FEHILY TIMONEY

DESIGNING AND DELIVERING
A SUSTAINABLE FUTURE

APPENDIX 16

Landscape and Visual Assessment

Appendix 16.1 Photomontages

Appendix 16.2 Landscape plan

FEHILY TIMONEY

DESIGNING AND DELIVERING
A SUSTAINABLE FUTURE

APPENDIX 16.1

PHOTOMONTAGES

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LVIA PHOTOMONTAGES

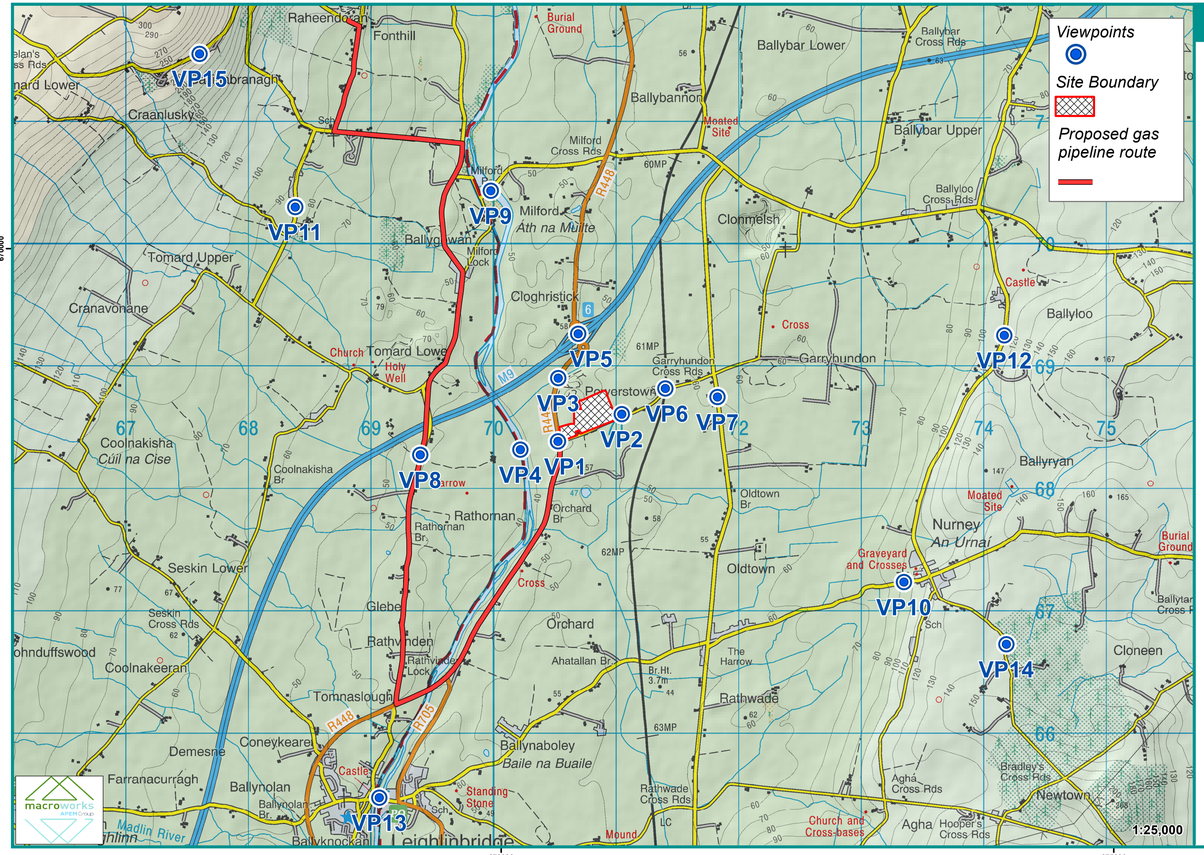
Powerstown Biogas
Volume 2: Appendix 16.1

This book contains imagery for the viewpoints chosen for the LVIA study

June 2026



LVIA I TVIA I Landscape Design I Visibility Analysis I Glint and Glare I Verified Photomontages I CGI I Shadow Flicker Analysis



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90° Outline View
90° Photomontage with Mitigation Established

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90° Baseline Photography
90° Outline View
90° Photomontage
90° Photomontage with Mitigation Established

VP3: R448 regional road, Cloghristick townland
90° Baseline Photography
90° Outline View
90° Photomontage

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90° Baseline Photography
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90° Baseline Photography
90° Outline View
90° Photomontage
90° Photomontage with Mitigation Established

***Please Note:** There is no Photomontage or Mitigated Photomontage from this viewpoint as the proposed development is completely screened by existing vegetation and/or terrain

****Please Note:** The proposed development is not visible from this viewpoint as it is completely screened by terrain

*****Please Note:** There is no Photomontage from this viewpoint as the proposed development is completely screened by existing vegetation and/or terrain

MACRO WORKS METHOD STATEMENT - Verified View Photomontage Production

Introduction

There is no industry-standard definition of what constitutes a ‘verified photomontage’, and it has been applied in two different ways, namely in terms of image size/scaling, and the accuracy of the camera location. Both are essentially concerned with the ability to audit the accuracy of the visual material.

The Landscape Institute Technical Guidance Note 06/19 – Visual representation of development proposals (TGN 06/19) states that:

“Visualisations should provide the viewer with a fair representation of what would be likely to be seen if the proposed development is implemented and should portray the proposal in scale with its surroundings. In the context of landscape/townscape and visual impact assessment, it is crucial that visualisations are objective and sufficiently accurate for the task in hand. In short, visualisation should be fit for purpose.”

Macro Works has produced the Verified View Montages (VVM) included in this document in accordance with TGN 06/19, guidance which is broadly consistent with Scottish Natural Heritage (now NatureScot) ‘Visual Representation of Wind Farms’ 2017. This guidance advocates a proportionate approach and appropriate levels of accuracy to the production of visual material.

In the context that the visual material is to accompany a planning application, Macro Works has followed a highly accurate and verifiable process to accurately communicate the scale, appearance, context, form, and extent of development, and ensure that the visual material is accurate, objective, and unbiased. The VVM are considered consistent with Type 4 in the guidance.

The photography was captured during good weather conditions with high levels of visibility. Photography has been taken to a very high standard in accordance with the guidance, and locational information is captured with a high degree of accuracy with regard to location and elevation.

The locations of the visualisations have been identified through the Landscape/Townscape and Visual Impact Assessment (LVIA or TVIA) process, and produced from 3D model information received from project architects/engineers.

This methodology has been prepared by Macro Works to explain the production of the VVM, ensuring the process is transparent and auditable.

Photography and GPS/GNSS Data

At the agreed locations, high-quality photography is captured in RAW format using either a Canon 5D Mark II or Canon 6D Mark II Full Frame Sensor camera. A Manfrotto tripod and panoramic head and leveller are used to ensure the photography is taken level and at consistent angles to ensure consistent overlapping.

Viewpoint locations are captured by inhouse trained personnel using a survey-grade GNSS unit and made compatible with the GIS referenced drawings of the proposed development. Where deemed necessary, the camera location is paint-marked and photographed and subsequently surveyed by a qualified topographical surveyor. In these circumstances, surveyors are given the photograph locations, together with marked-up photography that shows elements in the view (parapet heights, kerbing, lamp posts, etc.) that are to be surveyed as control points for model alignment within the panorama.

TGN 06/19 advocates the use of a 50mm prime lens as the industry standard, and this is the default approach adopted. In urban contexts, where a 50mm lens cannot fully capture the proposed development, the guidance accepts the use of alternative fixed-length prime lenses (Appendix 11, P.28). This approach is adopted dependent on the proximity of the development.

Following the site visit, RAW images are processed via Adobe Lightroom and panoramas are stitched and generated using the recommended industry standard software, PTGui Pro.

Post Production and Formatting

Post-production, the rendered image is taken into Adobe Photoshop where it is ‘masked’ into the existing captured panorama. This essentially involves ensuring that anything in the foreground of the proposals is brought in front of the rendered image.

Adjustments are made as required to ensure that the lighting, reflections, and material characteristics of each render are accurate to the time and date of the photography and that the images meet GDPR standards (via blurring faces and car registrations, etc.).

Proposed mitigation is added where indicated via a Landscape Mitigation Plan.

Each VVM is subject to a thorough review and approval process which includes discussions with project engineers and architects to ensure it accurately reflects the architectural proposals.

3D Modelling and VVM Creation

The proposed development is accurately modelled into a 3D environment in GIS mapping software and 3DS Max 2023 using a combination of data sources (REVIT files, AutoCAD drawings, DTM/DSM data etc.) received from the project architects and engineers.

Virtual 3D cameras are positioned according to the survey coordinates, and the focal length is set to match the captured photography.

For rural projects, the visualisation preparation methodology recommended in the Scottish Natural Heritage 2017 ‘Visual Representation of Wind Farms’ is strictly followed. This involves the creation of 360° wirelines using GIS software, which perfectly match the generated panoramas and 3DS Max renders for each viewpoint. This allows for the development to be accurately placed within the captured photography.

For urban projects, camera matching or photographic alignment is a method by which a combination of data is used to produce an accurate camera match for each view. Virtual 3D cameras are positioned and the captured photography is then placed into the background of the 3DS Max Viewpoint. The surveyed information is then matched to the existing buildings in the photography.

Where appropriate, colour palettes and material references provided by the wider design team are applied to the model to provide a real-world representation. To ensure a high degree of accuracy, renders of the development are generated from 3DS Max 2023 with identical image characteristics to that of the baseline photography, including reference to the date and time of capture.

Image Presentation

The objective of Type 4 visualisation is to present a printed image which gives a realistic impression of scale and detail.

VVMs are presented in accordance with the TGN 06/19 guidance, and final views are formatted into a booklet using Adobe InDesign, with all accompanying information relating to the photography, modelling, topography, post-production and viewpoints included.

For each viewpoint location, a 90° Horizontal Field of View (HFoV) cylindrical baseline photograph is provided to allow a 96% enlargement contextual reference. Image enlargement of 150% is recommended in the guidance (where feasible) to allow for binocular image scaling when printed, which results in an image with a 53.5° HFoV. Where this is not feasible because of proximity, or infrastructure occupying a wide field of view well beyond 53.5° that would necessitate splitting the view across multiple images, 90° HFoV cylindrical images are presented to avoid confusion for the viewer. A bounding box illustrates the extent of a 53.5° image where this is the case.

This document contains a site location map with VVM locations plotted, and all reference information, including photography, modelling, topographic, post-production, formatting, viewpoint and viewing instructions.

90˚ Baseline View



Powerstown Biogas - Landscape and Visual Impact Assessment

Viewpoint Ref: VP1 R448 regional road, Powerstown townland

Visualisation Type 4 - This 90˚cylindrical projection panorama has been captured, prepared and presented in accordance with the guidance set out in the Landscape Institute Technical Guidance Note 06/19 for Type 4 Visualisations and the Scottish Natural Heritage 2017 guidance 'Visual Representation of Wind Farms'. This image has been presented in a 90˚ cylindrical format to aid visual comprehension of linear infrastructure occupying a wide FoV, which avoids splitting the view across numerous multiple images.

Easting (ITM):	670463
Northing (ITM):	668424
Direction of View:	43 ˚
Distance to Site:	0.02 km
Elevation:	49.8 m

Horizontal Field of View:	90˚ (cylindrical projection)
Principal Distance:	522 mm
Paper size:	841 x 297 mm
Correct printed image size:	820 x 251 mm
Enlargement Factor:	96%

Date and Time:	2025/10/16 13:02
Camera:	Canon 5D Mark II Digital SLR
Lens:	Canon Fixed 50mm Full Frame Sensor
Panoramic Head:	Manfrotto Pano Head/Leveller
Camera Height:	1.7m (AGL)

Photography Software:	Adobe Lightroom
Panorama Stitching Software:	PTGui Pro
Post-Production Software:	Adobe Photoshop
Formatting Software:	Adobe Illustrator/InDesign

Modelling Software:	3DS Max 2023
Rendering Software:	Mental Ray/Corona
GNSS Unit:	Trimble Catalyst (GNSS)
Topographical Data:	LiDAR/OSI Terrain Data
GPS Ref:	Georeferenced/Surveyed DWGS

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90˚ Outline View

indicating physical position and scale of the proposed development irrespective of screening



Powerstown Biogas - Landscape and Visual Impact Assessment

Viewpoint Ref: VP1 R448 regional road, Powerstown townland

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90˚ Photomontage
Established Mitigation



Powerstown Biogas - Landscape and Visual Impact Assessment

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Powerstown Biogas - Landscape and Visual Impact Assessment

Viewpoint Ref: VP2 L3045 local road, Powerstown townland

Visualisation Type 4 - This 90˚cylindrical projection panorama has been captured, prepared and presented in accordance with the guidance set out in the Landscape Institute Technical Guidance Note 06/19 for Type 4 Visualisations and the Scottish Natural Heritage 2017 guidance 'Visual Representation of Wind Farms'. This image has been presented in a 90˚ cylindrical format to aid visual comprehension of linear infrastructure occupying a wide FoV, which avoids splitting the view across numerous multiple images.

Easting (ITM):	670983
Northing (ITM):	668647
Direction of View:	274 ˚
Distance to Site:	0.05 km
Elevation:	58.9 m

Horizontal Field of View:	90˚ (cylindrical projection)
Principal Distance:	522 mm
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90˚ Photomontage



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90˚ Photomontage
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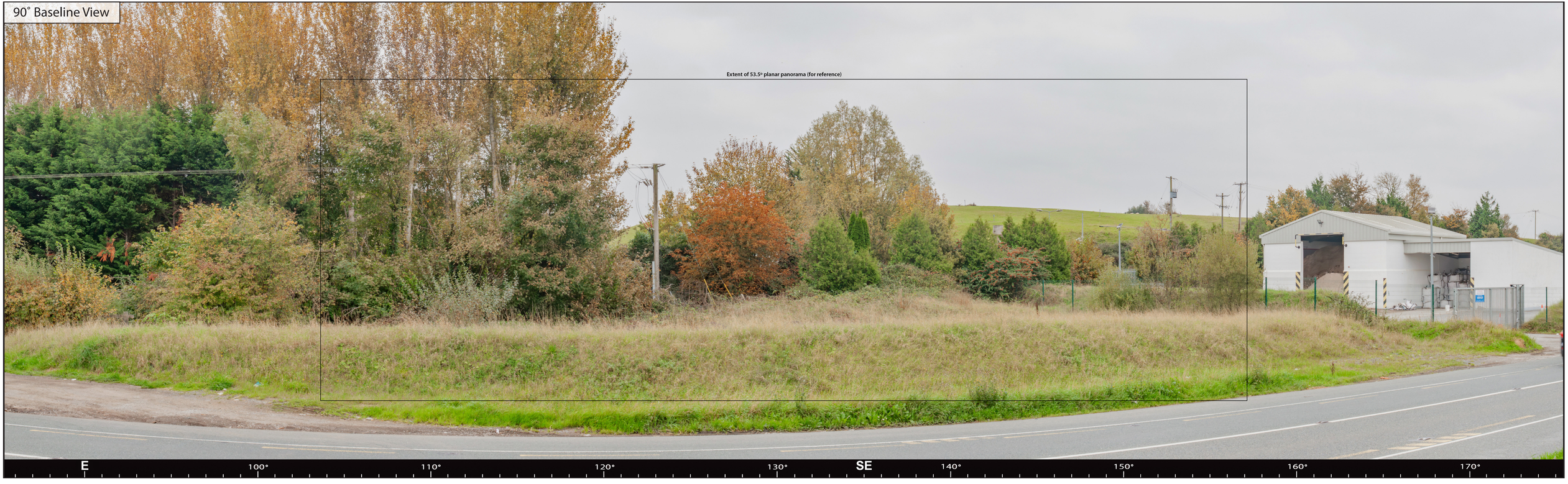
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Powerstown Biogas - Landscape and Visual Impact Assessment

Viewpoint Ref: VP3 R448 regional road, Cloghristick townland

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Easting (ITM):	670464
Northing (ITM):	668941
Direction of View:	130 ˚
Distance to Site:	0.26 km
Elevation:	45.9 m

Horizontal Field of View:	90˚ (cylindrical projection)
Principal Distance:	522 mm
Paper size:	841 x 297 mm
Correct printed image size:	820 x 251 mm
Enlargement Factor:	96%

Date and Time:	2025/10/16 12:56
Camera:	Canon SD Mark II Digital SLR
Lens:	Canon Fixed 50mm Full Frame Sensor
Panoramic Head:	Manfrotto Pano Head/Leveller
Camera Height:	1.7m (AGL)

Photography Software:	Adobe Lightroom
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Powerstown Biogas - Landscape and Visual Impact Assessment

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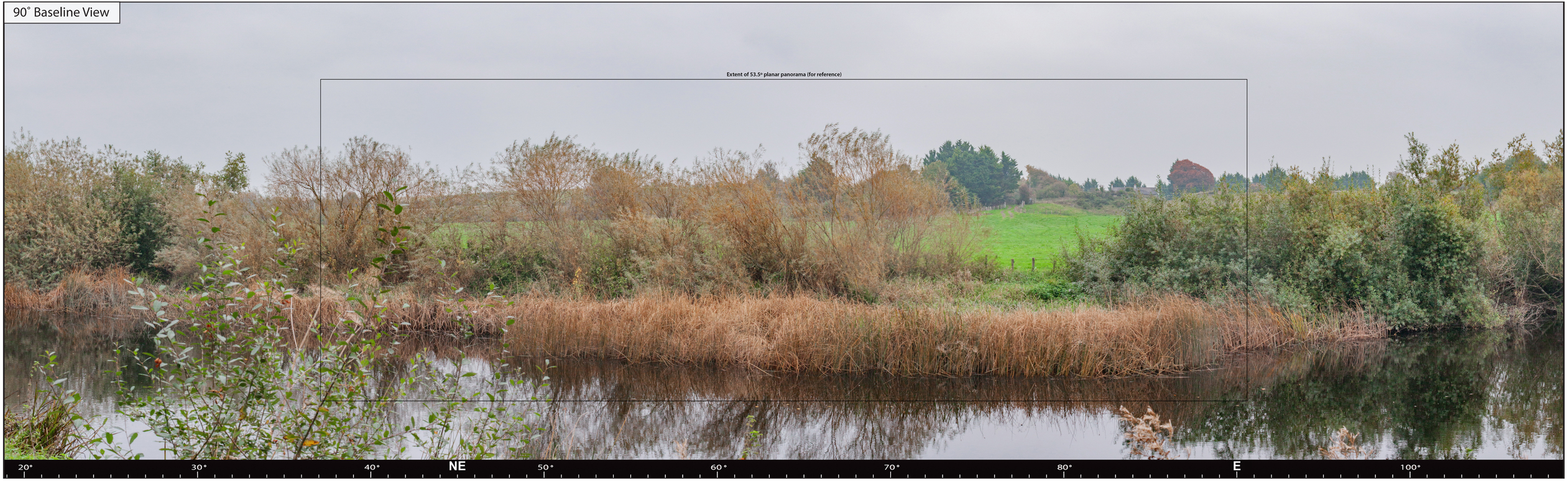
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90˚ Baseline View



Powerstown Biogas - Landscape and Visual Impact Assessment

Viewpoint Ref: VP4 The Barrow Way, Tomard Upper townland

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Easting (ITM):	670155
Northing (ITM):	668356
Direction of View:	64 ˚
Distance to Site:	0.34 km
Elevation:	42.0 m

Horizontal Field of View:	90˚ (cylindrical projection)
Principal Distance:	522 mm
Paper size:	841 x 297 mm
Correct printed image size:	820 x 251 mm
Enlargement Factor:	96%

Date and Time:	2025/10/16 10:58
Camera:	Canon 5D Mark II Digital SLR
Lens:	Canon Fixed 50mm Full Frame Sensor
Panoramic Head:	Manfrotto Pano Head/Leveller
Camera Height:	1.7m (AGL)

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Powerstown Biogas - Landscape and Visual Impact Assessment

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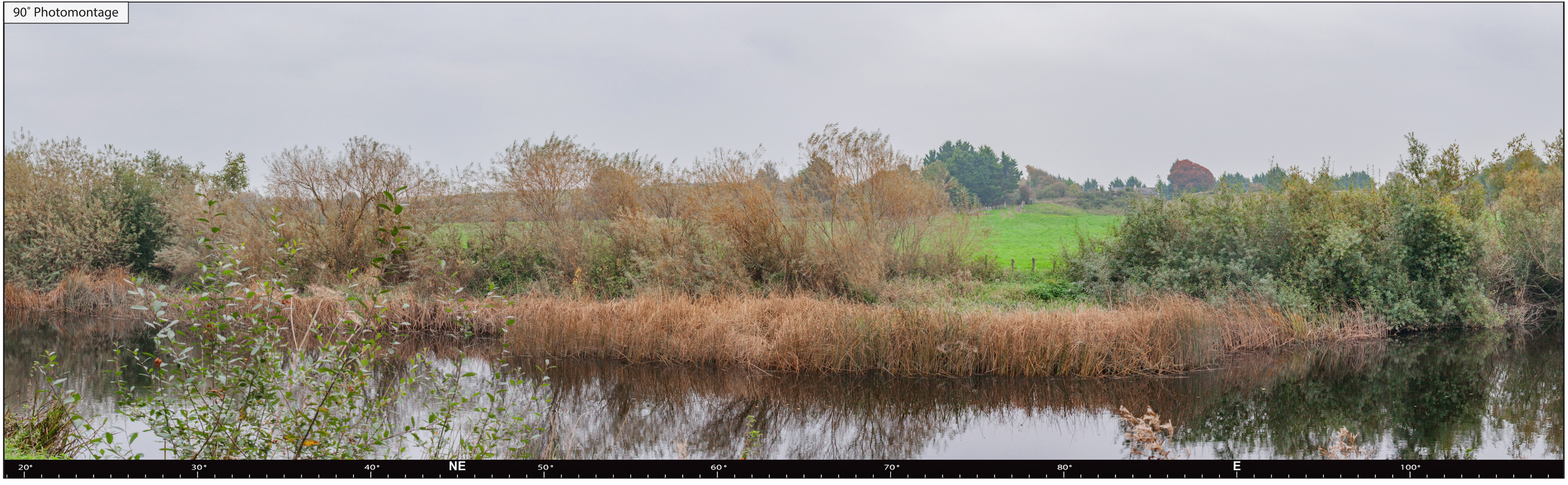
Date and Time:	2025/10/16 10:58
Camera:	Canon 5D Mark II Digital SLR
Lens:	Canon Fixed 50mm Full Frame Sensor
Panoramic Head:	Manfrotto Pano Head/Leveller
Camera Height:	1.7m (AGL)

Photography Software:	Adobe Lightroom
Panorama Stitching Software:	PTGui Pro
Post-Production Software:	Adobe Photoshop
Formatting Software:	Adobe Illustrator/InDesign

Modelling Software:	3DS Max 2023
Rendering Software:	Mental Ray/Corona
GNSS Unit:	Trimble Catalyst (GNSS)
Topographical Data:	LiDAR/OSI Terrain Data
GPS Ref:	Georeferenced/Surveyed DWGS

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90˚ Photomontage



Powerstown Biogas - Landscape and Visual Impact Assessment

Viewpoint Ref: VP4 The Barrow Way, Tomard Upper townland

Visualisation Type 4 - This 90˚cylindrical projection panorama has been captured, prepared and presented in accordance with the guidance set out in the Landscape Institute Technical Guidance Note 06/19 for Type 4 Visualisations and the Scottish Natural Heritage 2017 guidance 'Visual Representation of Wind Farms'. This image has been presented in a 90˚ cylindrical format to aid visual comprehension of linear infrastructure occupying a wide FoV, which avoids splitting the view across numerous multiple images.

Easting (ITM):	670155
Northing (ITM):	668356
Direction of View:	64 ˚
Distance to Site:	0.34 km
Elevation:	42.0 m

Horizontal Field of View:	90˚ (cylindrical projection)
Principal Distance:	522 mm
Paper size:	841 x 297 mm
Correct printed image size:	820 x 251 mm
Enlargement Factor:	96%

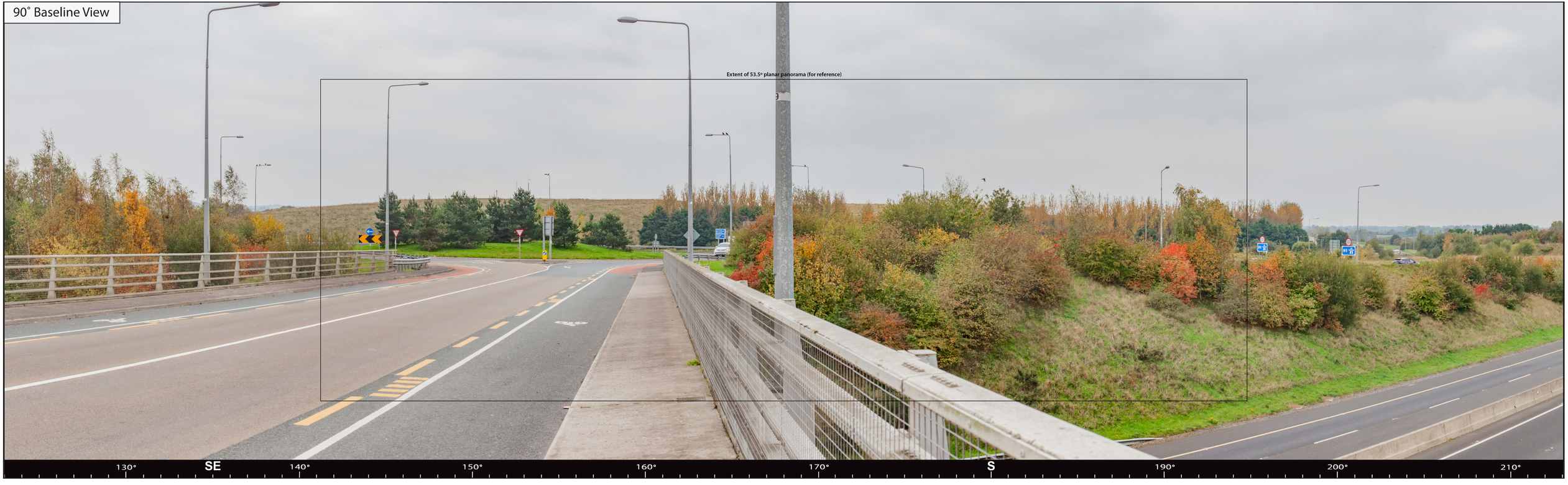
Date and Time:	2025/10/16 10:58
Camera:	Canon 5D Mark II Digital SLR
Lens:	Canon Fixed 50mm Full Frame Sensor
Panoramic Head:	Manfrotto Pano Head/Leveller
Camera Height:	1.7m (AGL)

Photography Software:	Adobe Lightroom
Panorama Stitching Software:	PTGui Pro
Post-Production Software:	Adobe Photoshop
Formatting Software:	Adobe Illustrator/InDesign

Modelling Software:	3DS Max 2023
Rendering Software:	Mental Ray/Corona
GNSS Unit:	Trimble Catalyst (GNSS)
Topographical Data:	LiDAR/OSI Terrain Data
GPS Ref:	Georeferenced/Surveyed DWGS

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90˚ Baseline View



Powerstown Biogas - Landscape and Visual Impact Assessment

Viewpoint Ref: VP5 R448 regional road at the M9 overpass, Cloghristick townland

Visualisation Type 4 - This 90˚cylindrical projection panorama has been captured, prepared and presented in accordance with the guidance set out in the Landscape Institute Technical Guidance Note 06/19 for Type 4 Visualisations and the Scottish Natural Heritage 2017 guidance 'Visual Representation of Wind Farms'. This image has been presented in a 90˚ cylindrical format to aid visual comprehension of linear infrastructure occupying a wide FoV, which avoids splitting the view across numerous multiple images.

Easting (ITM):	670626
Northing (ITM):	669302
Direction of View:	168 ˚
Distance to Site:	0.51 km
Elevation:	54.9 m

Horizontal Field of View:	90˚ (cylindrical projection)
Principal Distance:	522 mm
Paper size:	841 x 297 mm
Correct printed image size:	820 x 251 mm
Enlargement Factor:	96%

Date and Time:	2025/10/16 12:46
Camera:	Canon 5D Mark II Digital SLR
Lens:	Canon Fixed 50mm Full Frame Sensor
Panoramic Head:	Manfrotto Pano Head/Leveller
Camera Height:	1.7m (AGL)

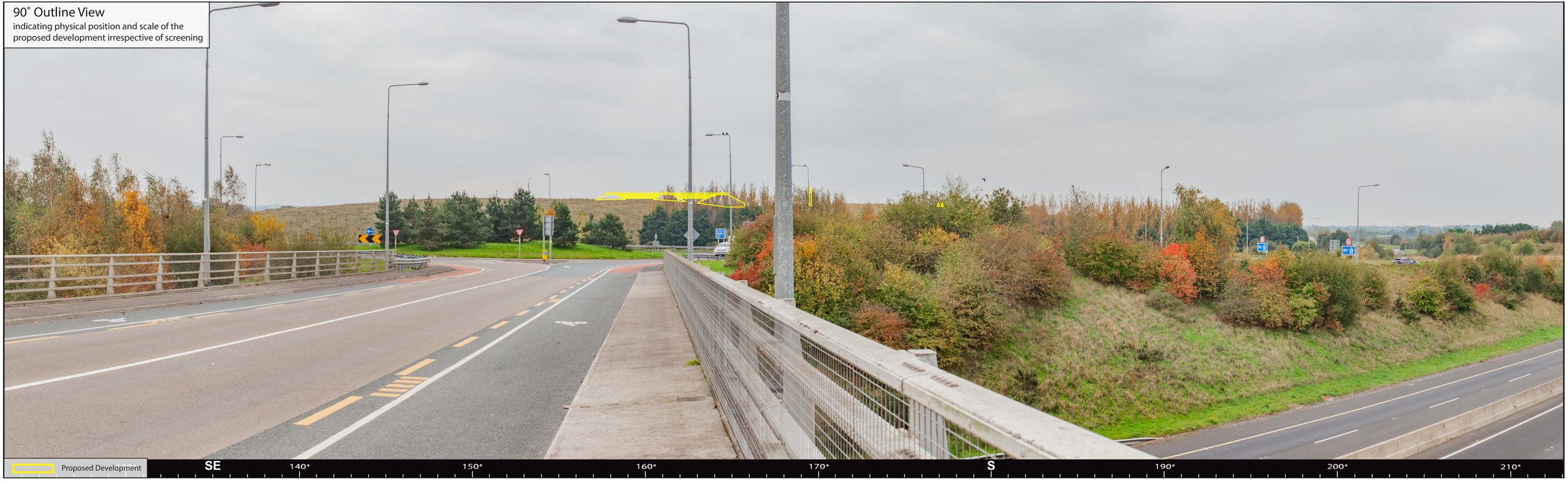
Photography Software:	Adobe Lightroom
Panorama Stitching Software:	PTGui Pro
Post-Production Software:	Adobe Photoshop
Formatting Software:	Adobe Illustrator/InDesign

Modelling Software:	3DS Max 2023
Rendering Software:	Mental Ray/Corona
GNSS Unit:	Trimble Catalyst (GNSS)
Topographical Data:	LiDAR/OSI Terrain Data
GPS Ref:	Georeferenced/Surveyed DWGS

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90˚ Outline View

indicating physical position and scale of the proposed development irrespective of screening



Powerstown Biogas - Landscape and Visual Impact Assessment

Viewpoint Ref: VP5 R448 regional road at the M9 overpass, Cloghristick townland

Visualisation Type 4 - This 90˚cylindrical projection panorama has been captured, prepared and presented in accordance with the guidance set out in the Landscape Institute Technical Guidance Note 06/19 for Type 4 Visualisations and the Scottish Natural Heritage 2017 guidance 'Visual Representation of Wind Farms'. This image has been presented in a 90˚ cylindrical format to aid visual comprehension of linear infrastructure occupying a wide FoV, which avoids splitting the view across numerous multiple images.

Easting (ITM):	670626
Northing (ITM):	669302
Direction of View:	168 ˚
Distance to Site:	0.51 km
Elevation:	54.9 m

Horizontal Field of View:	90˚ (cylindrical projection)
Principal Distance:	522 mm
Paper size:	841 x 297 mm
Correct printed image size:	820 x 251 mm
Enlargement Factor:	96%

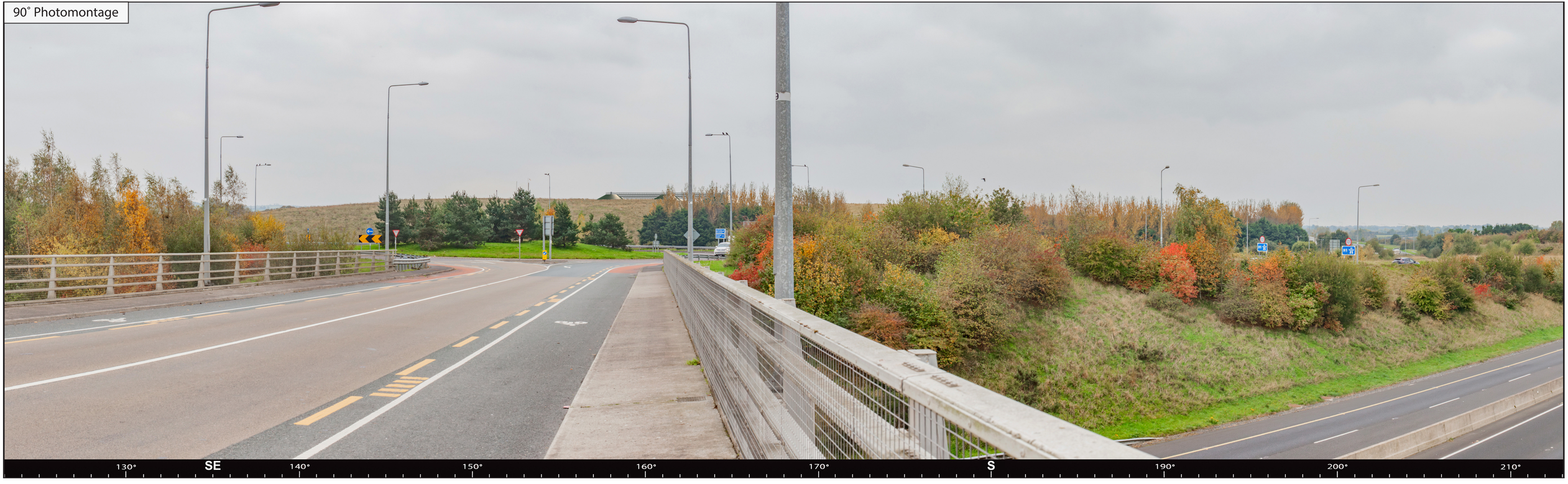
Date and Time:	2025/10/16 12:46
Camera:	Canon 5D Mark II Digital SLR
Lens:	Canon Fixed 50mm Full Frame Sensor
Panoramic Head:	Manfrotto Pano Head/Leveller
Camera Height:	1.7m (AGL)

Photography Software:	Adobe Lightroom
Panorama Stitching Software:	PTGui Pro
Post-Production Software:	Adobe Photoshop
Formatting Software:	Adobe Illustrator/InDesign

Modelling Software:	3DS Max 2023
Rendering Software:	Mental Ray/Corona
GNSS Unit:	Trimble Catalyst (GNSS)
Topographical Data:	LiDAR/OSI Terrain Data
GPS Ref:	Georeferenced/Surveyed DWGS

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90˚ Photomontage



Powerstown Biogas - Landscape and Visual Impact Assessment

Viewpoint Ref: VP5 R448 regional road at the M9 overpass, Cloghristick townland

Visualisation Type 4 - This 90˚cylindrical projection panorama has been captured, prepared and presented in accordance with the guidance set out in the Landscape Institute Technical Guidance Note 06/19 for Type 4 Visualisations and the Scottish Natural Heritage 2017 guidance 'Visual Representation of Wind Farms'. This image has been presented in a 90˚ cylindrical format to aid visual comprehension of linear infrastructure occupying a wide FoV, which avoids splitting the view across numerous multiple images.

Easting (ITM):	670626
Northing (ITM):	669302
Direction of View:	168 ˚
Distance to Site:	0.51 km
Elevation:	54.9 m

Horizontal Field of View:	90˚ (cylindrical projection)
Principal Distance:	522 mm
Paper size:	841 x 297 mm
Correct printed image size:	820 x 251 mm
Enlargement Factor:	96%

Date and Time:	2025/10/16 12:46
Camera:	Canon 5D Mark II Digital SLR
Lens:	Canon Fixed 50mm Full Frame Sensor
Panoramic Head:	Manfrotto Pano Head/Leveller
Camera Height:	1.7m (AGL)

Photography Software:	Adobe Lightroom
Panorama Stitching Software:	PTGui Pro
Post-Production Software:	Adobe Photoshop
Formatting Software:	Adobe Illustrator/InDesign

Modelling Software:	3DS Max 2023
Rendering Software:	Mental Ray/Corona
GNSS Unit:	Trimble Catalyst (GNSS)
Topographical Data:	LiDAR/OSI Terrain Data
GPS Ref:	Georeferenced/Surveyed DWGS

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Powerstown Biogas - Landscape and Visual Impact Assessment

Viewpoint Ref: VP6 L3045 local road at the National Rail bridge, Powerstown townland

Visualisation Type 4 - This 90˚cylindrical projection panorama has been captured, prepared and presented in accordance with the guidance set out in the Landscape Institute Technical Guidance Note 06/19 for Type 4 Visualisations and the Scottish Natural Heritage 2017 guidance 'Visual Representation of Wind Farms'. This image has been presented in a 90˚ cylindrical format to aid visual comprehension of linear infrastructure occupying a wide FoV, which avoids splitting the view across numerous multiple images.

Easting (ITM):	671337
Northing (ITM):	668856
Direction of View:	255 ˚
Distance to Site:	0.46 km
Elevation:	60.0 m

Horizontal Field of View:	90˚ (cylindrical projection)
Principal Distance:	522 mm
Paper size:	841 x 297 mm
Correct printed image size:	820 x 251 mm
Enlargement Factor:	96%

Date and Time:	2025/10/16 13:21
Camera:	Canon 5D Mark II Digital SLR
Lens:	Canon Fixed 50mm Full Frame Sensor
Panoramic Head:	Manfrotto Pano Head/Leveller
Camera Height:	1.7m (AGL)

Photography Software:	Adobe Lightroom
Panorama Stitching Software:	PTGui Pro
Post-Production Software:	Adobe Photoshop
Formatting Software:	Adobe Illustrator/InDesign

Modelling Software:	3DS Max 2023
Rendering Software:	Mental Ray/Corona
GNSS Unit:	Trimble Catalyst (GNSS)
Topographical Data:	LiDAR/OSI Terrain Data
GPS Ref:	Georeferenced/Surveyed DWGS

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Powerstown Biogas - Landscape and Visual Impact Assessment

Viewpoint Ref: VP6 L3045 local road at the National Rail bridge, Powerstown townland

Visualisation Type 4 - This 90˚cylindrical projection panorama has been captured, prepared and presented in accordance with the guidance set out in the Landscape Institute Technical Guidance Note 06/19 for Type 4 Visualisations and the Scottish Natural Heritage 2017 guidance 'Visual Representation of Wind Farms'. This image has been presented in a 90˚ cylindrical format to aid visual comprehension of linear infrastructure occupying a wide FoV, which avoids splitting the view across numerous multiple images.

Easting (ITM):	671337
Northing (ITM):	668856
Direction of View:	255 ˚
Distance to Site:	0.46 km
Elevation:	60.0 m

Horizontal Field of View:	90˚ (cylindrical projection)
Principal Distance:	522 mm
Paper size:	841 x 297 mm
Correct printed image size:	820 x 251 mm
Enlargement Factor:	96%

Date and Time:	2025/10/16 13:21
Camera:	Canon 5D Mark II Digital SLR
Lens:	Canon Fixed 50mm Full Frame Sensor
Panoramic Head:	Manfrotto Pano Head/Leveller
Camera Height:	1.7m (AGL)

Photography Software:	Adobe Lightroom
Panorama Stitching Software:	PTGui Pro
Post-Production Software:	Adobe Photoshop
Formatting Software:	Adobe Illustrator/InDesign

Modelling Software:	3DS Max 2023
Rendering Software:	Mental Ray/Corona
GNSS Unit:	Trimble Catalyst (GNSS)
Topographical Data:	LiDAR/OSI Terrain Data
GPS Ref:	Georeferenced/Surveyed DWGS

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90˚ Photomontage



Powerstown Biogas - Landscape and Visual Impact Assessment

Viewpoint Ref: VP6 L3045 local road at the National Rail bridge, Powerstown townland

Visualisation Type 4 - This 90˚cylindrical projection panorama has been captured, prepared and presented in accordance with the guidance set out in the Landscape Institute Technical Guidance Note 06/19 for Type 4 Visualisations and the Scottish Natural Heritage 2017 guidance 'Visual Representation of Wind Farms'. This image has been presented in a 90˚ cylindrical format to aid visual comprehension of linear infrastructure occupying a wide FoV, which avoids splitting the view across numerous multiple images.

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Elevation:	60.0 m

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Enlargement Factor:	96%

Date and Time:	2025/10/16 13:21
Camera:	Canon 5D Mark II Digital SLR
Lens:	Canon Fixed 50mm Full Frame Sensor
Panoramic Head:	Manfrotto Pano Head/Leveller
Camera Height:	1.7m (AGL)

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Topographical Data:	LiDAR/OSI Terrain Data
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Powerstown Biogas - Landscape and Visual Impact Assessment

Viewpoint Ref: VP7 L3044 local road, Garryhundon townland

Visualisation Type 4 - This 90˚cylindrical projection panorama has been captured, prepared and presented in accordance with the guidance set out in the Landscape Institute Technical Guidance Note 06/19 for Type 4 Visualisations and the Scottish Natural Heritage 2017 guidance 'Visual Representation of Wind Farms'. This image has been presented in a 90˚ cylindrical format to aid visual comprehension of linear infrastructure occupying a wide FoV, which avoids splitting the view across numerous multiple images.

Easting (ITM):	671765
Northing (ITM):	668786
Direction of View:	266 ˚
Distance to Site:	0.84 km
Elevation:	61.2 m

Horizontal Field of View:	90˚ (cylindrical projection)
Principal Distance:	522 mm
Paper size:	841 x 297 mm
Correct printed image size:	820 x 251 mm
Enlargement Factor:	96%

Date and Time:	2025/10/16 13:32
Camera:	Canon 5D Mark II Digital SLR
Lens:	Canon Fixed 50mm Full Frame Sensor
Panoramic Head:	Manfrotto Pano Head/Leveller
Camera Height:	1.7m (AGL)

Photography Software:	Adobe Lightroom
Panorama Stitching Software:	PTGui Pro
Post-Production Software:	Adobe Photoshop
Formatting Software:	Adobe Illustrator/InDesign

Modelling Software:	3DS Max 2023
Rendering Software:	Mental Ray/Corona
GNSS Unit:	Trimble Catalyst (GNSS)
Topographical Data:	LiDAR/OSI Terrain Data
GPS Ref:	Georeferenced/Surveyed DWGS

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90˚ Outline View

indicating physical position and scale of the proposed development irrespective of screening



Powerstown Biogas - Landscape and Visual Impact Assessment

Viewpoint Ref: VP7 L3044 local road, Garryhundon townland

Visualisation Type 4 - This 90˚cylindrical projection panorama has been captured, prepared and presented in accordance with the guidance set out in the Landscape Institute Technical Guidance Note 06/19 for Type 4 Visualisations and the Scottish Natural Heritage 2017 guidance 'Visual Representation of Wind Farms'. This image has been presented in a 90˚ cylindrical format to aid visual comprehension of linear infrastructure occupying a wide FoV, which avoids splitting the view across numerous multiple images.

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Principal Distance:	522 mm
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Date and Time:	2025/10/16 13:32
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Lens:	Canon Fixed 50mm Full Frame Sensor
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Camera Height:	1.7m (AGL)

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Formatting Software:	Adobe Illustrator/InDesign

Modelling Software:	3DS Max 2023
Rendering Software:	Mental Ray/Corona
GNSS Unit:	Trimble Catalyst (GNSS)
Topographical Data:	LiDAR/OSI Terrain Data
GPS Ref:	Georeferenced/Surveyed DWGS

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Powerstown Biogas - Landscape and Visual Impact Assessment

Viewpoint Ref: VP7 L3044 local road, Garryhundon townland

Visualisation Type 4 - This 90˚cylindrical projection panorama has been captured, prepared and presented in accordance with the guidance set out in the Landscape Institute Technical Guidance Note 06/19 for Type 4 Visualisations and the Scottish Natural Heritage 2017 guidance 'Visual Representation of Wind Farms'. This image has been presented in a 90˚ cylindrical format to aid visual comprehension of linear infrastructure occupying a wide FoV, which avoids splitting the view across numerous multiple images.

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Principal Distance:	522 mm
Paper size:	841 x 297 mm
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Enlargement Factor:	96%

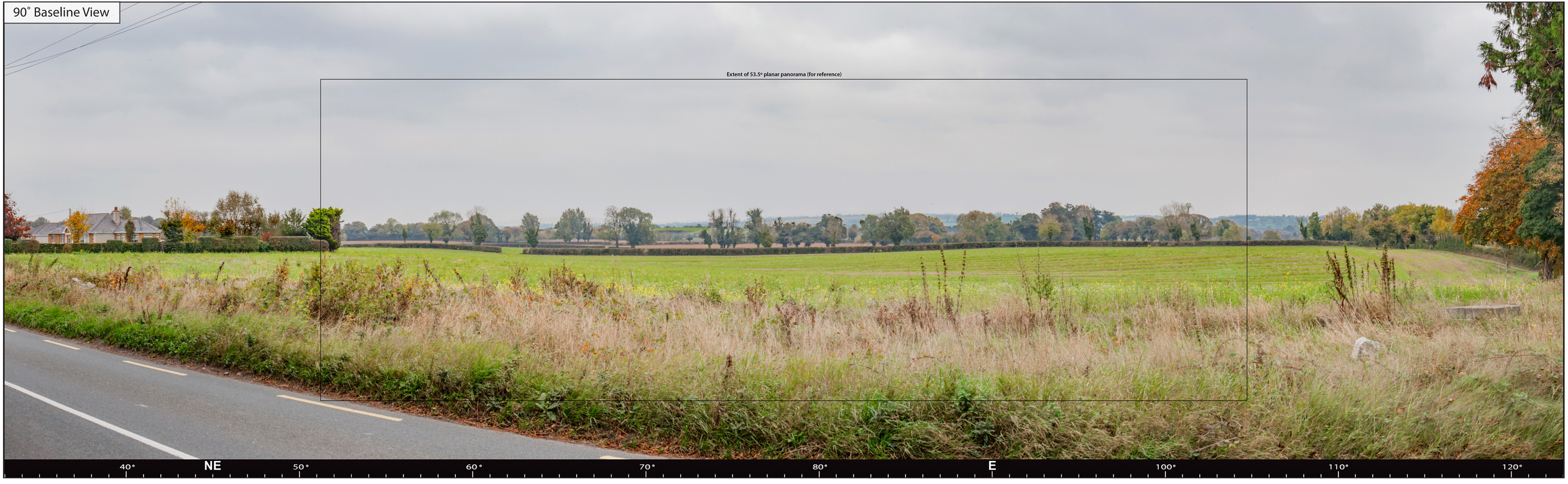
Date and Time:	2025/10/16 13:32
Camera:	Canon 5D Mark II Digital SLR
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Rendering Software:	Mental Ray/Corona
GNSS Unit:	Trimble Catalyst (GNSS)
Topographical Data:	LiDAR/OSI Terrain Data
GPS Ref:	Georeferenced/Surveyed DWGS

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90˚ Baseline View



Powerstown Biogas - Landscape and Visual Impact Assessment

Viewpoint Ref: VP8 L3038 local road, Rathornan townland

Visualisation Type 4 - This 90˚cylindrical projection panorama has been captured, prepared and presented in accordance with the guidance set out in the Landscape Institute Technical Guidance Note 06/19 for Type 4 Visualisations and the Scottish Natural Heritage 2017 guidance 'Visual Representation of Wind Farms'. This image has been presented in a 90˚ cylindrical format to aid visual comprehension of linear infrastructure occupying a wide FoV, which avoids splitting the view across numerous multiple images.

Easting (ITM):	669338
Northing (ITM):	668313
Direction of View:	78 ˚
Distance to Site:	1.15 km
Elevation:	54.5 m

Horizontal Field of View:	90˚ (cylindrical projection)
Principal Distance:	522 mm
Paper size:	841 x 297 mm
Correct printed image size:	820 x 251 mm
Enlargement Factor:	96%

Date and Time:	2025/10/16 12:29
Camera:	Canon 5D Mark II Digital SLR
Lens:	Canon Fixed 50mm Full Frame Sensor
Panoramic Head:	Manfrotto Pano Head/Leveller
Camera Height:	1.7m (AGL)

Photography Software:	Adobe Lightroom
Panorama Stitching Software:	PTGui Pro
Post-Production Software:	Adobe Photoshop
Formatting Software:	Adobe Illustrator/InDesign

Modelling Software:	3DS Max 2023
Rendering Software:	Mental Ray/Corona
GNSS Unit:	Trimble Catalyst (GNSS)
Topographical Data:	LiDAR/OSI Terrain Data
GPS Ref:	Georeferenced/Surveyed DWGS

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Powerstown Biogas - Landscape and Visual Impact Assessment

Viewpoint Ref: VP8 L3038 local road, Rathornan townland

Visualisation Type 4 - This 90˚cylindrical projection panorama has been captured, prepared and presented in accordance with the guidance set out in the Landscape Institute Technical Guidance Note 06/19 for Type 4 Visualisations and the Scottish Natural Heritage 2017 guidance 'Visual Representation of Wind Farms'. This image has been presented in a 90˚ cylindrical format to aid visual comprehension of linear infrastructure occupying a wide FoV, which avoids splitting the view across numerous multiple images.

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Direction of View:	78 ˚
Distance to Site:	1.15 km
Elevation:	54.5 m

Horizontal Field of View:	90˚ (cylindrical projection)
Principal Distance:	522 mm
Paper size:	841 x 297 mm
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Date and Time:	2025/10/16 12:29
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Panoramic Head:	Manfrotto Pano Head/Leveller
Camera Height:	1.7m (AGL)

Photography Software:	Adobe Lightroom
Panorama Stitching Software:	PTGui Pro
Post-Production Software:	Adobe Photoshop
Formatting Software:	Adobe Illustrator/InDesign

Modelling Software:	3DS Max 2023
Rendering Software:	Mental Ray/Corona
GNSS Unit:	Trimble Catalyst (GNSS)
Topographical Data:	LiDAR/OSI Terrain Data
GPS Ref:	Georeferenced/Surveyed DWGS

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90˚ Photomontage



Powerstown Biogas - Landscape and Visual Impact Assessment

Viewpoint Ref: VP8 L3038 local road, Rathornan townland

Visualisation Type 4 - This 90˚cylindrical projection panorama has been captured, prepared and presented in accordance with the guidance set out in the Landscape Institute Technical Guidance Note 06/19 for Type 4 Visualisations and the Scottish Natural Heritage 2017 guidance 'Visual Representation of Wind Farms'. This image has been presented in a 90˚ cylindrical format to aid visual comprehension of linear infrastructure occupying a wide FoV, which avoids splitting the view across numerous multiple images.

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Rendering Software:	Mental Ray/Corona
GNSS Unit:	Trimble Catalyst (GNSS)
Topographical Data:	LiDAR/OSI Terrain Data
GPS Ref:	Georeferenced/Surveyed DWGS

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Powerstown Biogas - Landscape and Visual Impact Assessment

Viewpoint Ref: VP9 Along L1003 local road at Milford Mill, Cloghristick townland

Visualisation Type 4 - This 90˚cylindrical projection panorama has been captured, prepared and presented in accordance with the guidance set out in the Landscape Institute Technical Guidance Note 06/19 for Type 4 Visualisations and the Scottish Natural Heritage 2017 guidance 'Visual Representation of Wind Farms'. This image has been presented in a 90˚ cylindrical format to aid visual comprehension of linear infrastructure occupying a wide FoV, which avoids splitting the view across numerous multiple images.

Easting (ITM):	669913
Northing (ITM):	670471
Direction of View:	155 ˚
Distance to Site:	1.87 km
Elevation:	52.4 m

Horizontal Field of View:	90˚ (cylindrical projection)
Principal Distance:	522 mm
Paper size:	841 x 297 mm
Correct printed image size:	820 x 251 mm
Enlargement Factor:	96%

Date and Time:	2025/10/16 10:23
Camera:	Canon 5D Mark II Digital SLR
Lens:	Canon Fixed 50mm Full Frame Sensor
Panoramic Head:	Manfrotto Pano Head/Leveller
Camera Height:	1.7m (AGL)

Photography Software:	Adobe Lightroom
Panorama Stitching Software:	PTGui Pro
Post-Production Software:	Adobe Photoshop
Formatting Software:	Adobe Illustrator/InDesign

Modelling Software:	3DS Max 2023
Rendering Software:	Mental Ray/Corona
GNSS Unit:	Trimble Catalyst (GNSS)
Topographical Data:	LiDAR/OSI Terrain Data
GPS Ref:	Georeferenced/Surveyed DWGS

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Powerstown Biogas - Landscape and Visual Impact Assessment

Viewpoint Ref: VP9 Along L1003 local road at Milford Mill, Cloghristick townland

Visualisation Type 4 - This 90˚cylindrical projection panorama has been captured, prepared and presented in accordance with the guidance set out in the Landscape Institute Technical Guidance Note 06/19 for Type 4 Visualisations and the Scottish Natural Heritage 2017 guidance 'Visual Representation of Wind Farms'. This image has been presented in a 90˚ cylindrical format to aid visual comprehension of linear infrastructure occupying a wide FoV, which avoids splitting the view across numerous multiple images.

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Northing (ITM):	670471
Direction of View:	155 ˚
Distance to Site:	1.87 km
Elevation:	52.4 m

Horizontal Field of View:	90˚ (cylindrical projection)
Principal Distance:	522 mm
Paper size:	841 x 297 mm
Correct printed image size:	820 x 251 mm
Enlargement Factor:	96%

Date and Time:	2025/10/16 10:23
Camera:	Canon 5D Mark II Digital SLR
Lens:	Canon Fixed 50mm Full Frame Sensor
Panoramic Head:	Manfrotto Pano Head/Leveller
Camera Height:	1.7m (AGL)

Photography Software:	Adobe Lightroom
Panorama Stitching Software:	PTGui Pro
Post-Production Software:	Adobe Photoshop
Formatting Software:	Adobe Illustrator/InDesign

Modelling Software:	3DS Max 2023
Rendering Software:	Mental Ray/Corona
GNSS Unit:	Trimble Catalyst (GNSS)
Topographical Data:	LiDAR/OSI Terrain Data
GPS Ref:	Georeferenced/Surveyed DWGS

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90˚ Baseline View



Powerstown Biogas - Landscape and Visual Impact Assessment

Viewpoint Ref: VP10 L3046 local road, Nurney village

Visualisation Type 4 - This 90˚cylindrical projection panorama has been captured, prepared and presented in accordance with the guidance set out in the Landscape Institute Technical Guidance Note 06/19 for Type 4 Visualisations and the Scottish Natural Heritage 2017 guidance 'Visual Representation of Wind Farms'. This image has been presented in a 90˚ cylindrical format to aid visual comprehension of linear infrastructure occupying a wide FoV, which avoids splitting the view across numerous multiple images.

Easting (ITM):	673322
Northing (ITM):	667275
Direction of View:	300 ˚
Distance to Site:	2.70 km
Elevation:	97.8 m

Horizontal Field of View:	90˚ (cylindrical projection)
Principal Distance:	522 mm
Paper size:	841 x 297 mm
Correct printed image size:	820 x 251 mm
Enlargement Factor:	96%

Date and Time:	2026/02/17 09:53
Camera:	Canon SD Mark II Digital SLR
Lens:	Canon Fixed 50mm Full Frame Sensor
Panoramic Head:	Manfrotto Pano Head/Leveller
Camera Height:	1.7m (AGL)

Photography Software:	Adobe Lightroom
Panorama Stitching Software:	PTGui Pro
Post-Production Software:	Adobe Photoshop
Formatting Software:	Adobe Illustrator/InDesign

Modelling Software:	3DS Max 2023
Rendering Software:	Mental Ray/Corona
GNSS Unit:	Trimble Catalyst (GNSS)
Topographical Data:	LiDAR/OSI Terrain Data
GPS Ref:	Georeferenced/Surveyed DWGS

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90˚ Outline View

indicating physical position and scale of the proposed development irrespective of screening



Powerstown Biogas - Landscape and Visual Impact Assessment

Viewpoint Ref: VP10 L3046 local road, Nurney village

Visualisation Type 4 - This 90˚cylindrical projection panorama has been captured, prepared and presented in accordance with the guidance set out in the Landscape Institute Technical Guidance Note 06/19 for Type 4 Visualisations and the Scottish Natural Heritage 2017 guidance 'Visual Representation of Wind Farms'. This image has been presented in a 90˚ cylindrical format to aid visual comprehension of linear infrastructure occupying a wide FoV, which avoids splitting the view across numerous multiple images.

Easting (ITM):	673322
Northing (ITM):	667275
Direction of View:	300 ˚
Distance to Site:	2.70 km
Elevation:	97.8 m

Horizontal Field of View:	90˚ (cylindrical projection)
Principal Distance:	522 mm
Paper size:	841 x 297 mm
Correct printed image size:	820 x 251 mm
Enlargement Factor:	96%

Date and Time:	2026/02/17 09:53
Camera:	Canon SD Mark II Digital SLR
Lens:	Canon Fixed 50mm Full Frame Sensor
Panoramic Head:	Manfrotto Pano Head/Leveller
Camera Height:	1.7m (AGL)

Photography Software:	Adobe Lightroom
Panorama Stitching Software:	PTGui Pro
Post-Production Software:	Adobe Photoshop
Formatting Software:	Adobe Illustrator/InDesign

Modelling Software:	3DS Max 2023
Rendering Software:	Mental Ray/Corona
GNSS Unit:	Trimble Catalyst (GNSS)
Topographical Data:	LiDAR/OSI Terrain Data
GPS Ref:	Georeferenced/Surveyed DWGS

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90˚ Photomontage



Powerstown Biogas - Landscape and Visual Impact Assessment

Viewpoint Ref: VP10 L3046 local road, Nurney village

Visualisation Type 4 - This 90˚cylindrical projection panorama has been captured, prepared and presented in accordance with the guidance set out in the Landscape Institute Technical Guidance Note 06/19 for Type 4 Visualisations and the Scottish Natural Heritage 2017 guidance 'Visual Representation of Wind Farms'. This image has been presented in a 90˚ cylindrical format to aid visual comprehension of linear infrastructure occupying a wide FoV, which avoids splitting the view across numerous multiple images.

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Direction of View:	300 ˚
Distance to Site:	2.70 km
Elevation:	97.8 m

Horizontal Field of View:	90˚ (cylindrical projection)
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GNSS Unit:	Trimble Catalyst (GNSS)
Topographical Data:	LiDAR/OSI Terrain Data
GPS Ref:	Georeferenced/Surveyed DWGS

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90˚ Photomontage
Established Mitigation



Powerstown Biogas - Landscape and Visual Impact Assessment

Viewpoint Ref: VP10 L3046 local road, Nurney village

Visualisation Type 4 - This 90˚cylindrical projection panorama has been captured, prepared and presented in accordance with the guidance set out in the Landscape Institute Technical Guidance Note 06/19 for Type 4 Visualisations and the Scottish Natural Heritage 2017 guidance 'Visual Representation of Wind Farms'. This image has been presented in a 90˚ cylindrical format to aid visual comprehension of linear infrastructure occupying a wide FoV, which avoids splitting the view across numerous multiple images.

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Direction of View:	300 ˚
Distance to Site:	2.70 km
Elevation:	97.8 m

Horizontal Field of View:	90˚ (cylindrical projection)
Principal Distance:	522 mm
Paper size:	841 x 297 mm
Correct printed image size:	820 x 251 mm
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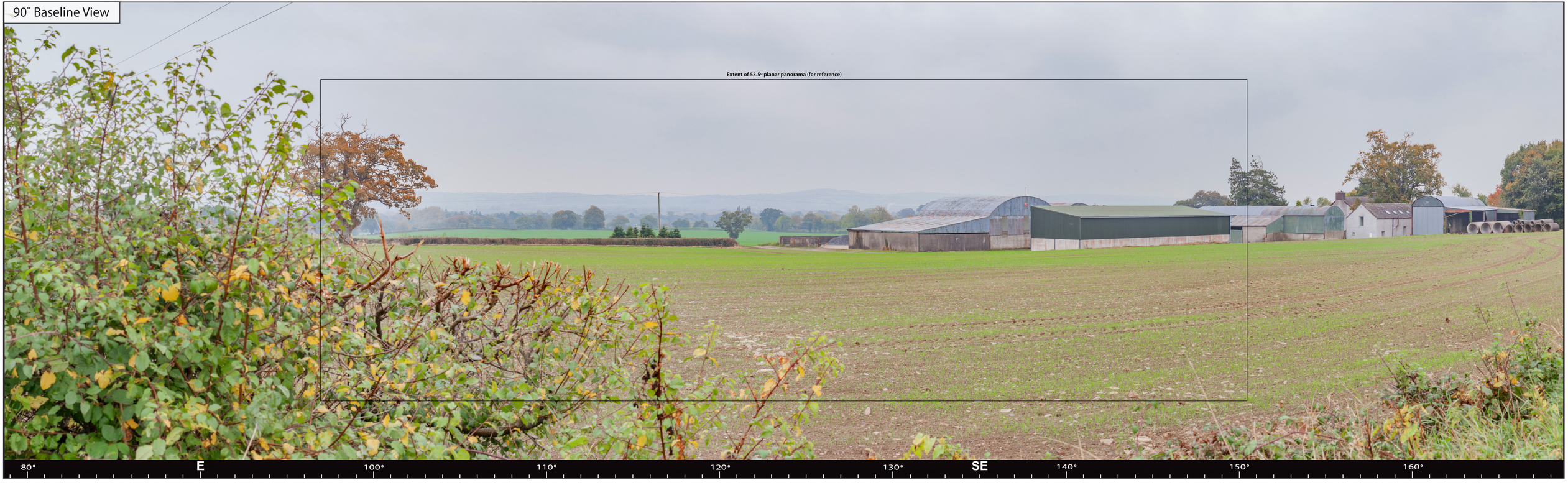
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Topographical Data:	LiDAR/OSI Terrain Data
GPS Ref:	Georeferenced/Surveyed DWGS

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90˚ Baseline View



Powerstown Biogas - Landscape and Visual Impact Assessment

Viewpoint Ref: VP11 L7132 local road, Ballinabrannagh village

Visualisation Type 4 - This 90˚cylindrical projection panorama has been captured, prepared and presented in accordance with the guidance set out in the Landscape Institute Technical Guidance Note 06/19 for Type 4 Visualisations and the Scottish Natural Heritage 2017 guidance 'Visual Representation of Wind Farms'. This image has been presented in a 90˚ cylindrical format to aid visual comprehension of linear infrastructure occupying a wide FoV, which avoids splitting the view across numerous multiple images.

Easting (ITM):	668318
Northing (ITM):	670339
Direction of View:	124 ˚
Distance to Site:	2.80 km
Elevation:	86.5 m

Horizontal Field of View:	90˚ (cylindrical projection)
Principal Distance:	522 mm
Paper size:	841 x 297 mm
Correct printed image size:	820 x 251 mm
Enlargement Factor:	96%

Date and Time:	2025/10/16 11:44
Camera:	Canon 5D Mark II Digital SLR
Lens:	Canon Fixed 50mm Full Frame Sensor
Panoramic Head:	Manfrotto Pano Head/Leveller
Camera Height:	1.7m (AGL)

Photography Software:	Adobe Lightroom
Panorama Stitching Software:	PTGui Pro
Post-Production Software:	Adobe Photoshop
Formatting Software:	Adobe Illustrator/InDesign

Modelling Software:	3DS Max 2023
Rendering Software:	Mental Ray/Corona
GNSS Unit:	Trimble Catalyst (GNSS)
Topographical Data:	LiDAR/OSI Terrain Data
GPS Ref:	Georeferenced/Surveyed DWGS

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90˚ Outline View

indicating physical position and scale of the proposed development irrespective of screening



Powerstown Biogas - Landscape and Visual Impact Assessment

Viewpoint Ref: VP11 L7132 local road, Ballinabrannagh village

Visualisation Type 4 - This 90˚cylindrical projection panorama has been captured, prepared and presented in accordance with the guidance set out in the Landscape Institute Technical Guidance Note 06/19 for Type 4 Visualisations and the Scottish Natural Heritage 2017 guidance 'Visual Representation of Wind Farms'. This image has been presented in a 90˚ cylindrical format to aid visual comprehension of linear infrastructure occupying a wide FoV, which avoids splitting the view across numerous multiple images.

Easting (ITM):	668318
Northing (ITM):	670339
Direction of View:	124 ˚
Distance to Site:	2.80 km
Elevation:	86.5 m

Horizontal Field of View:	90˚ (cylindrical projection)
Principal Distance:	522 mm
Paper size:	841 x 297 mm
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Enlargement Factor:	96%

Date and Time:	2025/10/16 11:44
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Camera Height:	1.7m (AGL)

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Modelling Software:	3DS Max 2023
Rendering Software:	Mental Ray/Corona
GNSS Unit:	Trimble Catalyst (GNSS)
Topographical Data:	LiDAR/OSI Terrain Data
GPS Ref:	Georeferenced/Surveyed DWGS

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90˚ Photomontage



Powerstown Biogas - Landscape and Visual Impact Assessment

Viewpoint Ref: VP11 L7132 local road, Ballinabrannagh village

Visualisation Type 4 - This 90˚cylindrical projection panorama has been captured, prepared and presented in accordance with the guidance set out in the Landscape Institute Technical Guidance Note 06/19 for Type 4 Visualisations and the Scottish Natural Heritage 2017 guidance 'Visual Representation of Wind Farms'. This image has been presented in a 90˚ cylindrical format to aid visual comprehension of linear infrastructure occupying a wide FoV, which avoids splitting the view across numerous multiple images.

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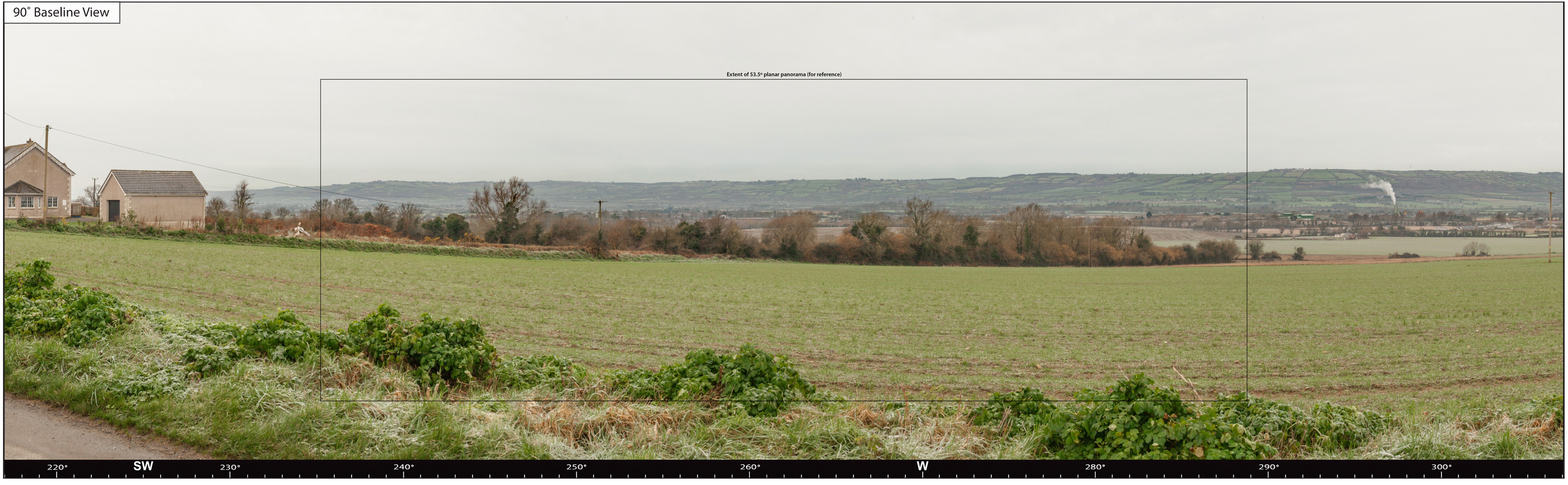
Date and Time:	2025/10/16 11:44
Camera:	Canon 5D Mark II Digital SLR
Lens:	Canon Fixed 50mm Full Frame Sensor
Panoramic Head:	Manfrotto Pano Head/Leveller
Camera Height:	1.7m (AGL)

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Formatting Software:	Adobe Illustrator/InDesign

Modelling Software:	3DS Max 2023
Rendering Software:	Mental Ray/Corona
GNSS Unit:	Trimble Catalyst (GNSS)
Topographical Data:	LiDAR/OSI Terrain Data
GPS Ref:	Georeferenced/Surveyed DWGS

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90˚ Baseline View



Powerstown Biogas - Landscape and Visual Impact Assessment

Viewpoint Ref: VP12 Scenic route 5 'Ballyryan' along the L3052 local road, Ballyryan townland

Visualisation Type 4 - This 90˚cylindrical projection panorama has been captured, prepared and presented in accordance with the guidance set out in the Landscape Institute Technical Guidance Note 06/19 for Type 4 Visualisations and the Scottish Natural Heritage 2017 guidance 'Visual Representation of Wind Farms'. This image has been presented in a 90˚ cylindrical format to aid visual comprehension of linear infrastructure occupying a wide FoV, which avoids splitting the view across numerous multiple images.

Easting (ITM):	674108
Northing (ITM):	669292
Direction of View:	262 ˚
Distance to Site:	3.23 km
Elevation:	110.9 m

Horizontal Field of View:	90˚ (cylindrical projection)
Principal Distance:	522 mm
Paper size:	841 x 297 mm
Correct printed image size:	820 x 251 mm
Enlargement Factor:	96%

Date and Time:	2026/02/17 09:42
Camera:	Canon SD Mark II Digital SLR
Lens:	Canon Fixed 50mm Full Frame Sensor
Panoramic Head:	Manfrotto Pano Head/Leveller
Camera Height:	1.7m (AGL)

Photography Software:	Adobe Lightroom
Panorama Stitching Software:	PTGui Pro
Post-Production Software:	Adobe Photoshop
Formatting Software:	Adobe Illustrator/InDesign

Modelling Software:	3DS Max 2023
Rendering Software:	Mental Ray/Corona
GNSS Unit:	Trimble Catalyst (GNSS)
Topographical Data:	LiDAR/OSI Terrain Data
GPS Ref:	Georeferenced/Surveyed DWGS

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90˚ Outline View

indicating physical position and scale of the proposed development irrespective of screening



Powerstown Biogas - Landscape and Visual Impact Assessment

Viewpoint Ref: VP12 Scenic route 5 'Ballyryan' along the L3052 local road, Ballyryan townland

Visualisation Type 4 - This 90˚cylindrical projection panorama has been captured, prepared and presented in accordance with the guidance set out in the Landscape Institute Technical Guidance Note 06/19 for Type 4 Visualisations and the Scottish Natural Heritage 2017 guidance 'Visual Representation of Wind Farms'. This image has been presented in a 90˚ cylindrical format to aid visual comprehension of linear infrastructure occupying a wide FoV, which avoids splitting the view across numerous multiple images.

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Direction of View:	262 ˚
Distance to Site:	3.23 km
Elevation:	110.9 m

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Rendering Software:	Mental Ray/Corona
GNSS Unit:	Trimble Catalyst (GNSS)
Topographical Data:	LiDAR/OSI Terrain Data
GPS Ref:	Georeferenced/Surveyed DWGS

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90˚ Photomontage



Powerstown Biogas - Landscape and Visual Impact Assessment

Viewpoint Ref: VP12 Scenic route 5 'Ballyryan' along the L3052 local road, Ballyryan townland

Visualisation Type 4 - This 90˚cylindrical projection panorama has been captured, prepared and presented in accordance with the guidance set out in the Landscape Institute Technical Guidance Note 06/19 for Type 4 Visualisations and the Scottish Natural Heritage 2017 guidance 'Visual Representation of Wind Farms'. This image has been presented in a 90˚ cylindrical format to aid visual comprehension of linear infrastructure occupying a wide FoV, which avoids splitting the view across numerous multiple images.

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Elevation:	110.9 m

Horizontal Field of View:	90˚ (cylindrical projection)
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GPS Ref:	Georeferenced/Surveyed DWGS

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90˚ Photomontage
Established Mitigation



Powerstown Biogas - Landscape and Visual Impact Assessment

Viewpoint Ref: VP12 Scenic route 5 'Ballyryan' along the L3052 local road, Ballyryan townland

Visualisation Type 4 - This 90˚cylindrical projection panorama has been captured, prepared and presented in accordance with the guidance set out in the Landscape Institute Technical Guidance Note 06/19 for Type 4 Visualisations and the Scottish Natural Heritage 2017 guidance 'Visual Representation of Wind Farms'. This image has been presented in a 90˚ cylindrical format to aid visual comprehension of linear infrastructure occupying a wide FoV, which avoids splitting the view across numerous multiple images.

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Direction of View:	262 ˚
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Modelling Software:	3DS Max 2023
Rendering Software:	Mental Ray/Corona
GNSS Unit:	Trimble Catalyst (GNSS)
Topographical Data:	LiDAR/OSI Terrain Data
GPS Ref:	Georeferenced/Surveyed DWGS

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90˚ Baseline View



Powerstown Biogas - Landscape and Visual Impact Assessment

Viewpoint Ref: VP13 Scenic view 29 'Leighlinbridge', located along the R705 regional road at Leighlinbridge town

Visualisation Type 4 - This 90˚cylindrical projection panorama has been captured, prepared and presented in accordance with the guidance set out in the Landscape Institute Technical Guidance Note 06/19 for Type 4 Visualisations and the Scottish Natural Heritage 2017 guidance 'Visual Representation of Wind Farms'. This image has been presented in a 90˚ cylindrical format to aid visual comprehension of linear infrastructure occupying a wide FoV, which avoids splitting the view across numerous multiple images.

Easting (ITM):	669003
Northing (ITM):	665512
Direction of View:	31 ˚
Distance to Site:	3.27 km
Elevation:	39.3 m

Horizontal Field of View:	90˚ (cylindrical projection)
Principal Distance:	522 mm
Paper size:	841 x 297 mm
Correct printed image size:	820 x 251 mm
Enlargement Factor:	96%

Date and Time:	2025/10/16 14:16
Camera:	Canon 5D Mark II Digital SLR
Lens:	Canon Fixed 50mm Full Frame Sensor
Panoramic Head:	Manfrotto Pano Head/Leveller
Camera Height:	1.7m (AGL)

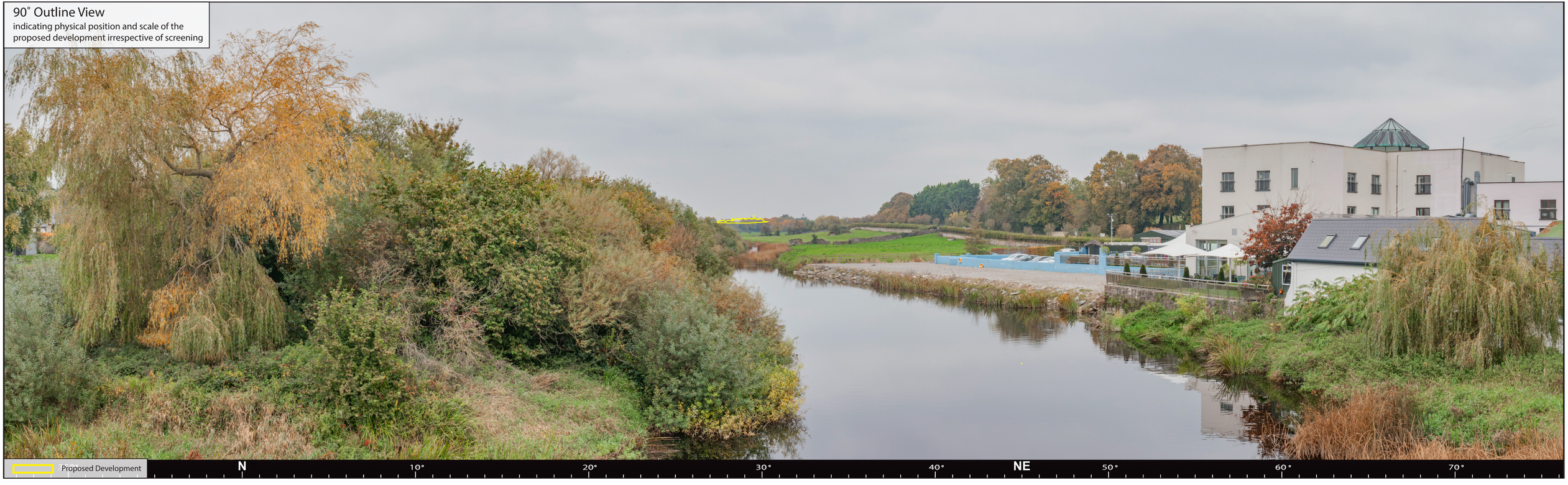
Photography Software:	Adobe Lightroom
Panorama Stitching Software:	PTGui Pro
Post-Production Software:	Adobe Photoshop
Formatting Software:	Adobe Illustrator/InDesign

Modelling Software:	3DS Max 2023
Rendering Software:	Mental Ray/Corona
GNSS Unit:	Trimble Catalyst (GNSS)
Topographical Data:	LiDAR/OSI Terrain Data
GPS Ref:	Georeferenced/Surveyed DWGS

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90˚ Outline View

indicating physical position and scale of the proposed development irrespective of screening



Powerstown Biogas - Landscape and Visual Impact Assessment

Viewpoint Ref: VP13 Scenic view 29 'Leighlinbridge', located along the R705 regional road at Leighlinbridge town

Visualisation Type 4 - This 90˚cylindrical projection panorama has been captured, prepared and presented in accordance with the guidance set out in the Landscape Institute Technical Guidance Note 06/19 for Type 4 Visualisations and the Scottish Natural Heritage 2017 guidance 'Visual Representation of Wind Farms'. This image has been presented in a 90˚ cylindrical format to aid visual comprehension of linear infrastructure occupying a wide FoV, which avoids splitting the view across numerous multiple images.

Easting (ITM):	669003
Northing (ITM):	665512
Direction of View:	31 ˚
Distance to Site:	3.27 km
Elevation:	39.3 m

Horizontal Field of View:	90˚ (cylindrical projection)
Principal Distance:	522 mm
Paper size:	841 x 297 mm
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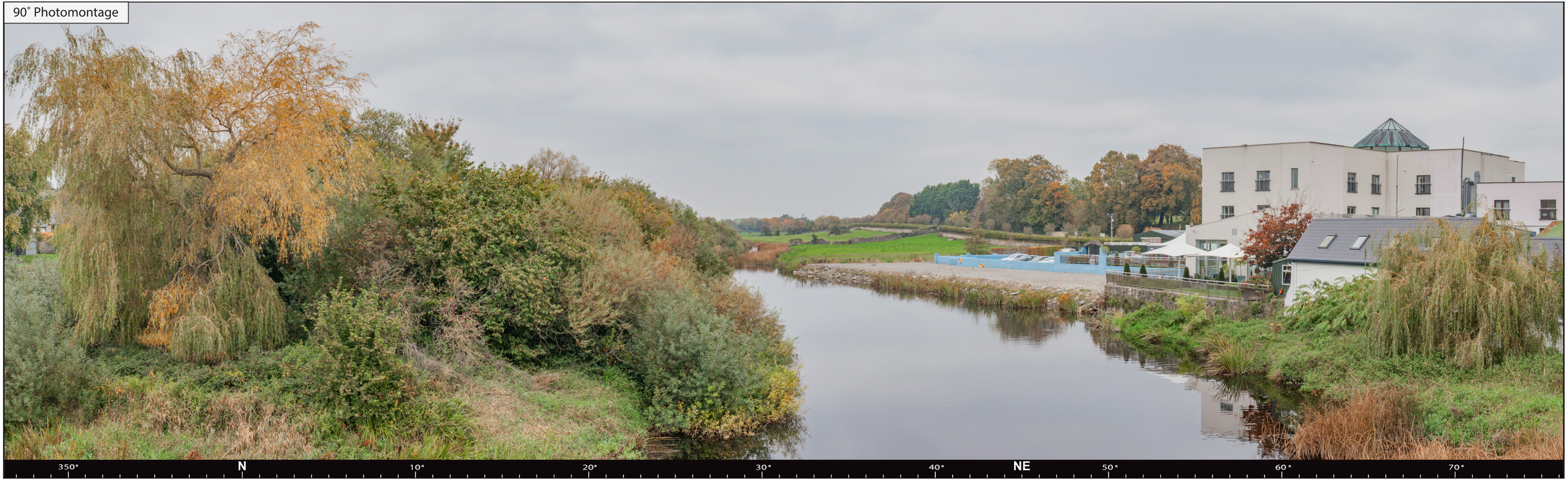
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Camera:	Canon 5D Mark II Digital SLR
Lens:	Canon Fixed 50mm Full Frame Sensor
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GPS Ref:	Georeferenced/Surveyed DWGS

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90˚ Photomontage



Powerstown Biogas - Landscape and Visual Impact Assessment

Viewpoint Ref: VP13 Scenic view 29 'Leighlinbridge', located along the R705 regional road at Leighlinbridge town

Visualisation Type 4 - This 90˚cylindrical projection panorama has been captured, prepared and presented in accordance with the guidance set out in the Landscape Institute Technical Guidance Note 06/19 for Type 4 Visualisations and the Scottish Natural Heritage 2017 guidance 'Visual Representation of Wind Farms'. This image has been presented in a 90˚ cylindrical format to aid visual comprehension of linear infrastructure occupying a wide FoV, which avoids splitting the view across numerous multiple images.

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Northing (ITM):	665512
Direction of View:	31 ˚
Distance to Site:	3.27 km
Elevation:	39.3 m

Horizontal Field of View:	90˚ (cylindrical projection)
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Paper size:	841 x 297 mm
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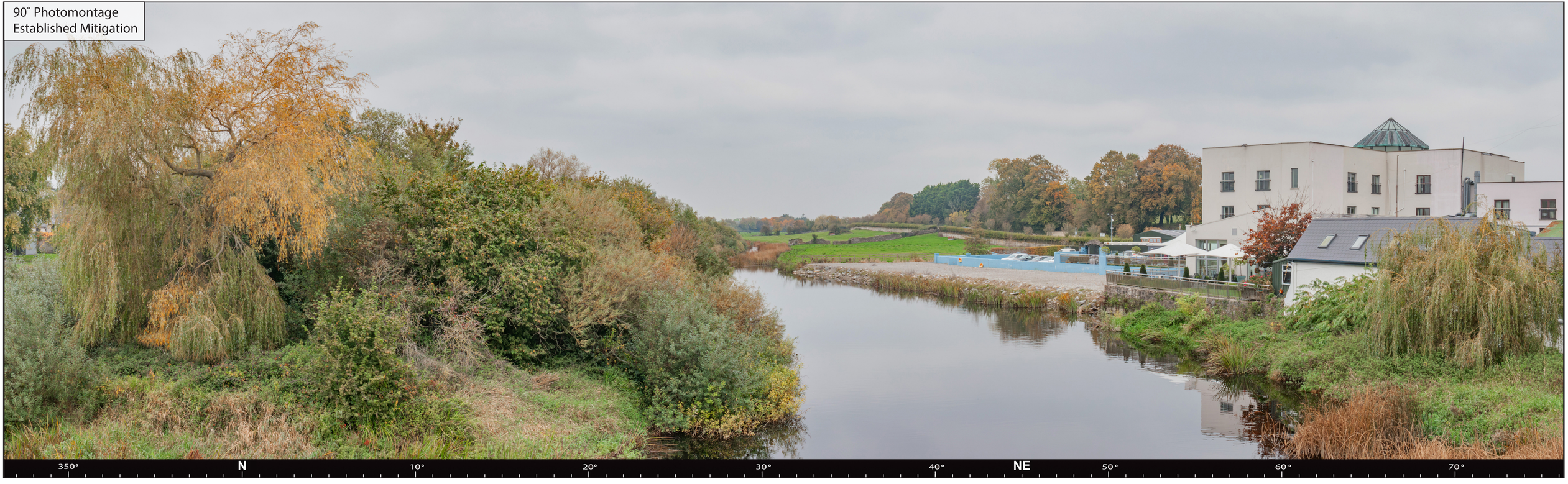
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Topographical Data:	LiDAR/OSI Terrain Data
GPS Ref:	Georeferenced/Surveyed DWGS

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90˚ Photomontage
Established Mitigation



Powerstown Biogas - Landscape and Visual Impact Assessment

Viewpoint Ref: VP13 Scenic view 29 'Leighlinbridge', located along the R705 regional road at Leighlinbridge town

Visualisation Type 4 - This 90˚cylindrical projection panorama has been captured, prepared and presented in accordance with the guidance set out in the Landscape Institute Technical Guidance Note 06/19 for Type 4 Visualisations and the Scottish Natural Heritage 2017 guidance 'Visual Representation of Wind Farms'. This image has been presented in a 90˚ cylindrical format to aid visual comprehension of linear infrastructure occupying a wide FoV, which avoids splitting the view across numerous multiple images.

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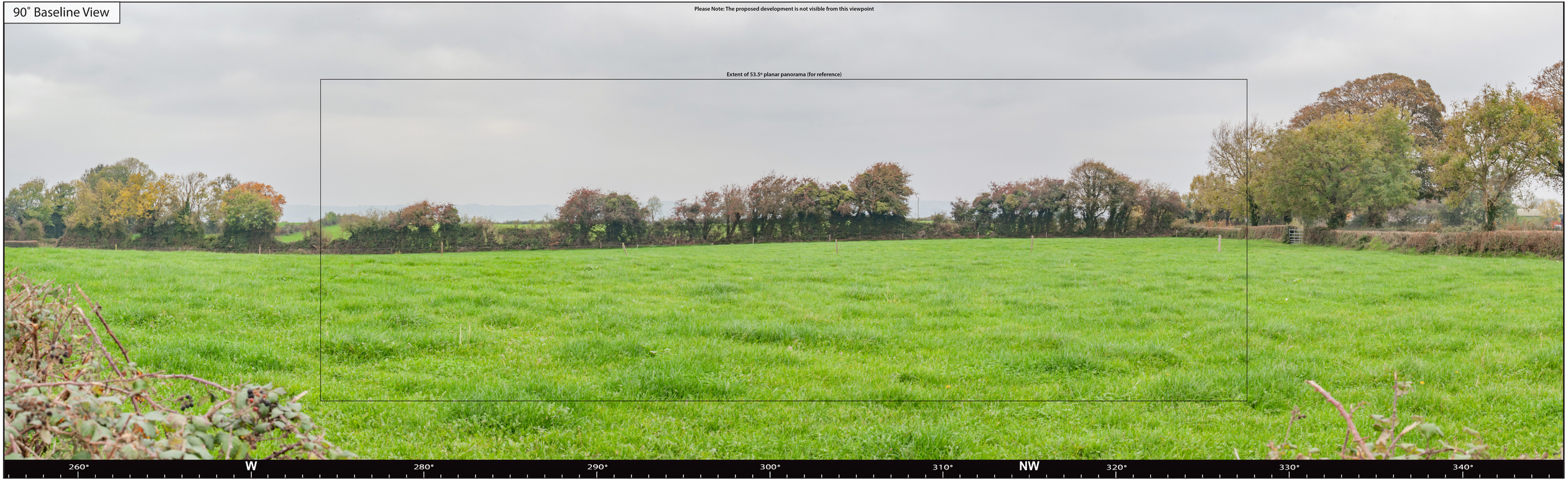
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Modelling Software:	3DS Max 2023
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GNSS Unit:	Trimble Catalyst (GNSS)
Topographical Data:	LiDAR/OSI Terrain Data
GPS Ref:	Georeferenced/Surveyed DWGS

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90˚ Baseline View

Please Note: The proposed development is not visible from this viewpoint



Powerstown Biogas - Landscape and Visual Impact Assessment

Viewpoint Ref: VP14 L7416 local road, Newtown townland

Visualisation Type 4 - This 90˚cylindrical projection panorama has been captured, prepared and presented in accordance with the guidance set out in the Landscape Institute Technical Guidance Note 06/19 for Type 4 Visualisations and the Scottish Natural Heritage 2017 guidance 'Visual Representation of Wind Farms'. This image has been presented in a 90˚ cylindrical format to aid visual comprehension of linear infrastructure occupying a wide FoV, which avoids splitting the view across numerous multiple images.

Easting (ITM):	674122
Northing (ITM):	666766
Direction of View:	301 ˚
Distance to Site:	3.68 km
Elevation:	138.7 m

Horizontal Field of View:	90˚ (cylindrical projection)
Principal Distance:	522 mm
Paper size:	841 x 297 mm
Correct printed image size:	820 x 251 mm
Enlargement Factor:	96%

Date and Time:	2025/10/16 13:56
Camera:	Canon 5D Mark II Digital SLR
Lens:	Canon Fixed 50mm Full Frame Sensor
Panoramic Head:	Manfrotto Pano Head/Leveller
Camera Height:	1.7m (AGL)

Photography Software:	Adobe Lightroom
Panorama Stitching Software:	PTGui Pro
Post-Production Software:	Adobe Photoshop
Formatting Software:	Adobe Illustrator/InDesign

Modelling Software:	3DS Max 2023
Rendering Software:	Mental Ray/Corona
GNSS Unit:	Trimble Catalyst (GNSS)
Topographical Data:	LiDAR/OSI Terrain Data
GPS Ref:	Georeferenced/Surveyed DWGS

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90˚ Baseline View



Powerstown Biogas - Landscape and Visual Impact Assessment

Viewpoint Ref: VP15 Scenic route 9 'Tomard lower' along the L3041 local road, Ballinabrannagh townland

Visualisation Type 4 - This 90˚cylindrical projection panorama has been captured, prepared and presented in accordance with the guidance set out in the Landscape Institute Technical Guidance Note 06/19 for Type 4 Visualisations and the Scottish Natural Heritage 2017 guidance 'Visual Representation of Wind Farms'. This image has been presented in a 90˚ cylindrical format to aid visual comprehension of linear infrastructure occupying a wide FoV, which avoids splitting the view across numerous multiple images.

Easting (ITM):	667536
Northing (ITM):	671590
Direction of View:	132 ˚
Distance to Site:	4.21 km
Elevation:	212.9 m

Horizontal Field of View:	90˚ (cylindrical projection)
Principal Distance:	522 mm
Paper size:	841 x 297 mm
Correct printed image size:	820 x 251 mm
Enlargement Factor:	96%

Date and Time:	2025/10/16 11:58
Camera:	Canon 5D Mark II Digital SLR
Lens:	Canon Fixed 50mm Full Frame Sensor
Panoramic Head:	Manfrotto Pano Head/Leveller
Camera Height:	1.7m (AGL)

Photography Software:	Adobe Lightroom
Panorama Stitching Software:	PTGui Pro
Post-Production Software:	Adobe Photoshop
Formatting Software:	Adobe Illustrator/InDesign

Modelling Software:	3DS Max 2023
Rendering Software:	Mental Ray/Corona
GNSS Unit:	Trimble Catalyst (GNSS)
Topographical Data:	LiDAR/OSI Terrain Data
GPS Ref:	Georeferenced/Surveyed DWGS

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90˚ Outline View

indicating physical position and scale of the proposed development irrespective of screening



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90˚ Photomontage



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90˚ Photomontage
Established Mitigation



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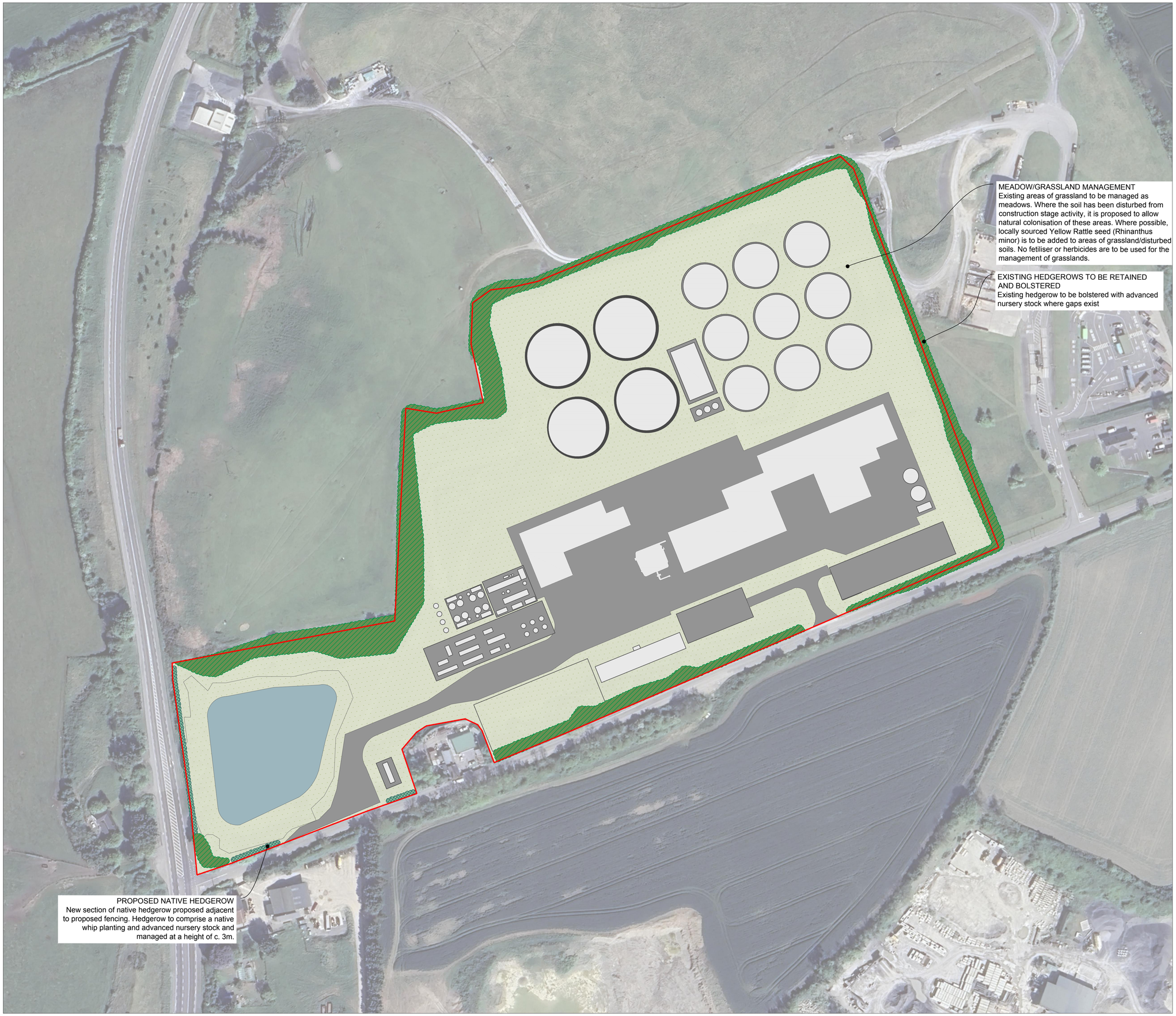
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APPENDIX 16.2

LANDSCAPE PLAN



LEGEND:

- Existing hedgerow to be retained and bolstered
- Proposed hedgerow
- Meadow/grassland management
- Site boundary

NOTES:

The function of the proposed mitigation planting is primarily for screening, but it will also enhance the ecological corridors that are already present within the hedgerows.

Mitigation screen planting shall consist of a mixture of native hedgerow species that are prevalent in the immediate area. Planting to consist of feathered whips (of various sizes) in staggered rows at a spacing of 600mm.

'Under-planting' to consist of a single row of whips to the development side of existing tree lines and hedgerows.

'Inter-planting' to consist of whips at 400mm centres to fill gaps in existing tree lines and hedgerows.

New sections of hedgerow to consist of a triple staggered row of whips and advanced nursery stock at 600mm spacing.

All native species will be planted as whips, with the primary and secondary structure species to be of a minimum height of 90cm and the other shrubs species to be of a minimum height of 60cm.

Proposed mitigation screen planting to be planted as per diagram LMP1.1-1.2 and maintained at a height of approximately 3-4m unless otherwise specified. Hedgerow type 1 to be planted as necessary for gap filling and bolstering.

Proposed mitigation to be planted in the first growing season prior to commencement of development. Hedgerows should reach full establishment (3-4 meters) within 2-3 years of planting.

Wildflower / Wild grass seeding of local provenance to occupy any residual space between perimeter fence and nearest line of whip planting.

Species mix to be finalised in conjunction with the project ecologist.

*Advanced nursery stock to be provided as Crateagus monogyna (Hawthorn) at 8-10cm girth (c. 3m) bare root standard trees.

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NATIVE HEDGEROW SPECIES:

Botanical name	Common name	Size	%
Primary structure;			
Crataegus monogyna	Hawthorn	90-120cm / 8-10cm girth 3m br standard trees	60%
Secondary structure;			
Prunus spinosa	Blackthorn	90-120cm	15%
Ilex aquifolium	Holly	90-120cm	15%
Shrub species structure;			
Viburnum opulus	Guelder Rose	60-90cm	2.5%
Corylus avellana	Hazel	60-90cm	2.5%
Rosa canina	Dog-rose	60-90cm	2.5%
Euonymus europaeus	Spindle	60-90cm	2.5%

macroworks APEM Group

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Ireland
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PROJECT:	CLIENT:
Powerstown Biogas, County Carlow	Fehily Timoney

DRAWING:		SCALE:
Landscape Mitigation Plan		1:1000
DATE:	**DWN BY:**	**CKD BY:**
11/02/2026	NPC	RB
SHEET SIZE:		**DWG No.**
A1 (landscape)		LD.PLMP 1.1

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