

Google Earth Model

The Google Earth model has been designed and tested in Google Earth Pro v7.1, and may not work in older versions. Google Earth Pro is free and can be downloaded [HERE](#). If, at any point during the installation process, Google Earth Pro asks for a username and licence key, enter your e-mail address as the username and **GEPFREE** as the key. Generic Google Earth help and tutorials can be found [HERE](#).

The model may take a few moments to load when first opened (depending on the power of the computer) – allow it to open fully and zoom in to the National Park boundary before attempting to pan around or Google Earth may crash.

By default only the 'Panoramic Photo', 'Representative Viewpoint' and 'South Downs National Park' layers are switched on in the legend. The other layers can be switched on and off using the checkboxes. Each can also be expanded using the drop down arrows to get more information.

All layers have attribution data, which can be viewed by clicking on the relevant feature on the map. If there are multiple layers visible it will only give the information for the top layer, so turn off any layers that are not of interest.

To view the panoramic photos, click on one of the 'Panoramic Photo' points and then click 'View Panorama' in the popup box which will open it within the Google Earth interface. The panoramas can be navigated either using the mouse or using the arrow keys on the keyboard. A mouse wheel, if available, can be used to zoom in and out. The nine buttons at the bottom of the screen can also be used to navigate around the panorama in the same manner. The 'F11' key on the keyboard or the rightmost button at the bottom of the screen can be used to make the panorama expand to fill the screen.

To close the panorama and go back the Google Earth model click the 'Back to Google Earth' button at the top left of the screen.

Zone of Theoretical Visibility (ZTV)

ZTVs give an indication of the potential (**theoretical**) visibility of an object. For this project the ZTVs are run on OS Terrain 5 (OST5) elevation data out to a distance of 35km from the point, or to the edge of the DTM, whichever is closer. The OST5 data is a Digital Terrain Model (DTM) which contains only topography and does not contain surface features, for example trees, buildings or hedges, and thus is a 'worst case scenario' of visibility. It has a square pixel size of five metres, and a vertical accuracy exceeding 2 metres.

The ZTVs have been created using ESRI ArcGIS Desktop, . The method used to create these ZTVs takes into account both the curvature of the Earth, and the refraction of light through the atmosphere – both of which have significant effects over long distances.

Viewpoint ZTVs

The viewpoint ZTVs have been run from a point modelled at 2m above ground level in order to simulate the likely tallest viewer eye height.

Landmark ZTVs

The landmark ZTVs have been run from an assumed height above ground level as set out in Appendix 2 of the 'South Downs National Park: View Characterisation and Analysis' report. Point landmarks have been simulated by a single point, whereas landmarks that take up a larger geographical area (such as hill forts) have been simulated by a grid of points covering their extent at an interval that suits the size and shape.

Height at which Objects Become Visible (HOBV)

HOBV analysis is an extrapolation of ZTV analysis that calculates how much higher than ground level an object would have to be, in order to be visible from the source point/points of the ZTV. In this study, all HOBV values are calculated in metres so, for example, an HOBV value of 5 would mean an object would have to be at least 5 metres tall to be visible from the ZTV point.

The combined HOBV (CHOBV) was created by merging all of the individual HOBV datasets and taking the lowest value for each pixel, to show the maximum height an object could be before it was visible from at least one viewpoint.

Data

Dataset Name	Source	Copyright
Panoramic Photo	LUC	N/A
Representative Viewpoint	LUC	N/A
Landmark	LUC	N/A
South Downs National Park	Natural England	© Natural England copyright 2015. Contains Ordnance Survey data © Crown copyright and database right 2015.
Listed Building	Historic England	© Historic England 2015. Contains Ordnance Survey data © Crown copyright and database right 2015.
Conservation Area	South Downs National Park Authority	© Crown copyright and database rights 2015. Ordnance Survey LIC. 10050083
Local Nature Reserve (LNR)	Natural England	© Natural England copyright 2015. Contains Ordnance Survey data © Crown copyright and database right 2015.
Regionally Important Geological Site (RIGS)	Hampshire Biodiversity Information Centre, Sussex Biodiversity Record Centre	Contains Ordnance Survey data © Crown copyright and database right 2015.
Site of Importance to Nature Conservation (SINC)	Hampshire Biodiversity Information Centre, Sussex Biodiversity Record Centre	Contains Ordnance Survey data © Crown copyright and database right 2015.
Ancient Woodland Inventory (AWI)	Natural England	© Natural England copyright 2015. Contains Ordnance Survey data © Crown copyright and database right 2015.
National Nature Reserve (NNR)	Natural England	© Natural England copyright 2015. Contains Ordnance Survey data © Crown copyright and database right 2015.
Site of Special Scientific Interest (SSSI)	Natural England	© Natural England copyright 2015. Contains Ordnance Survey data © Crown copyright and database right 2015.
Ramsar	Natural England	© Natural England copyright 2015. Contains Ordnance Survey data © Crown copyright and database right

		2015.
Special Protection Area (SPA)	Natural England	© Natural England copyright 2015. Contains Ordnance Survey data © Crown copyright and database right 2015.
Special Area of Conservation (SAC)	Natural England	© Natural England copyright 2015. Contains Ordnance Survey data © Crown copyright and database right 2015.
Historic Landscape Character	South Downs National Park Authority	© Crown copyright and database rights 2015. Ordnance Survey LIC. 10050083
Landscape Character 2012	South Downs National Park Authority	© Crown copyright and database rights 2015. Ordnance Survey LIC. 10050083