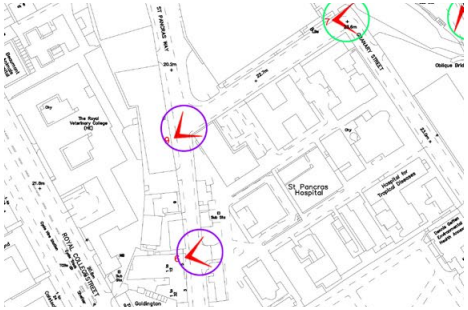
Existing

Proposed



Viewpoint Map

Existing

Proposed

Viewpoint Map

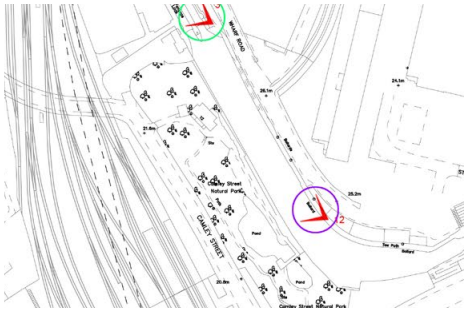
Existing

Proposed

Viewpoint Map

Existing

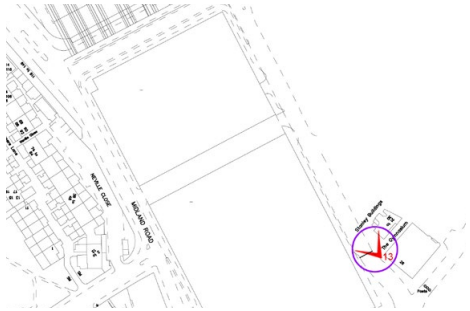
Proposed



Viewpoint Map

Existing

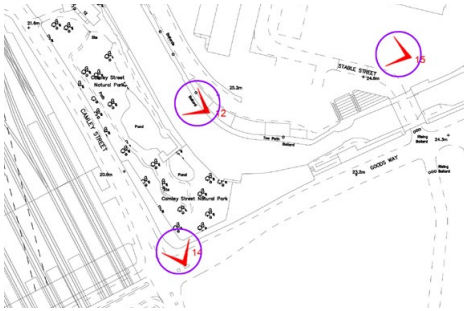
Proposed



Viewpoint Map

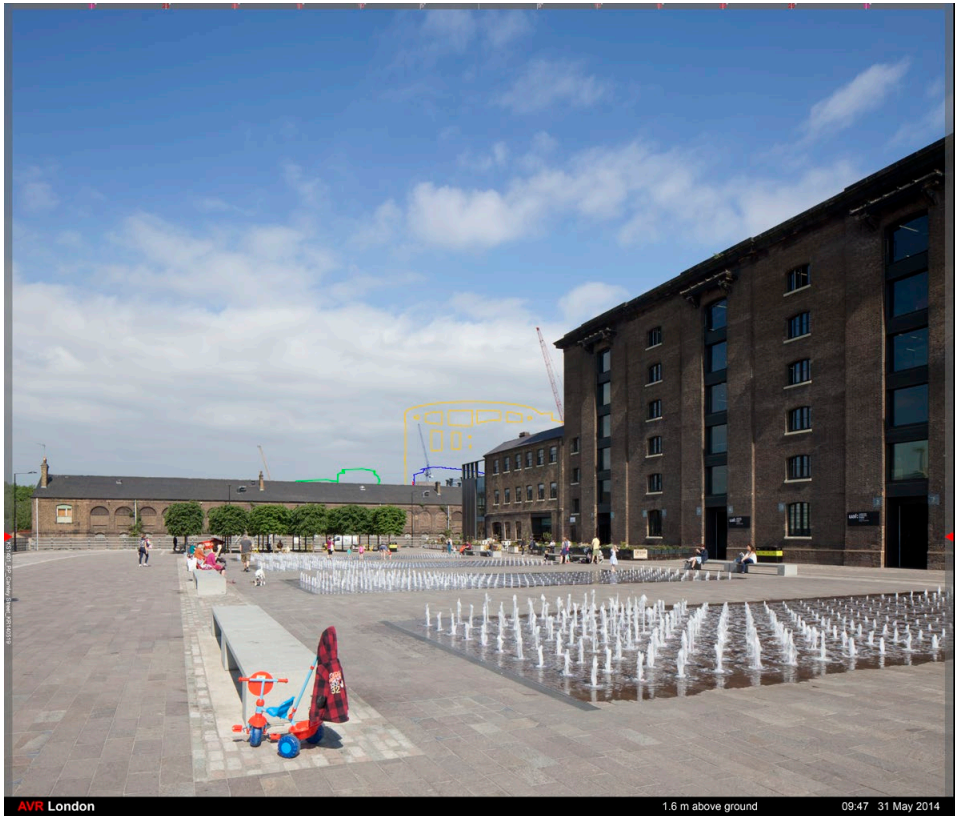
Existing

Proposed

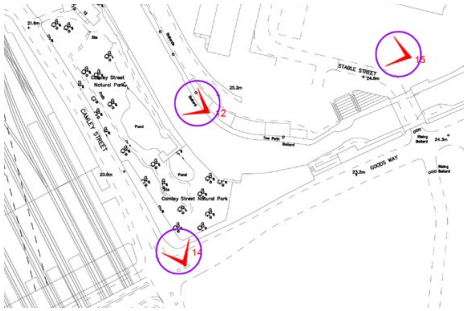


Viewpoint Map

Existing



Proposed



Viewpoint Map

Existing

Proposed

Proposed Zoom

AVR METHODOLOGY

AVR London were commissioned in April 2014 to produce a number of verified images of the proposal known as Camley Street. The positions were identified from briefing information sent over from the architects, site visits and previous townscape submissions.

2D plans, sections and elevations, Ordnance Survey Mapping and 3D digital models were all provided by the architects KSR for 101 Camley Street, Glenn Howells for 102, and AHMM for 103, these were used by AVR London to verify the proposal from the selected viewing positions.

Surveying

Control stations were established at each camera position and easily and clearly identifiable static points within the view were identified by the chartered land surveyor on site and marked as an overlay on the photograph from that position.

The survey control stations are resected from the OS base mapping and wherever possible, linked together to form a survey network. This means that survey information is accurate to tolerances quoted by GPS survey methods in plan and commensurate with this in level.

Horizontal and vertical angle observations from the control stations allow the previously identified points within the view to be surveyed using line of sight surveying and the accurate coordination of these points determined using an intersection program. These points are then related back to the Ordnance Survey grid and provided in a spreadsheet format.

The required horizon line within the image is established using the horizontal collimation of the theodolite (set to 1.60m above the ground) to identify 3 or 4 features that fall along the horizon line.

Surveying equipment used:
Wild/Leica TC1000 electronic theodolite which has 3" angle measuring accuracy and 3mm + 2ppm distance measuring accuracy.
Wild/Leica NAK2 automatic level which a standard deviation of +/- 0.7mm/km

Photography

The scenes were photographed using a plumb line over a survey pin to accurately position the view location. The centre of the camera lens was positioned at a height of 1.60 metres above the ground to simulate average viewing height. The view was taken with a lens that gave approximately a 68 degree field of view, either in landscape or portrait format, a standard which has emerged for verified architectural photography. The nature of digital photography means that a record of the time and date of each photograph is embedded within the file; this metadata allows accurate lighting timings to be recreated within the computer model.

In professional architectural photography, having the camera horizontal is desirable in order to prevent any 3-point perspective being introduced to the image and ensure the verticals within the photographed scene remain parallel. Within architectural photography this is standard practice and more realistically reflects the viewing experience. The camera used by the photographer has the ability to shift the digital capture chip with respect to the centre of the camera lens, allowing for the horizon in the image to be above, below or centrally within the image whilst maintaining the parallel nature of verticals previously mentioned.

Using the surveyed horizon points as a guide, the photograph is checked and rotated, if necessary, in proprietary digital image manipulation software to ensure that the horizon line on the photograph is level and coincident with the information received from the surveyor.

View 3 - St Pancras Lock

Point	Easting	Northing	Level
1	529869.27	183590.05	35.66
2	529930.40	183579.60	24.69
3	529931.14	183583.02	23.77
4	529924.14	183590.53	35.16
5	529921.09	183594.49	25.87
6	529948.73	183578.84	23.42
7	529863.55	183632.61	35.78
8	529913.53	183602.62	26.68
9	529904.39	183616.84	26.03
10	529740.26	183761.43	65.79
11	529738.09	183779.08	59.79
12	529868.75	183661.88	29.56
13	529854.92	183695.71	36.85
14	529942.00	183594.52	23.46
15	529906.91	183653.39	38.13
16	529928.62	183628.24	25.81
17	529950.50	183584.35	23.42

Accurate Visual Representation Production Process

The 3D computer model was supplied aligned on the Ordnance Survey coordinate grid system and approved by the architects.

Within the 3D software a virtual camera was set up using the coordinates provided by the surveyor along with the previously identified points within the scene. The virtual camera was verified by matching the contextual surveyed points with matching points within the overlaid photograph. As all the surveyed points, virtual camera and 3D model all relate to the same 3-Dimensional coordinate system then there is only one position, viewing direction and field of view where all these points coincide with the actual photograph from site. The virtual camera is now verified against the site photograph.

For the fully rendered views a lighting simulation (using accurate latitude, longitude and time) was established within the proprietary 3D modeling software matching that of the actual site photograph. Along with the virtual sunlight, virtual materials were applied to the 3D model to match those advised by the architects. The proprietary 3D modeling software then uses the verified virtual camera, 3D digital model, lighting and material setup to produce a computer generated render of the proposed building.

Using the surveyed information and verification process described above, the scale and position of a proposal with a scene can be objectively calculated. However, using proprietary software currently available the exact response of proposed materials to their environment is subjective so the exact portrayal of a proposal is a collaboration between illustrator and architect. The final computer generated image of the proposed building is achieved by combining the computer generated render and the site photography within proprietary digital compositing software.

On certain views a wireline of the proposed building is used to demonstrate the extent of the visible development, this is masked by built form and dotted behind vegetation.

Camley Street - View Positions

Camera	Easting	Northing	Ground Level
1	529395.19	184017.09	27.04
2	529528.44	183919.94	23.49
3	529954.54	183575.29	23.45
4	529808.88	183543.72	20.40
5	529786.00	183480.97	21.86
5A	529715.77	183482.58	21.58
6	529604.18	183565.34	19.10
7	529707.75	183726.36	23.60
8	529743.63	183796.06	27.30
9	529597.13	183647.80	19.78
10	529815.94	183646.84	25.89
11	529771.11	183743.74	27.32
12	530031.31	183445.80	21.16
13	530101.13	183158.69	17.30
14	530012.57	183343.74	17.12
15	530153.95	183480.29	24.51
LVMF 2A.1	527665.69	186131.55	96.54

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