Former Debenhams Store, Staines Accurate Visual Representations

Document prepared by Preconstruct Ltd on behalf of Future High Street Living (Staines) Ltd, to accompany a planning appeal for the proposed development at High Street, Staines-upon-Thames, Surrey.

24th October 2022 www.preconstruct.com



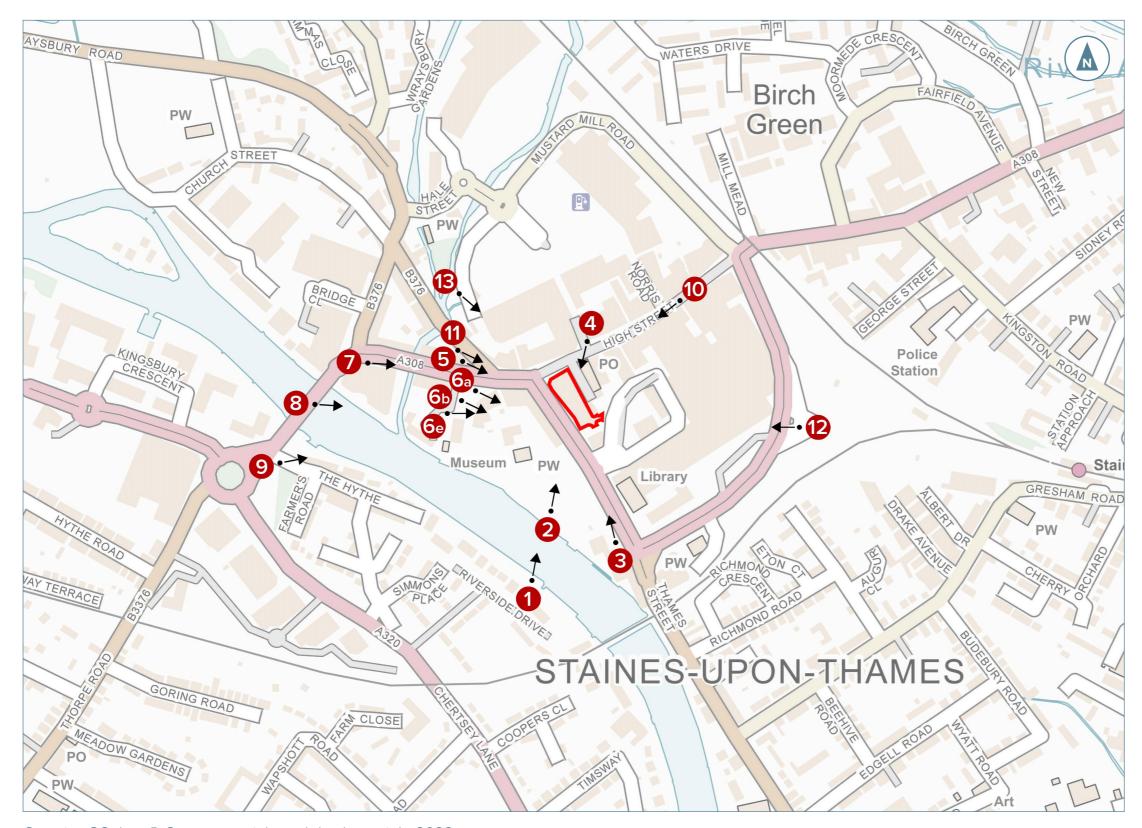
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01 Viewpoint Locations



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02 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	Thames Path	N	AVR3 - Type4	206m	503500.3	171278.9	14.4m	07/10/2022 / 16:44	1.65m	Sony A7R IV (35mm)	Canon TS-E 24mm F/3.5L	24mm	Central	Planar	74°
02	Memorial Gardens	NE	AVR3 - Type4	101m	503469.9	171408.7	15.5m	07/10/2022 / 15:02	1.65m	Sony A7R IV (35mm)	Canon TS-E 24mm F/3.5L	24mm	Lowered	Planar	74°
03	Thames St near junction with South St	NW	AVR3 - Type4	134m	503587.1	171354.8	15.5m	07/10/2022 / 13:42	1.65m	Sony A7R IV (35mm)	Canon TS-E 24mm F/3.5L	24mm	Lowered	Planar	74°
04	Tilly's Lane junction with High St	S	AVR3 - Type4	39m	503539.7	171602.6	16.9m	07/10/2022 / 17:40	1.65m	Sony A7R IV (35mm)	Canon TS-E 24mm F/3.5L	24mm	Lowered	Planar	74°
05	Clarence St junction with Church Street	Е	AVR3 - Type4	84m	503415.0	171558.6	16.6m	07/10/2022 / 17:16	1.65m	Sony A7R IV (35mm)	Canon TS-E 24mm F/3.5L	24mm	Lowered	Planar	74°
06a	Market Square near Clarence St	E	AVR3 - Type4	103m	503394.5	171538.0	16.5m	07/10/2022 / 15:31	1.65m	Sony A7R IV (35mm)	Canon TS-E 24mm F/3.5L	24mm	Lowered	Planar	74°
06b	Market Square near Staines War Memorial	Е	AVR3 - Type4	124m	503374.3	171525.0	16.4m	07/10/2022 / 15:49	1.65m	Sony A7R IV (35mm)	Canon TS-E 24mm F/3.5L	24mm	Lowered	Planar	74°
06e	Market Square near Staines Town Hall	Е	AVR3 - Type4	138m	503363.3	171508.5	16.5m	07/10/2022 / 16:07	1.65m	Sony A7R IV (35mm)	Canon TS-E 24mm F/3.5L	24mm	Central	Planar	74°
07	Clarence St near junction with Bridge St	Е	AVR3 - Type4	235m	503264.1	171574.1	18.1m	07/10/2022 / 16:57	1.65m	Sony A7R IV (35mm)	Canon TS-E 24mm F/3.5L	24mm	Lowered	Planar	74°
08	Staines Bridge	Е	AVR3 - Type4	308m	503191.3	171509.3	20.3m	07/10/2022 / 16:17	1.65m	Sony A7R IV (35mm)	Canon TS-E 24mm F/3.5L	24mm	Central	Planar	74°
09	The Hythe	Е	AVR3 - Type4	353m	503154.8	171457.0	18.4m	07/10/2022 / 16:28	1.65m	Sony A7R IV (35mm)	Canon TS-E 24mm F/3.5L	24mm	Central	Planar	74°
10	High St	SW	AVR3 - Type4	197m	503692.1	171671.7	15.6m	07/10/2022 / 11:36	1.65m	Sony A7R IV (35mm)	Canon TS-E 24mm F/3.5L	24mm	Lowered	Planar	74°
11	Church St	SE	AVR3 - Type4	123m	503383.6	171591.8	15.9m	07/10/2022 / 17:21	1.65m	Sony A7R IV (35mm)	Canon TS-E 24mm F/3.5L	24mm	Lowered	Planar	74°
12	South St near entrance to Elmsleigh surface car park	W	AVR1/3 - Type4	246m	503814.5	171484.0	16.2m	07/10/2022 / 13:32	1.65m	Sony A7R IV (35mm)	Canon TS-E 24mm F/3.5L	24mm	Central	Planar	74°
13	Mustard Mill Rd near Vue Cinema	SE	AVR1 - Type4	162m	503384.1	171664.6	15.4m	07/10/2022 / 17:32	1.65m	Sony A7R IV (35mm)	Canon TS-E 24mm F/3.5L	24mm	Lowered	Planar	74°

03 Views



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View 1 Thames Path

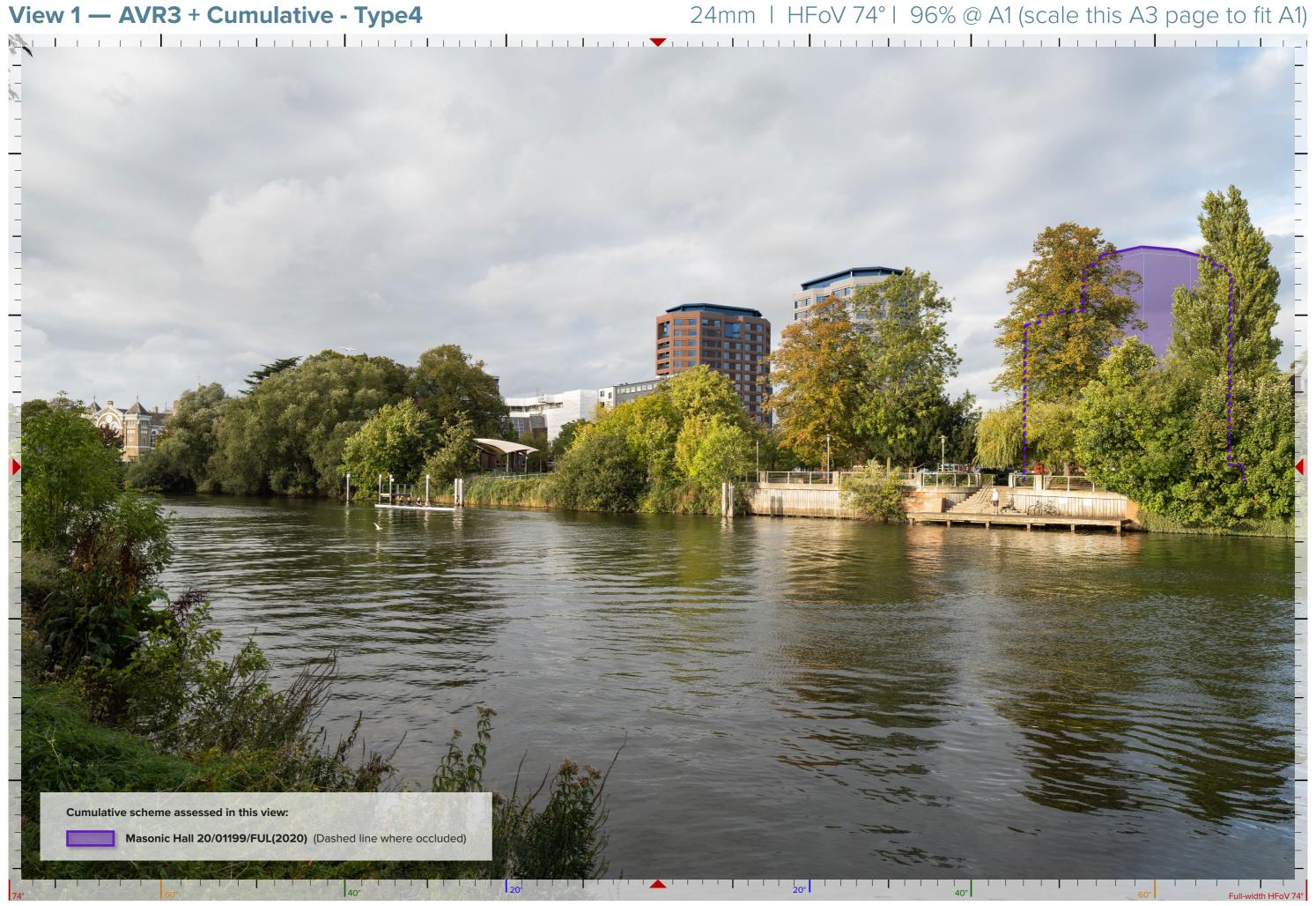
Existing and View Data



V	Description	Direction (looking)		Distance to site boundary	Easting	Northing	Ground AOD	Date / Time	Camera Height	Camera	Lens	Focal Length	Horizon	Projection	HFoV
С	Thames Path	N	AVR3 - Type4	206m	503500.3	171278.9	14.4m	07/10/2022 / 16:44	1.65m	Sony A7R IV (35mm)	Canon TS-E 24mm F/3.5L	24mm	Central	Planar	74°







View 2 Memorial Gardens Existing and View Data

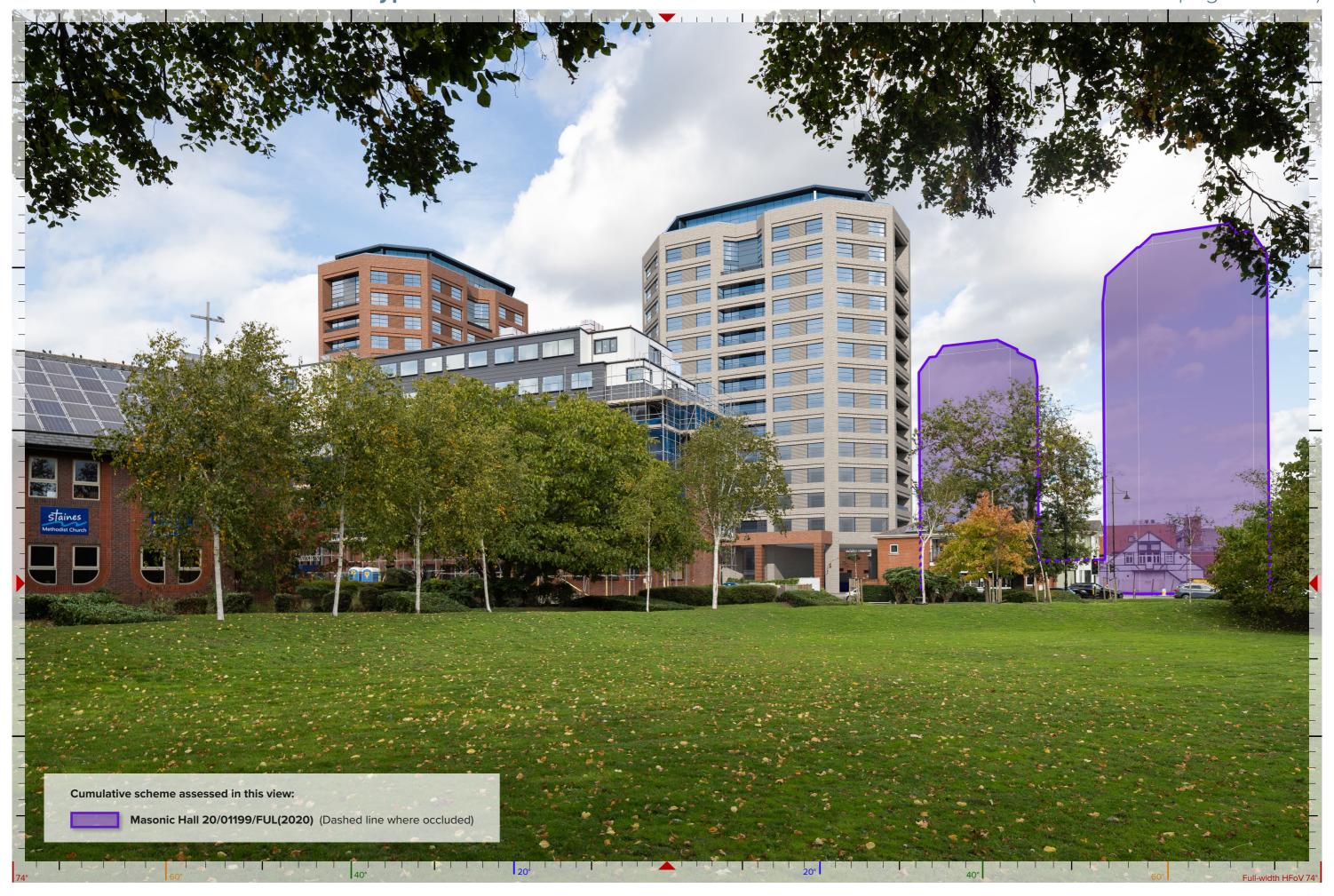


6e	Museum PRIVERSIDE DR.	PW 1	3	Library PW OTHERES
Lens	Focal Length	Horizon	Projection	HFoV

VP	Description	Direction (looking)		Distance to site boundary	Easting	Northing	Ground AOD	Date / Time	Camera Height	Camera	Lens	Focal Length	Horizon	Projection	HFoV
02	Memorial Gardens	NE	AVR3 - Type4	101m	503469.9	171408.7	15.5m	07/10/2022 / 15:02	1.65m	Sony A7R IV (35mm)	Canon TS-E 24mm F/3.5L	24mm	Lowered	Planar	74°

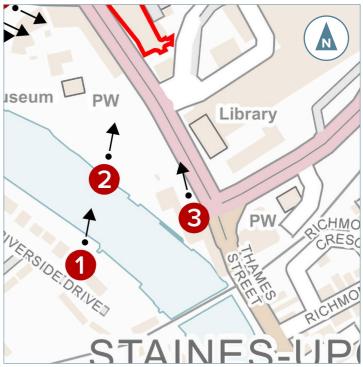






View 3 Thames St near junction with South St Existing and View Data







VP	Description	Direction (looking)		Distance to site boundary	Easting	Northing	Ground AOD	Date / Time	Camera Height	Camera	Lens	Focal Length	Horizon	Projection	HFoV
03	Thames St near junction with South St	NW	AVR3 - Type4	134m	503587.1	171354.8	15.5m	07/10/2022 / 13:42	1.65m	Sony A7R IV (35mm)	Canon TS-E 24mm F/3.5L	24mm	Lowered	Planar	74°

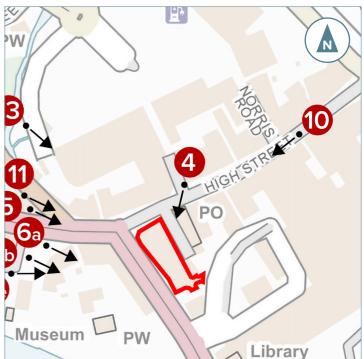






View 4 Tilly's Lane junction with High St Existing and View Data







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
04	Tilly's Lane junction with High St	S	AVR3 - Type4	39m	503539.7	171602.6	16.9m	07/10/2022 / 17:40	1.65m	Sony A7R IV (35mm)	Canon TS-E 24mm F/3.5L	24mm	Lowered	Planar	74°

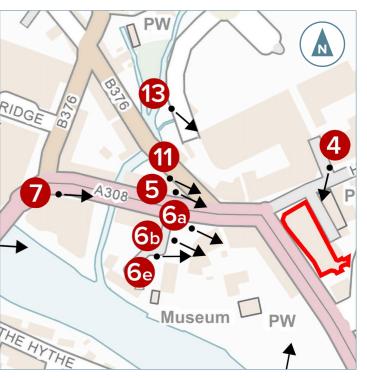






View 5 Clarence St junction with Church Street Existing and View Data







VP	Description	Direction (looking)		Distance to site boundary	Easting	Northing	Ground AOD	Date / Time	Camera Height	Camera	Lens	Focal Length	Horizon	Projection	HFoV
05	Clarence St junction with Church Street	Е	AVR3 - Type4	84m	503415.0	171558.6	16.6m	07/10/2022 / 17:16	1.65m	Sony A7R IV (35mm)	Canon TS-E 24mm F/3.5L	24mm	Lowered	Planar	74°

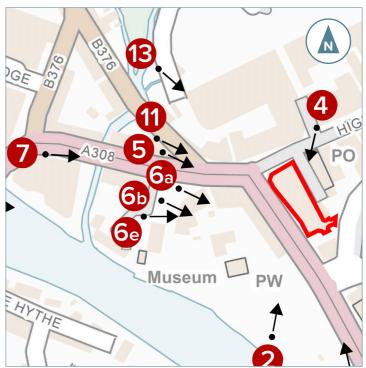






View 6a Market Square near Clarence St Existing and View Data







VP	Description		Visualisation Level & Type	Distance to site boundary	Easting	Northing	Ground AOD	Date / Time	Camera Height	Camera	Lens	Focal Length	Horizon	Projection	HFoV
06a	Market Square near Clarence St	Е	AVR3 - Type4	103m	503394.5	171538.0	16.5m	07/10/2022 / 15:31	1.65m	Sony A7R IV (35mm)	Canon TS-E 24mm F/3.5L	24mm	Lowered	Planar	74°





10° 40° 40°

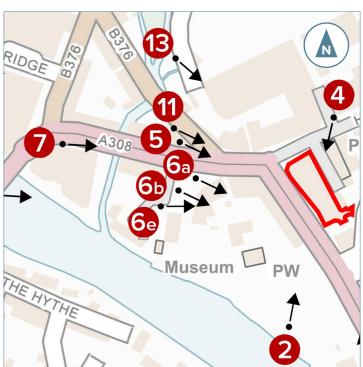
Former Debenhams Store, Staines | Accurate Visual Representations | 24th October 2022 | www.preconstruct.com

Cumulative scheme assessed in this view:

Masonic Hall 20/01199/FUL(2020) (Dashed line where occluded)

View 6b Market Square near Staines War Memorial Existing 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
06b	Market Square near Staines War Memorial	Е	AVR3 - Type4	124m	503374.3	171525.0	16.4m	07/10/2022 / 15:49	1.65m	Sony A7R IV (35mm)	Canon TS-E 24mm F/3.5L	24mm	Lowered	Planar	74°

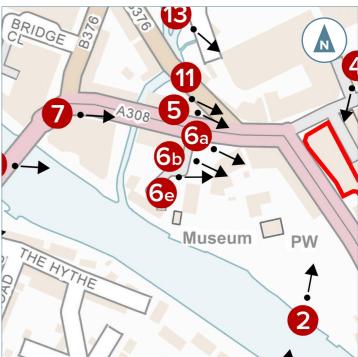






View 6e Market Square near Staines Town Hall Existing and View Data



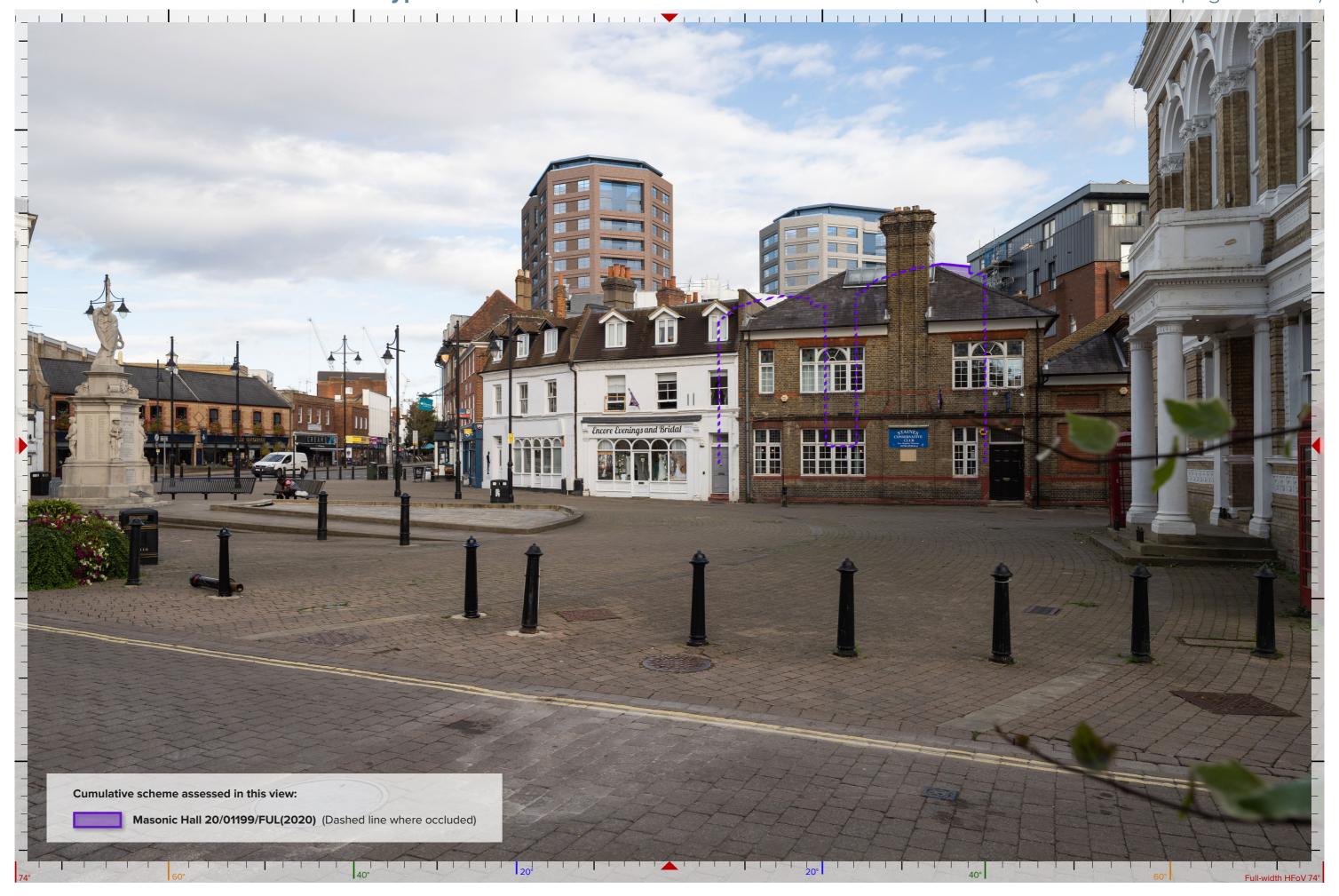




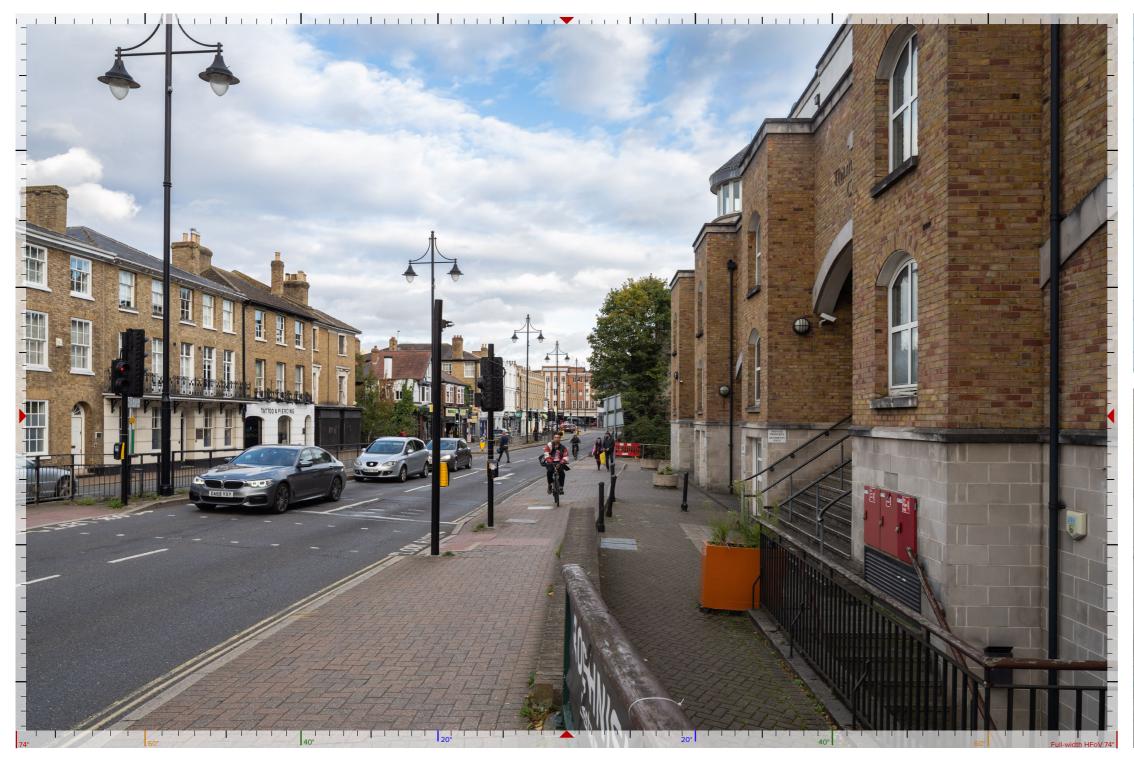
VP	Description	Direction (looking)		Distance to site boundary	Easting	Northing	Ground AOD	Date / Time	Camera Height	Camera	Lens	Focal Length	Horizon	Projection	HFoV
06e	Market Square near Staines Town Hall	Е	AVR3 - Type4	138m	503363.3	171508.5	16.5m	07/10/2022 / 16:07	1.65m	Sony A7R IV (35mm)	Canon TS-E 24mm F/3.5L	24mm	Central	Planar	74°

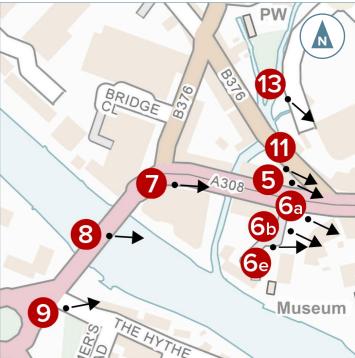






View 7 Clarence St near junction with Bridge St Existing and View Data







VP	Description		Visualisation Level & Type	Distance to site boundary	Easting	Northing	Ground AOD	Date / Time	Camera Height	Camera	Lens	Focal Length	Horizon	Projection	HFoV
07	Clarence St near junction with Bridge St	Е	AVR3 - Type4	235m	503264.1	171574.1	18.1m	07/10/2022 / 16:57	1.65m	Sony A7R IV (35mm)	Canon TS-E 24mm F/3.5L	24mm	Lowered	Planar	74°

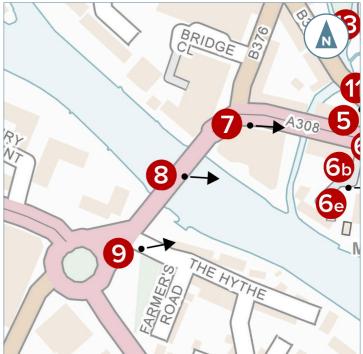






View 8 Staines Bridge Existing and View Data







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	Staines Bridge	Е	AVR3 - Type4	308m	503191.3	171509.3	20.3m	07/10/2022 / 16:17	1.65m	Sony A7R IV (35mm)	Canon TS-E 24mm F/3.5L	24mm	Central	Planar	74°

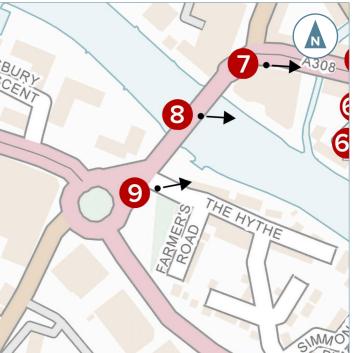






View 9 The Hythe Existing and View Data







VP	Description		Visualisation Level & Type	Distance to site boundary	Easting	Northing	Ground AOD	Date / Time	Camera Height	Camera	Lens	Focal Length	Horizon	Projection	HFoV
09	The Hythe	Е	AVR3 - Type4	353m	503154.8	171457.0	18.4m	07/10/2022 / 16:28	1.65m	Sony A7R IV (35mm)	Canon TS-E 24mm F/3.5L	24mm	Central	Planar	74°



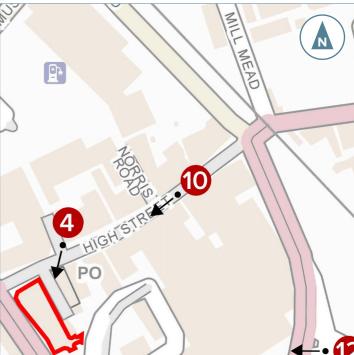




View 10 High St

Existing and View Data







VP	Description	Direction (looking)	Visualisation Level & Type	Distance to site boundary	Easting	Northing	Ground AOD	Date / Time	Camera Height		Lens	Focal Length	Horizon	Projection	HFoV
10	High St	SW	AVR3 - Type4	197m	503692.1	171671.7	15.6m	07/10/2022 / 11:36	1.65m	Sony A7R IV (35mm)	Canon TS-E 24mm F/3.5L	24mm	Lowered	Planar	74°

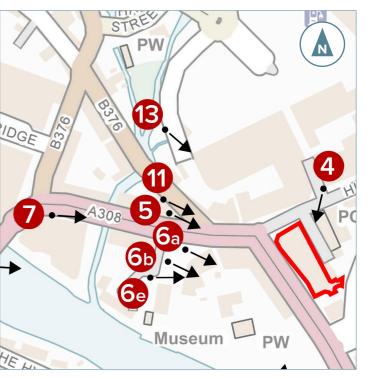






View 11 Church St Existing and View Data







VP	Description	Direction (looking)	Visualisation Level & Type	Distance to site boundary	Easting	Northing	Ground AOD	Date / Time	Camera Height		Lens	Focal Length	Horizon	Projection	HFoV
11	Church St	SE	AVR3 - Type4	123m	503383.6	171591.8	15.9m	07/10/2022 / 17:21	1.65m	Sony A7R IV (35mm)	Canon TS-E 24mm F/3.5L	24mm	Lowered	Planar	74°







View 12 South St near entrance to Elmsleigh surface car park Existing and View Data



VP	Description	Direction (looking)	Visualisation Level & Type	Distance to site boundary	Easting	Northing	Ground AOD	Date / Time	Camera Height		Lens	Focal Length	Horizon	Projection	HFoV
12	South St near entrance to Elmsleigh surface car park	W	AVR3/1 - Type4	246m	503814.5	171484.0	16.2m	07/10/2022 / 13:32	1.65m	Sony A7R IV (35mm)	Canon TS-E 24mm F/3.5L	24mm	Central	Planar	74°

Statio

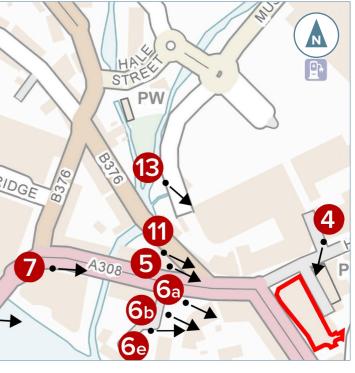






View 13 Mustard Mill Rd near Vue Cinema Existing and View Data



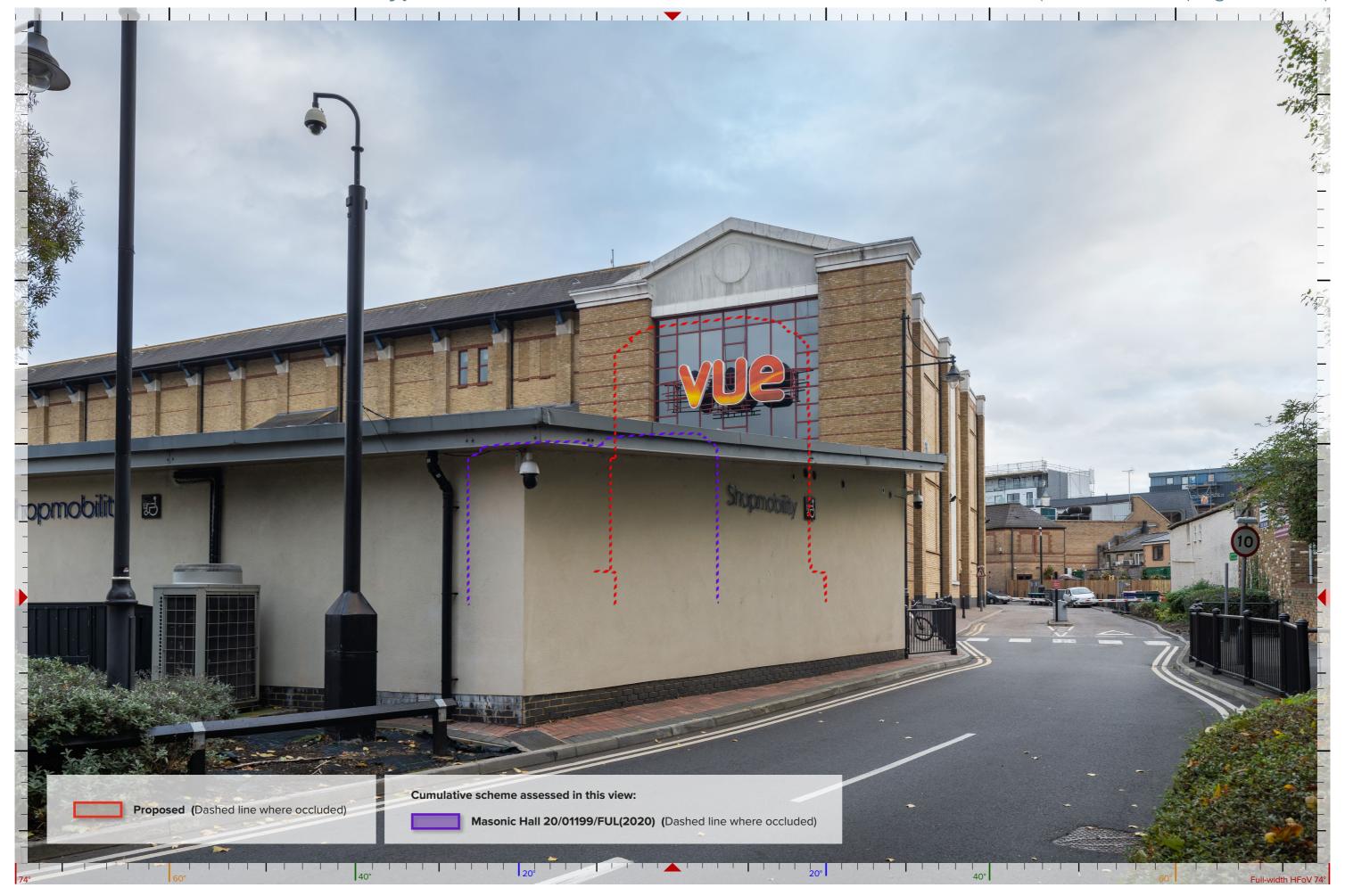




VP	Description	Direction (looking)		Distance to site boundary	Easting	Northing	Ground AOD	Date / Time	Camera Height		Lens	Focal Length	Horizon	Projection	HFoV
13	Mustard Mill Rd near Vue Cinema	SE	AVR1 - Type4	162m	503384.1	171664.6	15.4m	07/10/2022 / 17:32	1.65m	Sony A7R IV (35mm)	Canon TS-E 24mm F/3.5L	24mm	Lowered	Planar	74°







Appendices



Appendix 01: Methodology

Overview

The process of generating verified views (also referred to as accurate visual representations / AVR) was carried out by Preconstruct.

Preconstruct use a methodology that is compliant with 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 (September 2019); The Revised SPG London View Management Framework (March 2012).

High quality/resolution photographs were taken from the agreed locations by Preconstruct. An adequate number of visible features were subsequently surveyed, including the precise location and bearing of the cameras. A development model was imported to correct geographical co-ordinates. With a known camera positions and orientations, photographic and surveyed existing visible features, the development model was accurately aligned to the photographs.

Photography

For each agreed viewpoint location, a high resolution photograph was taken with a 35mm (full frame) digital camera. The location at which the photograph was taken was marked with a nail, peg and / or spray paint, to allow the surveyor to record the precise location on a subsequent visit. The camera was levelled horizontally and laterally by means of a bubbled tripod head, camera-mounted spirit level and in-camera digital level.

Lens Selection Criteria

There is no definitive camera, lens, or FoV (Field of View) format suitable for all planning photomontages. Emphasis was placed on capturing the proposed development set within the important peripheral context of the environment.

The 40° lens (50mm lens/35mm camera) was deemed inadequate to capture the full extent of the proposed and/ or its relevant context. Therefore, a wider 74° (24mm/35mm

camera) was selected. This was used across all the views for consistency.

We recommend that all parties use the planning photomontages as a complement to on-site assessment.

Use of Tilt Shift (T/S) Lenses

Where a T/S lens was selected it has only been used with either:

1) No T/S function (therefore replicating a standard prime lens). Here the view will be annotated "Horizon - Central" within the view data table.

0

2) Only with an upwards 'Shift' function. Here the view will be annotated "Horizon - Lowered" within the view information table. And the lowered "point of perspective (Horizon Line / Optical Axis)" will be annotated with an arrow.

The upwards 'Shift' function (2) will only be used in the case of one or more of the following reasons:

The proposed scheme is tall and would largely extend off the top of a non-shifted view.

Important surrounding context would extend off the top of a non-shifted view.

In either case, the technique is a long-term staple of architectural photography. It allows an accurate representation of what a on-site viewer would naturally experience by looking up to study an environment, without creating distracting and confusing converging vertical lines.

Using an upwards 'Shift' function has been 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 proposed. A cohesive landscape-format approach also provides greater consistency of horizontal FoVs within the overall suite of images.

Lens Selection

24mm Tilt/Shift Lens - landscape orientation. 74° horizontal field of view (HFoV).

Field of View (FoV) Frame

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 scale should be read in pairs. E.g. the space between the two markers | 40° and 40° | has a total horizontal field of view of 40°. Accuracy is estimated to be within 1° to 3°, to allow for rounding errors and lens variations.

Camera Make/Model

Sony a7R IV (ILCE-7RM4) (35mm)

Lens Make/Model

- Canon TS-E 24mm F/3.5L
- Sigma MC-11 Mount Converter Canon EF to Sony E Mount

Tripod, Head & Other Photographic Equipment

- Manfrotto Tripod
- Manfrotto Tripod Head
- Camera Mounted Spirit Level / In-Camera Digital Level
- Street Marking Paint / Marker Pen
- Survey Nails / Pegs

Post Production

Each base photograph has had a level of basic colour correction applied to it so that it best represents the impression of the scene as the photographer experienced it in person.

This processing is predominately done to the 16bit RAW file using Adobe Lightroom. It 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 Al masking; and other post processing effects such as sharpening and noise reduction.

Survey

For each agreed viewpoint location an instructional document was released to the survey subcontractor. The surveyor was instructed (by means of a marked-up photograph, map and tripod (in situ) photograph) to record a range of contextual reference points and the viewpoint location.

Survey Equipment

- Leica 1200 series GPS Smartnet enabled dual receiver (GPS and GLONASS)
- Leica Total Station (1201 or TS16 or TS15) 1' accuracy with 1000m reflectorless laser

Field Survey Methodology

- Camera locations: where possible, the camera position will be used as a setup point for the total station, enabling the re-creation of the view as seen in the imagery and reducing the risk of wrong interpretation of detail. Connection is usually via GPS Smartnet derived control points in OSGB datum and grid. 3-4 control stations are used, to ensure long distance accuracies and to identify possible outliers.
- Reference points visible in the photography are measured with reflectorless means from the total station. If long distance views have suitable detail too far from the camera station, further setups are used closer to the detail. Common visible detail points are observed from different setup points to check and increase accuracy achieved.
- Accuracies of camera positions and surveyed details will vary due to setup geometry and distance, but will typically always be below 20 centimetres.

Data Processing and Delivery

Data is processed using industry standard software (Leica GeoOffice and TerraModel) to create points listings. A3 verification plots or digital photos are marked up with the surveyed points to aid identification. All points are to OSGB36 grid and datum, to allow the use of common Ordnance Survey products and industry standard site surveys.

The Proposed Development

Preconstruct imported an Autodesk Revit 3D model of the proposed development as supplied by the project architect. This was subsequently directed and reviewed by the project architect. The model was aligned to the OSGB36 co-ordinate system.

Cumulative Schemes

Preconstruct created basic models of the Masonic Hall cumulative scheme 20/01199/FUL (2020) using pdf drawings available from the Spelthorne Borough Council planning portal.

The Verification Process

The collected survey reference point data and camera location data was imported into the 3D model environment from the delimited text file (relative to the OSGB36 co-ordinate system) by means of a proprietary script.

At each viewpoint location a virtual camera was set up in the 3D software (Autodesk 3DS Max) using the coordinates provided by the surveyor. The 3D coordinates of the survey reference points were used to create an accurate 'point cloud' model of the contextual surveyed parts of the scene. This was supplemented with publicly available LIDAR point cloud data.

The scene was verified by matching the contextual surveyed points (and LIDAR data) to the photograph. For each viewpoint, a 'point cloud' render* was made from the virtual camera in the 3D digital model. Using Adobe Photoshop, the photography and 'point cloud' render were aligned.

Subsequently more renders were made for the proposed buildings and cumulative scheme. The alignment process was repeated to provide accurate placement of the proposed builtforms within the context of the photographs.

Where proposed built-form is occluded by existing context, it was masked-out. the cumulative scheme was represented as a wireline and where this is occluded by existing context, and/or the proposed scheme, a dashed-line was applied.

In the event that existing buildings are to be demolished, some areas of the proposed views can be 'revealed' (where previously they were occluded). These areas of the photographs have been digitally painted back in. These retouched sections are estimations based on studying the site, and surroundings, on Google maps and street views.

* Rendering is the process of generating an image from a model (or models in what collectively could be called the 3D environment), by means of computer programs - specifically, in this case Chaos Group's Vray.

Printing, Viewing Distance and Image Enlargement

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

image enlargement values (monocular) are included within this document on each view. Images to be viewed at a comfortable arm's length (approx 542mm).

All focal lengths listed relate to a 35mm full-frame sensor camera.

Caution is needed in regard to the automatically scaling of printers and printing software. Printing should at 100% and edge-to-edge to match the listed sheet sizes.

Appendix 02: Sources of Data

Survey Data

Asset	Description	Supplier	Reference	Date	Comment
Survey Data	Table of Points (XLSX file) Surveyors notes/mark-up (PDF)	Mastermap Surveys	VV- 0120	10/10/2022	Imported using proprietary script. Origin Shift -503527 E -171519 N

Supplied Data

Asset & Description	Format	Supplier	Reference	Date	Comment
Proposed Scheme Model	Autodesk Revit File	Corstorphine & Wright	21115-CW-XX-XX-M3-A-BUIL-S2-P02.rvt	29/09/2022	
Proposed Scheme Elevation Drawing	DWG	Corstorphine & Wright	21115-0321-P-02 Proposed Elevation A - Thames Street.dwg	29/09/2022	Used to assist in alignment of Proposed Model to correct AOD heights
Proposed Scheme Site Plan	DWG	Corstorphine & Wright	21115 - Building footprint within OS tile.dwg	29/09/2022	Contains OS reference. Used to assist in alignment of Proposed Model to OS coordinate system.

Supporting Data

Asset & Description	Format	Supplier	Reference	Date	Comment
Cumulative - Drawings	PDFs	Spelthorne Borough Council - Planning Portal	Masonic Hall 20/01199/FUL (2020),	0.440.400.00	Cumulative scheme. Model created from PDF drawings. Indicative accuracy levels due to drawing quality.

Generated/Compiled Data (by Preconstruct)

Asset	Description	Reference	Comment
3D Model / Scene	Scene files generated in Autodesk 3DS Max to create and render model data	5019 MaxRender	

Example Survey Data



Point #	Eastings	Northings	Height (AOD)
V7	503264.081	171574.098	18.096
C1	503314.212	171588.829	29.042
C2	503297.401	171564.573	26.42
C3	503289.177	171565.979	26.398
C4	503356.842	171574.342	26.343
C5	503282.475	171567.019	21.589
C6	503274.046	171568.461	21.584
C7	503361.113	171583.197	29.452
C8	503297.255	171587.728	25.645
C9	503307.437	171585.138	22.844
C10	503298.08	171587.443	20.158
C11	503290.702	171565.614	19.259
C12	503320.744	171582.886	22.629
C13	503303.722	171566.169	20.968
C14	503313.215	171586.31	29.478
C15	503362.937	171576.528	29.263
C16	503299.833	171564.07	21.565
C17	503304.658	171575.905	29.615
C18	503275.956	171578.456	17.746
C19	503497.288	171540.834	28.409



Note: Supporting LIDAR data was also used for alignment (not shown).

Appendix 03: AVR Level Descriptions

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

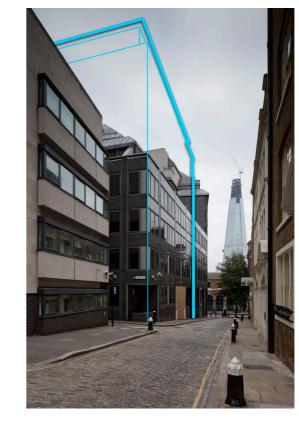
"To assist agreement between all parties prior to AVR preparation, the following classification types are presented to broadly define the purpose of an AVR in terms of the visual properties it represents. This classification is a cumulative scale in which each level incorporates all the properties of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





Showing location and size (in this case as a toned area superimposed on photograph)



Confirming degree of visibility (in this case as an occluded 'wireline' image)



Explaining architectural form (in this case as a simply shaded render in a uniform opaque material)



Confirming the use of materials (in this case using a 'photorealistic' rendering technique)



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