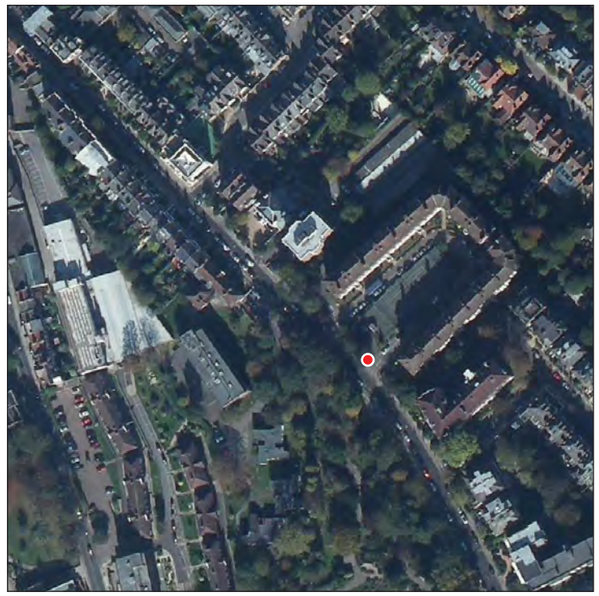
3.0 AVR VIEWS

Viewpoint 5 (Summer View) - Richmond Hill road, near Richmond Hill Court - Verification Data

Viewpoint Reference	Description and Direction of View	AVR Level	Method	Easting	Northing	Height (mAOD)	Tripod Height (m)	Camera	Lens	Focal Length	Orientation	HFOV	Date	Time
5	Richmond Hill road, near Richmond Hill Court, looking south west.	AVR1	Verified	518152.675	174300.843	35.743	1.60	Canon 5D Mark II	Canon f/1.4 24mm	24mm	Landscape	73.7°	31/08/2018	08:44

Survey Reference Points



Viewpoint Location

Tripod Set-up Location

3.0 AVR VIEWS

Viewpoint 5 - Richmond Hill road, near Richmond Hill Court, looking south west - Existing View (Summer)

3.0 AVR VIEWS

Visible Extent of Proposed Development

Non Visible Extent of Proposed Development

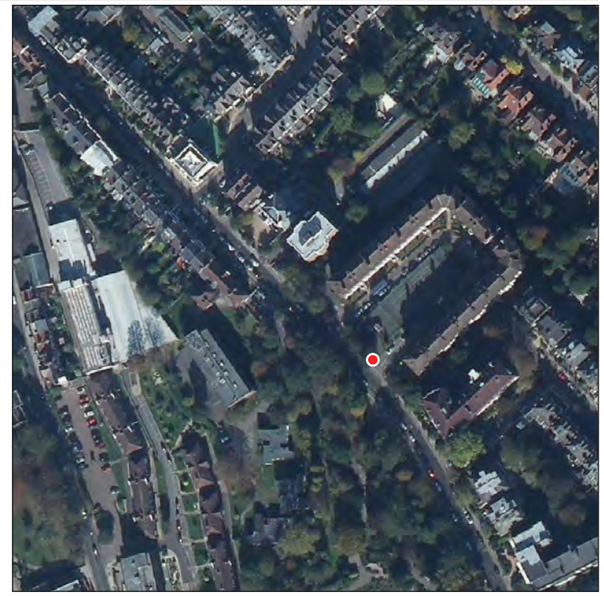
Viewpoint 5 - Richmond Hill road, near Richmond Hill Court, looking south west - Proposed View (Summer) - AVR Level 1

3.0 AVR VIEWS

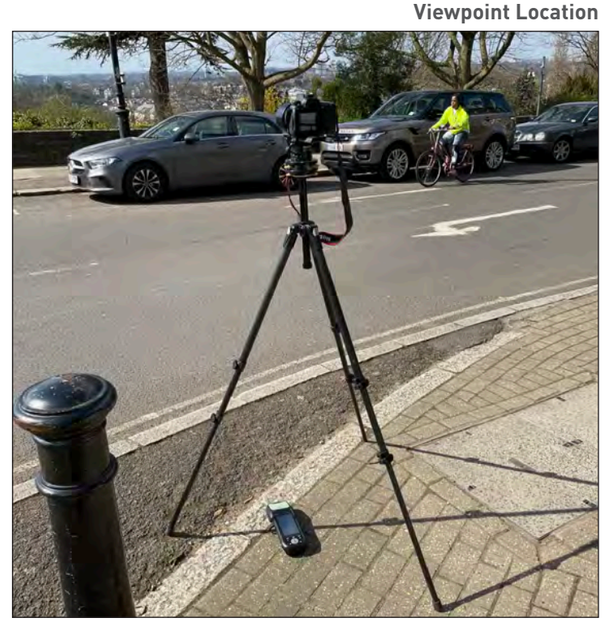
Viewpoint 5 (Winter View) - Richmond Hill road, near Richmond Hill Court - Verification Data

Viewpoint Reference	Description and Direction of View	AVR Level	Method	Easting	Northing	Height (mAOD)	Tripod Height (m)	Camera	Lens	Focal Length	Orientation	HFOV	Date	Time
5	Richmond Hill road, near Richmond Hill Court, looking south west.	AVR1	Verified	518149	174307	35	1.60	Canon 5D Mark II	Canon f/1.4 24mm	24mm	Landscape	73.7°	22/03/2021	14:19

Survey Reference Points



Viewpoint Location



Tripod Set-up Location

3.0 AVR VIEWS

Viewpoint 5 - Richmond Hill road, near Richmond Hill Court, looking south west - Existing View (Winter)

3.0 AVR VIEWS

Visible Extent of Proposed Development

Non Visible Extent of Proposed Development

Viewpoint 5 - Richmond Hill road, near Richmond Hill Court, looking south west - Proposed View (Winter) - AVR Level 1

APPENDIX A AVR METHODOLGY

Overview

The generation of AVRs (also known as verified views) for the proposed redevelopment of Howson Terrace, Richmond, London was carried out by Pegasus Planning Group.

Pegasus Planning Group use methodologies compliant with relevant sections of the current guidelines for photography, photomontage and AVR production included within:

- The Landscape Institute/IEMA Guidelines for Landscape and Visual Impact Assessment (3rd edition 2013);
- The Landscape Institute Advice Note 01/11 Photography and Photomontage in Landscape and Visual Impact Assessment;
- London View Management Framework Supplementary Planning Guidance (March 2012); and
- Scottish Natural Heritage (SNH) Visual Representation of Wind Farms (December 2014, Version 2.1).

The AVRs within this document have been produced using a consistent methodology using Camera Matching techniques. Camera matching is the process of replicating real-world camera parameters (position, orientation, projection and focal length) in a 3d virtual environment, enabling the production of mass models and photo-realistic renders of development proposals to be overlaid on baseline photography to the correct scale and orientation.

Definition and Classification of AVRs

The London View Management Framework: Supplementary Planning Guidance (March 2012) defines an AVR as:

"An AVR is a static or moving image which shows the location of a proposed development as accurately as possible; it may also illustrate the degree to which the development will be visible, its detailed form or the proposed use of materials. An AVR must be prepared following a well-defined and verifiable procedure and can therefore be relied upon by assessors to represent fairly the selected visual properties of a proposed development. AVRs are produced by accurately combining images of the proposed building (typically created from a three dimensional computer model) with a representation of its context; this usually being a photograph, a video sequence, or an image created from a second computer model built from survey data. AVRs can be presented in a number of different ways, as either still or moving images, in a variety of digital or printed formats."

The London View Management Framework: Supplementary Planning Guidance (March 2012) Appendix C classifies AVRs into 4 categories according to their purpose from Levels 0 to 3:

AVR Level	Showing
0	Location and size of proposal
1	Location, size and degree of visibility of proposal
2	As level 1 + description of architectural form
3	As level 2 + use of materials

Examples of AVR Levels (images taken from The London View Management Framework: Supplementary Planning Guidance (March 2012) Appendix C):

AVR Level 0:

Showing Location and Size (in this case as a toned area superimposed on photograph)

AVR Level 1:

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

AVR Level 2:

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

AVR Level 3:

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

The majority of photography based AVRs are either AVR 3 (commonly referred to as "fully rendered" or "photoreal") or AVR 1 (commonly referred to as "wireline").

The purpose of a wireline view is to accurately indicate the location and degree of visibility of the Proposed Development in the context of the existing condition and potentially in the context of other proposed schemes.

APPENDIX A AVR METHODOLGY

Site Visit and Viewpoint Locations

Each viewpoint is carefully chosen based on a combination of information, these include; zone of theoretical visibility (ZTV) analysis, strategic importance, open dialogue with local authority, and site walkover. Once the project team had agreed the exact locations, a photograph was taken which formed the basis of the study. The surveyor established the precise location of the camera.

Pegasus Planning Group carried out the site photography and survey on the 31st August 2018 and 22nd March 2021. The viewpoint locations were recorded using photography of the exact position of the camera and were GPS recorded using surveying equipment.

Photography

For each agreed viewpoint location, a high resolution photograph was taken with a 35mm (full frame) digital SLR camera, The camera is set up at a height of 1.6m to replicate an eye level view from the specified position. The location at which the photograph was taken was GPS recorded and photographed. The camera was levelled horizontally and vertically by means of a tripod mounted levelling base and two camera mounted spirit levels.

Lens Selection

In order to capture the full extent of the proposed development and an appropriate amount of contextual built form a 24mm lens (73.7° horizontal field of view), or a 50mm lens (39.6° horizontal field of view), were used.

Photography Equipment

- Canon 5D mkII digital SLR camera (35mm)
- Canon EF 24mm f/1.4 USM Lens
- Canon EF 50mm f/1.4 USM Lens
- Tripod indexed pan head
- Levelling base with spirit level

Field Survey Methodology

Alignment points are identified within each baseline image, usually points of contrast or standout permanent immovable features, distributed throughout the image within the x,y,z planes. Each point including the camera position is then surveyed and logged using the GPS unit based on the OSGB36 co-ordinate system giving Easting (x), Northing (y) and above Ordnance datum (AOD) height (z), for camera matching within the 3d computer environment. In any cases where no viable survey points are available two images are taken from the same camera position with control poles set out and surveyed in one of the images allowing the virtual camera to be orientated before the control image is replaced.

Survey Equipment

- Leica Zeno 20 + Disto S910: gamtec GPS Unit with HxGN SmartNet Real-Time Kinematic (RTK) Corrections to provide a tolerance of +/- 20mm.

Survey Data Post Processing

The camera locations and reference points were exported from the native GPS format into 3d dwg point cloud for cross-referencing within the 3d environment and baseline photography.

Photography Post Production

Where necessary standard image post production techniques were used, including curves, sharpening and levels. Should post production be required to a baseline viewpoint image the details of such are included in the Viewpoint Information table.
Any exceptions to the applied policies or deviations from the methodology are clearly described.

The Development Proposal

Pegasus Planning Group were provided with a 3d model of the proposal by the project architect.

The model was checked for accuracy against supplied 2d plans and elevation drawings and aligned to the OSGB36 co-ordinate system to correlate with the 3d survey data.

AVR Documentation

Each AVR image has an annotated border or 'graticule which indicates the field of view, the optical axis and the horizon line. This annotation helps the user to understand the characteristics of the lens used for the source photograph, whether the photographer applied tilt, vertical rise or horizontal shift during the taking of the shot and if the final image has been cropped on one or more sides.

The four red arrows mark the horizontal and vertical location of the 'optical axis'. The optical axis is a line passing through the eye point normal to the projection plane. In photography this line passes through the centre of the lens, assuming that the film plane has not been tilted relative to the lens mount. In computer rendering it is the viewing vector, i.e the line from the eye point to the target point.

If the point indicated by these marks lies above or below the centre of the image, this indicates either that vertical rise was used when taking the photograph or that the image has subsequently been cropped from the top or bottom edge. If it lies to the left or right of the centre of the image then cropping has been applied to one side or the other, or more unusually that horizontal shift was applied to the photograph.

The AVRs are annotated with the following information:

- Unique identification code (Viewpoint Reference Number)
- Textual description of viewpoint location and direction of view
- AVR Level
- Method
- Co-ordinates of camera position, height and tripod height
- Camera model and lens
- Focal length
- Image orientation
- Image horizontal field of view (HFOV)
- Time of day and date for any source photography
- Map and site photography showing location of camera position
- Peripheral annotation to the image to confirm the direction of view in the original photography (the optical axis)
- Definition of the field of view depicted each side of the optical axis, either in the form of peripheral annotation, textual description or more sophisticated maps

APPENDIX A AVR METHODOLGY

Photographic Alignment within the 3d Environment

The 3d model and point cloud data is combined into one 3d file, the whole model is then imported to 3ds Max, a 3d visualisation software.

A virtual camera was created within 3ds Max using the surveyed camera location, recorded target point and field of view (FOV) based on the camera and lens combination selected for the shot .

The annotated photograph was attached as a background to this view, to assist the Visualiser in aligning the surveyed point cloud to each corresponding background point, based on the Camera Matching Technique.

At this stage a 2nd member of the visualisation team cross-checked the camera alignment to verify the view was correctly set.

Using this virtual camera, a render was created of the aligned model at a resolution to match the baseline photograph. This was overlaid onto the baseline photograph to assess the accuracy of the alignment. When using a wide-angle lens, observations outside the circle of distortion are given less weighting.

Final Rendering and Post-Production

Depending on the level of AVR required the final render may take on various forms.

AVR Level 0 and 1 requires the proposals to be rendered in their simplest form as basic block models. The render is exported out from 3ds Max as a layered image file to the same resolution as the baseline photography. This image is then overlaid onto the baseline photography using Adobe Photoshop where a coloured wash is applied to the proposal for a level 0 AVR or in the case of a level 1 AVR lines are applied to the image to illustrate the visible and occluded maximum physical extent of the proposals. This process was performed on all views.

Level 1 AVRs use a single line display to indicate the profile of a scheme. Key edge lines are sometimes added to help understand the massing. The width of the profile line is selected to ensure that the diagram is clear, and is always drawn inside the true profile.

Level 2 and 3 AVRs require the proposals to be rendered with more architectural detail.

For level 2 AVR, a uniform opaque material is applied to the model. Context buildings that may influence shadows on the development proposal are constructed within the 3d environment and lighting is added to reflect the conditions at the time of photography. The image is rendered and exported from 3ds Max into Photoshop where it is overlaid onto the baseline photography and masking is applied to hide the non-visible aspects of the development in the view.

Masking is a technique to superimpose any elements within the view that will be in front of the development proposal thus provided the true visible extent of the development.

Level 3 AVRs are produced to represent the likely appearance of the proposed development using the proposed materials and textures which are applied to give the view a photo-realistic appearance. When a level 3 AVR is produced, context buildings and features are added to the model creating more realistic shadows cast by, and onto the development. Lighting conditions are set-up within 3ds Max to match the theoretical sunlight conditions at the time the source photograph was taken, and additional model lighting placed as required to best approximate the recorded lighting conditions and the representation of its proposed materials.

The final render is exported to the same resolution as the baseline photography. Multi pass renders are exported to give the visualiser more control in enhancements of the final image. These multi passes may included but not limited to Reflections, Refractions, Shadows, Lighting, Ambient Occlusion and Global Illumination.

The multi pass renders are layered within Adobe Photoshop and blended together to produce the correct level of detail and photo-realistic feel. Finally masking is applied to the image. Endless aesthetic effects can be applied to the rendered image to enhance the realism of the final image and/or make adjustments as a result of proposed material changes. However, the visualiser always attempts to be faithful to the proposed design within it's chosen site.

The final image is verified by a second visualiser to check the appearance, masking and form of the development.

The final images for all levels of AVRs are then saved in an appropriate format for inclusion within the AVR document.

Software Used

- AutoCAD
- 3ds Max 2022
- V-Ray 5 for 3ds Max
- Adobe Photoshop
- Adobe InDesign

APPENDIX B SOURCES OF AVR DATA

Supplied Data

Asset	File Type	Supplier	Reference	Date	Comments
3d Model	SketchUp	Hunters	M8764 Howson Terrace site model.skp	08.10.18	Model provided in Sketchup format. Converted into 3ds format.
Topographical Survey	dwg	Hunters	2926 R1.dwg	08.10.18	
Site Plan	dwg	Hunters	M8764_ASK003_Site_Plan_1-150@A0.dwg	08.10.18	
3d Model	SketchUp	Hunters	20201022 M8764 reduced massing.skp	19.07.21	Model provided in Sketchup format. Converted into 3ds format.

Generated Data by Pegasus Planning Group

Asset	File Type	Reference	Date	Comments
Survey Data	dwg	P17-2640_AVR-Survey-Points	31.08.18	
Viewpoint Locations	dwg	P17-2640_VPs	31.08.18	
Viewpoint Locations	dwg	P17-2640 Winter_VPs	22.03.21	

APPENDIX C TABLE OF SURVEY REFERENCE POINTS

Reference	Easting	Northing	Height (mAOD)
P001	518016.78	174223.66	11.28
P002	518016.06	174221.58	13.25
P003	518030.57	174260.41	19.66
P004	518033.05	174255.09	18.98
P005	518034.74	174248.05	19.60
P006	518034.80	174245.76	16.81
P007	518033.95	174243.28	16.12
P008	518019.06	174217.10	11.50
P009	518027.82	174227.45	13.20
P010	518031.96	174215.68	11.26
P011	518038.86	174219.37	14.14
P012	518039.63	174217.22	14.16
P013	518039.65	174217.25	15.51
P014	518039.62	174217.24	16.91
P015	518039.66	174217.28	18.17
P016	518039.69	174213.28	18.71
P017	518048.03	174214.74	18.60
P018	518070.79	174215.87	21.28
P019	518038.75	174208.30	15.63
P020	518038.65	174208.25	12.17
P021	518141.63	174286.14	34.98
P022	518141.48	174286.31	34.97
P023	518105.49	174270.17	30.34
P024	518103.72	174270.28	30.33
P025	518100.64	174269.49	30.31
P026	518100.54	174267.83	30.32
P027	518106.70	174271.18	28.05
P028	518141.10	174286.78	34.93
P029	518138.78	174285.65	35.26
P030	518138.49	174286.15	35.53
P031	518138.82	174287.04	35.25
P032	518140.47	174287.47	34.88
P033	518140.28	174287.70	34.86
P034	518140.09	174287.93	34.85
P035	518144.68	174290.06	35.54
P036	518143.54	174291.43	35.41
P037	518144.16	174199.05	20.59
P038	518130.21	174219.34	19.75
P039	518130.49	174219.81	19.75
P040	518149.28	174200.62	22.01
P041	518149.09	174200.55	23.01
P042	518148.93	174200.39	24.29
P043	518149.22	174200.58	24.15

Reference	Easting	Northing	Height (mAOD)
P044	518150.73	174201.72	25.88
P045	518153.84	174201.11	25.91
P046	518155.12	174199.22	24.33
P047	518153.01	174199.84	24.17
P048	518153.04	174199.85	23.08
P049	518149.74	174203.37	23.01
P050	518151.11	174200.17	23.03
P051	518151.07	174200.22	24.17
P052	518126.51	174190.84	21.71
P053	518293.42	173975.84	40.81
P054	518292.55	173977.46	40.82
P055	518291.72	173979.08	40.80
P056	518290.89	173980.73	40.77
P057	518290.33	173982.70	40.92
P058	518285.57	173994.44	40.39
P059	518285.50	173994.46	41.19
P060	518285.12	173995.28	41.21
P061	518284.77	173996.08	41.23
P062	518284.83	173996.04	40.39
P063	518285.20	173995.24	40.37
P064	518285.67	173992.53	40.84
P065	518286.41	173990.84	40.75
P066	518287.17	173989.17	40.69
P067	518287.88	173987.48	40.68
P068	518280.51	174006.54	41.43
P069	518279.10	174009.88	41.51
P070	518277.62	174015.21	41.65
P071	518268.90	174020.60	41.19
P072	518268.15	174022.16	41.21
P073	518267.27	174023.94	41.21
P074	518263.72	174025.82	41.85
P075	518266.45	174025.59	41.24
P076	518265.33	174029.12	41.28
P077	518264.67	174028.94	41.33
P078	518264.54	174030.76	41.29
P079	518263.69	174032.44	41.28
P080	518262.88	174034.07	41.28
P081	518258.05	174036.42	42.59
P082	518260.00	174052.49	41.63
P083	518253.91	174049.27	42.21
P084	517943.34	174219.16	2.36
P085	517881.63	174156.63	26.36
P086	517879.44	174151.32	28.70

Reference	Easting	Northing	Height (mAOD)
P087	517874.02	174153.62	26.44
P088	517869.12	174159.89	21.47
P089	517844.68	174223.71	26.45
P090	517941.35	174227.26	2.62
P091	517949.46	174212.05	3.35
P092	517942.92	174223.55	3.23
P093	517951.13	174209.43	3.51
P094	517952.45	174207.96	3.47
P095	517974.60	174204.72	5.40
P096	517975.05	174201.34	8.05
P097	518039.96	174202.46	29.01
P098	518039.94	174202.40	26.72
P099	518037.90	174177.24	25.25
P100	517982.06	174189.13	9.49
P101	517845.21	174445.29	9.81
P102	517843.69	174446.57	7.64
P103	517837.61	174443.58	7.54
P104	517837.17	174442.92	7.36
P105	517834.78	174441.21	7.37
P106	517833.94	174441.00	7.54
P107	517828.05	174447.79	6.66
P108	517825.75	174443.77	5.84
P109	517820.62	174457.86	6.75
P110	517815.39	174456.49	5.23
P111	517815.47	174461.98	6.84
P112	517812.01	174461.58	8.57
P113	517809.41	174464.94	4.69
P114	517806.19	174466.37	5.36
P115	517805.98	174471.80	5.39
P116	517830.25	174470.49	5.48
P117	517831.34	174469.15	5.47
P118	517842.88	174454.85	5.41

Pegasus Group

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FIGURE 11

AVRS SEQUENTIAL SINGLE FRAMES AND ACCURATE VISUAL REPRESENTATIONS VIEWPOINTS A - L

HOWSON TERRACE, RICHMOND, LONDON

TVIA SEQUENTIAL SINGLE FRAMES AND ACCURATE VISUAL REPRESENTATIONS

PREPARED BY PEGASUS GROUP ON BEHALF OF HOUSING AND CARE 21 | SEPTEMBER 2021 | P17-2640_06

Pegasus Environment

CONTENTS

APPENDICES

1.0 INTRODUCTION

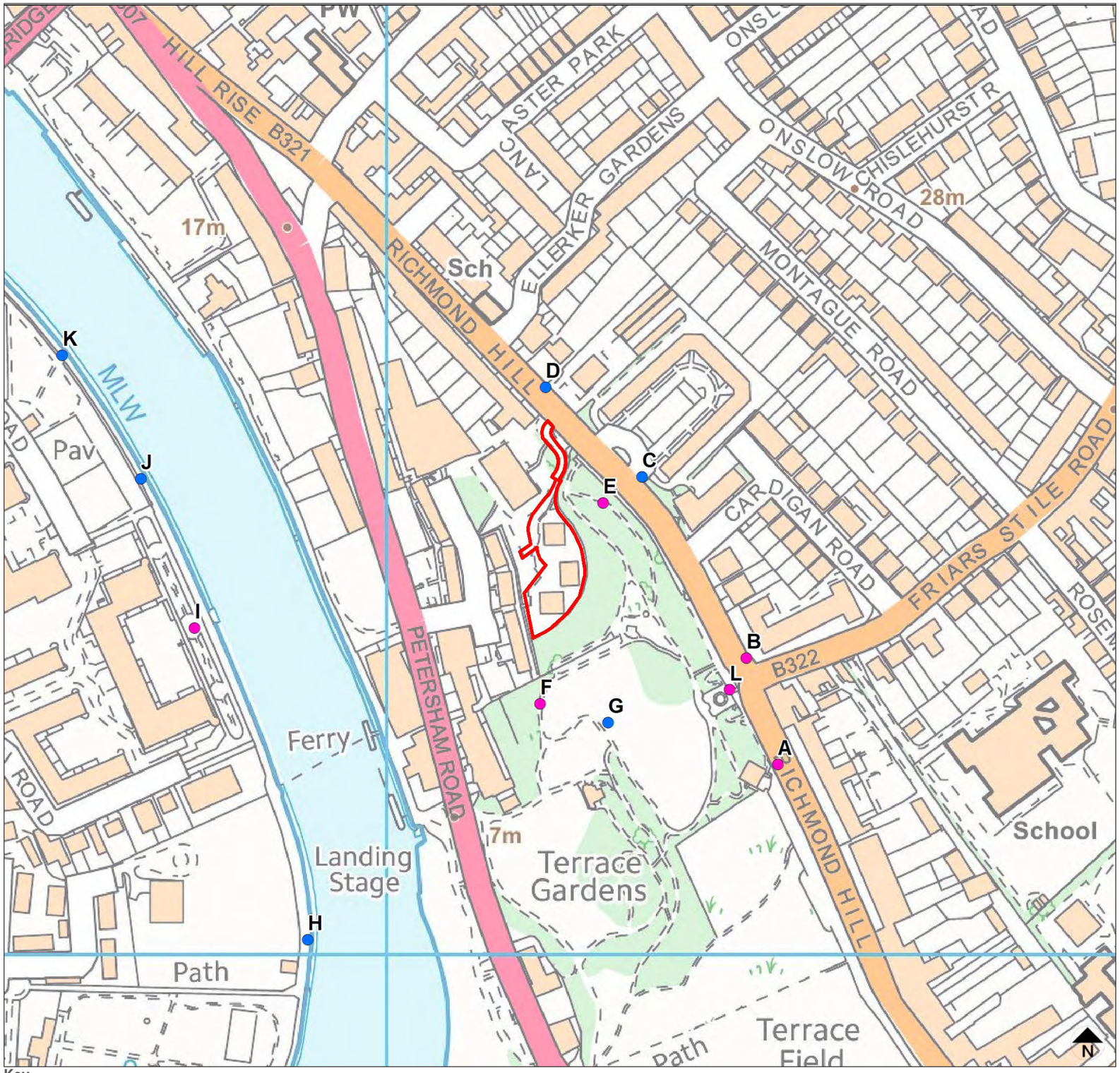
1.1 Pegasus Planning Group were instructed on behalf of Housing and Care 21 to prepare a series of Accurate Visual Representations (AVR) to assess the redevelopment of Howson Terrace, Richmond, London.

1.2 The development proposals comprise demolition of Housing and Care 21's existing three 2 storey buildings at Howson Terrace, Richmond Hill and replacement with a development of up to 5/6 storeys with an articulated roofline which varies across the site.

1.3 The London View Management Framework (LVMF) defines AVRs as:
"An Accurate Visual Representation (AVR) is a static or moving image that shows the location of a proposed development, the degree to which it will be visible, its detailed form and/or the materials to be used. AVRs combine images of the proposed development with a representation of the existing view. The detail of the analysis should be appropriate to the scale and type of development proposed. Additional information about preparing and using Accurate Visual Representations is contained in Appendix 1.
There are 4 levels of AVR which are described as:
Level 0 - Location and size of proposal
Level 1 - Location, size and degree of visibility of proposal
Level 2 - As level 1 + description of architectural form
Level 3 - As level 2 + use of materials."

2.0 VIEWPOINT LOCATIONS

2.1 A total of 10 viewpoints were identified as requiring Level 1 AVRs, as shown in Figure 1.



Key:
- Site Location
- Single Frame Images (Non AVR)
- AVR Viewpoint

Figure 1: Viewpoint Location Plan

2.0 VIEWPOINT LOCATIONS

2.2 Viewpoint Information

Viewpoint Reference	Description and Direction of View	AVR Level	Method	Easting	Northing	Height (mAOD)	Tripod Height (m)	Camera	Lens	Focal Length	Orientation	HFOV	Date	Time
A	Richmond Hill road, at south east-ern corner of Terrace Gardens looking north west.	N/A	Non-Verified	518242.60	174123.95	40	1.60	Canon 6D Mark II	Canon f/1.4 50mm	50mm	Landscape	39.6°	22/03/2021	12:57
B	Junction of Richmond Hill road and Friars Stile Road, looking north west.	N/A	Non-Verified	518223.16	174189.94	38	1.60	Canon 6D Mark II	Canon f/1.4 50mm	50mm	Landscape	39.6°	22/03/2021	13:21
C	Richmond Hill road, entrance to Richmond Hill Court, looking south west.	AVR1	Verified	518158.57	174301.93	33	1.60	Canon 6D Mark II	Canon f/1.4 24mm	24mm	Landscape	73.7°	22/03/2021	14:22
D	Richmond Hill road, near Priors Lodge opposite Site entrance, look-ing south.	AVR1	Verified	518099.00	174357.34	28	1.60	Canon 6D Mark II	Canon f/1.4 24mm	24mm	Landscape	73.7°	22/03/2021	14:13
E	Terrace Gardens, northern edge, elevated path leading to Richmond Hill road, looking south west.	N/A	Non-Verified	519134.69	174285.77	27	1.60	Canon 6D Mark II	Canon f/1.4 50mm	50mm	Landscape	39.6°	22/03/2021	14:06
F	Terrace Gardens, western circular path, looking north.	N/A	Non-Verified	518095.57	174161.52	15	1.60	Canon 6D Mark II	Canon f/1.4 24mm	24mm	Landscape	73.7°	22/03/2021	13:47
G	Terrace Gardens, central area near Hollyhock Café, looking north	AVR1	Verified	518137.56	174150.01	19	1.60	Canon 6D Mark II	Canon f/1.4 24mm	24mm	Landscape	73.7°	22/03/2021	13:56
H	River Thames Path, near Cam-bridge Park Footpath, looking north east.	AVR1	Verified	517951.71	174015.40	4	1.60	Canon 6D Mark II	Canon f/1.4 50mm	50mm	Landscape	39.6°	22/03/2021	15:25
I	River Thames Path, near Richmond Bridge Estate / Pelabon Gardens, looking east.	AVR1	Verified	517881.81	174208.52	4	1.60	Canon 6D Mark II	Canon f/1.4 50mm	50mm	Landscape	39.6°	22/03/2021	15:12
J	River Thames Path, near tennis courts, looking east.	AVR1	Verified	517848.47	174300.81	4	1.60	Canon 6D Mark II	Canon f/1.4 50mm	50mm	Landscape	39.6°	22/03/2021	14:59
K	River Thames Path, southern edge of Cambridge Gardens, looking south east.	AVR1	Verified	517799.84	174377.31	4	1.60	Canon 6D Mark II	Canon f/1.4 50mm	50mm	Landscape	39.6°	22/03/2021	14:55
L	Terrace Gardens, eastern edge overlooking Bulbous Betty sculp-ture, looking north west.	N/A	Non-Verified	518212.90	174170.15	37	1.60	Canon 6D Mark II	Canon f/1.4 50mm	50mm	Landscape	39.6°	22/03/2021	13:35

3.0 AVR VIEWS

Viewpoint A - Richmond Hill road, at south eastern corner of Terrace Gardens - Verification Data

Viewpoint Reference	Description and Direction of View	AVR Level	Method	Easting	Northing	Height (mAOD)	Tripod Height (m)	Camera	Lens	Focal Length	Orientation	HFOV	Date	Time
A	Richmond Hill road, at south eastern corner of Terrace Gardens looking north west.	N/A	Non-Verified	518242.60	174123.95	40	1.60	Canon 6D Mark II	Canon f/1.4 50mm	50mm	Landscape	39.6°	22/03/2021	12:57

Survey Reference Points (No Survey points taken from this location)

Viewpoint Location

Tripod Set-up Location

3.0 AVR VIEWS

Viewpoint A - Richmond Hill road, at south eastern corner of Terrace Gardens looking north west - Existing View

3.0 AVR VIEWS

Viewpoint A - Richmond Hill road, at south eastern corner of Terrace Gardens looking north west - Proposed View (No view prepared from this location due to insufficient alignment points)

3.0 AVR VIEWS

Viewpoint B - Junction of Richmond Hill road and Friars Stile Road, looking north west. - Verification Data

Viewpoint Reference	Description and Direction of View	AVR Level	Method	Easting	Northing	Height (mAOD)	Tripod Height (m)	Camera	Lens	Focal Length	Orientation	HFOV	Date	Time
B	Junction of Richmond Hill road and Friars Stile Road, looking north west.	N/A	Non-Verified	518223.16	174189.94	38	1.60	Canon 5D Mark II	Canon f/1.4 50mm	50mm	Landscape	39.6°	22/03/2021	13:21

Survey Reference Points (No Survey points taken from this location)

Viewpoint Location

Tripod Set-up Location

3.0 AVR VIEWS

Viewpoint B - Junction of Richmond Hill road and Friars Stile Road, looking north west - Existing View

3.0 AVR VIEWS

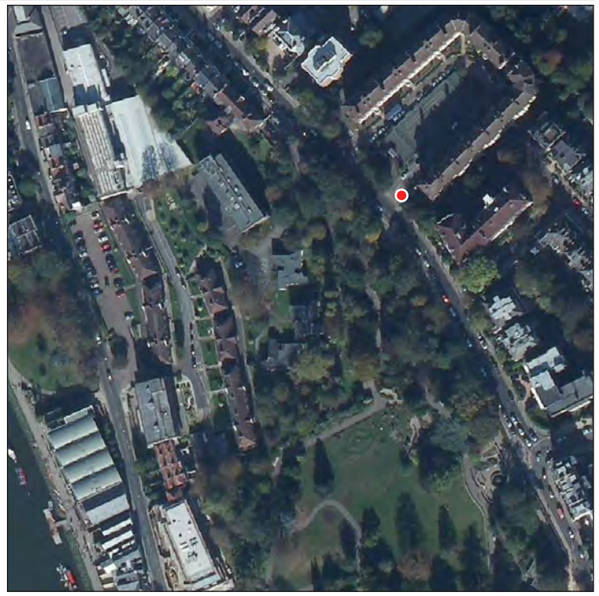
Viewpoint B - Junction of Richmond Hill road and Friars Stile Road, looking north west - Proposed View (No view prepared from this location due to insufficient alignment points)

3.0 AVR VIEWS

Viewpoint C - Richmond Hill road, entrance to Richmond Hill Court - Verification Data

Viewpoint Reference	Description and Direction of View	AVR Level	Method	Easting	Northing	Height (mAOD)	Tripod Height (m)	Camera	Lens	Focal Length	Orientation	HFOV	Date	Time
C	Richmond Hill road, entrance to Richmond Hill Court, looking south west.	AVR1	Verified	518158.57	174301.93	33	1.60	Canon 6D Mark II	Canon f/1.4 24mm	24mm	Landscape	73.7°	22/03/2021	14:22

Survey Reference Points



Viewpoint Location

Tripod Set-up Location

3.0 AVR VIEWS

Viewpoint C - Richmond Hill road, entrance to Richmond Hill Court, looking south west - Existing View

3.0 AVR VIEWS

Visible Extent of Proposed Development

Non Visible Extent of Proposed Development

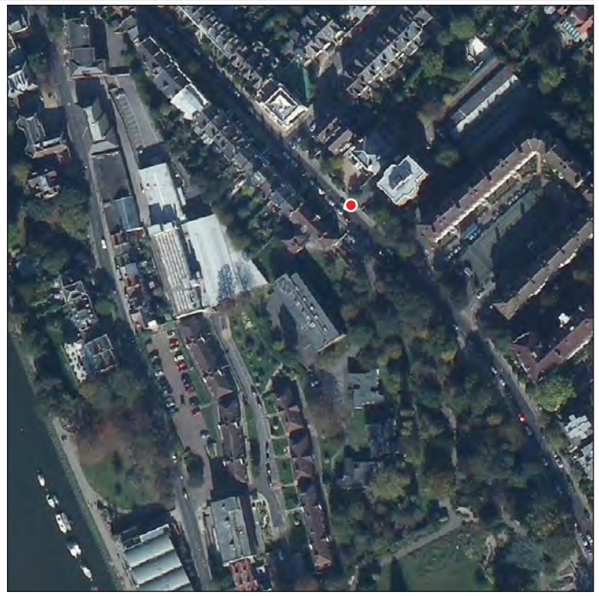
Viewpoint C - Richmond Hill road, entrance to Richmond Hill Court, looking south west - Proposed View - AVR Level 1

3.0 AVR VIEWS

Viewpoint D - Richmond Hill road, near Priors Lodge opposite Site entrance - Verification Data

Viewpoint Reference	Description and Direction of View	AVR Level	Method	Easting	Northing	Height (mAOD)	Tripod Height (m)	Camera	Lens	Focal Length	Orientation	HFOV	Date	Time
D	Richmond Hill road, near Priors Lodge opposite Site entrance, looking south.	AVR1	Verified	518099.00	174357.34	28	1.60	Canon 6D Mark II	Canon f/1.4 24mm	24mm	Landscape	73.7°	22/03/2021	14:13

Survey Reference Points



Viewpoint Location

Tripod Set-up Location