresponding printed page sizes, are shown on each 'Baseline' and 'Proposed' page. Pages should be viewed at a comfortable arm's length (typically 500mm – 550mm).

Enlargement values and printed page sizes are not included in the (LI) guidance for wider lens. However, values are included in our documents when practical and informative.

Additionally, a digital scale is shown on some pages to assist with on-screen viewing. This allows the viewer to adjust the size of a *on-screen page* to match the desired *printed page* size and image enlargement value.

## **Appendix B — Example Composite View**



Example composited view demonstrating layers of image data: camera match, photography, digital model and survey/LIDAR data. Blue: Bespoke viewpoint survey and alignment. White: model of proposed development.

it #	Eastings	Northings	mAOD
	509381.326	186808.942	45.868
	509431.201	186938.236	59.761
	509424.195	186902.445	58.198
	509412.301	186864.778	56.555
	509424.272	186904.533	48.797
	509412.233	186864.948	47.045
	509400.156	186836.404	45.671
	509409.583	186842.325	45.29
	509400.358	186827.721	46.34
	509396.838	186819.523	45.745
	509398.325	186816.684	45.44
	509407.63	186818.877	47.623
	509428.357	186821.865	47.03
	509442.887	186883.565	47.857
	509442.45	186877.206	46.831
	509444.583	186887.637	45.318
	509391.56	186850.791	48.831
	509394.012	186842.295	46.769

Bespoke viewpoint survey data sample.



Survey Station

## **Appendix C** — Visualisation Level & Type Descriptions

## Accurate Visual Representations (AVR) 'Level' Descriptions

Extract from 'The London View Management Framework' (SPG March 2012 - Part 3, page 248) 'Appendix C: Accurate Visual Representations':

"To assist agreement between all parties prior to AVR preparation, the following classification types are presented to broadly define the purpose of an AVR in terms of the visual properties it represents. This classification is a cumulative scale in which each level incorporates all the properties of the previous level."

"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"

## **Preconstruct — Typical AVR Level Examples**



The Landscape Institute's 'Visual Representation of Development Proposals, Technical Guidance Note 06/19' (September 2019) proposes four Visualisation Types (1-4), from least to most sophisticated.

The visualisations within this document are categorised as Type-4. They demonstrate the highest level of accuracy and stringent verifiable methodology of the 4 types.

## **Preconstruct — Type-4 Specification**

Photomontage / Photowire — Survey / Scale Verifiable Aim: to represent scale, appearance, context, form, and extent of development.

Full Frame Sensor (FFS) photography shot with a level tripod (and panoramic head where appropriate).

Use of 50mm lens when practical, but exceptions for wider lenses apply. This includes up to 24mm and 24mm Tilt-Shift lenses — ideal for close-range views and urban context.

Viewpoint locations calculated with either bespoke survey (inc advanced GPS) or using a combination of: digital mapping observations, phone GPS and LIDAR data. Dedicated viewpoint location plan/map included.

Placement of the proposed development within the photographs is accurate and verifiable through the use of camera matches using bespoke viewpoint survey and/ or LIDAR data. The proposed development, survey data, and viewpoints are all accurately geolocated within an OS coordinate system.

3D digital model of development provided by the design team or created from technical drawings.

Where practical, 'Image Enlargement' values (and corresponding page sizes) are shown on each image page. This is typically 100% but exceptions apply.

Inclusion of detailed technical methodology.



**AVR1 (Wireline)** Confirming degree of visibility

This example — a 'wireline' (outline and This example — a lit render in a uniform This example — a 'rendered' edges) with a translucent fill. Dashedline and no fill where occluded.



AVR2 (Clay) **Explaining architectural form** 

opaque 'clay' material. Masked out

AVR3 (Rendered) Confirming the use of materials

'photorealistic' depiction. Masked out where occluded.

where occluded.

## **Visualisation 'Type' Descriptions**



Delivery | Design | Engagement | Heritage | Impact Management | Planning Sustainable Development | Townscape | Transport

Edinburgh : 11 Alva Street | Edinburgh | EH2 4PH Glasgow : 177 West George Street | Glasgow | G2 2LB London : Da Vinci House | 44 Saffron Hill | London | EC1N 8FH Manchester : This is The Space | 68 Quay Street | Manchester | M3 3EJ Birmingham : The Colmore Building | 20 Colmore Circus Queensway | Birmingham | B4 6AT

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