

A green icon consisting of two right-pointing chevrons.

Coille Linne Wind Farm

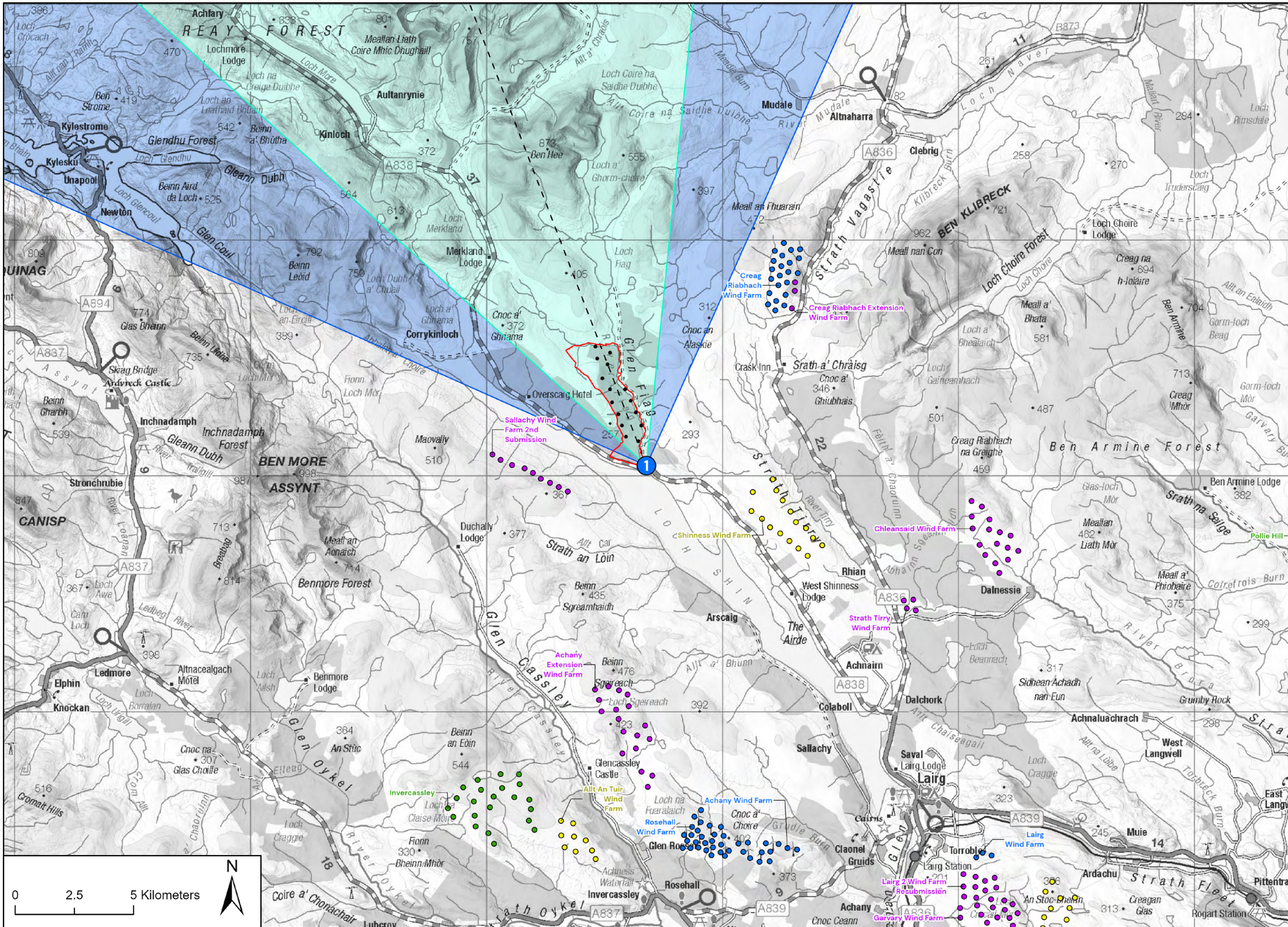
Environmental Impact Assessment Report
Volume 3: NatureScot Visualisations

Energiekontor UK Ltd

June 2025

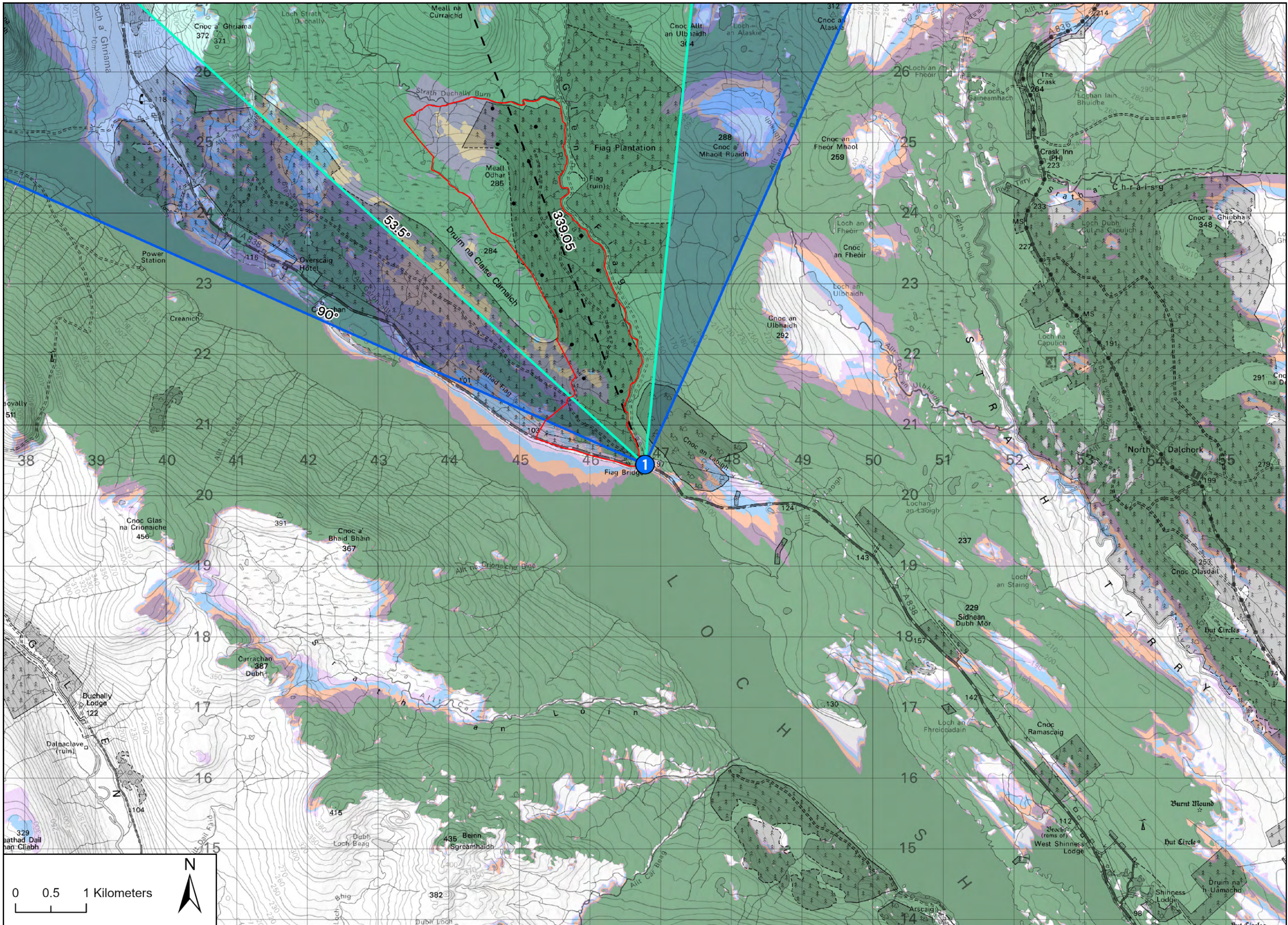
VOLUME 3: NATURESCOT VISUALISATIONS - CONTENTS

Visualisation Number	Title	
Viewpoint 1	A838 near Fiag Bridge (<i>Night-time Visualisation</i>)	Sheets A – J
Viewpoint 2	Loch Fiag	Sheets A- D
Viewpoint 3	A838 near Overscaig Hotel (<i>Night-time Visualisation</i>)	Sheets A - H
Viewpoint 4	A838 near Sithean Dubh Mor	Sheets A - D
Viewpoint 5	A836 near Crask Inn	Sheets A - D
Viewpoint 6	Moavally	Sheets A - D
Viewpoint 7	Ben Hee	Sheets A - D
Viewpoint 8	Arscaig	Sheets A - D
Viewpoint 9	A838 near West Shinness Lodge	Sheets A - D
Viewpoint 10	Ben Sgeireach	Sheets A - D
Viewpoint 11	A836 near Rhian Bridge	Sheets A - D
Viewpoint 12	Ben More Assynt	Sheets A - D
Viewpoint 13	Ben Klibreck (<i>Meall nan Con</i>)	Sheets A - D
Viewpoint 14	A836 near An t-Sron (<i>Night-time Visualisation</i>)	Sheets A - D
Viewpoint 15	The Ord	Sheets A - D
Viewpoint 16	Torroble	Sheets A - H
Viewpoint A	Beinn Leoid	Sheets A - C
Viewpoint B	Ben Hope	Sheets A - C
Viewpoint C	Ben Loyal	Sheets A - C
Viewpoint D	Carn a Choin Deirg*	Sheets A - C



Viewpoint Location Plan - Site Context and Cumulative Wind Farms - Scale 1:150,000

COILLE LINNE WIND FARM



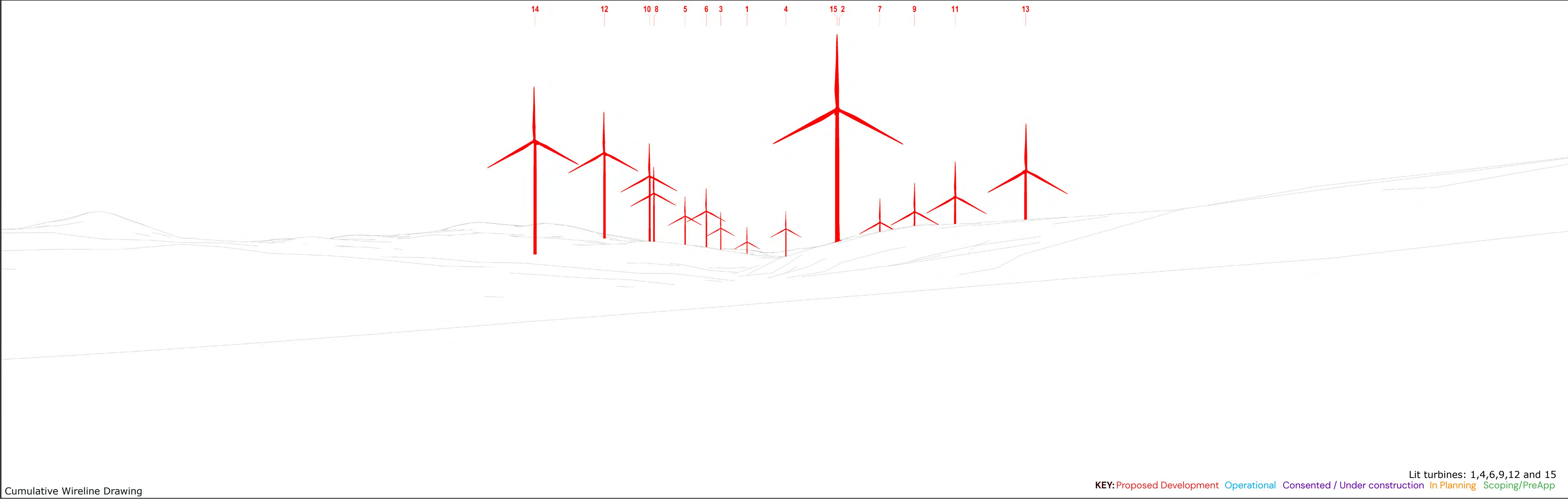
Viewpoint Location Plan - Visual Extents and Blade Tip ZTV - Scale 1:50,000

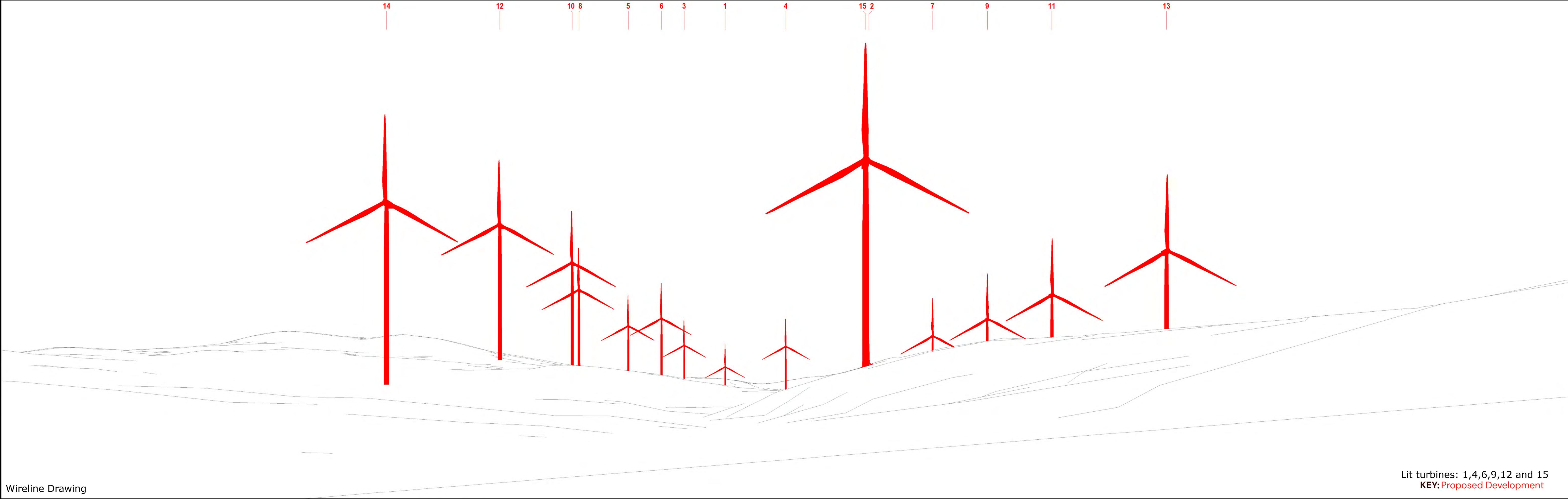
- Key**
- Application Boundary
 - Turbine Layout
- Blade Tip Zone of Theoretical Visibility (250m)
- 1 to 3 Turbines Visible
 - 4 to 6 Turbines Visible
 - 7 to 9 Turbines Visible
 - 10 to 12 Turbines Visible
 - 13 to 15 Turbines Visible
- Wind Farm Status
- Operational
 - Consented / Under Constructed
 - In Planning / Application
 - Scoping
- Viewpoint Information
- L VIA Viewpoint
 - Centre of Visualisation (Bearing)
 - 53.5° Field of View
 - 90° Field of View



Baseline Photograph

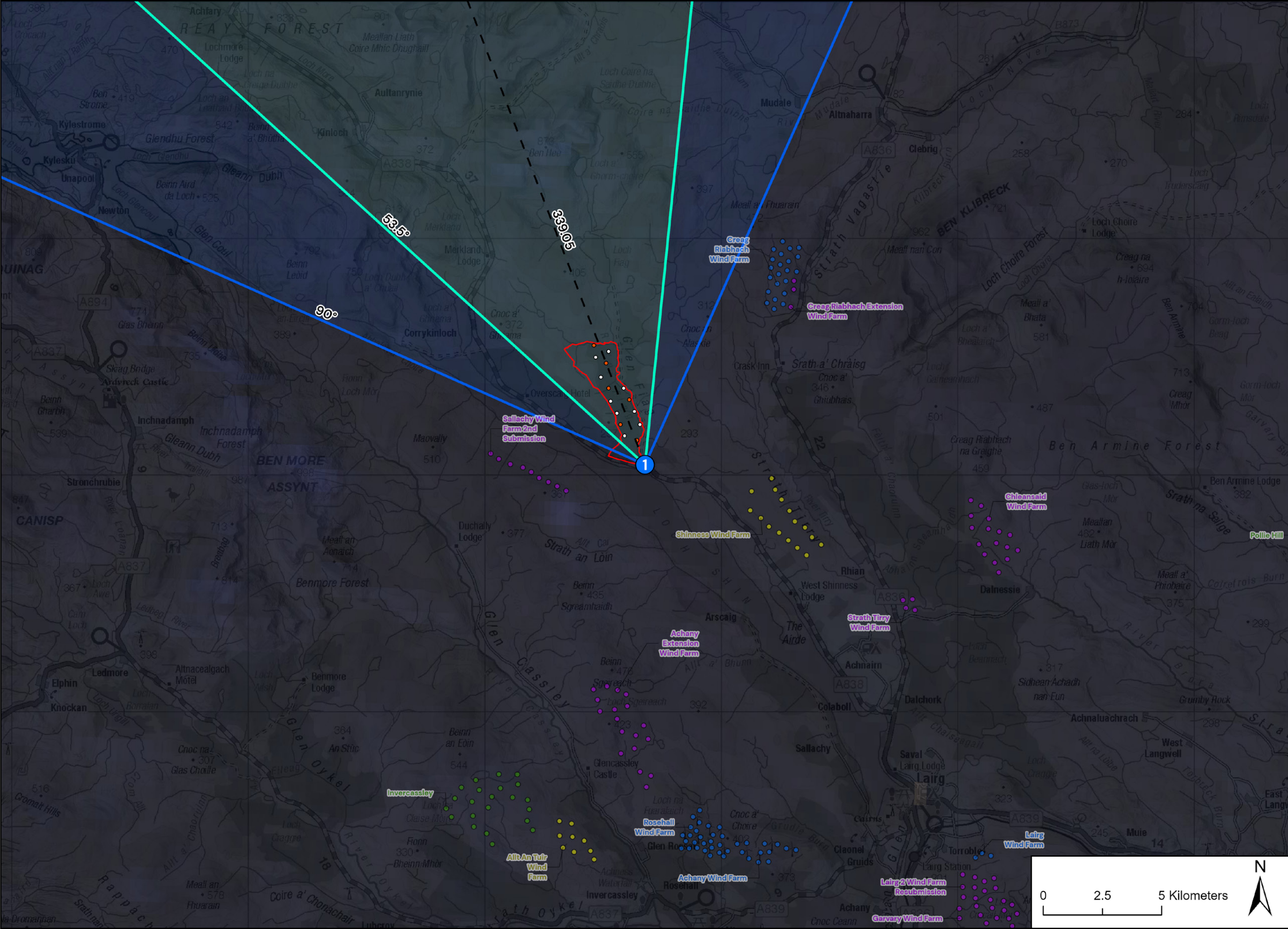
Extent of 53.5 degrees panorama



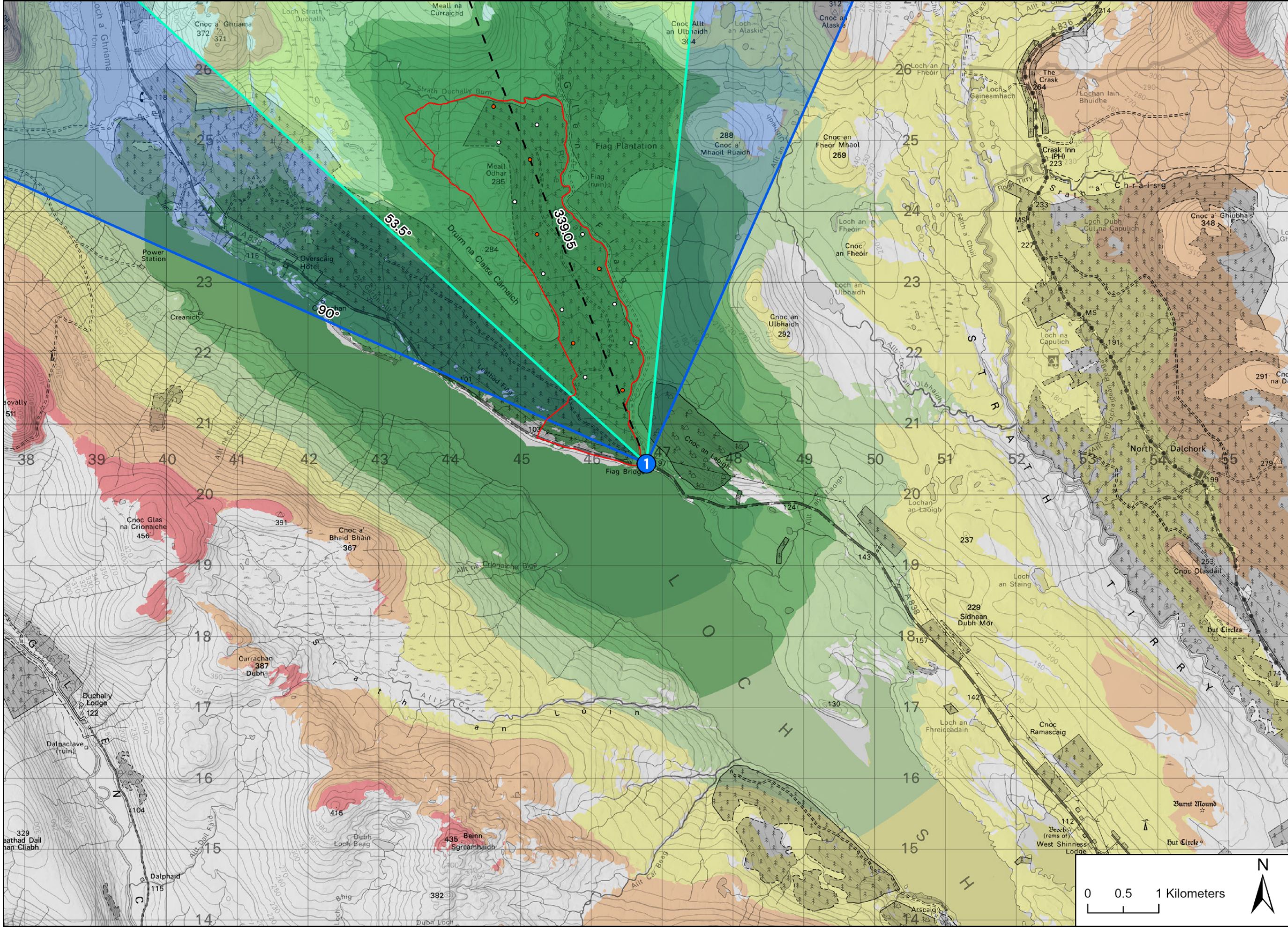




Photomontage



Viewpoint Location Plan - Site Context, Cumulative Wind Farms and Dark Sky Baseline Satellite Image - Scale 1:150,000



Viewpoint Location Plan - Visual Extents and Turbine Lighting Intensity ZTV - Scale 1:50,000

Key

- Application Boundary
- Turbine Layout (No Aviation Light)
- Turbine Layout Fitted with Steady Red Aviation Light

Other Wind Farms (Status)

- Operational
- Consented / Under Constructed
- In Planning
- Scoping

Viewpoint Information

- L VIA Viewpoint
- Centre of Visualisation (Bearing)
- 53.5° Field of View
- 90° Field of View

Dark Sky Baseline Satellite Image

- Visible Light

Source: The Applicant acknowledges the use of imagery provided by services from NASA's Global Imagery Browse Services (GIBS), part of NASA's Earth Observing System Data and Information System (EOSDIS)

Turbine Lighting Intensity ZTV

INTENSITY OF TURBINE LIGHT SHOWN IN CANDELA [CD]		
VERTICAL ANGLE	2000 CD LIGHT	200 CD LIGHT
3° TO 0°	UP TO 2500 CD	UP TO 250 CD
0° TO -1°	2185 CD TO 982 CD	218 CD TO 98 CD
-1° TO -2°	982 CD TO 413 CD	98 CD TO 41 CD
-2° TO -3°	413 CD TO 217 CD	41 CD TO 21 CD
-3° TO -4°	217 CD TO 172 CD	21 CD TO 17 CD
BELOW -4°	BELOW 172 CD	BELOW 17 CD

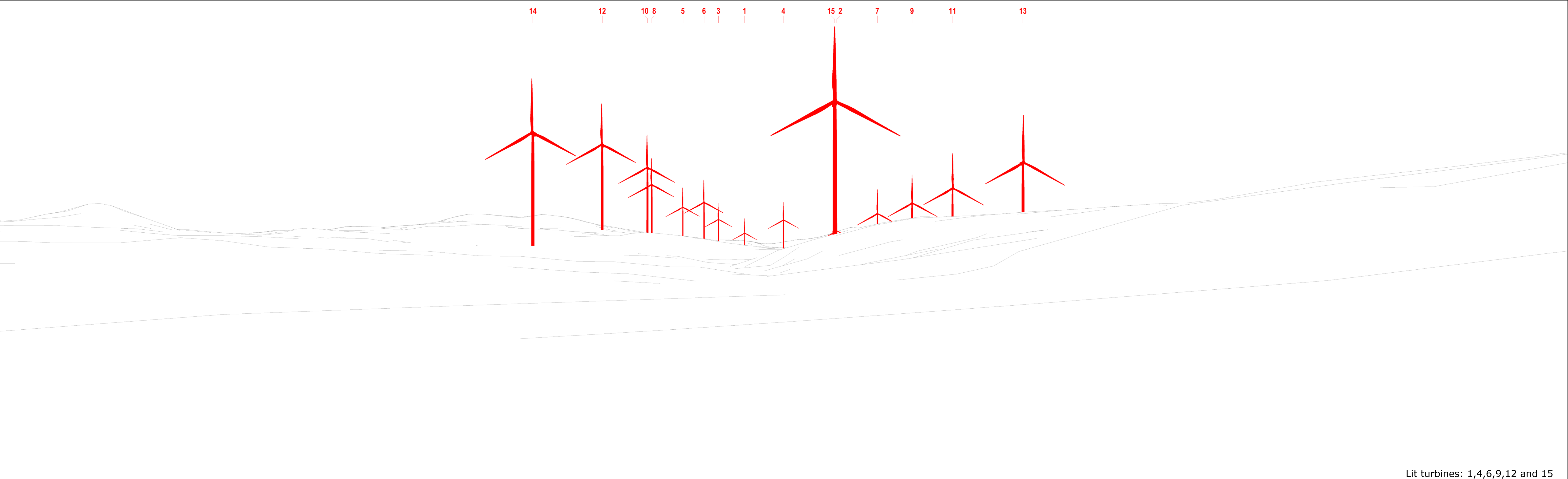
NOTES

- A reduced lighting scheme has been agreed with the Civil Aviation Authority (CAA) and it is proposed six of the eight turbines would be lit (T1, T4, T6, T9, T12 and T15).
- The visible turbine lights will be switched on between Evening Civil Twilight and Morning Civil Twilight. Approximately 11 hours per day averaged over the year.
- Civil Aviation Authority SARG Policy Statement (2017) states "If the horizontal meteorological visibility in all directions from every wind turbine generator in a group is more than 5 km, the intensity for the light positioned as close as practicable to the top of the fixed structure required to be fitted to any generator in the wind farm and displayed may be reduced to not less than 10% of the minimum peak intensity."
- The lighting intensity for each of the vertical angles shown in the above table has been provided by Contemex (Light Bulb Manufacturer) and is based on optimal test conditions in a calibration chamber.
- The perception of theoretical candela intensity does not take account of atmospheric attenuation (reduction in brightness over distance).
- The ZTV does not take account of surface features such as buildings or forestry.
- The ZTV has been produced using OS Terrain 5 height data and calculates the difference in vertical angle between the turbine lights and the study area.
- The ZTV represents a reasonable worst case and the theoretical lighting intensity illustrated may be the result of a single turbine within the group.
- Actual visibility is likely to be less than predicted due to a range of other factors considered in Appendix 6.8 of the L VIA which include the darkness adaptation of individual receptors and weather obscuration.

Further technical information can be found in Appendix 6.8 Night-time Lighting Assessment Methodology.



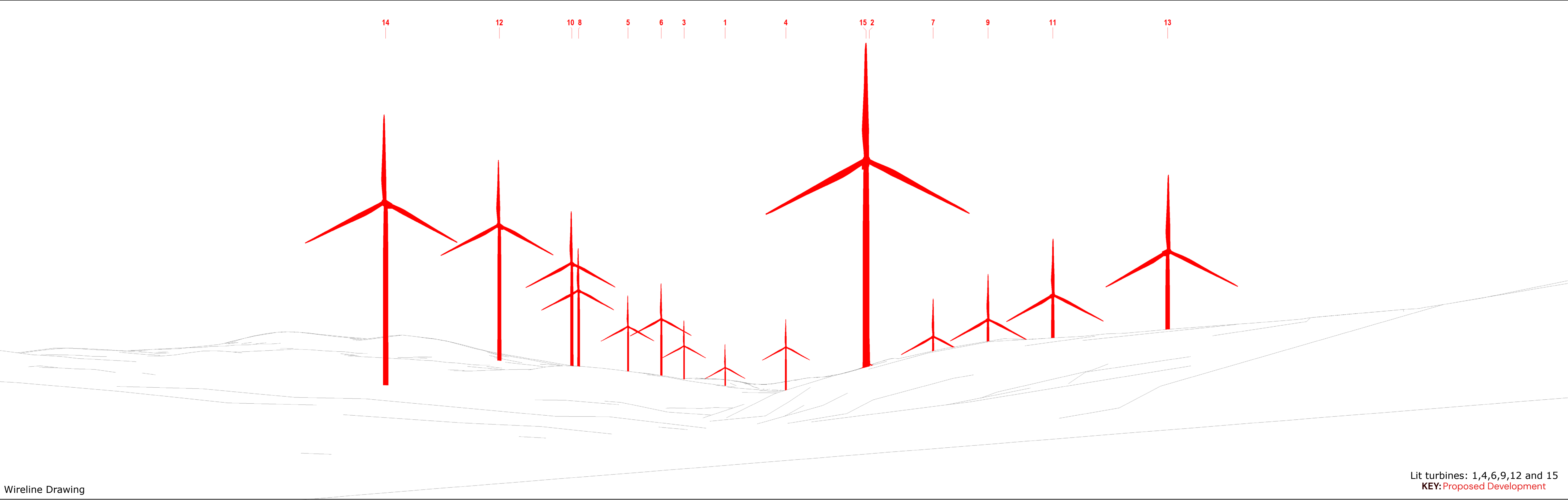
Baseline Photograph



Cumulative Wireline Drawing

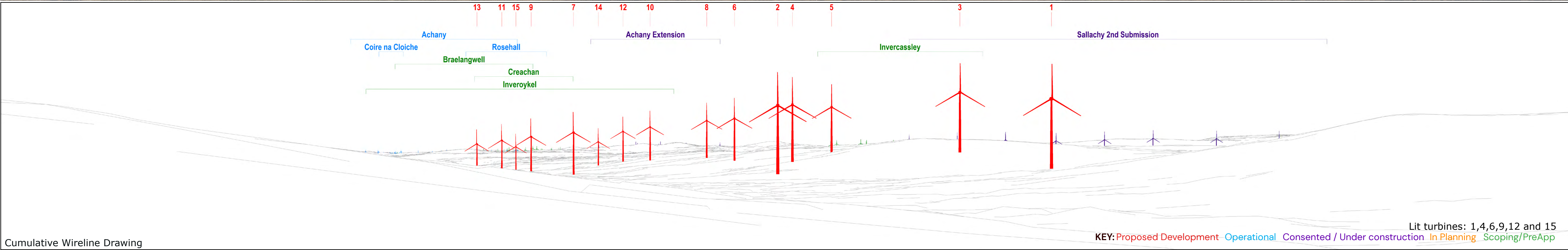
KEY: Proposed Development Operational Consented / Under construction In Planning Scoping/PreApp

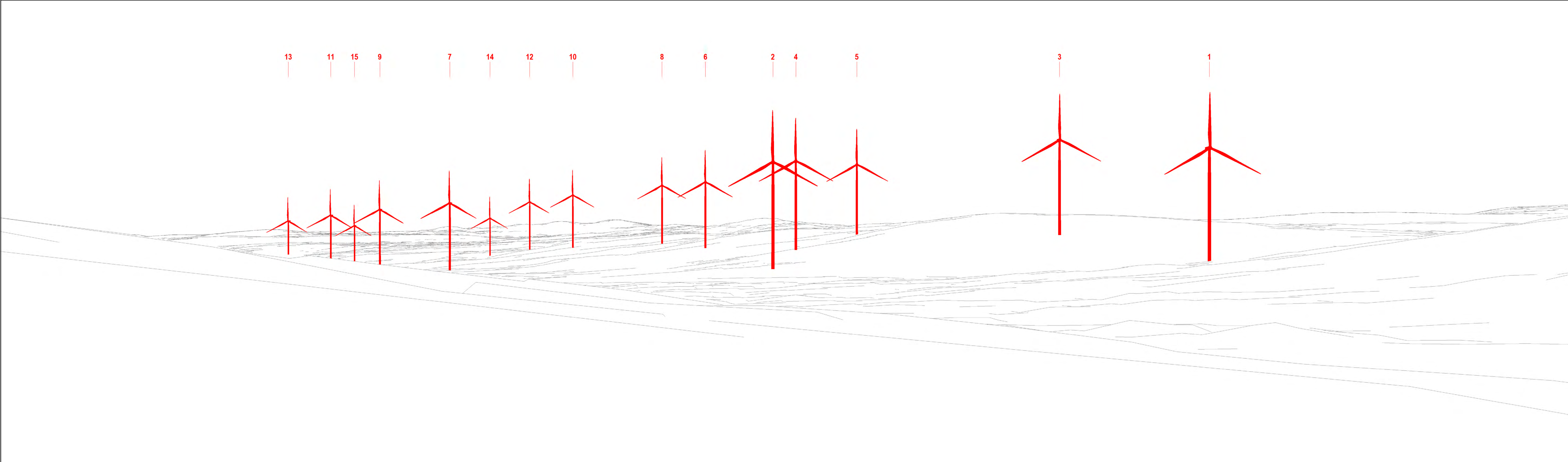
Lit turbines: 1,4,6,9,12 and 15





Photomontage





Wireline Drawing

Lit turbines: 1,4,6,9,12 and 15
KEY: Proposed Development



Photomontage

Viewpoint Information

COILLE LINNE WIND FARM

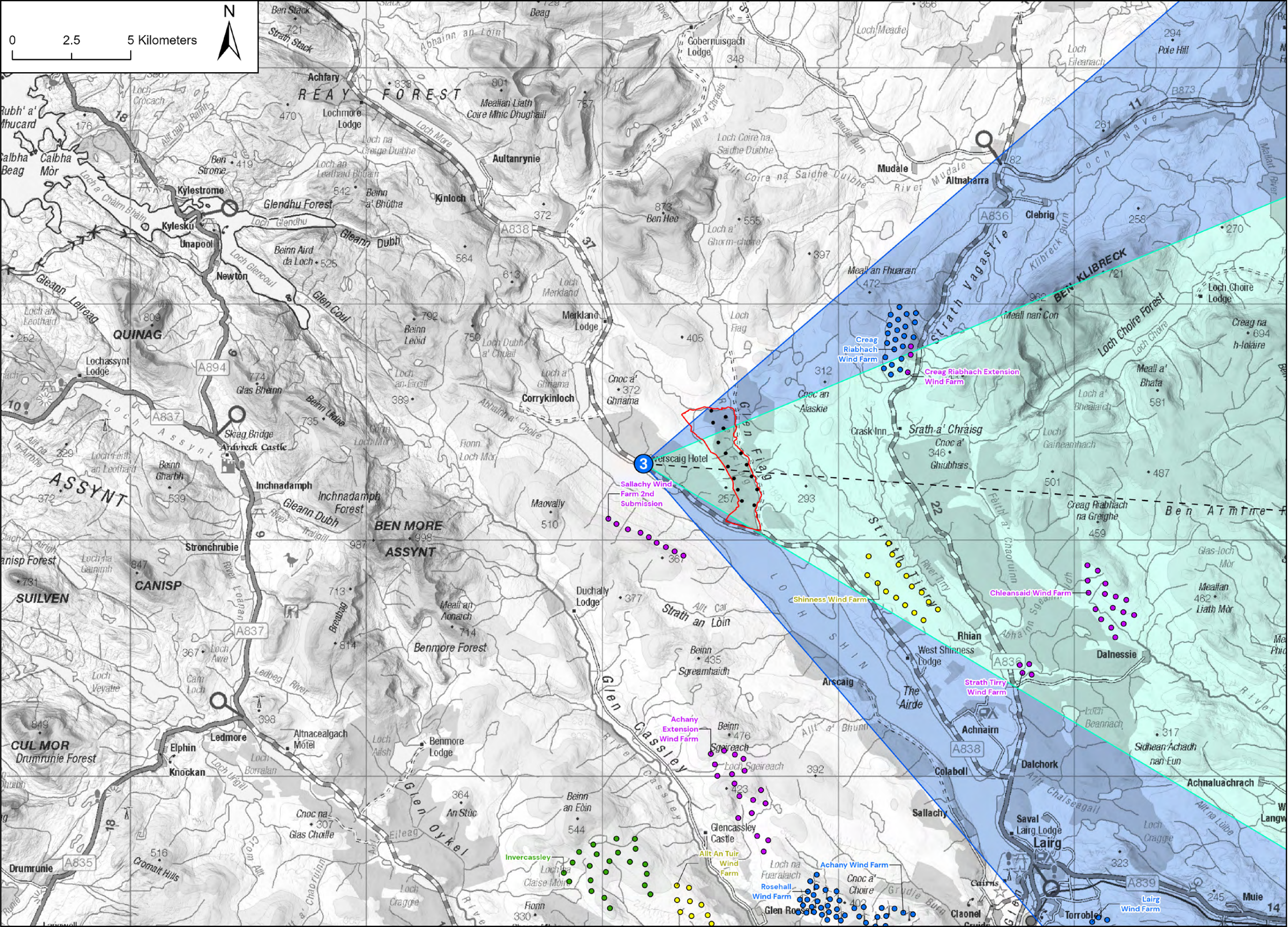
OS Reference: E245506, N927664
Ground level: 221m (AOD)

Distance to nearest turbine: 2360m (T1)
Bearing to centre of photograph: 186.92°

Angle of view: 53.5° (planar)
Principal distance: 812.5mm
Paper size: 841 x 297 mm (half A1)
Correct printed image size: 820 x 260mm

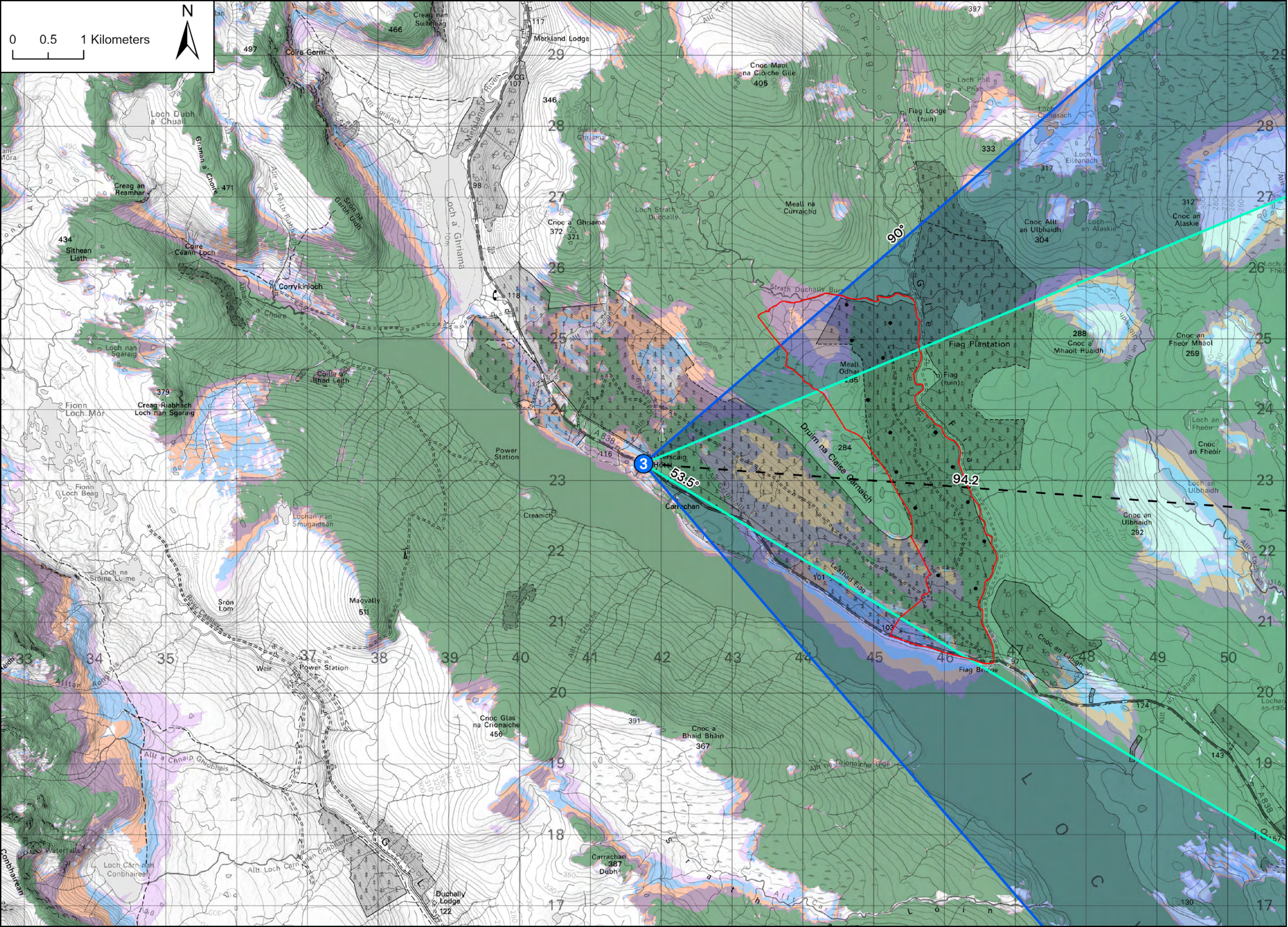
Camera: Nikon Z 6 II, FFS
Lens: 50mm Fixed Focal Lens
Height: 1.5m
Date & Time: 18/09/2024 @ 16:41





Viewpoint Location Plan - Site Context and Cumulative Wind Farms - Scale 1:150,000

COILLE LINNE WIND FARM

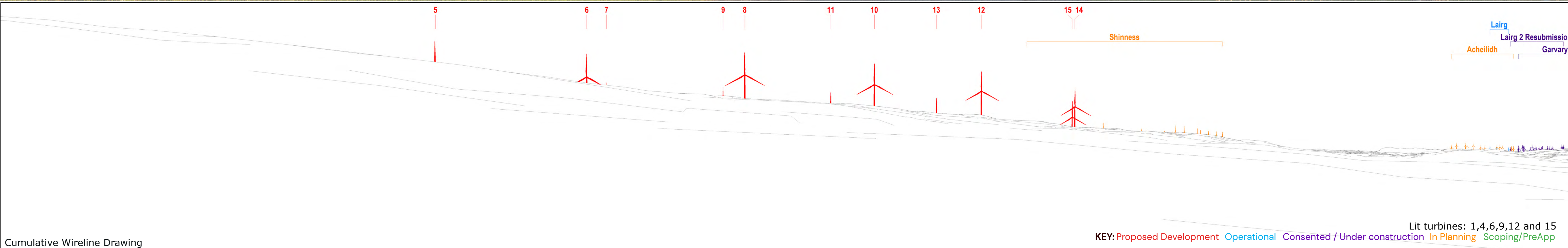


Viewpoint Location Plan - Visual Extents and Blade Tip ZTV - Scale 1:50,000

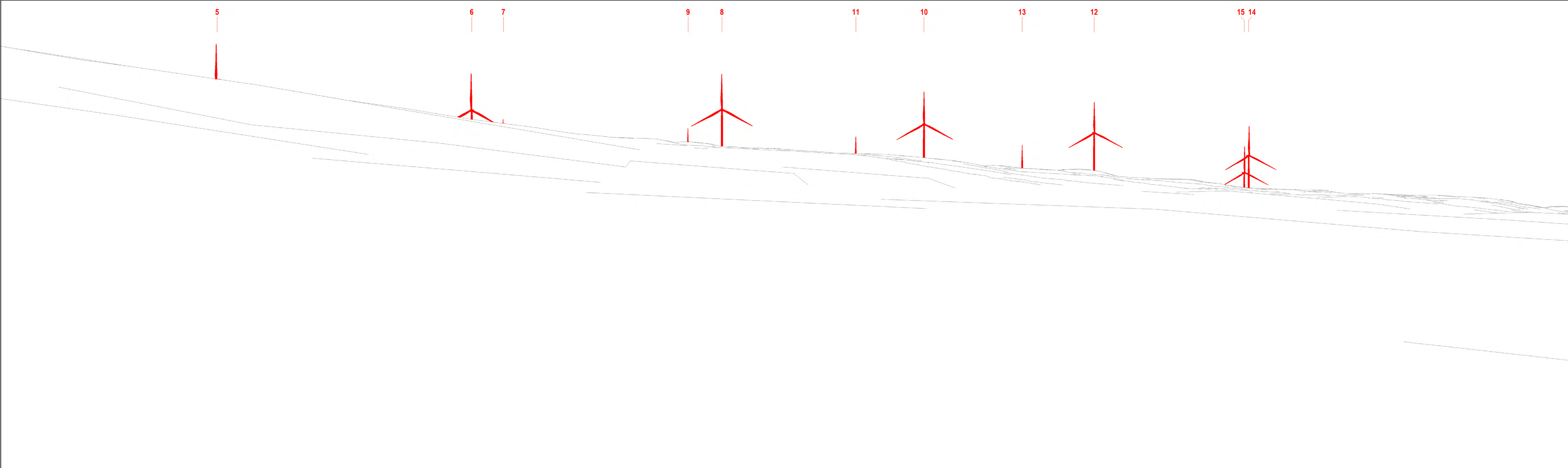
- Key**
- Application Boundary
 - Turbine Layout
- Blade Tip Zone of Theoretical Visibility (250m)
- 1 to 3 Turbines Visible
 - 4 to 6 Turbines Visible
 - 7 to 9 Turbines Visible
 - 10 to 12 Turbines Visible
 - 13 to 15 Turbines Visible
- Wind Farm Status
- Operational
 - Consented / Under Constructed
 - In Planning / Application
 - Scoping
- Viewpoint Information
- LVIA Viewpoint
 - Centre of Visualisation (Bearing)
 - 53.5° Field of View
 - 90° Field of View



Baseline Photograph



Cumulative Wireline Drawing



Wireline Drawing

Lit turbines: 1,4,6,9,12 and 15
KEY: Proposed Development



Photomontage

Viewpoint Information

COILLE LINNE WIND FARM

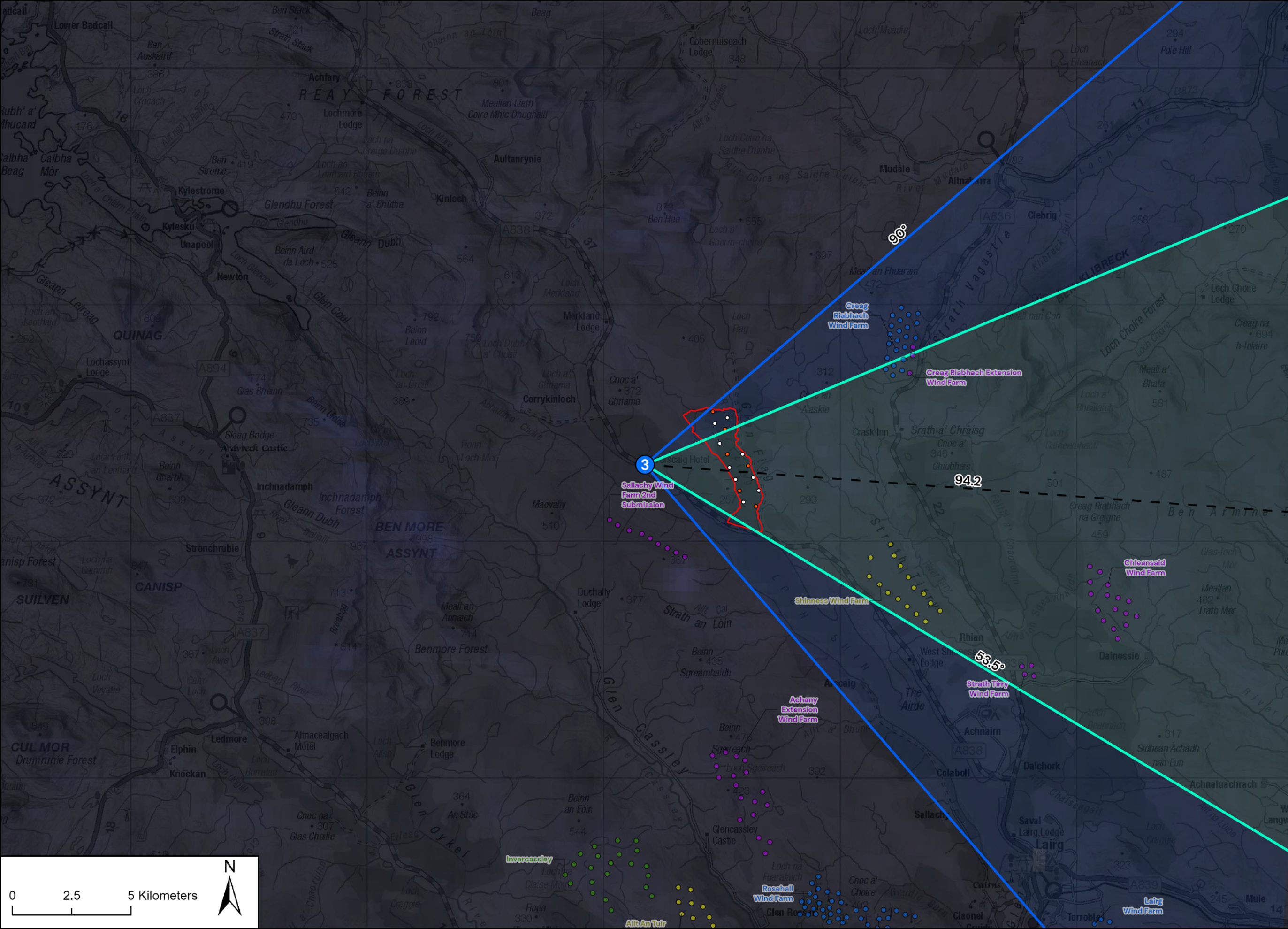
OS Reference: E241749, N923235
Ground level: 117m (AOD)

Distance to nearest turbine: 3291m (T5)
Bearing to centre of photograph: 94.2°

Angle of view: 53.5° (planar)
Principal distance: 812.5mm
Paper size: 841 x 297 mm (half A1)
Correct printed image size: 820 x 260mm

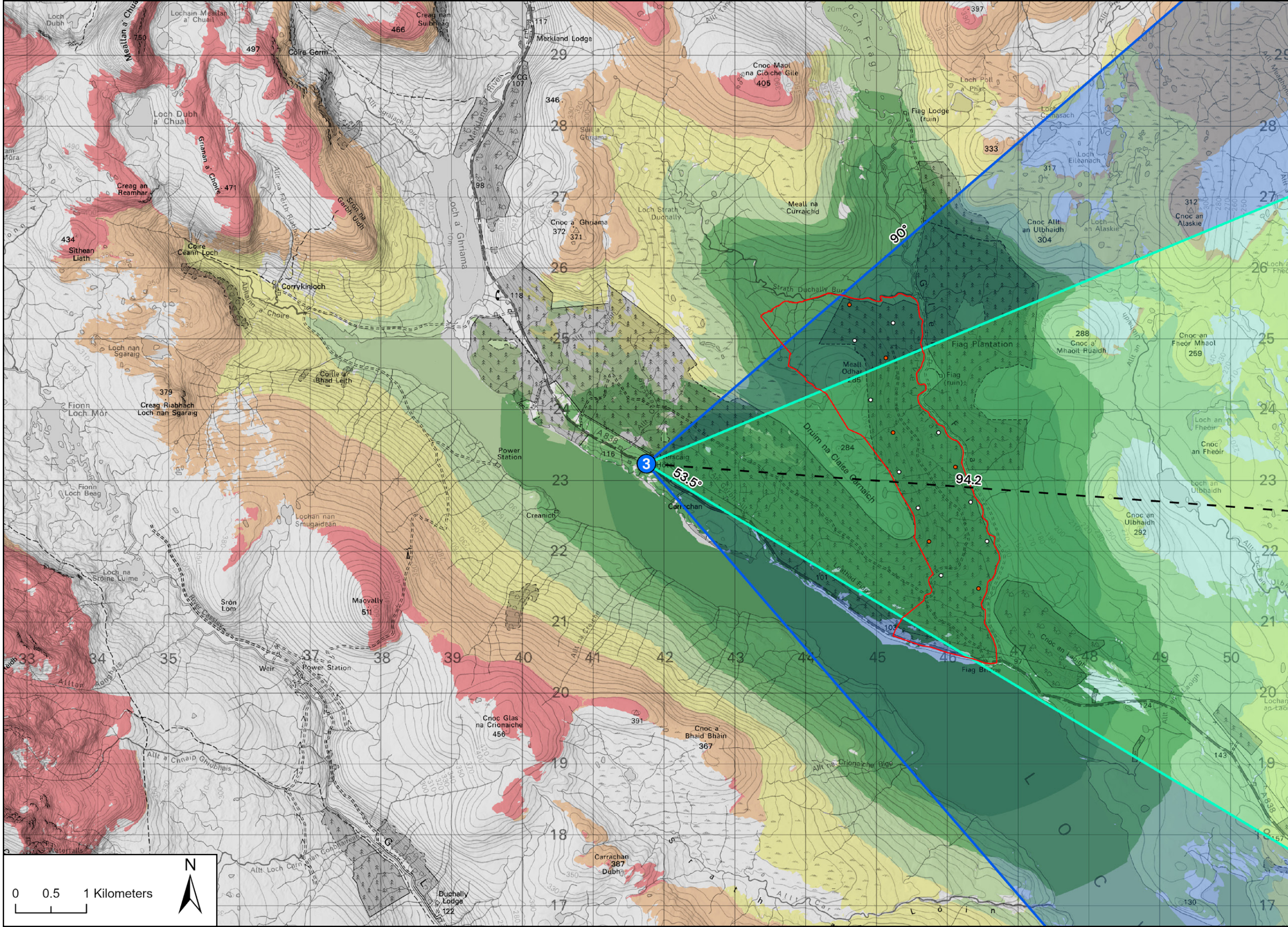
Camera: Canon 5D Mk III, FFS
Lens: 50mm Fixed Focal Lens
Height: 1.5m
Date & Time: 05/09/2024 @ 17:01





Viewpoint Location Plan - Site Context, Cumulative Wind Farms and Dark Sky Baseline Satellite Image - Scale 1:150,000

COILLE LINNE WIND FARM



Viewpoint Location Plan - Visual Extents and Turbine Lighting Intensity ZTV - Scale 1:50,000

Key

- Application Boundary
- Turbine Layout (No Aviation Light)
- Turbine Layout Fitted with Steady Red Aviation Light

Other Wind Farms (Status)

- Operational
- Consented / Under Constructed
- In Planning
- Scoping

Viewpoint Information

- L VIA Viewpoint
- Centre of Visualisation (Bearing)
- 53.5° Field of View
- 90° Field of View

Dark Sky Baseline Satellite Image

- Visible Light

Source: The Applicant acknowledges the use of imagery provided by services from NASA's Global Imagery Browse Services (GIBS), part of NASA's Earth Observing System Data and Information System (EOSDIS)

Turbine Lighting Intensity ZTV

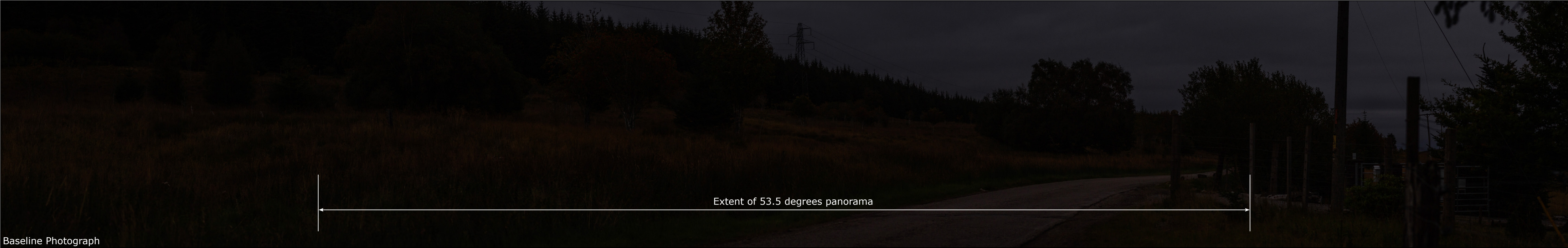
INTENSITY OF TURBINE LIGHT SHOWN IN CANDELA [CD]

VERTICAL ANGLE	2000 CD LIGHT	200 CD LIGHT
3° TO 0°	UP TO 2500 CD	UP TO 250 CD
0° TO -1°	2185 CD TO 982 CD	218 CD TO 98 CD
-1° TO -2°	982 CD TO 413 CD	98 CD TO 41 CD
-2° TO -3°	413 CD TO 217 CD	41 CD TO 21 CD
-3° TO -4°	217 CD TO 172 CD	21 CD TO 17 CD
BELOW -4°	BELOW 172 CD	BELOW 17 CD

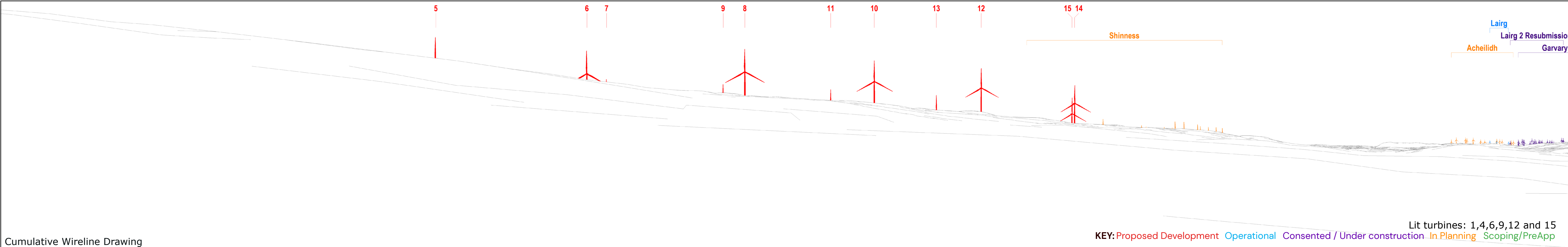
NOTES

- A reduced lighting scheme has been agreed with the Civil Aviation Authority (CAA) and it is proposed six of the eight turbines would be it (T1, T4, T6, T9, T12 and T15).
- The visible turbine lights will be switched on between Evening Civil Twilight and Morning Civil Twilight. Approximately 11 hours per day averaged over the year.
- Civil Aviation Authority SARG Policy Statement (2017) states "If the horizontal meteorological visibility in all directions from every wind turbine generator in a group is more than 5 km, the intensity for the light positioned as close as practicable to the top of the fixed structure required to be fitted to any generator in the wind farm and displayed may be reduced to not less than 10% of the minimum peak intensity."
- The lighting intensity for each of the vertical angles shown in the above table has been provided by Contemex (Light Bulb Manufacturer) and is based on optimal test conditions in a calibration chamber.
- The perception of theoretical candela intensity does not take account of atmospheric attenuation (reduction in brightness over distance).
- The ZTV does not take account of surface features such as buildings or forestry.
- The ZTV has been produced using OS Terrain 5 height data and calculates the difference in vertical angle between the turbine lights and the study area.
- The ZTV represents a reasonable worst case and the theoretical lighting intensity illustrated may be the result of a single turbine within the group.
- Actual visibility is likely to be less than predicted due to a range of other factors considered in Appendix 5.8 of the L VIA which include the darkness adaptation of individual receptors and weather obscuration.

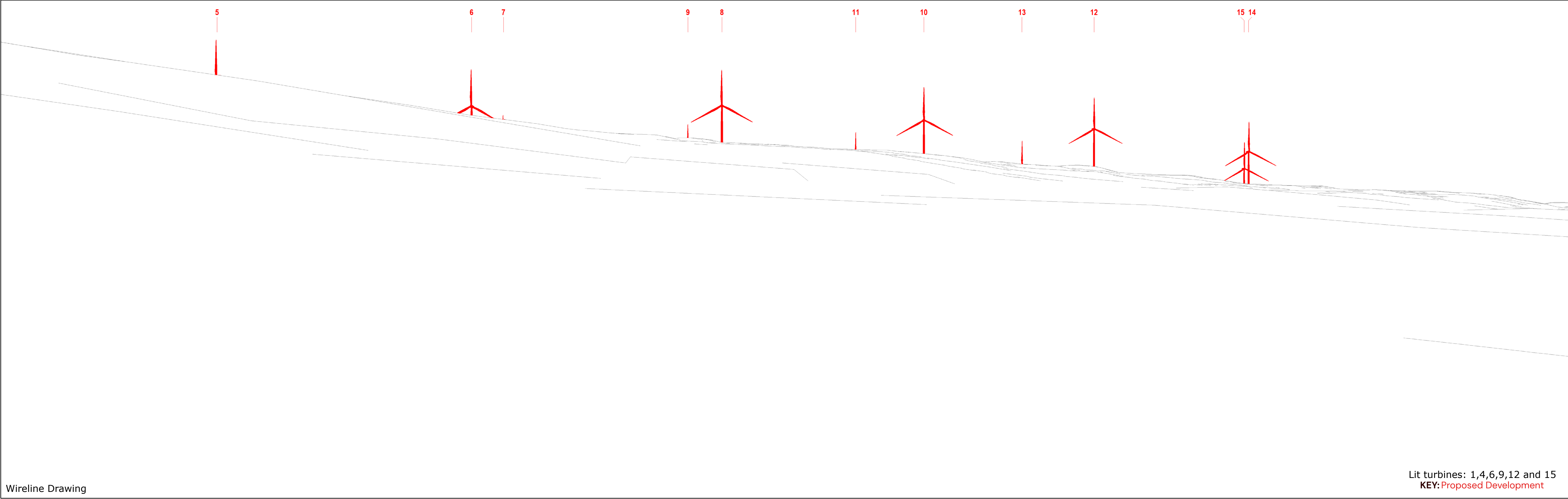
Further technical information can be found in Appendix 6.8 Night-time Lighting Assessment Methodology.



Baseline Photograph



Cumulative Wireline Drawing



Wireline Drawing

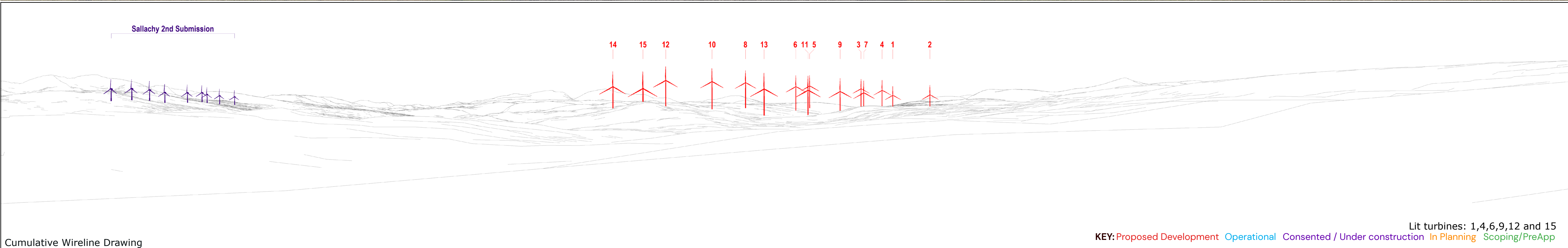
Lit turbines: 1,4,6,9,12 and 15
KEY: Proposed Development



Photomontage



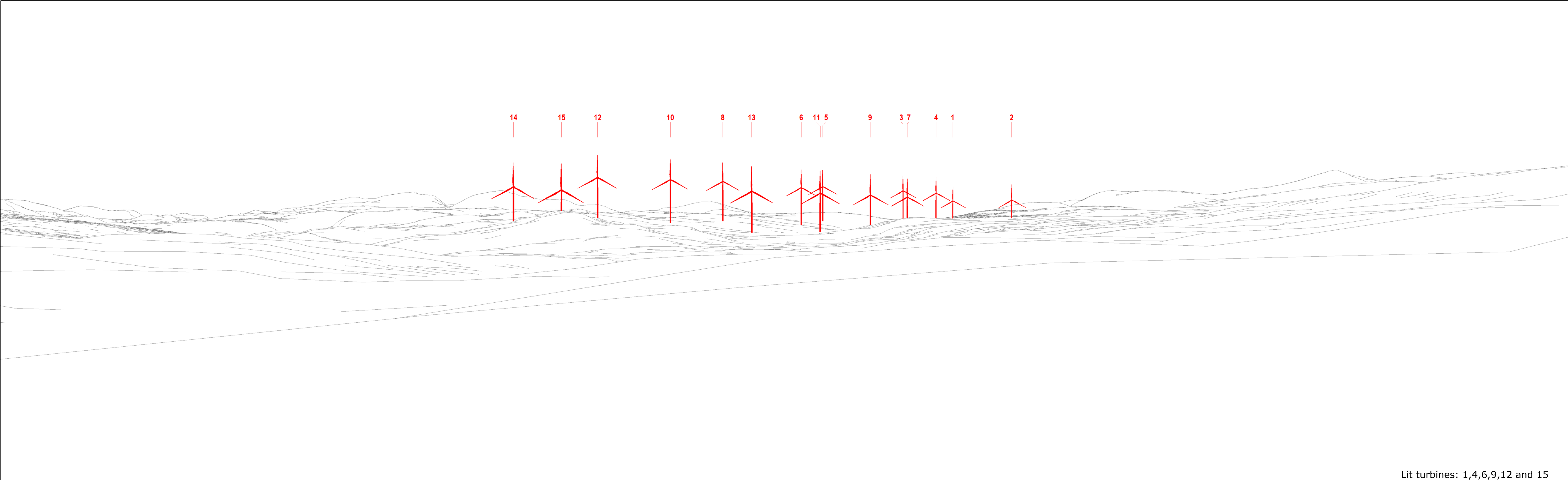
Baseline Photograph



Cumulative Wireline Drawing

KEY: Proposed Development Operational Consented / Under construction In Planning Scoping/PreApp

Lit turbines: 1,4,6,9,12 and 15



Wireline Drawing

Lit turbines: 1,4,6,9,12 and 15
KEY: Proposed Development



Photomontage

Viewpoint Information

COILLE LINNE WIND FARM

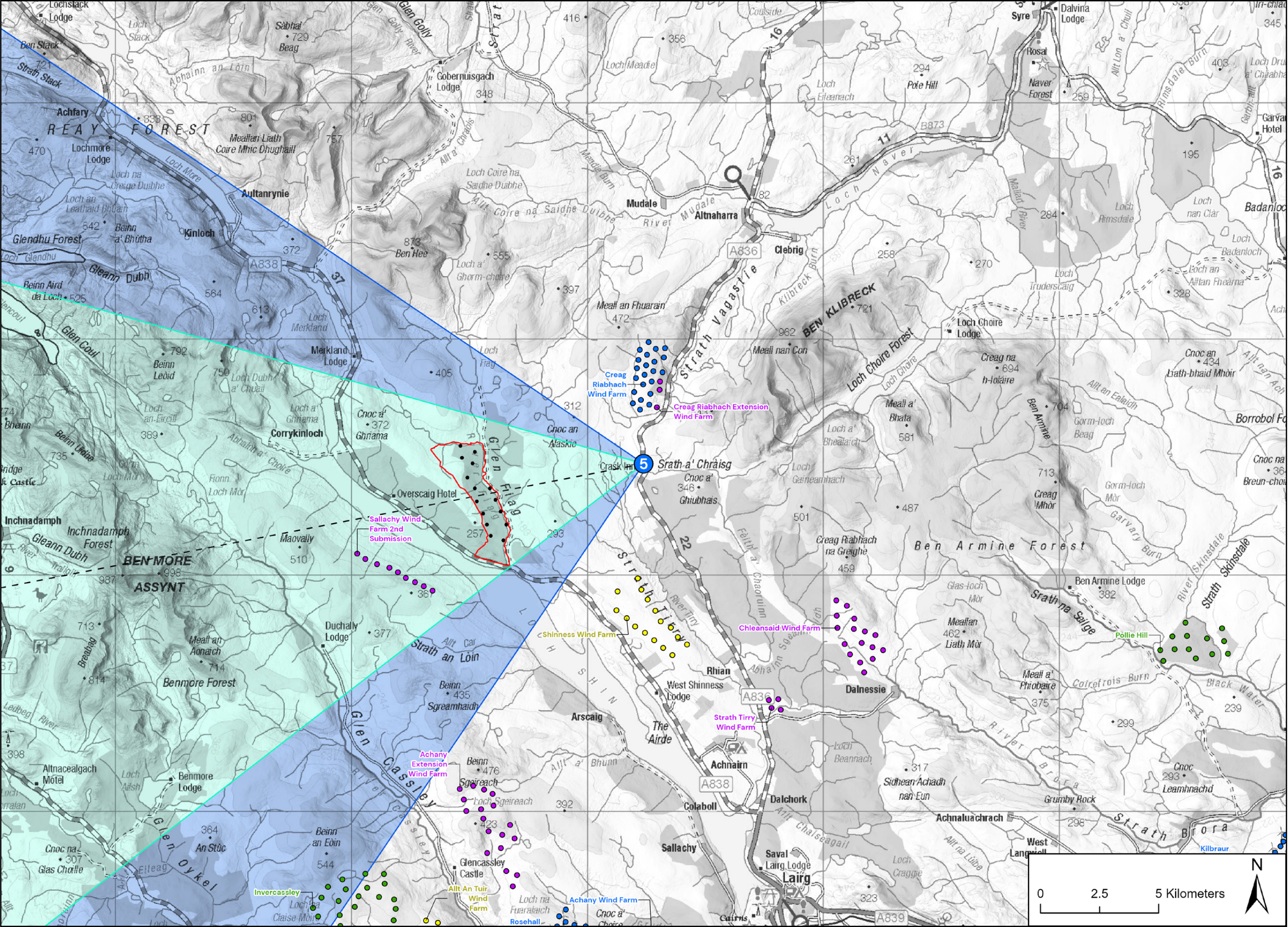
OS Reference: E250282, N918703
Ground level: 144m (AOD)

Distance to nearest turbine: 4737m (T15)
Bearing to centre of photograph: 313.99°

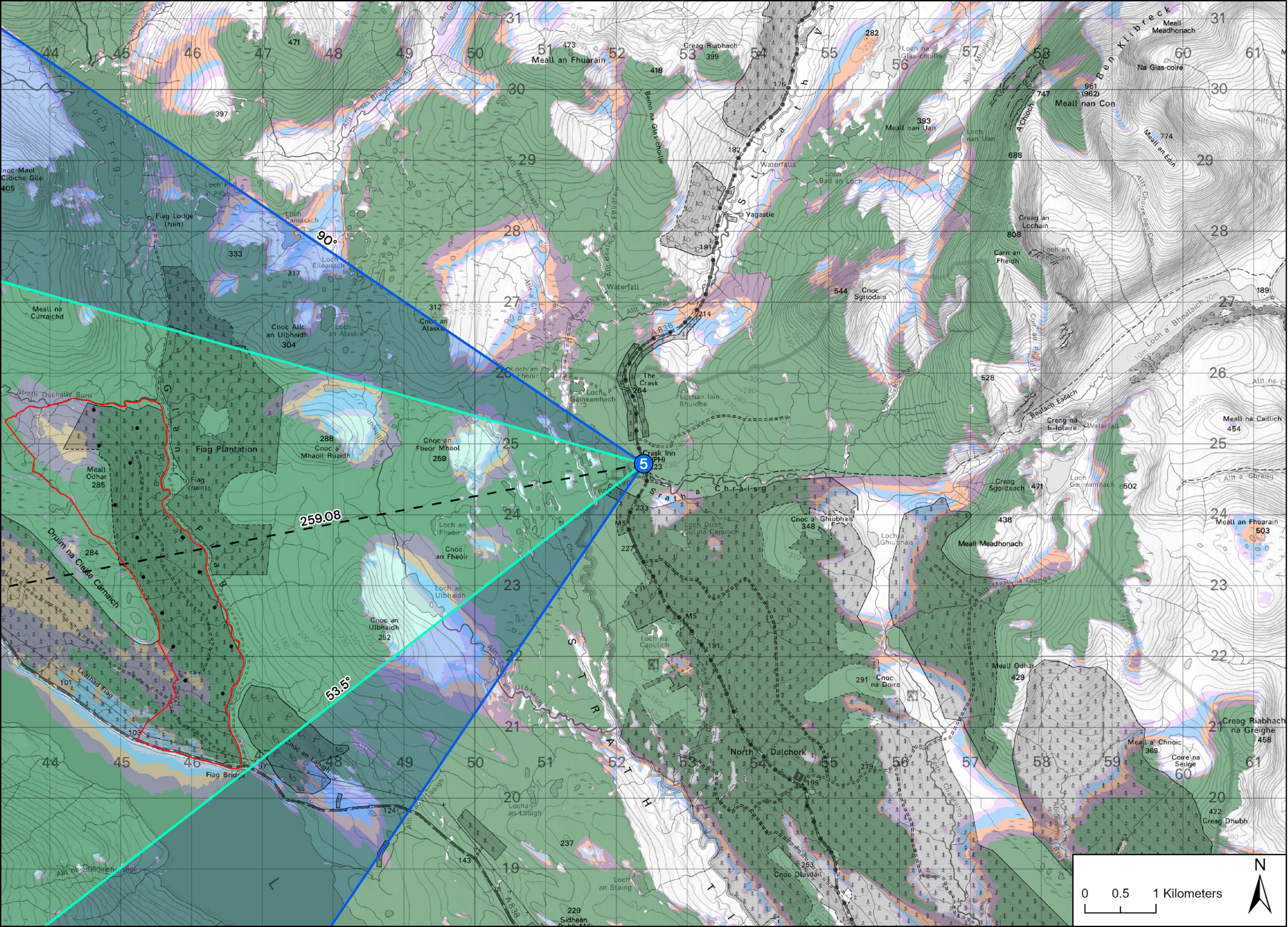
Angle of view: 53.5° (planar)
Principal distance: 812.5mm
Paper size: 841 x 297 mm (half A1)
Correct printed image size: 820 x 260mm

Camera: Canon 5D Mk III, FFS
Lens: 50mm Fixed Focal Lens
Height: 1.5m
Date & Time: 05/09/2024 @ 15:52



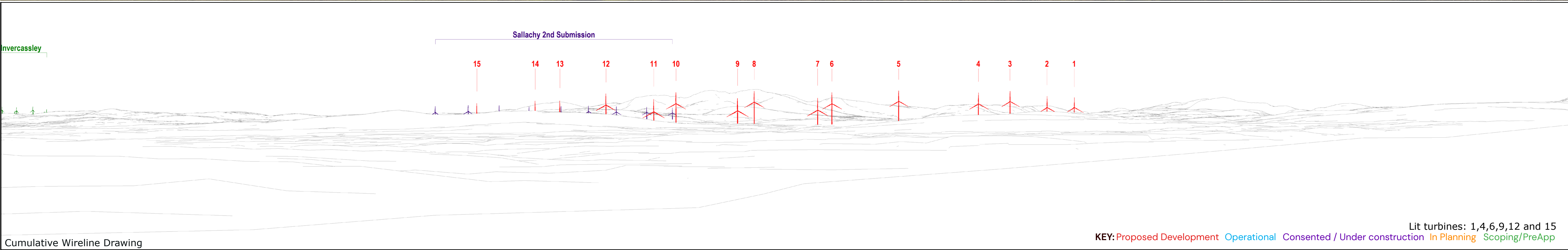


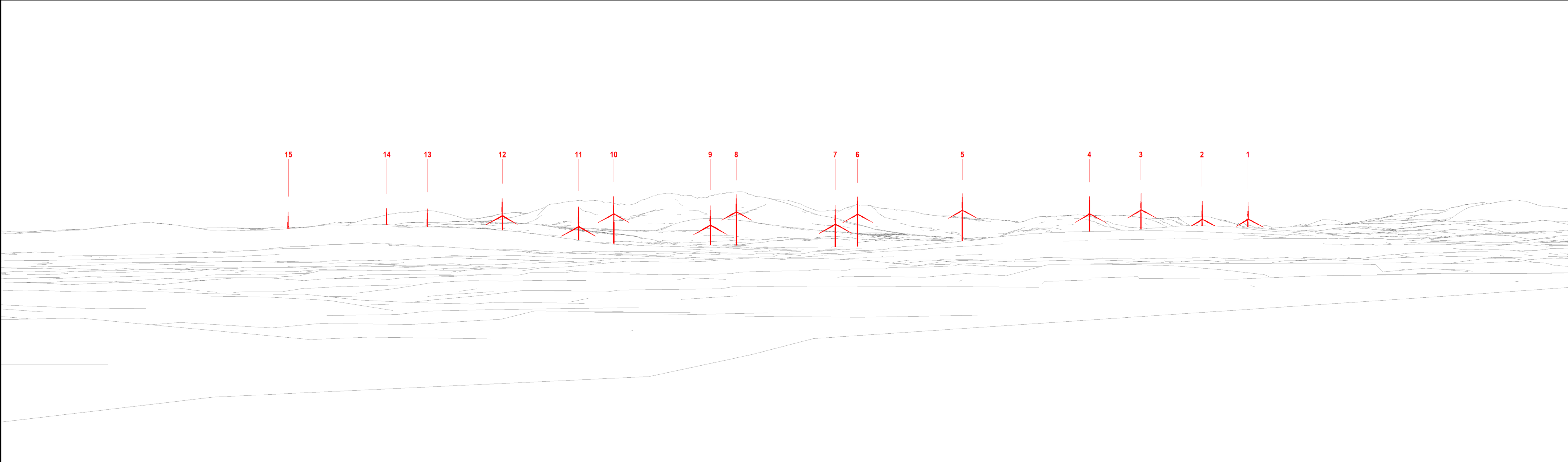
Viewpoint Location Plan - Site Context and Cumulative Wind Farms - Scale 1:150,000



Viewpoint Location Plan - Visual Extents and Blade Tip ZTV - Scale 1:50,000

- Key**
- Application Boundary
 - Turbine Layout
- Blade Tip Zone of Theoretical Visibility (250m)**
- 1 to 3 Turbines Visible
 - 4 to 6 Turbines Visible
 - 7 to 9 Turbines Visible
 - 10 to 12 Turbines Visible
 - 13 to 15 Turbines Visible
- Wind Farm Status**
- Operational
 - Consented / Under Constructed
 - In Planning / Application
 - Scoping
- Viewpoint Information**
- L VIA Viewpoint
 - Centre of Visualisation (Bearing)
 - 53.5° Field of View
 - 90° Field of View



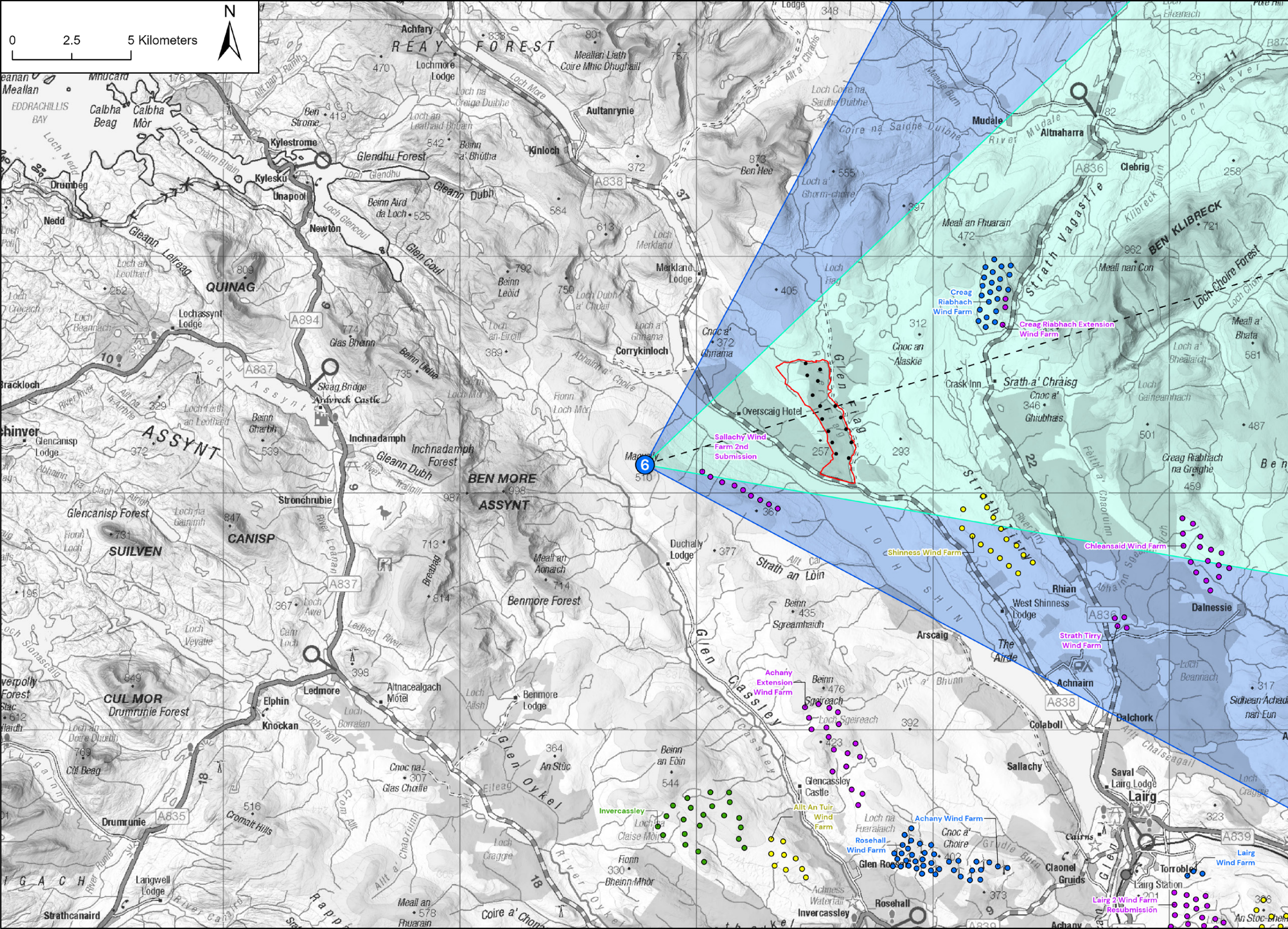


Wireline Drawing

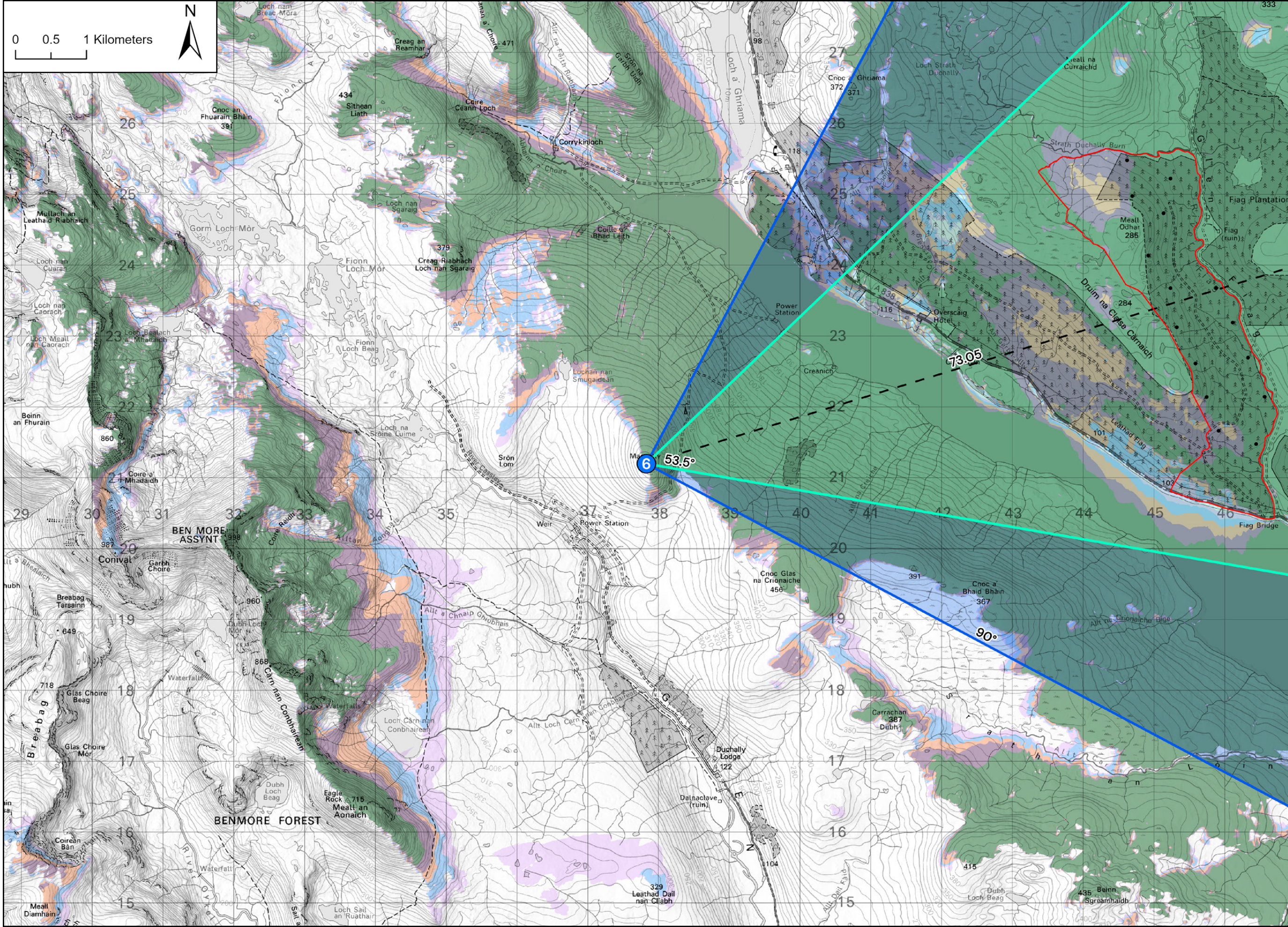
Lit turbines: 1,4,6,9,12 and 15
KEY: Proposed Development



Photomontage



Viewpoint Location Plan - Site Context and Cumulative Wind Farms - Scale 1:150,000

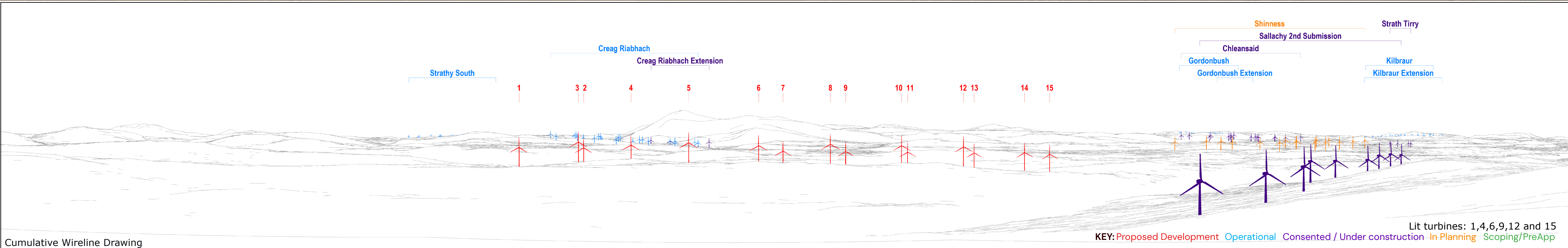


Viewpoint Location Plan - Visual Extents and Blade Tip ZTV - Scale 1:50,000

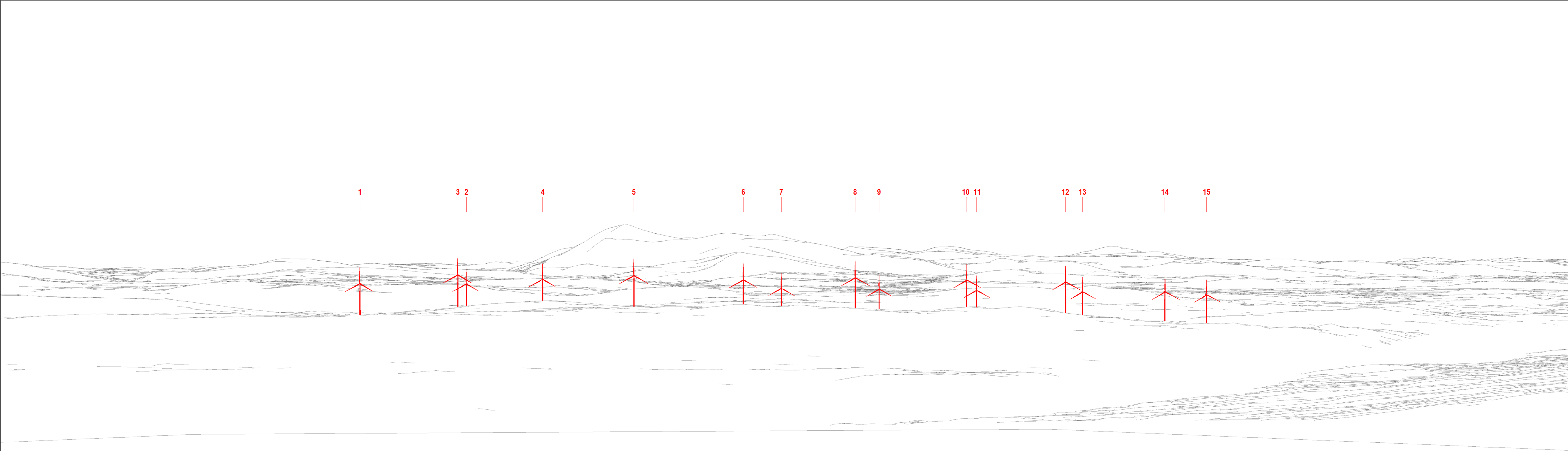
- Key**
- Application Boundary
 - Turbine Layout
- Blade Tip Zone of Theoretical Visibility (250m)
- 1 to 3 Turbines Visible
 - 4 to 6 Turbines Visible
 - 7 to 9 Turbines Visible
 - 10 to 12 Turbines Visible
 - 13 to 15 Turbines Visible
- Wind Farm Status
- Operational
 - Consented / Under Constructed
 - In Planning / Application
 - Scoping
- Viewpoint Information
- LVIA Viewpoint
 - Centre of Visualisation (Bearing)
 - 53.5° Field of View
 - 90° Field of View



Baseline Photograph



Cumulative Wireline Drawing

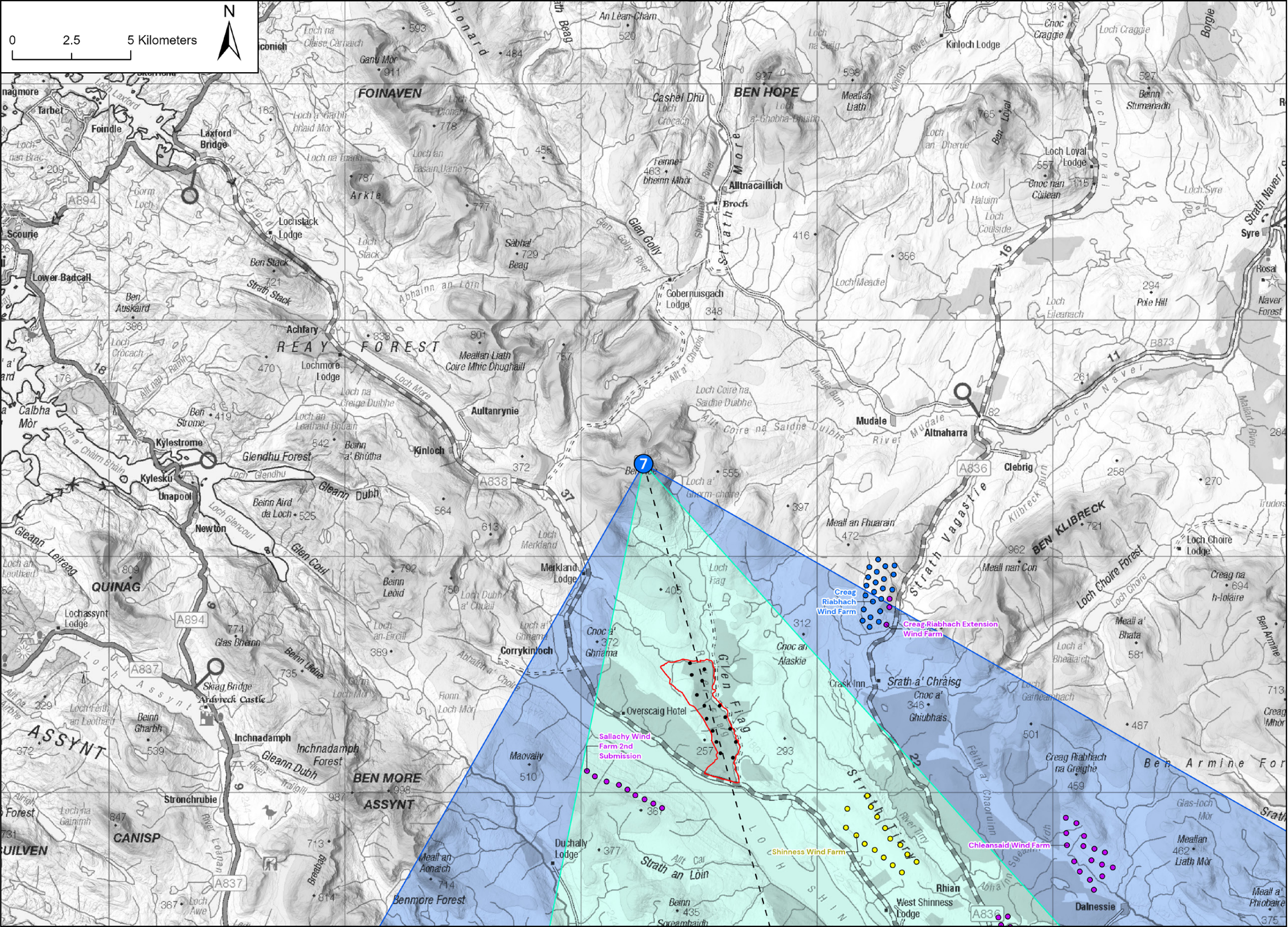


Wireline Drawing

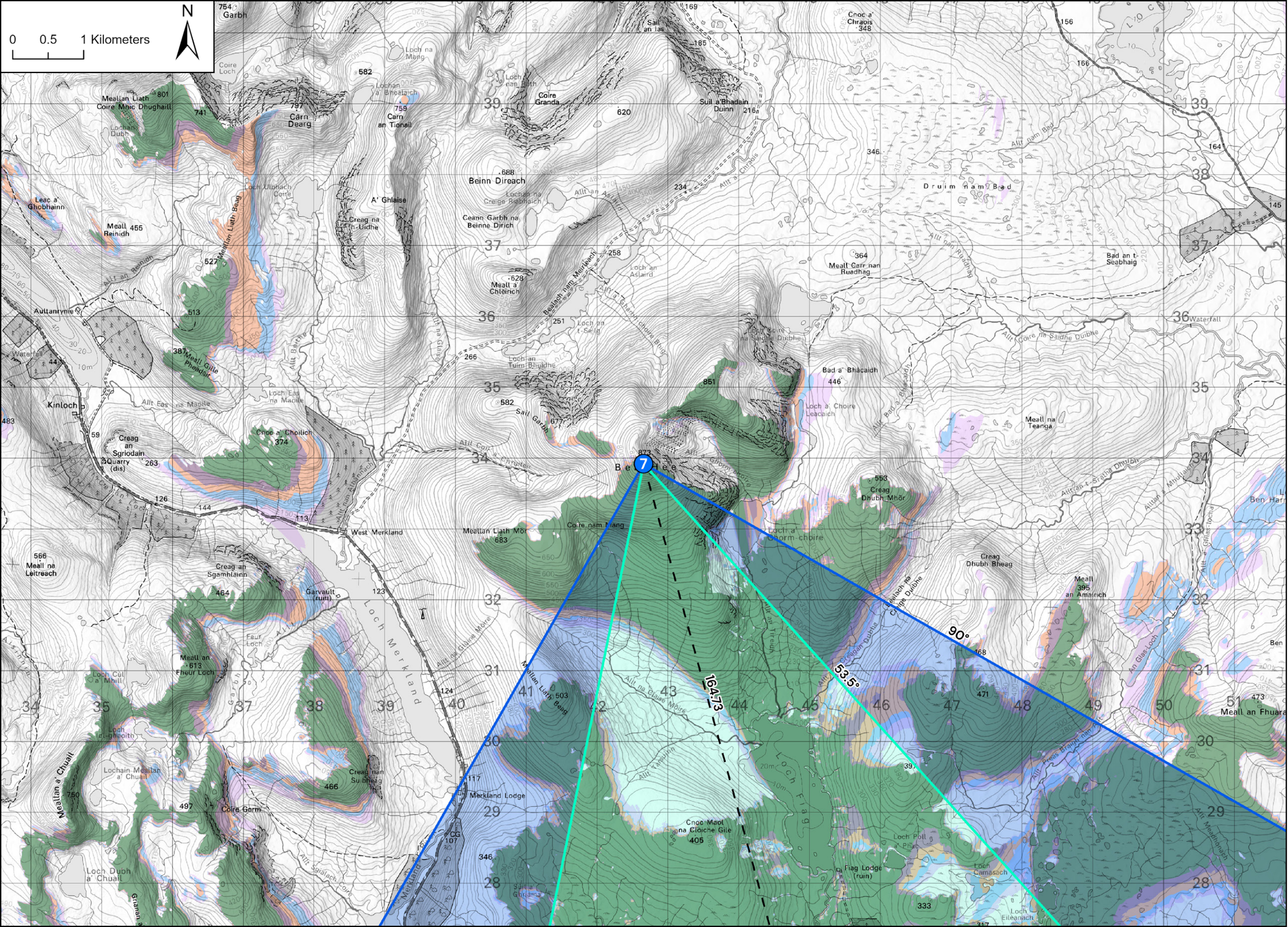
Lit turbines: 1,4,6,9,12 and 15
KEY: Proposed Development



Photomontage



Viewpoint Location Plan - Site Context and Cumulative Wind Farms - Scale 1:150,000



Viewpoint Location Plan - Visual Extents and Blade Tip ZTV - Scale 1:50,000

Key

- Application Boundary
- Turbine Layout

Blade Tip Zone of Theoretical Visibility (250m)

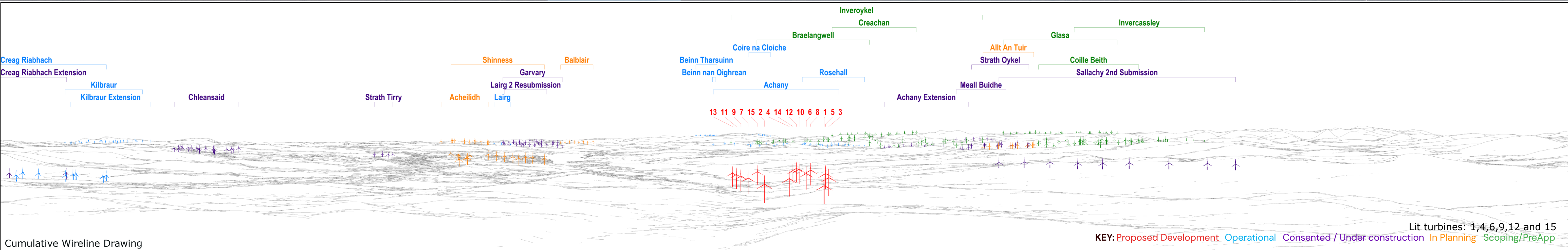
- 1 to 3 Turbines Visible
- 4 to 6 Turbines Visible
- 7 to 9 Turbines Visible
- 10 to 12 Turbines Visible
- 13 to 15 Turbines Visible

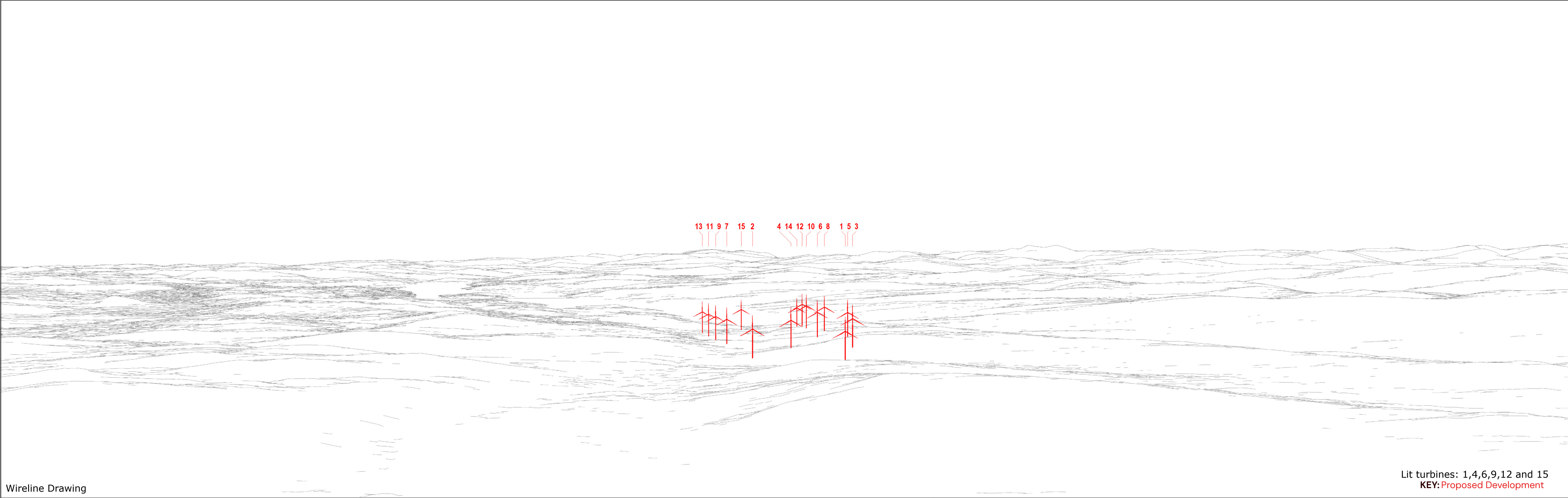
Wind Farm Status

- Operational
- Consented / Under Constructed
- In Planning / Application
- Scoping

Viewpoint Information

- L VIA Viewpoint
- Centre of Visualisation (Bearing)
- 53.5° Field of View
- 90° Field of View



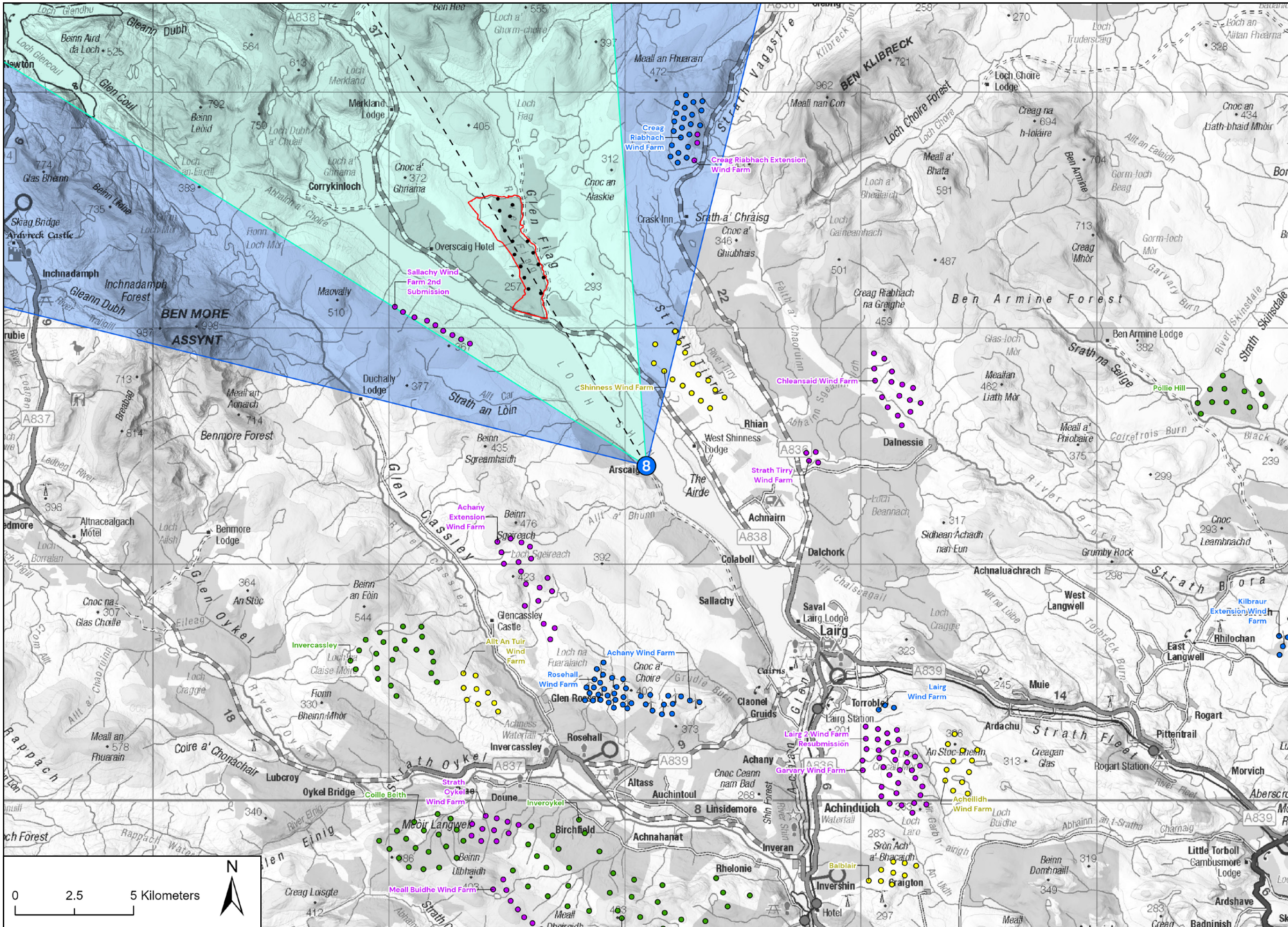


Wireline Drawing

Lit turbines: 1,4,6,9,12 and 15
KEY: Proposed Development

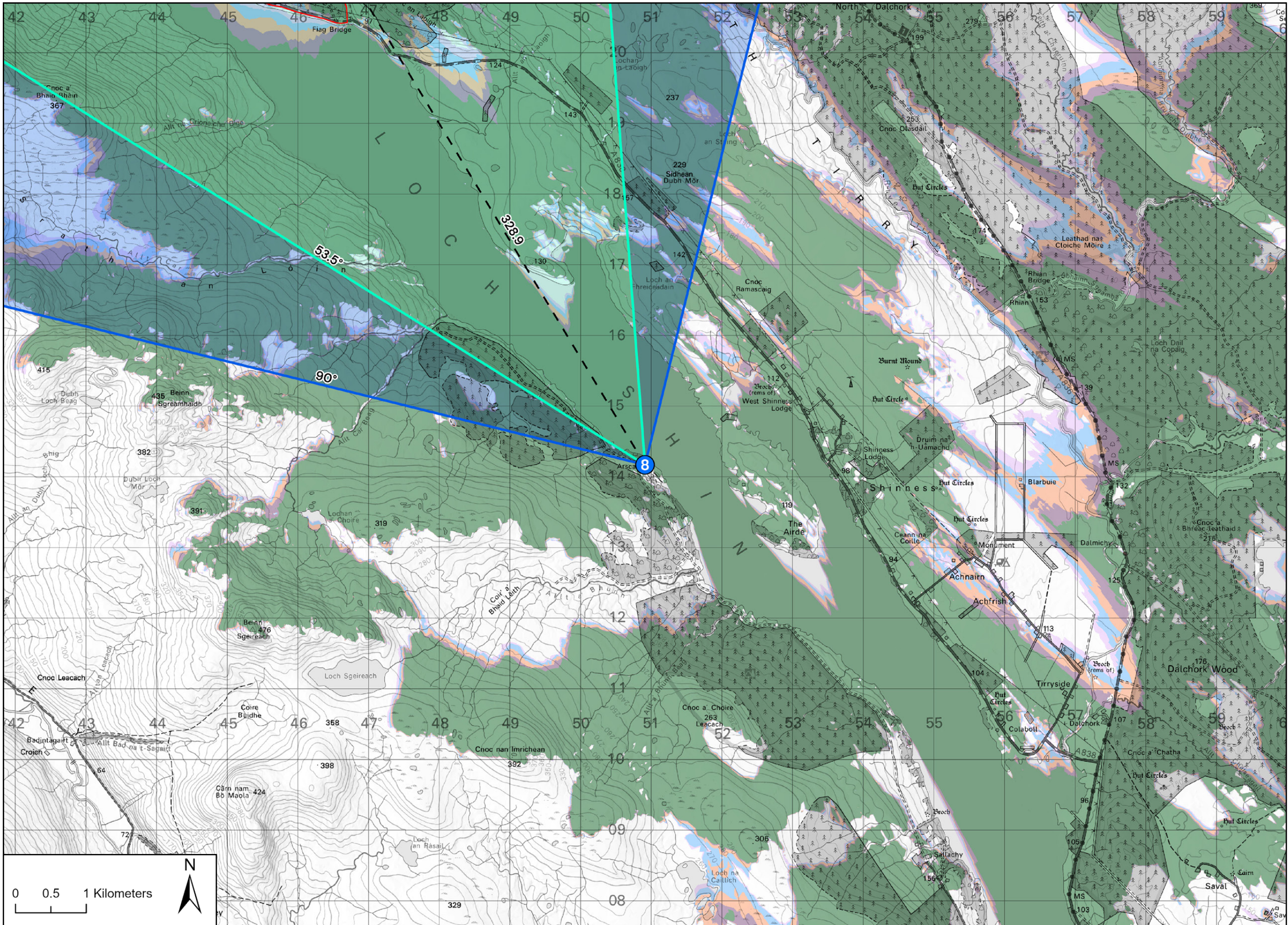


Photomontage



Viewpoint Location Plan - Site Context and Cumulative Wind Farms - Scale 1:150,000

COILLE LINNE WIND FARM



Viewpoint Location Plan - Visual Extents and Blade Tip ZTV - Scale 1:50,000

Key

Application Boundary

Turbine Layout

Blade Tip Zone of Theoretical Visibility (250m)

1 to 3 Turbines Visible

4 to 6 Turbines Visible

7 to 9 Turbines Visible

10 to 12 Turbines Visible

13 to 15 Turbines Visible

Wind Farm Status

Operational

Consented / Under Constructed

In Planning / Application

Scoping

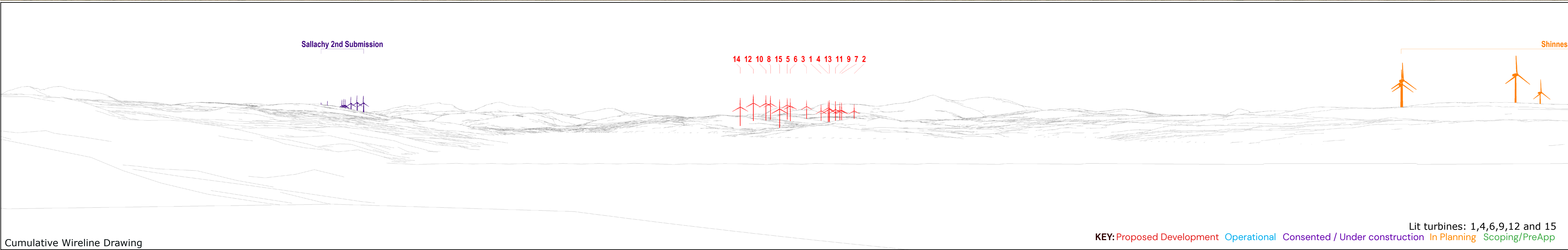
Viewpoint Information

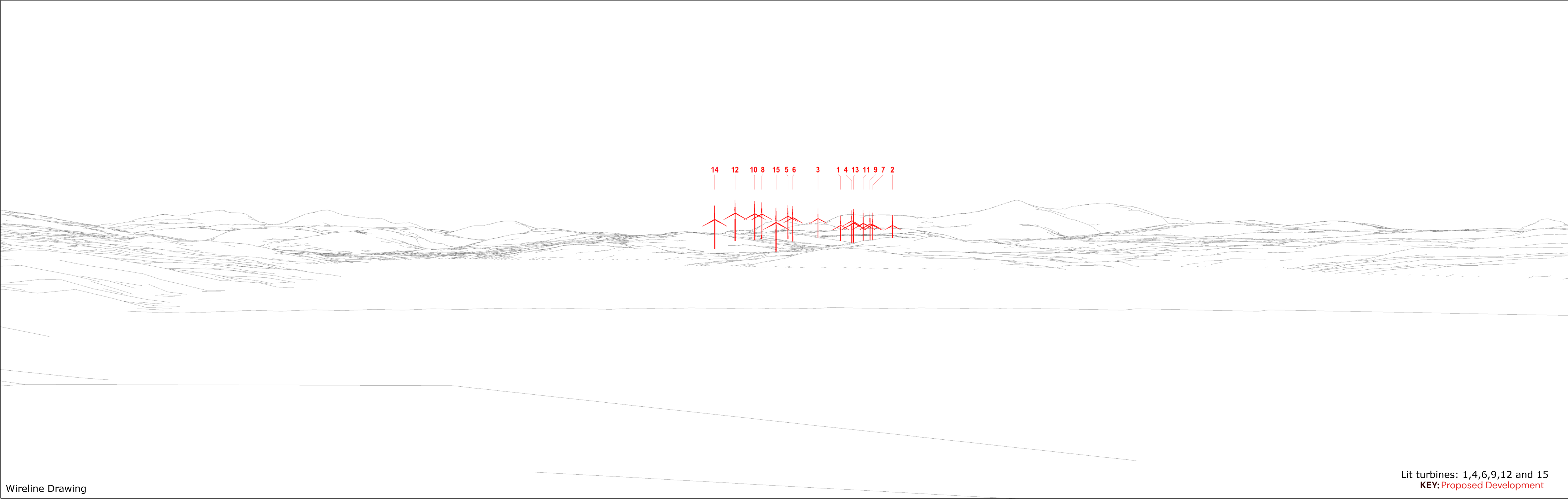
LVIA Viewpoint

Centre of Visualisation (Bearing)

53.5° Field of View

90° Field of View





Wireline Drawing

Lit turbines: 1,4,6,9,12 and 15
KEY: Proposed Development



Photomontage

Viewpoint Information

COILLE LINNE WIND FARM

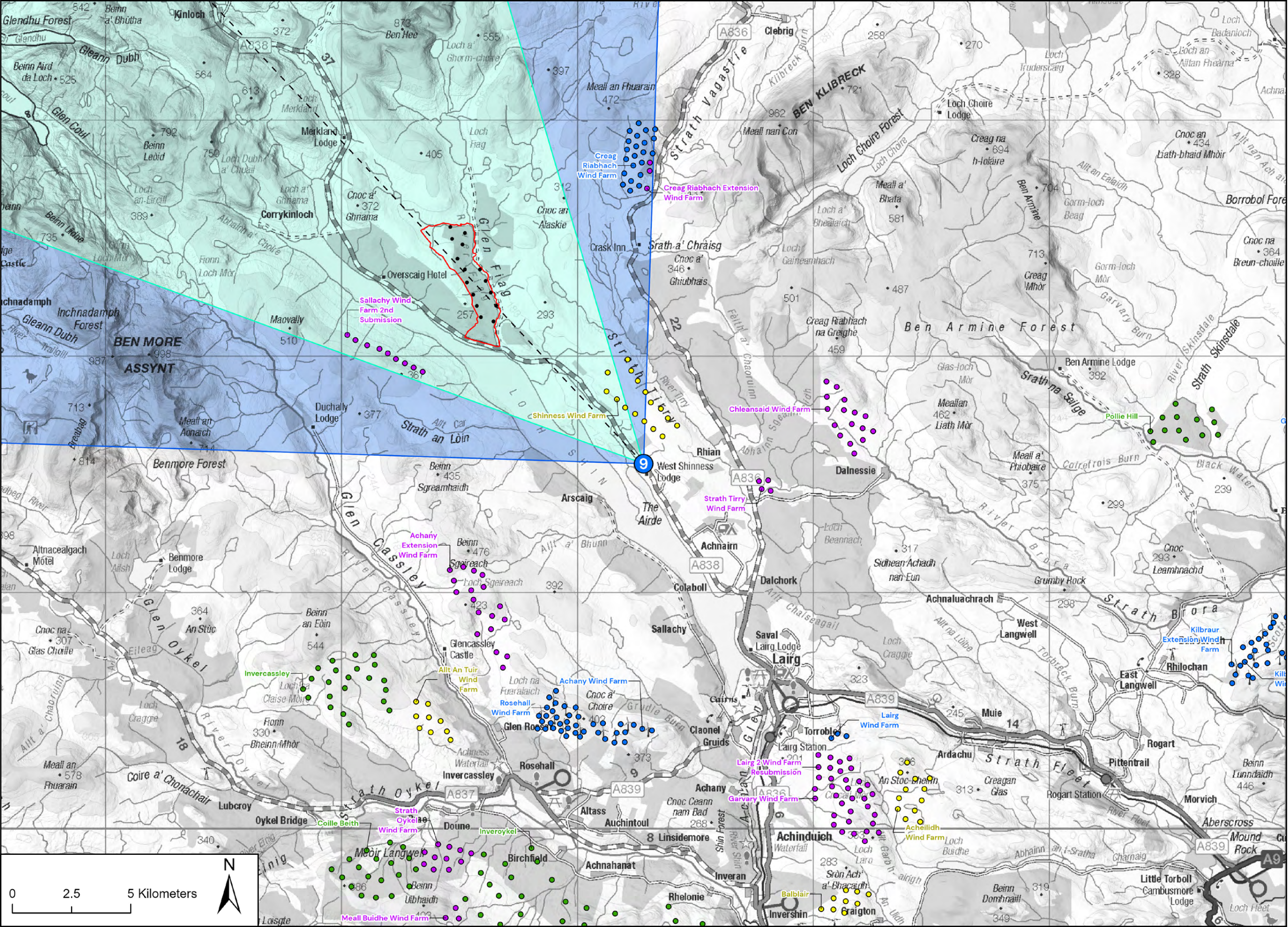
OS Reference: E250911, N914167
Ground level: 116m (AOD)

Distance to nearest turbine: 8566m (T15)
Bearing to centre of photograph: 328.9°

Angle of view: 53.5° (planar)
Principal distance: 812.5mm
Paper size: 841 x 297 mm (half A1)
Correct printed image size: 820 x 260mm

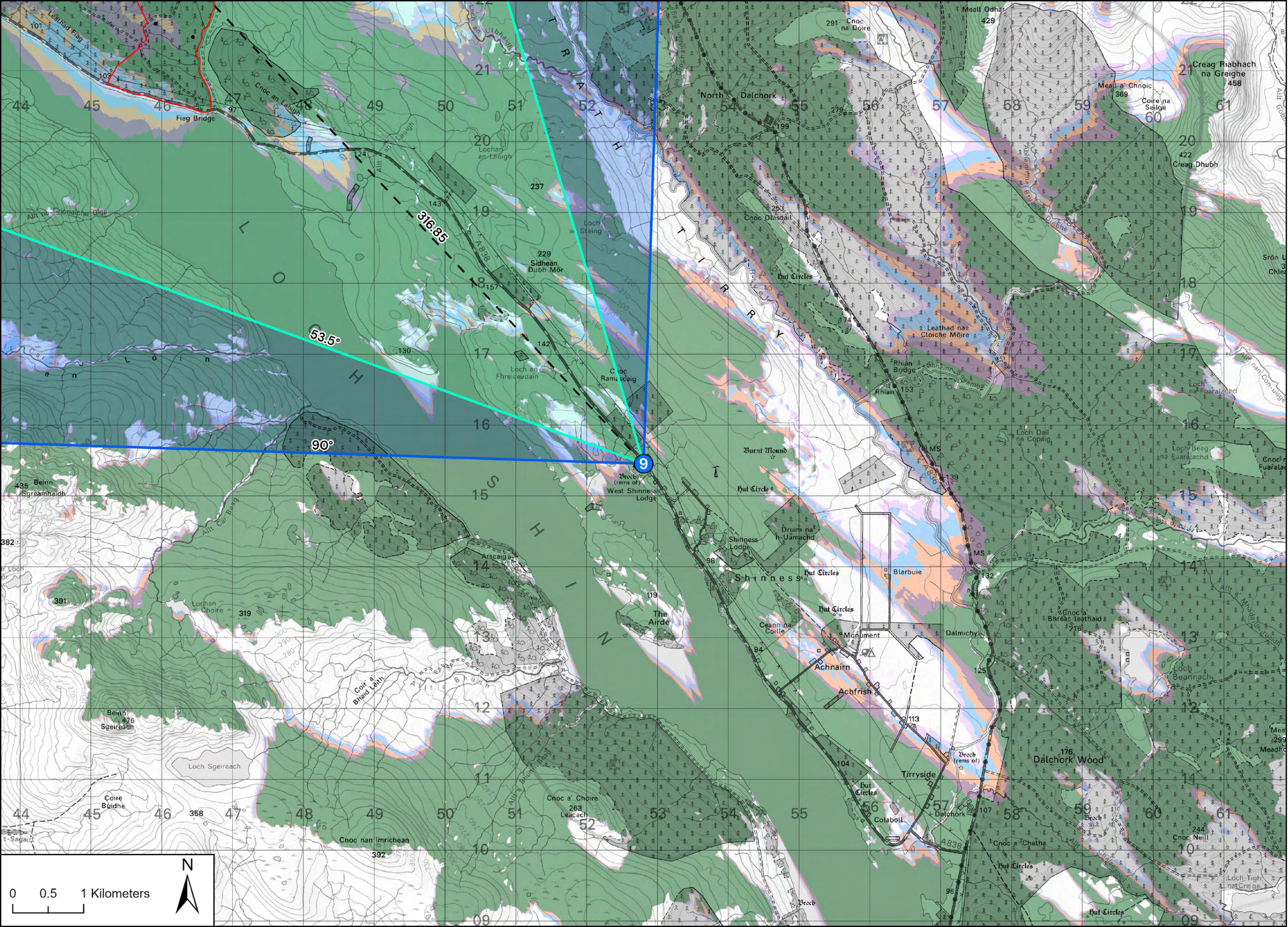
Camera: Nikon Z 6 II, FFS
Lens: 50mm Fixed Focal Lens
Height: 1.5m
Date & Time: 16/09/2024 @ 14:58





Viewpoint Location Plan - Site Context and Cumulative Wind Farms - Scale 1:150,000

COILLE LINNE WIND FARM



Viewpoint Location Plan - Visual Extents and Blade Tip ZTV - Scale 1:50,000

Key

- Application Boundary
- Turbine Layout

Blade Tip Zone of Theoretical Visibility (250m)

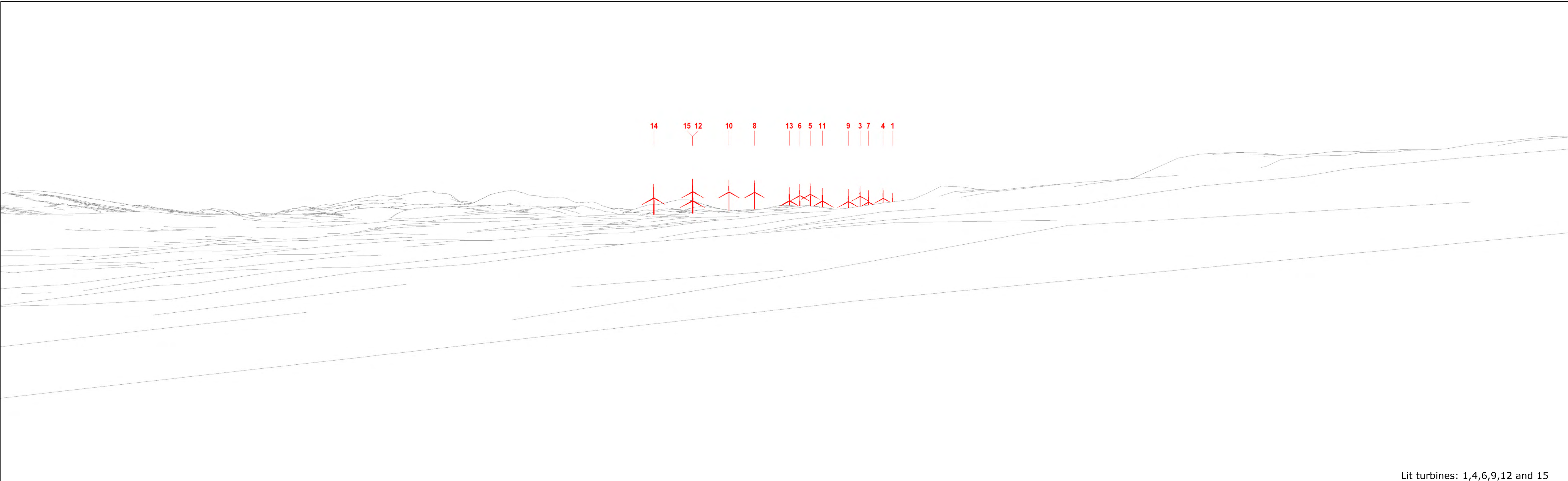
- 1 to 3 Turbines Visible
- 4 to 6 Turbines Visible
- 7 to 9 Turbines Visible
- 10 to 12 Turbines Visible
- 13 to 15 Turbines Visible

Wind Farm Status

- Operational
- Consented / Under Constructed
- In Planning / Application
- Scoping

Viewpoint Information

- LVIA Viewpoint
- Centre of Visualisation (Bearing)
- 53.5° Field of View
- 90° Field of View



Wireline Drawing

Lit turbines: 1,4,6,9,12 and 15
KEY: Proposed Development



Photomontage

Viewpoint Information

COILLE LINNE WIND FARM

OS Reference: E252804, N915452
Ground level: 115m (AOD)

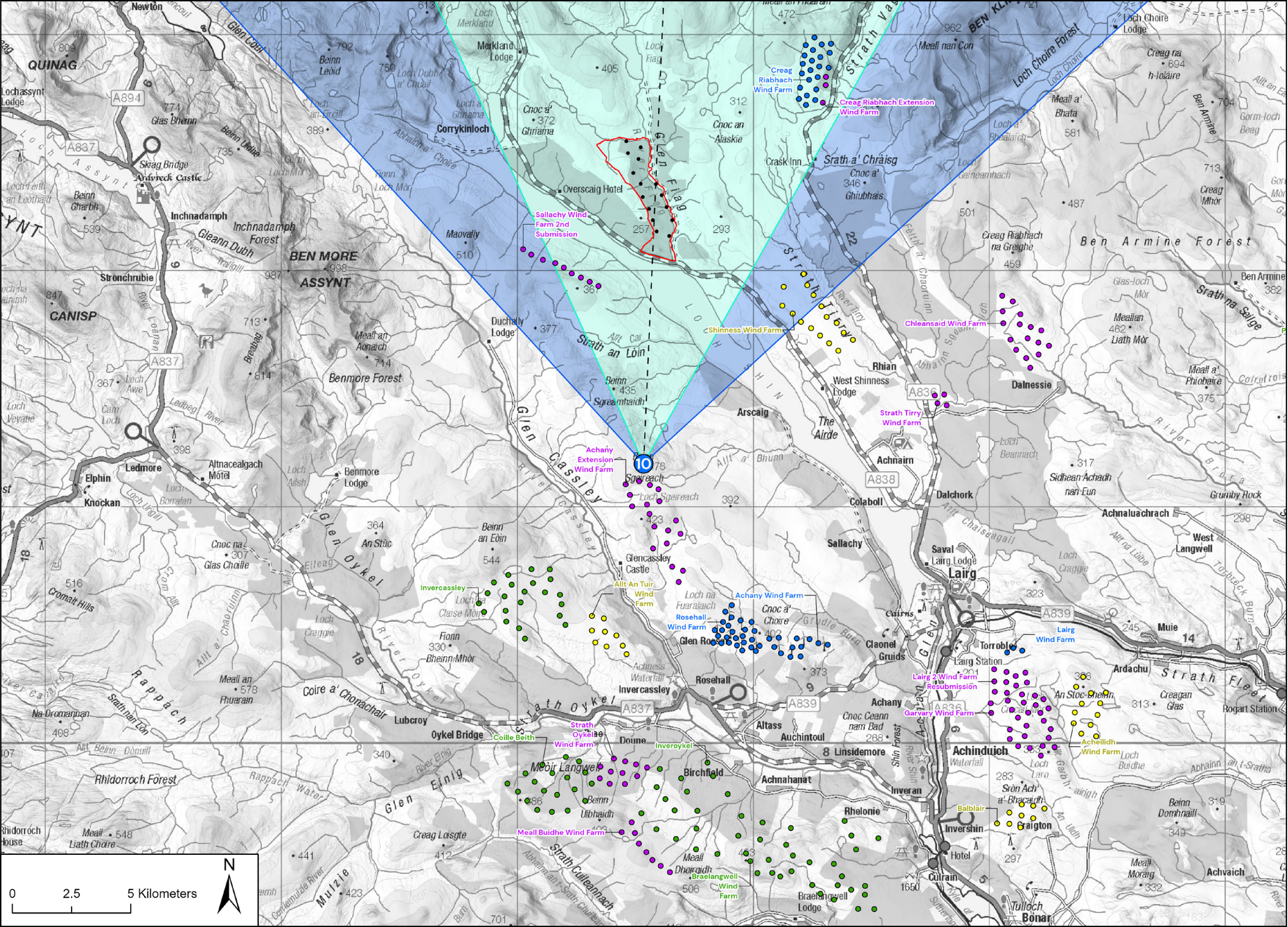
Distance to nearest turbine: 8762m (T15)
Bearing to centre of photograph: 316.85°

Angle of view: 53.5° (planar)
Principal distance: 812.5mm
Paper size: 841 x 297 mm (half A1)
Correct printed image size: 820 x 260mm

Camera: Canon 5D Mk III, FFS
Lens: 50mm Fixed Focal Lens
Height: 1.5m
Date & Time: 05/09/2024 @ 15:34

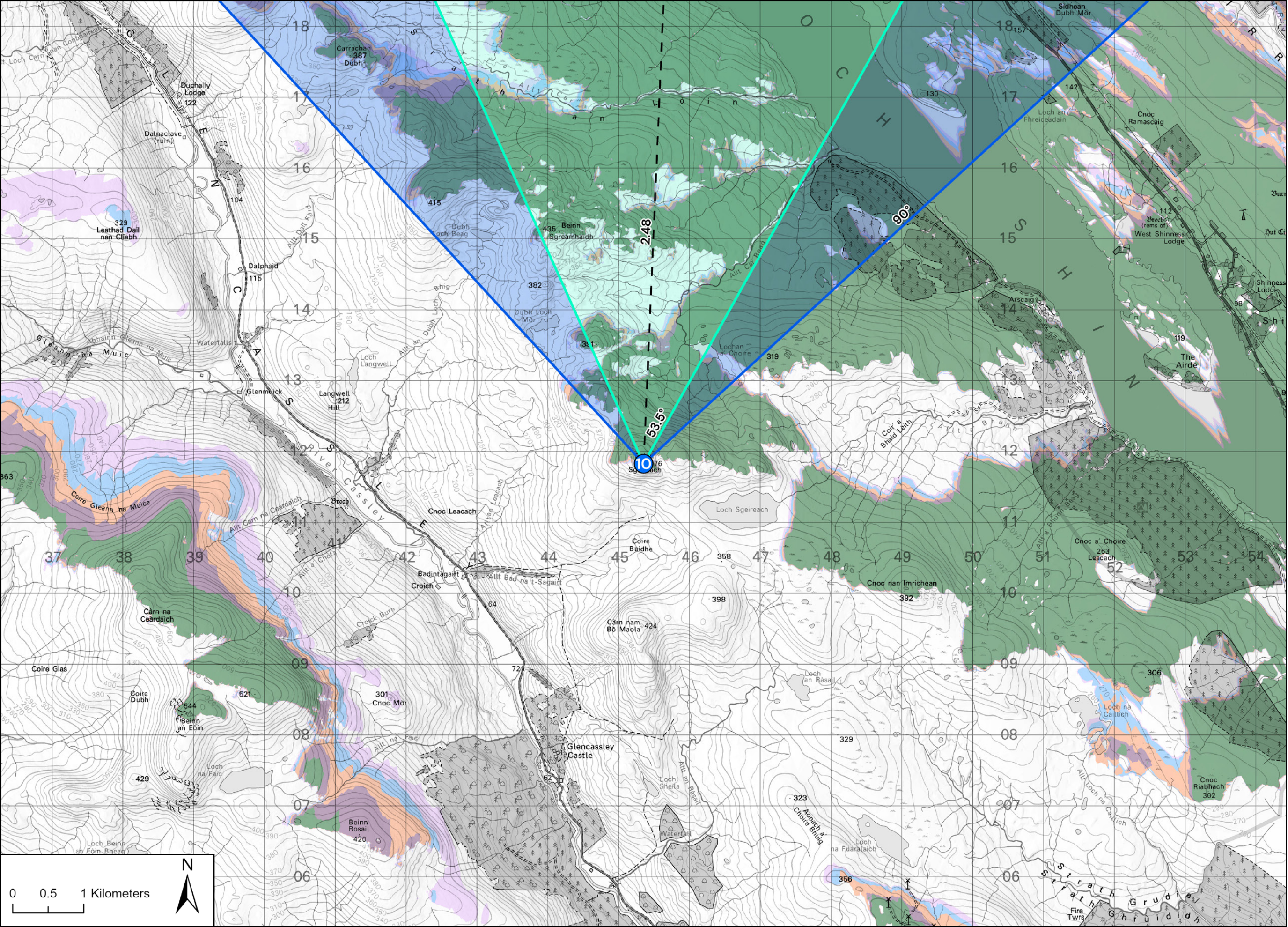


(Sheet D)
Viewpoint 9: A838 near West Shinness Lodge



Viewpoint Location Plan - Site Context and Cumulative Wind Farms - Scale 1:150,000

COILLE LINNE WIND FARM



Viewpoint Location Plan - Visual Extents and Blade Tip ZTV - Scale 1:50,000

Key

- Application Boundary
- Turbine Layout

Blade Tip Zone of Theoretical Visibility (250m)

- 1 to 3 Turbines Visible
- 4 to 6 Turbines Visible
- 7 to 9 Turbines Visible
- 10 to 12 Turbines Visible
- 13 to 15 Turbines Visible

Wind Farm Status

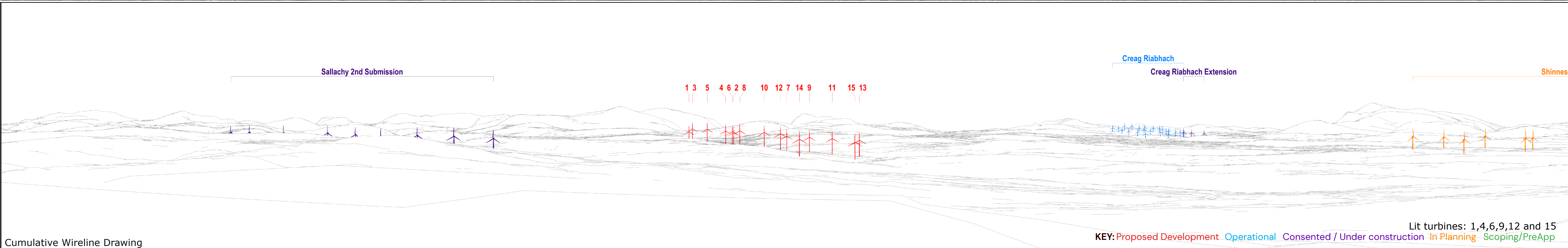
- Operational
- Consented / Under Constructed
- In Planning / Application
- Scoping

Viewpoint Information

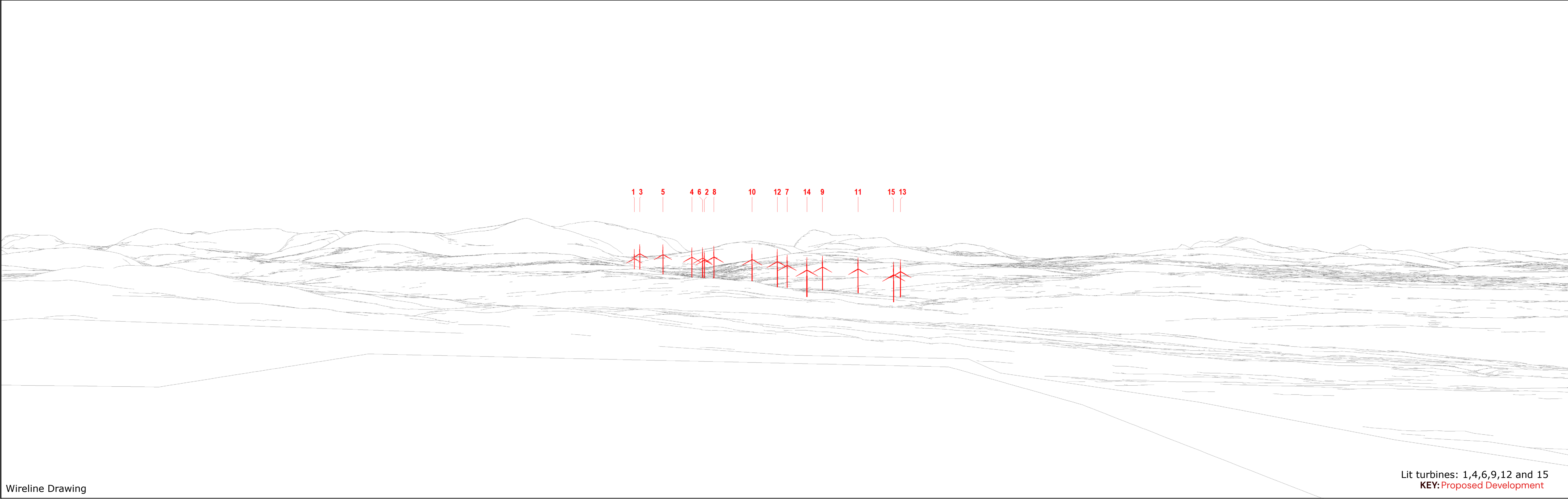
- L VIA Viewpoint
- Centre of Visualisation (Bearing)
- 53.5° Field of View
- 90° Field of View



Baseline Photograph



Cumulative Wireline Drawing



Wireline Drawing

Lit turbines: 1,4,6,9,12 and 15
KEY: Proposed Development



Photomontage

Viewpoint Information

COILLE LINNE WIND FARM

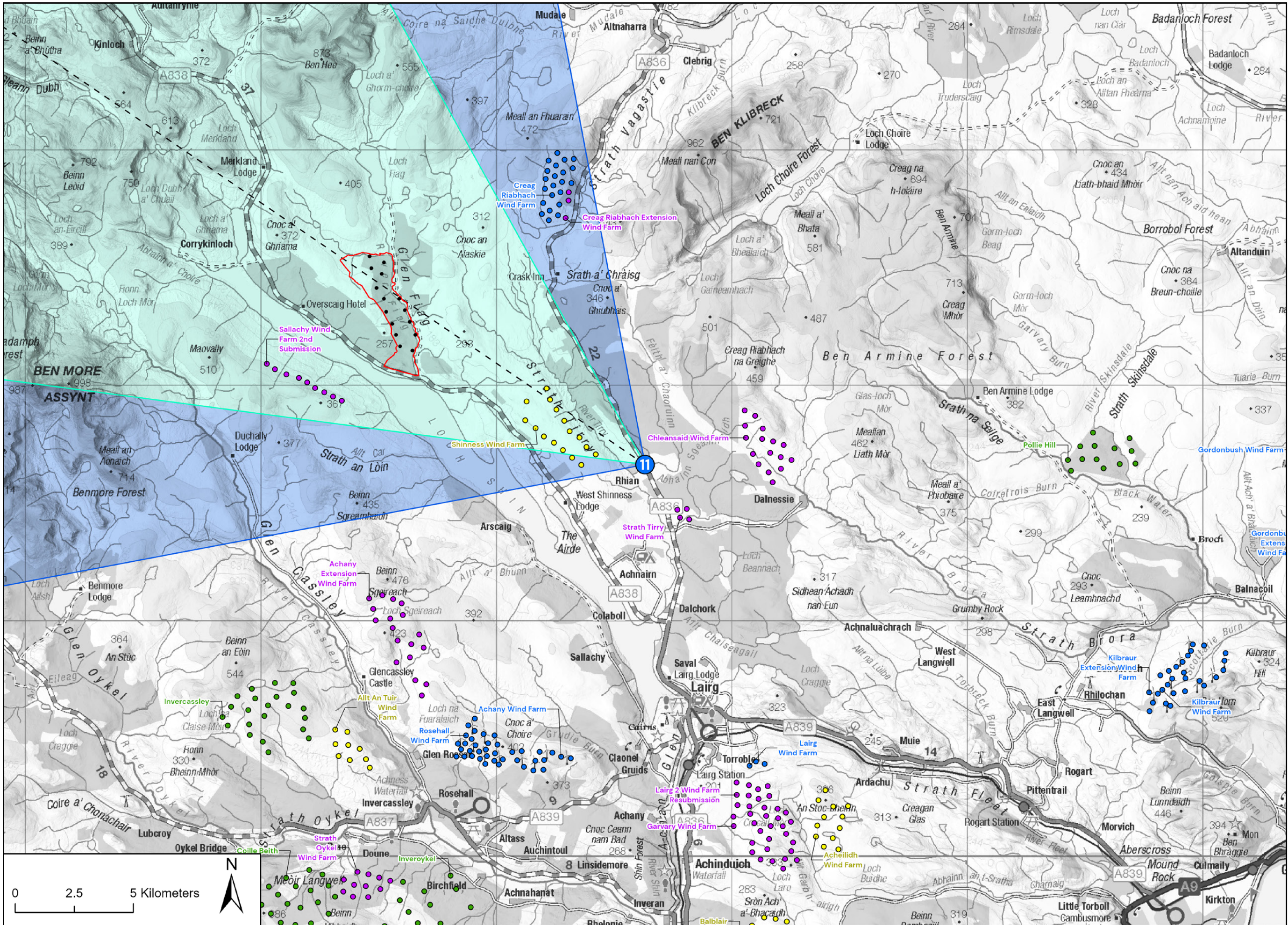
OS Reference: E245352, N911826
Ground level: 476m (AOD)

Distance to nearest turbine: 9709m (T15)
Bearing to centre of photograph: 2.48°

Angle of view: 53.5° (planar)
Principal distance: 812.5mm
Paper size: 841 x 297 mm (half A1)
Correct printed image size: 820 x 260mm

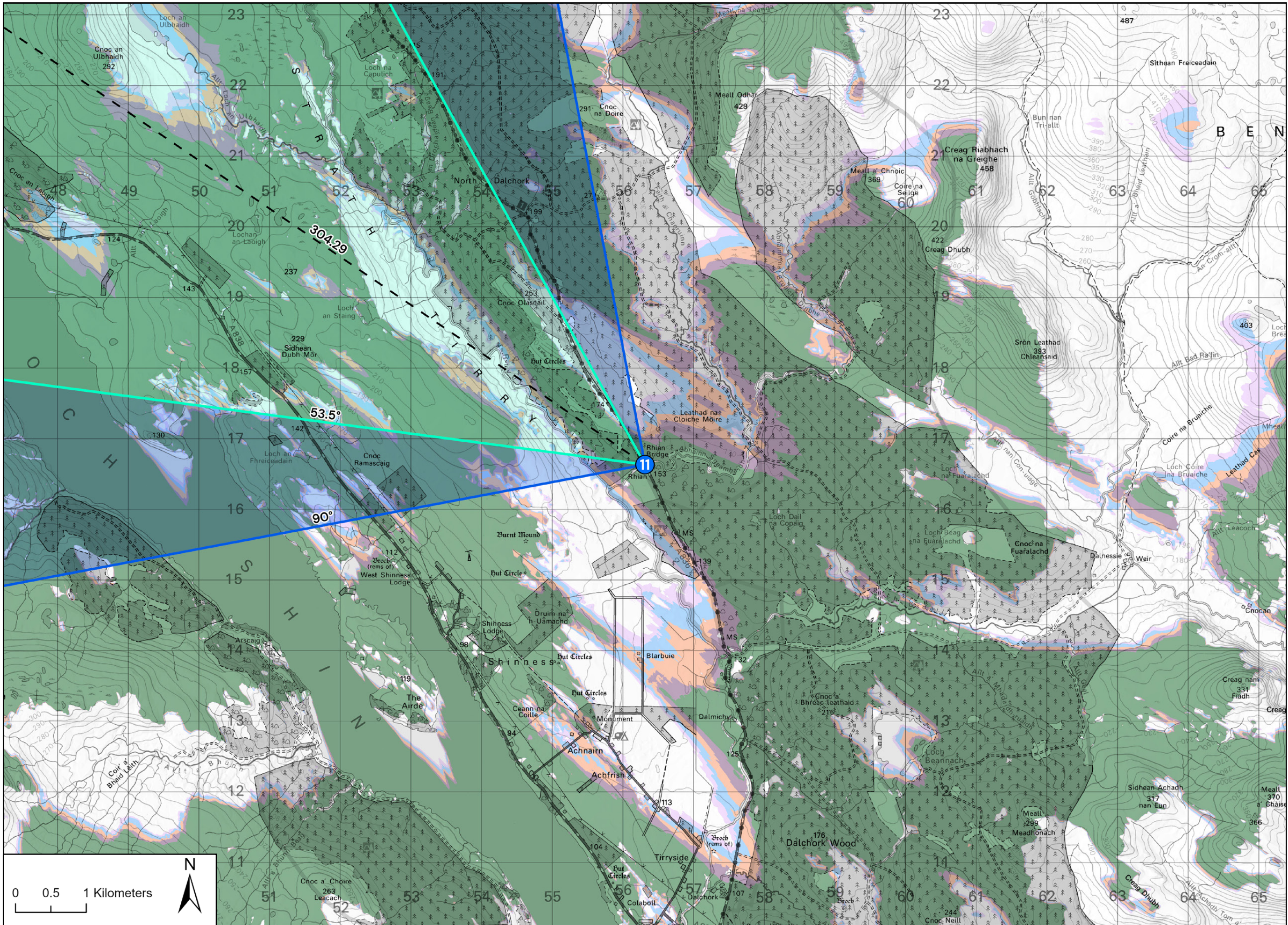
Camera: Nikon Z 6 II, FFS
Lens: 50mm Fixed Focal Lens
Height: 1.5m
Date & Time: 01/04/2025 @ 11:56





Viewpoint Location Plan - Site Context and Cumulative Wind Farms - Scale 1:150,000

COILLE LINNE WIND FARM



Viewpoint Location Plan - Visual Extents and Blade Tip ZTV - Scale 1:50,000

Key

Application Boundary

Turbine Layout

Blade Tip Zone of Theoretical Visibility (250m)

1 to 3 Turbines Visible

4 to 6 Turbines Visible

7 to 9 Turbines Visible

10 to 12 Turbines Visible

13 to 15 Turbines Visible

Wind Farm Status

Operational

Consented / Under Constructed

In Planning / Application

Scoping

Viewpoint Information

L VIA Viewpoint

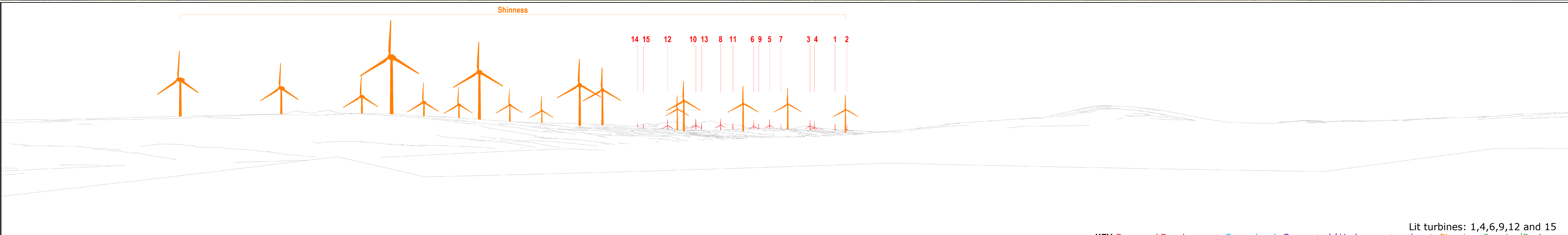
Centre of Visualisation (Bearing)

53.5° Field of View

90° Field of View



Baseline Photograph



Cumulative Wireline Drawing

Viewpoint Information

COILLE LINNE WIND FARM

OS Reference: E256313, N916632
Ground level: 151m (AOD)

Distance to nearest turbine: 10997m (T15)
Bearing to centre of photograph: 304.29°

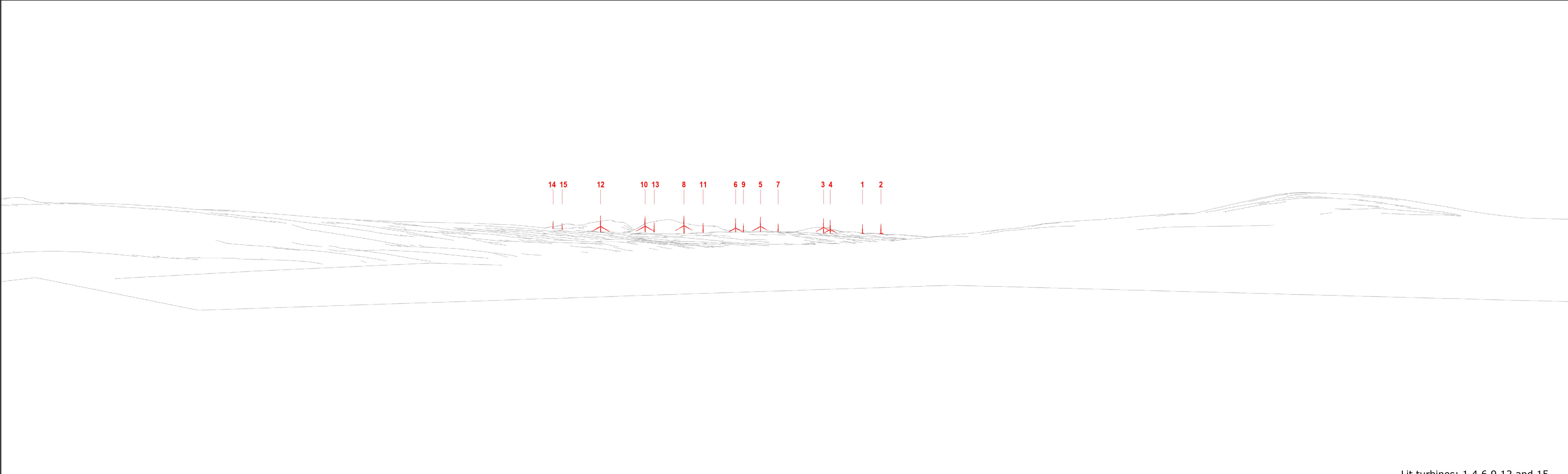
Angle of view: 90° (cylindrical)
Principal distance: 500mm
Paper size: 841 x 297 mm (half A1)
Correct printed image size: 820 x 260mm

Camera: Canon 5D Mk III, FFS
Lens: 50mm Fixed Focal Lens
Height: 1.5m
Date & Time: 06/08/2024 @ 15:25

KEY: Proposed Development Operational Consented / Under construction In Planning Scoping/PreApp
Lit turbines: 1,4,6,9,12 and 15

EnergieKontor

PEGASUS GROUP



Wireline Drawing

Lit turbines: 1,4,6,9,12 and 15
KEY: Proposed Development



Photomontage

Viewpoint Information

COILLE LINNE WIND FARM

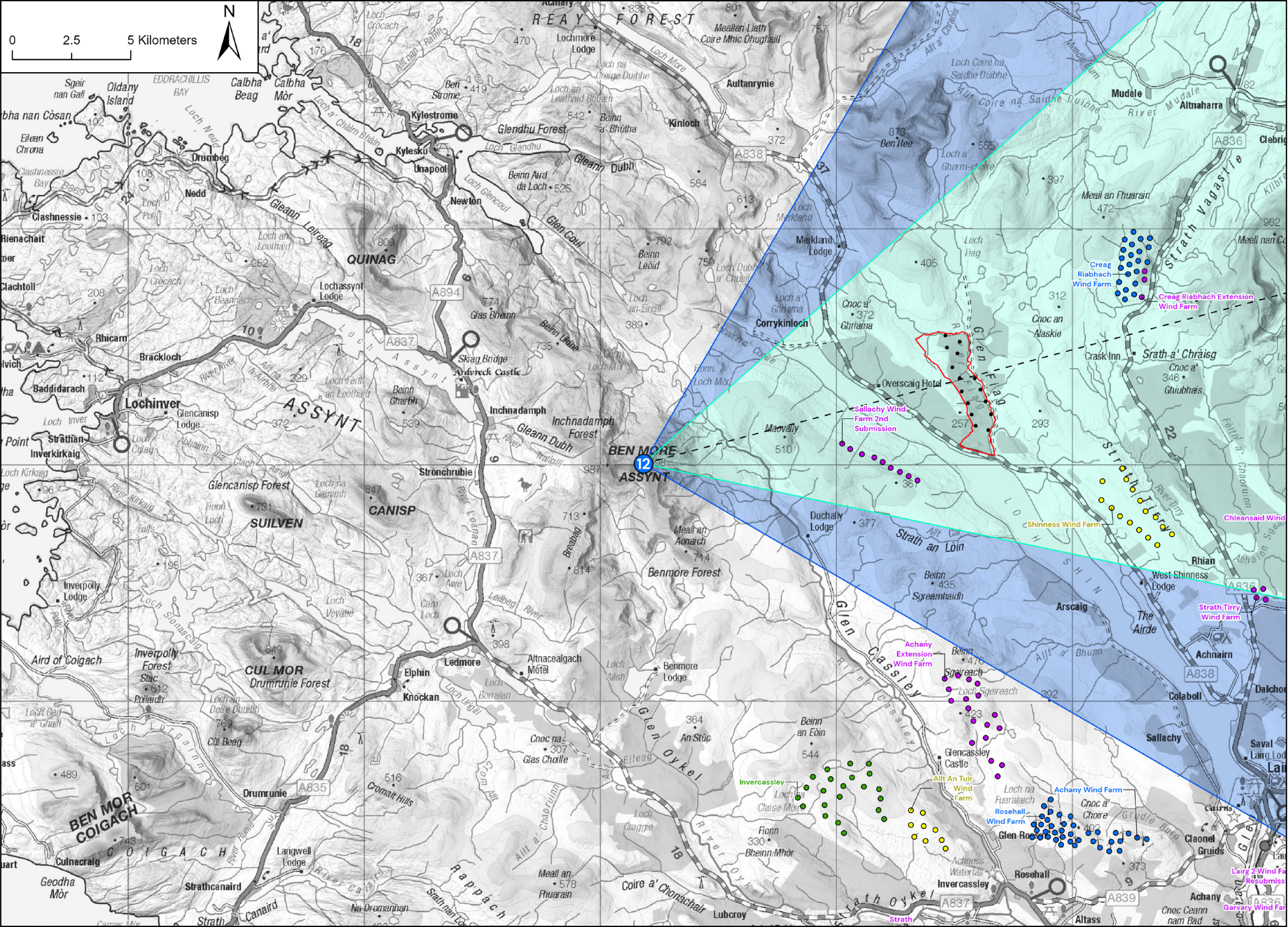
OS Reference: E256313, N916632
Ground level: 151m (AOD)

Distance to nearest turbine: 10997m (T15)
Bearing to centre of photograph: 304.29°

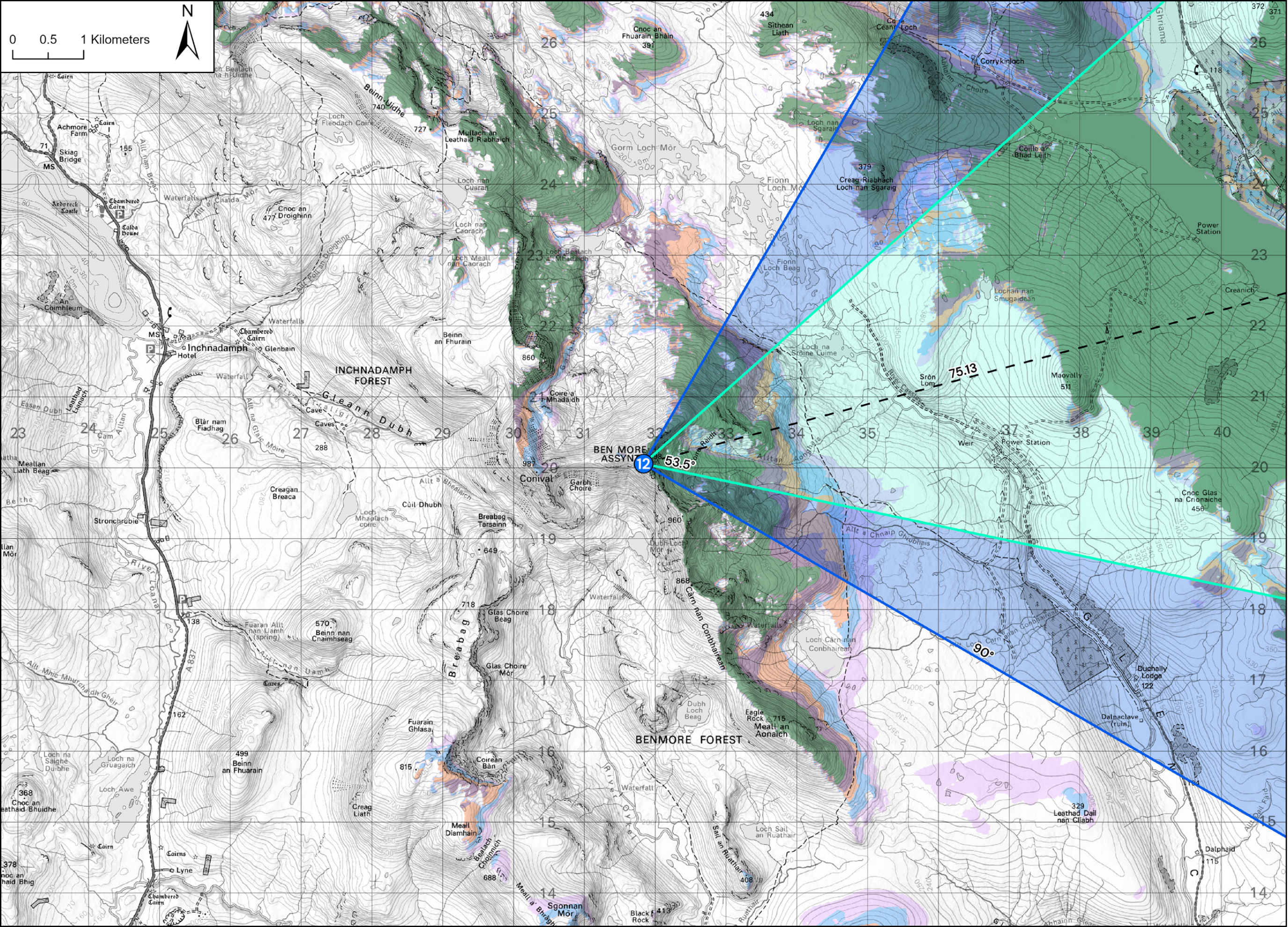
Angle of view: 53.5° (planar)
Principal distance: 812.5mm
Paper size: 841 x 297 mm (half A1)
Correct printed image size: 820 x 260mm

Camera: Canon 5D Mk III, FFS
Lens: 50mm Fixed Focal Lens
Height: 1.5m
Date & Time: 06/08/2024 @ 15:25





Viewpoint Location Plan - Site Context and Cumulative Wind Farms - Scale 1:150,000



Viewpoint Location Plan - Visual Extents and Blade Tip ZTV - Scale 1:50,000

Key

- Application Boundary
- Turbine Layout

Blade Tip Zone of Theoretical Visibility (250m)

- 1 to 3 Turbines Visible
- 4 to 6 Turbines Visible
- 7 to 9 Turbines Visible
- 10 to 12 Turbines Visible
- 13 to 15 Turbines Visible

Wind Farm Status

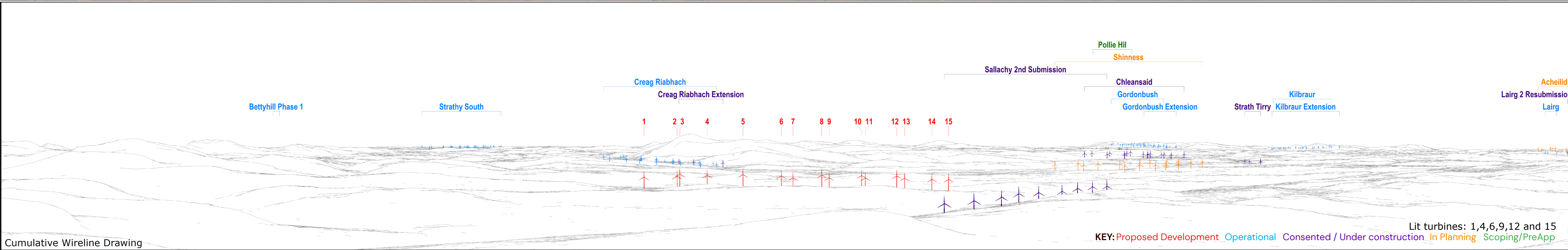
- Operational
- Consented / Under Constructed
- In Planning / Application
- Scoping

Viewpoint Information

- LVIA Viewpoint
- Centre of Visualisation (Bearing)
- 53.5° Field of View
- 90° Field of View



Baseline Photograph



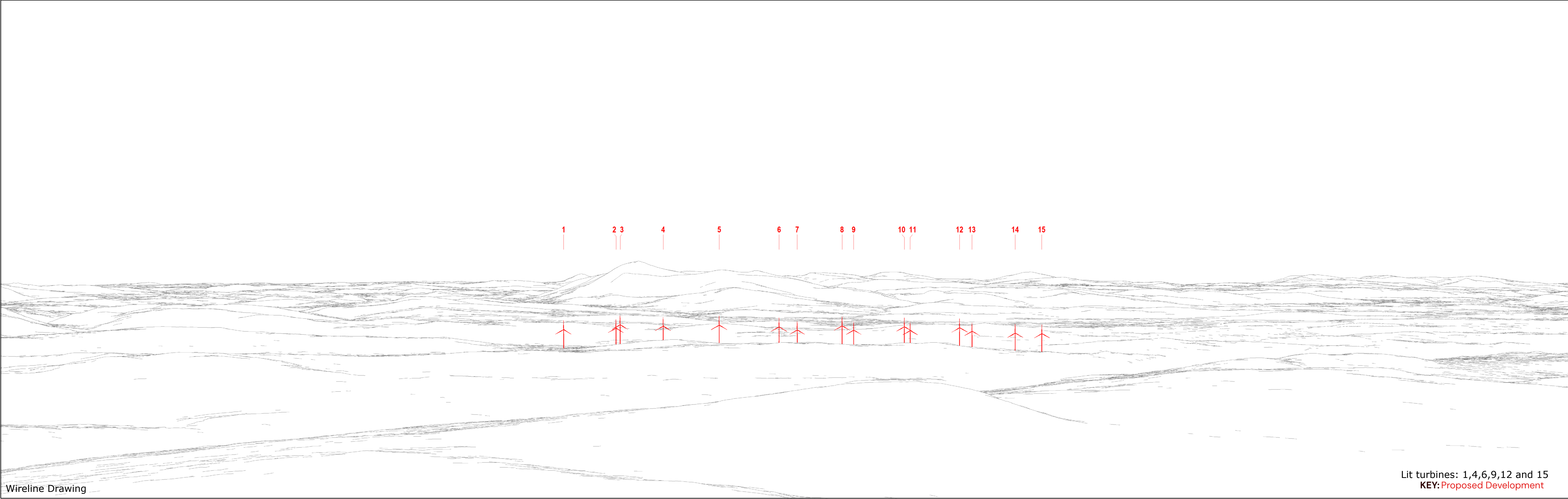
Cumulative Wireline Drawing

Viewpoint Information

OS Reference: E231838, N920055
Ground level: 994m (AOD)
Distance to nearest turbine: 13698m (T5)
Bearing to centre of photograph: 75.13°
Angle of view: 90° (cylindrical)
Principal distance: 500mm
Paper size: 841 x 297 mm (half A1)
Correct printed image size: 820 x 260mm
Camera: Nikon Z 6 II, FFS
Lens: 50mm Fixed Focal Lens
Height: 1.5m
Date & Time: 07/09/2024 @ 13:38

COILLE LINNE WIND FARM



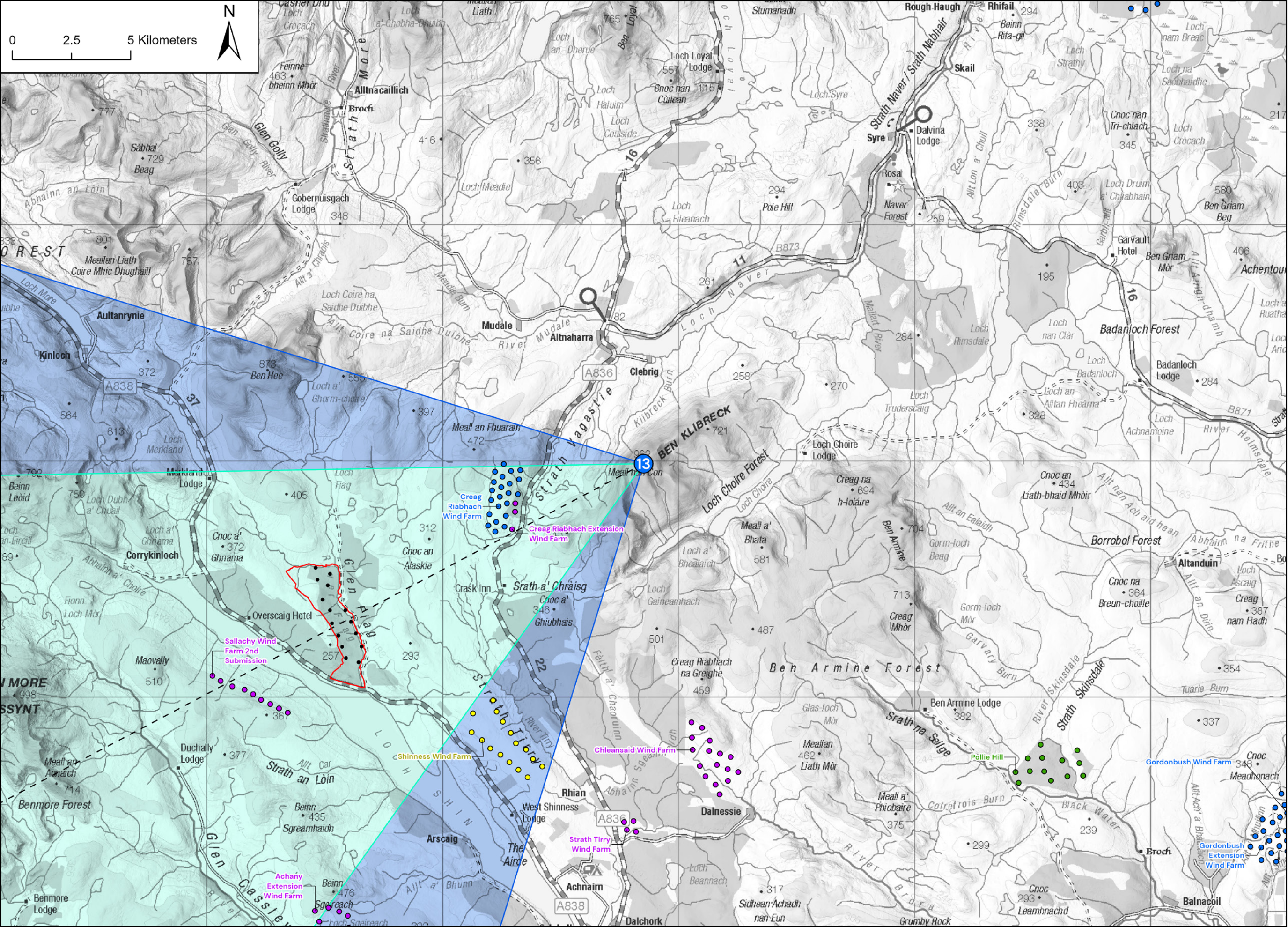


Wireline Drawing

Lit turbines: 1,4,6,9,12 and 15
KEY: Proposed Development

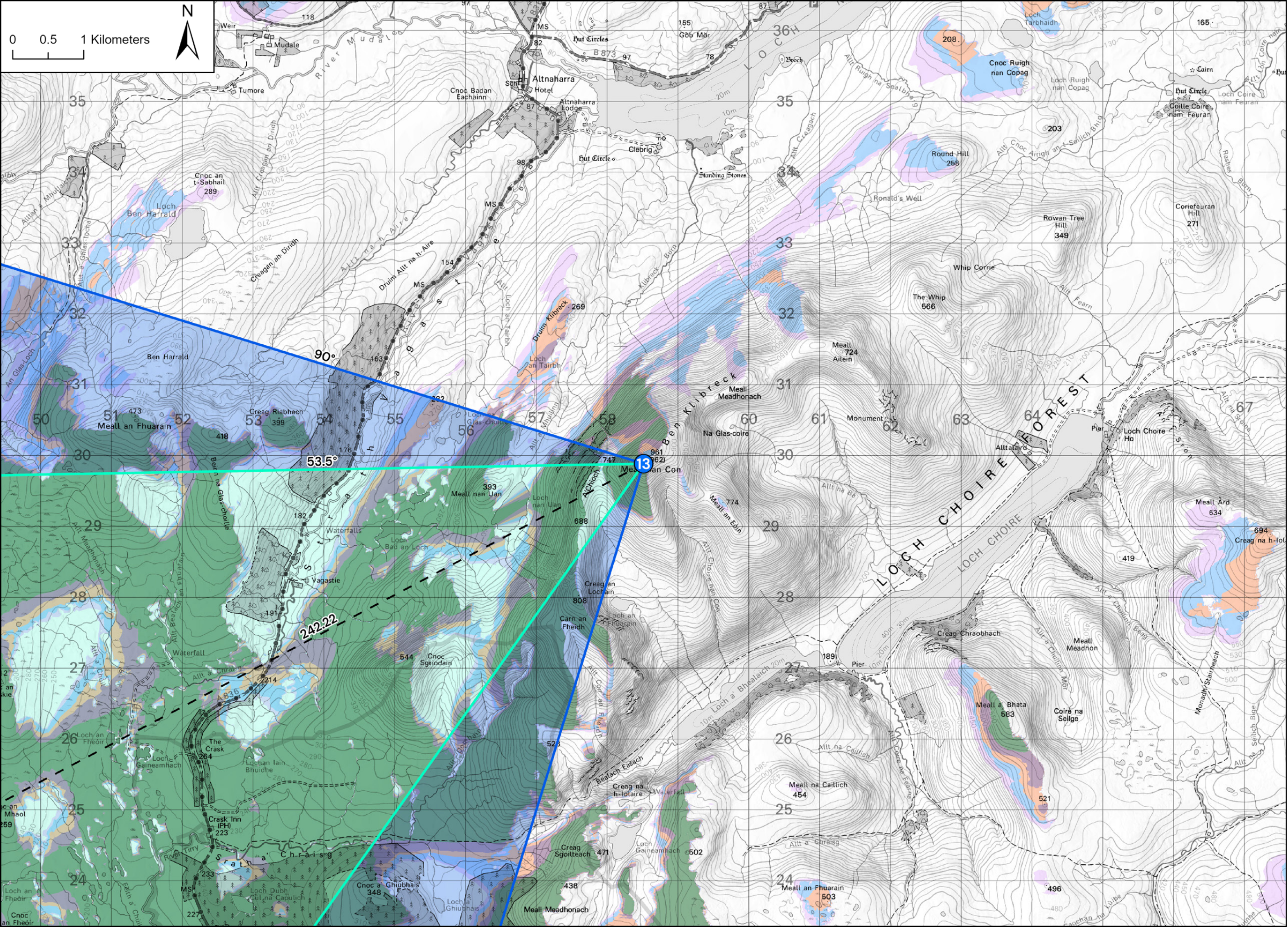


Photomontage



Viewpoint Location Plan - Site Context and Cumulative Wind Farms - Scale 1:150,000

COILLE LINNE WIND FARM



Viewpoint Location Plan - Visual Extents and Blade Tip ZTV - Scale 1:50,000

Key

- Application Boundary
- Turbine Layout

Blade Tip Zone of Theoretical Visibility (250m)

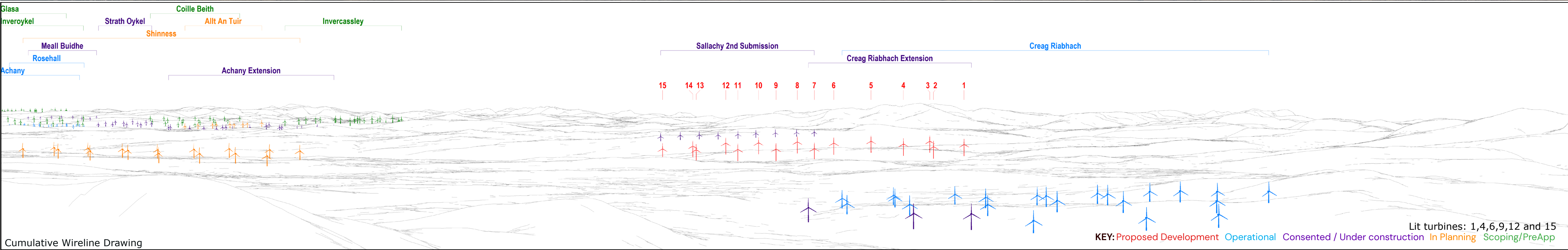
- 1 to 3 Turbines Visible
- 4 to 6 Turbines Visible
- 7 to 9 Turbines Visible
- 10 to 12 Turbines Visible
- 13 to 15 Turbines Visible

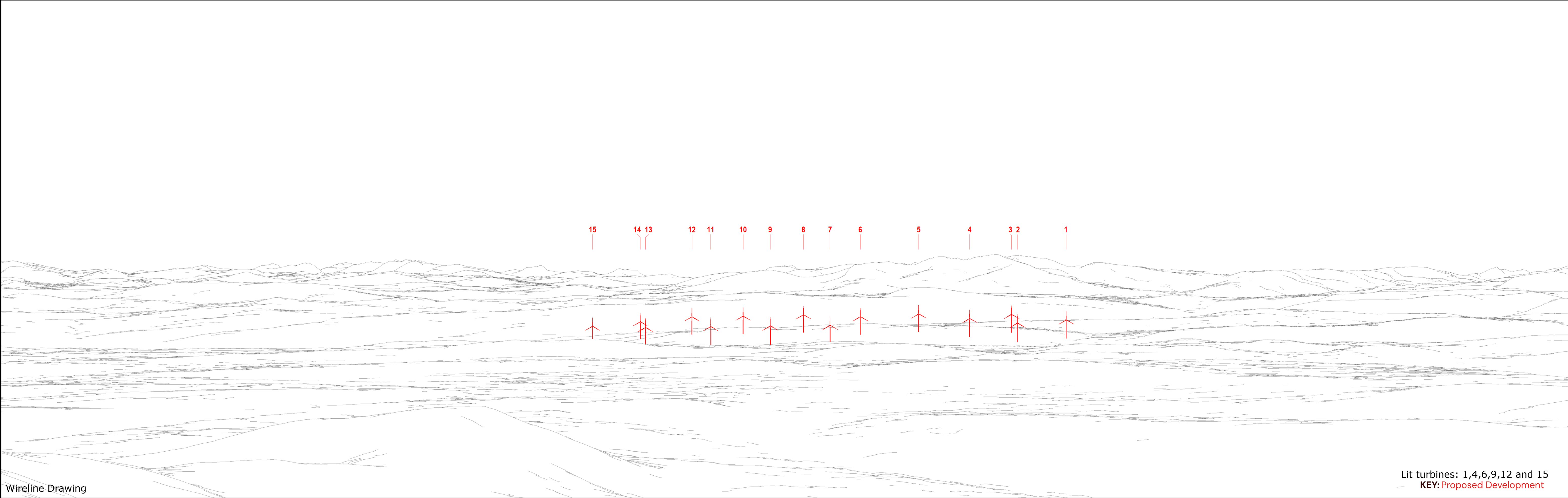
Wind Farm Status

- Operational
- Consented / Under Constructed
- In Planning / Application
- Scoping

Viewpoint Information

- L VIA Viewpoint
- Centre of Visualisation (Bearing)
- 53.5° Field of View
- 90° Field of View





Viewpoint Information

COILLE LINNE WIND FARM

OS Reference: E258515, N929883
Ground level: 955m (AOD)

Distance to nearest turbine: 14078m (T2)
Bearing to centre of photograph: 242.22°

Angle of view: 53.5° (planar)
Principal distance: 812.5mm
Paper size: 841 x 297 mm (half A1)
Correct printed image size: 820 x 260mm



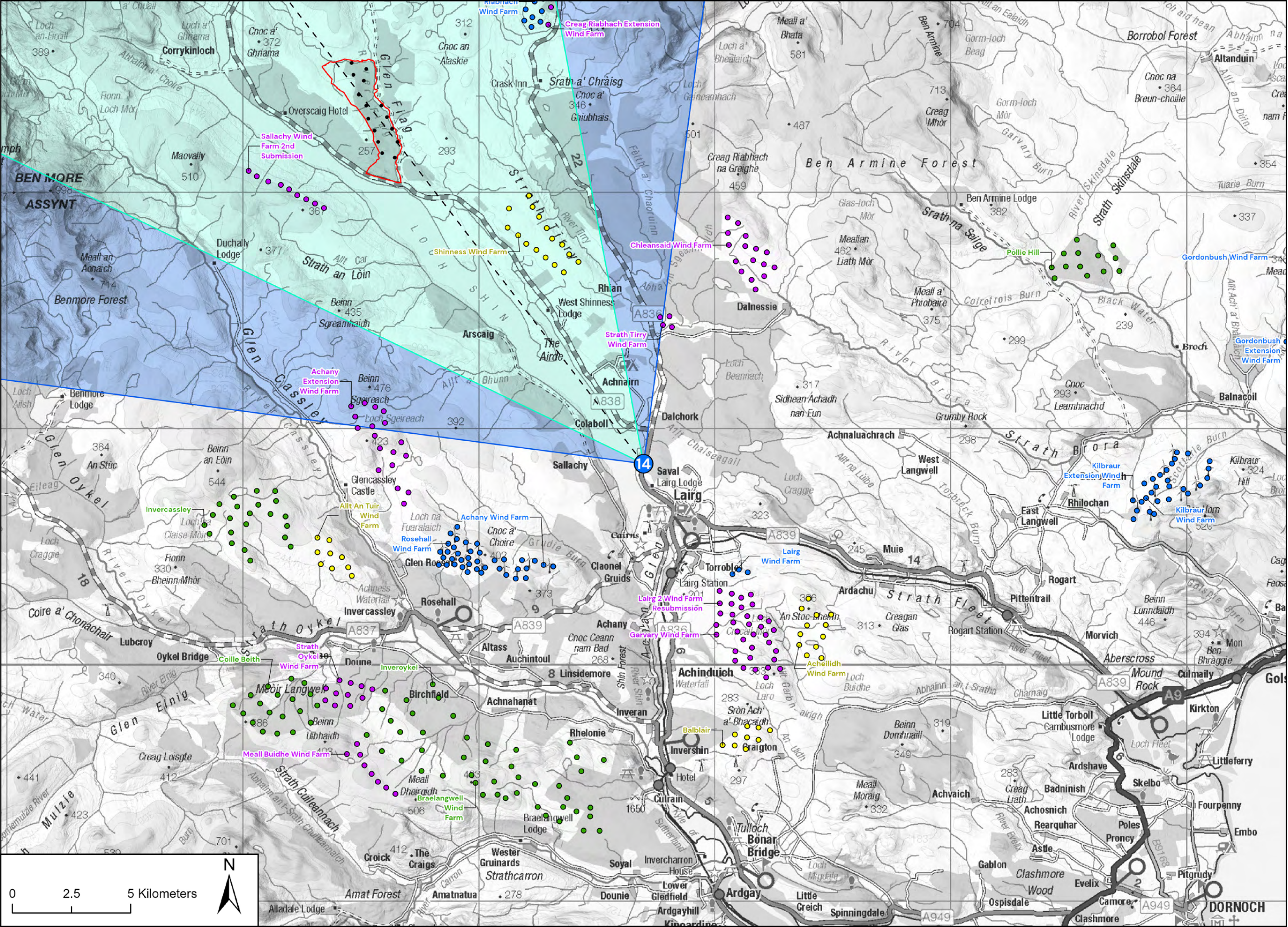
Lit turbines: 1,4,6,9,12 and 15
KEY: Proposed Development

Viewpoint 13: Ben Klibreck (Meall nan Con)

(Sheet C)

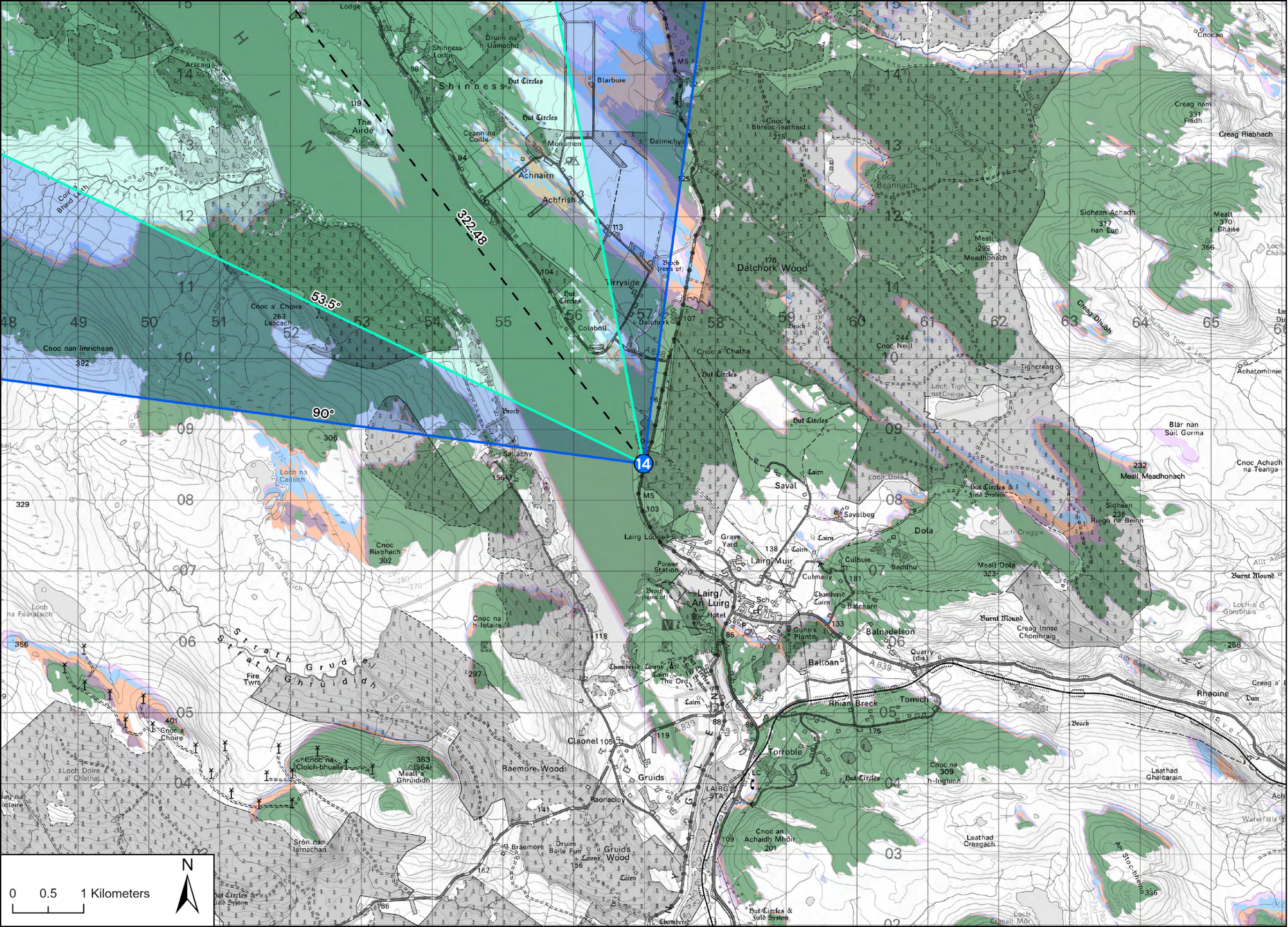


Photomontage



Viewpoint Location Plan - Site Context and Cumulative Wind Farms - Scale 1:150,000

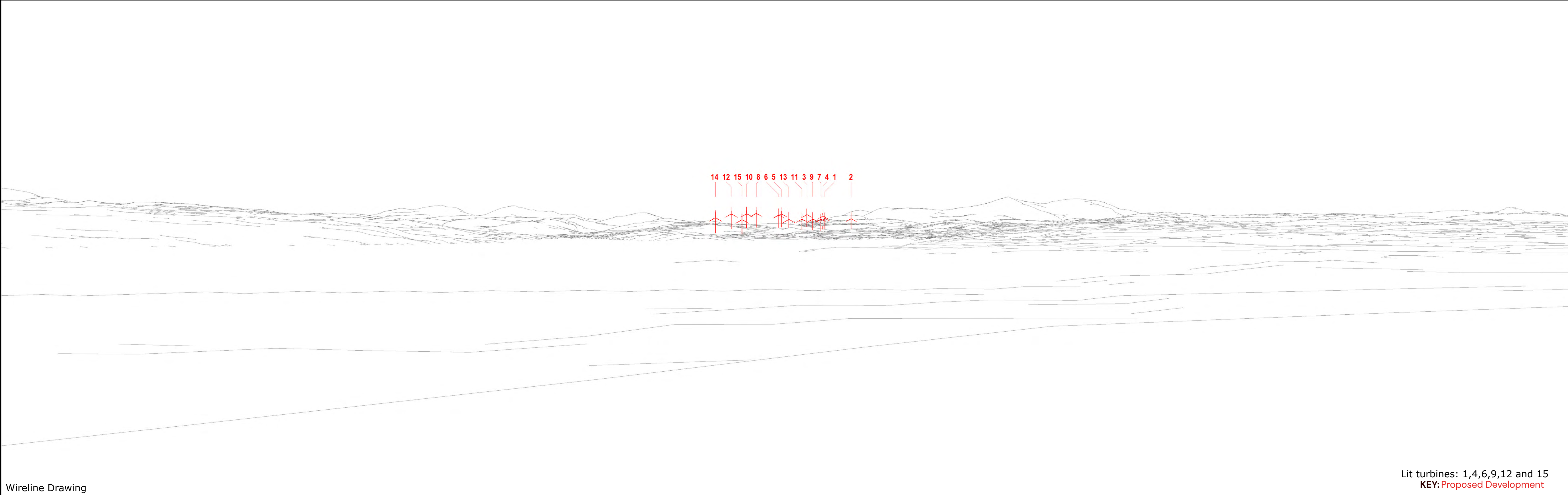
COILLE LINNE WIND FARM



Viewpoint Location Plan - Visual Extents and Blade Tip ZTV - Scale 1:50,000

- Key**
- Application Boundary
 - Turbine Layout
- Blade Tip Zone of Theoretical Visibility (250m)
- 1 to 3 Turbines Visible
 - 4 to 6 Turbines Visible
 - 7 to 9 Turbines Visible
 - 10 to 12 Turbines Visible
 - 13 to 15 Turbines Visible
- Wind Farm Status
- Operational
 - Consented / Under Constructed
 - In Planning / Application
 - Scoping
- Viewpoint Information
- L VIA Viewpoint
 - Centre of Visualisation (Bearing)
 - 53.5° Field of View
 - 90° Field of View





Wireline Drawing

Lit turbines: 1,4,6,9,12 and 15
KEY: Proposed Development



Photomontage

Viewpoint Information

COILLE LINNE WIND FARM

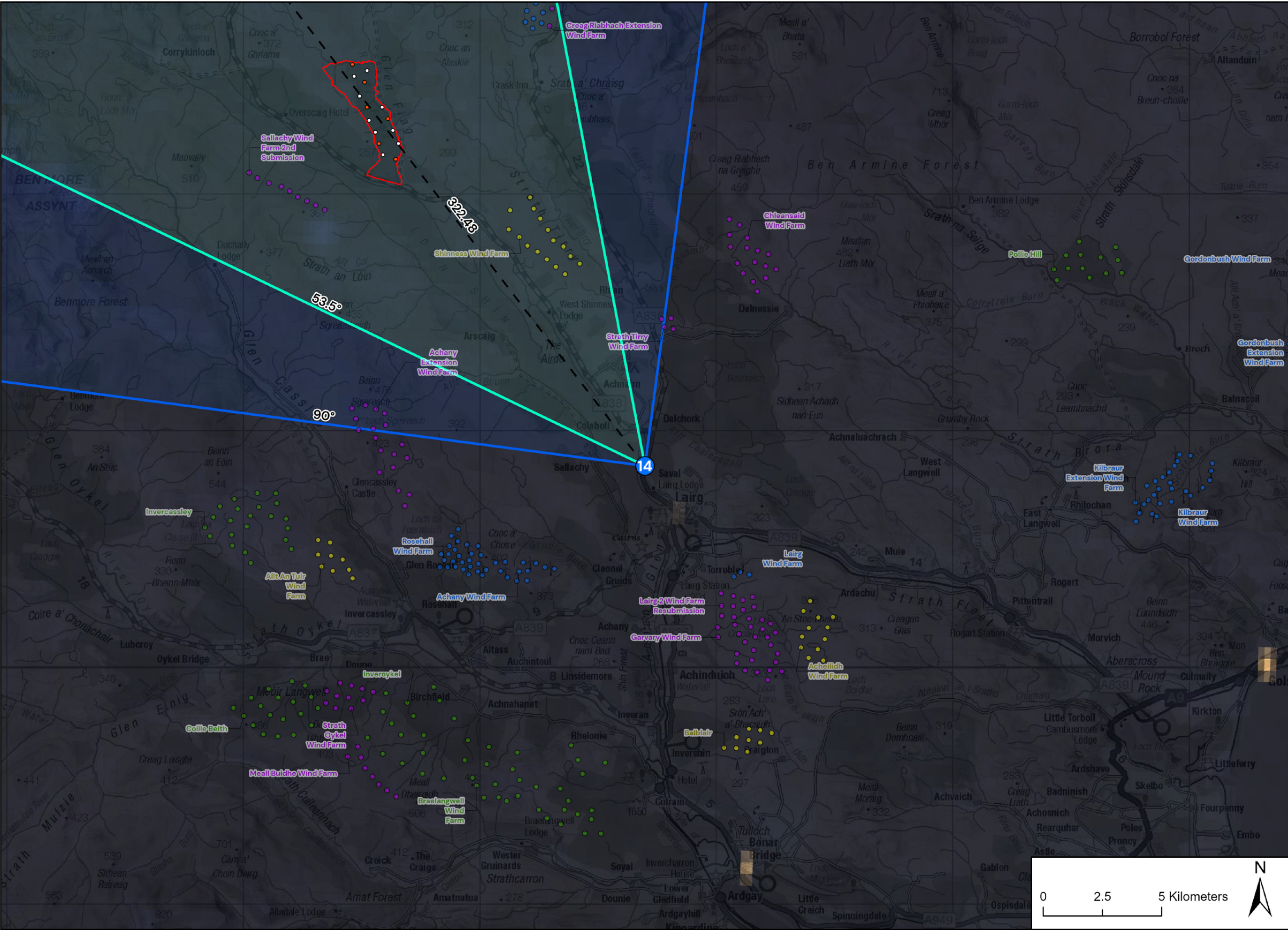
OS Reference: E256986, N908513
Ground level: 105m (AOD)

Distance to nearest turbine: 16710m (T15)
Bearing to centre of photograph: 322.48°

Angle of view: 53.5° (planar)
Principal distance: 812.5mm
Paper size: 841 x 297 mm (half A1)
Correct printed image size: 820 x 260mm

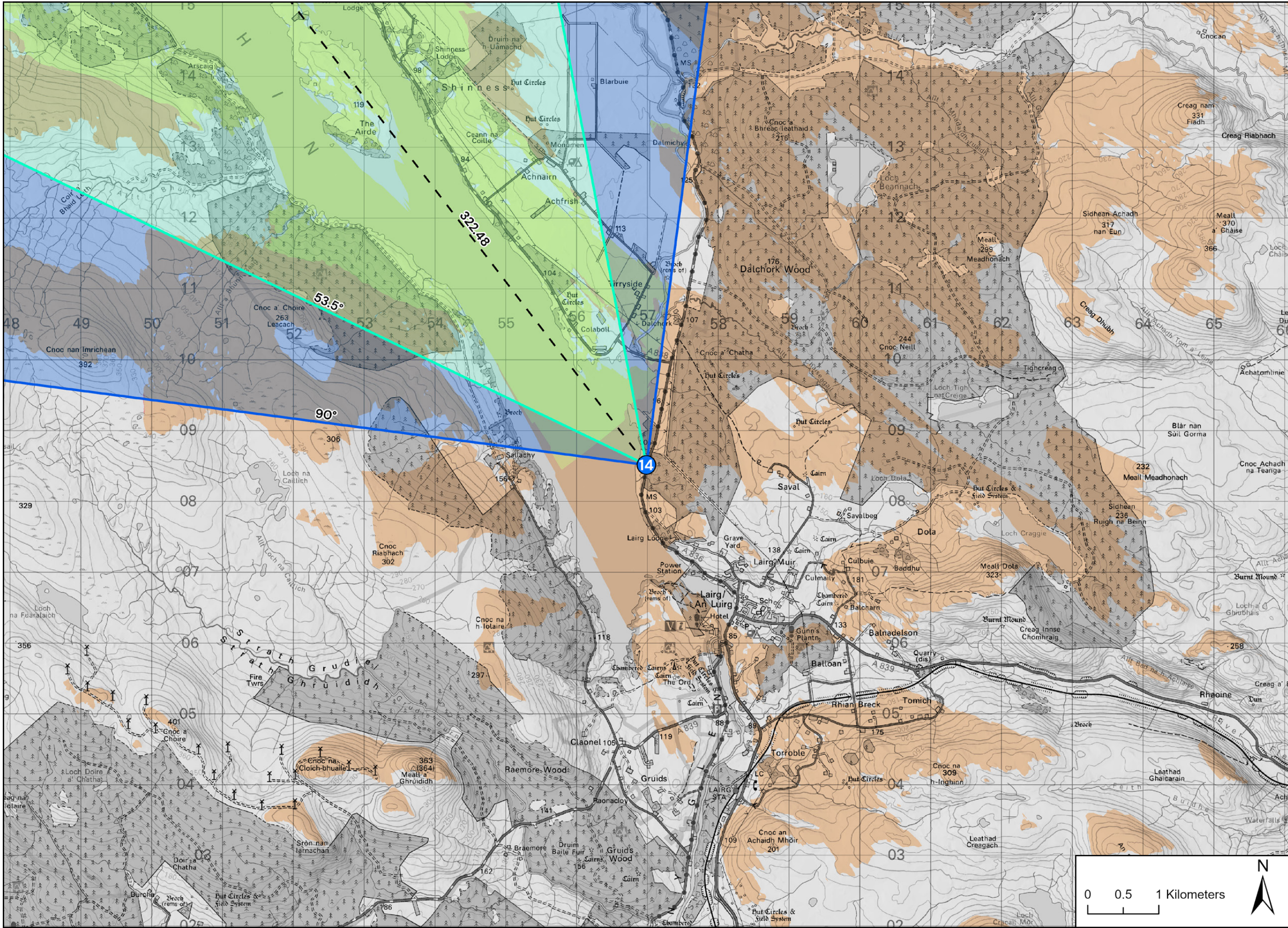
Camera: Canon 5D Mk III, FFS
Lens: 50mm Fixed Focal Lens
Height: 1.5m
Date & Time: 05/09/2024 @ 15:03





Viewpoint Location Plan - Site Context, Cumulative Wind Farms and Dark Sky Baseline Satellite Image - Scale 1:150,000

COILLE LINNE WIND FARM



Viewpoint Location Plan - Visual Extents and Turbine Lighting Intensity ZTV - Scale 1:50,000

- Key**
- Application Boundary
 - Turbine Layout (No Aviation Light)
 - Turbine Layout Fitted with Steady Red Aviation Light
- Other Wind Farms (Status)**
- Operational
 - Consented / Under Constructed
 - In Planning
 - Scoping
- Viewpoint Information**
- L VIA Viewpoint
 - Centre of Visualisation (Bearing)
 - 53.5° Field of View
 - 90° Field of View
- Dark Sky Baseline Satellite Image**
- Visible Light

Source: The Applicant acknowledges the use of imagery provided by services from NASA's Global Imagery Browse Services (GIBS), part of NASA's Earth Observing System Data and Information System (EOSDIS)

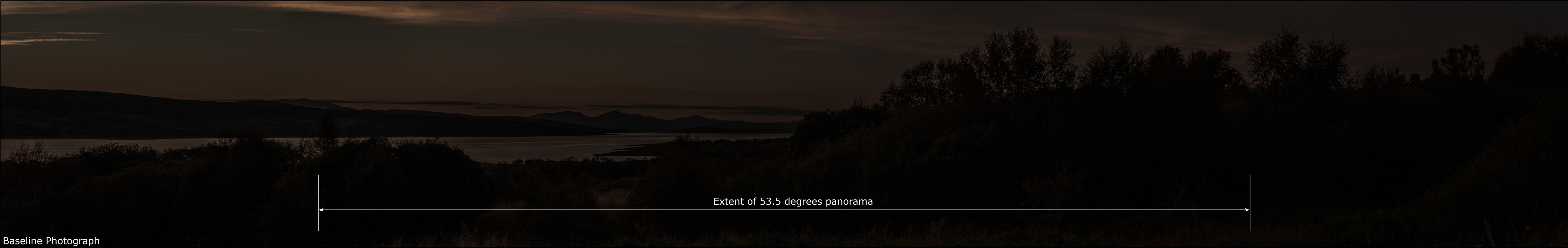
Turbine Lighting Intensity ZTV

INTENSITY OF TURBINE LIGHT SHOWN IN CANDELA [CD]		
VERTICAL ANGLE	2000 CD LIGHT	200 CD LIGHT
3° TO 0°	UP TO 2500 CD	UP TO 250 CD
0° TO -1°	2185 CD TO 982 CD	218 CD TO 98 CD
-1° TO -2°	982 CD TO 413 CD	98 CD TO 41 CD
-2° TO -3°	413 CD TO 217 CD	41 CD TO 21 CD
-3° TO -4°	217 CD TO 172 CD	21 CD TO 17 CD
BELOW -4°	BELOW 172 CD	BELOW 17 CD

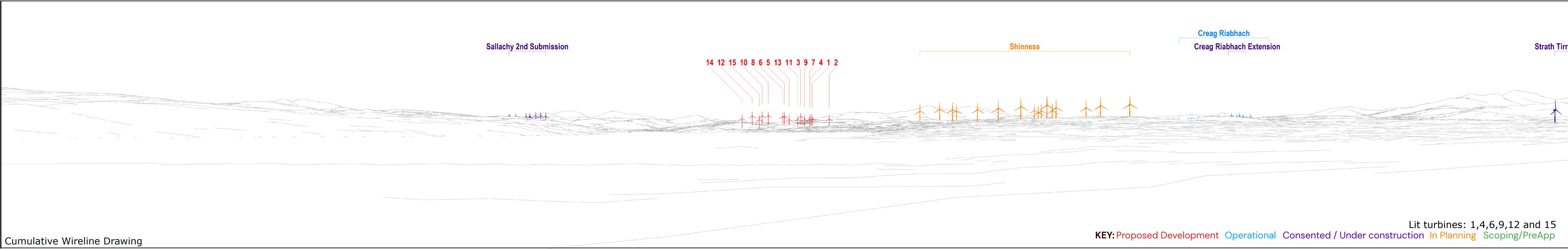
NOTES

- A reduced lighting scheme has been agreed with the Civil Aviation Authority (CAA) and it is proposed six of the eight turbines would be lit (T1, T4, T6, T12 and T15).
- The visible turbine lights will be switched on between Evening Civil Twilight and Morning Civil Twilight, approximately 11 hours per day averaged over the year.
- Civil Aviation Authority SARG Policy Statement (2017) states "If the horizontal meteorological visibility in all directions from every wind turbine generator in a group is more than 5 km, the intensity for the light positioned as close as practicable to the top of the fixed structure required to be fitted to any generator in the wind farm and displayed may be reduced to not less than 10% of the minimum peak intensity."
- The lighting intensity for each of the vertical angles shown in the above table has been provided by Contamex (Light Bulb Manufacturer) and is based on optimal test conditions in a calibration chamber.
- The perception of theoretical candela intensity does not take account of atmospheric attenuation (reduction in brightness over distance).
- The ZTV does not take account of surface features such as buildings or forestry.
- The ZTV has been produced using OS Terrain 5 height data and calculates the difference in vertical angle between the turbine lights and the study area.
- The ZTV represents a reasonable worst case and the theoretical lighting intensity illustrated may be the result of a single turbine within the group.
- Actual visibility is likely to be less than predicted due to a range of other factors considered in Appendix 6.8 of the LIA which include the darkness adaptation of individual receptors and weather obscuration.

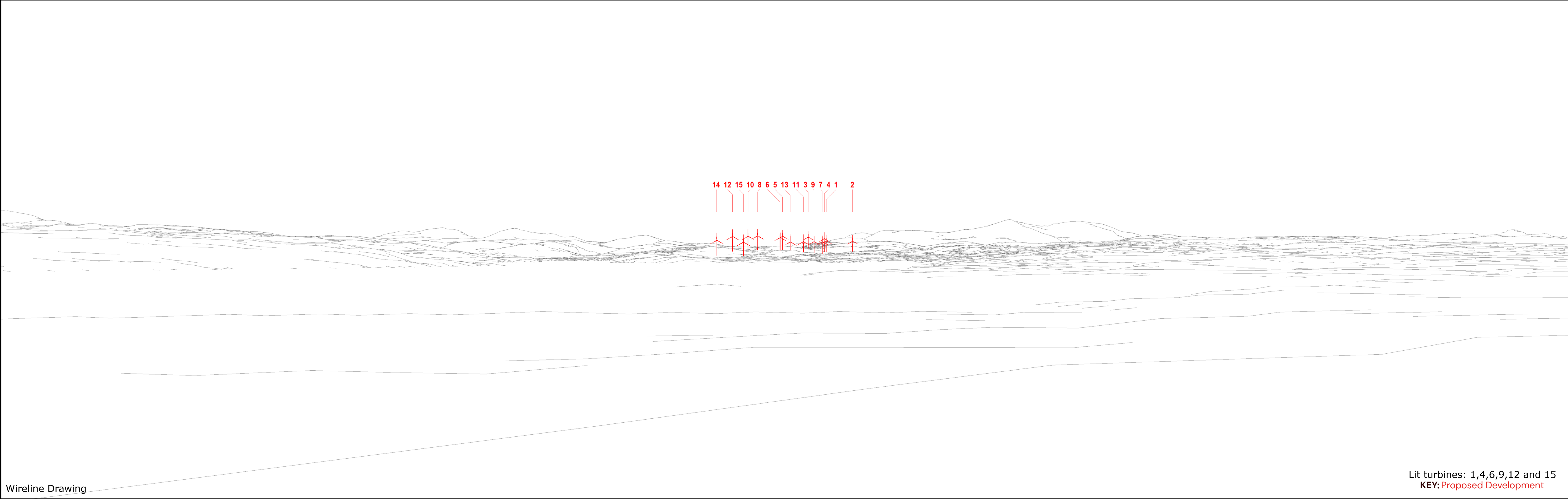
Further technical information can be found in Appendix 6.8 Night-time Lighting Assessment Methodology.



Baseline Photograph



Cumulative Wireline Drawing

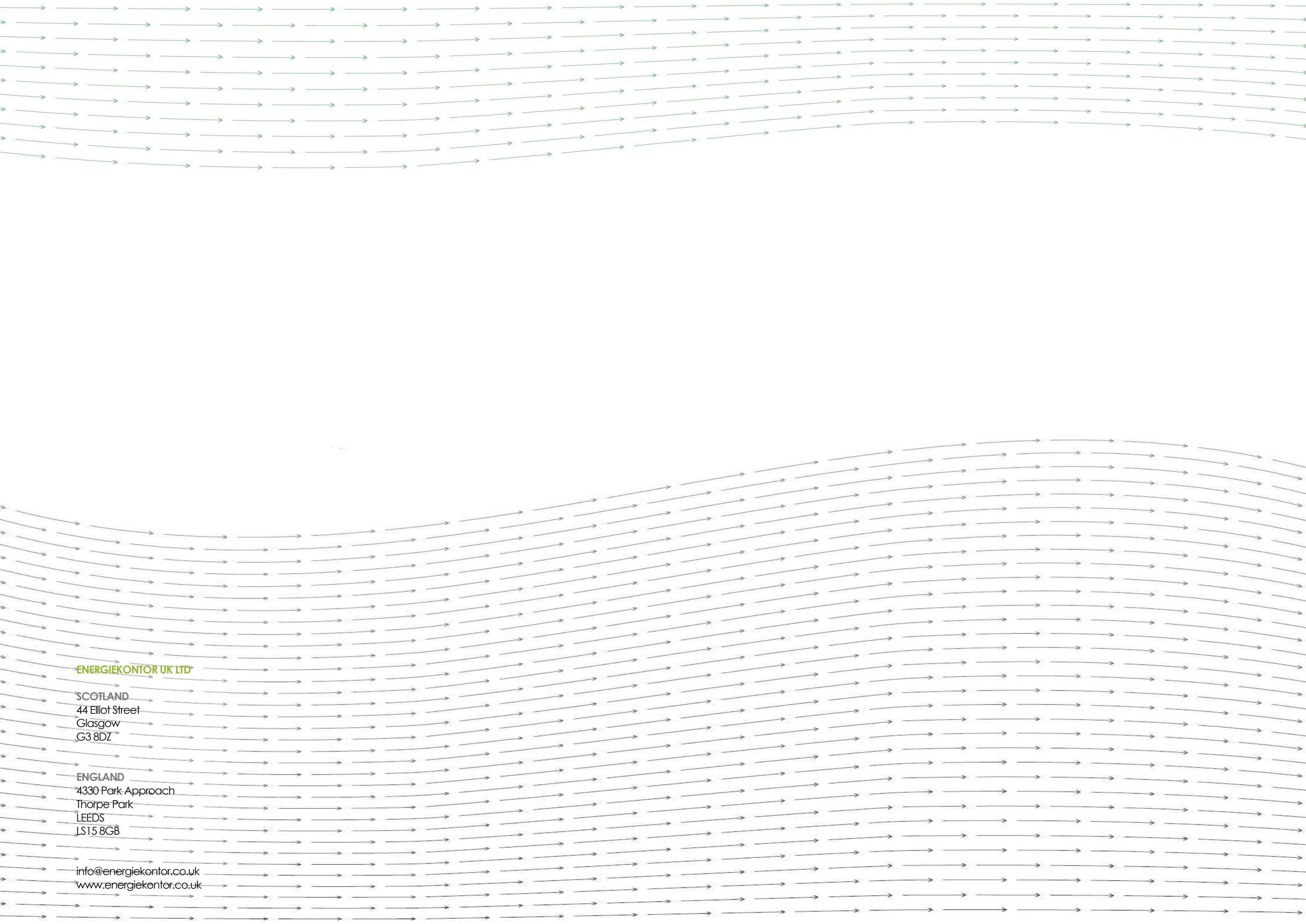


Wireline Drawing

Lit turbines: 1,4,6,9,12 and 15
KEY: Proposed Development



Photomontage



ENERGIEKONTOR UK LTD

SCOTLAND
44 Elliot Street
Glasgow
G3 8DZ

ENGLAND
4330 Park Approach
Thorpe Park
LEEDS
LS15 8GB

info@energiekontor.co.uk
www.energiekontor.co.uk