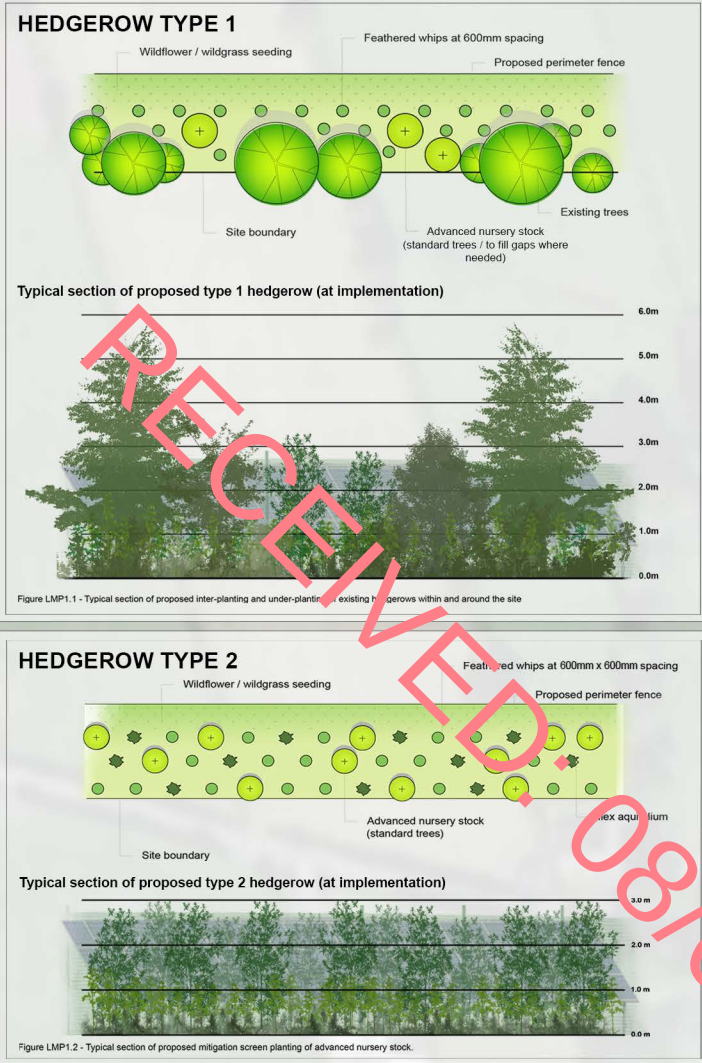




- LEGEND:**
- Hedgerow Type 1
 - Hedgerow Type 2
 - Native woodland planting
 - Field margins/ grass seeding
 - Existing hedgerows
 - Advanced nursery stock
 - Proposed fence
 - Drain
 - Site boundary

NOTES:

The function of the proposed mitigation planting is to support screening and to enhance biodiversity across the site. The new and bolstered sections of hedgerow vegetation, proposed woodland mix and wild grass verges will all reinforce the existing green infrastructure links and provide new ecological corridors within the site and throughout the wider landscape.

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.

Native grass seeding of local provenance to occupy any residual space between perimeter fence and nearest line of whip planting. Field margins to be managed inline with the BRIDE project management techniques.

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

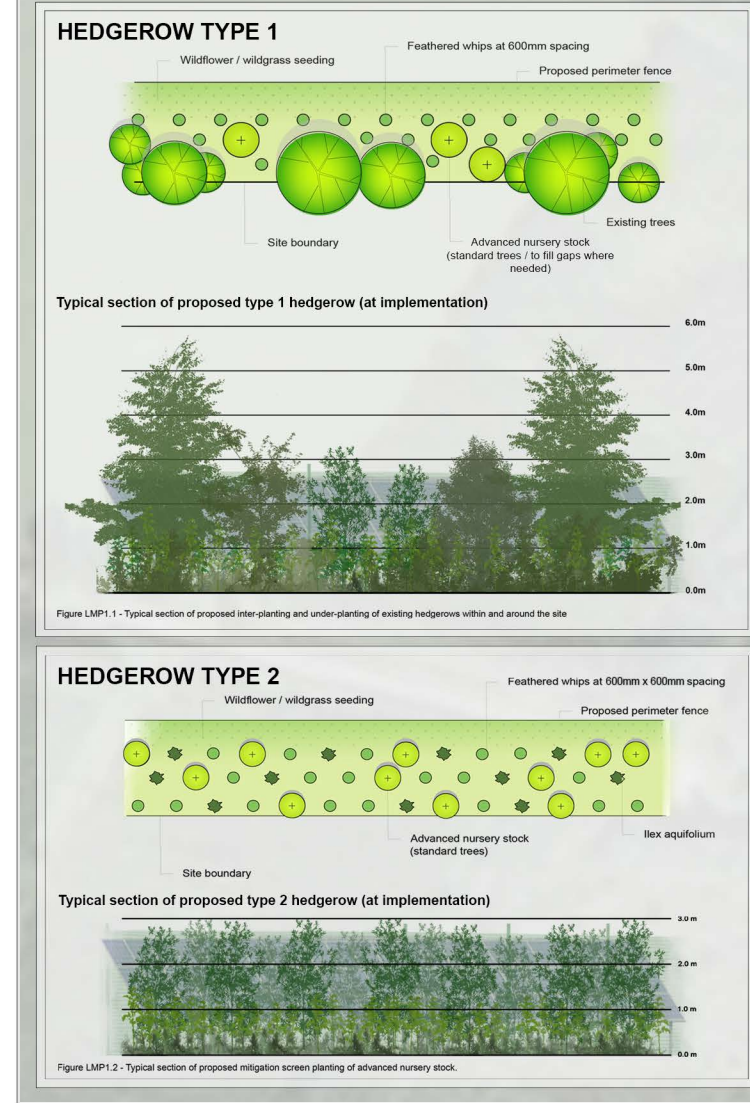
*Advanced nursery stock to be provided as Crataegus monogyna (Hawthorn) at 8-10cm girth (c. 3m) bare root standard trees.

NATIVE HEDGEROW SPECIES:

Botanical name	Common name	Size	%
<i>Primary structure;</i>			
Crataegus monogyna	Hawthorn	90-120cm / 8-10cm girth 3m br standard trees	60%
<i>Secondary structure;</i>			
Prunus spinosa	Blackthorn	90-120cm	15%
Ilex aquifolium	Holly	90-120cm	15%
<i>Shrub species structure;</i>			
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%

Ground Floor, Hibernia House
Cherrywood Business Park
Loughlinstown, Dublin 18
Ireland
00353 (01) 2303585
info@macroworks.ie

PROJECT: Project_Admiral		CLIENT: XX	
DRAWING: Landscape Mitigation Plan - Sheet 2		SCALE: 1:2000	
DATE: Apr 2025	DWN BY: YA	CKD BY: CD	
SHEET SIZE: A1 (landscape)		DWG No. LD_PRJCT_ADMRL_3.2	



LEGEND:

Hedgerow Type 1

Hedgerow Type 2

Native woodland planting

Field margins/
grass seeding

Existing hedgerows

Advanced nursery stock

Proposed fence

Drain

Site boundary

NOTES:

The function of the proposed mitigation planting is to support screening and to enhance biodiversity across the site. The new and bolstered sections of hedgerow vegetation, proposed woodland mix and wild grass verges will all reinforce the existing green infrastructure links and provide new ecological corridors within the site and throughout the wider landscape.

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Rosa canina	Dog-rose	60-90cm	2.5%
Euonymus europaeus	Spindle	60-90cm	2.5%

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APEM Group

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info@macroworks.ie**

PROJECT:
Project_Admiral

CLIENT:
XX

DRAWING:
Landscape Mitigation Plan - Sheet 3

SCALE:
1:2000

DATE:
Apr 2025

DWN BY:
YA

CKD BY:
CD

SHEET SIZE:
A1 (landscape)

DWG No.
LD_PRJCT_ADMRL_3.3

APPENDIX 12.2

RECEIVED: 08/07/2025



macroworks

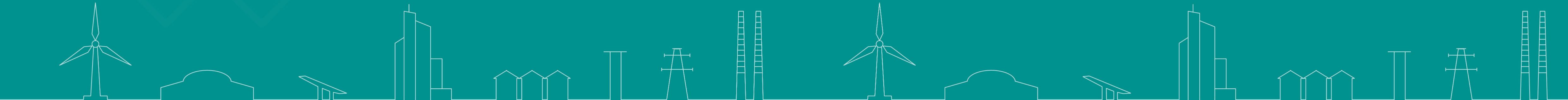
LVIA PHOTOMONTAGES

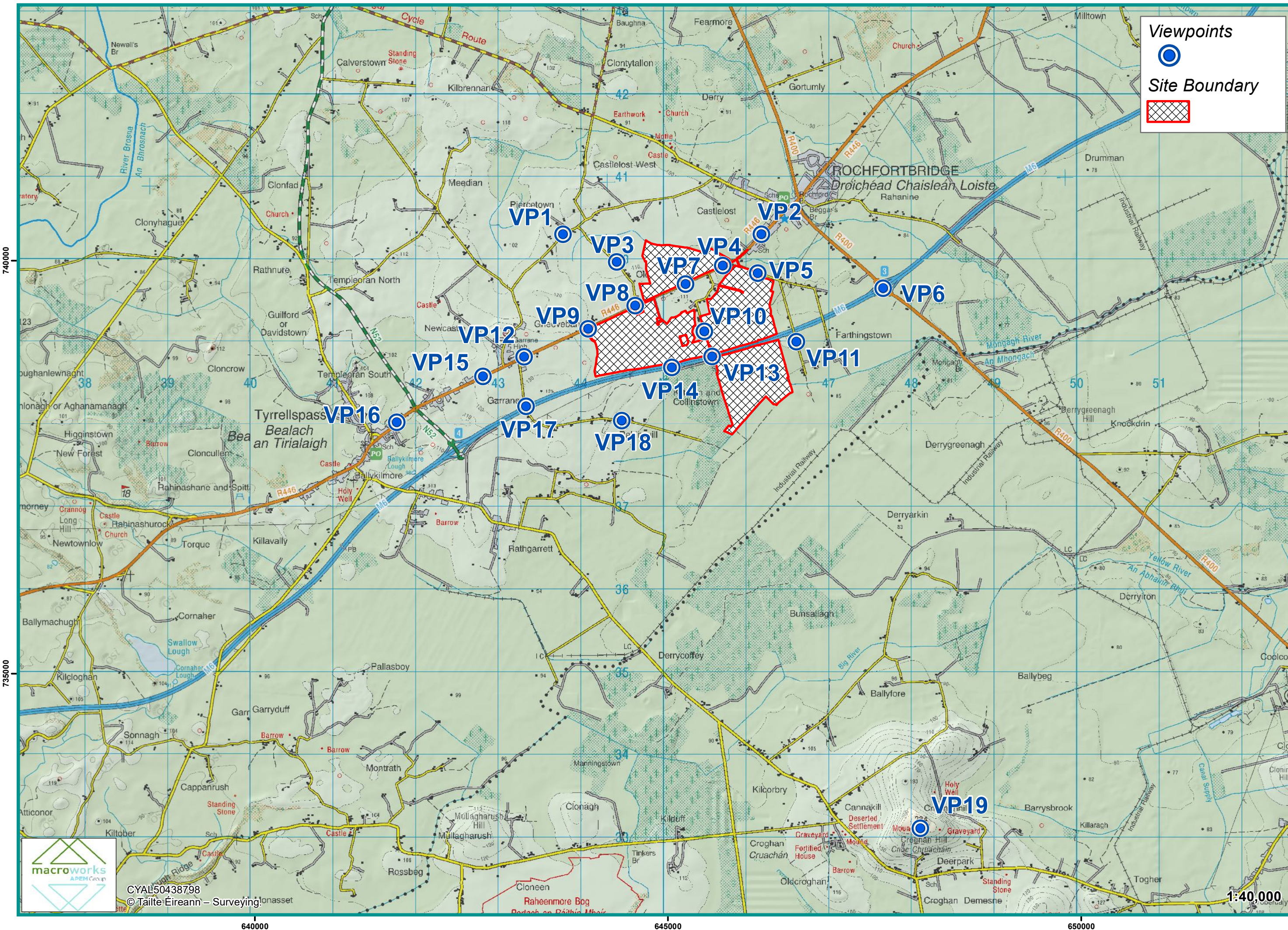
Project Admiral

RECEIVED: 08/07/2025

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

June 2025





VP1: L5125 at Piercetown
 90° Baseline Photography
 90° Outline View
 90° Photomontage
 90° Photomontage with Mitigation Established

VP2: R446 at Castlelost southwest of Rotchfortbridge*

VP3: L5125 at Oldtown (a* + b)

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

VP4: R446 at Farthingtstown (a + b + c + d)

90° Baseline Photography

90° Outline View

90° Photomontage

90° Photomontage with Mitigation Established

90° Baseline Photography

90° Outline View

90° Photomontage

90° Photomontage with Mitigation Established

90° Baseline Photography

90° Outline View

90° Photomontage

90° Photomontage with Mitigation Established

90° Baseline Photography

90° Outline View

90° Photomontage

90° Photomontage with Mitigation Established

VP5: L11272 at Farthingstown (a* + b)
 90° Baseline Photography
 90° Outline View
 90° Photomontage
 90° Photomontage with Mitigation Established
 90° Baseline Photography
 90° Outline View

VP6: R400 overpass of M6³
90° Baseline Photography
90° Outline View

VPT: R446 at Oldtown (a + b + c + d)

90° Baseline Photography

90° Outline View

90° Photomontage

90° Photomontage with Mitigation Established

90° Baseline Photography

90° Outline View

90° Photomontage

90° Photomontage with Mitigation Established

90° Baseline Photography

90° Outline View

90° Photomontage

90° Photomontage with Mitigation Established

90° Baseline Photography

90° Outline View

VP8: R446 at Oldtown west on its site section with the L5125 (a + b + c)

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

VP9: R446 at Gnevebane (a + b)

VP10: L51251 at Kiltotan and Collinstown (a + b + c)

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

VP11: Local road laneway south of M6 at Farthingtown (a + b)
 90° Baseline Photography
 90° Outline View
 90° Photomontage
 90° Photomontage with Mitigation Established
 90° Baseline Photography
 90° Outline View
 90° Photomontage
 90° Photomontage with Mitigation Established

VP12: R446 at Garrane*
90° Baseline Photography
90° Outline View

VP13: L51251 overbridge of the M6 (a + b + c)

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

VP14: M6 Motorway Layby at Kiltoran and Collinstown (a + b)

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

VP15: R446 at Newcastle**
90° Baseline Photography

VP16: R446 east of Tyrrellspass**
90° Baseline Photography

VP17: L51254 overbridge of the M6 at Garrane
 90° Baseline Photography
 90° Outline View
 90° Photomontage
 90° Photomontage with Mitigation Established

VP18: L51254 at Rahincuill (a + b)

- 50° Baseline Photography
- 90° Outline View
- 50° Photomontage
- 30° Baseline Photography
- 90° Outline view
- 90° Photomontage

VP19: Croghan Hill
90° Baseline Photo
90° Outline View
90° Photomontage
90° Photomontage

***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

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.



Project Admiral - Landscape and Visual Impact Assessment

Viewpoint Ref: VP1 L5125 at Piercetown

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):	643728	Horizontal Field of View: 90° (cylindrical projection)	Date and Time:	30/04/2025 14:22	Photography Software:	Adobe Lightroom	Modelling Software:	3DS Max 2023
Northing (ITM):	740321	Principal Distance:	Camera:	Canon 5D Mark II Digital SLR	Panorama Stitching Software:	PTGui Pro	Rendering Software:	Mental Ray/Corona
Direction of View:	124 °	Paper size:	Lens:	Canon Fixed 50mm Full Frame Sensor	Post-Production Software:	Adobe Photoshop	GNSS Unit:	Trimble Catalyst (GNSS)
Distance to Site:	994 m	Correct printed image size:	Panoramic Head:	Manfrotto Pano Head/Leveller	Formatting Software:	Adobe Illustrator/InDesign	Topographical Data:	LiDAR/OSI Terrain Data
Elevation:	105.9 m	Enlargement Factor:	Camera Height:	1.7m (AGL)			GPS Ref:	Georeferenced/Surveyed DWGS







Project Admiral - Landscape and Visual Impact Assessment

Viewpoint Ref: VP1 L5125 at Piercetown

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:	124 °	Paper size:	Lens:	Canon Fixed 50mm Full Frame Sensor	Post-Production Software:	Adobe Photoshop	GNSS Unit:	Trimble Catalyst (GNSS)
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