# **Appendix 2 - Miller Hare's methodology**

#### A2 View Locations

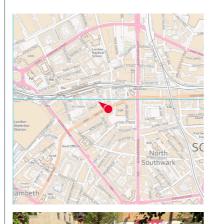




2 | Union Street, between The Lord Nelson PH and Rowland Hill House, opposite junction with Gambia Street, looking west



3 | The Cut, between nos. 39A-41, looking north



4 | Baylis Road, at the northern corner of Waterloo Millennium Green, looking north-east



5 | Cab Road, in front of the northern stairway entrance to Waterloo Station, looking east



6 | Cornwall Road, opposite no. 1 Wootton Street, looking east into Wootton Street









National Grid Reference 531012.2E 180012.4N

Camera height 8.88m AOD

Bearing 82.6°, distance 0.4km

Date of photograph 18/07/2020

Time of photograph 17:36

Canon EOS 5D Mark IV DSLR

Height of camera 1.60m above ground

Looking at Centre of Site

Photography Details

Lens 24mm





Camera height 4.30m AOD Looking at Centre of Site Bearing 85.0°, distance 0.2km Photography Details Height of camera 1.60m above ground Date of photograph 18/07/2020

Time of photograph 17:04

Lens 24mm

Canon EOS 5D Mark IV DSLR



National Grid Reference 531773.1E 180000.4N

Camera Location

Camera height 6.25m AOD

Bearing 271.6°, distance 0.3km

Date of photograph 20/07/2020

Time of photograph 09:38

Canon EOS 5D Mark IV DSLR

Height of camera 1.60m above ground

Looking at Centre of Site

Photography Details

Lens 24mm

National Grid Reference 531498.4E 179948.5N Camera height 4.92m AOD Looking at Centre of Site Bearing 306.9°, distance 0.1km Photography Details Height of camera 1.60m above ground Date of photograph 20/07/2020 Time of photograph 10:02 Canon EOS 5D Mark IV DSLR Lens 24mm

National Grid Reference 531276.5E 179810.0N Camera height 5.37m AOD Looking at Centre of Site Bearing 31.6°, distance 0.3km Photography Details Height of camera 1.60m above ground Date of photograph 18/07/2020 Time of photograph 15:23 Canon EOS 5D Mark IV DSLR Lens 24mm

Camera Location

Looking at Centre of Site Bearing 258.1°, distance 0.2km Photography Details Height of camera 1.60m above ground Date of photograph 20/07/2020 Time of photograph 09:52 Canon EOS 5D Mark IV DSLR

Camera height 4.98m AOD

Lens 24mm

National Grid Reference 531669.7E 180053.2N

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7 | Wootton Street, at junction with Windmill Walk, looking east







10 | Theed Street, outside no. 3, looking south



11 | Colombo Street, outside The Rose & Crown PH, looking south-west





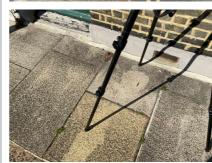






9 | Theed Street, outside no. 10, looking south







Camera Location National Grid Reference 531351.3E 180028.2N Camera height 4.36m AOD Looking at Centre of Site Bearing 87.4°, distance 0.1km Photography Details Height of camera 1.60m above ground Date of photograph 18/07/2020 Time of photograph 16:51 Canon EOS 5D Mark IV DSLR Lens 24mm

Camera Location National Grid Reference 531312.9E 180139.5N Camera height 4.86m AOD Looking at Centre of Site Bearing 121.0°, distance 0.2km Photography Details Height of camera 1.60m above ground Date of photograph 20/07/2020 Time of photograph 17:11 Canon EOS 5D Mark IV DSLR Lens 24mm

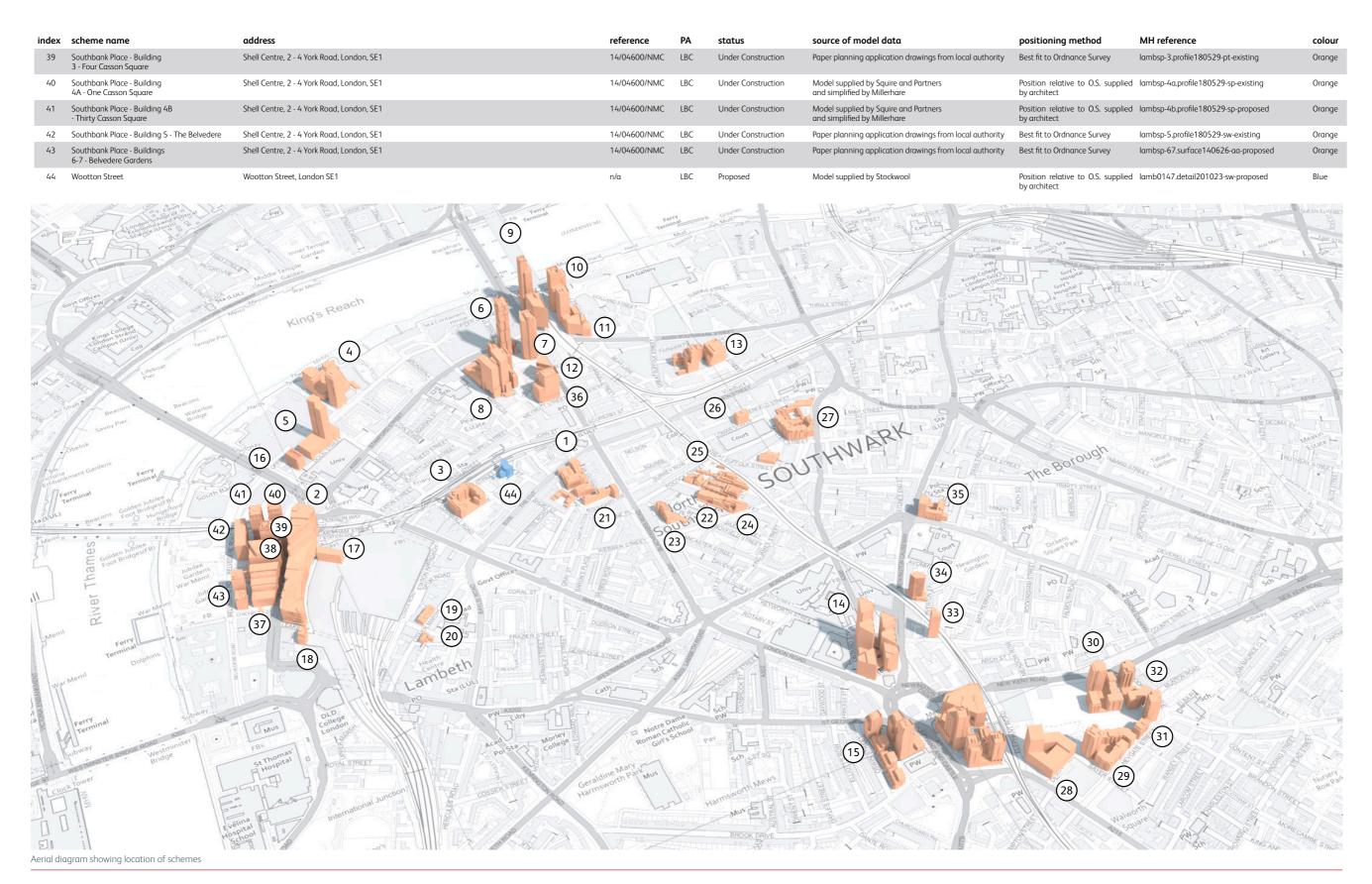
National Grid Reference 531353.8E 180174.4N Camera height 4.77m AOD Looking at Centre of Site Bearing 150.2°, distance 0.2km Photography Details Height of camera 1.60m above ground Date of photograph 20/07/2020 Time of photograph 17:23 Canon EOS 5D Mark IV DSLR Lens 24mm

Camera Location National Grid Reference 531385.7E 180133.4N Camera height 4.72m AOD Looking at Centre of Site Bearing 160.3°, distance 0.1km Photography Details Height of camera 1.60m above ground Date of photograph 20/07/2020 Time of photograph 17:31 Canon EOS 5D Mark IV DSLR Lens 24mm

Camera Location National Grid Reference 531553.5E 180221.7N Camera height 5.52m AOD Looking at Centre of Site Bearing 209.5°, distance 0.2km Photography Details Height of camera 1.60m above ground Date of photograph 20/07/2020 Time of photograph 07:28 Canon EOS 5D Mark IV DSLR Lens 24mm

## A3 Details of schemes

index	scheme name	address	reference	PA	status	source of model data	positioning method	MH reference	colour
1	Former Lesoco Campus	Former Lesoco Campus, Ufford Street, London SE1	15/AP/3024	SBC	Legal Consent granted	Paper planning application drawings from local authority	Best fit to Ordnance Survey	swrk0151.mass160928-rb-proposed	Orange
2	Elizabeth House (2019)	Elizabeth House, 39 York Road, London, SE1 7NQ	19/01477/EIAFUL	LBC	Legal Consent granted	Paper planning application drawings from local authority	Best fit to Ordnance Survey	lamb0207.surface190610-ahmm-proposed	Orange
3	Cornwall Road, Waterloo East	OCCC Estate, Cornwall Road, Wootton Street And Windmill Walk London SE1	16/06172/FUL	LBC	Legal Consent granted	Paper planning application drawings from local authority	Best fit to Ordnance Survey	lamb0400.profile170523-dp-proposed	Orange
4	ITV Headquarters	The London Television Centre, 60 - 72 Upper Ground, London, SE1 9LT	17/03986/FUL	LBC	Legal Consent granted	Model supplied by Hopkins Architects and simplified by Millerhare	Position relative to O.S. supplied by architect	lamb0047.profile170613-hopkins-proposed	Orange
5	Doon Street	Coin Street Site A, Doon Street, London. SE1	11/00996/FUL	LBC	Legal Consent granted	Paper planning application drawings from local authority	Best fit to Ordnance Survey	lamb0057-pa1.surface070620-ru-consented	Orange
6	18 Blackfriars (2016) - Residential Tower	Land at 18 Blackfriars Road bounded by Stamford Street, Paris Gardens and Christ Church Gardens, London, SE1 8NY	16/AP/5239	SBC	Legal Consent granted	Model supplied by Wilkinson Eyre Architects	Position relative to O.S. supplied by architect	swrk0001-a.profile161014-wea-proposed-resi	Orange
7	18 Blackfriars (2016) - Office Tower	Land at 18 Blackfriars Road bounded by Stamford Street, Paris Gardens and Christ Church Gardens, London, SE1 8NY	16/AP/5239	SBC	Legal Consent granted	Model supplied by BG Architects	Position relative to O.S. supplied by architect	swrk0001-b.profile161014-bg-proposed-office	Orange
8	Paris Gardens (2018)	1-5 Paris Gardens and 16-19 Hatfields, London, SE1 8ND	17/AP/4230	SBC	Legal Consent granted	Model supplied by KPF	Position relative to O.S. supplied by architect	swrk0030-c.profile180515-kpf-consented	Orange
9	Bankside Yards West - Ludgate House	64 Hopton Street, London SE1	17/AP/2286	SBC	Legal Consent granted	Model supplied by PLP Architects	Position relative to O.S. supplied by architect	swrk0077.surface170505-plp-proposed	Orange
10	Bankside Yards East - Sampson House	Sampson House, 64 Hopton Street, London, SE1 9JH	17/AP/2286	SBC	Legal Consent granted	Model supplied by PLP Architects	Position relative to O.S. supplied by architect	swrk0079.surface180410-plp-proposed	Orange
11	Titan House	144 Southwark Street, London, SE1 OUP	16/AP/4500	SBC	Legal Consent granted	Model supplied by GIA	Position relative to O.S. supplied by architect	swrk0079-a.mass130328-gia-consented	Orange
12	Friars Bridge Court	Friars Bridge Court, 41-45 Blackfriars Road, London SE1 8NZ	16/AP/1660	SBC	Legal Consent granted	Model supplied by PLP Architects	Position relative to O.S. supplied by architect	swrk0002-b.detail160309-plp-proposed-chalk	Orange
13	Lavington Street	Lavington Street, London SE1	16/AP/2668	SBC	Legal Consent granted	Model supplied by Allies and Morrison Architects	Position relative to O.S. supplied by architect	swrk0102-b.surface170324-am-proposed	Orange
14	Skipton House	Skipton House, 80 London Road, Perry Library, 250 Southwark Bridge Road; & Keyworth Street Hostel, 10 Keyworth Street, London, SE1	15/AP/5125	SBC	Legal Consent granted	Massing model supplied by Allies and Morrison	Best fit to Ordnance Survey	swrk0236.mass160628-am2-proposed	Orange
15	Elephant and Castle Town Centre	Shopping Centre Site, Elephant and Castle, 26, 28, 30 and 32 New Kent Road, Arches 6 and 7 Elephant Road, and London College of Communications Site, London SE1	16/AP/4458	SBC	Legal Consent granted	Paper planning application drawings from local authority	Best fit to Ordnance Survey	swrk0244.profile180704-dp-proposed	Orange
16	Doon Street - Office and Education Building	Coin Street Site A, Doon Street, London. SE1	10/00445/FUL	LBC	Legal Consent granted	Model supplied by Lifschutz Davidson Sandilands	Position relative to O.S. supplied by architect	lamb0057-pa3.surface081022-lds-consented	Orange
17	Waterloo International Terminal	Waterloo Station London SE1 8SW	16/02973/FUL	LBC	Legal Consent granted	Paper planning application drawings from local authority	Best fit to Ordnance Survey	lamb0215.mass190111-mb-proposed	Orange
18	10 Leake Street	10 Leake Street London SE1 7NN	n/a	LBC	Legal Consent granted	Drawings supplied by BPTW Architects	Best fit to Ordnance Survey	lamb0212-a.mass140624-bptw-proposed	Orange
19	100 Lower Marsh	100 - 108 Lower Marsh London SE1 7AB	16/05322/FUL	LBC	Legal Consent granted	Paper planning application drawings from local authority	Best fit to Ordnance Survey	lamb0227.mass190523-sc-consented	Orange
20	25 Lower Marsh Road	22 - 25 Lower Marsh London SE1 7RJ	15/03409/FUL	LBC	Legal Consent granted	Paper planning application drawings from local authority	Best fit to Ordnance Survey	lamb0228.profile151023-dp-proposed	Orange
21	90-92 Blackfriars Road	90-91 and 92 Blackfriars Road, London, SE1 8HW	12/AP/3558	SBC	Legal Consent granted	Paper planning application drawings from local authority	Best fit to Ordnance Survey	swrk0228-a.mass150514-rb-consented	Orange
22	14-21 Rushworth Street	14-21 Rushworth Street, London, SE1 ORB	19/AP/1259	SBC	Legal Consent granted	Paper planning application drawings from local authority	Best fit to Ordnance Survey	swrk0229-f.profile191125-kt-proposed	Orange
23	160 Blackfriars Road	160 Blackfriars Road, London, Southwark	20/AP/0556	SBC	Legal Consent granted	Paper planning application drawings from local authority	Best fit to Ordnance Survey	swrk0229-g.surface200817-dp-consented	Orange
24	The Colorama Building	61 Webber Street, London, SE1 ORF and 24-28 Rushworth Street, London, SE1 ORY	16/AP/0444	SBC	Legal Consent granted	Paper planning application drawings from local authority	Best fit to Ordnance Survey	swrk0229-c.mass170131-rb-consented	Orange
25	33-38 Rushworth Street	33-38 Rushworth Street London SE1 ORB And 1-7 King Bench Street SE1	17/AP/4289	SBC	Legal Consent granted	Paper planning application drawings from local authority	Best fit to Ordnance Survey	swrk0229-d.profile170207-ea-proposed	Orange
26	32-36 Loman Street	32-36 Loman Street London SE1 0EH	19/AP/1404	SBC	Legal Consent granted	Paper planning application drawings from local authority	Best fit to Ordnance Survey	swrk0261.mass200414-rb-consented	Orange
27	Southwark Fire Station	Southwark Fire Station, 94 Southwark Bridge Road, London, SE1 0EG, Grotto Place and Grotto Podiums	17/AP/0367	SBC	Legal Consent granted	Paper planning application drawings from local authority	Best fit to Ordnance Survey	swrk0263.profile180328-dp-consented	Orange
28	Elephant Park - MP5 - Plot H01 - Maximum Parameters	The Heygate Estate and surrounding land bound by New Kent Road to the north, Rodney Place and Rodney Road to the east, Wansey Street to the south and Walworth Road and Elephant Road to the west, London SE17	12/AP/1092	SBC	Legal Consent granted	Paper planning application drawings from local authority	Best fit to Ordnance Survey	ep-h01.mass190507-dmr-consented-parameter	Orange
29	Elephant Park - MP5 - Plot H07 - Reserved Matters	Plot H7 Heygate Street within land bounded by Elephant Park to the north, Plot H2 to the west, Heygate Street to the south and H11B to the east, London SE17	19/AP/1166	SBC	Legal Consent granted	Paper planning application drawings from local authority	Best fit to Ordnance Survey	ep-h07.mass190509-fg-proposed	Orange
30	Elephant Park - MP3 - Plot H05	Plot H5 within land bounded by New Kent Road (A201) to the north, Rodney Place and Rodney Road to the east, Wansey Street to the south and Walworth Road (A215) and Elephant Road to the west, London, SE17	17/AP/2268	SBC	Legal Consent granted	Paper planning application drawings from local authority	Best fit to Ordnance Survey	ep-h05.profile190509-kpn-proposed	Orange
31	Elephant Park - MP4 - Plot 11B	Plot 11B within land bound by plot H11A and Elephant Park to the north, Rodney Place and Rodney Road to the east, Heygate Street to the south and Plot H7 to the west	18/AP/1863	SBC	Legal Consent granted	Paper planning application drawings from local authority	Best fit to Ordnance Survey	ep-h11b.mass190509-kt-consented	Orange
32	Elephant Park - MP4 - Plot 11A	Plot H11A within land bounded by New Kent Road to the north, Rodney Place to the east, Plot H11B and Elephant Park to the south and Plot H5 to the west	18/AP/1862	SBC	Legal Consent granted	Paper planning application drawings from local authority	Best fit to Ordnance Survey	ep-h11a.mass190508-kt-consented	Orange
33	5-9 Rockingham Street	5-9 Rockingham Street & 2-4 Tiverton Street, SE1 6PF	19/AP/0750	SBC	Legal Consent granted	Paper planning application drawings from local authority	Best fit to Ordnance Survey	swrk0255.mass190301-hcla-consented	Orange
34	87 Newington Causeway	87 Newington Causeway, London, SE1 6BD	16/AP/3144	SBC	Legal Consent granted	Paper planning application drawings from local authority	Best fit to Ordnance Survey	swrk0256.mass161110-rb-proposed	Orange
35	Kings Place	Land at 19, 21 and 23 Harper Road, 325 Borough High Street, 1-5 and 7-11 Newington Causeway, London, SE1	16/AP/3174	SBC	Legal Consent granted	Paper planning application drawings from local authority	Best fit to Ordnance Survey	swrk0269-a.mass161109-proposed-rb	Orange
36	Wedge House (2015)	Wedge House, 32-40 Blackfriars Road, London, SE1 8PB	15/AP/0237	SBC	Under Construction	Paper planning application drawings from local authority	Best fit to Ordnance Survey	swrk0002-a.surface150313-rb-proposed	Orange
37	Southbank Place - Building 1 - One Southbank Place	Shell Centre, 2 - 4 York Road, London, SE1	14/04600/NMC	LBC	Under Construction	Paper planning application drawings from local authority	Best fit to Ordnance Survey	lambsp-1.surface140626-aa-proposed	Orange
38	Southbank Place - Building 2 - Two Southbank Place	Shell Centre, 2 - 4 York Road, London, SE1	14/04600/NMC	LBC	Under Construction	Paper planning application drawings from local authority	Best fit to Ordnance Survey	lambsp-2.profile180529-dp-existing	Orange



# A4 Model Overview



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### A5 Accurate Visual Representations

A5.1 Each of the views in this study has been prepared as an Accurate Visual Representation (AVR) following a consistent methodology and approach to rendering. Appendix C of 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."

A5.2 The Landscape Institute Technical Guidance Note 06/19 "Visual Representation of Development Proposals" notes that the production of technical visualisations:

"should allow competent authorities to understand the likely effects of the proposals on the character of an area and on views from specific points."

A5.3 Paragraph 2.2 highlights that the baseline photography should:

"be sufficiently up-to-date to reflect the current baseline

"include the extent of the site and sufficient context;"

"be based on good quality imagery, secured in good, clear weather conditions wherever reasonably possible;"

- A5.4 In this study the baseline condition is provided by carefully taken large format photography. The proposed condition is represented as an accurate photomontage, which combines a computer generated image with the photographic context. In preparing AVRs of this type certain several key attributes need to be determined, including:
  - the Field of View
  - the representation of the Proposed Development
  - documentation accompanying the AVR

#### Selection of Field of View

- A5.5 The choice of telephoto, standard or wide-angle lens, and consequently the Field of View, is made on the basis of the requirements for assessment which will vary from view to view.
- A5.6 In the simple case the lens selection will be that which provides a comfortable Viewing Distance. This would normally entail the use of what most photographers would refer to as a "standard" or "normal" lens, which in practice means the use of a lens with a 35mm equivalent focal length of between about 40 and 58 mm.
- A5.7 However in a visual assessment there are three scenarios where constraining the study to this single fixed lens combination would not provide the assessor with the relevant information to properly assess the Proposed Development in its context.

### Field Of View

The term 'Field Of View' (FOV) or more specifically Horizontal Field of View (HFOV), refers to the horizontal angle of view visible in a photograph or printed image and is expressed in degrees. It is often generally referred to as 'angle of view', 'included angle' or 'view cone angle'.

Using this measure it becomes practical to make a comparison between photographs taken using lens of various focal lengths captured on to photographic film or digital camera sensors of various size and proportions. It is also possible to compare computer renderings with photographic images.

Studies of this type use a range of camera equipment; in recent times digital cameras have largely superseded the traditional film formats of 35mm, medium format (6cm x 6cm) and large format (5in x 4in). Comparing digital and film formats may be achieved using either the HFOV or the 35mm equivalent lens calculation, however quoting the lens focal length (in mm) is not as consistently applicable as using the HFOV when comparing AVRs.

35mm Lens	HFOV degrees	Lens focal length (mm)
Wide angle lens	74.0	24
Medium wide lens	54.4	35
Standard lens	39.6	50
Telephoto lens	28.8	70
Telephoto lens	20.4	100
Telephoto lens	10.3	200
Telephoto lens	6.9	300

The FOV of digital cameras is dependent on the physical dimensions of the CCD used in the camera. These depend on the make and model of the camera. The comparison table uses the specifications for a Canon EOS-5D Mark II which has CCD dimensions of  $36.0 \text{mm} \times 22.0 \text{mm}$ .

- A5.8 Firstly, where the relationship being assessed is distant, the observer would tend naturally to focus closely on it. At this point the observer might be studying as little as 5 to 10 degrees in plan. The printing technology and image resolution of a print limit the amount of detail that can be resolved on paper when compared to the real world, hence in this situation it is appropriate to make use of a telephoto lens.
- As.9 Secondly, where the wider context of the view must be considered and in making the assessment a viewer would naturally make use of peripheral vision in order to understand the whole. A print has a fixed extent which constrains the angle of view available to the viewer and hence it is logical to use a wide angle lens in these situations in order to include additional context in the print.
- A5.10 Thirdly where the viewing point is studied at rest and the eye is free to roam over a very wide field of view and the whole setting of the view can be examined by turning the head. In these situations it is appropriate to provide a panorama comprising of a number of photographs placed side by side.
- A5.11 The Landscape Institute Technical Guidance Note 06/19
  Appendix 1 suggests that where a standard lens in landscape
  or portrait orientation cannot capture the view then the use
  of wider-angled prime lenses should be considered. Appendix
  13 further notes:

"The 24mm tilt shift is typically used for visualisation work where viewpoints are located close to a development and the normal range of prime lenses will not capture the proposed site"

A5.12 For some views two of these scenarios might be appropriate, and hence the study will include two versions of the same view with different fields of view.

# Representation of the Proposed Development and cumulative schemes

Classification of AVRs

A5.13 AVRs are classified according to their purpose using Levels 0 to 3. These are defined in detail in Appendix C of the London View Management Framework: Supplementary Planning Guidance (July 2007). The following table is a summary.

AVR level	showing	purpose		
AVR 0	Location and size of proposal	Showing Location and size		
AVR 1	Location, size and degree of visibility of proposal	Confirming degree of visibility		
AVR 2	As level 1 + description of architectural form	Explaining form		
AVR 3	As level 2 + use of materials	Confirming the use of materials		

A5.14 In practice 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 "wire-line"). Model based AVRs are generally AVR 1.

AVR 3 - Photoreal



Example of AVR 3 – confirming the use of materials (in this case using a 'photo-realistic' rendering technique)

- A5.15 The purpose of a Level 3 AVR is to represent the likely appearance of the Proposed Development under the lighting conditions found in the photograph. All aspects of the images that are able to be objectively defined have been created directly from a single detailed description of the building. These include the geometry of the building and the size and shape of shadows cast by the sun.
- A5.16 Beyond this it is necessary to move into a somewhat more subjective arena where the judgement of the delineator must be used in order to define the final appearance of the building under the specific conditions captured by the photographic and subsequent printing processes. In this area the delineator is primarily guided by the appearance of similar types of buildings at similar distances in the selected photograph. In large scope studies photography is necessarily executed over a long period of time and sometimes at short notice. This will produce a range of lighting conditions and photographic exposures. The treatment of lighting and materials within these images will respond according to those in the photograph.
- A5.17 Where the Proposed Development is shown at night-time, the lightness of the scheme and the treatment of the materials was the best judgment of the visualiser as to the likely appearance of the scheme given the intended lighting strategy and the ambient lighting conditions in the background photograph. In particular the exact lighting levels are not based on photometric calculations and therefore the resulting image is assessed by the Architect and Lighting Designer as being a reasonable interpretation of the concept lighting strategy.

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