

A303 Sparkford to Ilchester Dualling Scheme TR010036

6.3 Environmental Statement Appendix 7.5 Photomontage Methodology

APFP Regulation 5(2)(a)
Planning Act 2008

Infrastructure Planning (Applications: Prescribed
Forms and Procedure) Regulations 2009
July 2018



Infrastructure Planning

Planning Act 2008

**The Infrastructure Planning
(Applications: Prescribed Forms
and Procedure) Regulations
2009**

**A303 Sparkford to Ilchester Dualling
Scheme**

Development Consent Order 201[X]

**6.3 Environmental Statement
Appendix 7.5 Photomontage Methodology**

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Author:	A303 Sparkford to Ilchester Dualling Scheme Project Team, Highways England

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1 Methodology for the production of photomontages

1.1.1 The methodology for undertaking the photomontages for the A303 Sparkford to Ilchester Dualling Scheme (hereafter referred to as 'the scheme') to support Chapter 7 Landscape (Volume 6.1) of the Environmental Statement (ES) are given below. Reference is made to photography and field surveying techniques, followed by the methodology used for the photomontage production itself.

1.1.2 The photomontages are contained within Figures 7.9 a to c in Volume 6.2.

1.2 Photomontage equipment

1.2.1 Refer to ARCMINUTE Methodology 2017 in Appendix A.

1.3 Photography procedures

1.3.1 Refer to ARCMINUTE Methodology 2017 in Appendix A.

1.4 Procedure adopted for field surveying

1.4.1 Refer to ARCMINUTE Methodology 2017 in Appendix A.

1.5 Procedure adopted for photomontage production

Software

1.5.1 AutoCAD, 3DS Max and Photoshop are used to model the proposed scheme to generate perspective overlays for each photograph.

Drawings

1.5.2 DWG files (plans, elevations and details) for the scheme as well as X-Y-Z data from GPS system.

3D Model

1.5.3 Photomontages are produced by placing a computer generated camera at the surveyed camera position within the 3D model. The photograph taken from the actual camera position is used as a backdrop to the 3D model. A view of the 3D model within the photographic context is rendered.

Artwork

1.5.4 Photoshop is used to merge the perspective taken from the 3D model and the photograph to illustrate the visual appearance of the proposals.

Appendix A: ARCMINUTE methodology 2017

Photography, Survey and 3ds Max camera combined service package.

25b Pall Mall Deposit
124-128 Barlby Road
Ladbroke Grove
W10 6BL
07774 857627
0208 9605232
info@arcminute.co.uk
www.arcminute.co.uk

Arcminute Ltd
Registered in England and Wales
No 7544732
VAT No 925157914

CAMERA EQUIPMENT

Camera – 36x24mm / 42mp sensor.

Shift Lenses – 17mm, 24mm , 52mm and 80mm

Panoramic mount - custom engineered to rotate the camera in a flat plane within 0.015 degrees to the horizon.

IMAGE CAPTURE

The camera is mounted on a tripod 1.6m above the ground and high quality architectural photographic practice is used to capture the view in two-point perspective. For panoramic images the camera is placed on a rotating mount and a sequence of images sharing the same point of perspective and orientation with respect to the horizon are captured using a fixed 35mm lens. Images are captured in RAW format and a photograph is taken of the camera in it's location. Reasonable effort is made to capture images in the best weather and at the best times of day with regards to the angle of the sun however if deadlines are tight then clear visibility will be regarded as acceptable unless otherwise instructed.

SURVEY

A Leica total station is used to record a set of 15-25 3d coordinates within the view. These coordinates are aligned to OS using a Leica Viva GNSS system. Where a view is in a rural location and there are no fixed survey points then temporary survey targets are placed and the survey will be undertaken at the same time as the photography.

IMAGE PROCESSING

The RAW image is processed into a tiff image which is remapped to remove all lens distortion to ensure a perfect fit with the 3d data. Where panoramic images are required the individual frames are stitched together in specialist software to create a seamless image to the specified FOV in an equirectangular projection. The image is then placed into a larger background and positioned so that the calculated position of the image's optical axis is aligned with the center of the background to compensate for any lens shift.

CAMERA ALIGNMENT

The OS coordinate and orientation of the camera is calculated using the 3d OS survey coordinates and their corresponding 2d coordinates on the image. The values obtained by this process along with the OS coordinates are moved to a local point of origin to reduce their numerical size and are entered into the 3ds Max Physical camera controls and the survey points rendered out over the background image to verify the alignment.

OUTPUT PACKAGE

A high resolution layered tiff file with marked survey points and corresponding rendered objects as separate layers.

Information describing the physical parameters of the camera and the time and date of the image capture.

3ds Max Physical Camera aligned to survey.

A spreadsheet and DXF of survey points and camera coordinates in original OS and local coordinates.

A photographic record of the camera in it's position.