Pentland floating offshore wind farm Volume 4: Visual Materials A.17.4

110

Cultural Heritage Visual Materials





OFFSHORE EIAR (VOLUME 4): VISUAL MATERIALS

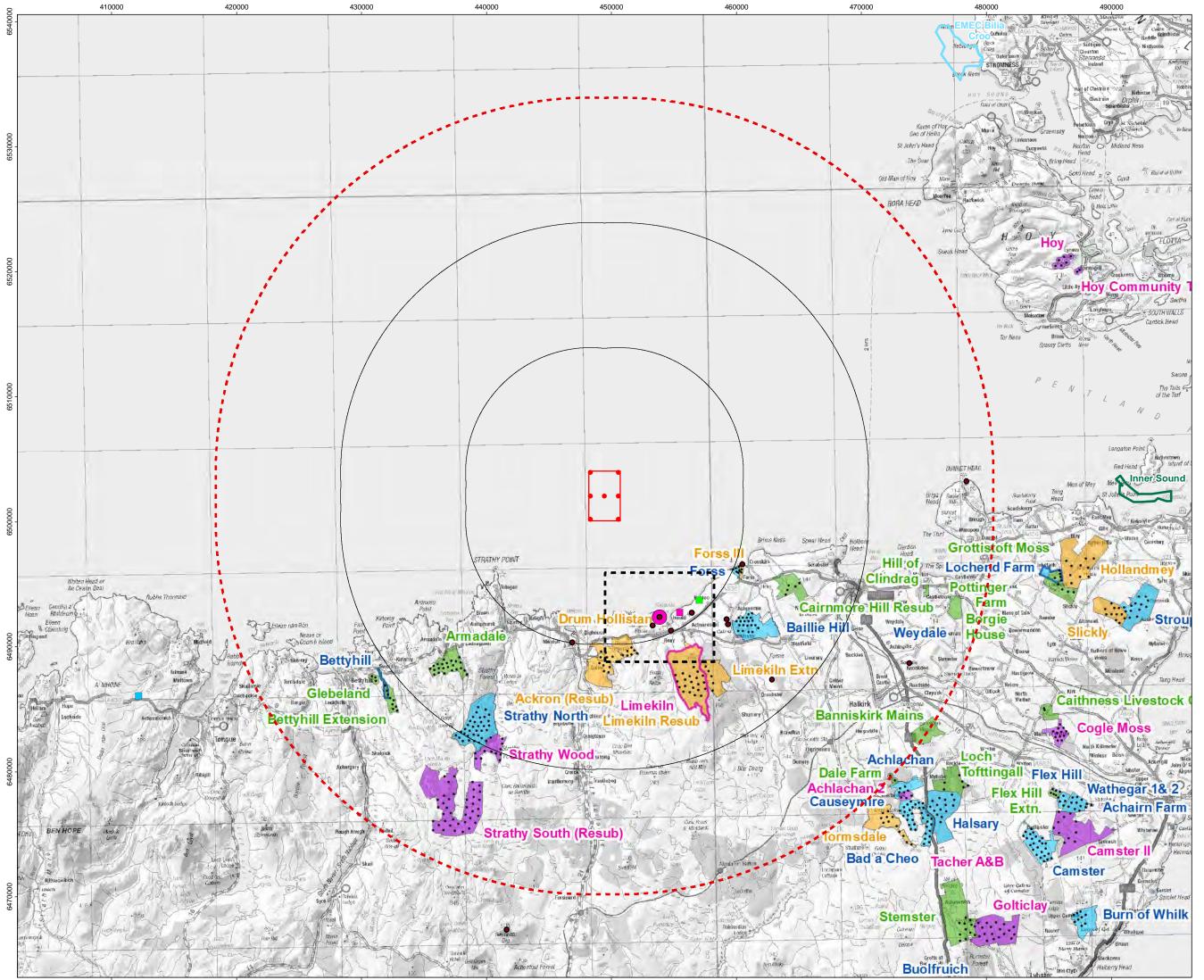
APPENDIX 17.4: CULTURAL HERITAGE VISUAL MATERIALS

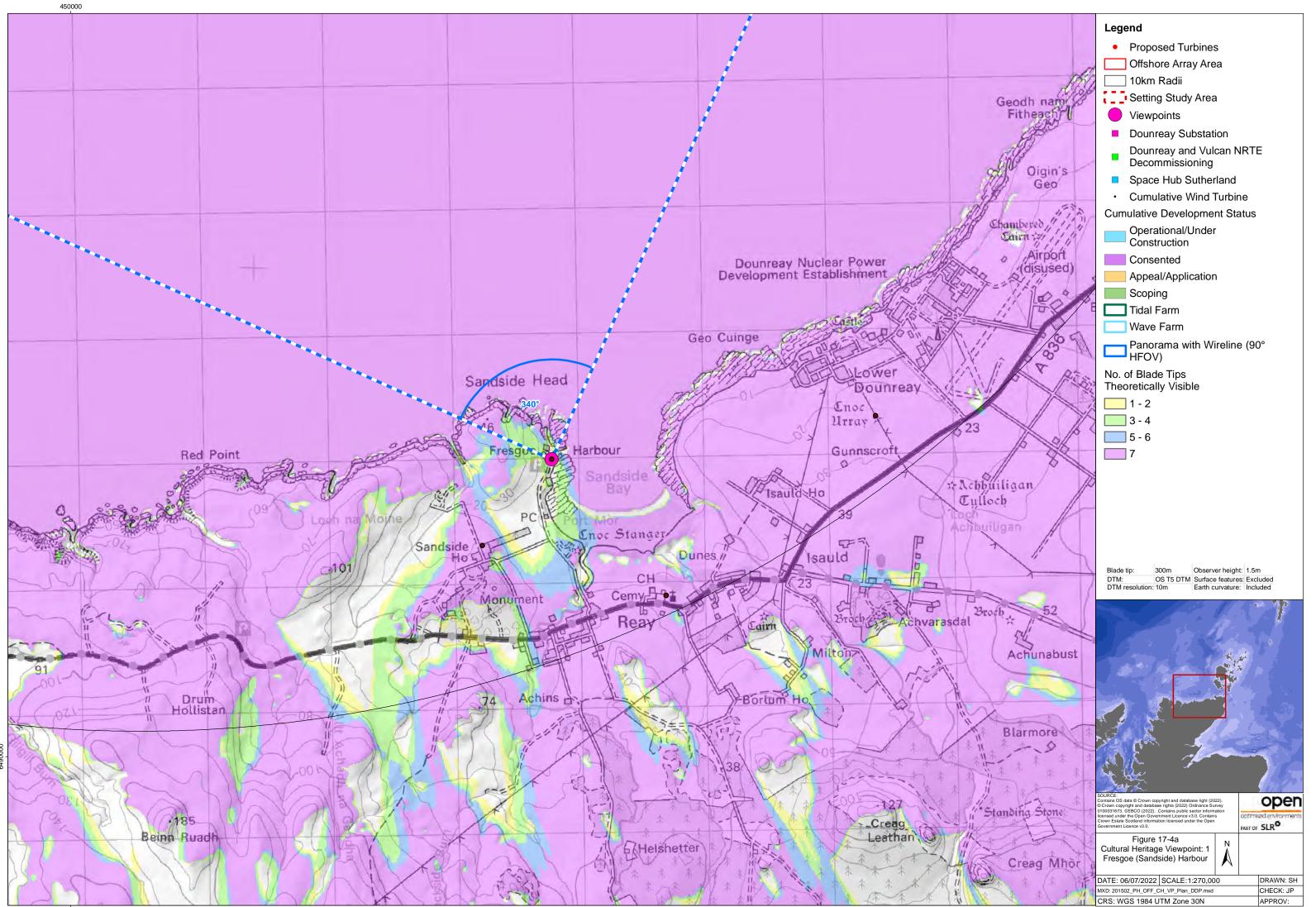
Document Title:	Pentland Floating Offshore Wind Farm Offshore EIAR			
Document no.	GBPNTD-ENV-ORA-PR-00002			
Project:	Pentland Floating Offshore Wind Farm			
Originator Company Optimised Environments (OPEN) on behalf of Orkney Reserved Centre for Archaeology (ORCA)				
Revision	01			
Originator	Jo Phillips			
Date	21.07.2022			

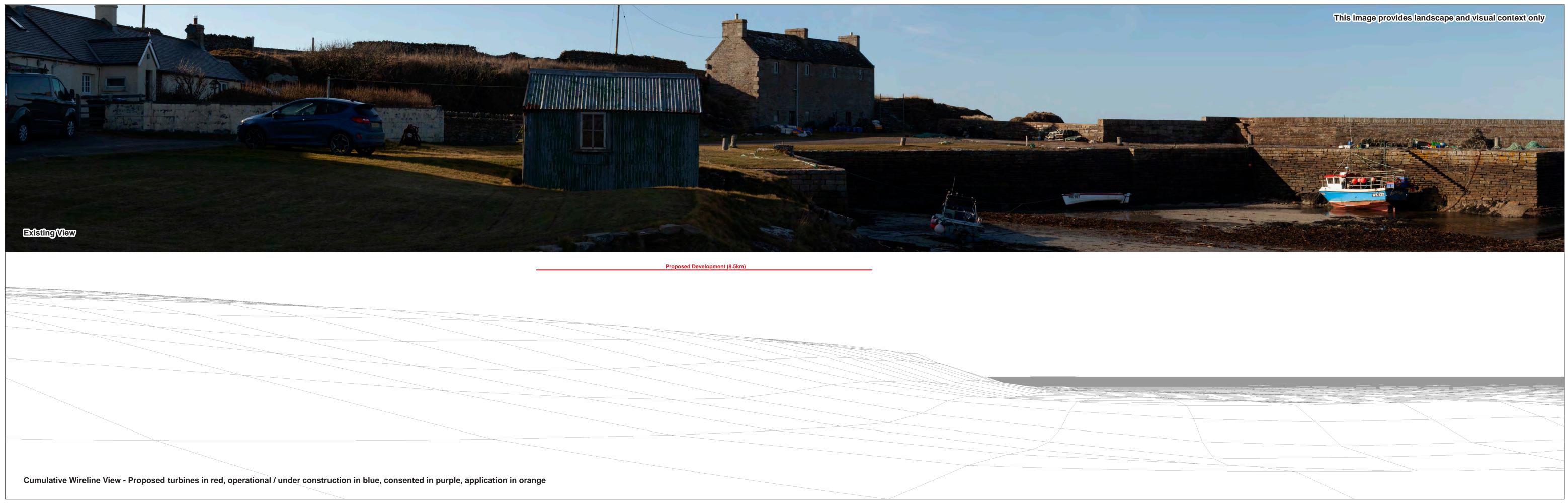
Revision History:

Revision	Date	Status	Originator	Reviewed	Approved
01	21.07.2022	Final	JP	TW/PM	PM









OS reference Elevation 2.3 m AOD Direction of view 340° Nearest turbine 8,490 m

295785 E 965990 N Principal distance Paper size

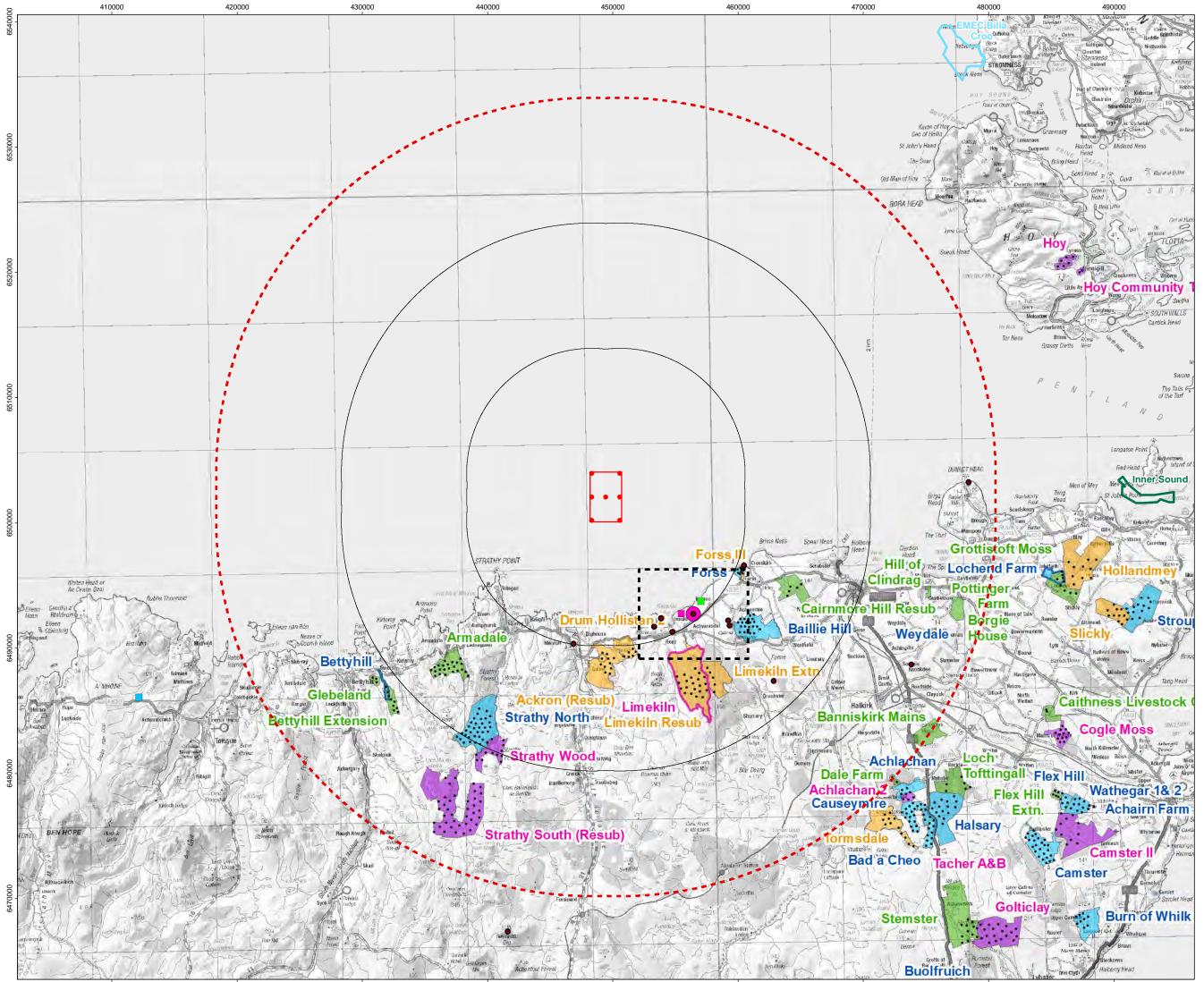
90° (cylindrical projection) Horizontal field of view 522 mm 841 x 297 mm (half A1) Correct printed image size 820 x 130 mm

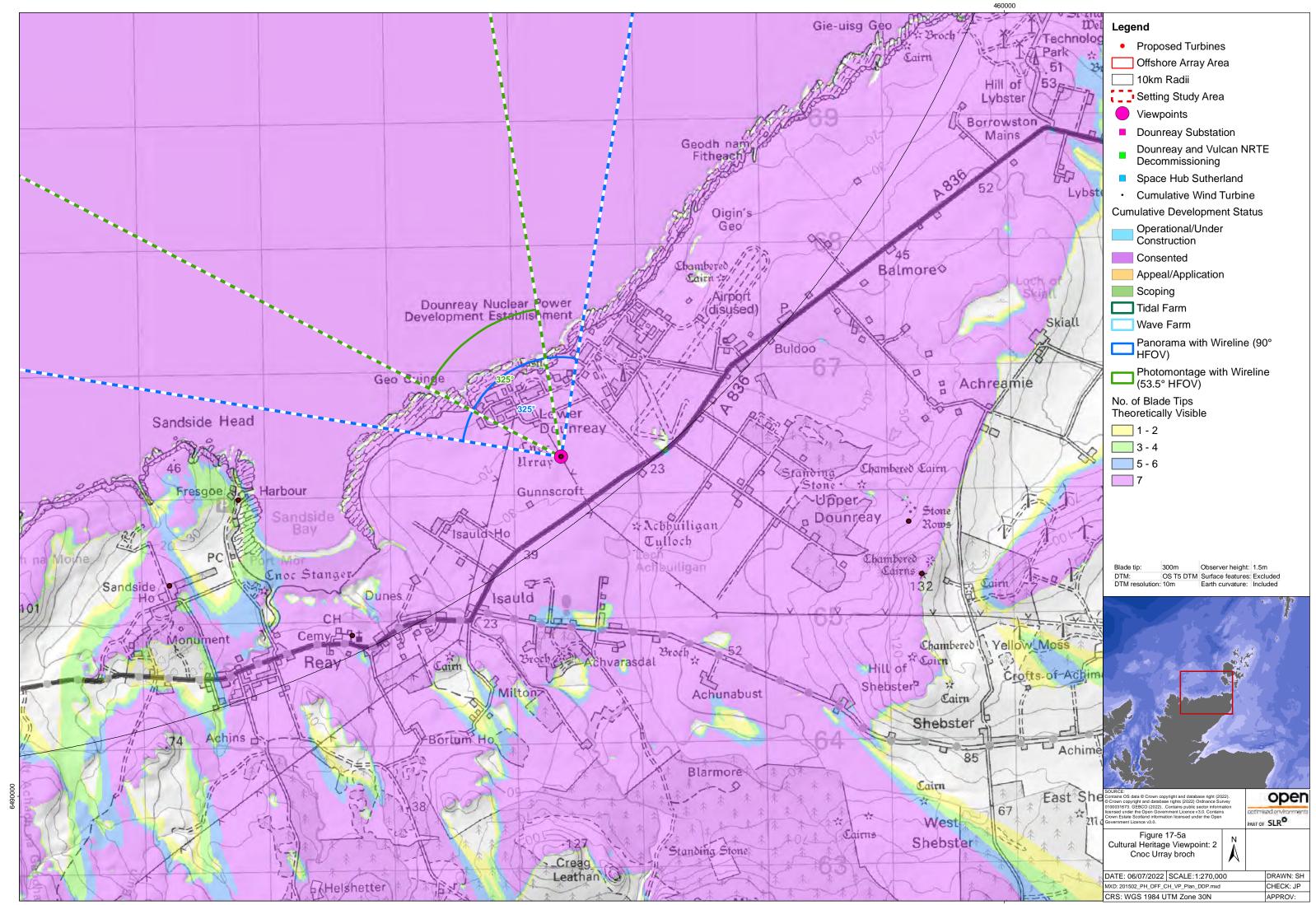
Camera Lens
 Camera height
 1.5 m AGL

 Date & time taken
 10/11/2021 11:25

Canon EOS 5D Mark II Canon EF 50mm f/1.4

Figure 17.4b Viewpoint 1: Fresgoe (Sandside) Harbour Panorama with Cumulative Wireline







OS reference Elevation Direction of view 325° Nearest turbine 9,513 m

25.1 m AOD

Principal distance Paper size

90° (cylindrical projection) 522 mm 841 x 297 mm (half A1) Correct printed image size 820 x 130 mm

Camera Lens Camera height 1.5 m AGL Date & time taken 10/11/2021 08:55

Canon EOS 5D Mark II Canon EF 50mm f/1.4

Figure 17.5b Viewpoint 2: Cnoc Urray broch Panorama with Cumulative Wireline

Wireline View

Elevation 25.1 m AOD Direction of view 325° Nearest turbine 9,513 m

OS reference 298383 E 966300 N

Horizontal field of view Principal distance Paper size Correct printed image size 820 x 260 mm

53.5° (planar projection) 812.5 mm 841 x 297 mm (half A1)

Camera Lens Camera height 1.5 m AGL Date & time taken 10/11/2021 08:55

Canon EOS 5D Mark II Canon EF 50mm f/1.4

1

2 6 7 3 5 4 | | | | | | | |

View flat at a comfortable arm's length

Figure 17.5c Viewpoint 2: Cnoc Urray broch Wireline



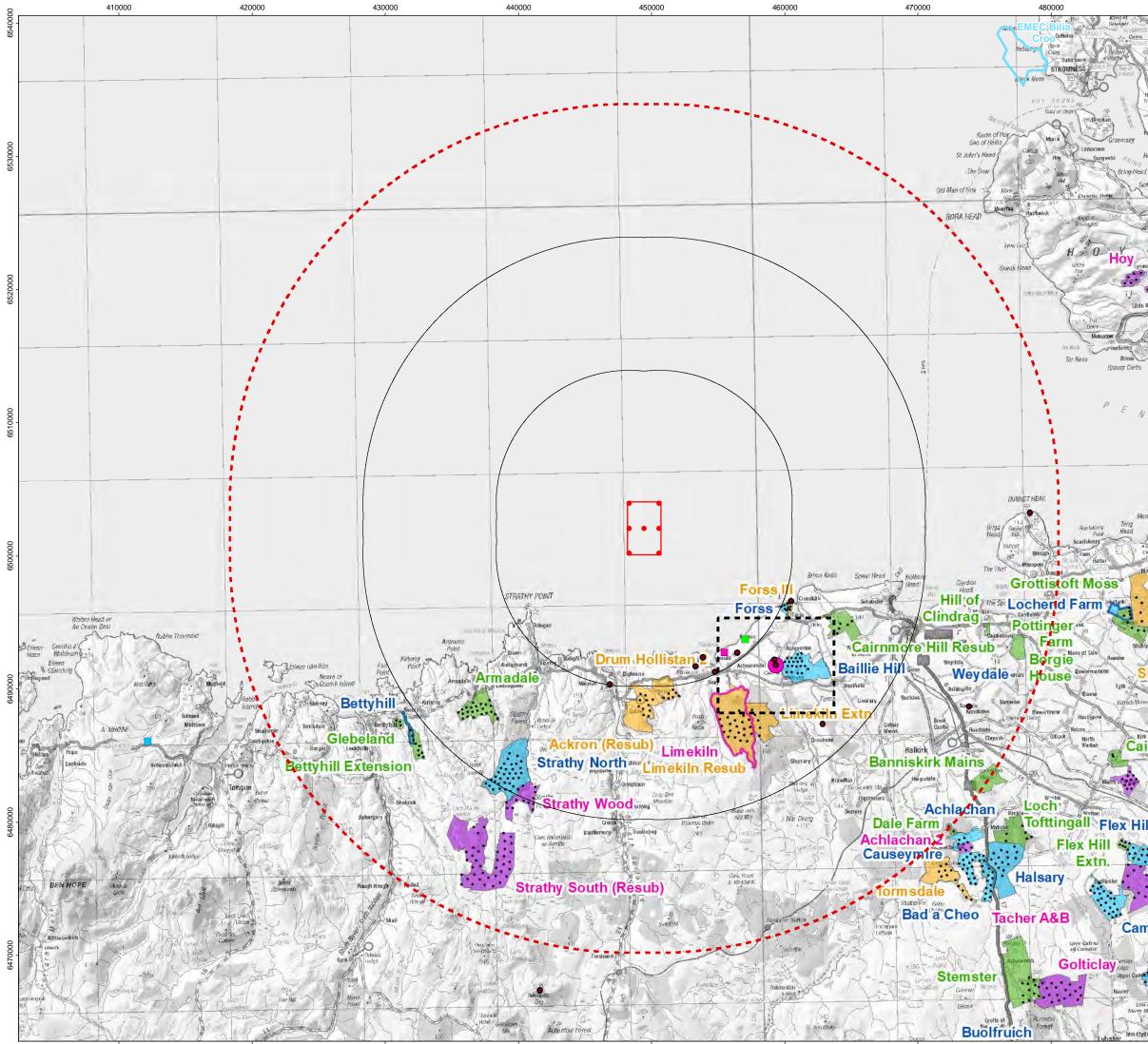
OS reference298383 E 9Elevation25.1 m AODirection of view325°Nearest turbine9,513 m

298383 E 966300 N 25.1 m AOD

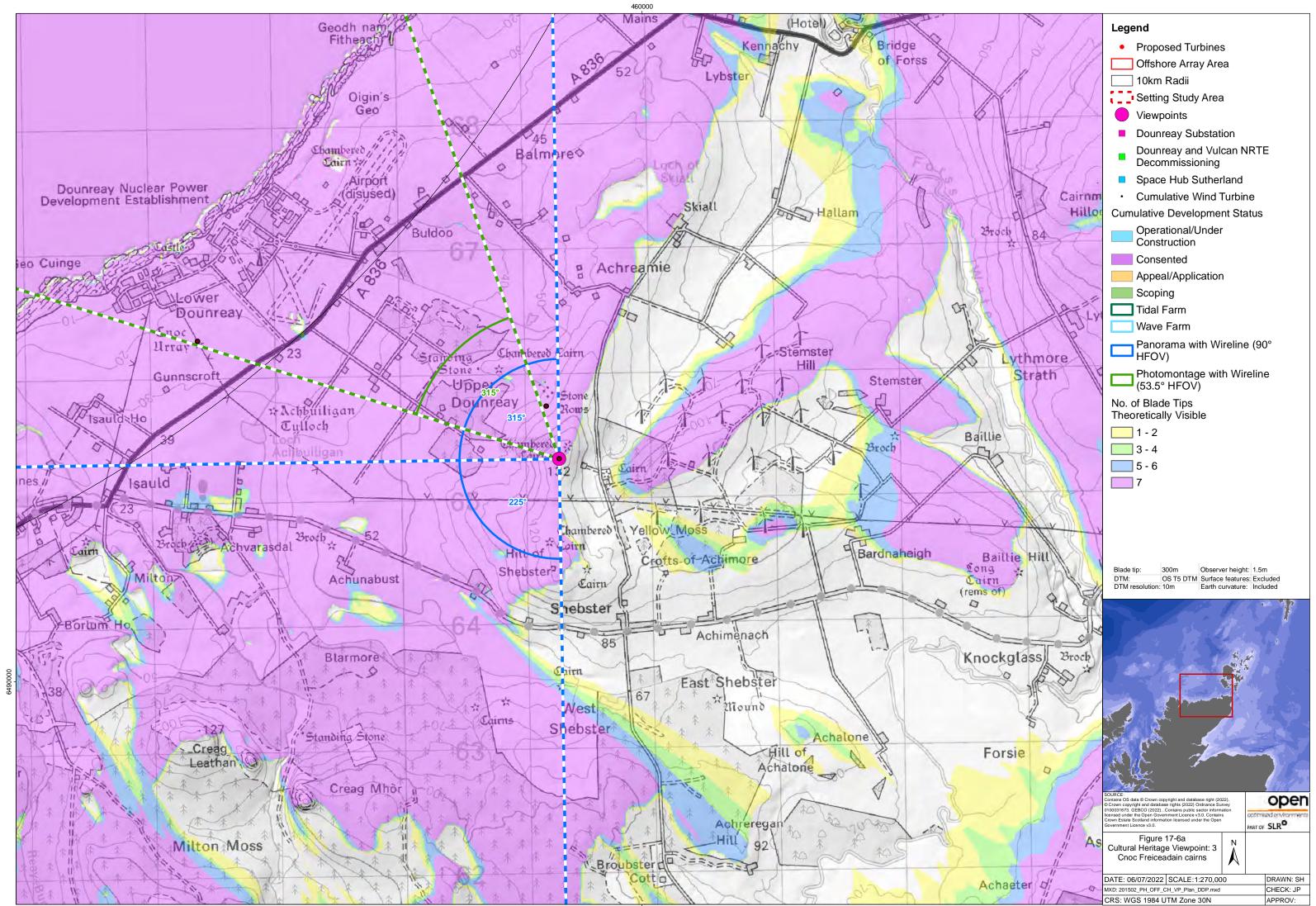
Horizontal field of view53.5° (planar projection)Principal distance812.5 mmPaper size841 x 297 mm (half A1)Correct printed image size820 x 260 mm

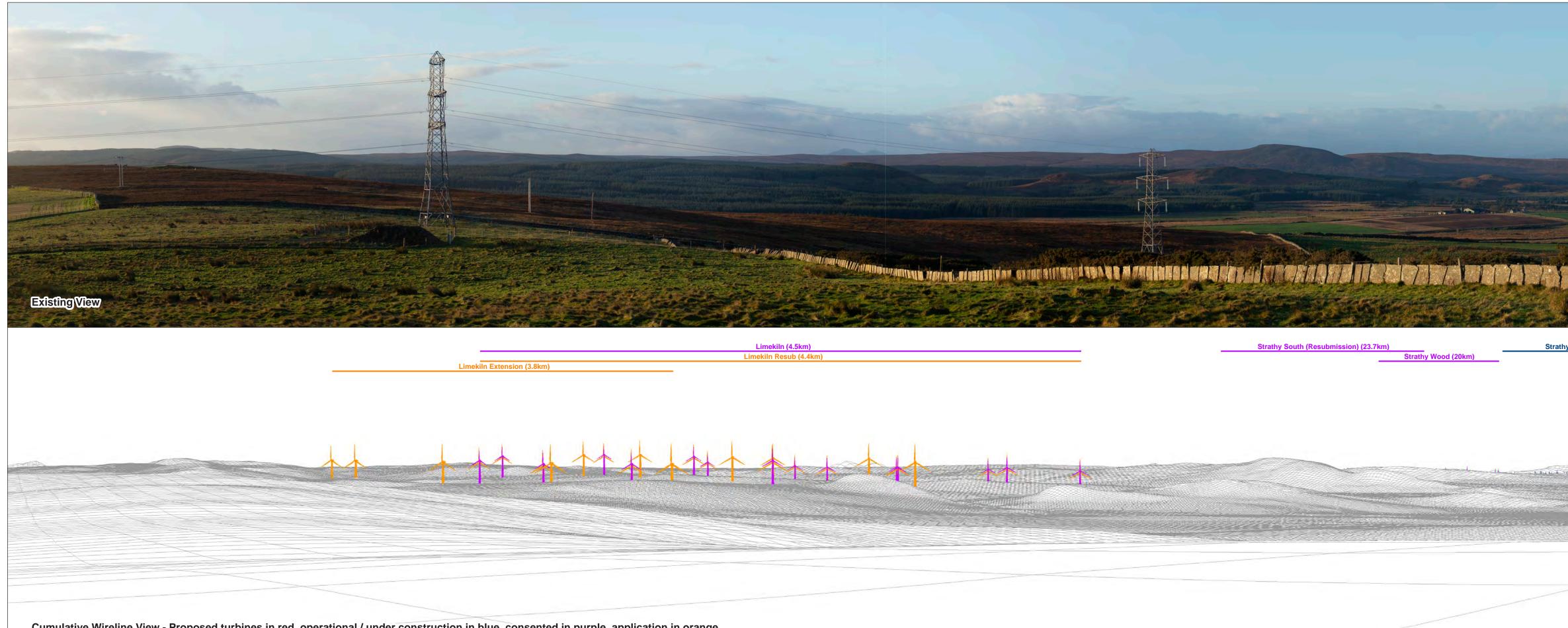
CameraCanon EOS 5D Mark IILensCanon EF 50mm f/1.4Camera height1.5 m AGLDate & time taken10/11/2021 08:55

Figure 17.5d Viewpoint 2: Cnoc Urray broch Photomontage © Crown Copyright and database right (2022). Licence Number 0100031673.









Cumulative Wireline View - Proposed turbines in red, operational / under construction in blue, consented in purple, application in orange

OS reference Elevation Direction of view 225° Nearest turbine 12,163 m

127.9 m AOD

301266 E 965316 N

Paper size

Horizontal field of view 90° (cylindrical projection) Principal distance 522 mm 841 x 297 mm (half A1) Correct printed image size 820 x 130 mm

Camera Lens Camera height 1.5 m AGL Date & time taken 10/11/2021 11:40

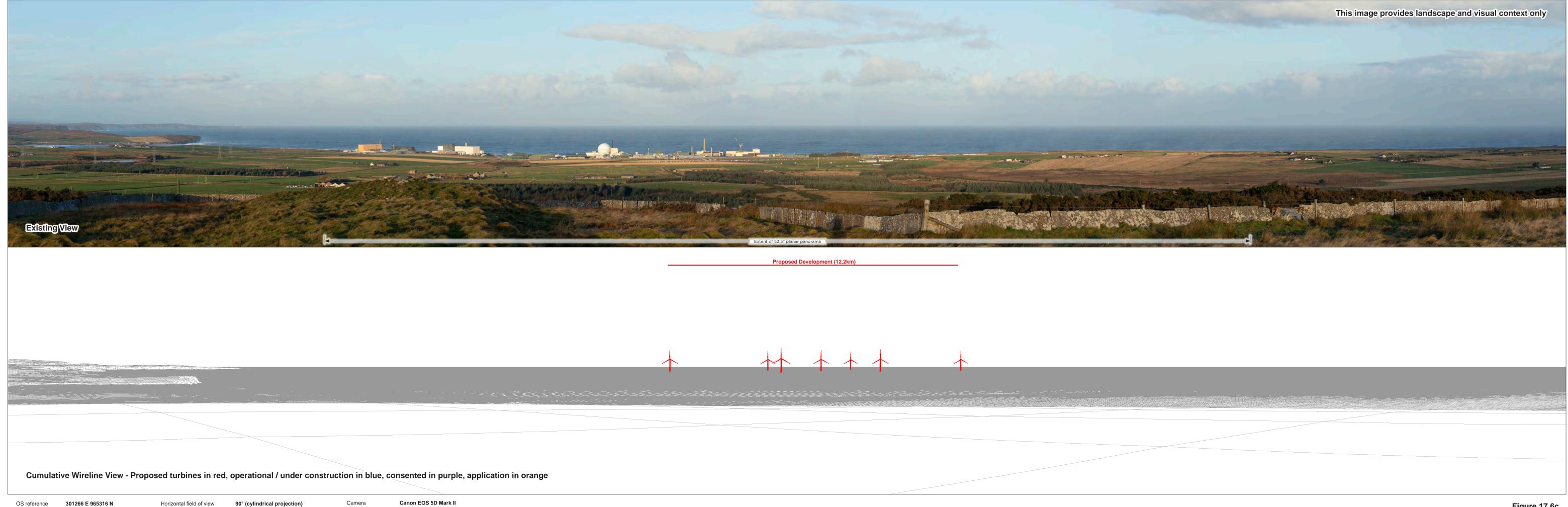
Canon EOS 5D Mark II Canon EF 50mm f/1.4

This image provides landscape and visual context only

Strathy North (20.4km) Drum Hollistan 2 (7.6km) sion) (9.6km)

Bettyhill (27.8km)

Figure 17.6b Viewpoint 3: Cnoc Freiceadain cairns Panorama with Cumulative Wireline (view 1 of 2) © Crown Copyright and database right (2022). Licence Number 0100031673.



OS reference Elevation 127.9 m AOD Direction of view 315° Nearest turbine 12,163 m

Horizontal field of view Principal distance Paper size

90° (cylindrical projection) 522 mm 841 x 297 mm (half A1) Correct printed image size 820 x 130 mm

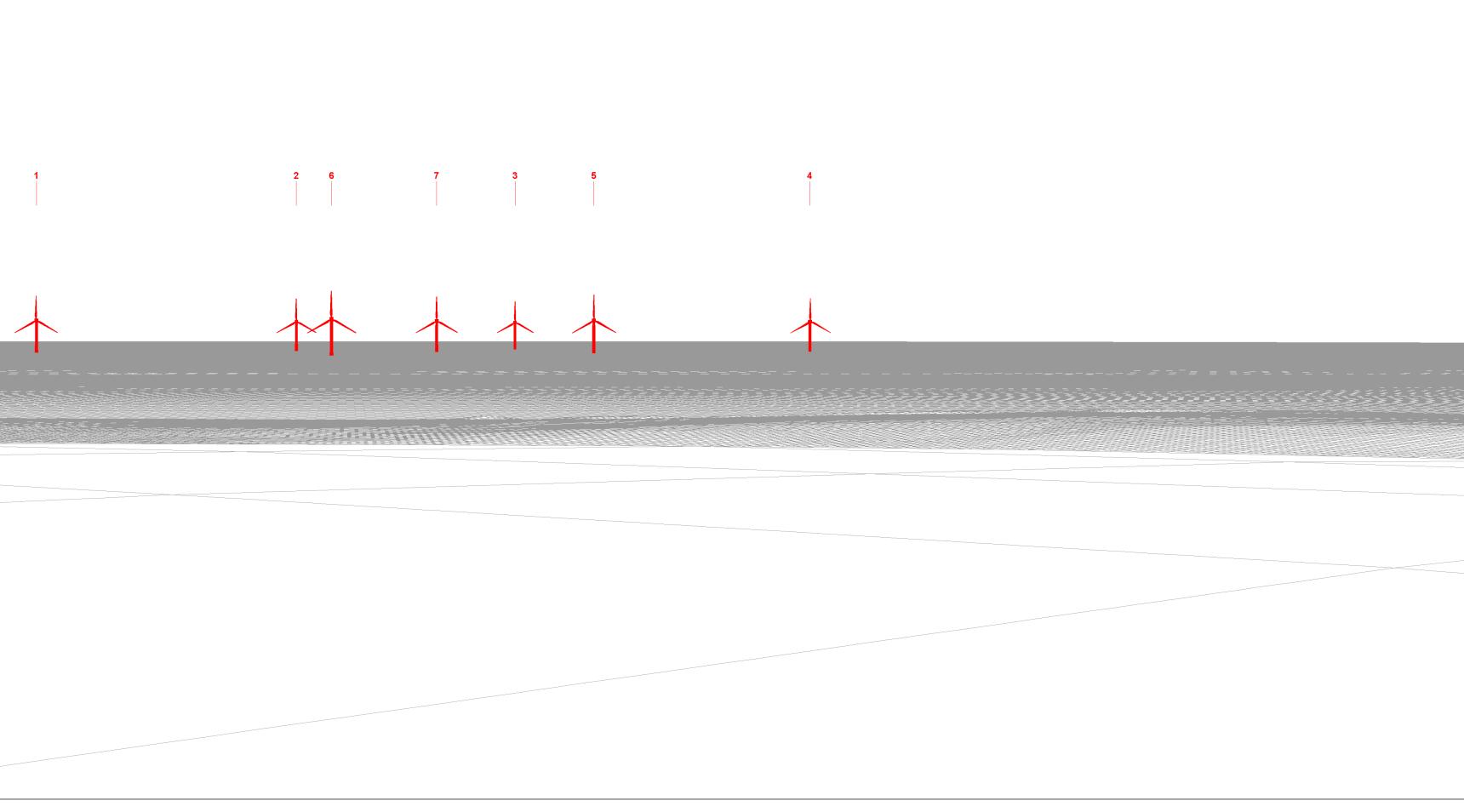
Camera Lens Camera height 1.5 m AGL Date & time taken 10/11/2021 11:40

Canon EOS 5D Mark II Canon EF 50mm f/1.4

Figure 17.6c Viewpoint 3: Cnoc Freiceadain cairns Panorama with Cumulative Wireline (view 2 of 2)

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ne View			
	 	 <i></i>	



View flat at a comfortable arm's length

Figure 17.6d Viewpoint 3: Cnoc Freiceadain cairns Wireline



OS reference **301266 E 965316 N** Elevation Direction of view 315° Nearest turbine 12,163 m

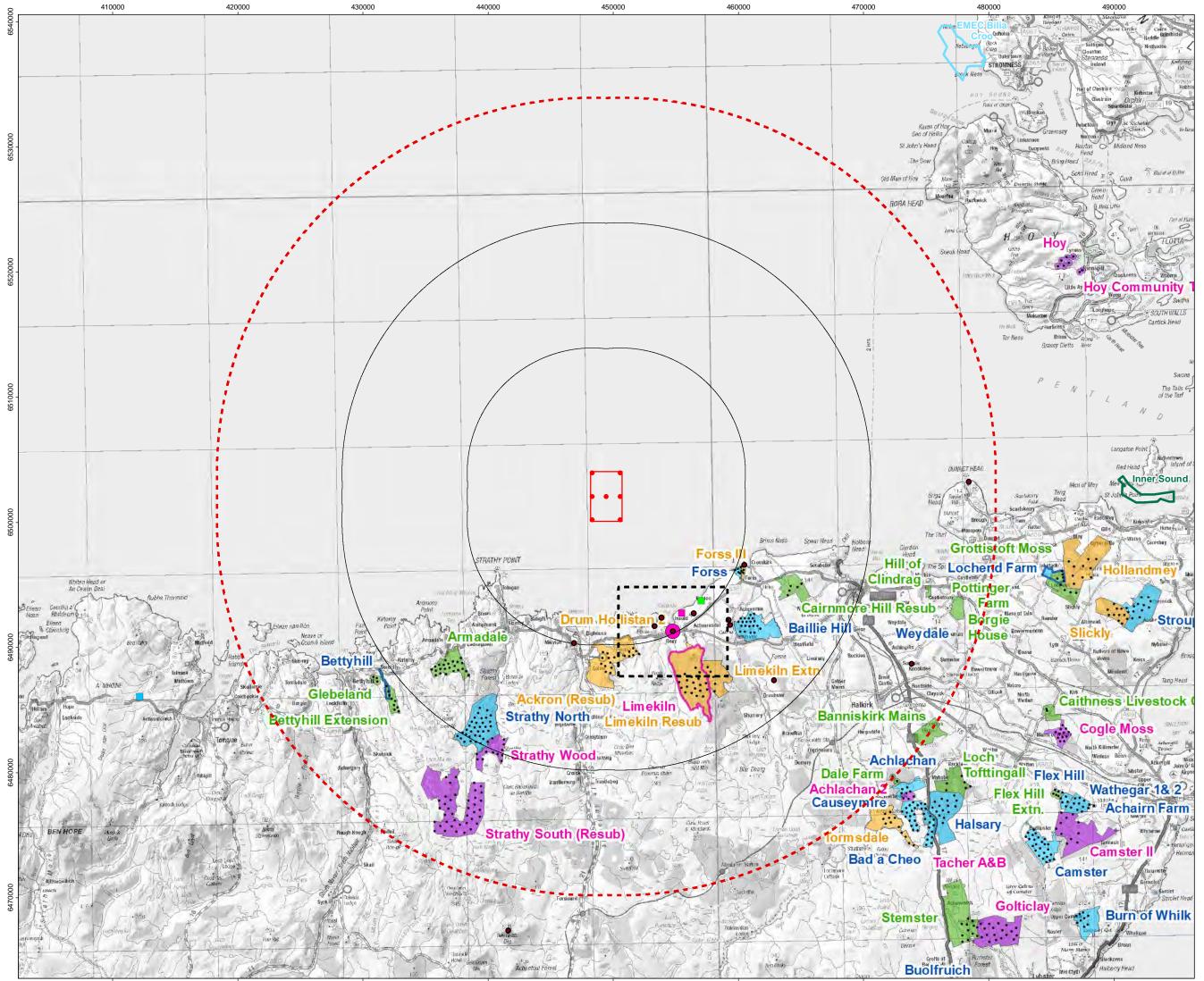
127.9 m AOD

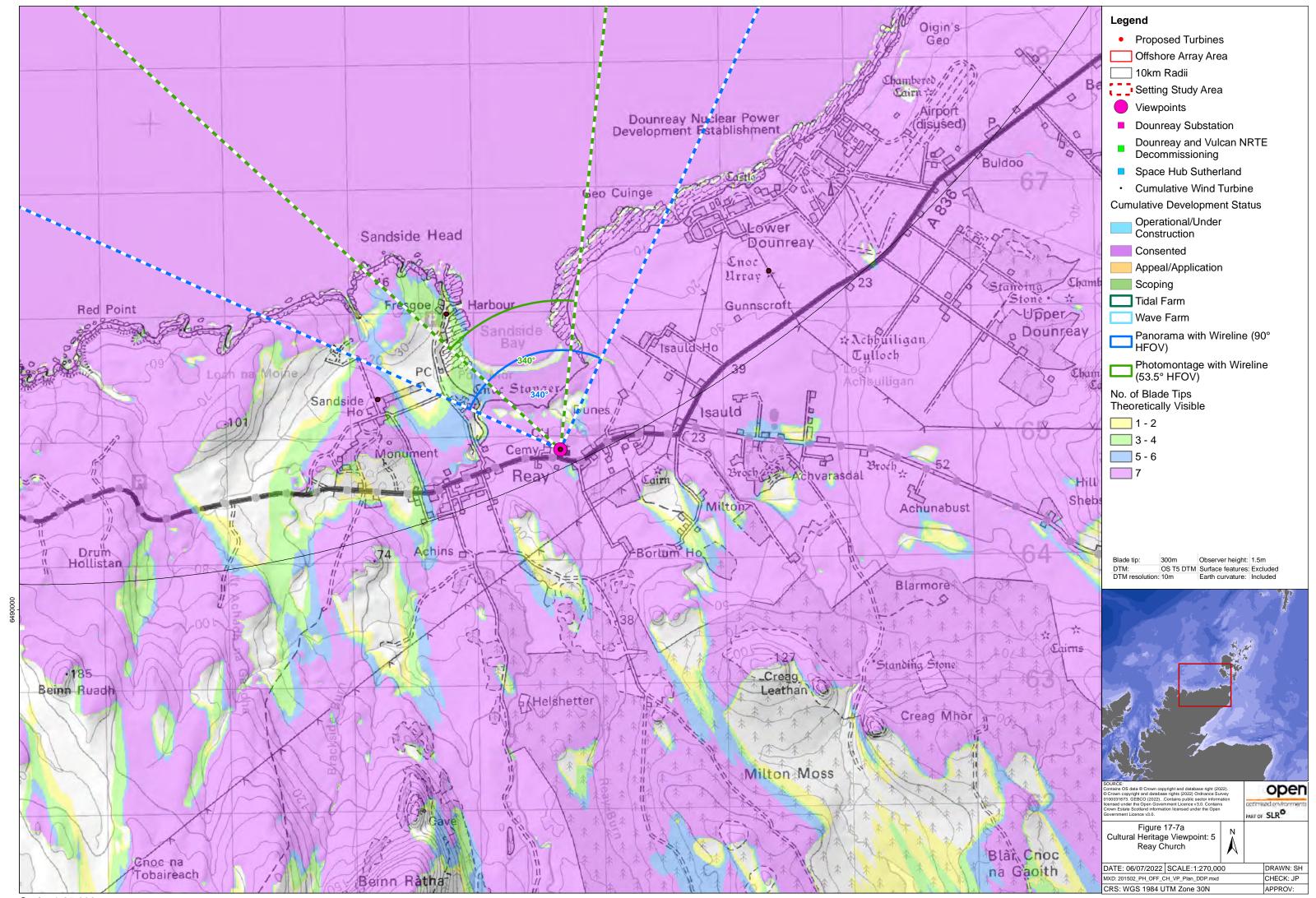
Horizontal field of view Principal distance Paper size

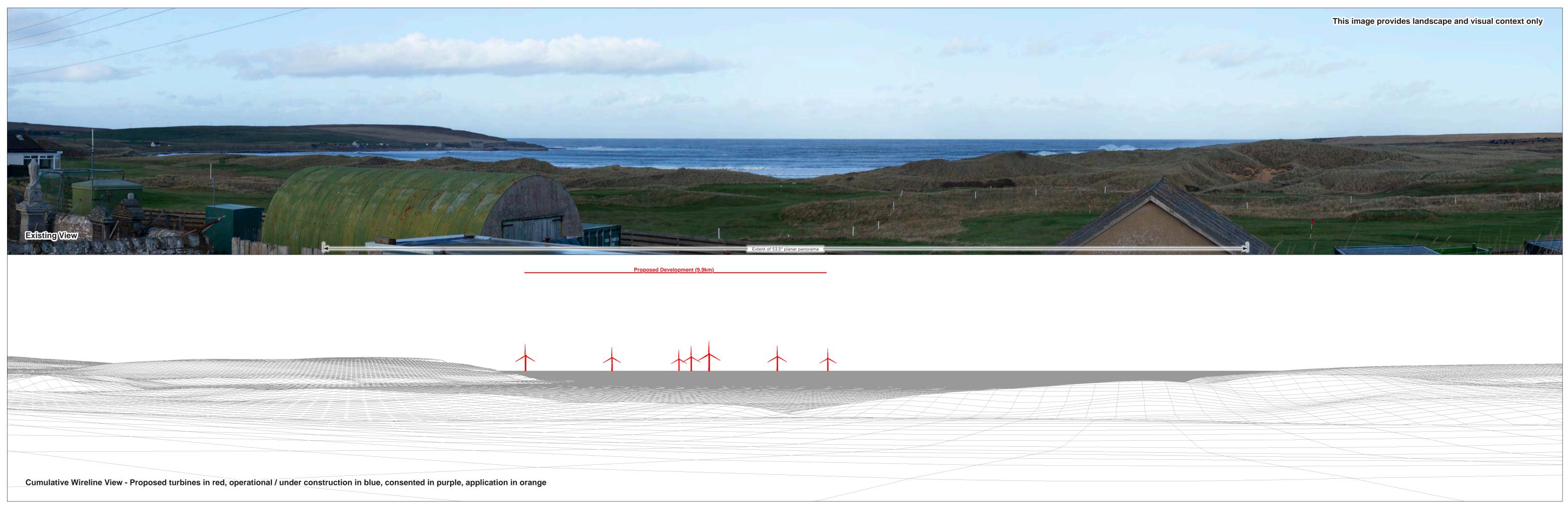
53.5° (planar projection) 812.5 mm 841 x 297 mm (half A1) Correct printed image size 820 x 260 mm

CameraCanon EOS 5D Mark IILensCanon EF 50mm f/1.4Camera height1.5 m AGLDate & time taken10/11/2021 11:40

Figure 17.6e Viewpoint 3: Cnoc Freiceadain cairns Photomontage © Crown Copyright and database right (2022). Licence Number 0100031673.







OS reference 296685 E 964888 N Elevation 20.4 m AOD Direction of view 340° Nearest turbine 9,857 m

Horizontal field of view Principal distance Paper size

90° (cylindrical projection) 522 mm 841 x 297 mm (half A1) Correct printed image size 820 x 130 mm

Camera Lens Camera height 1.5 m AGL

Canon EOS 5D Mark II Canon EF 50mm f/1.4 Date & time taken 10/11/2021 13:40

Figure 17.7b Viewpoint 5: Reay Church Panorama with Cumulative Wireline

1	2
	1

Wireline View

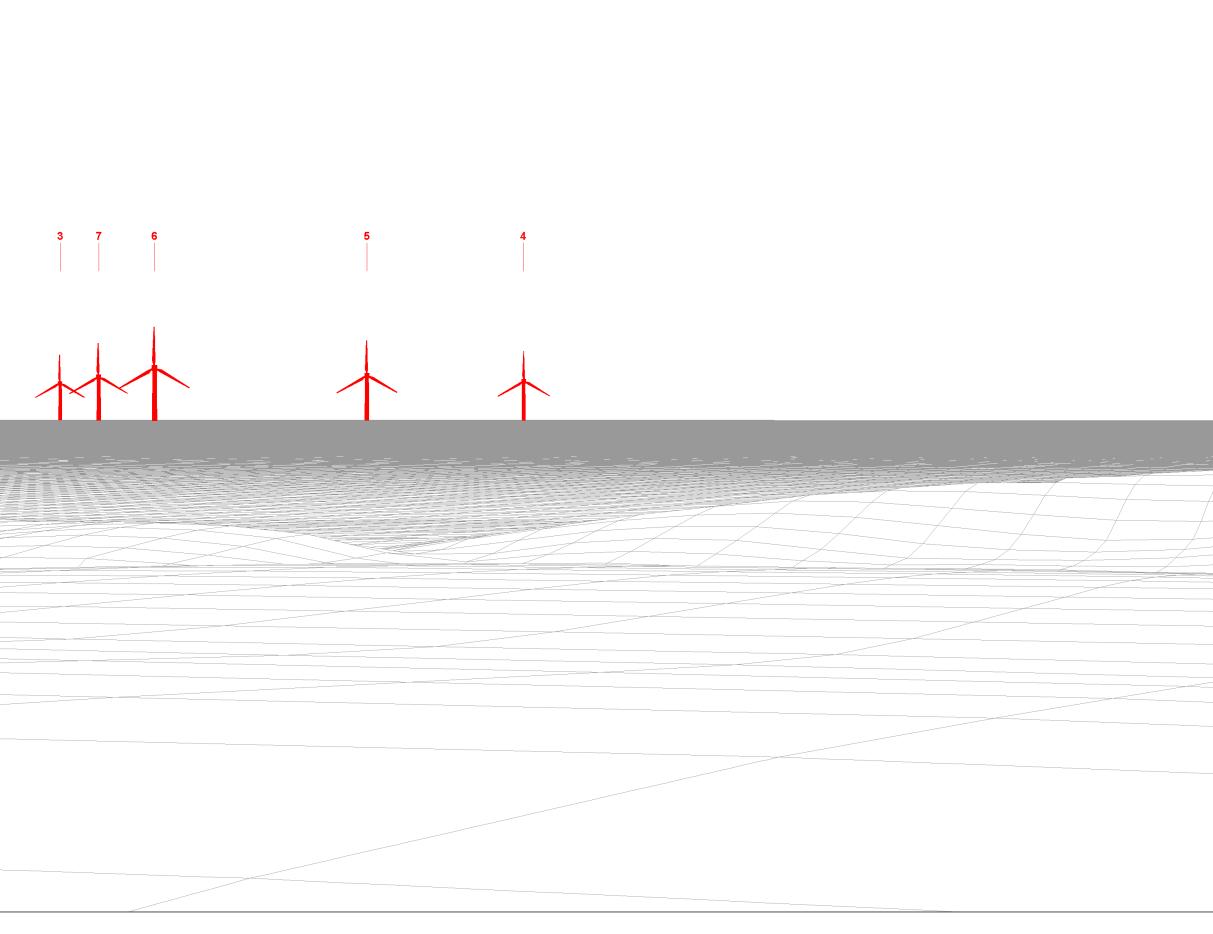
 OS reference
 296685 E 964888 N

 Elevation
 20.4 m AOD

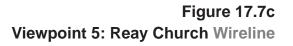
 Direction of view
 340°
 Nearest turbine 9,857 m

Horizontal field of view53.5° (planar projection)Principal distance812.5 mmPaper size841 x 297 mm (half A1)Correct printed image size820 x 260 mm

CameraCanon EOS 5D Mark IILensCanon EF 50mm f/1.4Camera height1.5 m AGLDate & time taken10/11/2021 13:40



View flat at a comfortable arm's length



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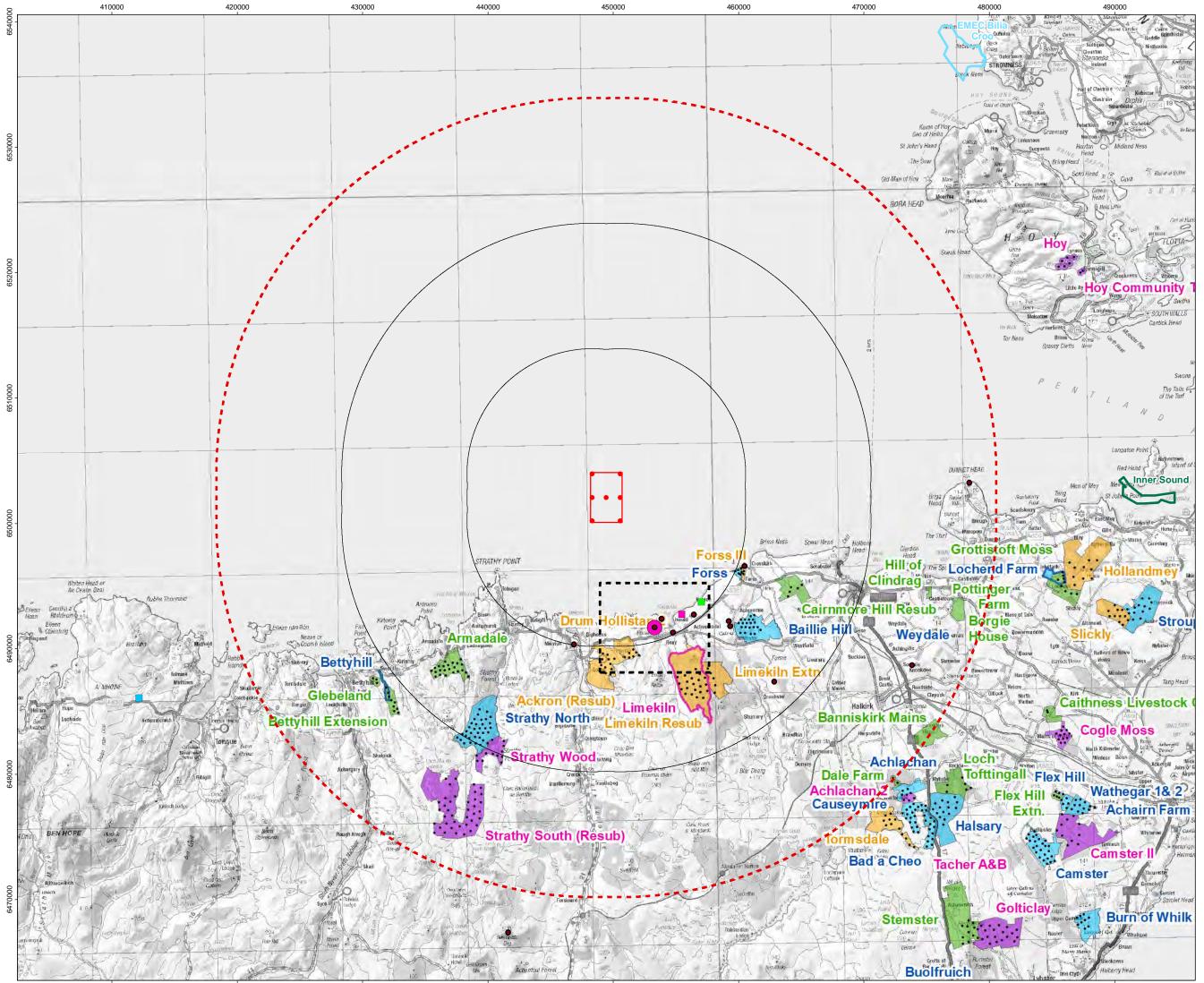
OS reference296685 E SElevation20.4 m AODirection of view340°Nearest turbine9,857 m

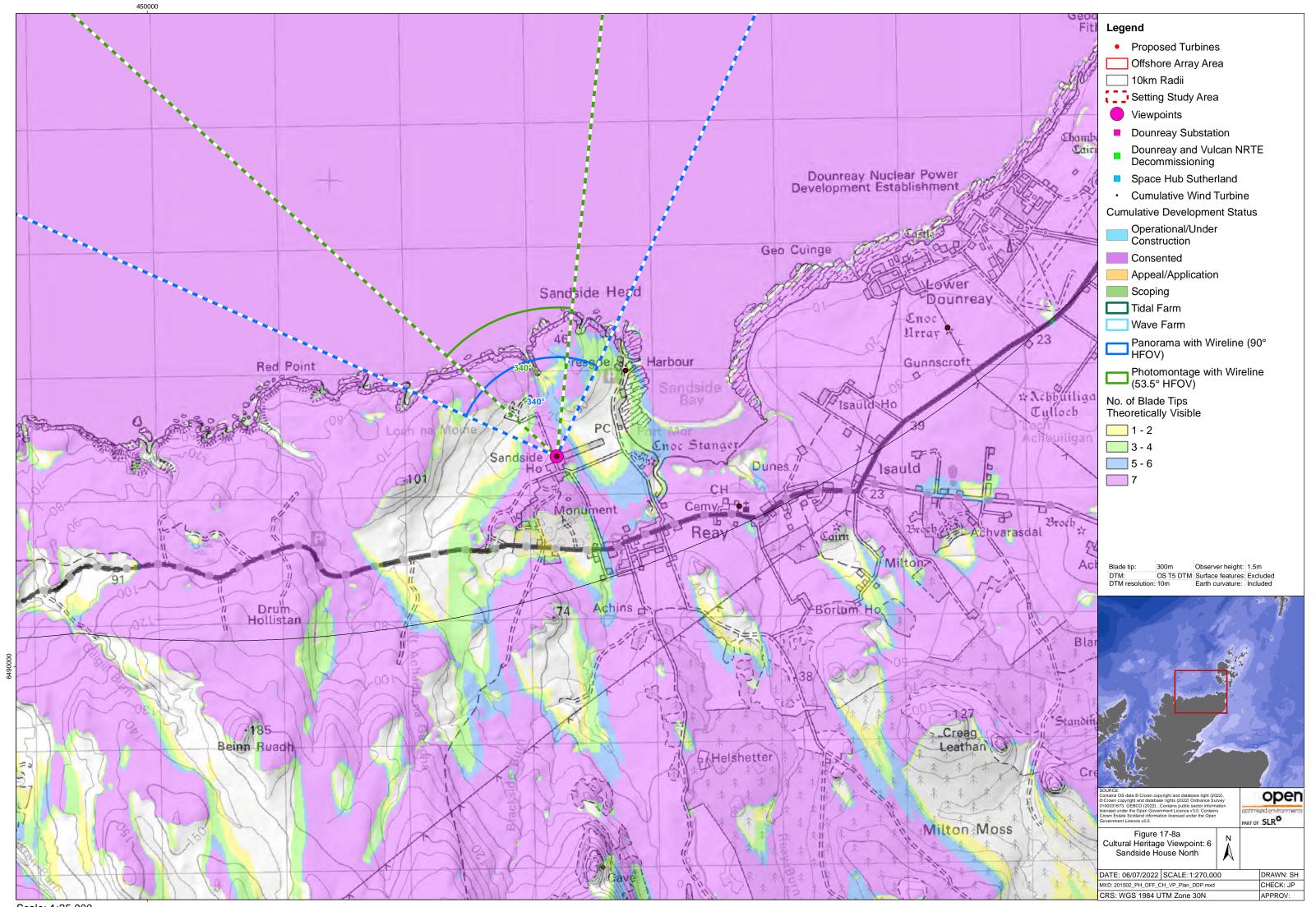
296685 E 964888 N 20.4 m AOD

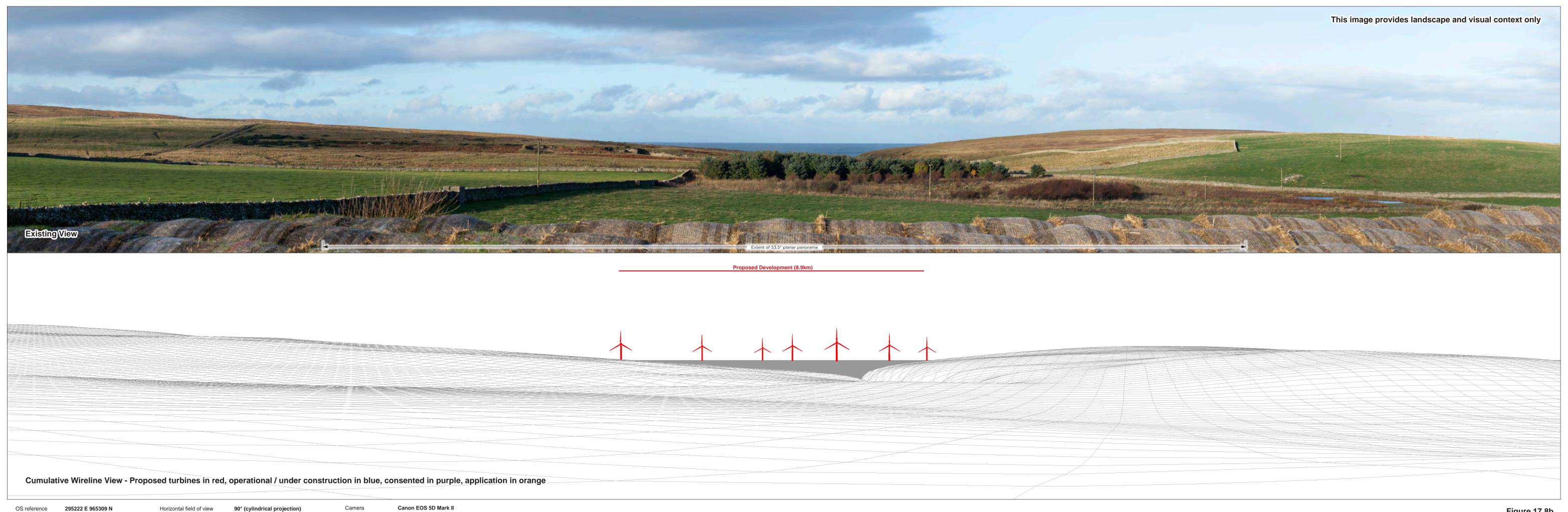
Horizontal field of view53.5° (planar projection)Principal distance812.5 mmPaper size841 x 297 mm (half A1)Correct printed image size820 x 260 mm

CameraCanon EOS 5D Mark IILensCanon EF 50mm f/1.4Camera height1.5 m AGLDate & time taken10/11/2021 13:40

Figure 17.7d Viewpoint 5: Reay Church Photomontage © Crown Copyright and database right (2022). Licence Number 0100031673.







OS reference Elevation 32.5 m AOD Direction of view 340° Nearest turbine 8,945 m

Principal distance

Paper size

90° (cylindrical projection) 522 mm 841 x 297 mm (half A1) Correct printed image size 820 x 130 mm

Camera Lens Camera height 1.5 m AGL Date & time taken 10/11/2021 09:50

Canon EOS 5D Mark II Canon EF 50mm f/1.4

- energy

-Wireline View-

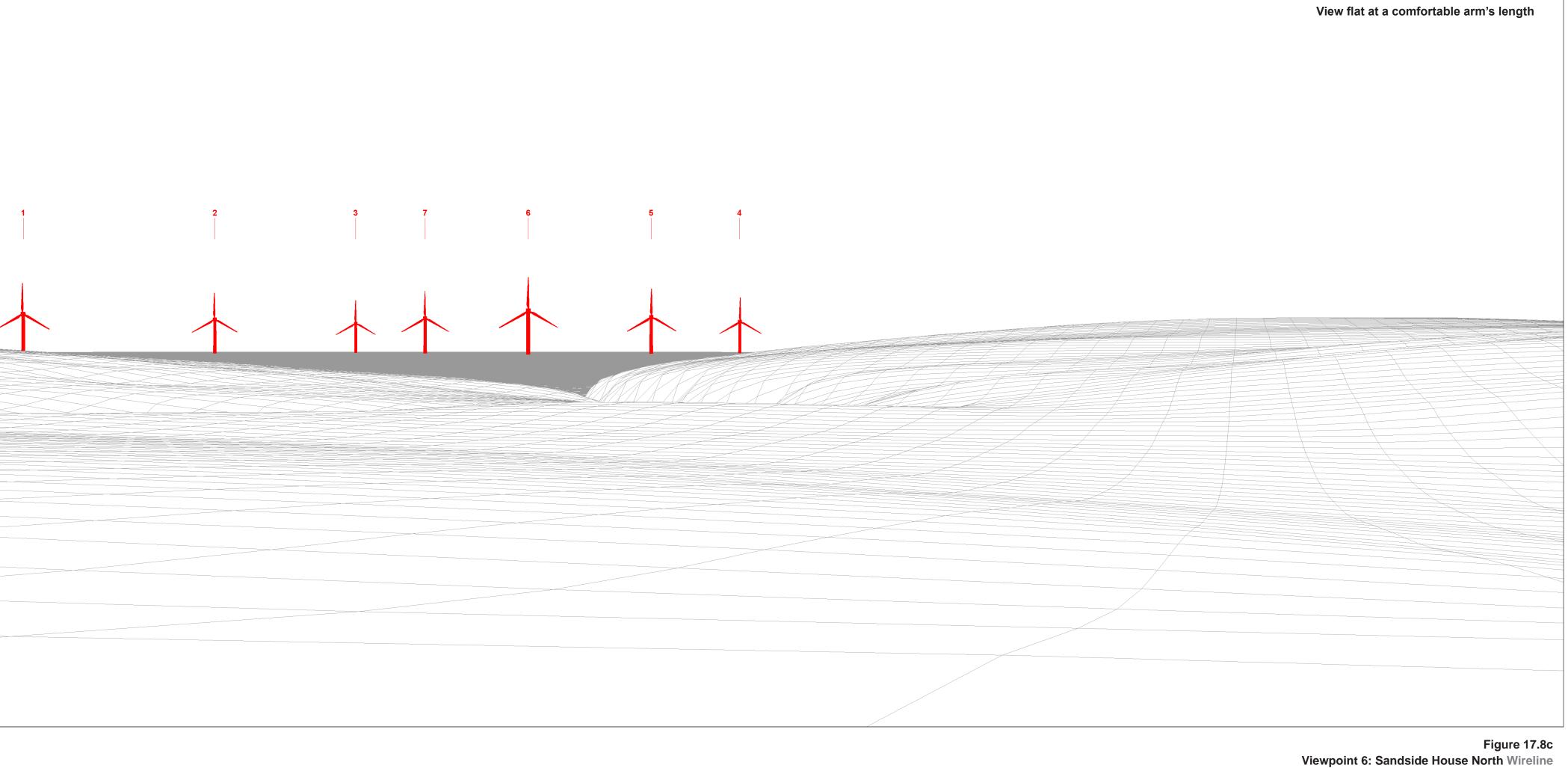
OS reference 295222 E 965309 N Elevation 32.5 m AOD Direction of view 340° Nearest turbine 8,945 m

Paper size

Horizontal field of view 53.5° (planar projection) Principal distance 812.5 mm 841 x 297 mm (half A1) Correct printed image size 820 x 260 mm

Camera Lens Camera height 1.5 m AGL

Canon EOS 5D Mark II Canon EF 50mm f/1.4 Date & time taken 10/11/2021 09:50





OS reference Elevation Direction of view 340° Nearest turbine 8,945 m

295222 E 965309 N 32.5 m AOD

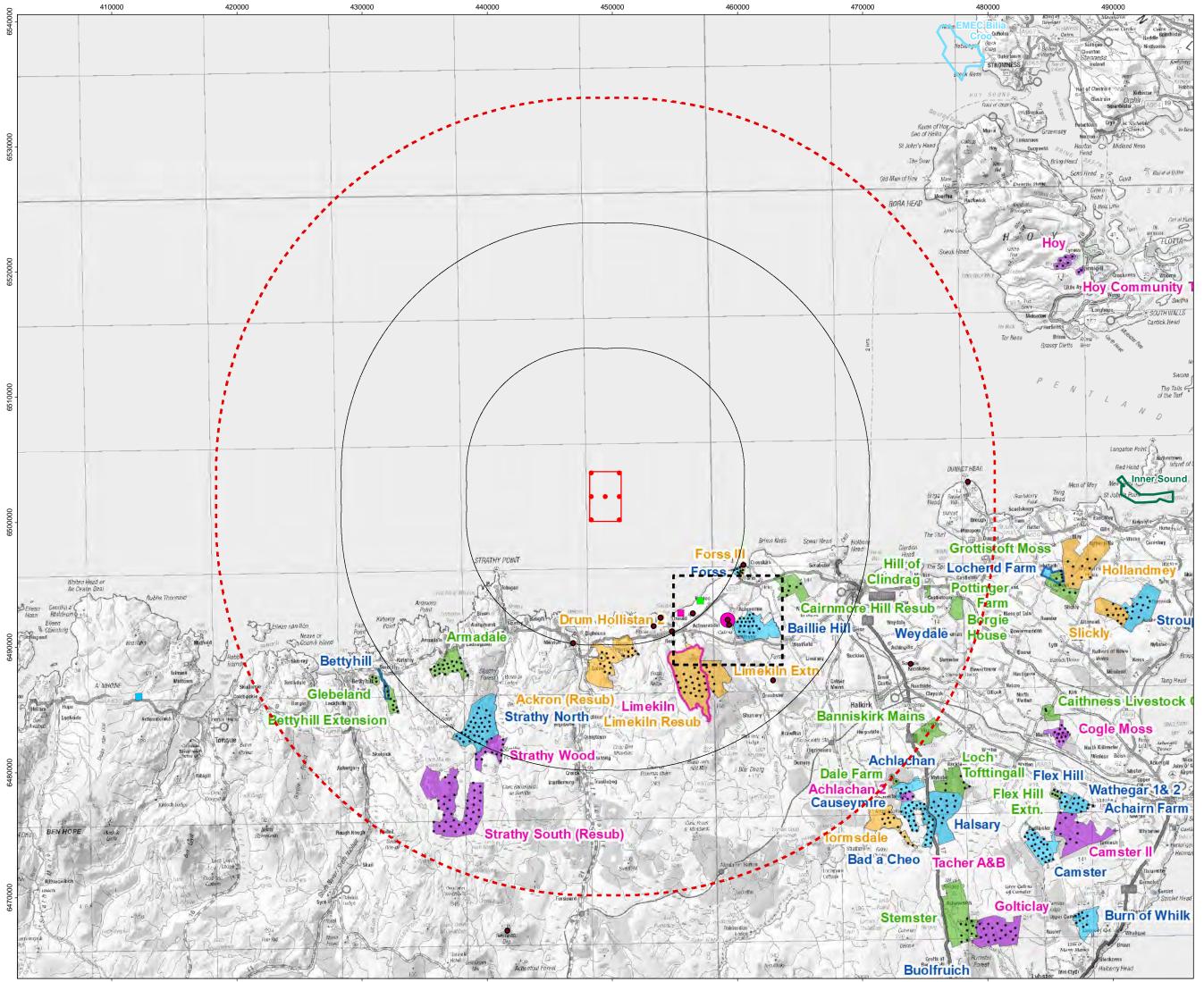
Horizontal field of view Principal distance Paper size Correct printed image size 820 x 260 mm

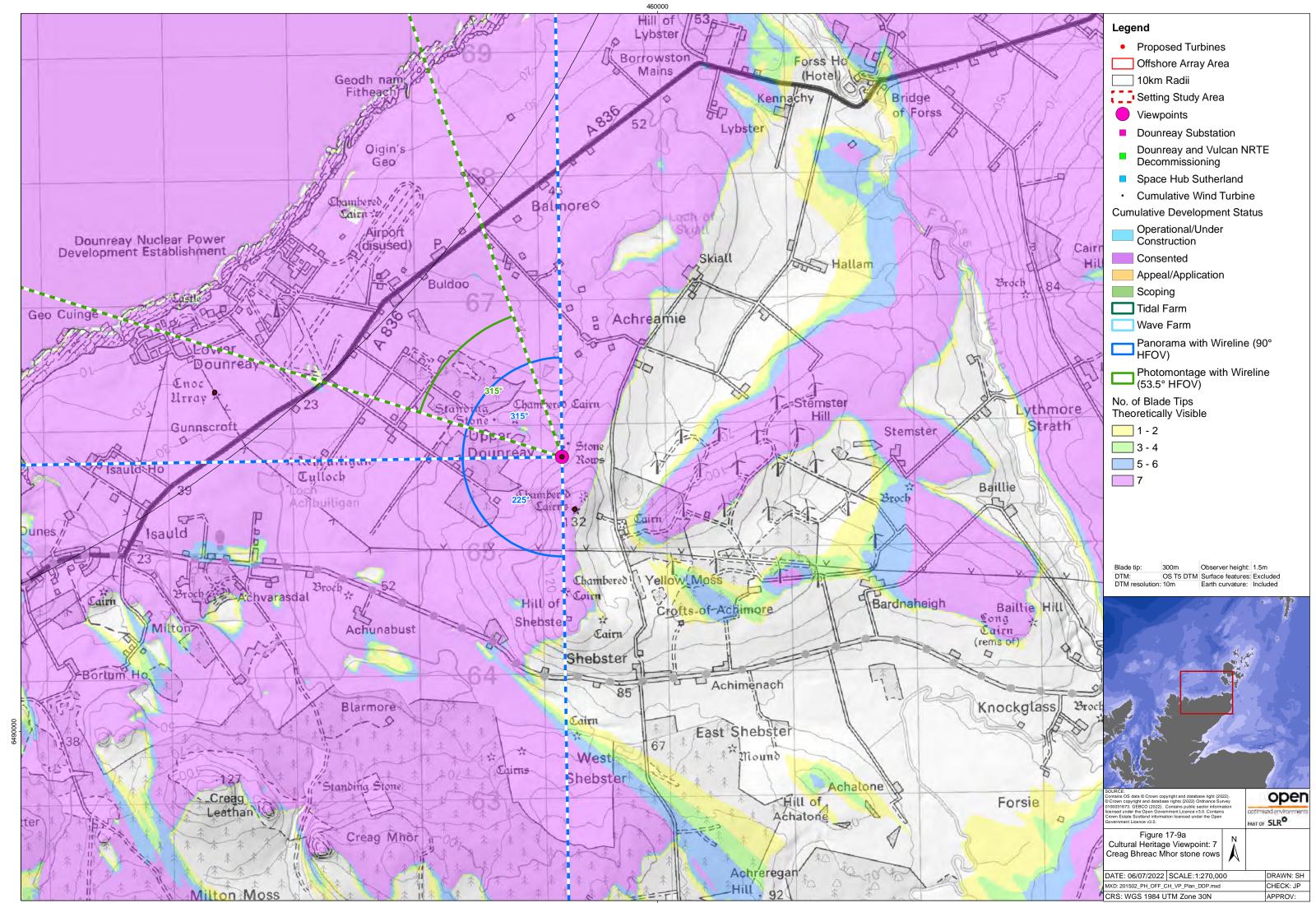
53.5° (planar projection) 812.5 mm 841 x 297 mm (half A1)

CameraCanon EOS 5D Mark IILensCanon EF 50mm f/1.4Camera height1.5 m AGLDate & time taken10/11/2021 09:50



Figure 17.8d Viewpoint 6: Sandside House North Photomontage © Crown Copyright and database right (2022). Licence Number 0100031673.







OS reference Elevation Direction of view 225° Nearest turbine 11,798 m

301168 E 965739 N 82.2 m AOD

Horizontal field of view Principal distance Paper size Correct printed image size 820 x 130 mm

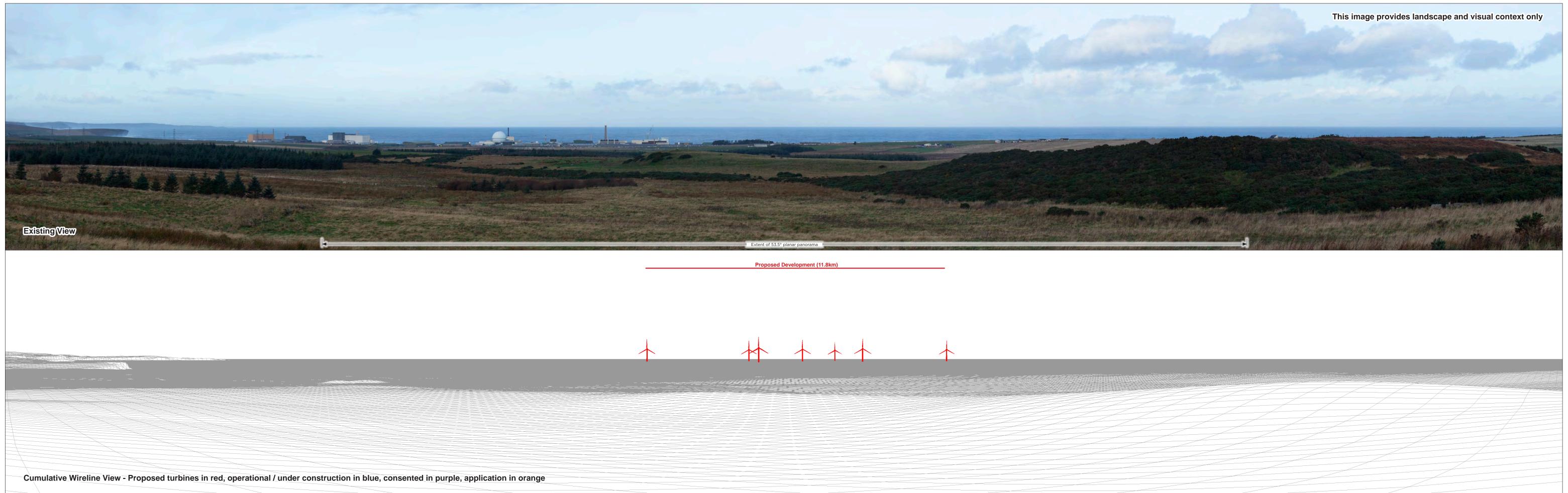
90° (cylindrical projection) 522 mm 841 x 297 mm (half A1)

Camera Lens
 Camera height
 1.5 m AGL

 Date & time taken
 13/04/2021 14:25

Canon EOS 5D Mark II Canon EF 50mm f/1.4

Figure 17.9b Viewpoint 7: Creag Bhreac Mhor stone rows Panorama with Cumulative Wireline (view 1 of 2)



OS reference **301168 E 965739 N** Elevation 82.2 m AOD Direction of view 315° Nearest turbine 11,798 m

Principal distance Paper size

Horizontal field of view 90° (cylindrical projection) 522 mm 841 x 297 mm (half A1) Correct printed image size 820 x 130 mm

Camera Lens Camera height 1.5 m AGL Date & time taken 13/04/2021 14:25

Canon EOS 5D Mark II Canon EF 50mm f/1.4

Figure 17.9c Viewpoint 7: Creag Bhreac Mhor stone rows Panorama with Cumulative Wireline (view 2 of 2)

© Crown Copyright and database right (2022). Licence Number 0100031673.

OS reference Elevation	301168 E 965739 N 82.2 m AOD	Horizontal field of view Principal distance	53.5° (planar projection) 812.5 mm	Camera Lens	Canon EOS 5D Mark II Canon EF 50mm f/1.4	
Wireline	View					

Elevation Direction of view 315° Nearest turbine 11,798 m

Paper size

812.5 mm 841 x 297 mm (half A1) Correct printed image size 820 x 260 mm

Camera height 1.5 m AGL Date & time taken 13/04/2021 14:25

Canon EF 50mm f/1.4

1 2 6 7 3 5 4 1 1 1 1 1 1 1 1

View flat at a comfortable arm's length

Figure 17.9d Viewpoint 7: Creag Bhreac Mhor stone rows Wireline

un finden hauss



Elevation Direction of view 315°

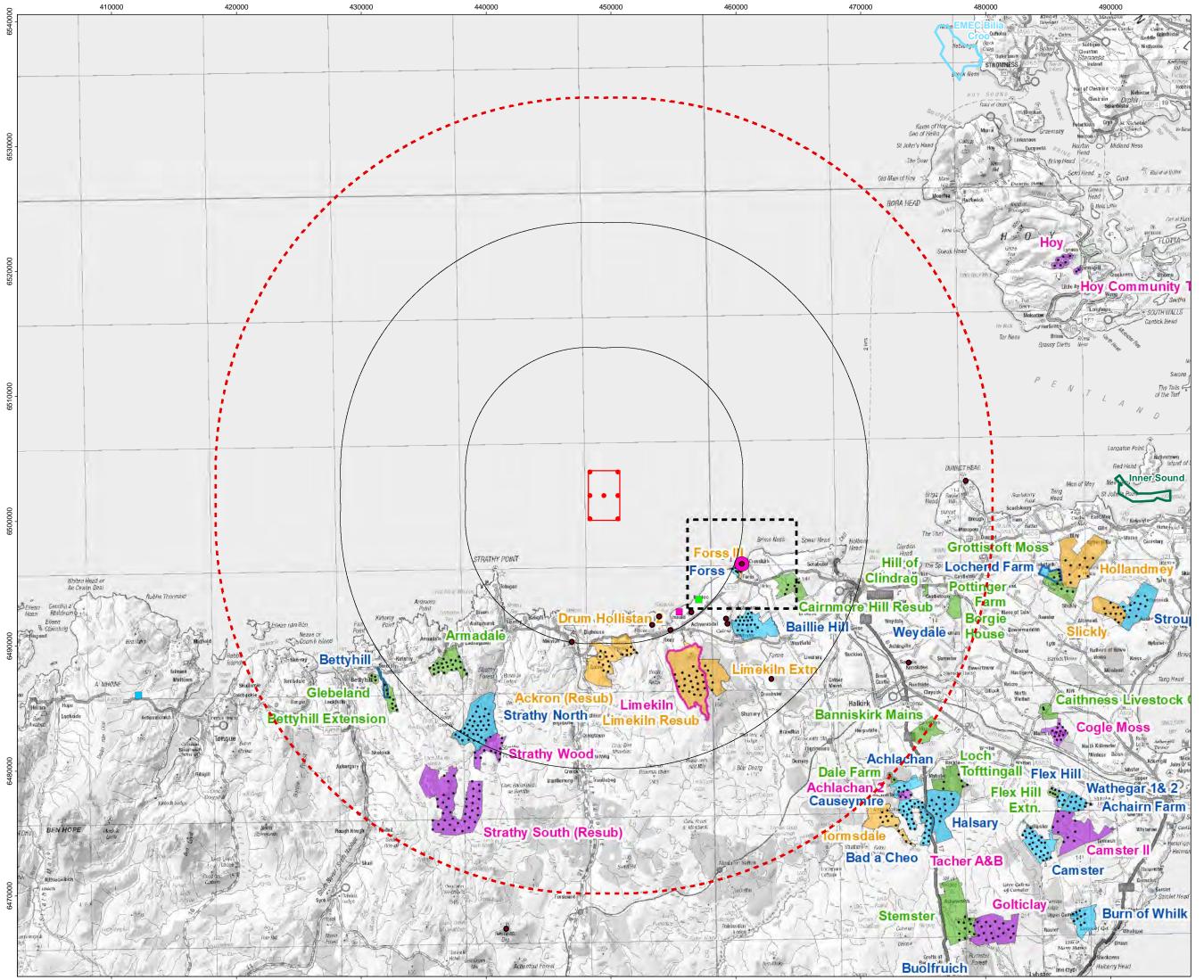
82.2 m AOD Nearest turbine 11,798 m

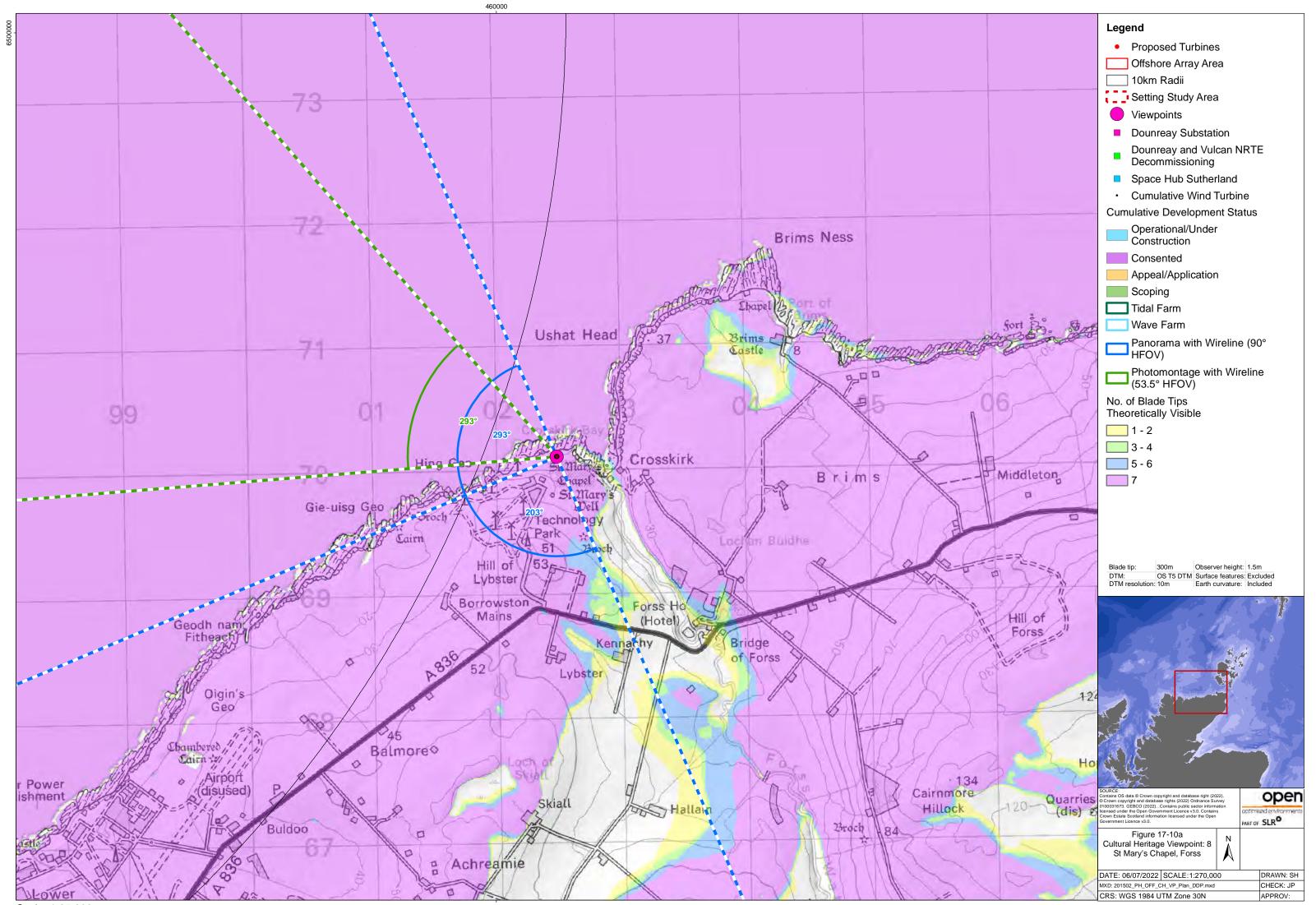
Horizontal field of view Principal distance Paper size

53.5° (planar projection) 812.5 mm 841 x 297 mm (half A1) Correct printed image size 820 x 260 mm

CameraCanon EOS 5D Mark IILensCanon EF 50mm f/1.4Camera height1.5 m AGLDate & time taken13/04/2021 14:25

Figure 17.9e Viewpoint 7: Creag Bhreac Mhor stone rows Photomontage © Crown Copyright and database right (2022). Licence Number 0100031673.







OS reference Elevation 15.3 m AOD Direction of view 203° Nearest turbine 10,564 m

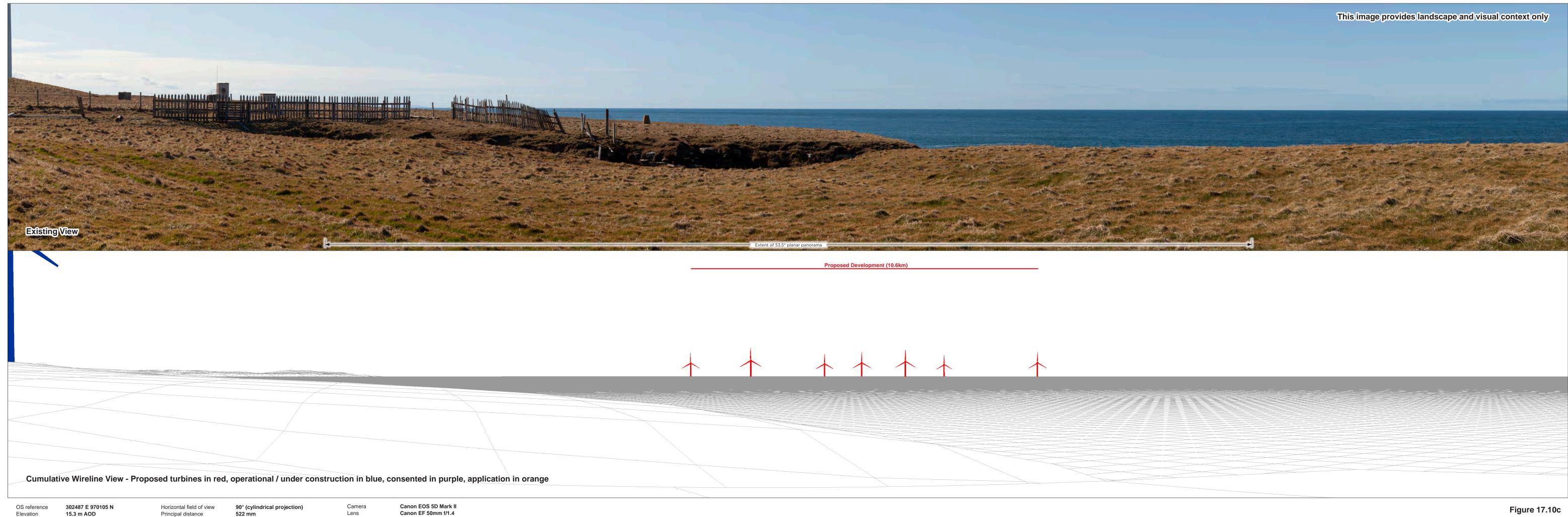
Principal distance Paper size

Horizontal field of view 90° (cylindrical projection) 522 mm 841 x 297 mm (half A1) Correct printed image size 820 x 130 mm

Camera Lens Camera height 1.5 m AGL Date & time taken 13/04/2021 14:25

Canon EOS 5D Mark II Canon EF 50mm f/1.4

Figure 17.10b Viewpoint 8: St Mary's Chapel, Forss Panorama with Cumulative Wireline (view 1 of 2) © Crown Copyright and database right (2022). Licence Number 0100031673.



Elevation Direction of view 293° Nearest turbine 10,564 m Paper size

522 mm 841 x 297 mm (half A1) Correct printed image size 820 x 130 mm

 Camera height
 1.5 m AGL

 Date & time taken
 13/04/2021 14:25

Figure 17.10c Viewpoint 8: St Mary's Chapel, Forss Panorama with Cumulative Wireline (view 2 of 2)

© Crown Copyright and database right (2022). Licence Number 0100031673.

Wireline View

Elevation 15.3 m AOD Direction of view 293° Nearest turbine 10,564 m

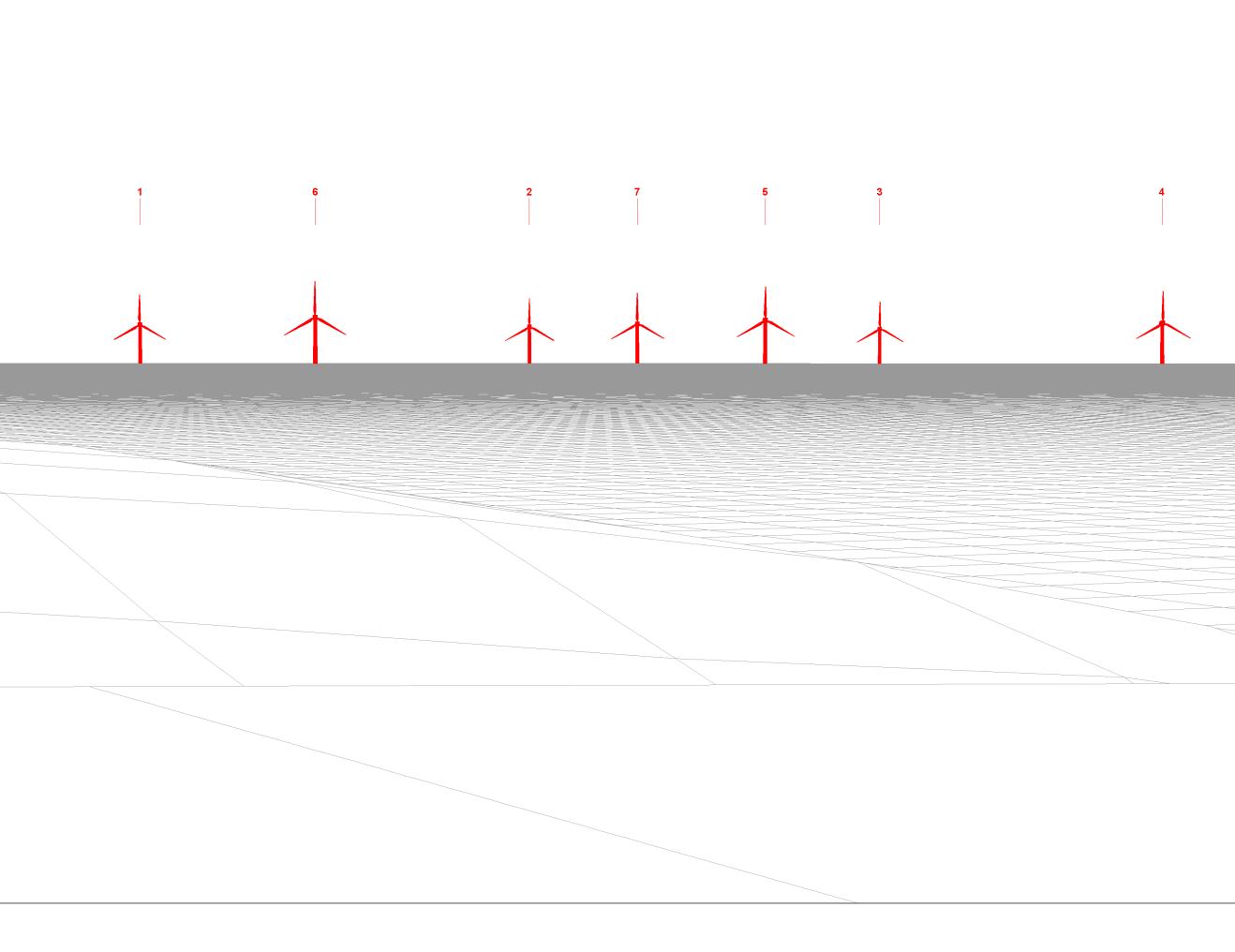
OS reference **302487 E 970105 N**

Principal distance Paper size Correct printed image size 820 x 260 mm

Horizontal field of view 53.5° (planar projection) 812.5 mm 841 x 297 mm (half A1)

Camera Lens Camera height 1.5 m AGL Date & time taken 13/04/2021 14:25

Canon EOS 5D Mark II Canon EF 50mm f/1.4



View flat at a comfortable arm's length

Figure 17.10d Viewpoint 8: St Mary's Chapel, Forss Wireline



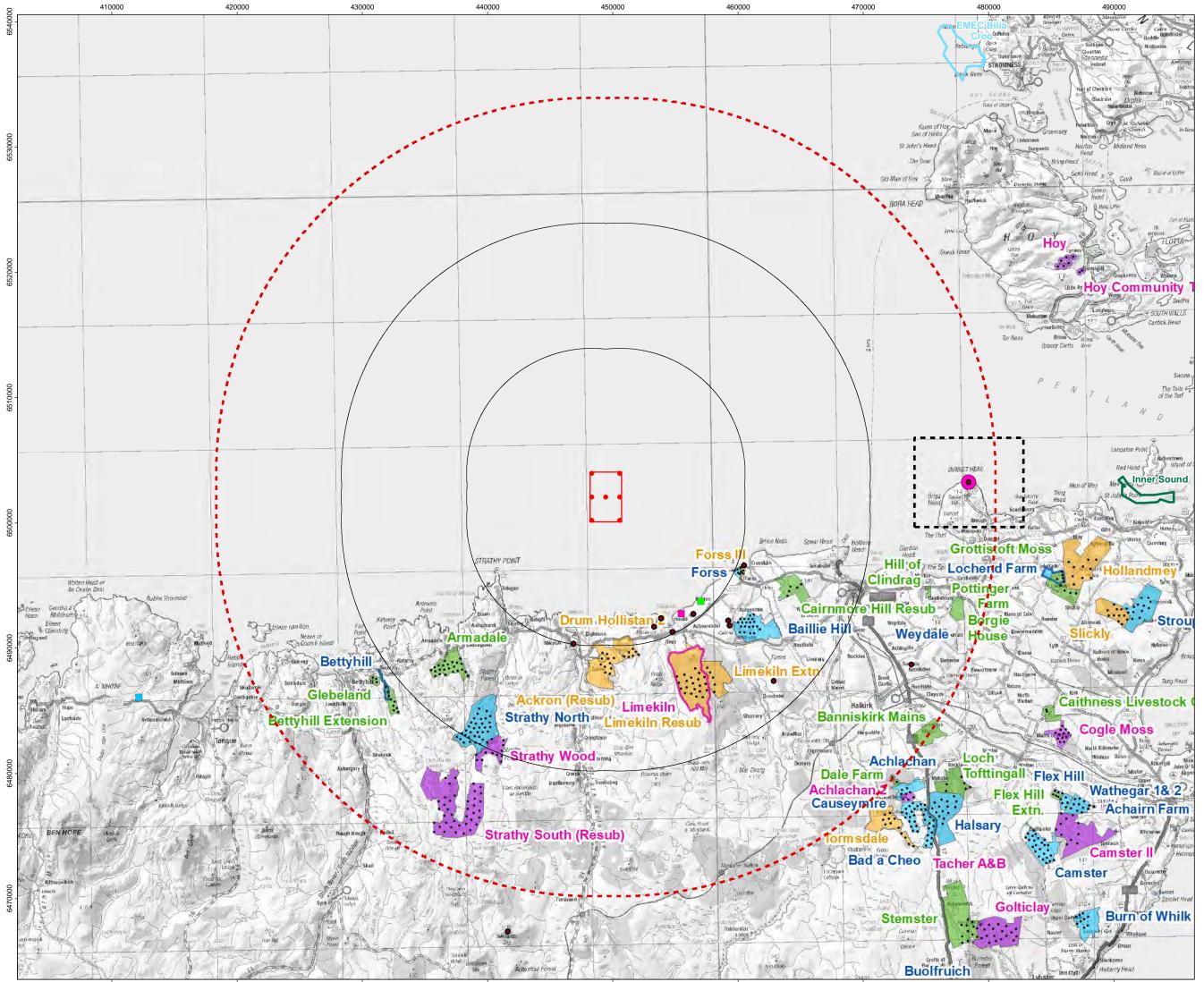
OS reference 302487 Elevation 15.3 m Direction of view 293° Nearest turbine 10,564 m

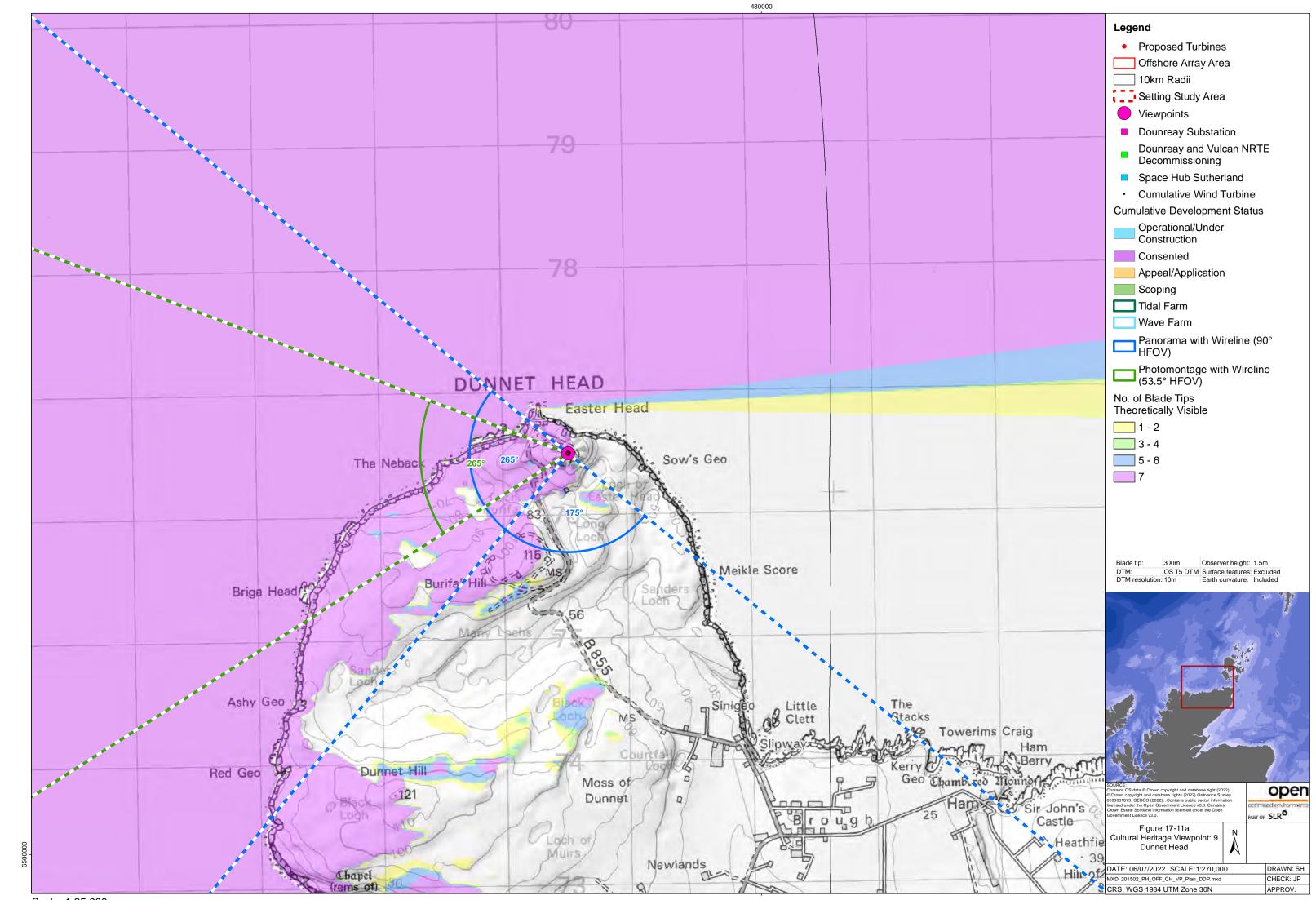
302487 E 970105 N 15.3 m AOD

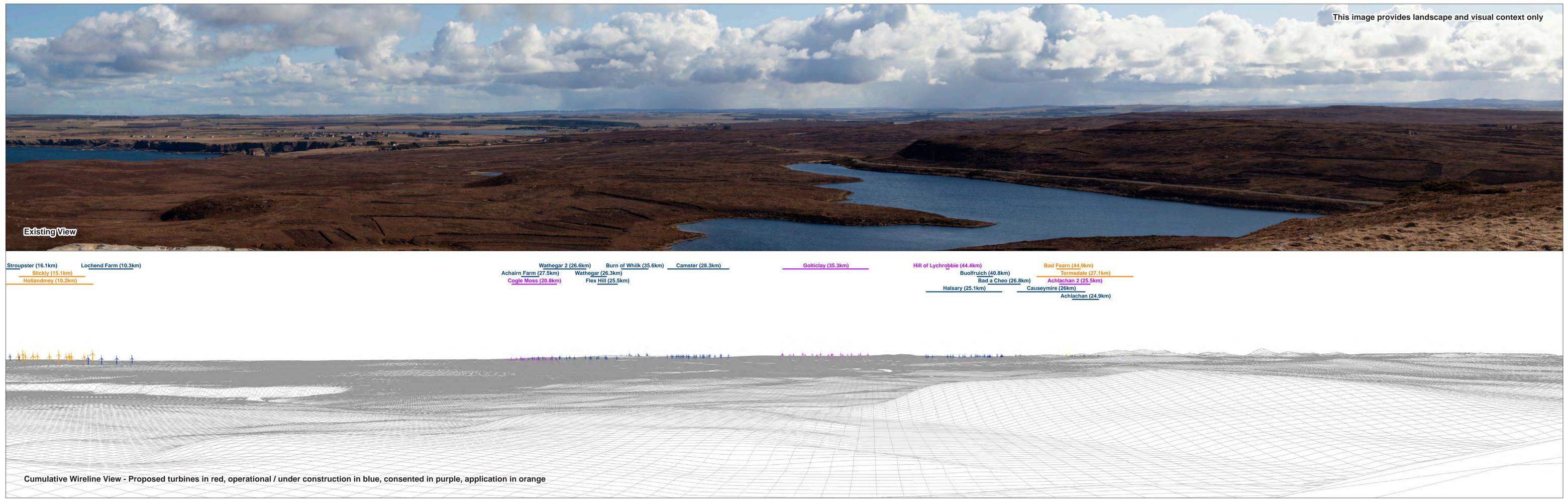
Horizontal field of view53.5° (planar projection)Principal distance812.5 mmPaper size841 x 297 mm (half A1)Correct printed image size820 x 260 mm

CameraCanon EOS 5D Mark IILensCanon EF 50mm f/1.4Camera height1.5 m AGLDate & time taken13/04/2021 14:25

Figure 17.10e Viewpoint 8: St Mary's Chapel, Forss Photomontage © Crown Copyright and database right (2022). Licence Number 0100031673.







320532 E 976496 N OS reference Elevation 125.6 m AOD Direction of view 175° Nearest turbine 27,884 m

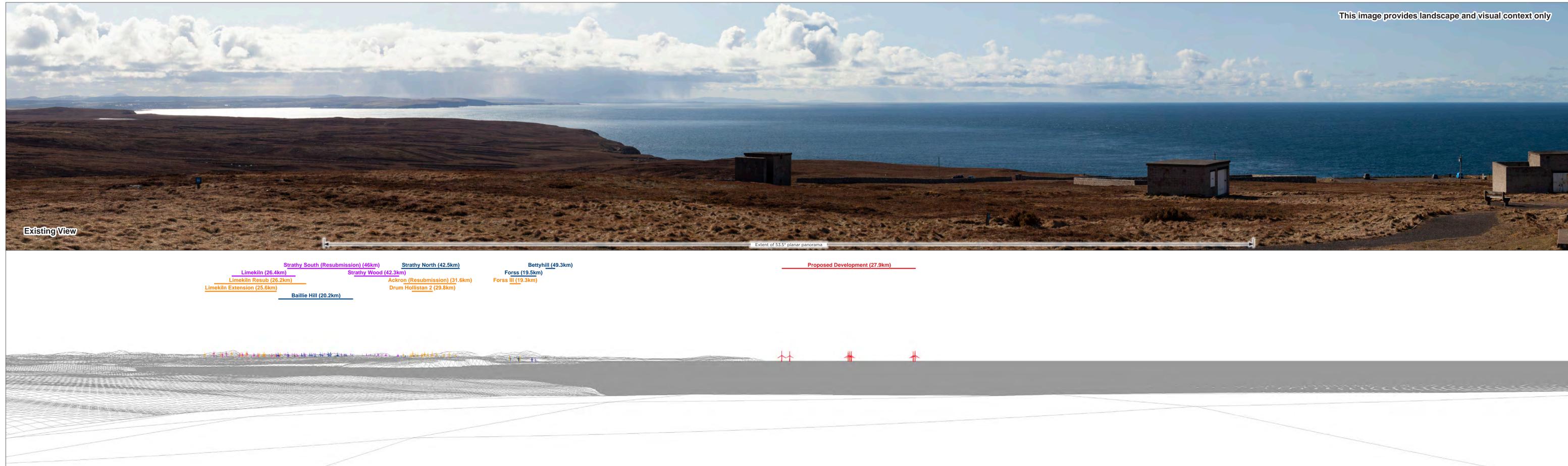
Principal distance Paper size

Horizontal field of view 90° (cylindrical projection) 522 mm 841 x 297 mm (half A1) Correct printed image size 820 x 130 mm

Camera Lens Camera height 1.5 m AGL Date & time taken 12/04/2021 14:55

Canon EOS 5D Mark II Canon EF 50mm f/1.4

Figure 17.11b Viewpoint 9: Dunnet Head Panorama with Cumulative Wireline (view 1 of 2)



Cumulative Wireline View - Proposed turbines in red, operational / under construction in blue, consented in purple, application in orange

OS reference Elevation Direction of view 265° Nearest turbine 27,884 m

320532 E 976496 N 125.6 m AOD

Horizontal field of view Principal distance Paper size Correct printed image size 820 x 130 mm

90° (cylindrical projection) 522 mm 841 x 297 mm (half A1)

Camera Lens Camera height 1.5 m AGL Date & time taken 12/04/2021 14:55

Canon EOS 5D Mark II Canon EF 50mm f/1.4

Figure 17.11c Viewpoint 9: Dunnet Head Panorama with Cumulative Wireline (view 2 of 2) © Crown Copyright and database right (2022). Licence Number 0100031673.

Wireline View

Elevation 125.6 m AOD Direction of view 265° Nearest turbine 27,884 m

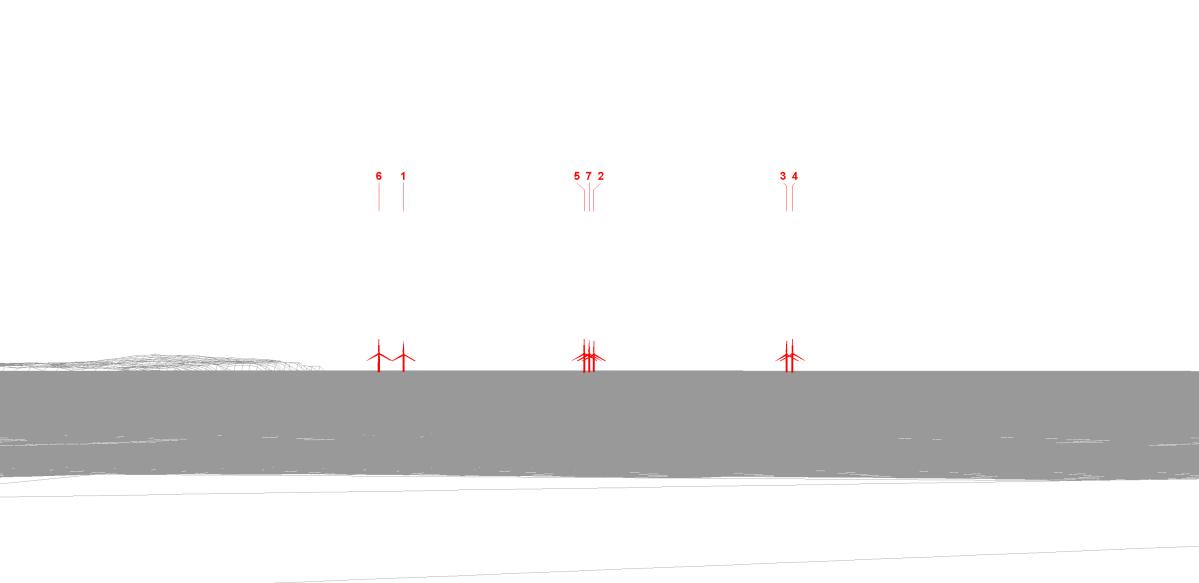
OS reference 320532 E 976496 N

Principal distance Paper size Correct printed image size 820 x 260 mm

Horizontal field of view 53.5° (planar projection) 812.5 mm 841 x 297 mm (half A1) Camera Lens
 Camera height
 1.5 m AGL

 Date & time taken
 12/04/2021 14:55

Canon EOS 5D Mark II Canon EF 50mm f/1.4



View flat at a comfortable arm's length

Figure 17.11d Viewpoint 9: Dunnet Head Wireline



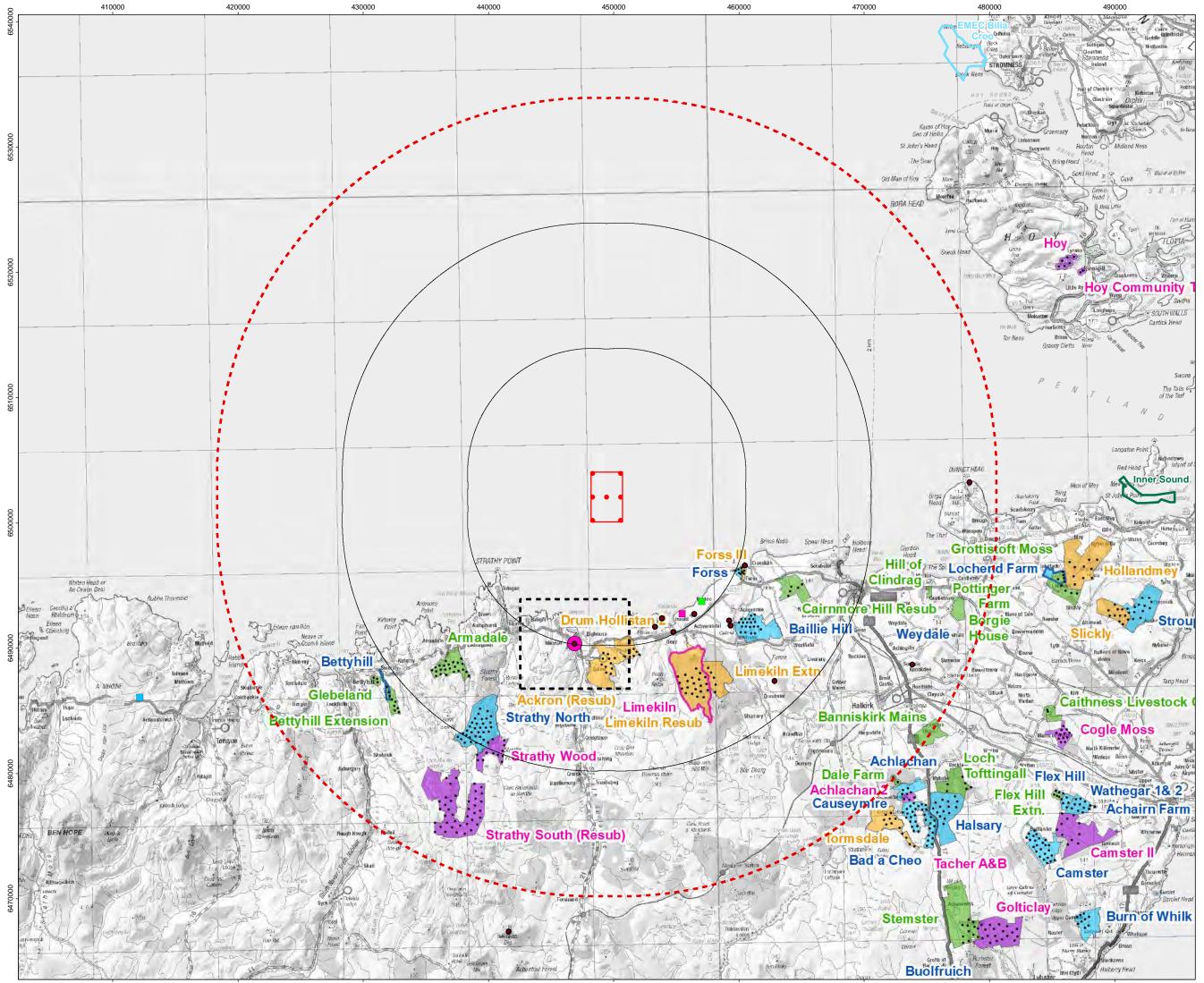
OS reference Elevation125.6 mDirection of view265°

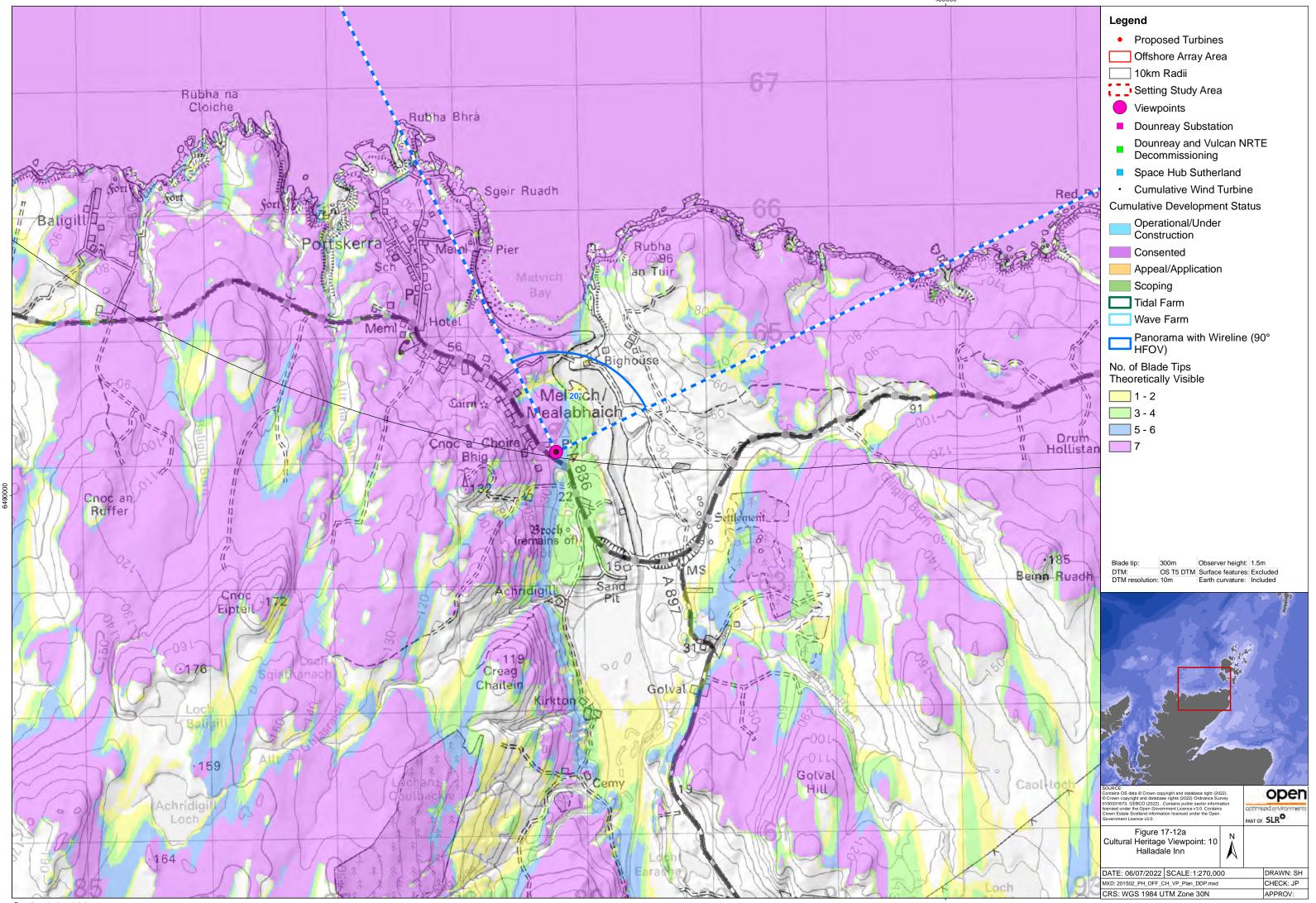
320532 E 976496 N 125.6 m AOD Nearest turbine 27,884 m

Horizontal field of view53.5° (planar projection)Principal distance812.5 mmPaper size841 x 297 mm (half A1)Correct printed image size820 x 260 mm

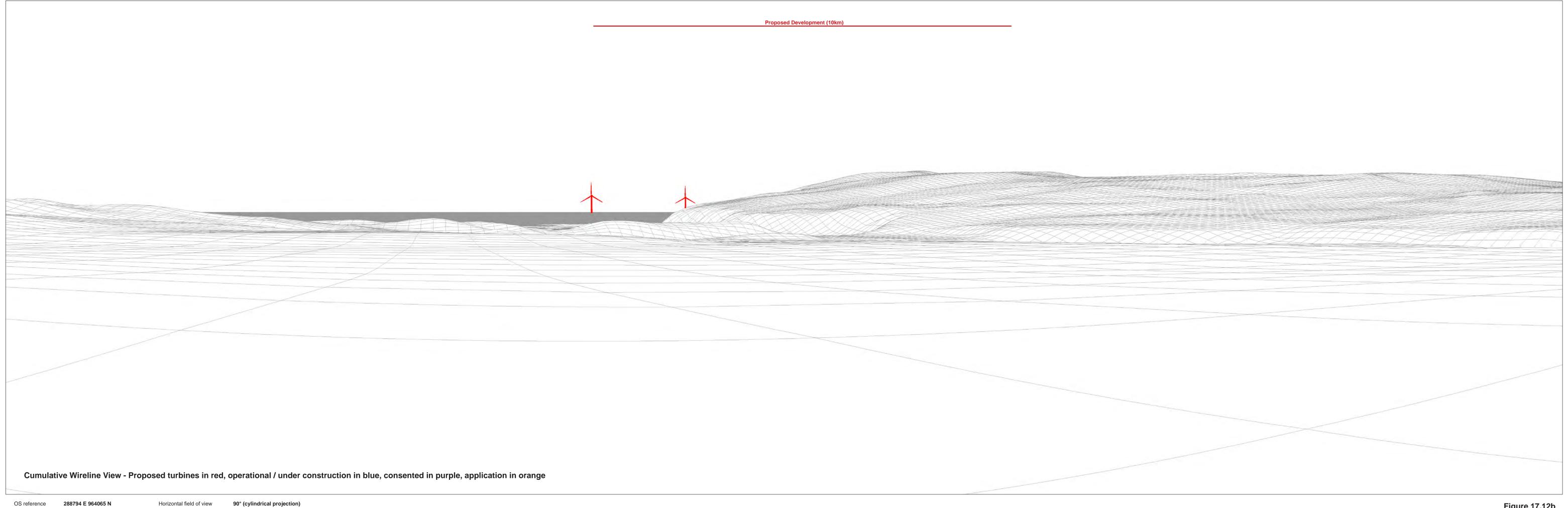
CameraCanon EOS 5D Mark IILensCanon EF 50mm f/1.4Camera height1.5 m AGLDate & time taken12/04/2021 14:55

Figure 17.11e Viewpoint 9: Dunnet Head Photomontage © Crown Copyright and database right (2022). Licence Number 0100031673.





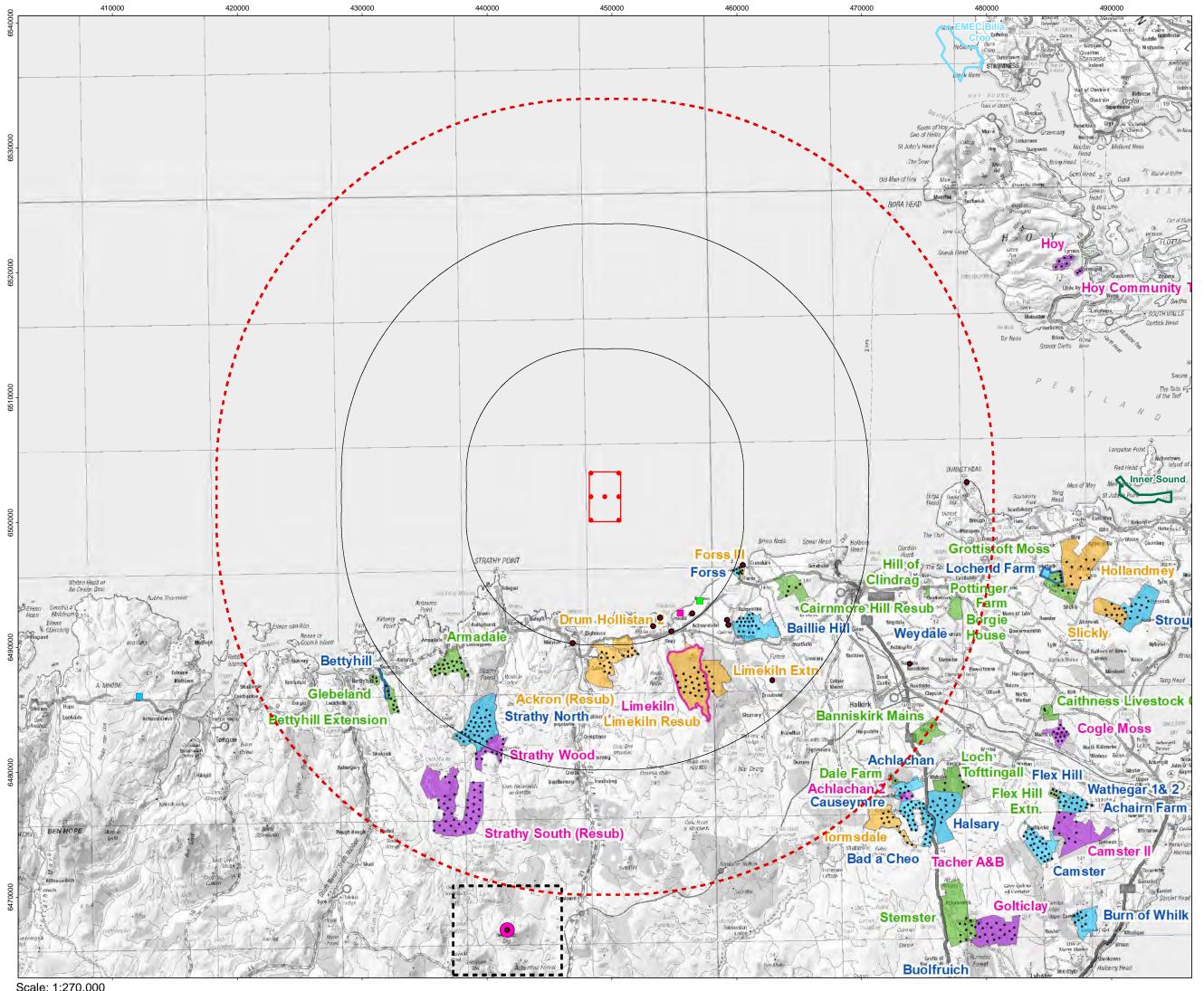


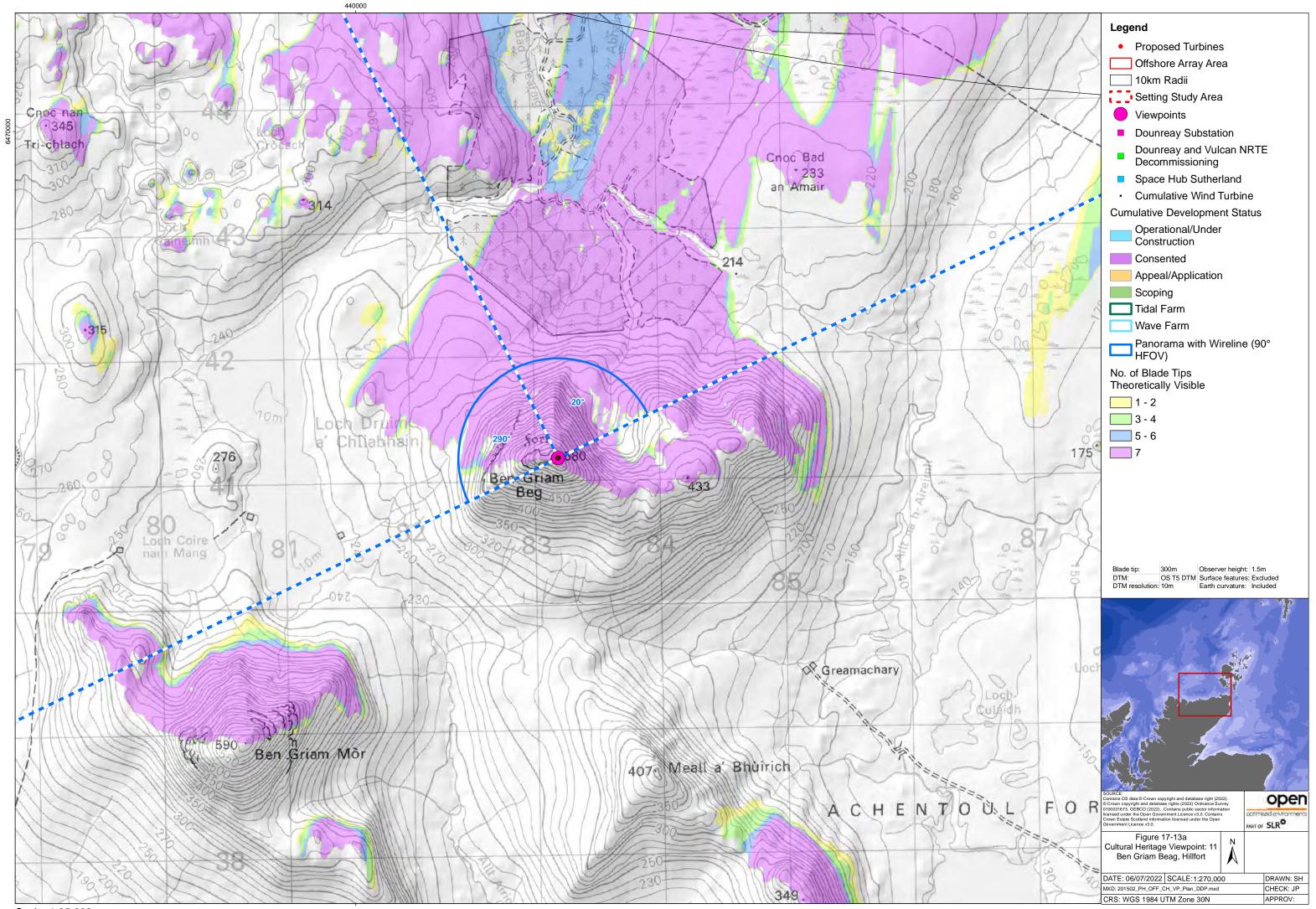


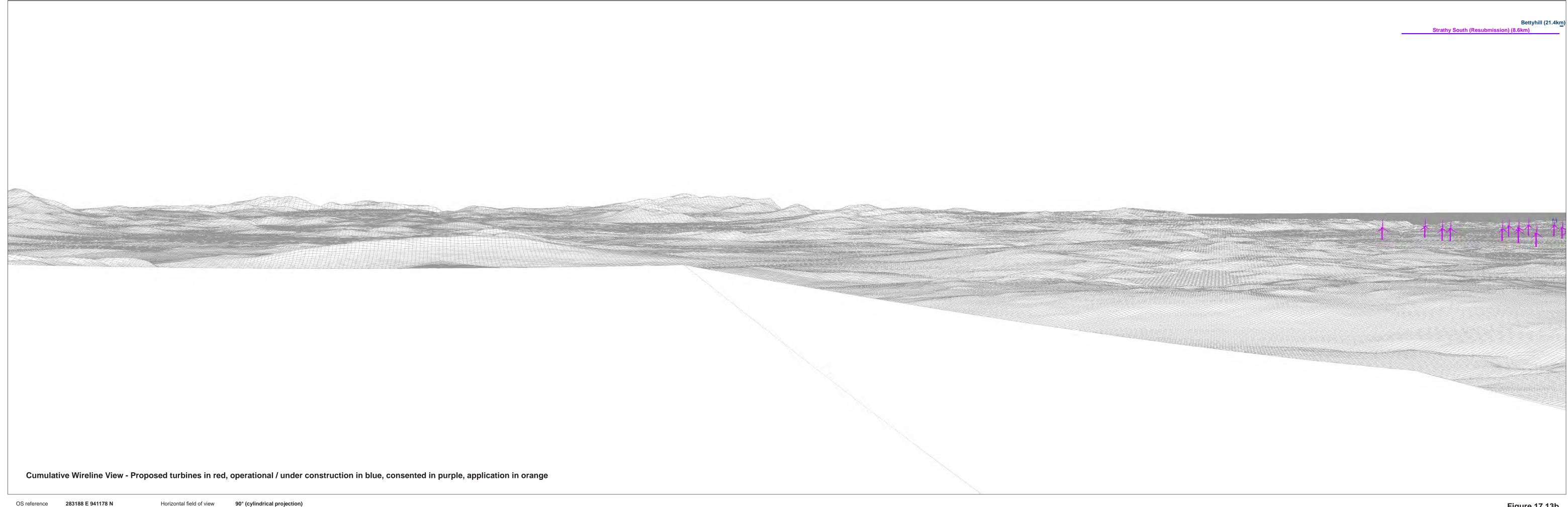
Elevation 26.1 m AOD Direction of view 60° Nearest turbine 9,960 m

Principal distance522 mmPaper size841 x 297 mm (half A1)Correct printed image size820 x 260 mm

Figure 17.12b Viewpoint 10: Halladale Inn Cumulative Wireline







OS reference Elevation Direction of view 290° Nearest turbine 33,500 m

549.7 m AOD

Principal distance Paper size

90° (cylindrical projection) 522 mm 841 x 297 mm (half A1) Correct printed image size 820 x 260 mm

Figure 17.13b Viewpoint 11: Ben Griam Beg, Hillfort Cumulative Wireline (view 1 of 2) © Crown Copyright and database right (2022). Licence Number 0100031673. Strathy South (Resubmission) (8.6km)

Strathy North (15.2km)

Strathy Wood (13.6km)

Cumulative Wireline View - Proposed turbines in red, operational / under construction in blue, consented in purple, application in orange

283188 E 941178 N OS reference Elevation Direction of view 20° Nearest turbine 33,500 m

549.7 m AOD

Horizontal field of view Principal distance Paper size

90° (cylindrical projection) 522 mm 841 x 297 mm (half A1) Correct printed image size 820 x 260 mm

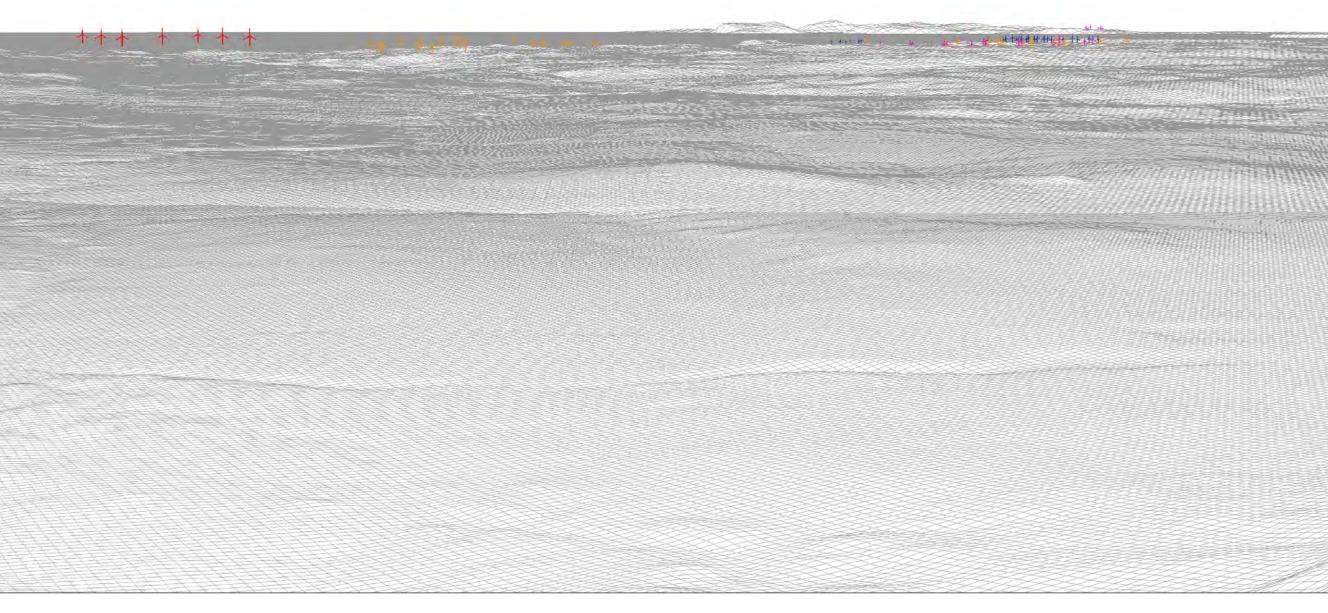
osed Development (33.5km)

Drum Hollistan 2 (23.9km)

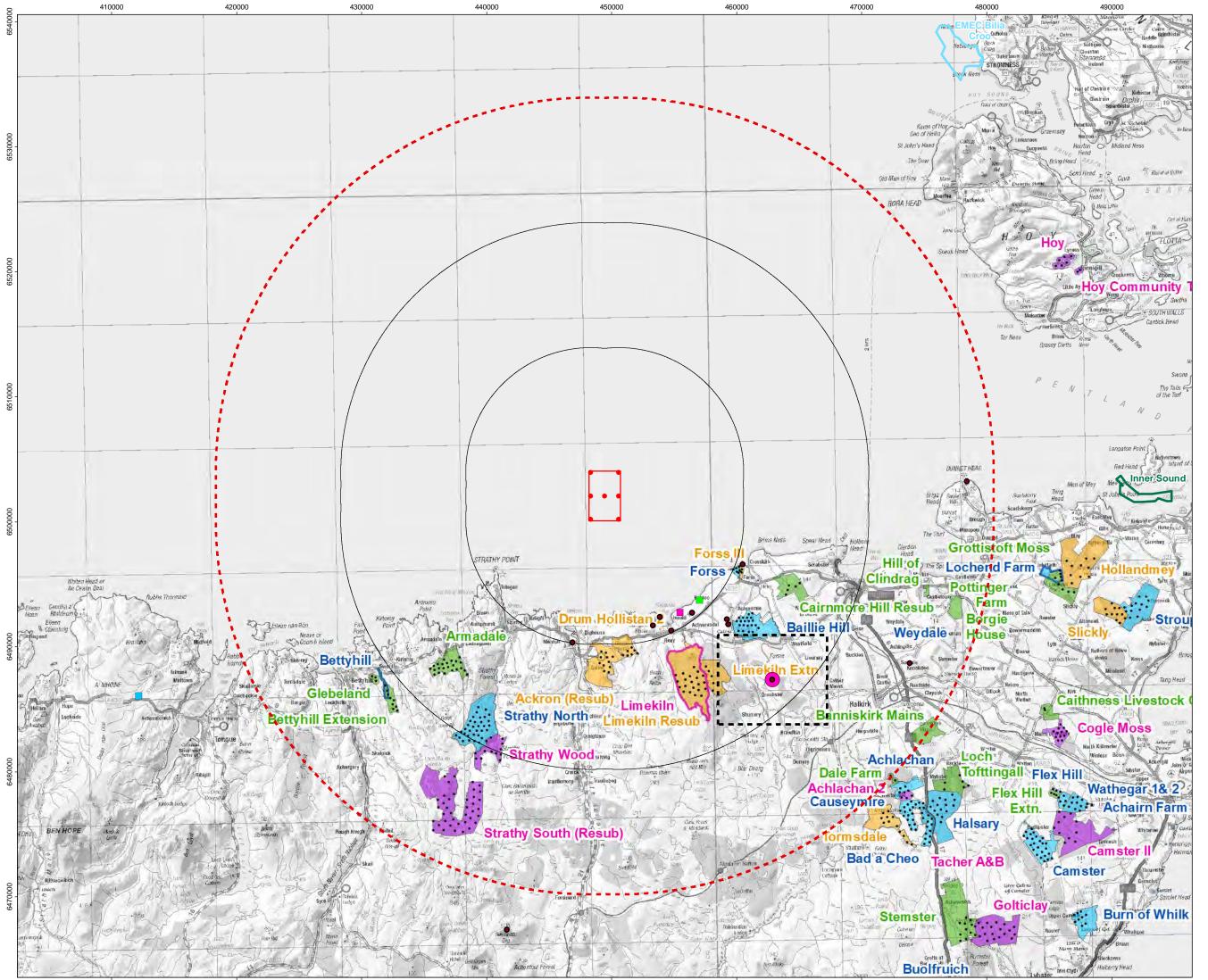
Ackron (Resubmission) (22.2km)

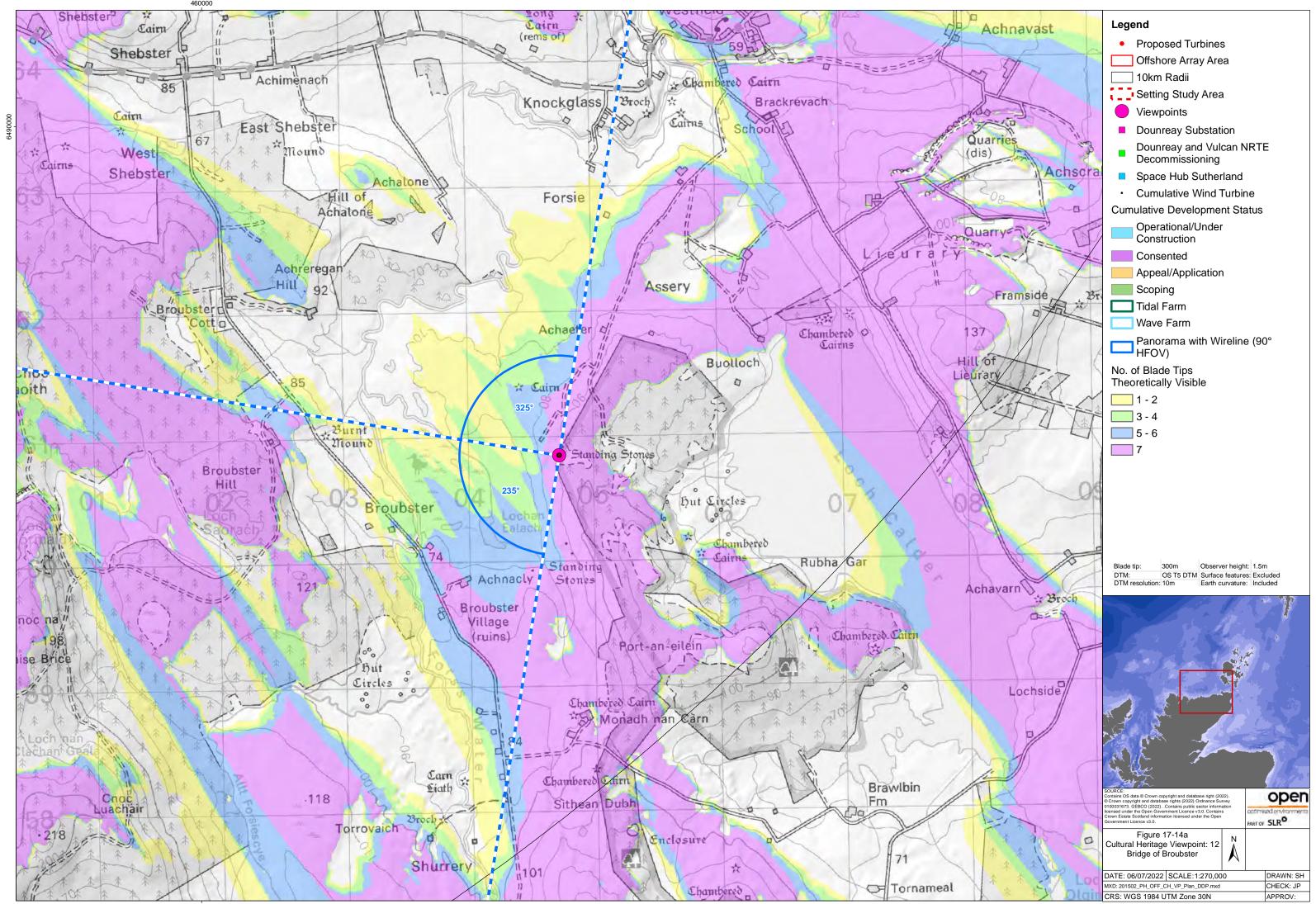
Hoy Community Turbine (69.8km) Hoy<u> (69</u>km) Fors<u>s (34.1</u>km) Baillie Hill (30.3km) Forss III (34.3km)

nekiln Extension (25.4km)



Hollandmey (53.2km Lochend Farm (52.6km) Stroupster (55.8kn Slickly (54.3km





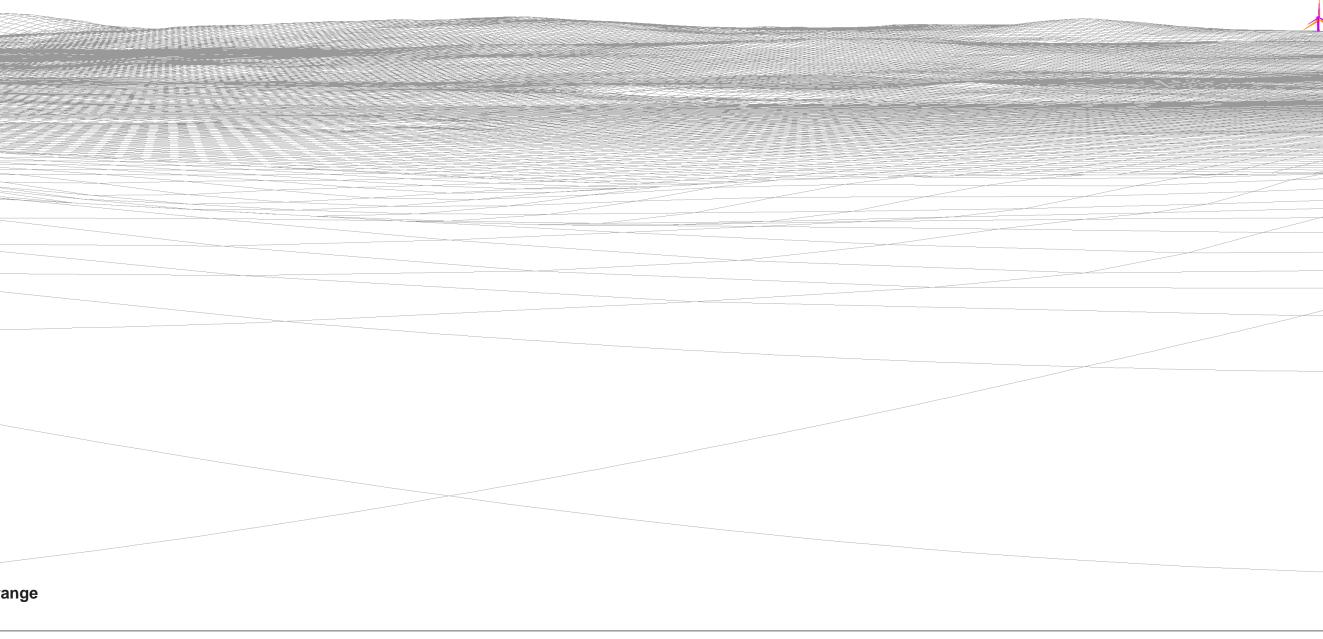
Cumulative Wireline View - Proposed turbines in red, operational / under construction in blue, consented in purple, application in orange

OS reference **304728 E 960846 N** Elevation Direction of view 235° Nearest turbine 17,783 m

89.6 m AOD

Horizontal field of view 90° (cylindrical projection) 522 mm 841 x 297 mm (half A1) Principal distance Paper size841 x 297 mm (hCorrect printed image size820 x 260 mm

Strathy South (Resubmission) (24.9km)



Linekin (tem) Linekin (tem) Linekin (tem) Linekin Extension (4.7km)			
Limekiln Resub (5.4km)		Ackron (R	esubmission) (12.9km)
	 Limekiln Pesub (5.4km)	<u>(6km)</u>	
	Liniekiln Extension (4.	7km)	
	 /		
Figure 17.14b			Figure 17 1/h

Figure 17.14b Viewpoint 12: Bridge of Broubster Cumulative Wireline (view 1 of 2) Ackron (Resubmission) (12.9km) Drum Hollistan 2 (11km) Limekiln Resub (5.4km) Limekiln Extension (4.7km)

		-		
~				
umulative Wireline View - Propose	ed turbines in red, operational / ur	oder construction in blue	consented in purple, application in	orange
umulative Wireline View - Propose	ed turbines in red, operational / ur	nder construction in blue, o	consented in purple, application in	orange
umulative Wireline View - Propose	ed turbines in red, operational / ur	nder construction in blue, o	consented in purple, application in	orange

304728 E 960846 N OS reference Elevation 89.6 m AOD Direction of view 325° Nearest turbine 17,783 m

Horizontal field of view Principal distance Paper size

90° (cylindrical projection) 522 mm 841 x 297 mm (half A1) Correct printed image size 820 x 260 mm

Baillie Hill (4.1km)

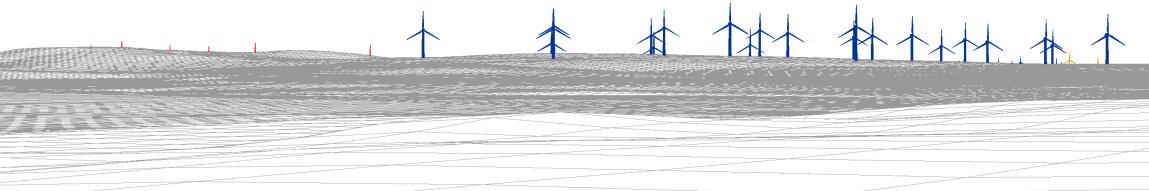
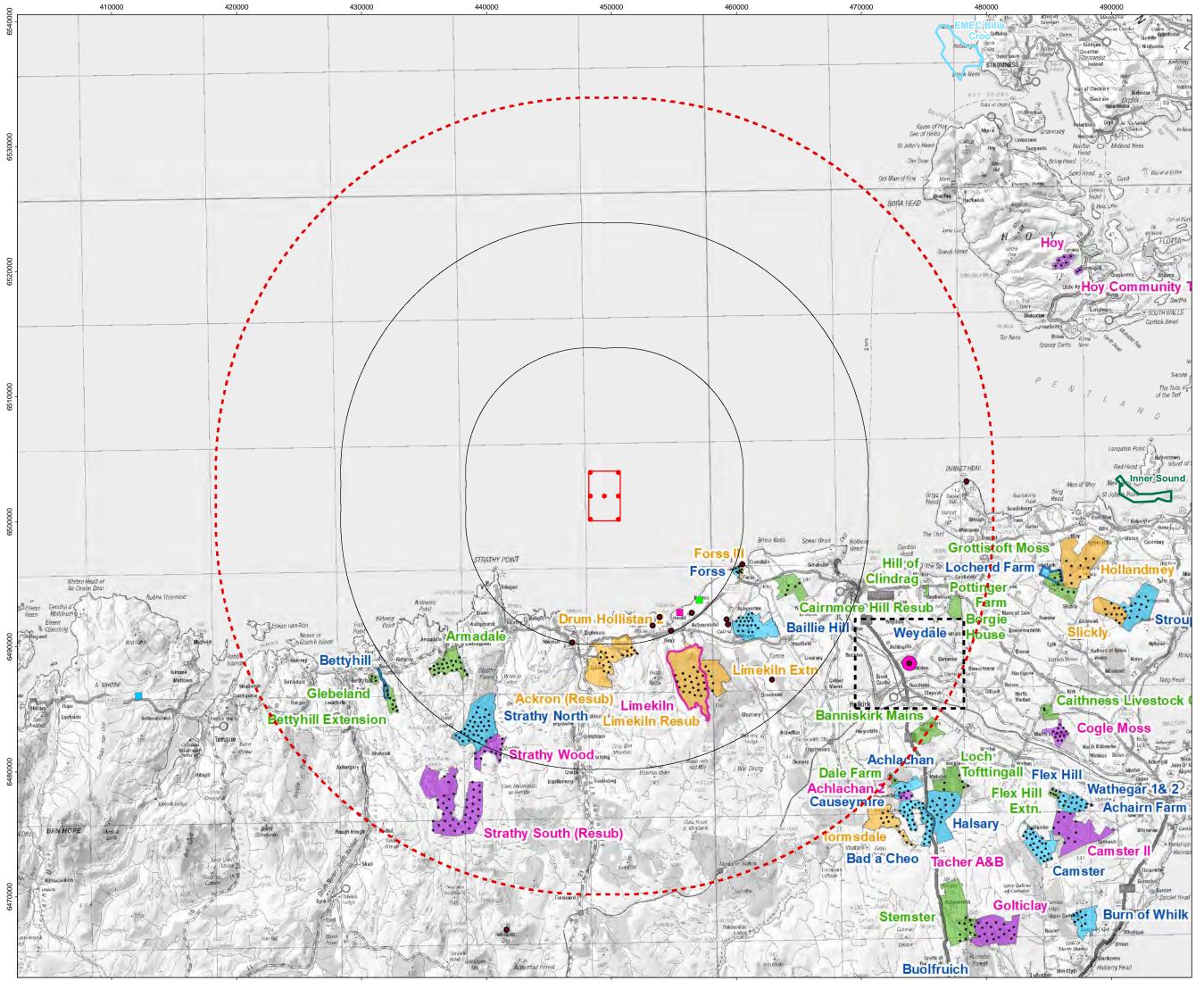
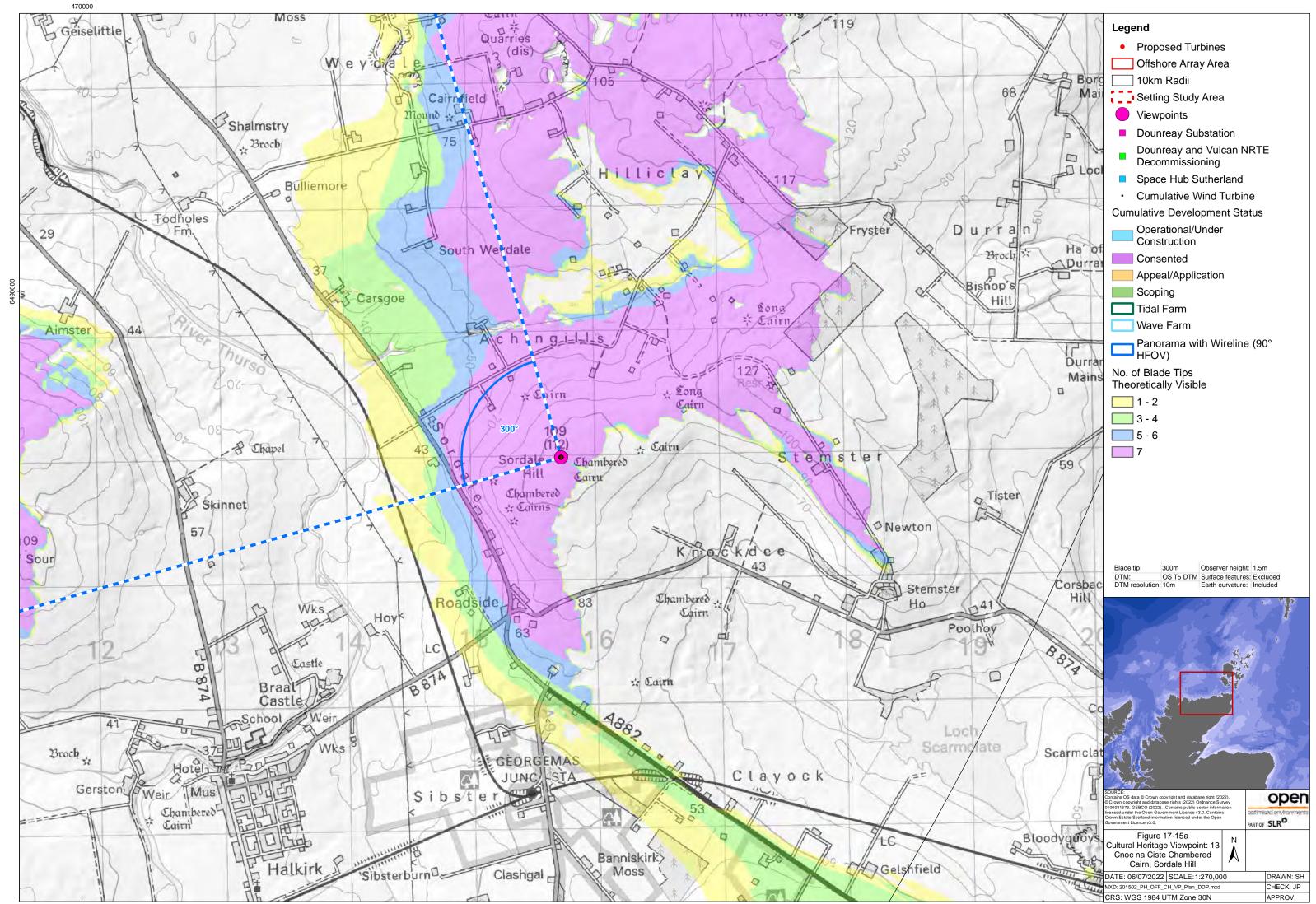
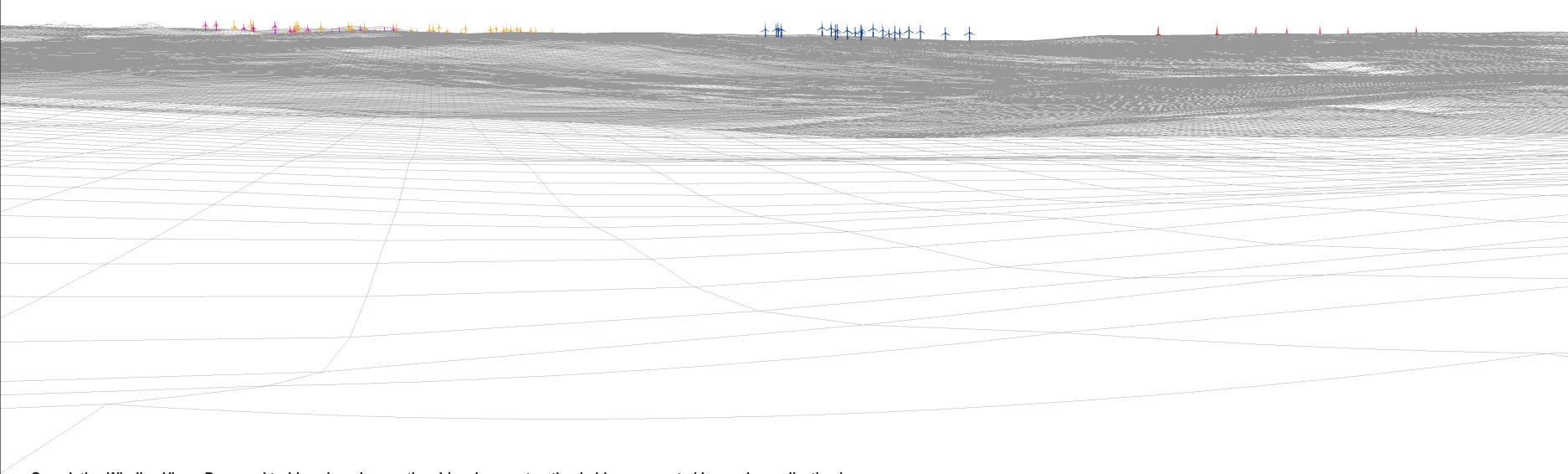


Figure 17.14c Viewpoint 12: Bridge of Broubster Cumulative Wireline (view 2 of 2) © Crown Copyright and database right (2022). Licence Number 0100031673.





	Drum H <u>ollistan </u> 2 (23.8km)	Baillie Hill (12.4km)
Limekiln (16.8km)	Ackron (Resubmission) (21.8km)	
Limekiln Resub (16.5km)		
Limekiln Extension (15.8km)		



Cumulative Wireline View - Proposed turbines in red, operational / under construction in blue, consented in purple, application in orange

OS reference 315730 E 961982 N Elevation 110.2 m AOD Direction of view 300° Nearest turbine 25,991 m

Paper size

Horizontal field of view 90° (cylindrical projection) Principal distance 522 mm 841 x 297 mm (half A1) Correct printed image size 820 x 260 mm

Proposed Development (26km)

Forss III (14.5km)

Figure 17.15b

Viewpoint 13: Cnoc na Ciste Chambered Cairn, Sordale Hill Cumulative Wireline