

LANGLEY BOTTOM FARM, EPSOM, SURREY

LANDSCAPE & VISUAL IMPACT APPENDIX (A3 DOUBLESIDED)
JULY 2026

CONTENTS

APPENDIX 1
Visually Verified Montages & Methodology

APPENDIX 1

VISUALLY VERIFIED MONTAGES & METHODOLOGY

VVM1 - VIEW E



LOCATION PLAN



VVM1 - VIEW E BASE IMAGE



VVM1 - VIEW E @ YEAR 01



VVM1 - VIEW E @ YEAR 15



A3 VERSION OF VVM1 FROM VIEWPOINT VIEW E BASELINE IMAGE (MUNRO STUDIOS)

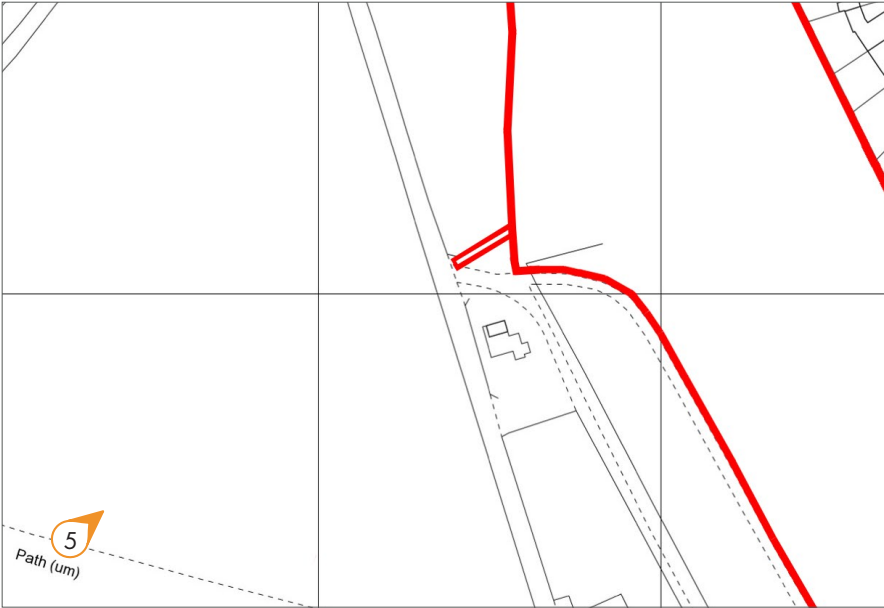


A3 VERSION OF VVM1 FROM VIEWPOINT VIEW E YEAR 01 (MUNRO STUDIOS)



A3 VERSION OF VVM1 FROM VIEWPOINT VIEW E YEAR 15 (MUNRO STUDIOS)

VVM2 - VIEW 05



LOCATION PLAN



VVM2 - VIEW 05 BASE IMAGE



VVM2 - VIEW 05 @ YEAR 01



VVM2 - VIEW 05 @ YEAR 15



A3 VERSION OF VVM2 FROM VIEWPOINT VIEW 05 BASELINE IMAGE (MUNRO STUDIOS)



A3 VERSION OF VVM2 FROM VIEWPOINT VIEW 05 YEAR 01 (MUNRO STUDIOS)



A3 VERSION OF VVM2 FROM VIEWPOINT VIEW 05 YEAR 15 (MUNRO STUDIOS)

VVM3 - VIEW 09



LOCATION PLAN



VVM3 - VIEW 09 BASE IMAGE



VVM3 - VIEW 09 @ YEAR 01



VVM3 - VIEW 09 @ YEAR 15



A3 VERSION OF VVM3 FROM VIEWPOINT VIEW 09 BASELINE IMAGE (MUNRO STUDIOS)



A3 VERSION OF VVM3 FROM VIEWPOINT VIEW 09 YEAR 01 (MUNRO STUDIOS)



A3 VERSION OF VVM3 FROM VIEWPOINT VIEW 09 YEAR 15 (MUNRO STUDIOS)

VVM4 - VIEW 12



LOCATION PLAN



VVM4 - VIEW 12 BASE IMAGE



VVM4 - VIEW 12 @ YEAR 01



VVM4 - VIEW 12 @ YEAR 15



A3 VERSION OF VVM4 FROM VIEWPOINT VIEW 12 BASELINE IMAGE (MUNRO STUDIOS)



A3 VERSION OF VVM4 FROM VIEWPOINT VIEW 12 YEAR 01 (MUNRO STUDIOS)



A3 VERSION OF VVM4 FROM VIEWPOINT VIEW 12 YEAR 15 (MUNRO STUDIOS)



**Proposed development:
Langley Bottom**

**Verifiable photomontage images,
methodology and supporting evidence**

July 2026

Contents

1.0 Overview

2.0 Methodology for creation of verified photomontage views

2.1 Photography and filming

2.2 Survey

2.3 3D model

2.4 Camera matching and rendering

2.5 Post production

3.0 Camera Locations

4.0 Supporting evidence - example data sheet

1.0 Overview

This document has been prepared by Munrostudios Ltd to explain the methodology used for producing verifiable photomontage images for the proposed development Land at Langley Bottom Farm. The visual assessment of the proposed development reflects current best practice in relation to the verification of images (a process which is constantly being refined and improved with advances in technology and industry experience).

The verified visual montages of the proposed development reflects the proposed development which enables its effect on the skyline, important settings and sensitive locations to be objectively evaluated with regard to relevant planning policy criteria. During this document, you will be guided through a step-by-step description of how Munrostudios produced an accurate representation of the proposed development in pictorial form to explain the process used including statements from the survey team and photographer.

The methods described in this document are based on current best practice and follow recommendations from the Landscape Institute's Technical Guidance Note 06/19 (17 September 2019) on Visual representation of development proposals; on Photography and photomontage in landscape and visual impact assessment. As part of the process Munrostudios produced an audit trail showing key stages of production that can be checked. i.e. verified by a third party. This document also sets out additional information in relation to the methodology that has been used to select the viewpoints, photography, computer modelling and the checks that have been carried out to ensure the accuracy of the wire-frame and block model photomontage views of the proposed development

The entities responsible for the preparation of the views that are set out in the following pages comprise:

Photography & Production and checking of verifiable images

The Garden Suite
Malthouse Court,
Malthouse Lane,
Hambledon,
Surrey. GU8 4HJ
01428 481471

Survey of existing views and camera locations

Cadmap Ltd, Office 9, Dalton House,
60 Windsor Avenue,
London, United Kingdom,
SW19 2RR
01483 429385

Verification of design and appearance

fabrik
Lenten House,
16 Lenten Street,
Alton,
Hampshire
GU34 1HG



2.0 Methodology

2.1 Photography

The photographer employed on this project was briefed by MunroCGI to work to a methodology which conforms to the principles recommended in the third edition of Guidelines for Landscape and Visual Impact Assessment (GLVIA3) this was published jointly by the LI and IEMA and came into force on 17 April 2013.

The methodology ensures that the appropriate combination of lens types are chosen to reflect as closely as possible to what can be seen by the human eye and take into account key visual receptors within each view. A consistent approach is taken for comparative purposes throughout the project. The following statement has been supplied by the photographer:

The following methodology applies to the production of photographic images originated during July 2026, which form the pictorial basis for visual impact assessments and photomontages for 4 views. Location points for Land at Langley Farm Bottom, by Andrew Smith from fabrik.

Equipment used

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 procedure

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.

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.

OUTPUT PACKAGE

A high resolution layered tiff file
Information describing the physical parameters of the camera and Camera coordinate height above survey nail, Lens focal length, Sensor size
Time and date of photograph
A photographic record of the camera in it's positions also given.

A 40deg FOV image printed on A3 and held at a comfortable arm's length will replicate in terms of scale that of the viewer if they are standing at the camera position. This would seem to be an ideal way to represent all visualisations but unfortunately it is a very narrow 'window' on the world and in order to show important context it is often desirable to use a wider FOV. This then requires the print to be held closer if it's the same A3 size which can prove difficult to view effectively or printed bigger than A3 which can prove difficult to handle in the field. If it's printed at the same size and viewed at the same size it will make objects in the scene appear smaller than they are in real life which could be regarded as misleading. Additionally at very wide FOV's objects at the edge of the frame look larger than those at the center due to the effects of perspectival distortion when projecting a 3d world on a 2d plane. In order to overcome this phenomenon wide views can be captured using a panoramic technique which maintains a constant linear scale across the image so that the relative scale of massing's can be judged across a large FOV. It does however require specialist viewing techniques such as curving the print on a constant radius equal to the viewing distance. In all instances changing a lens to gain a wider FOV or using panoramic capture does not alter the relationship in size or position between objects in the scene and thus cropping a portion out of a larger image is exactly the same as capturing that image with a lens with a narrower FOV. Only a change in camera position will change perspective and thus the relationship between objects in the view.

2.2 Survey

All of the baseline photographs have been taken by a professional architectural photographer. Each viewpoint location is then surveyed and identified by Ordnance Survey co-ordinates. The heights and distances of significant points within each view that are easily distinguishable have also been recorded as Ordnance Survey grid and level datum and their accuracy has been checked relative to the fixed camera position. The number of survey points that have been identified in each view range from 10 to 20 separate points dependent upon the particular view. These survey points provide an effective check for ensuring that the three dimensional model and existing views are accurately merged together. The following statement has been supplied by the surveyor:

Survey brief: We were commissioned to survey and record co-ordinates (Eastings, Northings and Height) of known points of detail located around the study site known as Land at Langley Farm Bottom. The points of detail were to be identified on a total of 3 base photographs provided by Munrostudios.

Date of survey: 22nd July 2026

Camera Point Positioning



Network RTK solutions were established using a Leica GPS + GLONASS SmartRover receiver. The equipment was set-up directly over the camera position (survey nail) and multiple observations were recorded. A second (reference) point was taken approximately 100m away from the camera position using the same method.

Data Capture

Traditional survey techniques were then employed to record the points of detail within each view. A Leica TCRA TS15 Total Station with long range reflector- less distance measurement capabilities was set-up directly over the camera point and orientated to Ordnance Survey National Grid using the two sets of co-ordinates determined by the SmartRover receiver.



2.3 3D model

In addition to initially modelling the maximum parameters for the VVMs submitted with the application, the model opposite (based on the illustrative masterplan) was generated to enable modelling of the additional VVMs. The generation of the three-dimensional computer models of the proposed development which is superimposed upon the existing views is based upon information supplied by the architect. If CAD is supplied, the two dimensional drawings of the proposed development are supplied by the architect and initially imported into 3D Studio Max. A 1:1 scale model of the proposed development is created. A crosscheck of heights and widths is then carried out between the three dimensional model and the two dimensional CAD drawings of the scheme whether the model has been created in house or been supplied by the client to be used. The 3D model is then approved by the architects.

3D Modeling

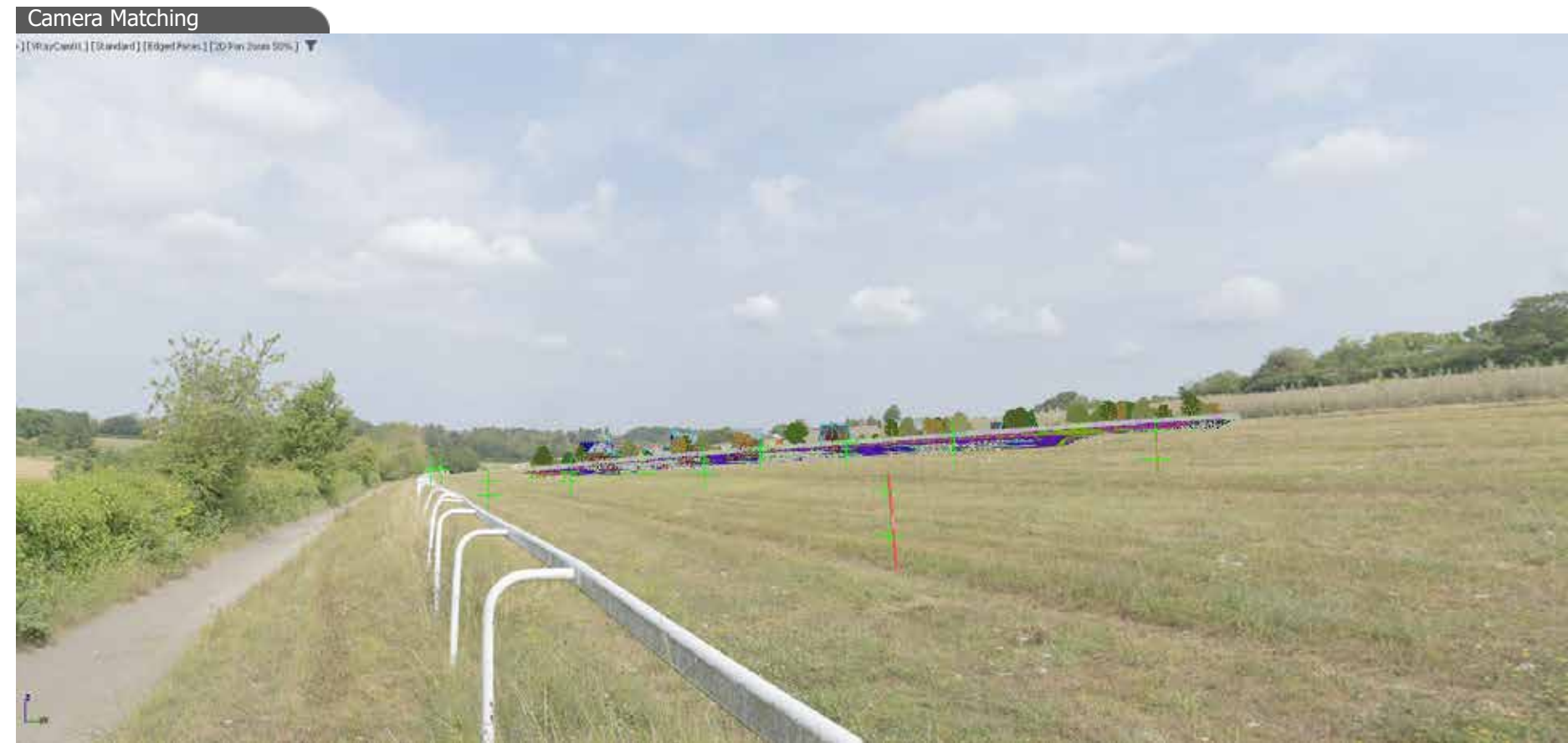


2.4 Camera matching and rendering

The particular method that has been used to verify the photomontage views of the proposed development is set out below. The verification process confirms the accuracy of the three dimensional model in relation to each existing views. The details of the Ordnance Survey co-ordinates for each viewpoint, and the angle of each view has also been checked as part of the verification process.

The next step in the process involves accurately positioning the three-dimensional model of the proposed development within each existing view. This is achieved through a process of matching the surveyed points in the digitised image with those recorded by the survey team on the existing photographs. The central horizon line in each of the existing views is then calculated and imported into 3D Studio Max as a backdrop to the 3D model. The survey points as well as the specifications of the lens type relating to each existing view is also entered into 3D Studio Max.

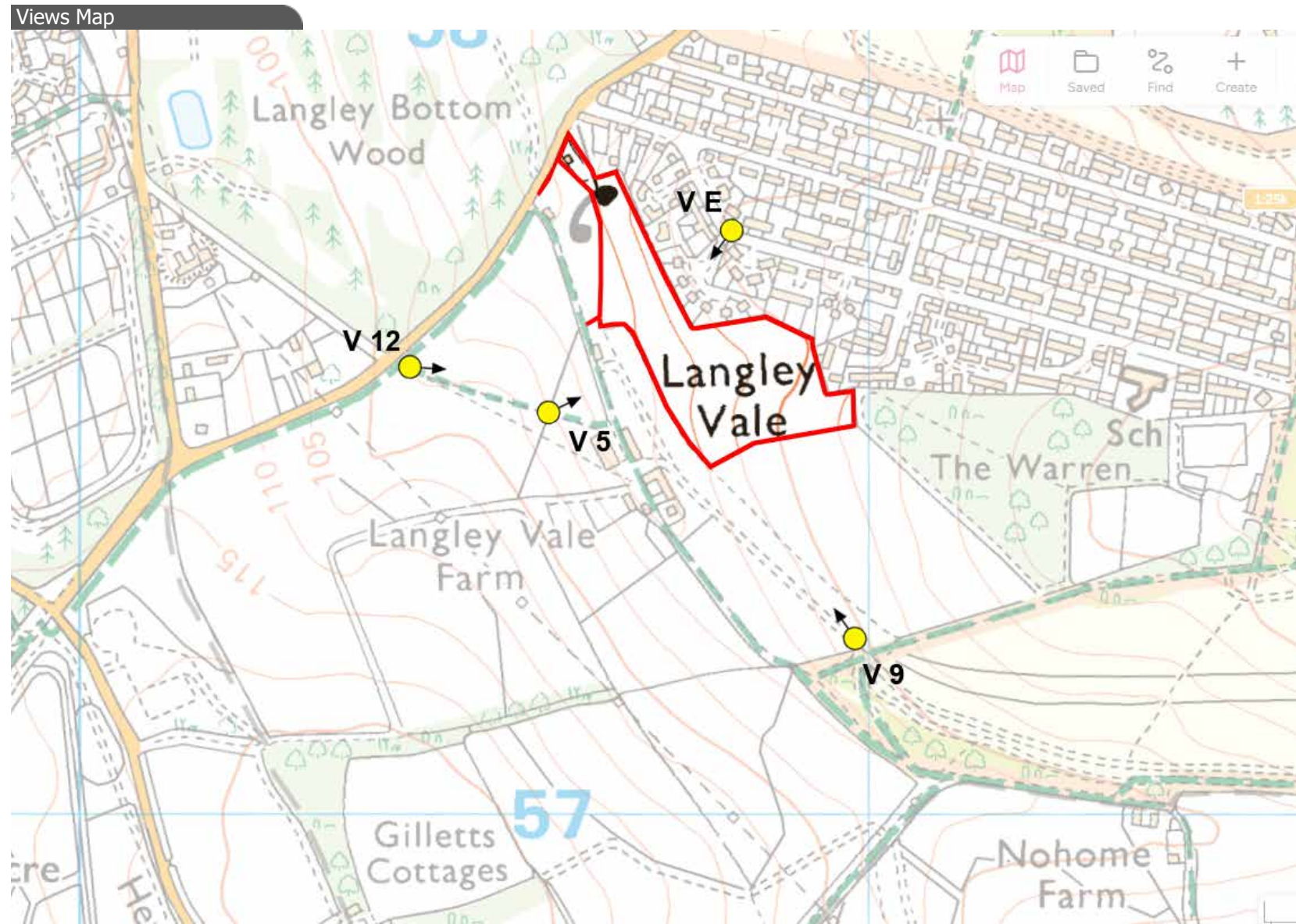
The survey points of the camera position and those relating to specified objects within each particular baseline image are then highlighted on the digitised image. A further check of the accuracy of the survey points in each digitised existing view is carried out by overlaying the central horizon line of each existing view with the digitised survey points prepared in 3D Studio Max. This additional check ensures that the survey points match precisely. This exercise requires meticulous attention to detail. Once the process of camera matching is complete, the three-dimensional model of the proposed development is accurately positioned within each of the existing views. This is achieved by rendering the camera matched three dimensional model of the proposed development within 3D Studio Max to the same size as the digitised existing view.



2.5 Post production

The render of the three-dimensional model is then superimposed on the existing still views in Adobe Photoshop. The foreground of the existing views such as trees, lampposts, cars, buildings etc, are then copied and placed over the rendered model in order to ensure that the depth is accurate within the photomontage view between the foreground, background and the rendered model. At this stage, the textured model is further adjusted to match the colouring and saturation of the photograph taken to create an accurate impression of what the textures of the building would look like. This is a qualitative exercise and requires interpretation by the designer on how the building will look, and guidance from the architect. A final qualitative check of all of the photomontage images is carried out to ensure that they provide objectively accurate views of the proposed development.



[illegible]

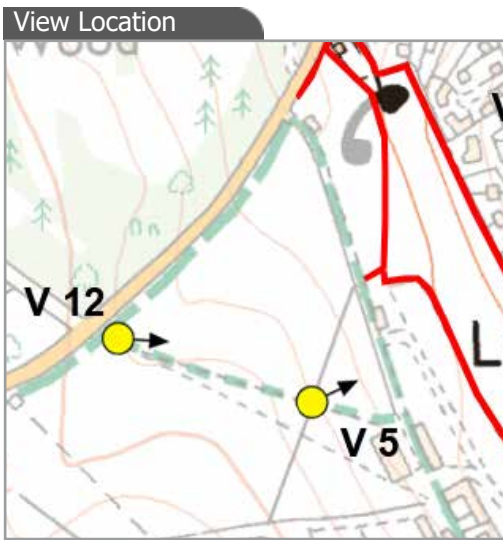
View 5:
Footpath to the west

Photography Details:
22/07/2026 08:45 BST

Camera Position:
OS Ref: 520590.615 : 157509.805
Height AOD: 90.483



OS survey points			
501	520595.242	157510.963	90.718
502	520596.569	157514.433	90.639
503	520595.163	157510.393	90.739
504	520629.861	157611.178	82.371
505	520638.345	157601.056	86.146
506	520650.466	157587.490	84.982
507	520656.422	157581.830	85.523
508	520681.490	157569.676	83.467
509	520782.086	157645.258	96.484
510	520754.177	157679.048	96.197
511	520674.761	157814.035	92.058
512	520598.028	157748.856	80.869
513	520613.838	157648.782	81.996
514	520633.844	157601.627	82.386
515	520591.892	157510.827	91.025
516	520599.629	157523.091	89.647



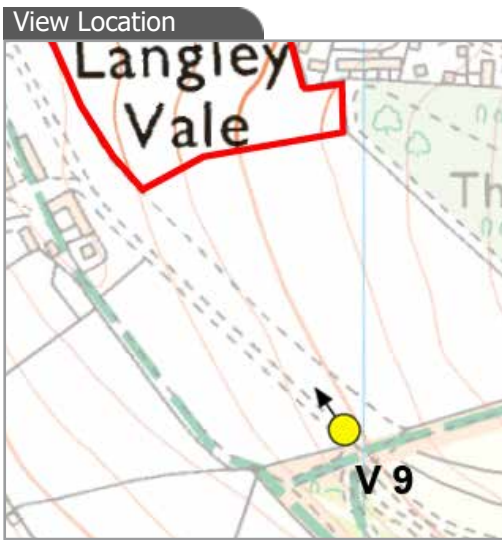
View 9:
Bridleway to the South
East

Photography Details:
22/07/2026 09:32 BST

Camera Position:
OS Ref: 520983.959 : 157214.405
Height AOD: 98.125



OS survey points			
901	520981.355	157222.661	99.005
902	520981.390	157222.670	98.581
903	520982.960	157230.662	99.670
904	520982.974	157230.658	99.211
905	520977.956	157239.103	99.694
906	520977.987	157239.073	99.259
907	520971.532	157248.909	99.525
908	520971.536	157248.926	99.097
909	520964.494	157256.006	99.237
910	520964.502	157256.014	98.820
911	520970.206	157239.649	98.925
912	520970.213	157239.659	98.501
913	520960.484	157245.351	98.246
914	520960.506	157245.342	97.838
915	520964.326	157235.819	98.246
916	520964.335	157235.816	97.777
917	520920.878	157274.962	96.923
918	520860.463	157335.726	94.822



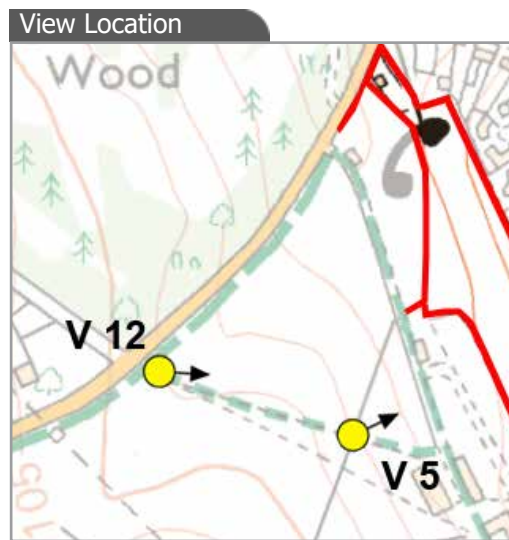
View 12:
Footpath next to Langley
Vale Rd

Photography Details:
22/07/2026 08:03 BST

Camera Position:
OS Ref: 520408.121 : 157563.641
Height AOD: 95.199



OS survey points			
1201	520410.374	157562.914	95.976
1202	520416.906	157560.951	95.199
1203	520441.884	157553.674	93.636
1204	520482.570	157541.806	95.587
1205	520426.017	157553.487	94.412
1206	520455.401	157544.937	94.343
1207	520417.072	157569.057	95.203
1208	520481.328	157626.846	89.125
1209	520421.819	157577.927	94.417
1210	520434.191	157589.142	93.158
1211	520422.197	157556.501	94.402
1212	520422.166	157556.524	93.980
1213	520452.014	157547.846	93.791
1214	520452.031	157547.853	93.368



View E:
Beaconsfield Rd

Photography Details:
22/07/2026 10:30 BST

Camera Position:
OS Ref: 520823.109 : 157737.653
Height AOD: 100.475



OS survey points			
301	520811.952	157731.133	100.898
302	520798.508	157726.376	102.102
303	520799.536	157728.968	107.849
304	520797.931	157732.912	108.523
305	520791.344	157698.016	108.670
306	520766.057	157666.006	101.302
307	520770.776	157659.213	101.529
308	520779.298	157662.126	99.734
309	520770.223	157673.875	98.390
310	520773.590	157671.179	97.030
311	520770.334	157658.461	99.056
312	520813.837	157722.729	100.455
313	520821.895	157726.762	100.159
314	520813.698	157733.094	99.940
315	520819.714	157725.108	100.362
316	520776.970	157664.288	99.741
317	520811.347	157725.780	99.643

