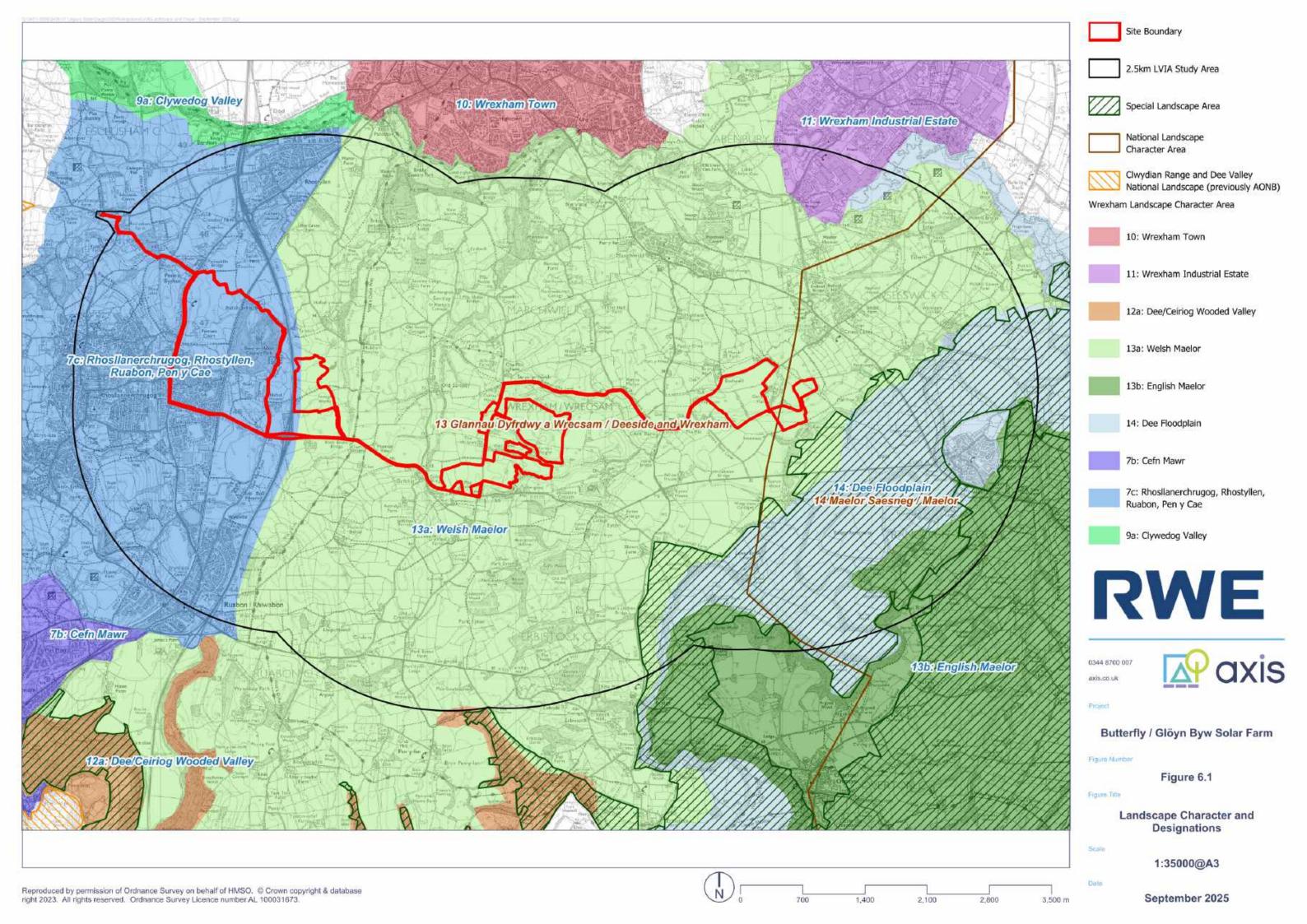
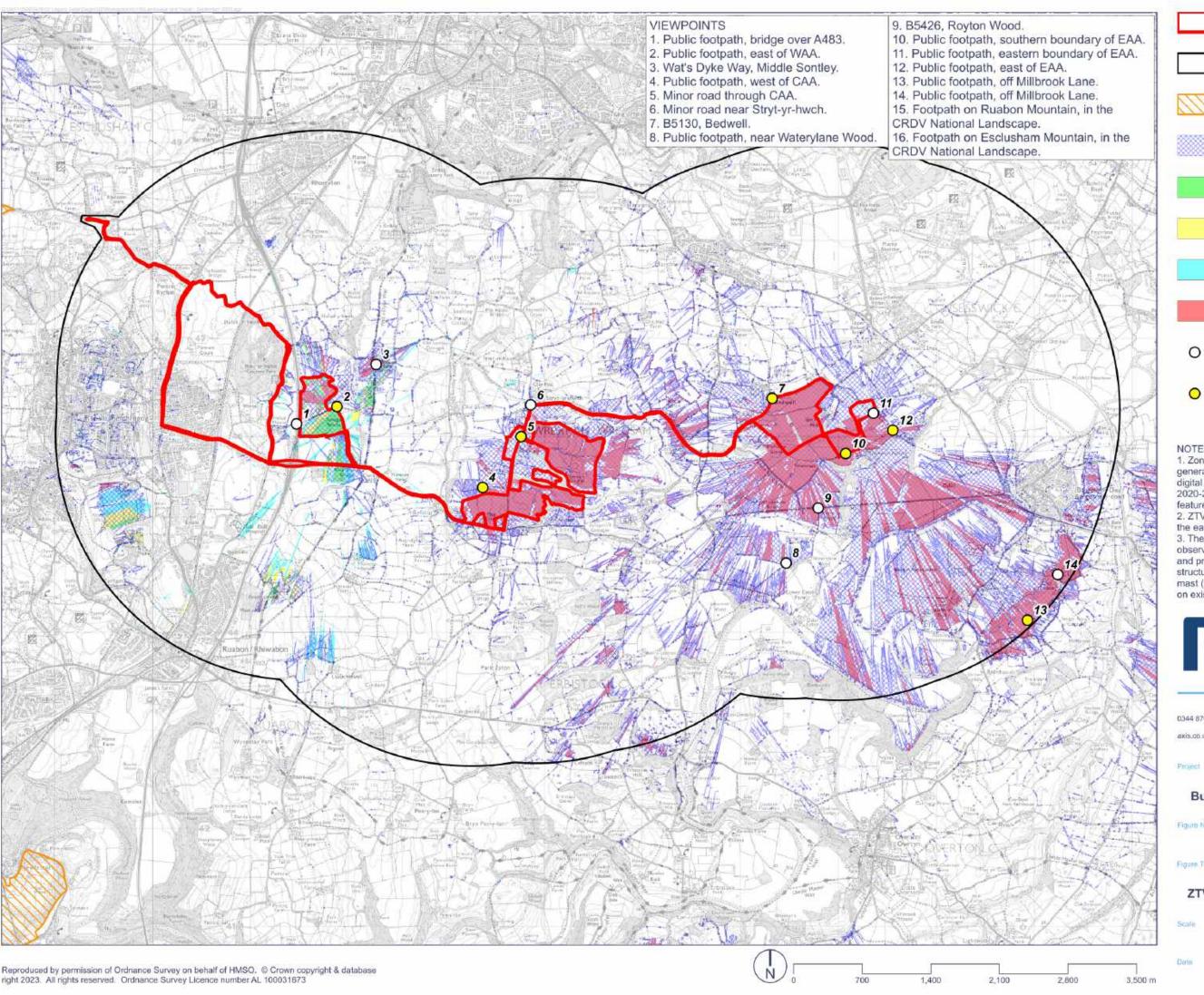




ES Figure 6.5c





Site Boundary 2.5km LVIA Study Area Clwydian Range and Dee Valley National Landscape (previously AONB) Theoretical visbility of 3m high solar panels Theoretical visibility of 4m high substation structures Theoretical visibility of 7m high substation structures Theoretical visibility of 15m high communications mast Theoretical visibility of

1. Zone of Theoretical Visibility (ZTV) has been generated using Welsh Government 1m LIDAR digital surface model (DSM) data, captured 2020-2022, which takes account of screening features in the landscape.

3.4m high BESS structures

Photomontage Viewpoint Location

Viewpoint Location

- 2. ZTV generation has allowed for curvature of the earth and light refraction.
- The ZTV has been generated based upon an observer eye height of 1.7m above ground level and proposed 3m high solar panels, substation structures (4m and 7m high), the communications mast (15m high) and 3.4 m high BESS structures on existing ground levels.





Butterfly / Glöyn Byw Solar Farm

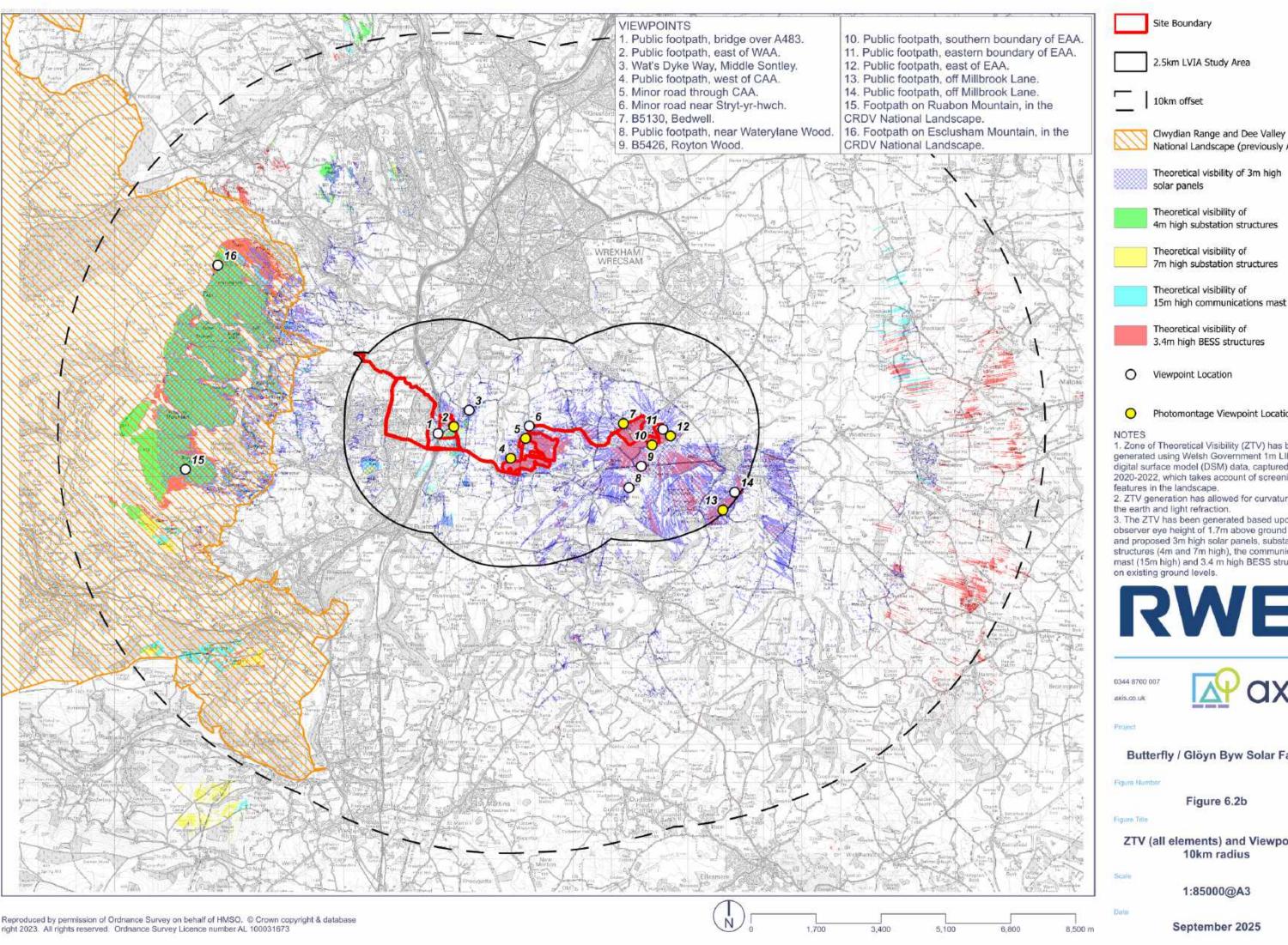
Figure Number

Figure 6.2a

Figure Title

ZTV (all elements) and Viewpoints

1:35000@A3



Site Boundary 2.5km LVIA Study Area 10km offset Clwydian Range and Dee Valley National Landscape (previously AONB) Theoretical visbility of 3m high solar panels Theoretical visibility of 4m high substation structures Theoretical visibility of

> Theoretical visibility of 3.4m high BESS structures

Viewpoint Location

Photomontage Viewpoint Location

- Zone of Theoretical Visibility (ZTV) has been generated using Welsh Government 1m LIDAR digital surface model (DSM) data, captured 2020-2022, which takes account of screening features in the landscape.
- 2. ZTV generation has allowed for curvature of the earth and light refraction.
- The ZTV has been generated based upon an observer eye height of 1.7m above ground level and proposed 3m high solar panels, substation structures (4m and 7m high), the communications mast (15m high) and 3.4 m high BESS structures



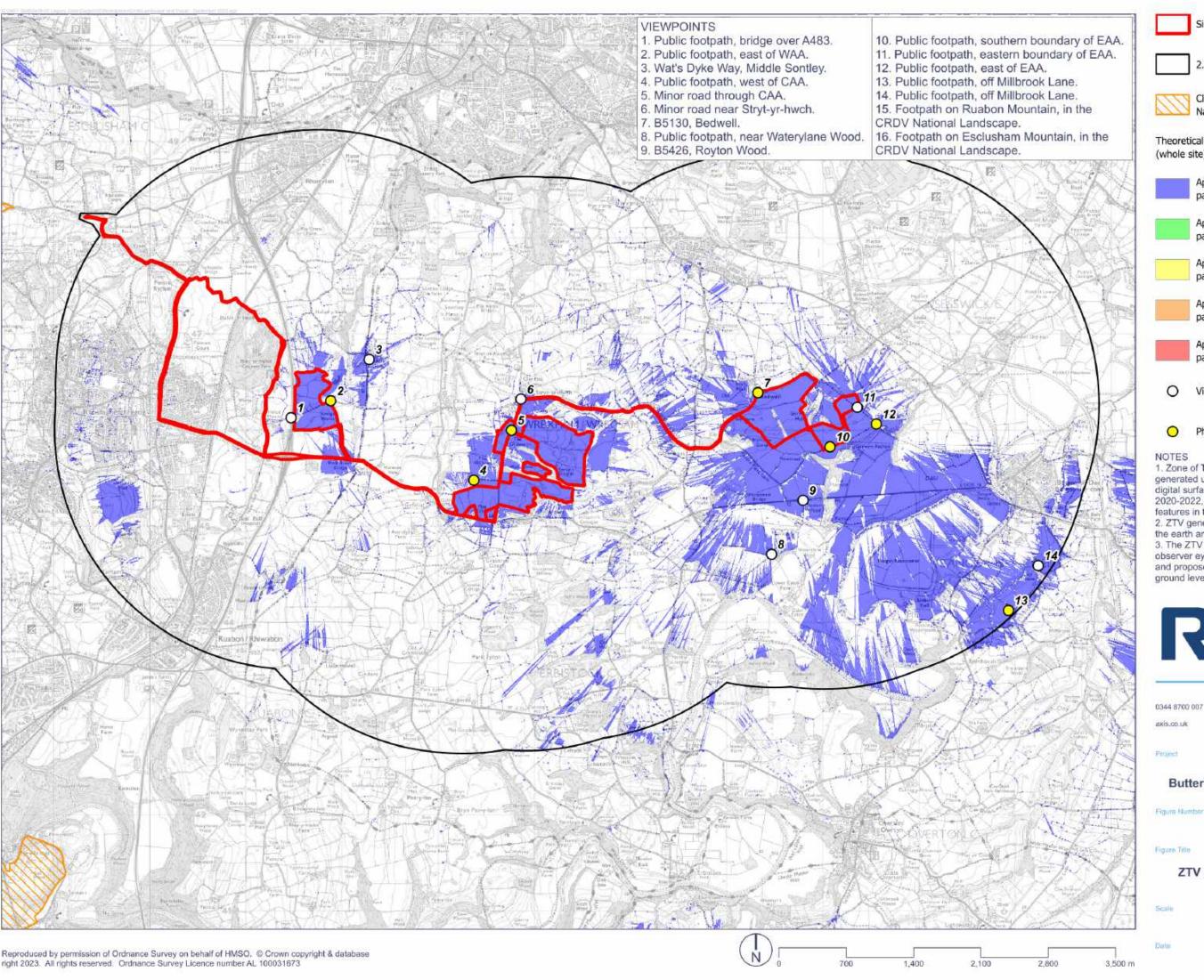


Butterfly / Glöyn Byw Solar Farm

Figure 6.2b

ZTV (all elements) and Viewpoints 10km radius

1:85000@A3



Site Boundary 2.5km LVIA Study Area Clwydian Range and Dee Valley National Landscape (previously AONB) Theoretical visibility of solar panels (whole site)

Approx. 1%-20% of solar panels theoretically visible

Approx. 20%-40% of solar panels theoretically visible

Approx. 40%-60% of solar panels theoretically visible

Approx. 60%-80% of solar panels theoretically visible

Approx. 80%-100% of solar panels theoretically visible

Viewpoint Location

Photomontage Viewpoint Location

 Zone of Theoretical Visibility (ZTV) has been generated using Welsh Government 1m LIDAR digital surface model (DSM) data, captured 2020-2022, which takes account of screening features in the landscape.

2. ZTV generation has allowed for curvature of the earth and light refraction.

The ZTV has been generated based upon an observer eye height of 1.7m above ground level and proposed 3m high solar panels on existing ground levels.





Butterfly / Glöyn Byw Solar Farm

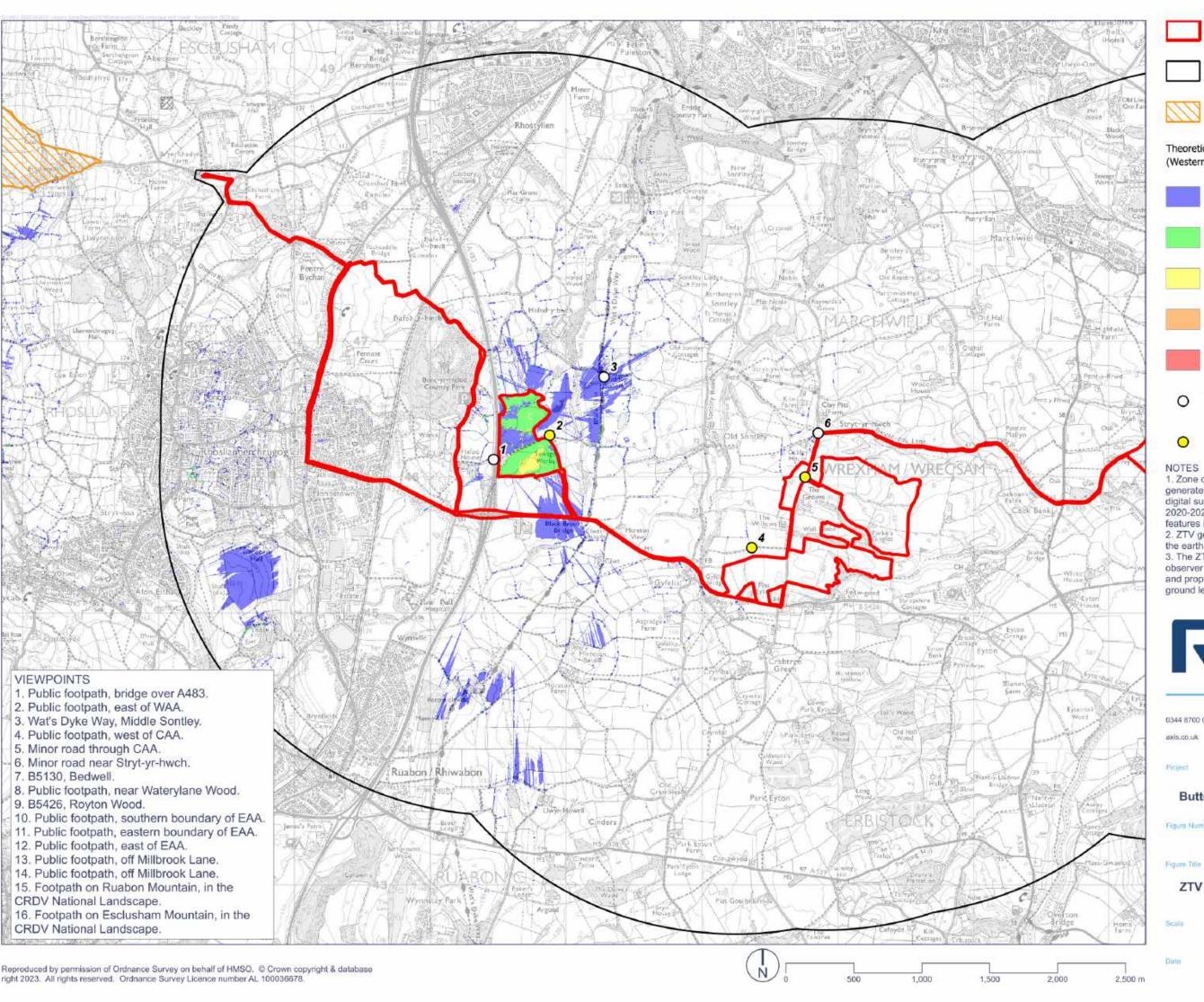
Figure Number

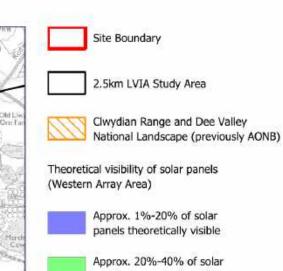
Figure 6.2c

Figure Title

ZTV (Solar Array - whole Site) and Viewpoints

1:35000@A3





panels theoretically visible

Approx. 40%-60% of solar panels theoretically visible

Approx 60%-80% of solar panels theoretically visible

Approx. 80%-100% of solar panels theoretically visible

Viewpoint Locations

Photomontage Viewpoint Locations

- Zone of Theoretical Visibility (ZTV) has been generated using Welsh Government 1m LIDAR digital surface model (DSM) data, captured 2020-2022, which takes account of screening features in the landscape.
- 2. ZTV generation has allowed for curvature of the earth and light refraction.
- The ZTV has been generated based upon an observer eye height of 1.7m above ground level and proposed 3m high solar panels on existing ground levels.





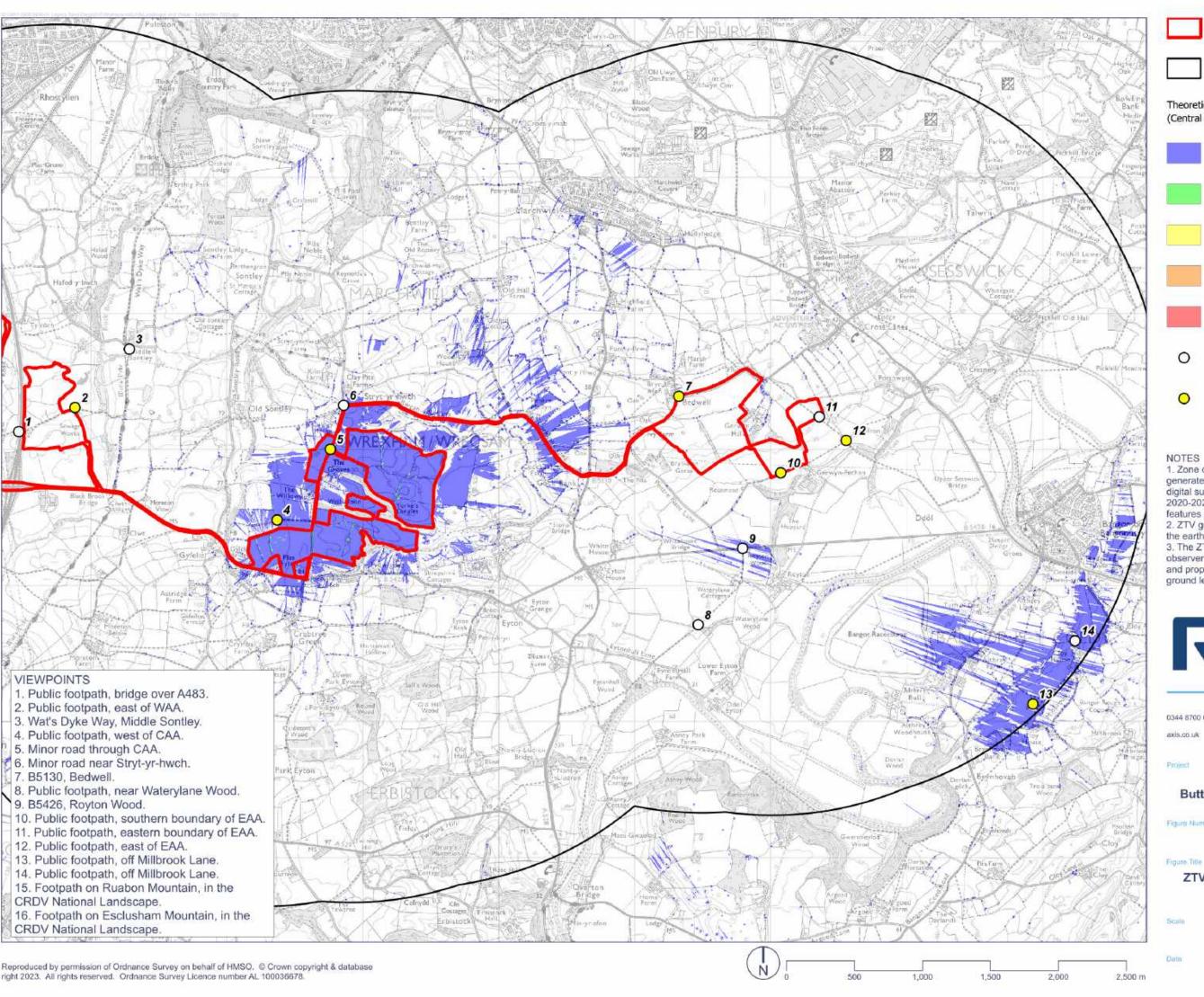
Butterfly / Glöyn Byw Solar Farm

Figure Number

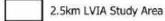
Figure 6.2d

ZTV (Solar Array - Western Array Area) and Viewpoints

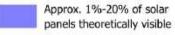
1:25000@A3

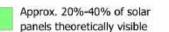


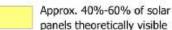
Site Boundary

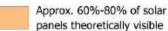


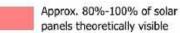
Theoretical visibility of solar panels (Central Array Area)



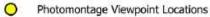








Viewpoint Locations



- Zone of Theoretical Visibility (ZTV) has been generated using Welsh Government 1m LIDAR digital surface model (DSM) data, captured 2020-2022, which takes account of screening features in the landscape.
- 2. ZTV generation has allowed for curvature of the earth and light refraction.
- The ZTV has been generated based upon an observer eye height of 1.7m above ground level and proposed 3m high solar panels on existing ground levels.





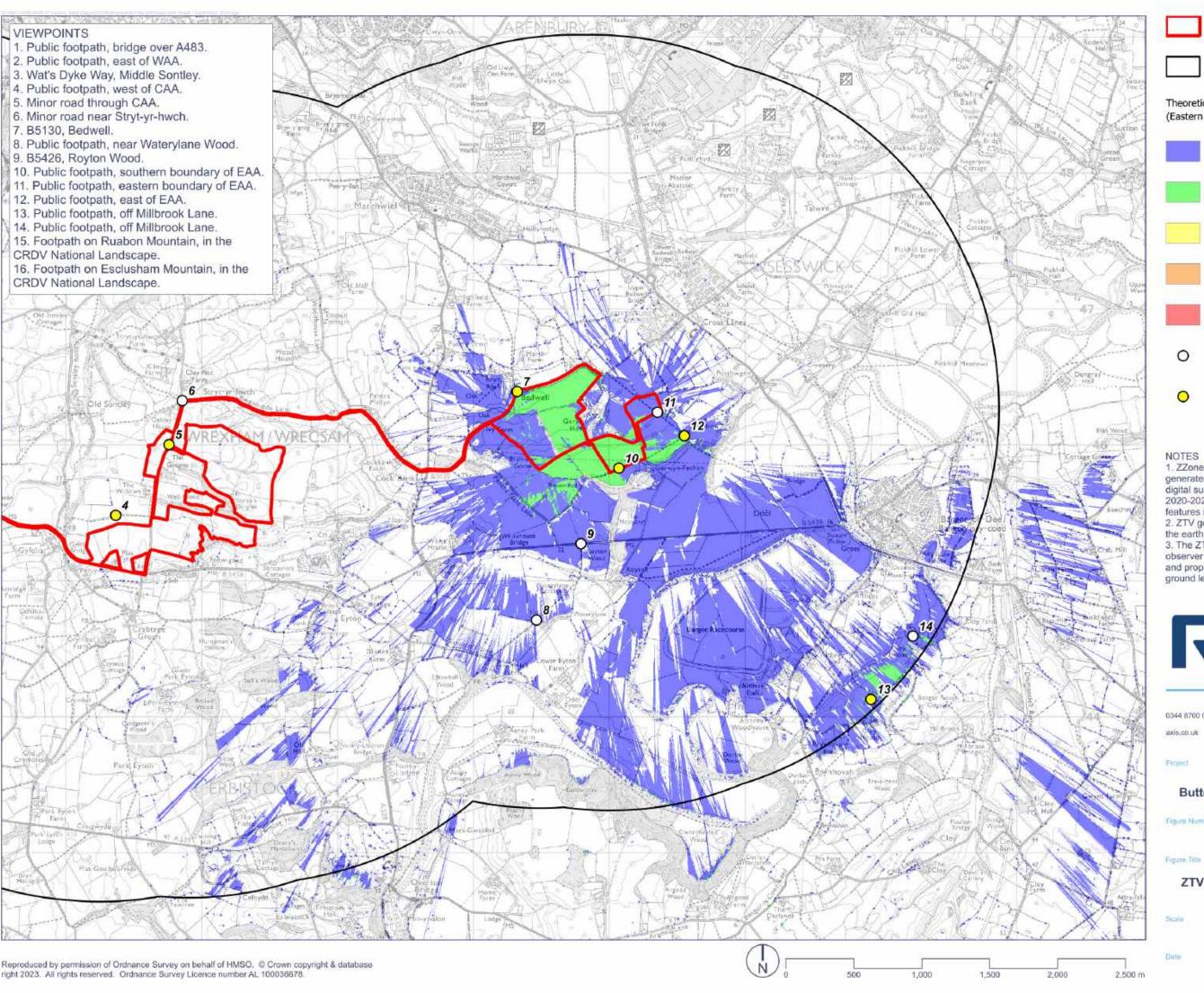
Butterfly / Glöyn Byw Solar Farm

Figure Number

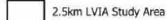
Figure 6.2e

ZTV (Solar Array - Central Array Area) and Viewpoints

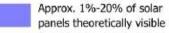
1:25000@A3



Site Boundary



Theoretical visibility of solar panels (Eastern Array Area)



Approx. 20%-40% of solar panels theoretically visible

Approx. 40%-60% of solar panels theoretically visible

Approx. 60%-80% of solar panels theoretically visible

Approx. 80%-100% of solar panels theoretically visible

Viewpoint Locations

Photomontage Viewpoint Locations

- 1. ZZone of Theoretical Visibility (ZTV) has been generated using Welsh Government 1m LIDAR digital surface model (DSM) data, captured 2020-2022, which takes account of screening features in the landscape.
- 2. ZTV generation has allowed for curvature of the earth and light refraction.
- The ZTV has been generated based upon an observer eye height of 1.7m above ground level and proposed 3m high solar panels on existing ground levels.





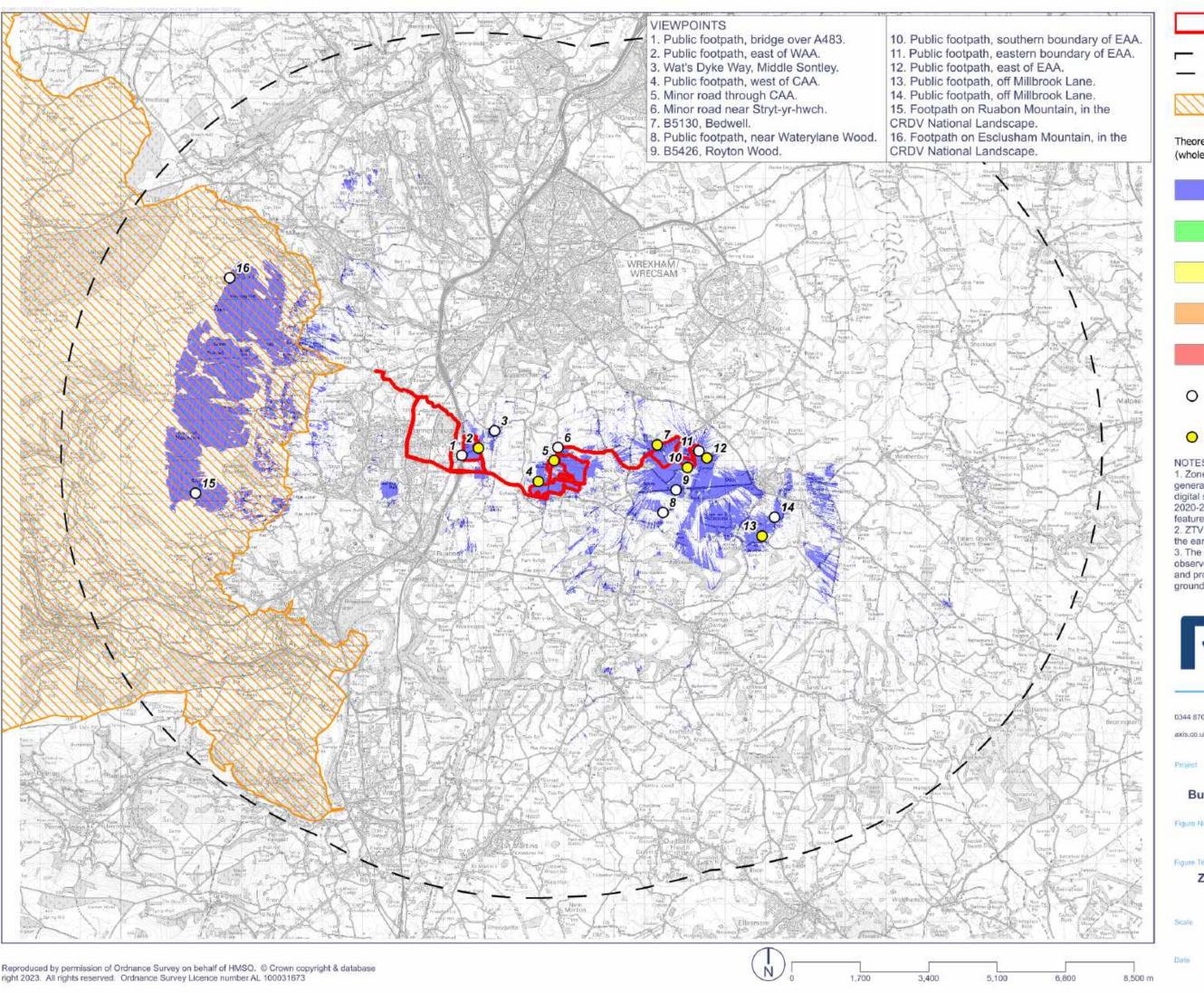
Butterfly / Glöyn Byw Solar Farm

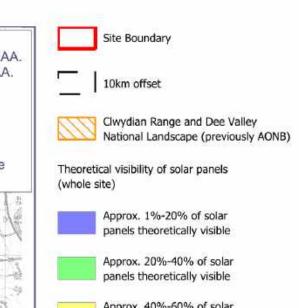
Figure Number

Figure 6.2f

ZTV (Solar Array - Eastern Array Area) and Viewpoints

1:25000@A3





Approx. 40%-60% of solar panels theoretically visible

Approx. 60%-80% of solar panels theoretically visible

> Approx. 80%-100% of solar panels theoretically visible

Viewpoint Location

Photomontage Viewpoint Location

- Zone of Theoretical Visibility (ZTV) has been generated using Welsh Government 1m LIDAR digital surface model (DSM) data, captured 2020-2022, which takes account of screening features in the landscape.
- 2. ZTV generation has allowed for curvature of the earth and light refraction.
- The ZTV has been generated based upon an observer eye height of 1.7m above ground level and proposed 3m high solar panels on existing ground levels.



0344 8700 007



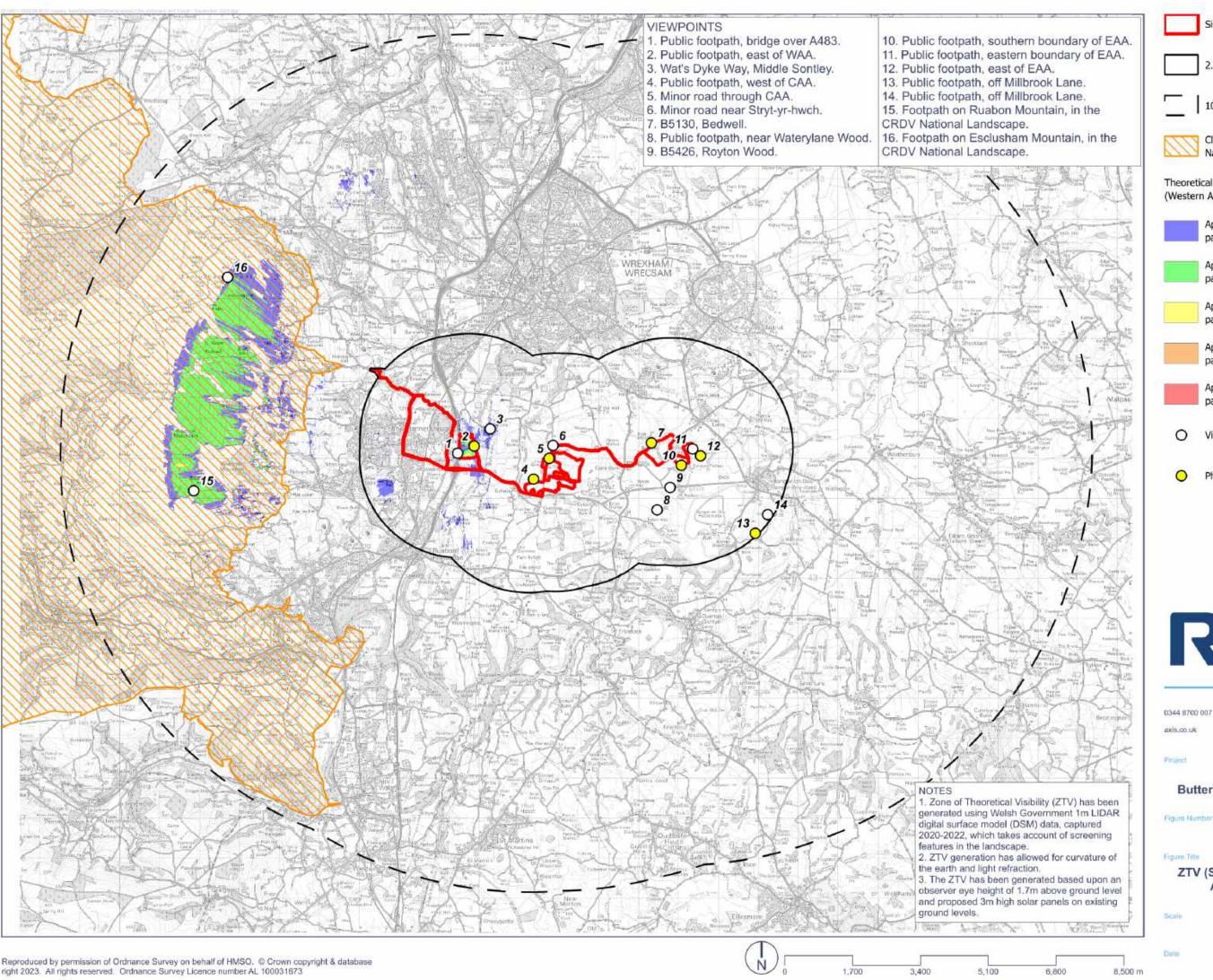
Butterfly / Glöyn Byw Solar Farm

Figure Number

Figure 6.2g

ZTV (Solar Array - whole Site) and Viewpoints 10km radius

1:85000@A3



10km offset Clwydian Range and Dee Valley National Landscape (previously AONB) Theoretical visibility of solar panels (Western Array Area) Approx. 1%-20% of solar panels theoretically visible Approx. 20%-40% of solar panels theoretically visible Approx. 40%-60% of solar panels theoretically visible Approx 60%-80% of solar panels theoretically visible Approx. 80%-100% of solar panels theoretically visible Viewpoint Location Photomontage Viewpoint Location

Site Boundary

2.5km LVIA Study Area





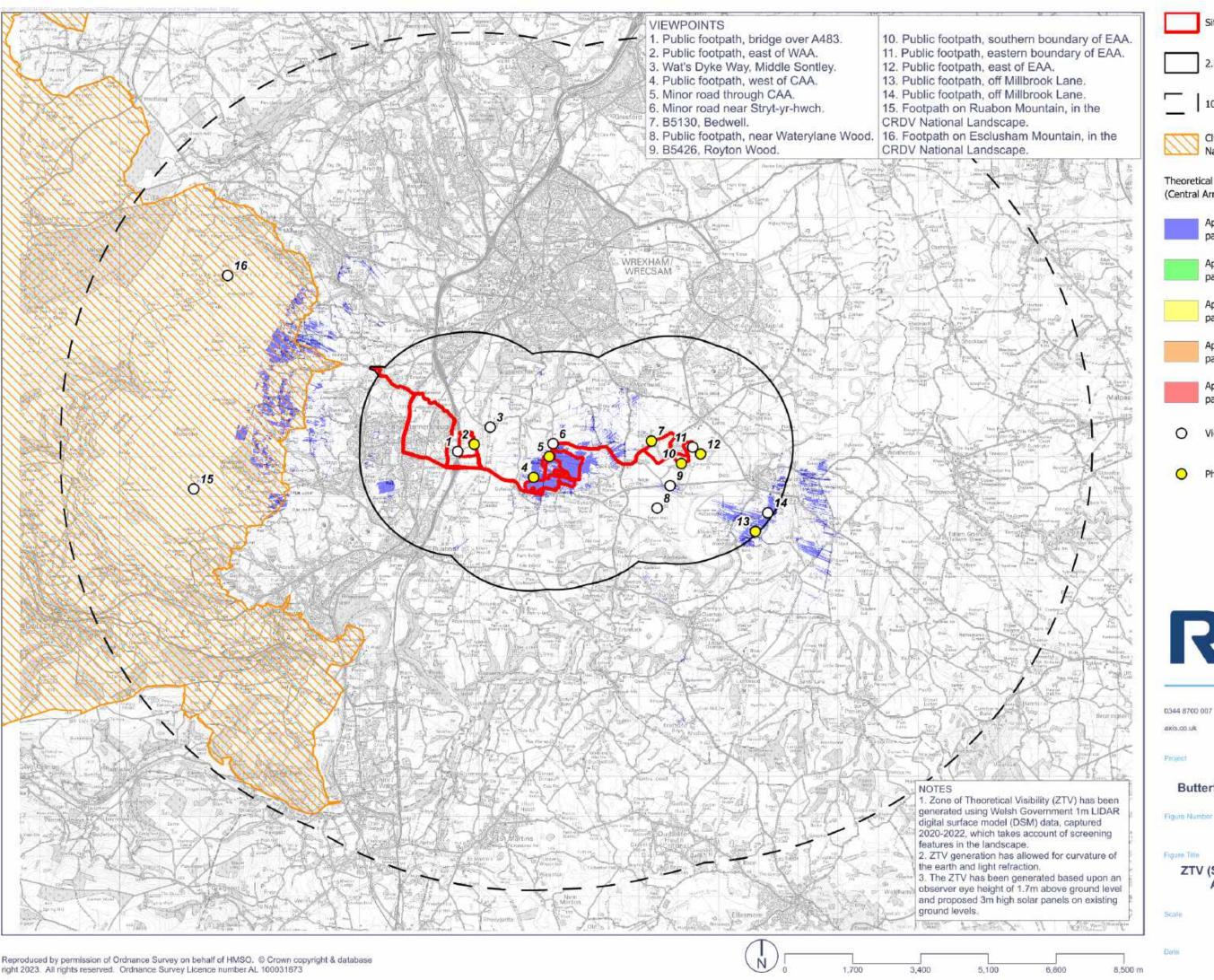
Butterfly / Glöyn Byw Solar Farm

Figure Number

Figure 6.2h

ZTV (Solar Array - Western Array Area) and Viewpoints 10km radius

1:85000@A3



Site Boundary 2.5km LVIA Study Area 10km offset Clwydian Range and Dee Valley National Landscape (previously AONB) Theoretical visibility of solar panels (Central Array Area) Approx. 1%-20% of solar panels theoretically visible Approx. 20%-40% of solar panels theoretically visible Approx. 40%-60% of solar panels theoretically visible Approx. 60%-80% of solar panels theoretically visible Approx. 80%-100% of solar panels theoretically visible Viewpoint Location Photomontage Viewpoint Location



0344 8700 007

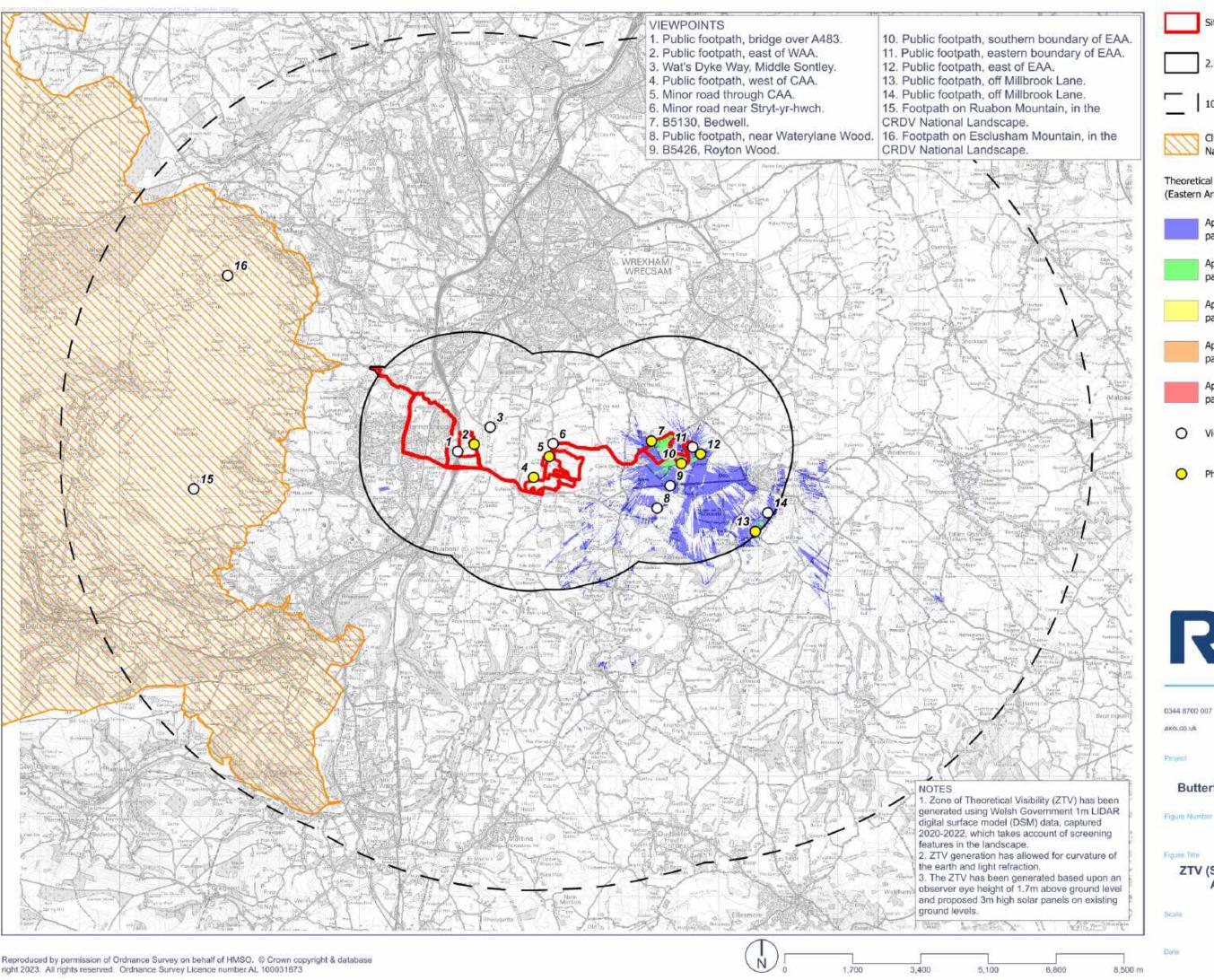


Butterfly / Glöyn Byw Solar Farm

Figure 6.2i

ZTV (Solar Array - Central Array Area) and Viewpoints 10km radius

1:85000@A3



Site Boundary 2.5km LVIA Study Area 10km offset Clwydian Range and Dee Valley National Landscape (previously AONB) Theoretical visibility of solar panels (Eastern Array Area) Approx. 1%-20% of solar panels theoretically visible Approx. 20%-40% of solar panels theoretically visible Approx. 40%-60% of solar panels theoretically visible Approx. 60%-80% of solar panels theoretically visible Approx. 80%-100% of solar panels theoretically visible Viewpoint Location Photomontage Viewpoint Location



0344 8700 007



Butterfly / Glöyn Byw Solar Farm

Figure 6.2j

ZTV (Solar Array - Eastern Array Area) and Viewpoints 10km radius

1:85000@A3





# Approx. location of WAA



Date and Time of Photograph: 26/01/24 12:52

British National Grid Co-ordinates: 331468,346131 Distance from Site: 40m





Cylindrical Date and Time of Photograph: 26/01/24 13:04 Lens: Canon EF 50mm 1:1.4 Direction of View: S-w Lens elevation (AOD):

British National Grid Co-ordinates: 331881,346308 Distance from Site: At boundary





Date and Time of Photograph: 26/01/24 13:04





Cylindrical Date and Time of Photograph: 24/01/24 12:14 Lens: Canon EF 50mm 1:1.4

Direction of View: **S-w** Lens elevation (AOD):



Date and Time of Photograph: 24/01/24 11:15 Lens: Canon EF 50mm 1:1.4

British National Grid Co-ordinates: 333369,345482 Distance from Site: 63m





Date and Time of Photograph: 24/01/24 11:15 Lens: Canon EF 50mm 1:1.4

British National Grid Co-ordinates: 333369,345482 Distance from Site: 63m

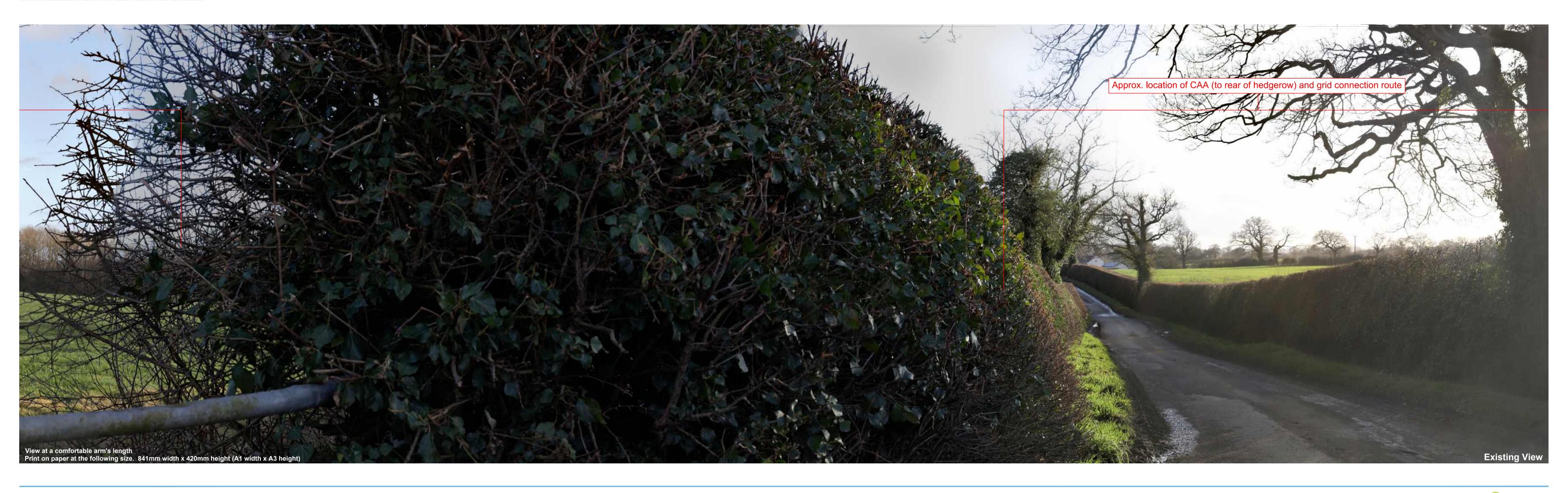




**Enlargement Factor:** 

Cylindrical Date and Time of Photograph: 25/02/25 16:21 Lens: Canon EF 50mm 1:1.4 Direction of View: E Lens elevation (AOD):

90° British National Grid Co-ordinates: 333761,346001 Distance from Site: Within Site



Cylindrical Date and Time of Photograph: 25/02/25 16:21 Lens: Canon EF 50mm 1:1.4 Direction of View: S Lens elevation (AOD):

90° British National Grid Co-ordinates: 333761,346001 Distance from Site: Within Site





View at a comfortable arm's length
Print on paper at the following size. 841mm width x 420mm height (A1 width x A3 height)

Date and Time of Photograph: 25/02/25 16:21 Lens: Canon EF 50mm 1:1.4

Direction of View: **W** Lens elevation (AOD):

British National Grid Co-ordinates: 333761,346001 Distance from Site: Within Site



**Existing View** 



Cylindrical Date and Time of Photograph: 25/02/25 16:21 Lens: Canon EF 50mm 1:1.4 Direction of View: N Lens elevation (AOD):

British National Grid Co-ordinates: 333761,346001 Distance from Site: Within Site





Cylindrical Date and Time of Photograph: 24/01/24 11:00 Lens: Canon EF 50mm 1:1.4

Direction of View: **E** Lens elevation (AOD):

British National Grid Co-ordinates: 333858,346325 Distance from Site: Within Site





Cylindrical Date and Time of Photograph: 24/01/24 11:00 Lens: Canon EF 50mm 1:1.4 Direction of View: S Lens elevation (AOD):

90° British National Grid Co-ordinates: 333858,346325 Distance from Site: Within Site





British National Grid Co-ordinates: 336324,346391 Distance from Site: At boundary





Date and Time of Photograph: 24/01/24 13:53

Direction of View: **S** Lens elevation (AOD):

British National Grid Co-ordinates: 336324,346391 Distance from Site: At boundary

BUTTERFLY / GLÖYN BYW SOLAR FARM Figure 6.3g ii Viewpoint 7: B5130, Bedwell



Date and Time of Photograph: 26/01/24 12:19 Lens: Canon EF 50mm 1:1.4

Direction of View: **N** Lens elevation (AOD):

British National Grid Co-ordinates: 336466,344711 Distance from Site: 1.108km





Date and Time of Photograph: 26/01/24 10:05



Date and Time of Photograph: 26/01/24 10:05 Lens: Canon EF 50mm 1:1.4

Direction of View: **N-e** Lens elevation (AOD):

37.43m

British National Grid Co-ordinates: 336793,345273 Distance from Site: 560m





Type: Type 1 Enlargement Factor: 96% Camera: Canon EOS 6D MkII FFS HFoV: 90° British National Grid Co-ordinates: 337073,3457829 Distance from Site: At boundary

Cylindrical Date and Time of Photograph: 26/01/24 11:17 Lens: Canon EF 50mm 1:1.4 Direction of View: W-n-w Lens elevation (AOD): 32.39m



British National Grid Co-ordinates: 337073,3457829 Distance from Site: At boundary

BUTTERFLY / GLÖYN BYW SOLAR FARM



Date and Time of Photograph: 26/01/24 11:44 Lens: Canon EF 50mm 1:1.4

90° British National Grid Co-ordinates: 337357,346240 Distance from Site: At boundary



British National Grid Co-ordinates: 337357,346240 Distance from Site: At boundary



British National Grid Co-ordinates: 337554,346066 Distance from Site: 255m

BUTTERFLY / GLÖYN BYW SOLAR FARM



Date and Time of Photograph: 26/01/24 11:31 Lens: Canon EF 50mm 1:1.4

Direction of View: W-n-w Lens elevation (AOD):

British National Grid Co-ordinates: 337554,346066 Distance from Site: 255m



Date and Time of Photograph: 26/01/24 10:31

British National Grid Co-ordinates: 338928,344128 Distance from Site: 2.43km



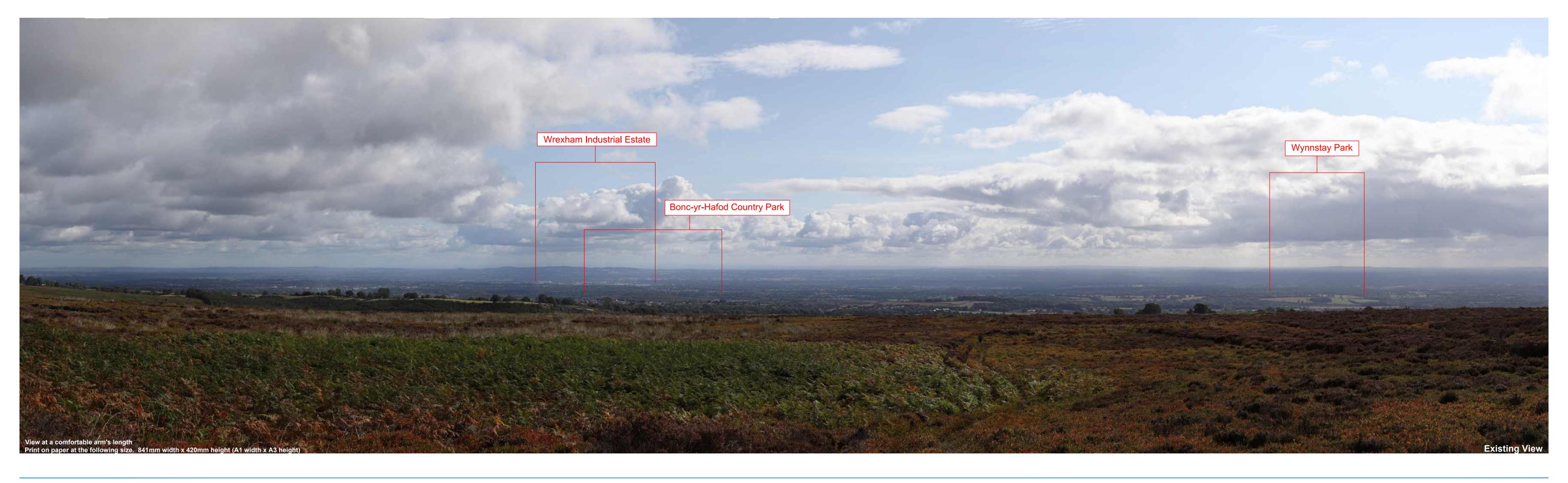


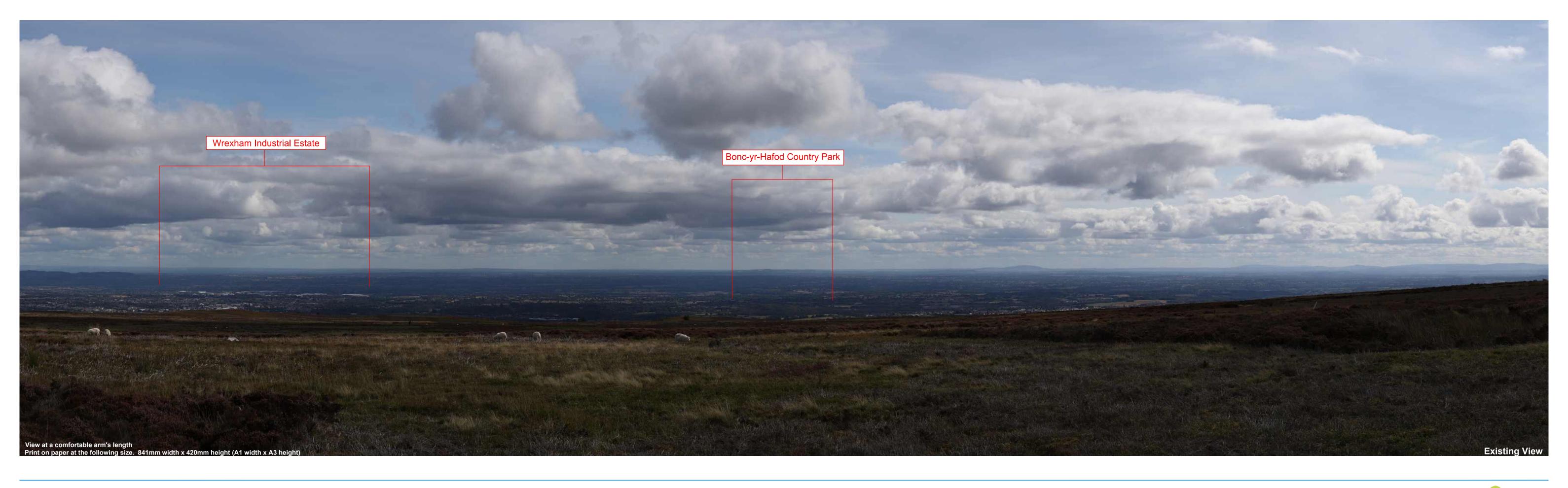
Cylindrical Date and Time of Photograph: 25/02/25 12:31 Lens: Canon EF 50mm 1:1.4 Direction of View: N-w Lens elevation (AOD):

Visualisation Type: **Type 1** Enlargement Factor:

90° British National Grid Co-ordinates: 339238,344593 Distance from Site: 1.94km







Enlargement Factor:

Cylindrical Date and Time of Photograph: 05/09/25 13:24 Lens: Canon EF 50mm 1:1.4 Direction of View: S-e Lens elevation (AOD):

90° British National Grid Co-ordinates: 325703,350538 Distance from Site: 4.3km





Projection: Cylindrical Date and Time of Photograph: 26/01/24 13:04 Lens: Canon EF 50mm 1:1.4 Direction of View: W Elevation (AOD):

90° British National Grid Co-ordinates: 331881,346308

91.2m





Cylindrical Date and Time of Photograph: 26/01/24 13:04 Lens: Canon EF 50mm 1:1.4 Direction of View: W Elevation (AOD):



Cylindrical Date and Time of Photograph: 26/01/24 13:04 Lens: Canon EF 50mm 1:1.4 Direction of View: W Elevation (AOD):





90° British National Grid Co-ordinates: 331881,346308

91.2m



90° British National Grid Co-ordinates: 331881,346308

91.2m

Viewpoint 2ii: Public footpath, east of WAA



Cylindrical Date and Time of Photograph: 26/01/24 13:04 Lens: Canon EF 50mm 1:1.4 Direction of View: N Elevation (AOD):

90° British National Grid Co-ordinates: 331881,346308

91.2m





Cylindrical Date and Time of Photograph: 26/01/24 11:15 Lens: Canon EF 50mm 1:1.4 Direction of View: E Elevation (AOD):

British National Grid Co-ordinates: 333369,345482

94.3m

Viewpoint 4i: Public footpath, west of CAA



Cylindrical Date and Time of Photograph: 26/01/24 11:15 Lens: Canon EF 50mm 1:1.4 Direction of View: E Elevation (AOD):

British National Grid Co-ordinates: 333369,345482 94.3m

Viewpoint 4i: Public footpath, west of CAA



Cylindrical Date and Time of Photograph: 26/01/24 11:15 Lens: Canon EF 50mm 1:1.4 Direction of View: S Elevation (AOD):

British National Grid Co-ordinates: 333369,345482

94.3m





Cylindrical Date and Time of Photograph: 26/01/24 11:15 Lens: Canon EF 50mm 1:1.4 Direction of View: S Elevation (AOD):



Cylindrical Date and Time of Photograph: 26/01/24 11:15 Lens: Canon EF 50mm 1:1.4 Direction of View: S Elevation (AOD):

94.3m

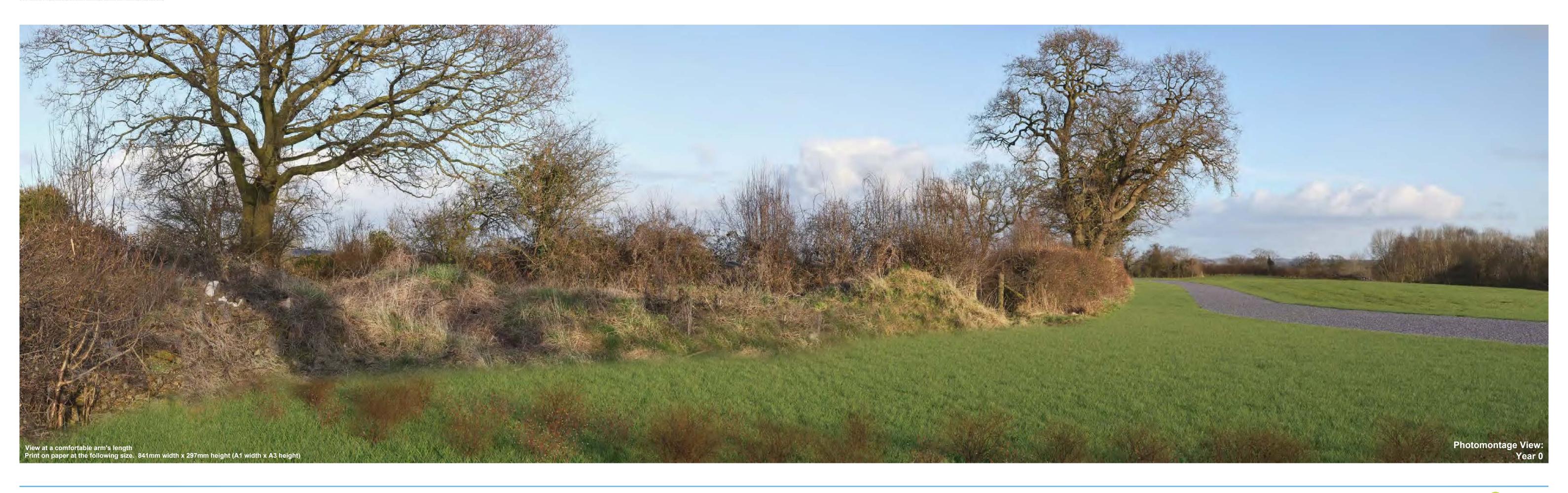




Cylindrical Date and Time of Photograph: 25/02/25 16:21 Lens: Canon EF 50mm 1:1.4 Direction of View: E Lens Elevation (AOD):

90° British National Grid Co-ordinates: 333761,346001

Viewpoint 5i: Minor road through CAA



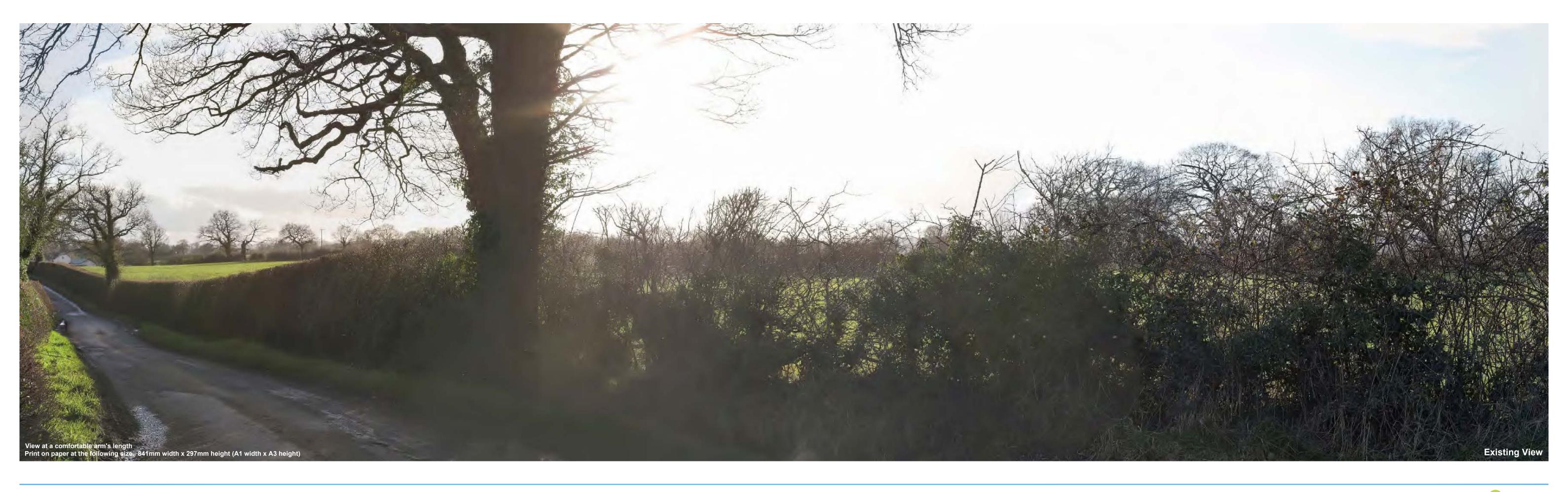
Cylindrical Date and Time of Photograph: 25/02/25 16:21 Lens: Canon EF 50mm 1:1.4 Direction of View: E Lens Elevation (AOD):



Cylindrical Date and Time of Photograph: 25/02/25 16:21 Lens: Canon EF 50mm 1:1.4 Direction of View: E Lens Elevation (AOD):

90° British National Grid Co-ordinates: 333761,346001

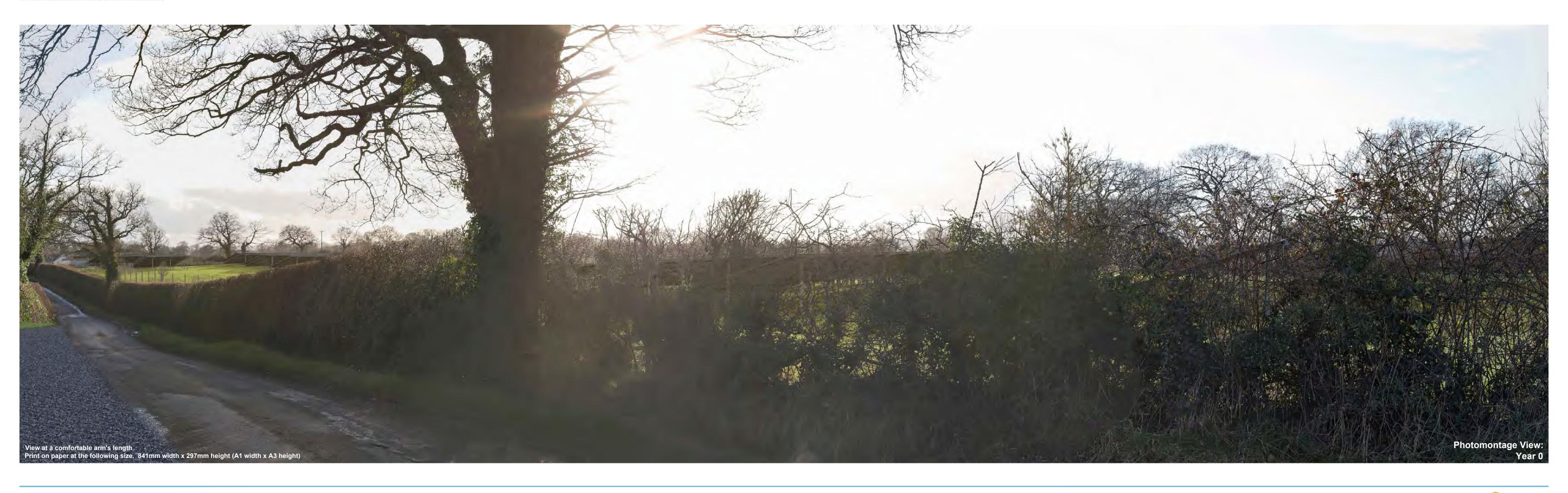
Viewpoint 5i: Minor road through CAA



Cylindrical Date and Time of Photograph: 25/02/25 16:21 Lens: Canon EF 50mm 1:1.4 Direction of View: S Lens Elevation (AOD):

90° British National Grid Co-ordinates: 333761,346001

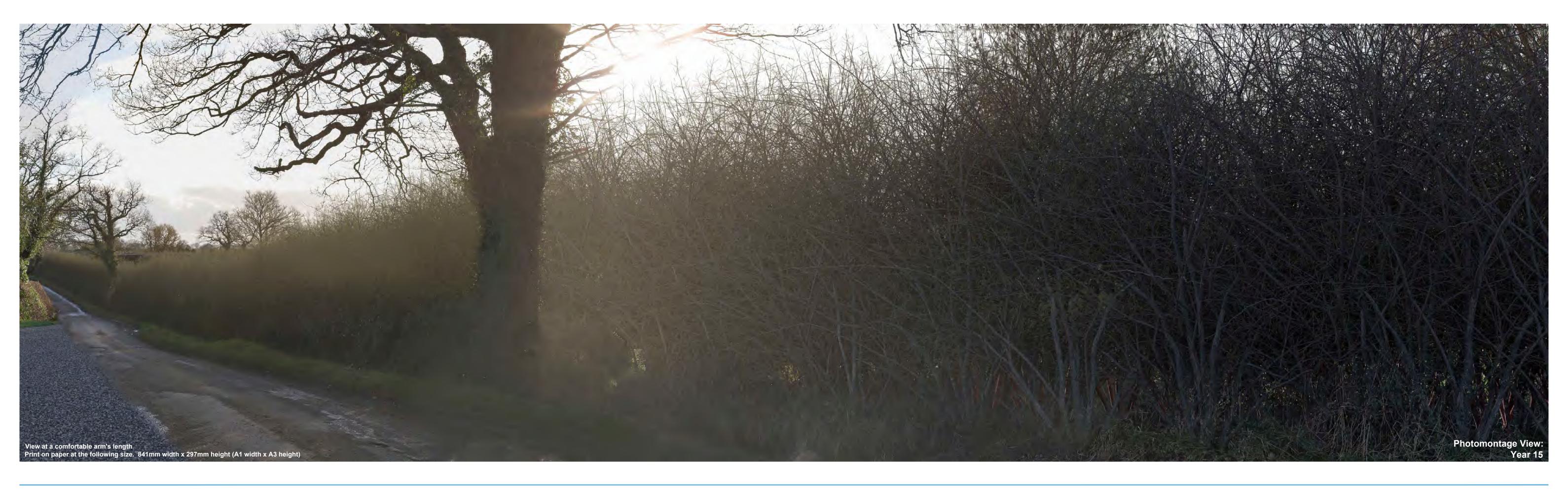
Viewpoint 5ii: Minor road through CAA



Cylindrical Date and Time of Photograph: 25/02/25 16:21 Lens: Canon EF 50mm 1:1.4 Direction of View: S Lens Elevation (AOD):

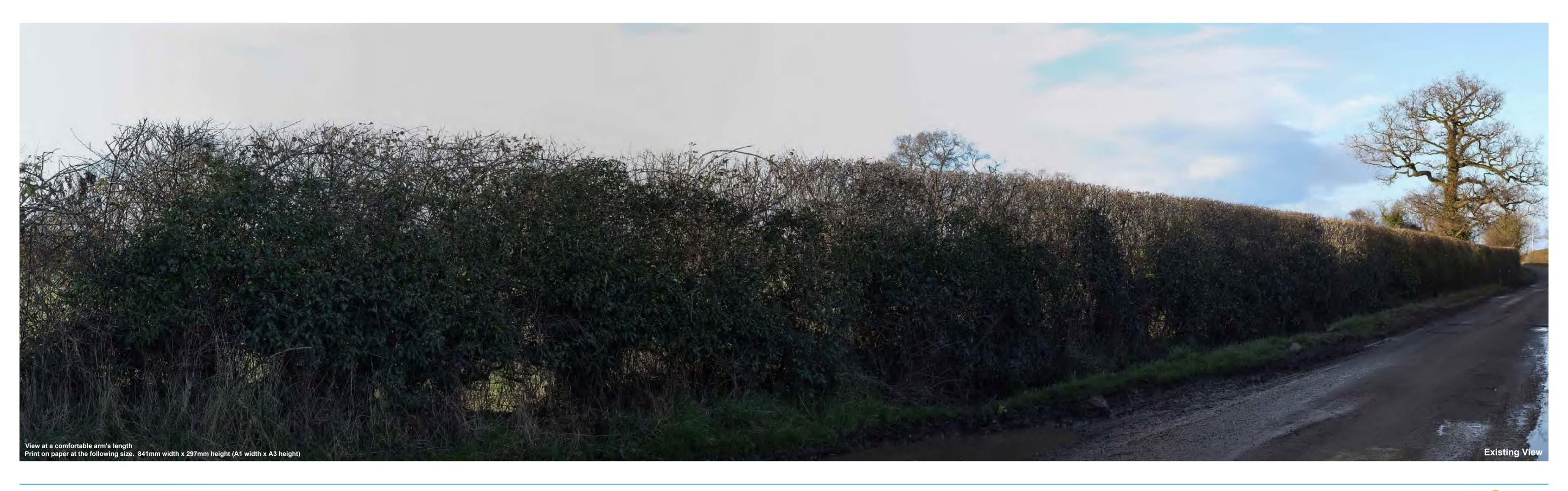
90° British National Grid Co-ordinates: 333761,346001

Viewpoint 5ii: Minor road through CAA



Cylindrical Date and Time of Photograph: 25/02/25 16:21 Lens: Canon EF 50mm 1:1.4 Direction of View: S Lens Elevation (AOD):







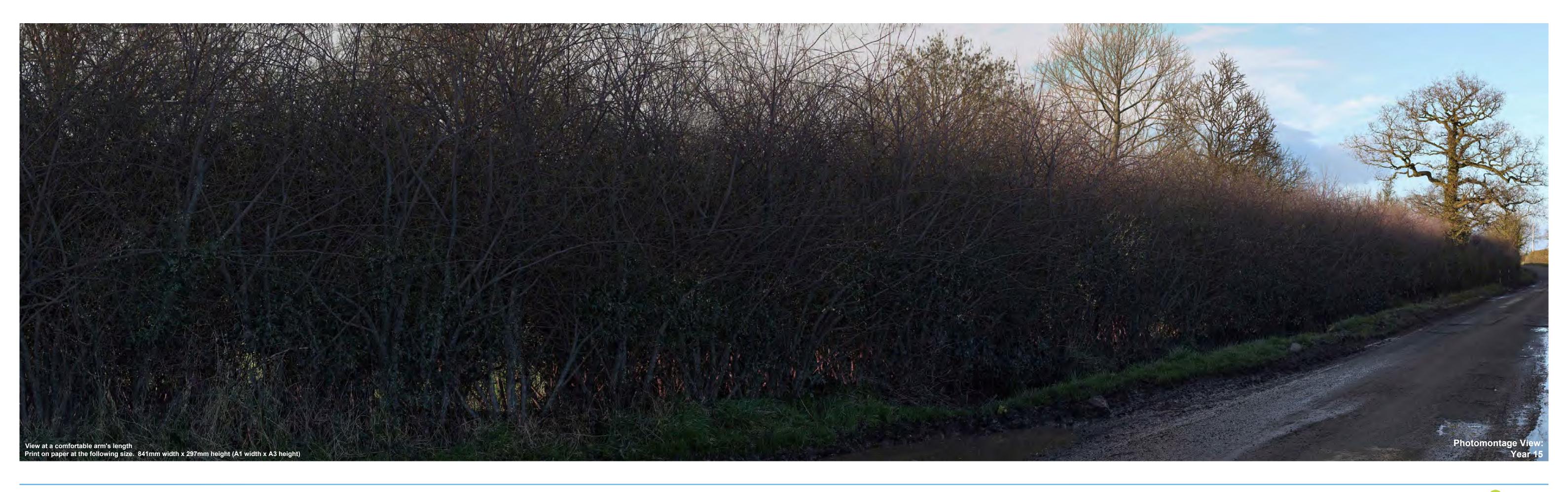
Cylindrical Date and Time of Photograph: 25/02/25 16:21 Lens: Canon EF 50mm 1:1.4 Direction of View: W Lens Elevation (AOD):





Cylindrical Date and Time of Photograph: 25/02/25 16:21 Lens: Canon EF 50mm 1:1.4 Direction of View: W Lens Elevation (AOD):





Cylindrical Date and Time of Photograph: 25/02/25 16:21 Lens: Canon EF 50mm 1:1.4 Direction of View: W Lens Elevation (AOD):

90° British National Grid Co-ordinates: 333761,346001

Viewpoint 5iii: Minor road through CAA



Cylindrical Date and Time of Photograph: 24/01/24 13:53 Lens: Canon EF 50mm 1:1.4 Direction of View: E Lens Elevation (AOD): 50.48m

British National Grid Co-ordinates: 336324,346391

Viewpoint 7i: B5130, Bedwell



50.48m Cylindrical Date and Time of Photograph: 24/01/24 13:53 Lens: Canon EF 50mm 1:1.4 Direction of View: E Lens Elevation (AOD):





90° British National Grid Co-ordinates: 336324,346391

Cylindrical Date and Time of Photograph: 24/01/24 13:53 Lens: Canon EF 50mm 1:1.4 Direction of View: E Lens Elevation (AOD): 50.48m





Cylindrical Date and Time of Photograph: 24/01/24 13:53 Lens: Canon EF 50mm 1:1.4 Direction of View: S Lens Elevation (AOD):





Cylindrical Date and Time of Photograph: 24/01/24 13:53 Lens: Canon EF 50mm 1:1.4 Direction of View: S Lens Elevation (AOD):



Cylindrical Date and Time of Photograph: 24/01/24 13:53 Lens: Canon EF 50mm 1:1.4 Direction of View: S Lens Elevation (AOD):





Cylindrical Date and Time of Photograph: 26/01/24 11:17

British National Grid Co-ordinates: 337073,3457829

32.39m Lens: Canon EF 50mm 1:1.4 Direction of View: W-n-w Lens Elevation (AOD):



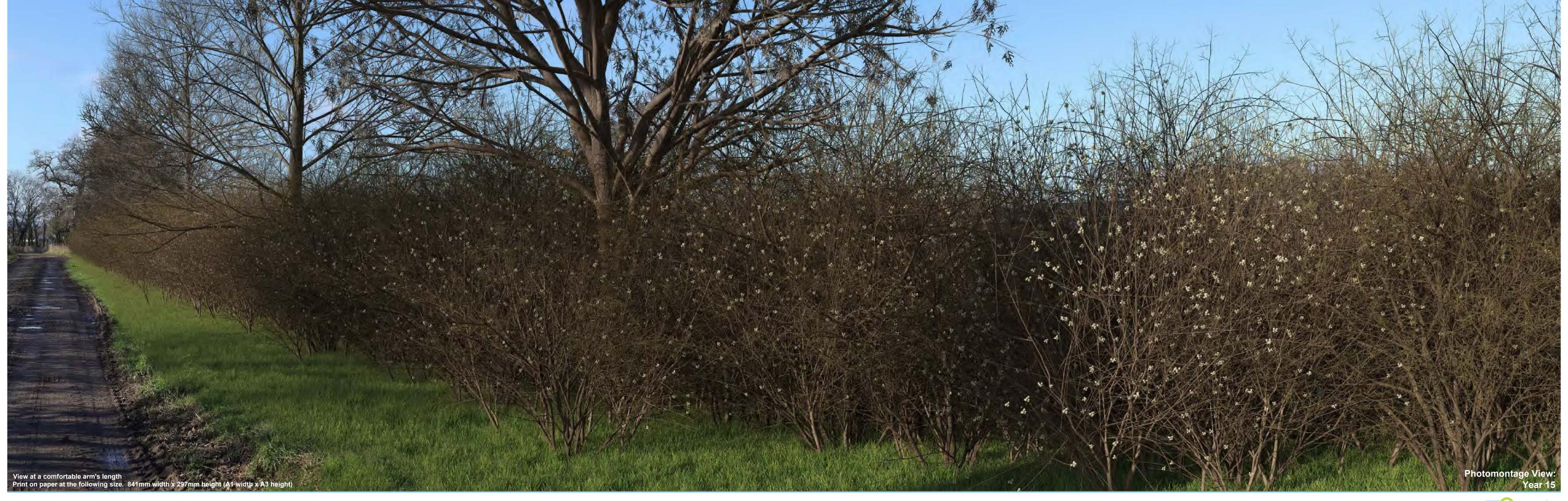


Cylindrical Date and Time of Photograph: 26/01/24 11:17 Lens: Canon EF 50mm 1:1.4 Direction of View: W-n-w Lens Elevation (AOD):

90° British National Grid Co-ordinates: 337073,3457829

32.39m





Visualisation Type: **Type 4** Enlargement Factor: Projection: Cylindrical Date and Time of Photograph: 26/01/24 11:17 Lens: Canon EF 50mm 1:1.4 Direction of View: W-n-w Lens Elevation (AOD):





Cylindrical Date and Time of Photograph: 26/01/24 11:17 Lens: Canon EF 50mm 1:1.4 Direction of View: N-n-e Lens Elevation (AOD):

British National Grid Co-ordinates: 337073,3457829

Viewpoint 10ii: Public footpath, southern boundary of EAA





Cylindrical Date and Time of Photograph: 26/01/24 11:17 Lens: Canon EF 50mm 1:1.4 Direction of View: N-n-e Lens Elevation (AOD):

90° British National Grid Co-ordinates: 337073,3457829

Viewpoint 10ii: Public footpath, southern boundary of EAA



Cylindrical Date and Time of Photograph: 26/01/24 11:17 Lens: Canon EF 50mm 1:1.4 Direction of View: N-n-e Lens Elevation (AOD):





90° British National Grid Co-ordinates: 337554,346066

32.9m





Cylindrical Date and Time of Photograph: 26/01/24 11:31 Lens: Canon EF 50mm 1:1.4 Direction of View: N-w Elevation (AOD):



Cylindrical Date and Time of Photograph: 26/01/24 11:31 Lens: Canon EF 50mm 1:1.4 Direction of View: N-w Elevation (AOD):

90° British National Grid Co-ordinates: 337554,346066

32.9m



Cylindrical Date and Time of Photograph: 26/01/24 10:31 Lens: Canon EF 50mm 1:1.4 Direction of View: N Elevation (AOD):

90° British National Grid Co-ordinates: 338928,344128

44.7m

Viewpoint 13: Public footpath, off Millbrook Lane





Cylindrical Date and Time of Photograph: 26/01/24 10:31 Lens: Canon EF 50mm 1:1.4 Direction of View: N Elevation (AOD):

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