open
optimised environments
PART OF SLR

Ørsted

ERM

- Proposed Wind Turbine
- 10km Radii
- 30km Study Area
- County Boundary
- NI/RoI Boundary Line

1:230,000 Scale @ A3

0 4.5 9 km

NORTH

Produced By: RH	Ref:
Checked By: JP	Date: 22/03/2023

Study Area
Figure 6.1

Owenreagh / Craignagapple Wind Farm Environmental Statement

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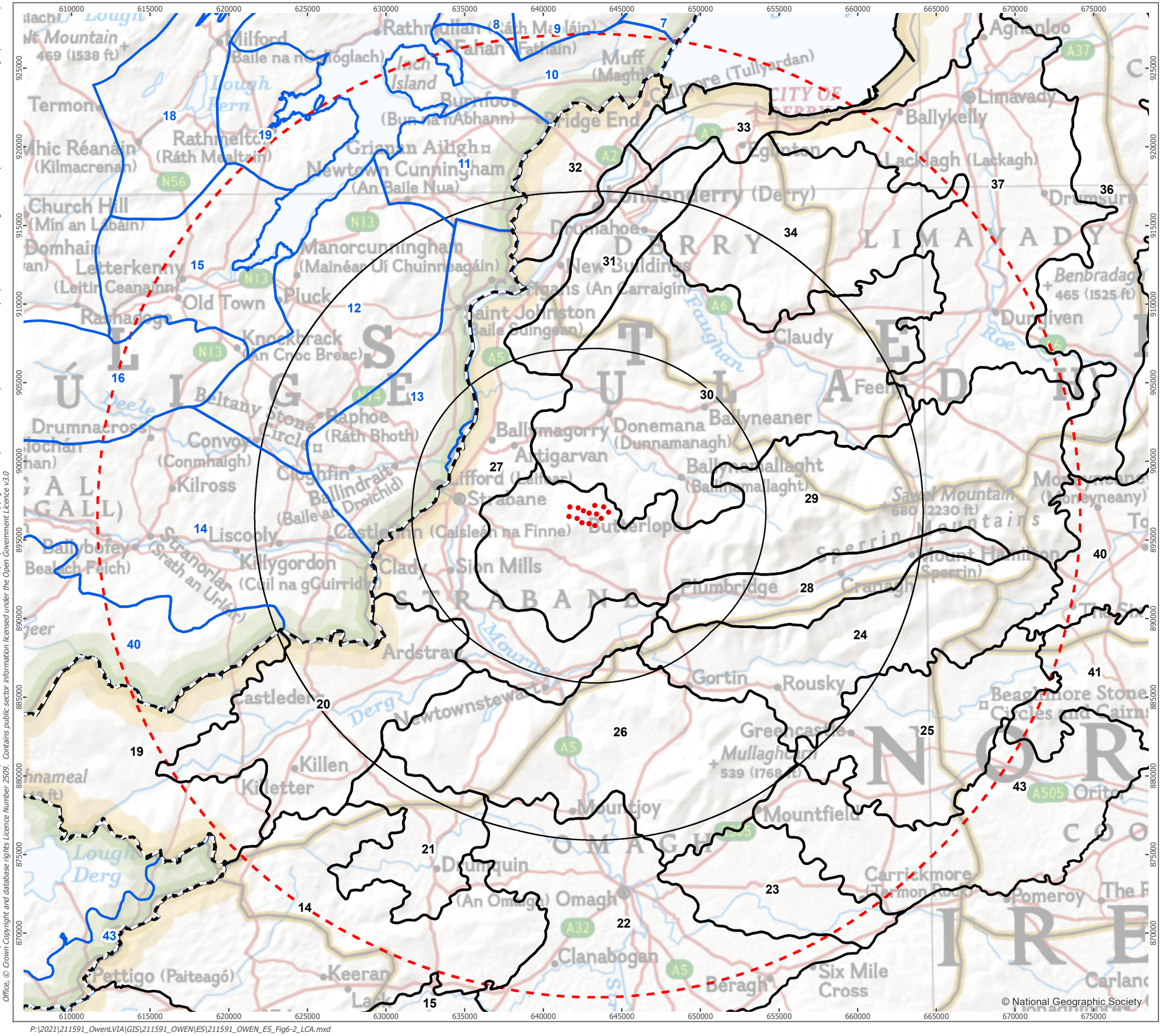

open
optimised environments
PART OF SLR

Ørsted

ERM

- Proposed Wind Turbine
- 10km Radii
- 30km Study Area
- NI/RoI Boundary Line
- Northern Ireland Landscape Character Assessment, 2000

14 - Lough Bradan
15 - Irvinestown Farmland
19 - Killeter Uplands
20 - Derg Valley
21 - Fairy Water Valley
22 - Omagh Farmland
23 - Camowen Valley
24 - South Sperrin
25 - Beaghmore Moors and Marsh
26 - Bessy Bell and Gortin
27 - Foyle Valley
28 - Glenelly Valley
29 - Sperrin Mountains
30 - Sperrin Foothills
31 - Burngibbagh and Drumahoe
32 - Derry Slopes
33 - Lough Foyle Alluvial Plain
34 - Loughermore Hills
36 - Binevenagh
37 - Roe Basin
40 - Upper Moyola Valley
41 - Slieve Gallion
43 - Carrickmore Hills

- Landscape Character Assessment of County Donegal, 2016

7 - Lough Foyle Coast
8 - Buncrana Coast
9 - Scalp Mountains
10 - South Inishowen farmland
11 - Grianin Slopes & Lowlands
12 - Laggan Valley
13 - Foyle Valley
14 - Finn Valley
15 - Letterkenny Estuary & Farmland
16 - Cark Mountain & Upland
18 - Lough Fern
19 - Rathmelton Swilly Coast
40 - Cashelnavern Border & Uplands
43 - Pettigo & Drumlins

1:230,000 Scale @ A3

0 4.5 9 km

NORTH

Produced By: RH	Ref:
Checked By: JP	Date: 22/03/2023

Landscape Character
Figure 6.2

Owenreagh / Craignagapple Wind Farm Environmental Statement

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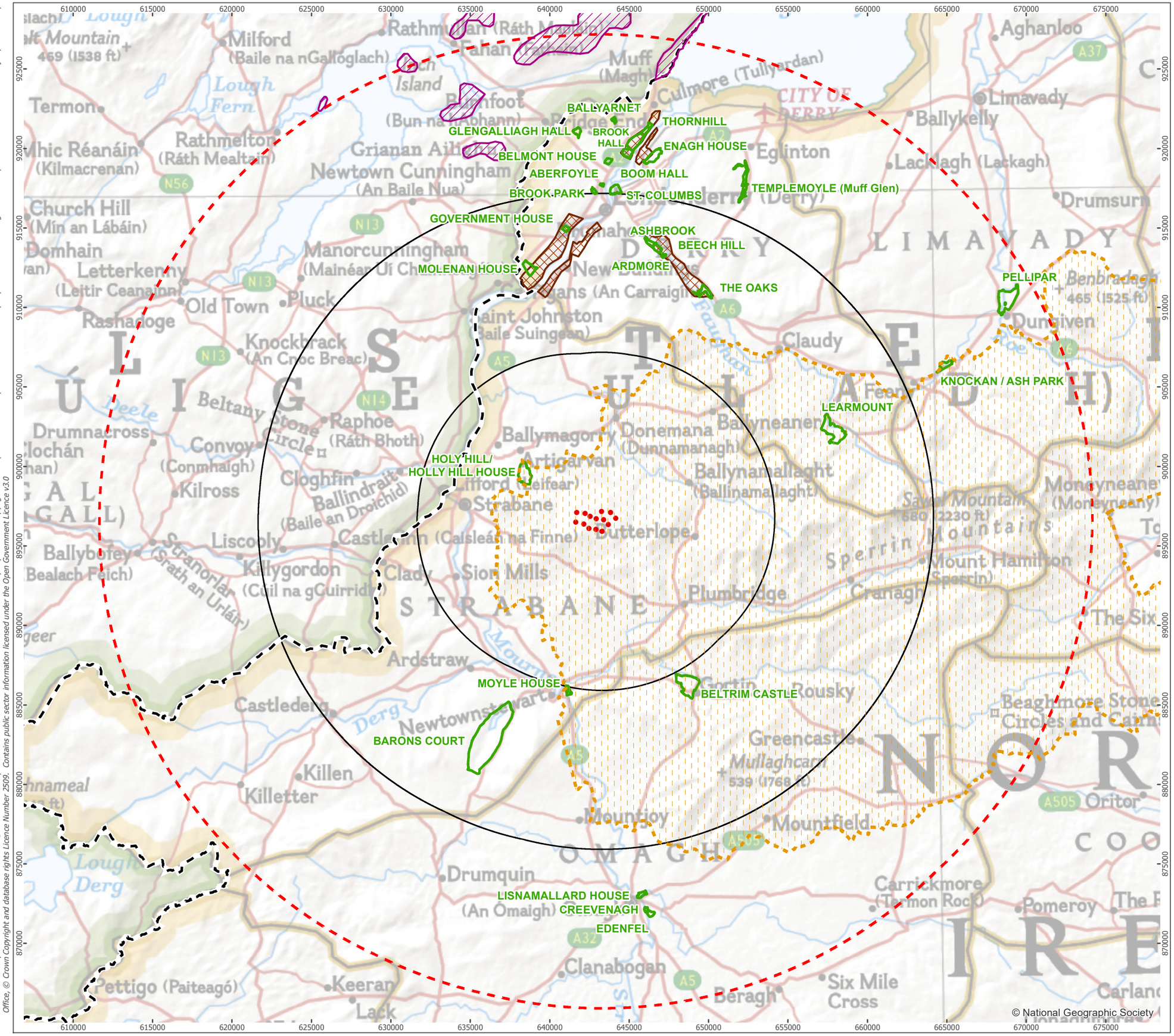

open
optimised environments
PART OF SLR

Ørsted

ERM

- Proposed Wind Turbine
- Site Boundary
- 10km Radii
- 30km Study Area
- NI/RoI Boundary Line
- Sperrin AONB
- Historic Parks & Gardens
- Area of High Scenic Value [1]
- Area of Especially High Scenic Amenity [2]

Notes:
[1] Derry City and Strabane Development Plan, 2011
[2] County Donegal Development Plan 2018-2024

1:230,000 Scale @ A3

0 4.5 9 km

NORTH

Produced By: RH	Ref:
Checked By: JP	Date: 22/03/2023

Landscape Designations
Figure 6.3

Owenreagh / Craignagapple Wind Farm Environmental Statement

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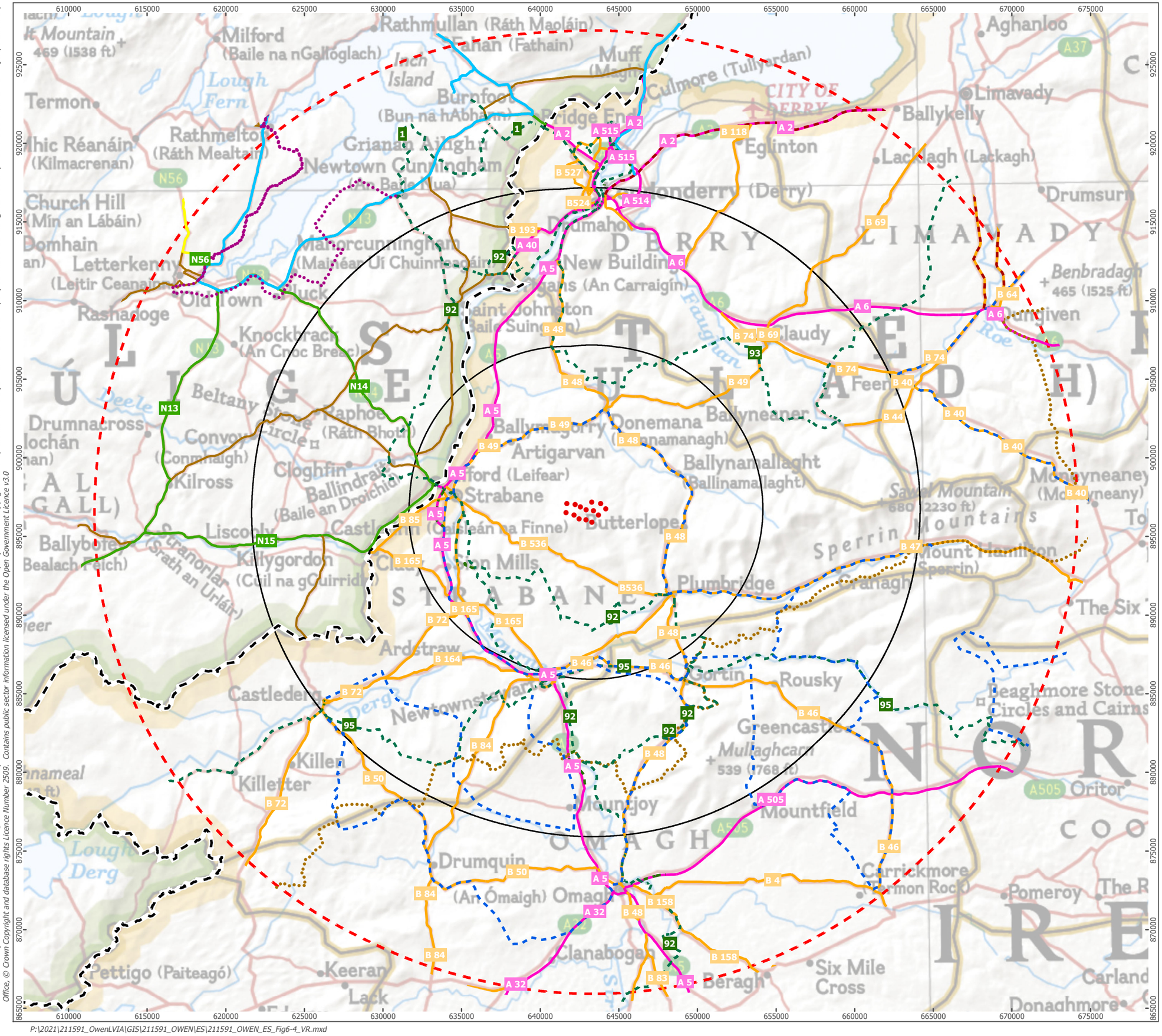
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Rathmullan (Ráth Maoláin)
Milford
(Baile na nGalloglach)
Lough Fern
Termon
Rathmelton
(Ráth Mealtain)
Church Hill
(Mín an Lábáin)
Letterkenny
(Leitir Ceanainn)
Rathmullan
Muff
Culmore (Tullyordan)
Aghanloo
Limavady
Ballykelly
Eglinton
Lackagh (Lackagh)
Drumsurn
Benbradagh
465 (1525 ft)
Dungiven
Claudy
Feeny
Ballyneaner
Donemana
Ballynamallaght
Ballinamallaght
Artigarvan
Strabane
Butterlope
Plumbridge
Sperrin Mountains
Mount Hamilton
(Sperrin)
Saddle Mountain
680 (2230 ft)
Moneyneaney
(Moneyneany)
The Six
Leaghmore Stone Circles and Cairns
Rousky
Greencastle
Mulaghcam
539 (1768 ft)
Mountfield
Carrickmore
Carmon Rock
Pomeroy
Oritor
Six Mile Cross
Carland
Donaghmore
Beragh
Clanabogan
Omagh
(An Ómaigh)
Drumquin
Mountjoy
Killeter
Castlederg
Newtownstewart
Ardstraw
Killygordon
(Cúil na gCuirridh)
Liscolly
Ballybofey
(Baile Ó Beifeá)
Strabane
Castlefin
(Caisleán na Finne)
Clady
Son Mills
Ballymagorry
Donemana
Artigarvan
Leifear
Beltany Stone Circle
Raphoe
(Ráth Bhoth)
Convoy
(Conmaigh)
Cloghfin
Ballindrait
(Baile an Droichid)
Kilross
Drumnacross
Rashaloge
Knockbrach
(An Cnoc Breac)
Old Town
Letterkenny
Mamorcunningham
(Mainéar Uí Chuinneagáin)
Newtown Cunningham
(An Baile Nua)
Grianan Ailigh
Bun na hAbhainn
Burnfoot
Inch Island
Fahan (Fathain)
Muff
Culmore
Derry (Derry)
Drumahoe
New Building
Carrigans (An Carraigín)
Saint Johnston
(Baile Suin)
Faughan
Roe
Lough Derg
Pettigo (Paiteagó)
Keeran
Lack
Lough Erne
Ballyshannon
(Béal Átha Seanaidh)
Donegal
Letterkenny
Derry
Omagh
Strabane
Limavady
Coleraine
Ballymena
Ballyshannon
Donegal
Lough Erne
Lough Derg
Lough Foyle
Lough Neagh
Sperrin Mountains
Slieve Gallion
Slieve Beagh
Slieve Croob
Slieve Gullion
Mourne Mountains
Slieve Donard
Slieve Binnian
Slieve Bearnagh
Slieve Commedagh
Slieve Foy
Slieve Gullion
Slieve Beagh
Slieve Croob

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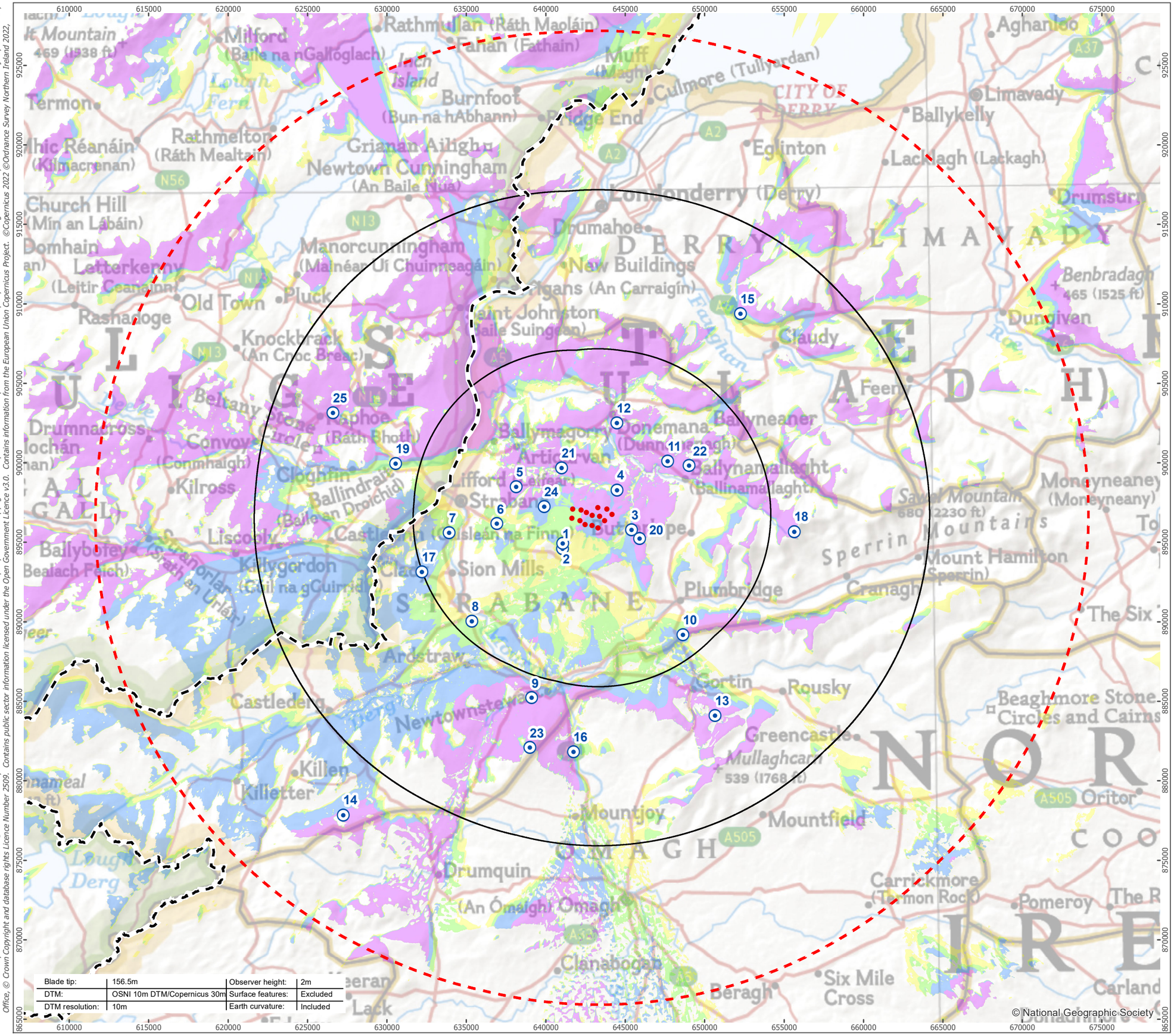
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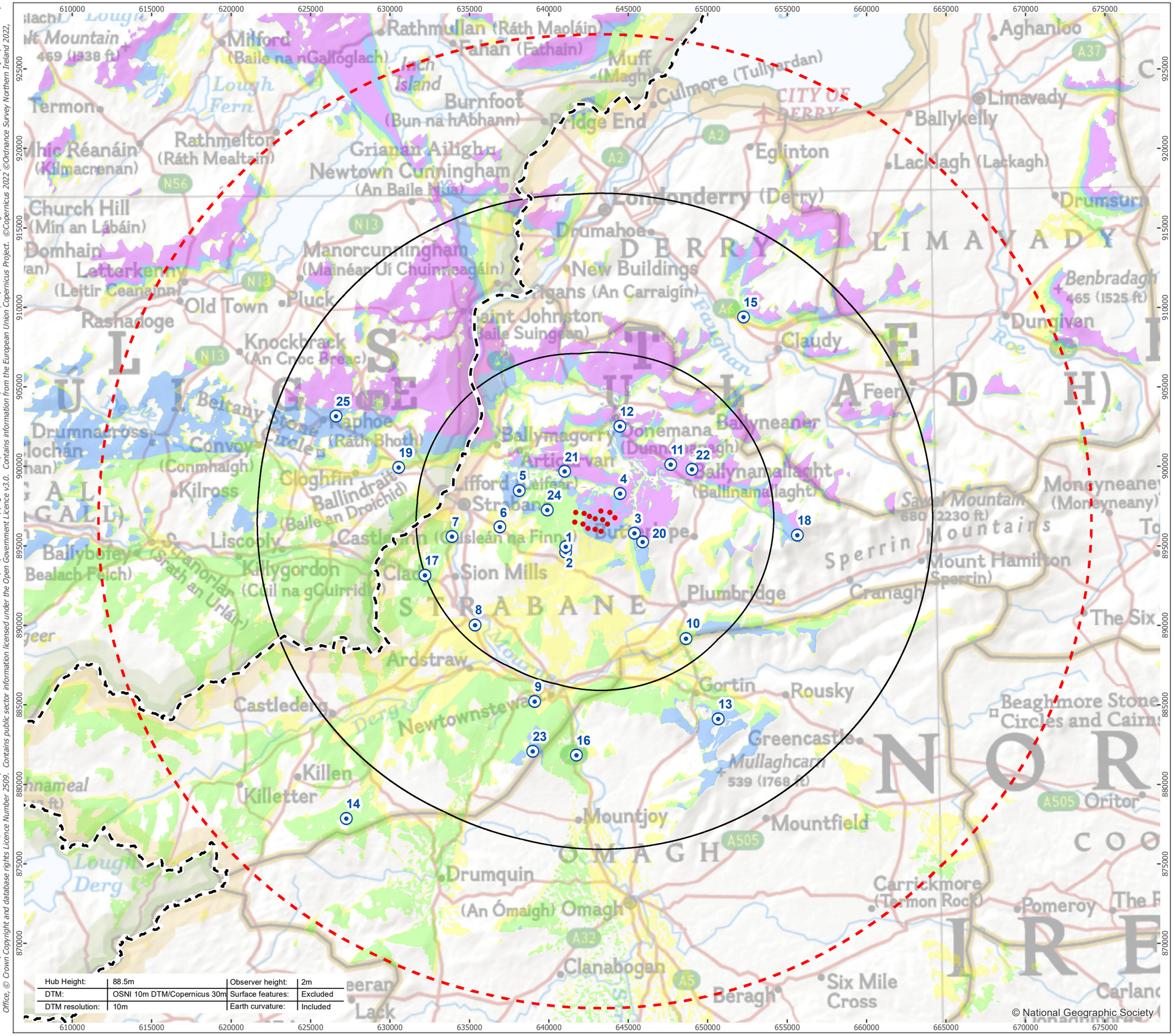
Londonderry (Derry)
CITY OF DERRY
Eglinton
Ballykelly
Limavady
Claudy
Newtown Cunningham
Manorcunningham
Burnfoot
Muff
Culmore (Tullyordan)
Sperrin Mountains
Mount Hamilton
Plumbridge
Sion Mills
Ballymagorry
Donemana
Ballynamallaght
Gortin
Rousky
Greencastle
Mullaghcarn
539 (1768 ft)
Mountfield
Mountjoy
Omagh
Drumquin
Castlederg
Killeter
Killen
Newtownstewart
Ardstraw
Strabane
Clanabogan
Beragh
Six Mile Cross
Carrickmore
Pomeroy
Oritor
Beaghmore Stone Circles and Cairns
The Six
Benbradagh
465 (1525 ft)
Dungiven
Drumsurn
Lackagh (Lackagh)
Aghanloo
Claudy
Feeny
Ballyneaner
Donemana
Ballynamallaght
Butcherpe
Sperrin Mountains
Saddle Mountain
680 (2230 ft)
Monreyneany
Moneyneaney
Kilross
Convoy
Cloghfin
Ballindrait
Liscolly
Killygordon
Ballybofey
Bealach Feich
Rathmelton
Rathmullan (Ráth Maoláin)
Milford
Fahan (Fathain)
Lough Fern
Lough Island
Termon
Church Hill
Letterkenny
Rashaloge
Old Town
Pluck
Knockbrack
Drumnatross
Kilmacrenan
Grianan Ailigh
Bridge End
Drumahoe
New Buildings
Carrigans (An Carraigín)
Saint Johnston
Raphoe
Beltany Stone Circle
Lough Derg
Lough Erne
Fairy Water
Finn
Mourne
Foyle
Roe
Faughan
Derry
Donegal
Tyrone
Fermanagh
Monaghan
Cavan
Leitrim
Sligo



open
optimised environments
PART OF SLR

Ørsted

ERM

- Proposed Wind Turbine
- 10km Radii
- 30km Study Area
- NI/RoI Boundary Line
- Viewpoint Location

No. of Hubs Theoretically Visible

- 1 - 4
- 5 - 8
- 9 - 12
- 13 - 14

1. Koram Road, Ligfordrum
2. Koram Road, Ligfordrum 2
3. Napple Road, Ballykeery Bridge
4. Moor Lough Picnic
5. Holyhill Road, Holy Hill
6. President Wilson's House
7. Strathmourne Road, Strathbane
8. Victoria Bridge
9. Harry Avery's
10. Slievbeg Road, Slievbeg
11. Ballynamallaght
12. B48 Dunnamanagh
13. Lenamore Picnic Area, Gortin
14. Ulster Way at Borlaght Mountain
15. Foreglen Road, Killaloo
16. A5 Strule River Valley
17. Bells Park Road, Glebe
18. Mullaghclogha, Sperrin Mountains
19. Ballindrait
20. Meendamph Road, Crockrour
21. Glenmornan
22. Aghafad Road
23. Bessy Bell
24. Silverhill Road
25. Raphoe

1:230,000 Scale @ A3

0 4.5 9 km

NORTH

Produced By: RH	Ref:
Checked By: JP	Date: 22/03/2023

Hub Height ZTV and Viewpoint Locations
Figure 6.6

Owenreagh / Craignagapple Wind Farm Environmental Statement

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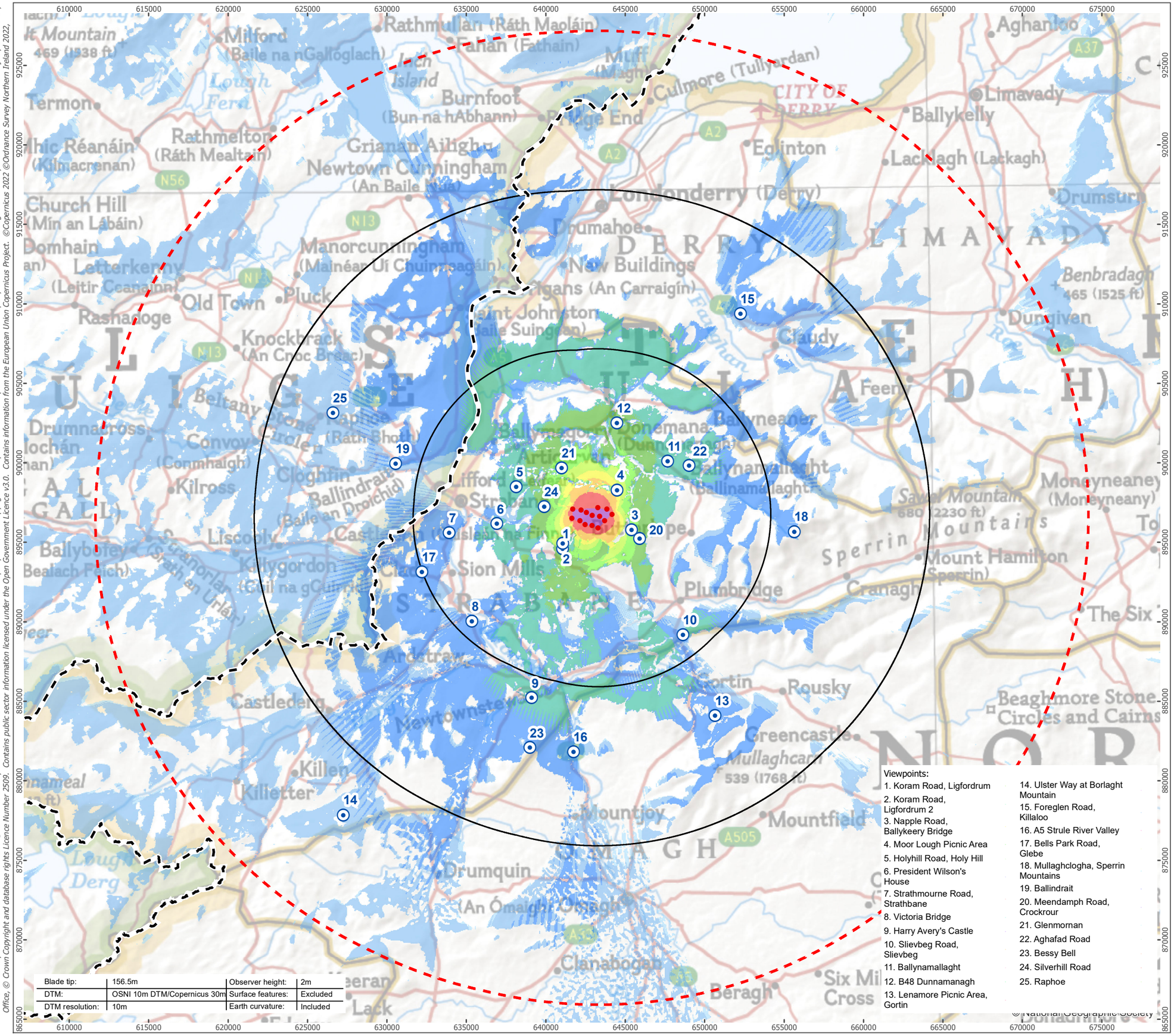

open optimised environments PART OF SLR

Ørsted

ERM

- Proposed Wind Turbine
- 10km Radii
- 30km Study Area
- NI/RoI Boundary Line
- Viewpoint Location

Horizontal Angle ZTV (Degrees)

- 0
- 0 - 1
- 1 - 5
- 5 - 10
- 10 - 20
- 20 - 30
- 30 - 40
- 40 - 50
- 50 - 60
- 60 - 90
- 90 - 180
- 180 - 360

* The horizontal angle ZTV measures how much of the horizontal field of view is occupied by the Development. It is measures the maximum angle from the furthest left to the furthest right extent of the Development.

1:230,000 Scale @ A3

0 4.5 9 km

NORTH

Produced By: RH	Ref:
Checked By: JP	Date: 24/01/2023

Horizontal Angle Blade Tip ZTV and Viewpoint Locations

Figure 6.7

Owenreagh / Craignagapple Wind Farm Environmental Statement

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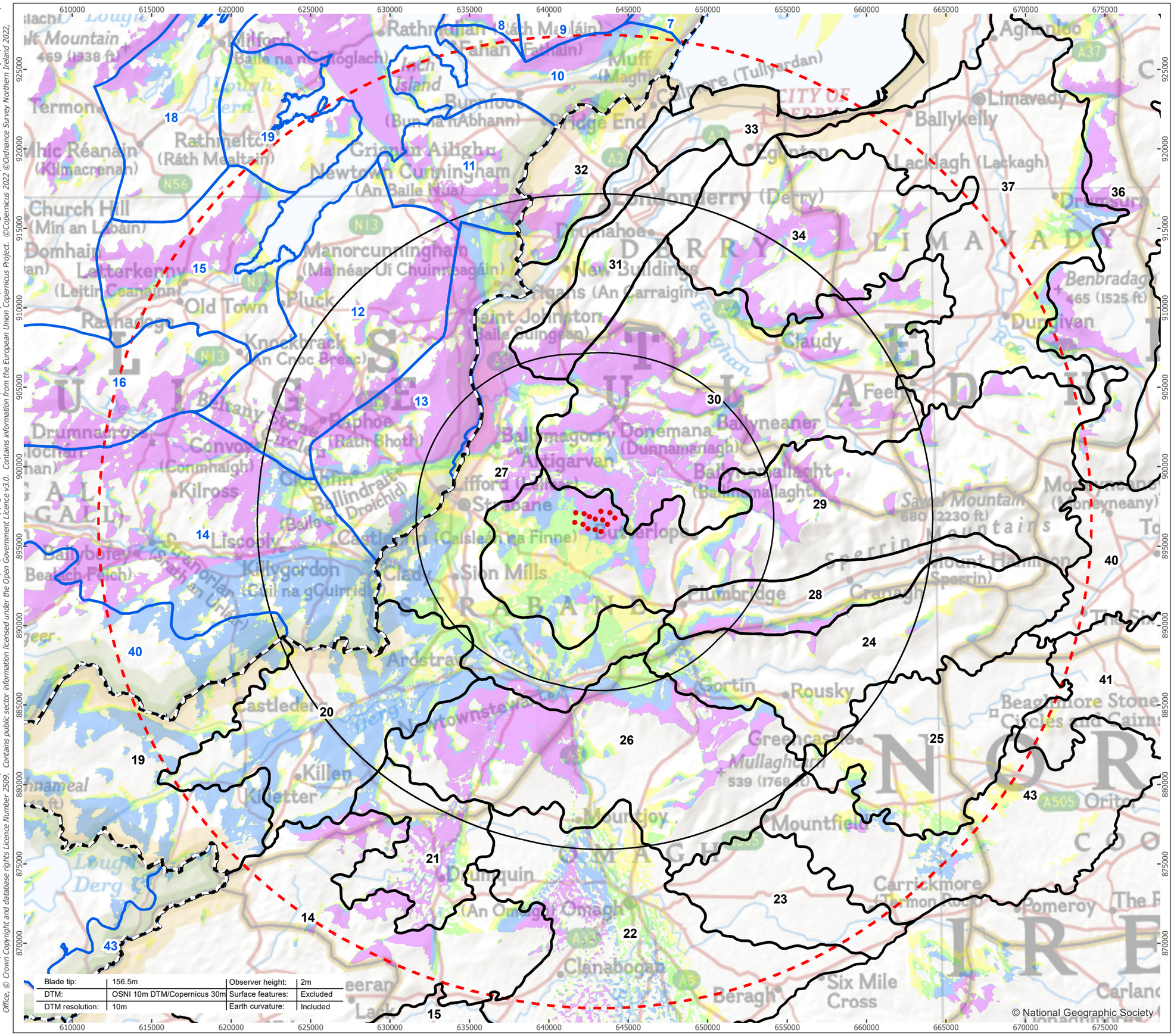

open
optimised environments
PART OF SLR

Ørsted

ERM

- Proposed Wind Turbine
- 10km Radii
- 30km Study Area
- NI/RoI Boundary Line
- Northern Ireland Landscape Character Assessment, 2000

14 - Lough Bradan
15 - Irvinestown Farmland
19 - Killeter Uplands
20 - Derg Valley
21 - Fairy Water Valley
22 - Omagh Farmland
23 - Camowen Valley
24 - South Sperrin
25 - Beaghmore Moors and Marsh
26 - Bessy Bell and Gortin
27 - Foyle Valley
28 - Glenelly Valley
29 - Sperrin Mountains
30 - Sperrin Foothills
31 - Burngibbagh and Drumahoe
32 - Derry Slopes
33 - Lough Foyle Alluvial Plain
34 - Loughermore Hills
36 - Binevenagh
37 - Roe Basin
40 - Upper Moyola Valley
41 - Slieve Gallion
43 - Carrickmore Hills

- Landscape Character Assessment of County Donegal, 2016

7 - Lough Foyle Coast
8 - Buncrana Coast
9 - Scalp Mountains
10 - South Inishowen farmland
11 - Grianin Slopes & Lowlands
12 - Laggan Valley
13 - Foyle Valley
14 - Finn Valley
15 - Letterkenny Estuary & Farmland
16 - Cark Mountain & Upland
18 - Lough Fern
19 - Rathmelton Swilly Coast
40 - Cashelnavern Border & Uplands
43 - Pettigo & Drumlins

No. of Blade Tips Theoretically Visible

1 - 4
5 - 8
9 - 12
13 - 14

1:230,000 Scale @ A3

0 4.5 9 km

NORTH

Produced By: RH	Ref:
Checked By: JP	Date: 22/03/2023

Blade Tip ZTV and Landscape Character
Figure 6.8

Owenreagh / Craignagapple Wind Farm Environmental Statement

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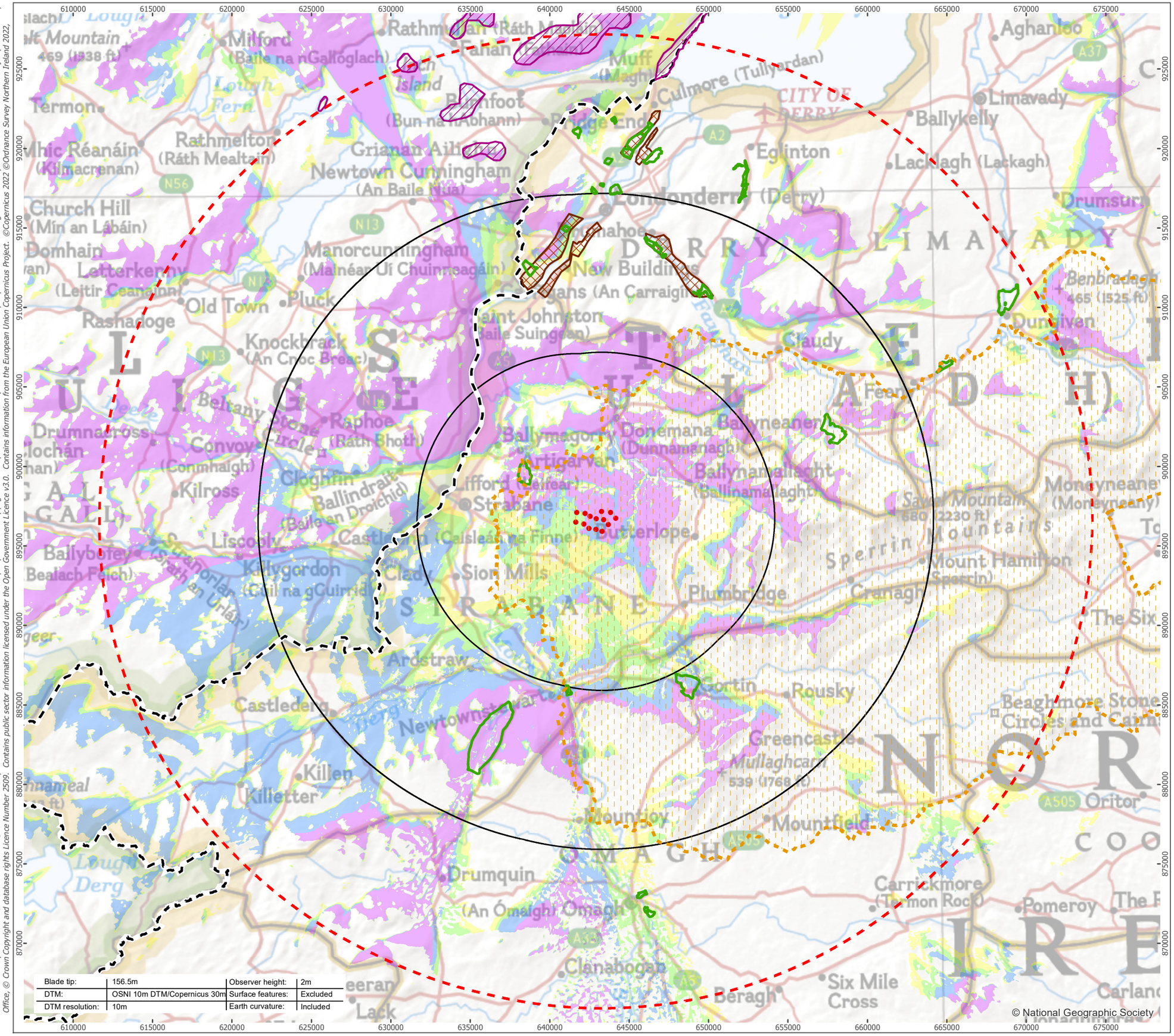

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open optimised environments PART OF SLR

Ørsted

ERM

- Proposed Wind Turbine
- 10km Radii
- 30km Study
- NI/RoI Boundary Line
- Sperrin
- Historic Parks & Gardens
- Area of High Scenic Value [1]
- Area of Especially High Scenic Amenity [2]

No. of Blade Tips Theoretically Visible

- 1 - 4
- 5 - 8
- 9 - 12
- 13 - 14

Notes:
[1] Derry City and Strabane Development Plan, 2011
[2] County Donegal Development Plan 2018-2024

1:230,000 Scale @ A3

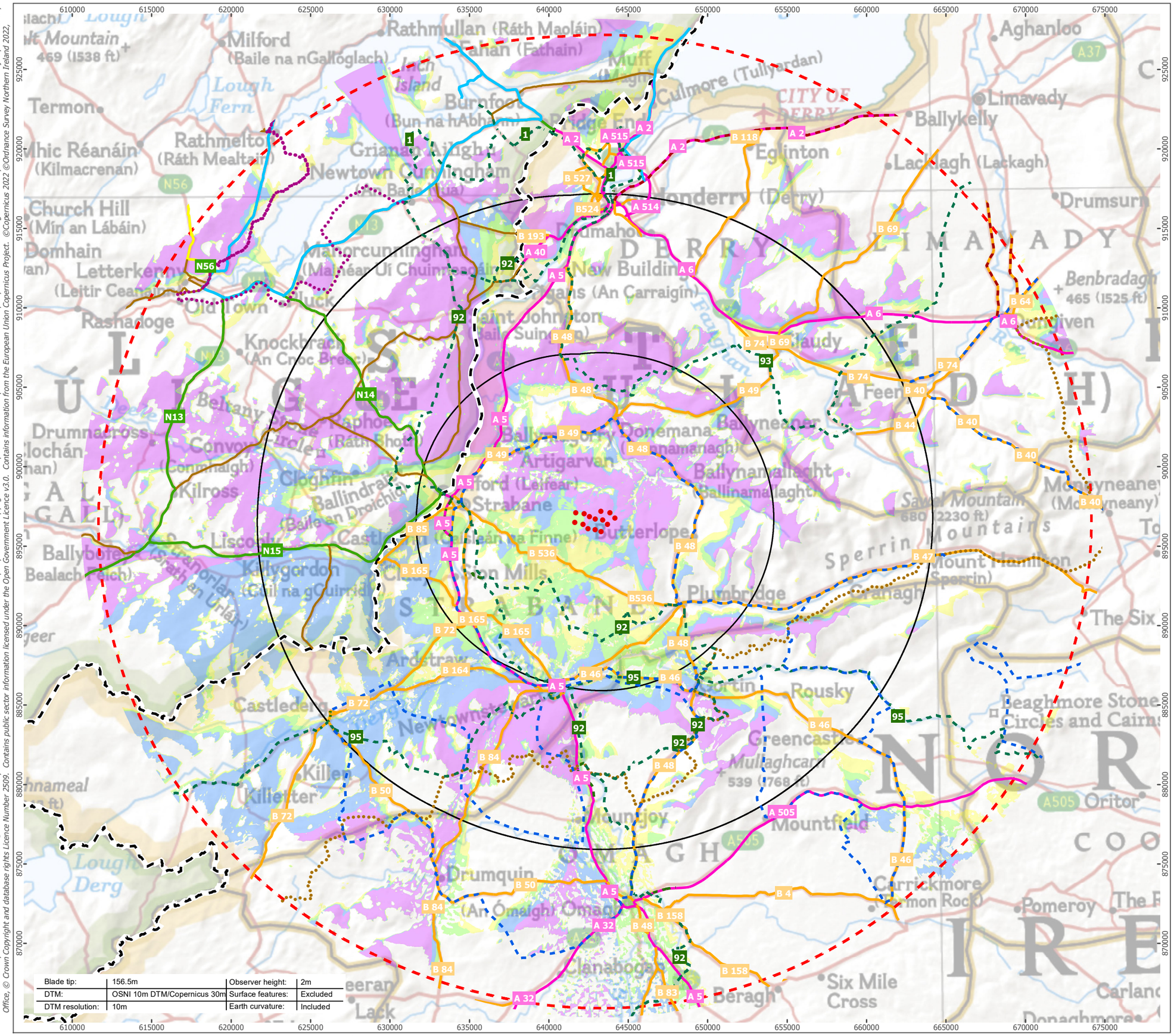
0 4.5 9 km

NORTH

Produced By: RH	Ref:
Checked By: JP	Date: 22/03/2023

Blade Tip ZTV and Landscape Designations
Figure 6.9

Owenreagh / Craignagapple Wind Farm Environmental Statement



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open optimised environments PART OF SLR

Ørsted

ERM

- Proposed Wind Turbine
- 10km Radii
- 30km Study Area
- NI/RoI Boundary Line

Roads - Northern Ireland

- A Road
- B Road

Roads - Republic of Ireland

- National Primary Road
- National Secondary Road
- Regional Road
- Causeway Coastal Driving Route
- Sperrins Route
- National Cycle Network
- Ulster Way
- Wild Atlantic Way
- Donegal Coastal Cycle Route

No. of Blade Tips Theoretically Visible

1 - 4 | 5 - 8 | 9 - 12 | 13 - 14

1:230,000 Scale @ A3

0 4.5 9 km

NORTH

Produced By: RH	Ref:
Checked By: JP	Date: 22/03/2023

Blade Tip ZTV and Visual Receptors

Figure 6.10

Owenreagh / Craignagapple Wind Farm Environmental Statement

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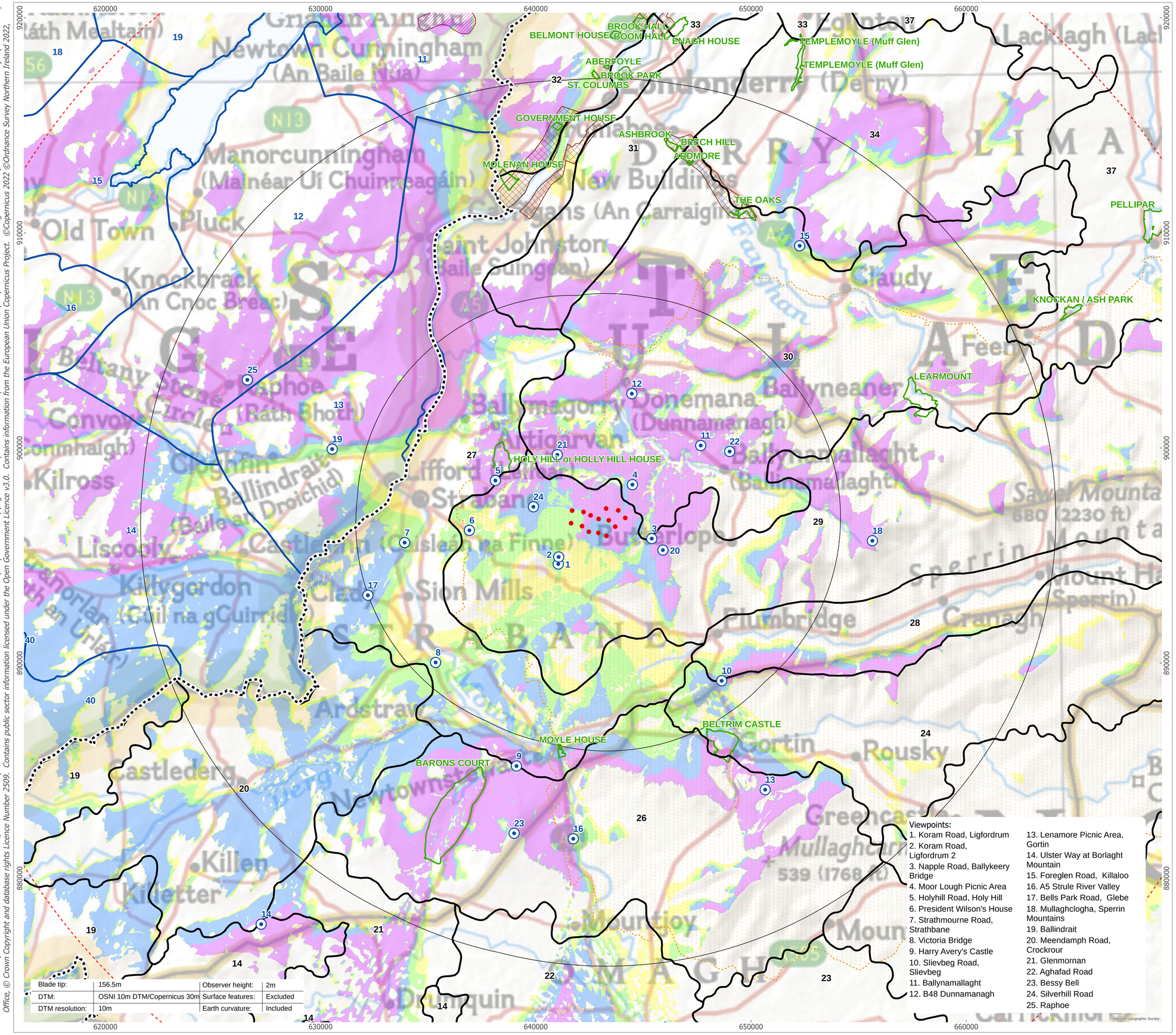

Blade tip:	156.5m	Observer height:	2m
DTM:	OSNI 10m DTM/Copernicus 30m	Surface features:	Excluded
DTM resolution:	10m	Earth curvature:	Included

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open optimised environments PART OF SLR

Ørsted

ERM

- Proposed Wind Turbine
- Viewpoint Location
- 10km Radii
- 30km Study Area
- NI/RoI Boundary Line
- Sperrin AONB
- Historic Parks &
- Area of High Scenic
- Area of Especially High
- Northern Ireland Landscape Character Assessment, 2000
- Landscape Character Assessment of County Donegal, 2016

No. of Blade Tips

- 1 - 4
- 5 - 8
- 9 - 12
- 13 - 14

Notes:
[1] Derry City and Strabane Development Plan, 2011
[2] County Donegal Development Plan 2018-2024

1:60,000 Scale @ A0

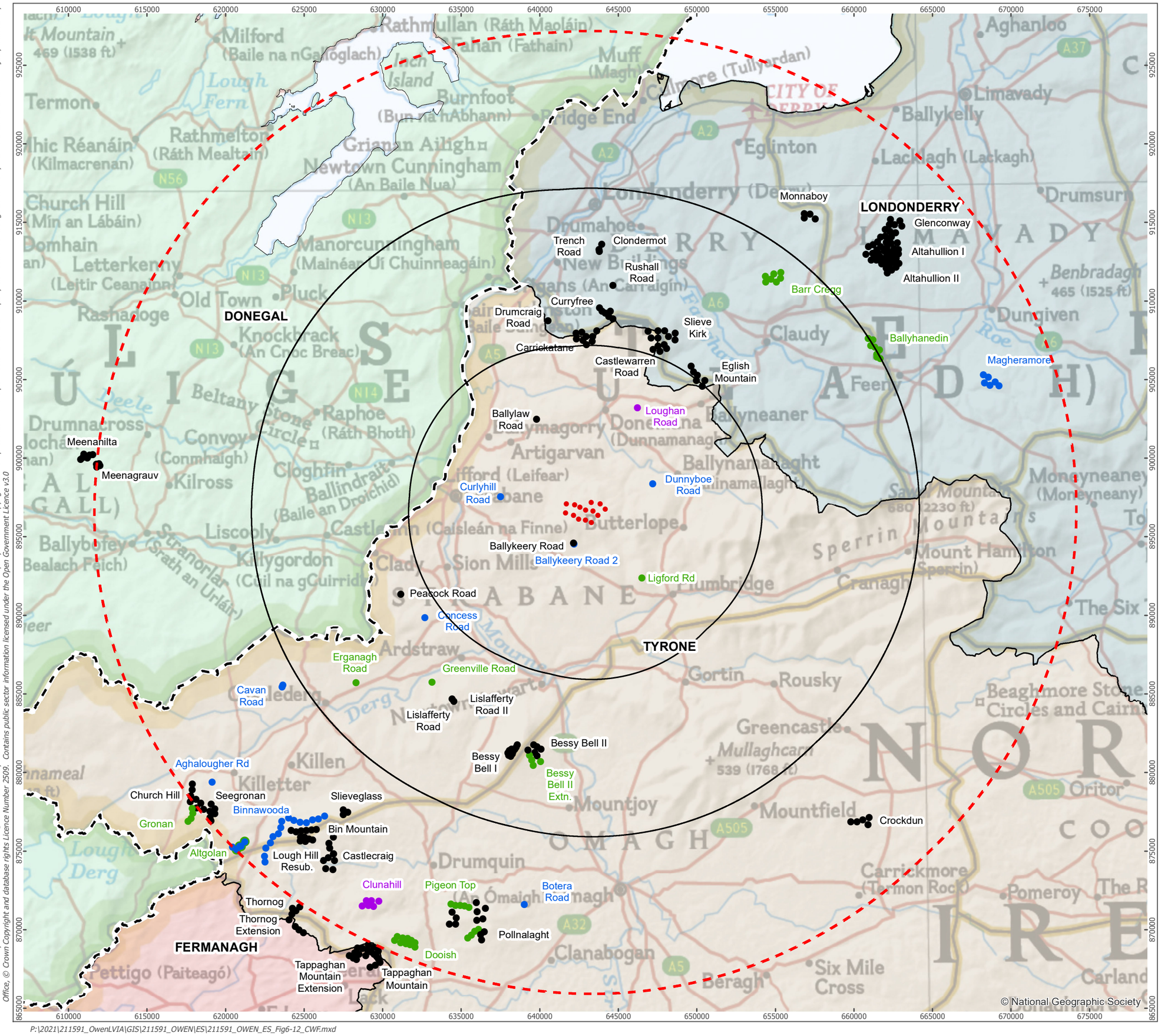
0 3 6 km

NORTH

Produced By: RH	Ref:
Checked By: JP	Date: 22/03/2023

Composite Map
Figure 6.11

Owenreagh / Craignagapple Wind Farm
Environmental Statement



open optimised environments PART OF SLR

Ørsted

ERM

- Proposed Wind Turbine
- 10km Radii
- 30km Study Area
- NI/RoI Boundary Line
- DONEGAL
- FERMANAGH
- LONDONDERRY
- TYRONE

Cumulative Wind Farm Status:

- Operational
- Under Construction
- Consented
- Appeal; Application

1:230,000 Scale @ A3

0 4.5 9 km

NORTH

Produced By: RH	Ref:
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Cumulative Wind Farms
Figure 6.12

Owenreagh / Craignagapple Wind Farm Environmental Statement

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PART OF SLR

Ørsted

ERM

- Proposed Wind Turbine
- 10km Radii
- 30km Study Area
- NI/RoI Boundary Line
- Operational Windfarm

CZTV - Owenreagh / Craignagapple + Owenreagh I and Extn.(II)

Cumulative Zone of Theoretical Visibility

- Owenreagh / Craignagapple Theoretical Visibility
- Owenreagh I and Extn.(II) Theoretical Visibility
- Combined Theoretical Visibility

1:230,000 Scale @ A3

0 4.5 9 km

NORTH

Produced By: RH	Ref:
Checked By: JP	Date: 22/03/2023

Comparative ZTV
Figure 6.13

Owenreagh / Craignagapple Wind Farm Environmental Statement

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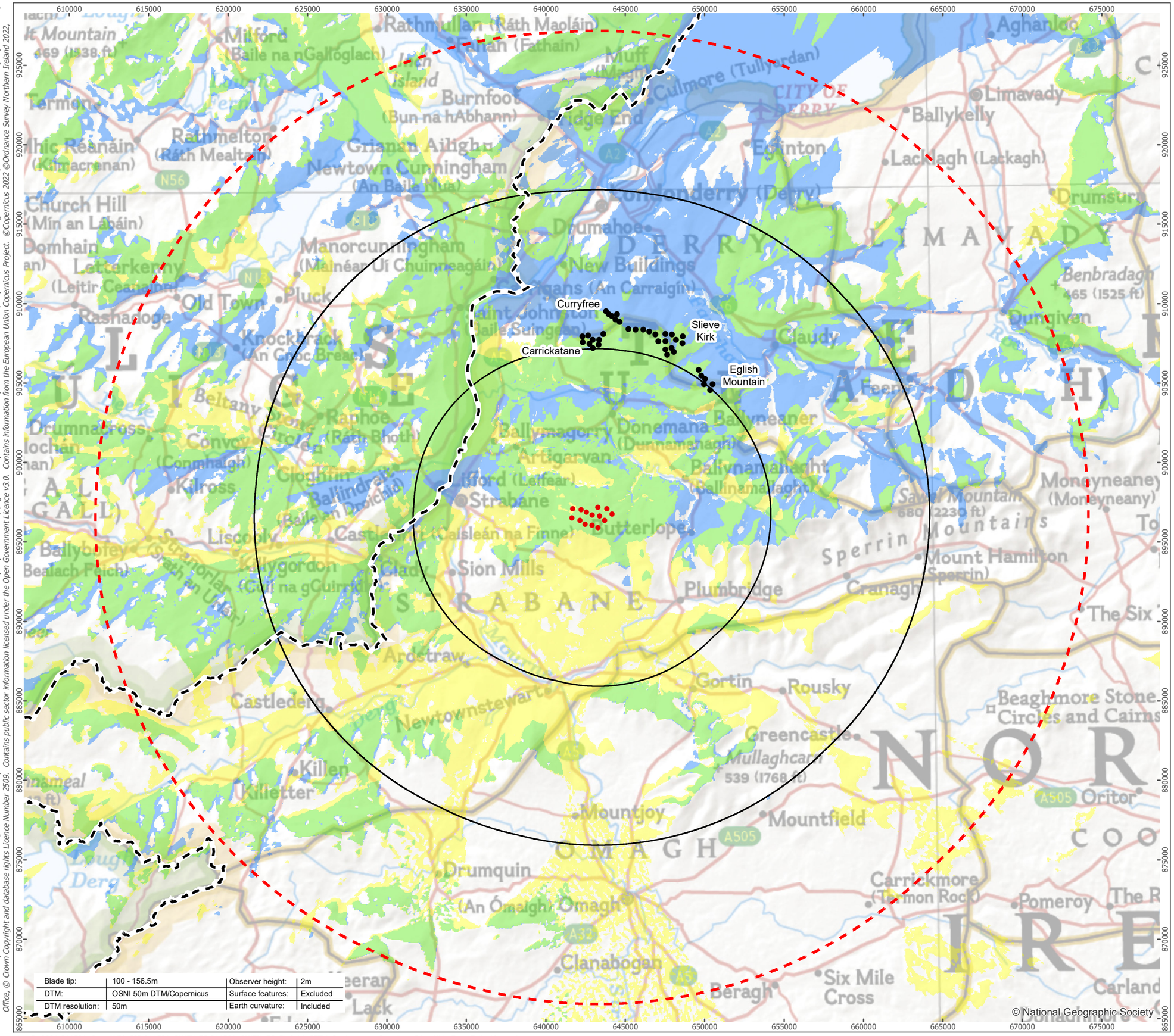

open optimised environments PART OF SLR

Ørsted

ERM

- Proposed Wind Turbine
- 10km Radii
- 30km Study Area
- NI/RoI Boundary
- Operational Windfarm

CZTV - Owenreagh / Craignagapple + Carrickatane, Curryfree, Slieve Kirk and Extn., and Eglish Mountain

Cumulative Zone of Theoretical Visibility

- Owenreagh / Craignagapple Theoretical Visibility
- Carrickatane, Curryfree, Slieve Kirk and Extn., and Eglish Mountain group Theoretical Visibility
- Combined Theoretical Visibility

1:230,000 Scale @ A3

0 4.5 9 km

NORTH

Produced By: RH	Ref:
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Cumulative ZTV
Figure 6.14

Owenreagh / Craignagapple Wind Farm Environmental Statement

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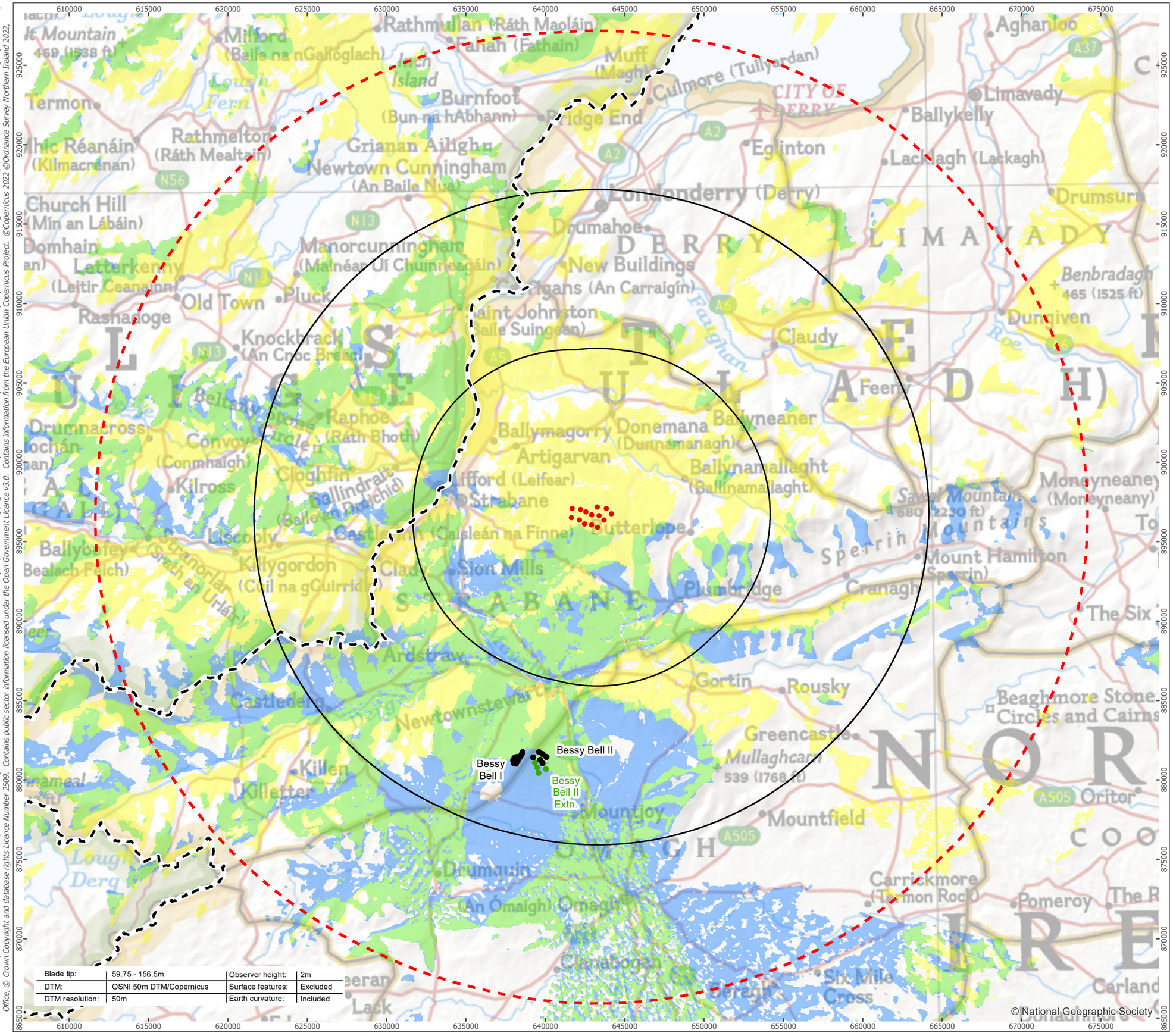

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open optimised environments PART OF SLR

Ørsted

ERM

- Proposed Wind Turbine
- 10km Radii
- 30km Study Area
- NI/RoI Boundary Line
- Operational Windfarm
- Consented Windfarm

CZTV - Owenreagh / Craignagapple + Bessy Bell I, II, Extn.II

Cumulative Zone of Theoretical Visibility

- Owenreagh / Craignagapple Theoretical Visibility
- Bessy Bell I, II, Extn.II group Theoretical Visibility
- Combined Theoretical Visibility

1:230,000 Scale @ A3

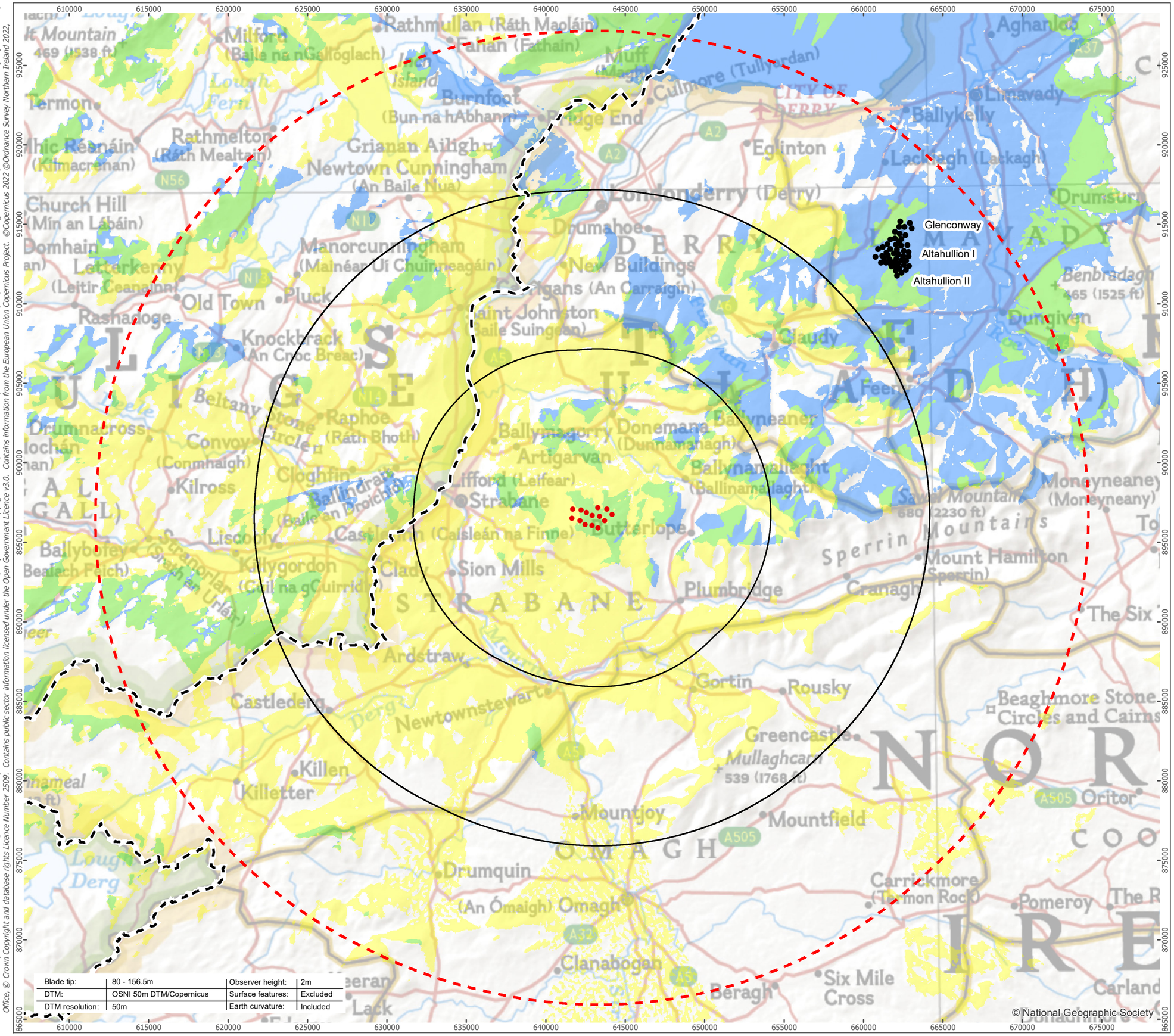
0 4.5 9 km

NORTH

Produced By: RH	Ref:
Checked By: JP	Date: 22/03/2023

Cumulative ZTV
Figure 6.15

Owenreagh / Craignagapple Wind Farm Environmental Statement



open
optimised environments
PART OF SLR

Ørsted

ERM

- Proposed Wind Turbine
- 10km Radii
- 30km Study Area
- NI/RoI Boundary Line
- Operational Windfarm

CZTV - Owenreagh / Craignagapple + Altahullion I, II, and Glenconway

Cumulative Zone of Theoretical Visibility

- Owenreagh / Craignagapple Theoretical Visibility
- Altahullion I, II, and Glenconway group Theoretical Visibility
- Combined Theoretical Visibility

1:230,000 Scale @ A3

0 4.5 9 km

NORTH

Produced By: RH	Ref:
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Cumulative ZTV
Figure 6.16

Owenreagh / Craignagapple Wind Farm Environmental Statement

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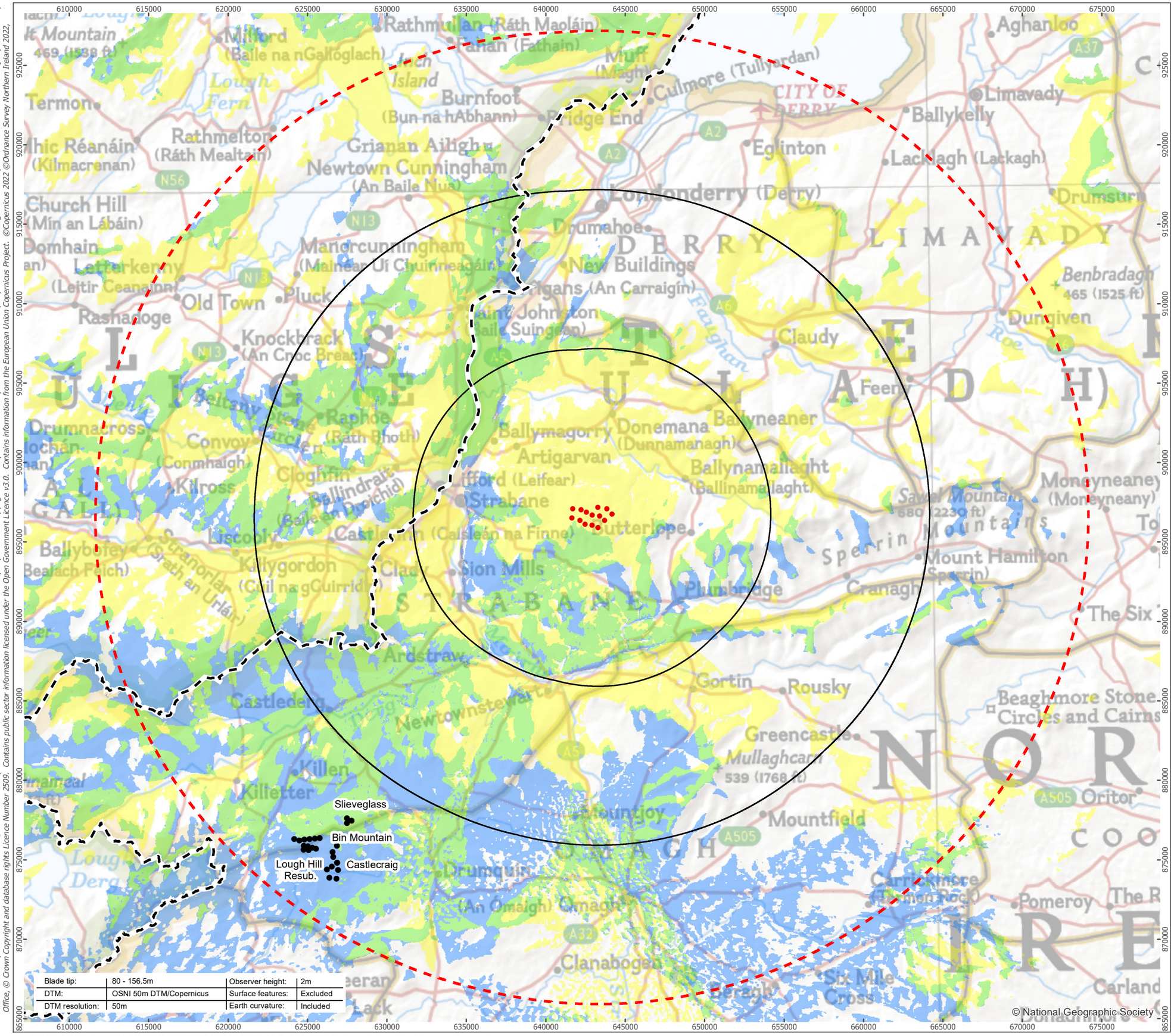

open optimised environments PART OF SLR

Ørsted

ERM

- Proposed Wind Turbine
- 10km Radii
- 30km Study Area
- NI/RoI Boundary
- Operational Windfarm

CZTV - Owenreagh / Craignagapple + Bin Mountain, Lough Hill, Slieveglass, and Castlecraig

Cumulative Zone of Theoretical Visibility

- Owenreagh / Craignagapple Theoretical Visibility
- Bin Mountain, Lough Hill, Slieveglass, and Castlecraig group Theoretical Visibility
- Combined Theoretical Visibility

1:230,000 Scale @ A3

0 4.5 9 km

NORTH

Produced By: RH	Ref:
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Cumulative ZTV
Figure 6.17

Owenreagh / Craignagapple Wind Farm Environmental Statement

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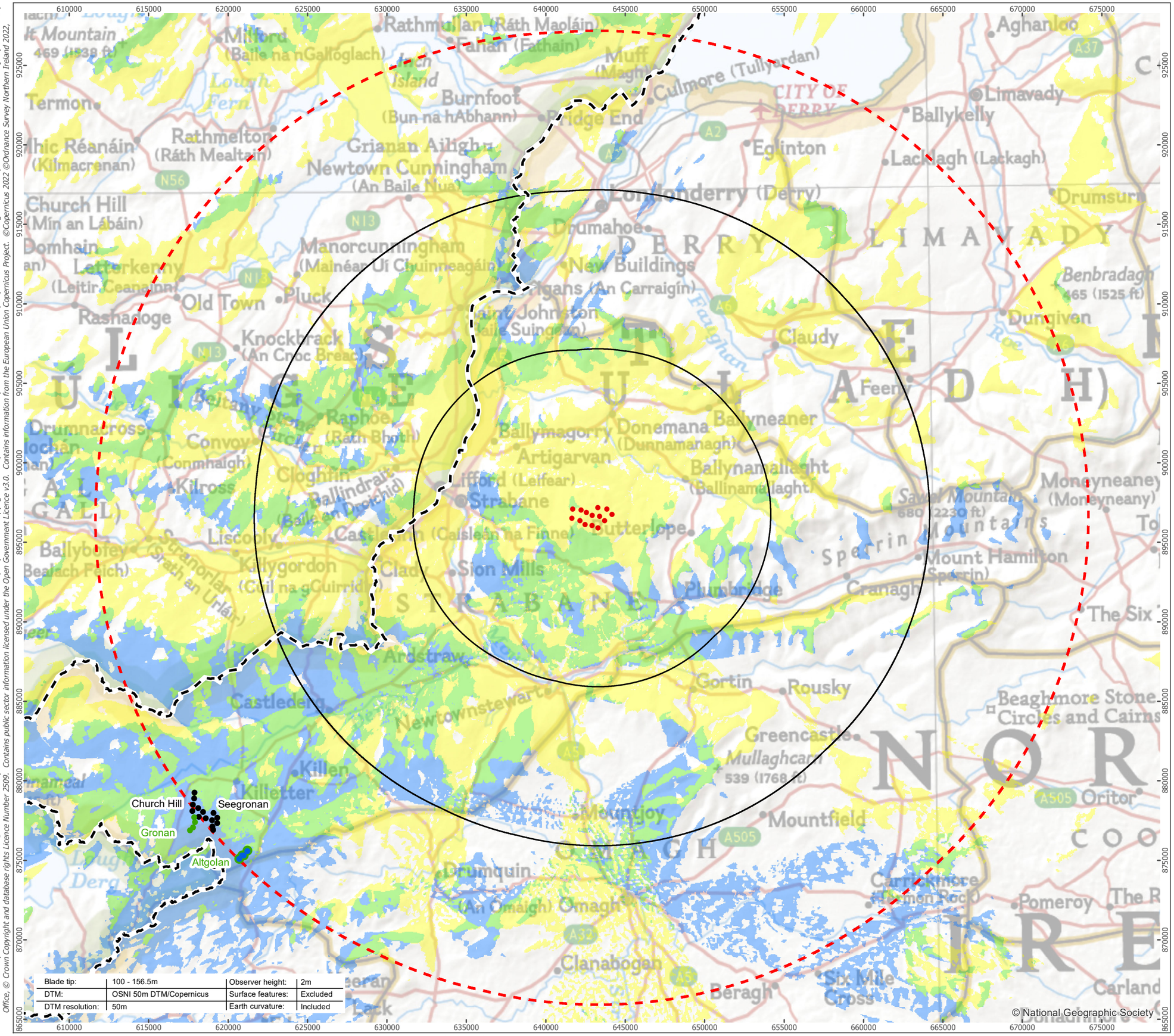

open
optimised environments
PART OF SLR

Ørsted

ERM

- Proposed Wind Turbine
- 10km Radii
- 30km Study Area
- NI/RoI Boundary Line
- Operational Windfarm
- Consented Windfarm
- Appeal; Application Windfarm

CZTV - Owenreagh / Craignagapple + Church Hill, Seegronan, Gronan, and Altgolan

Cumulative Zone of Theoretical Visibility

- Owenreagh / Craignagapple Theoretical Visibility
- Church Hill, Seegronan, Gronan, and Altgolan group Theoretical Visibility
- Combined Theoretical Visibility

1:230,000 Scale @ A3

0 4.5 9 km

NORTH

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Cumulative ZTV
Figure 6.18

Owenreagh / Craignagapple Wind Farm Environmental Statement

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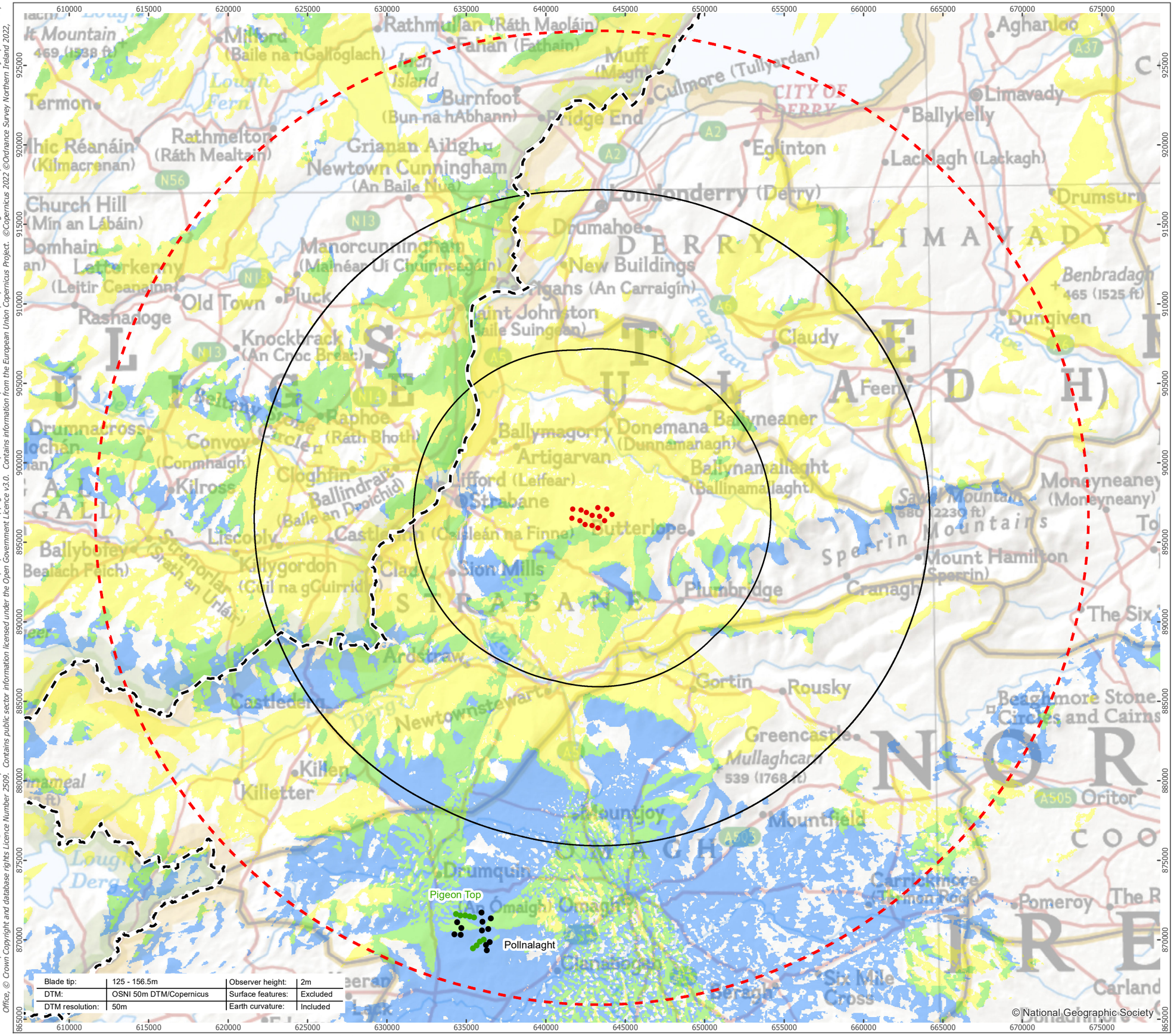

open optimised environments PART OF SLR

Ørsted

ERM

- Proposed Wind Turbine
- 10km Radii
- 30km Study Area
- NI/RoI Boundary Line
- Operational Windfarm
- Consented Windfarm

CZTV - Owenreagh / Craignagapple + Pollnalaght and Pigeon Top

Cumulative Zone of Theoretical Visibility

- Owenreagh / Craignagapple Theoretical Visibility
- Pollnalaght and Pigeon Top group Theoretical Visibility
- Combined Theoretical Visibility

1:230,000 Scale @ A3

0 4.5 9 km

NORTH

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Cumulative ZTV
Figure 6.19

Owenreagh / Craignagapple Wind Farm Environmental Statement

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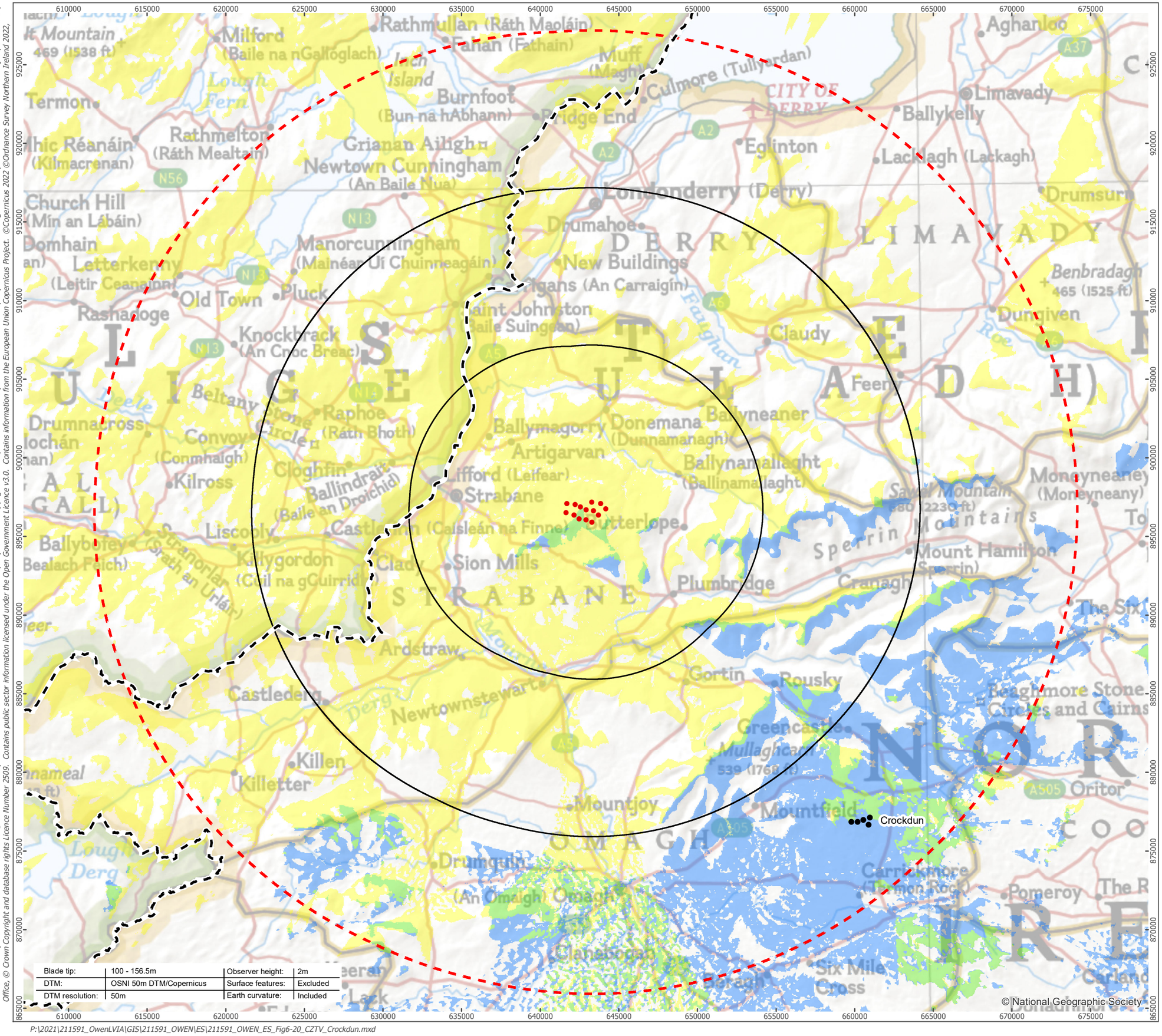

open
optimised environments
PART OF SLR

Ørsted

ERM

- Proposed Wind Turbine
- 10km Radii
- 30km Study Area
- NI/RoI Boundary
- Operational Windfarm

CZTV - Owenreagh / Craignagapple + Crockdun

Cumulative Zone of Theoretical Visibility

- Owenreagh / Craignagapple Theoretical Visibility
- Crockdun Theoretical Visibility
- Combined Theoretical Visibility

1:230,000 Scale @ A3

0 4.5 9 km

NORTH

Produced By: RH	Ref:
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Cumulative ZTV
Figure 6.20

Owenreagh / Craignagapple Wind Farm Environmental Statement

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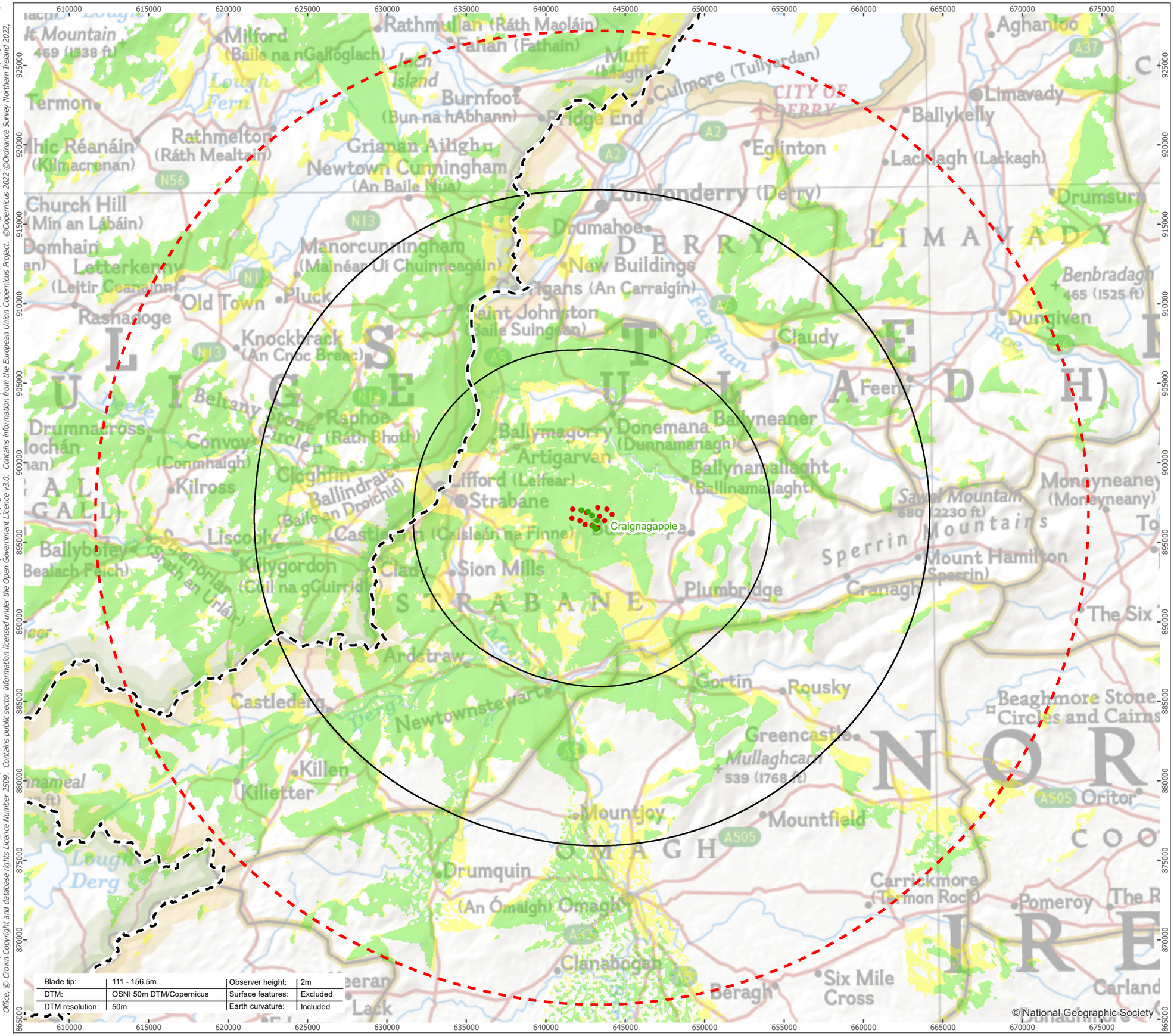
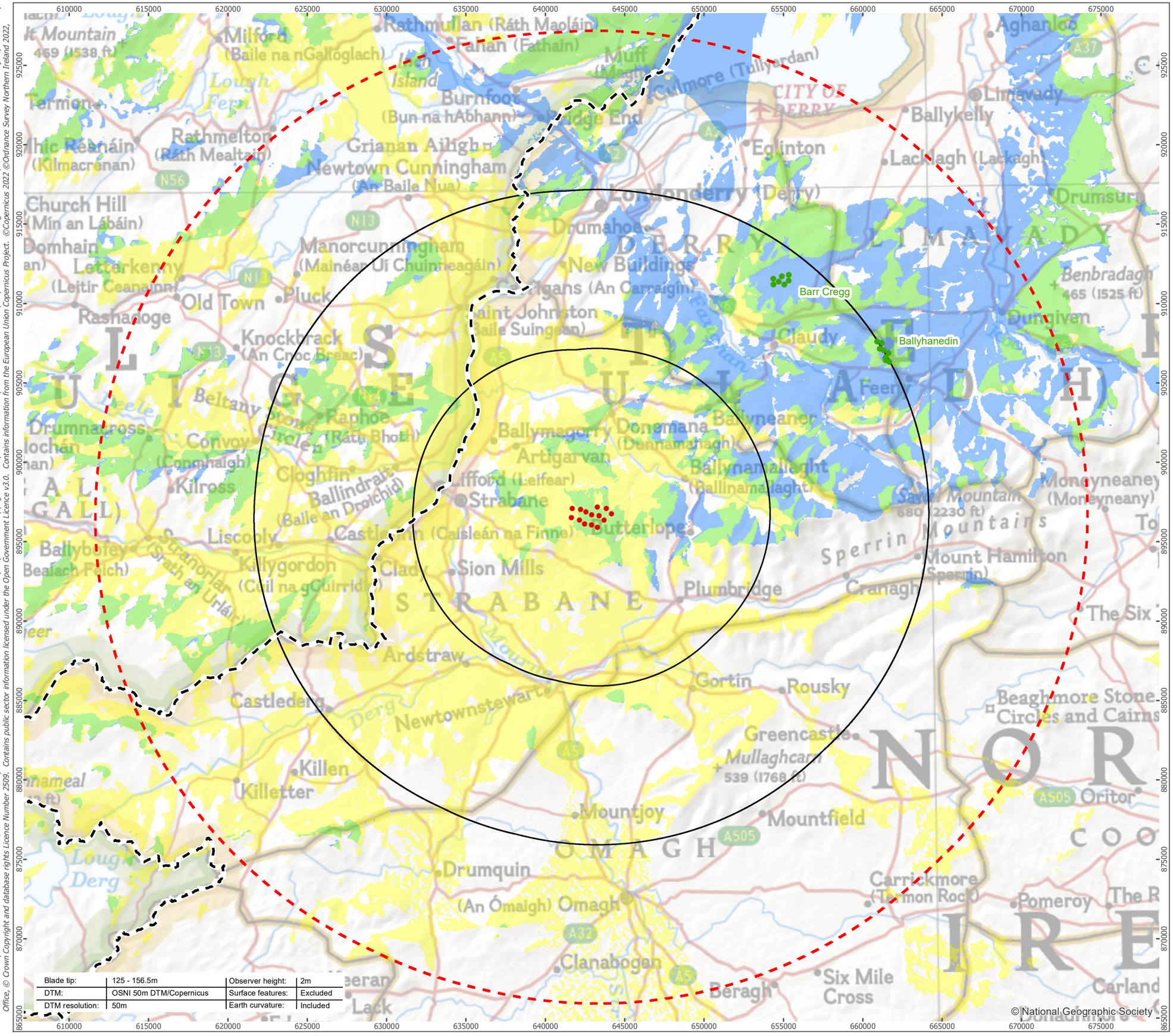

Craignagapple
Londonderry (Derry)
Strabane
Omagh
Sperrin Mountains
Newtownstewart
Castlederg
Claudy
Eglinton
Limavady
Ballykelly
Dungiven
Benbradagh
465 (1525 ft)
Mullaghcarn
539 (1768 ft)
Saddle Mountain
680 (2230 ft)
Mount Hamilton (Sperrin)
Beaghmore Stone Circles and Cairns
Carrickmore (Tamnamore Rock)
Pomeroy
Six Mile Cross
Clanabogan
Drumquin
Mountfield
Mountjoy
Killeter
Killen
Plumbridge
Sion Mills
Donemana
Artigarvan
Ballymagorry
Ballynamallaght
Ballyneaner
Castlederg
Ardstraw
Gortin
Rousky
Greencastle
Carland
Beragh
Oritor
Moneyneaney
Drumsurn
Lackagh (Lackagh)
Aghanloo
Culmore (Tullyordan)
Muff (Magh)
Fahan (Fathain)
Rathmullan (Ráth Maoláin)
Milford (Baile na nGalloglach)
Burnfoot (Bun na hAbhann)
Bridge End
Grianan Ailigh
Newtown Cunningham (An Baile Nua)
Manorcunningham (Mainéar Ui Chuinneagáin)
Drumahoe
New Buildings
Carrigans (An Carraigín)
Saint Johnston (Baile Suingean)
Raphoe (Ráth Bhoth)
Convoy (Conmhaigh)
Kilross
Liscooly
Kilygordon (Cúil na gCuirrín)
Clady
Clifford (Leifear)
Castlefin (Caisleán na Finne)
Ballybofey (Bealach Féich)
Termon
Rathmelton (Ráth Mealtain)
Church Hill (Mín an Lábáin)
Letterkenny (Leitir Ceanainn)
Old Town
Pluck
Knockbrack (An Cnoc Breac)
Rashaloge
Drumnaforgan
Beltany Stone Circle
Feeny
Monreyneany (Monreyneany)
The Six
Lough Derg
Lough Foyle
Lough Swilly
Lough Fern
Lough Erne
Lough Neagh
Lough Island
Foyle
Faughan
Roe
Mourne
Derry
Tyrone
Donegal
Fermanagh
Antrim
Limavady
Coleraine
Cookstown
Omagh
Strabane
Fermanagh
Donegal
Derry
Tyrone



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open optimised environments PART OF SLR

Ørsted

ERM

- Proposed Wind Turbine
- 10km Radii
- 30km Study Area
- NI/RoI Boundary
- Consented Windfarm

CZTV - Owenreagh / Craignagapple + Barr Cregg and Ballyhanedin

Cumulative Zone of Theoretical Visibility

- Owenreagh I Repower and Craignagapple Extn. Theoretical Visibility
- Barr Cregg and Ballyhanedin group Theoretical Visibility
- Combined Theoretical Visibility

1:230,000 Scale @ A3

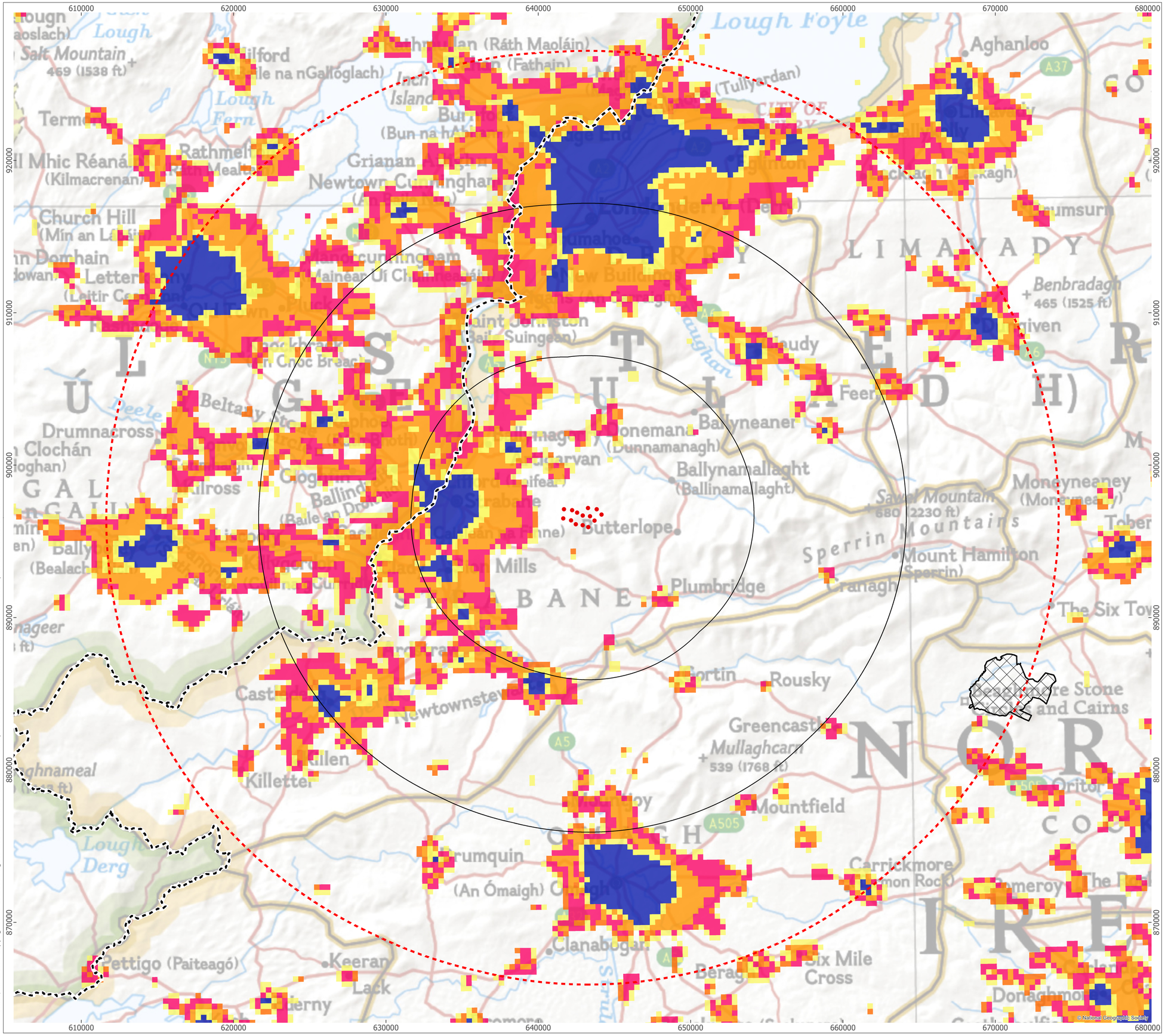
0 4.5 9 km

NORTH

Produced By: RH	Ref:
Checked By: JP	Date: 22/03/2023

Cumulative ZTV
Figure 6.22

Owenreagh / Craignagapple Wind Farm Environmental Statement



open
optimised environments
PART OF SLR

Ørsted

ERM

- Proposed Wind Turbine
- 10km Radii
- 30km Study Area
- NI/RoI Boundary Line
- Davagh Dark Skies Boundary

NASA VIIRS 2021 (wavelength (nm))
High : 255 (Brightest)
Low : 0 (Darkest)

1:120,000 Scale @ A1

0 4.5 9 km

NORTH

Produced By: RH	Ref:
Checked By: JP	Date: 31/03/2023

Baseline Light Pollution
Figure 6.14

Owenreagh / Craignagapple Wind Farm Environmental Statement

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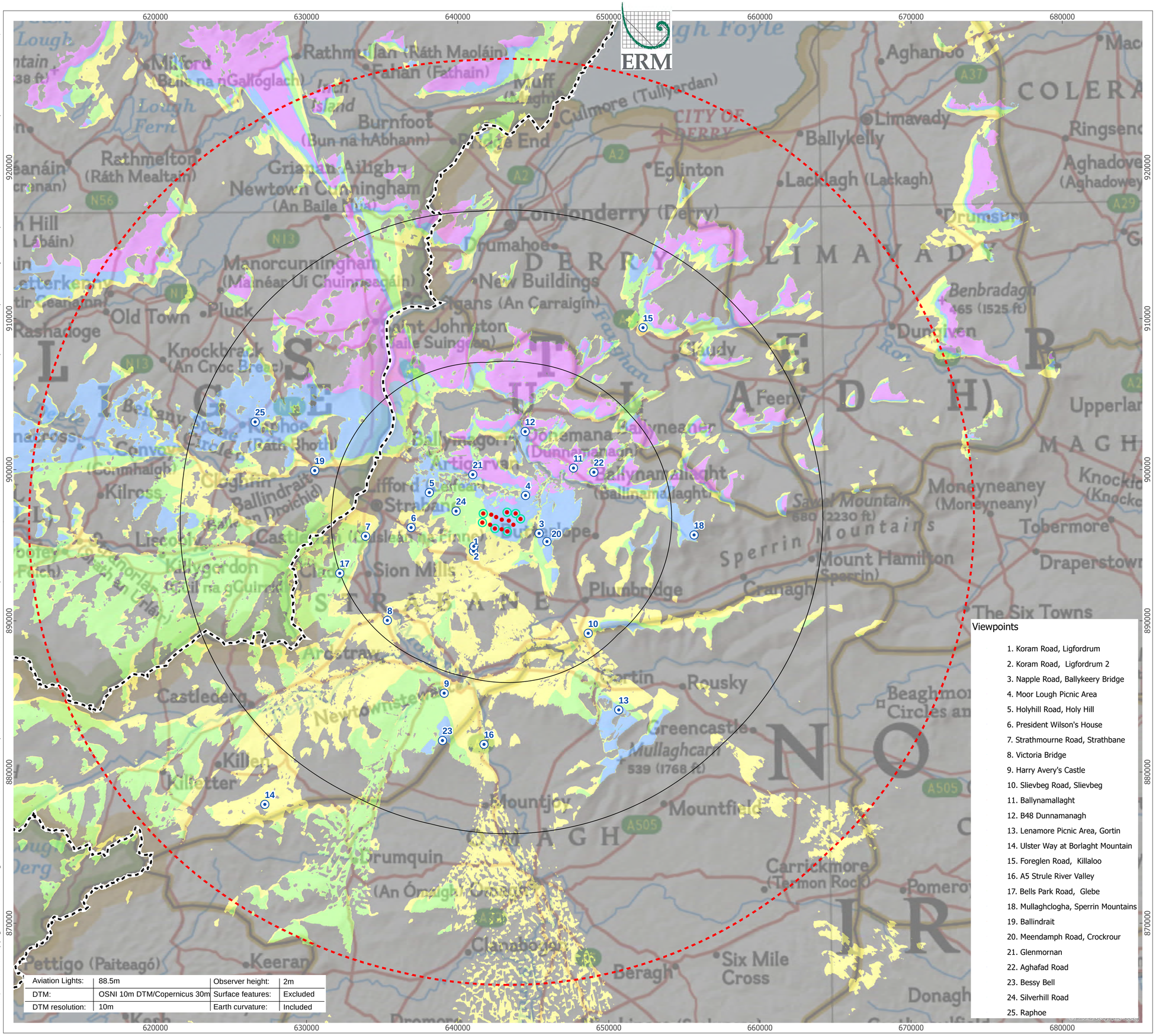

open optimised environments PART OF SLR

Ørsted

ERM

- Proposed Wind Turbine
- Civil Aviation lighting (steady red, 2000 candela)
- 10km Radii
- 30km Study Area
- NI/RoI Boundary Line
- Viewpoint Location

ZTV (turbine hub height assumed to be lit with aviation lights)

No. of Lights Theoretically Visible

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

1:120,000 Scale @ A1

0 4.5 9 km

NORTH

Produced By: RH	Ref:
Checked By: JP	Date: 04/04/2023

ZTV of Turbine Hub Lighting
Figure 6.24

Owenreagh / Craignagapple Wind Farm
Environmental Statement

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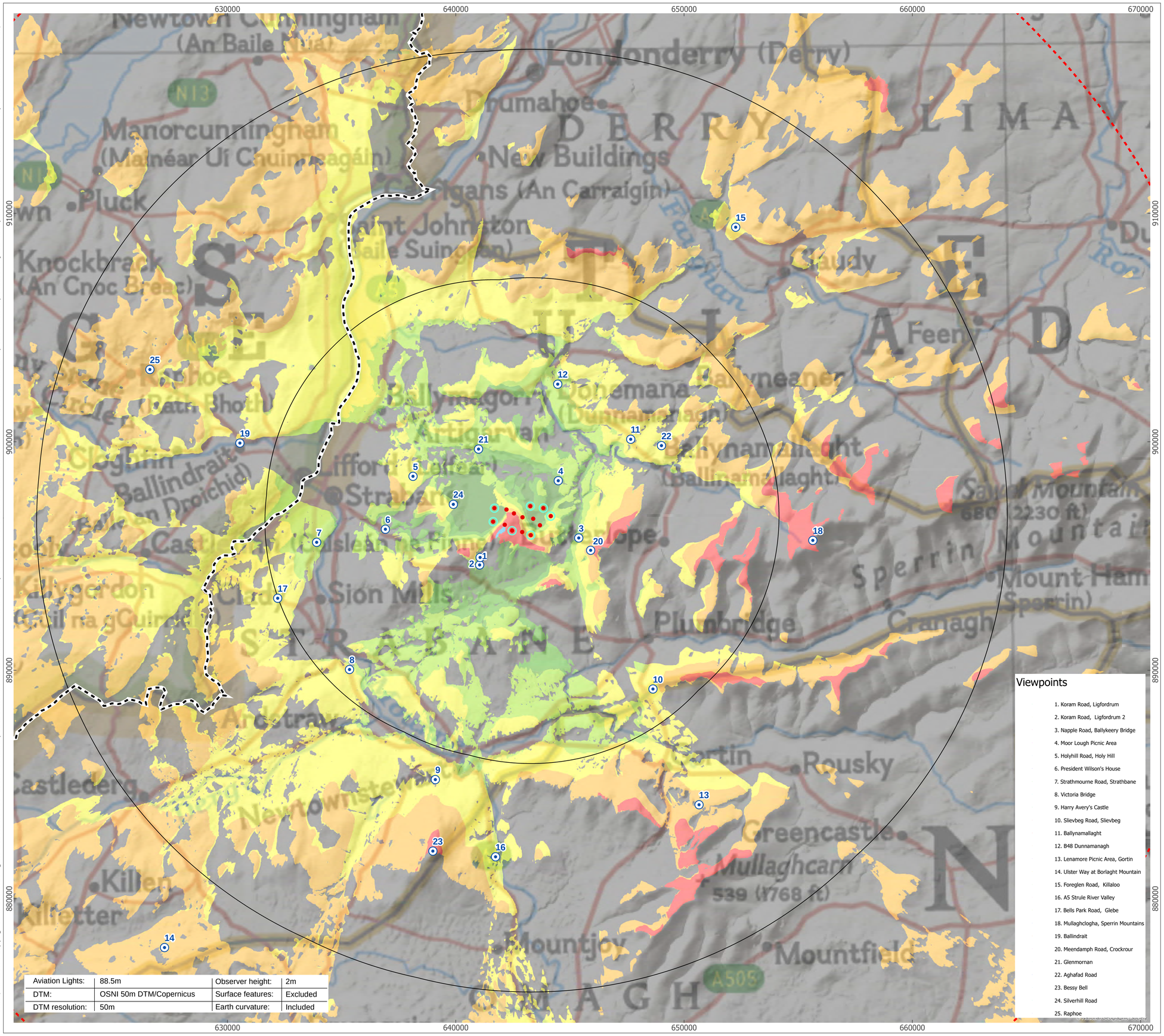

Aviation Lights:	88.5m	Observer height:	2m
DTM:	OSNI 50m DTM/Copernicus	Surface features:	Excluded
DTM resolution:	50m	Earth curvature:	Included

open optimised environments PART OF SLR

Ørsted

ERM

- Proposed Wind
- Civil Aviation lighting (steady red, 2000 candela)
- 10km
- 30km Study
- NI/RoI Boundary
- Viewpoint Location

Intensity of Turbine Light shown in Candelas (cd)

Intensity of Turbine Light shown in Candelas (cd)		
Vertical angle	Turbine Lighting Intensity	
	2000cd scenario	200cd scenario
Above 6°	<100cd	<10cd
2° to 6°	775 to 100cd	77.5 to 10cd
0° to 2°	2100 to 775cd	210 to 77.5cd
0° to -1	2100 to 750cd	210 to 75cd
-1° to -2°	750 to 75cd	75 to 7.5cd
-2° to -3°	75 to 32cd	7.5 to 3.2cd
-3° to -4°	32 to 13cd	3.2 to 1.3cd
Below -4°	<13cd	<1.3cd

Notes

1. The lighting intensity for each of the vertical angles shown is based on information provided by an aviation warning light manufacturer (See appendix).

2. Reduced intensity turbine lighting (200cd) based on 'Air Navigation Order 2016 (CAP393) Article 223 (8)' which allows the 2000cd turbine light to be 'reduced to not less than 10% of the minimum peak intensity specified ' i.e. 200cd 'if visibility in all directions from every wind turbine generator in a group is more than 5km '.

3. Perception of theoretical candela intensity does not take account of distance .

4. ZTV calculations do not take into account surface features such as forestry or buildings.

5. ZTV calculations for turbine lighting intensity are based on visible aviation lighting mounted on the turbine nacelle.

6. The ZTV calculates the degree of vertical angle from the study are a shown to each of the Proposed Development turbines.

7. ZTV calculations represent a worst case situation where predicted lighting intensity may be as a result of only one turbine in the layout.

1:80,000 Scale @ A1

0 2.5 5 km

NORTH

Produced By: RH	Ref:
Checked By: JP	Date: 04/04/2023

Lighting Intensity
Figure 6.25

Owenreagh / Craignagapple
Wind Farm
Environmental Statement

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