07.
Appendices

Appendix 7.1: Landscape and Visual Assessment Method

Introduction

Chapter 2 EIA Approach and Methodology sets out the overarching approach which has been used in developing the ES.

This section describes the technical methods used to determine the baseline conditions, sensitivity of the receptors and magnitude of effects and sets out the significance criteria that have been used for the LVIA. This includes where terminology differs from the standard approach, such as the reference to magnitude of effects and in the use of a 'matrix'.

LVIA Methodology

An appropriate and proportionate approach is taken to identify the key issues, sensitivities and likely significant effects associated with the landscape and visual topic. As advocated by good practice guidance, professional judgement will be employed alongside structured assessment methods and defined criteria to determine the level and significance of effects.

The assessment establishes and describes the existing baseline conditions and value of each identified landscape and visual receptor before making judgements on the nature of receptor (combination of susceptibility and value (sensitivity), nature of effect (scale/size/geographical extent, duration/reversibility) commonly referred to as magnitude and significance of effects resulting from the combination of nature of receptor and nature of effect.

Guidance Specific to the LVIA

The LVIA has been carried out in accordance with the following good practice guidance documents:

- Guidelines for Landscape and Visual impact Assessment (Third Edition) (Institute of Environmental Management and Assessment, 2013) Ref 1.1 (Guidelines for Landscape and Visual Impact Assessment. Third Edition (GLVIA3), 2013)
- Landscape Institute Technical Note 06/19: Visual Representation of Development Proposals (Landscape Institute, 2019) Ref 1.2 (Landscape Institute Technical Note 06/19: Visual Representation of Development Proposals, 2019);
- Landscape Institute Technical Guidance Note: TGN-02-21-Assessing Landscape Value Outside National Designations (Landscape Institute, 2021) (Landscape Institute Technical Guidance Note: TGN-02-21-Assessing Landscape Value Outside National Designations, 2021));
- Notes and Clarifications on aspects of the GLVIA3 LITGN-2024-01 (Landscape Institute, 2024) (Notes and Clarifications on aspects of the GLVIA3 LI TGN-2024-01 , 2024)
- The Horlock Rules (National Grid, 2009) (The Horlock Rules , 2009); and
- The Holford Rules (National Grid, 1959) (The Hoford Rules , 1959).

1. Several site visits have been undertaken within the study area, to supplement the desk-based study and verify initial findings. Site visits were undertaken on a targeted basis using publicly accessible locations and informed by analysis of mapping and ZTV modelling to focus on likely key receptors.

Zone of Theoretical Visibility Mapping

GLVIA3 indicates that mapping visibility, that is identifying areas of land from which a particular development may be visible must be identified and mapped at the outset of undertaking a LVIA. At paragraph 6.6 GLVIA3 states:

"Visibility mapping is an important tool in preparing the visual effects baseline but does not in its own right identify the effects. It can also play an important part in the different stages of the iterative design process. It can, for example, contribute to the early stages of site design and assessment to determine the potential visibility of a site compared to a similar development located on an alternative site. It can also be used to help in the consideration of concept layout and design alternatives in response to the potential visibility of different options".

The methodology adopted for this LVIA relies on a digital use of topographical/elevation data to create a digital terrain model of the study area and calculate inter-visibility between points within the development location, to construct a map showing the area from which the proposal may theoretically be visible.

The map products of this process adopted within this LVIA are referred to as the Zone of Theoretical Visibility (ZTV), and the purpose is to make clear that the area so defined only shows land from which the proposal may theoretically be visible.

The ZTV mapping is the desk study component of the visibility analysis. In reality many factors other than terrain will influence actual visibility.

Study Area

Definition of the Study Area for LVIAs (appraisals or assessments) may be determined either by specific development type guidance (Scottish Natural Heritage (SNH) guidance identifies suggested radii for visual analysis of wind farms based on the height of turbines) or determined by professional judgment based on the anticipated Zone of Theoretical Visibility (ZTV) informed by digital terrain modelling of the proposed development.

GLVIA3 suggests that the Study Area should cover the geographical area from which the proposed development would potentially be visible. The area should also be proportionate to the proposed development itself and may include refinement by professional judgement.

In the case of the proposed development, the Study Area of the assessment was defined by a combination of the ZTV, professional judgement and field survey verification. The combination of these factors has resulted in a Study Area which encompasses up to 5 km from the Site. Beyond this distance it is anticipated that the proposed development would be unlikely to give rise to significant landscape or visual effects.

Assessment Criteria

Sensitivity of Landscape Receptors

Landscape receptors are components of the landscape that are likely to be affected by the Project. These can include overall character and key characteristics, individual elements or features and specific aesthetic or perceptual aspects. It is the interaction between the different components of the Project and these landscape receptors which has potential to result in landscape impacts and effects (both adverse and beneficial).

The sensitivity of the landscape receptor has been derived by combining the value of the landscape (undertaken as part of the baseline study) and the susceptibility to change of the receptor to the specific type of development being assessed.

Landscape value is frequently addressed by reference to international, national, regional, and local designations. Absence of such a designation does not necessarily imply a lack of quality or value. Factors such as accessibility and local scarcity can render areas of nationally unremarkable quality, highly valuable as a local resource. The evaluation of landscape value will be informed by Landscape Institute TGN-02-21 (Landscape Institute, 2021) and undertaken considering the following factors and classified as very high, high, medium, low and very low with evidence provided as to the basis of the evaluation:

- natural heritage - landscape with clear evidence of ecological, geological, geomorphological, or physiographic interest which contribute positively to the landscape;
- cultural heritage - landscape with clear evidence of archaeological, historical or cultural interest which contribute positively to the landscape;
- landscape quality/condition - the measure of the physical state of the landscape including the intactness of the landscape and the condition of individual elements;
- scenic quality - the level of visual and sensory appeal of the landscape;
- perceptual aspects - the extent that the landscape receptor is recognised for its perceptual qualities (e.g. scenic, wildness or tranquillity);
- functional - landscape which performs a clearly identifiable and valuable function, particularly in the healthy functioning of the landscape;
- rarity - the presence of unusual elements or features;
- representativeness/distinctiveness- the presence of particularly characteristic features;
- recreation - the extent that recreational activities contribute to the landscape receptor; and
- association – the extent that cultural or historical associations contribute to the landscape receptor.

Landscape susceptibility relates to the ability of a particular landscape to accommodate the Project. It is assessed through consideration of the baseline characteristics of the landscape, and in particular, the scale or complexity of a given landscape. The evaluation of landscape susceptibility will be defined as very high, high, medium, low, or very low and is supported by a clear explanation based upon the analysis of the landscape receptor and the extent to

which it is able to accommodate the changes that would result from the Proposed Development.

The overall sensitivity assessment of the landscape receptor will be made by applying professional judgement to combine and analyse the identified value and susceptibility ratings. Overall sensitivity has been rated as very high, high, medium, low, or very low. **Table 1-1** outlines indicators that inform landscape value, susceptibility, and sensitivity. The basis of the assessment is made clear in the evaluation of each landscape receptor.

Table 0-1 Sensitivity of landscape receptors

Criteria	Higher Sensitivity	⟷	Lower Sensitivity
Value	A nationally designated landscape and/or a landscape in very good condition, recognised associations, exceptional scenic quality, very high recreational opportunities, a very high degree of distinctiveness, with very strong perceptual aspects and/or very important natural and cultural heritage features and functional qualities.	⟷	An undesignated landscape and/or landscape containing few if any notable elements/features, of poor condition or containing several detracting features and limited aesthetic qualities. Landscapes which have limited recognised associations, recreational opportunities, natural and cultural heritage features and/or functional qualities.
Susceptibility	Attributes that make up the character of the landscape which offer very limited opportunities to accommodate change of the type proposed without fundamentally altering key characteristics.	⟷	Attributes that make up the character of the landscape which are tolerant of a large degree of the type of change proposed without fundamentally altering the key characteristics.

Sensitivity of Visual Receptors

Value of the view is an appraisal of the value attached to views and is often informed by the appearance on Ordnance Survey or tourist maps and in guidebooks, literature, and art, or identified in policy. Value can also be indicated by the provision of parking or services, signage, and interpretation. The nature and composition of the view and its scenic quality is also an indicator. The value of the view has been classified as national, regional, district, local, and neighbourhood, broadly corresponding to very high, high, medium, low, or very low and is supported by evidenced, professional judgements.

The susceptibility of visual receptors to change has been established as a function of the occupation or activity of people experiencing the view, and the extent to which their attention or interest is focused on the view and the visual amenity they experience. For example, walkers whose interest may tend to be focused on the landscape or a particular view, or visitors at an attraction where views are an important part of the experience, indicate a higher level of susceptibility. Conversely receptors engaged in outdoor sport where views are not important or receptors at their place of work are considered less susceptible to change.

Judgements about the susceptibility of visual receptors have been ascribed using very high, high, medium, low, or very low ratings using consistent and reasoned judgements.

Sensitivity of visual receptors has been defined through an appraisal of the viewing expectation, or value placed on the view as identified in the baseline study, and the viewers susceptibility to change.

The overall sensitivity assessment of the visual receptor will be determined by applying professional judgement to combine the value and susceptibility ratings. Overall visual sensitivity has been rated as high, medium, low, or very low. **Table 1.2** outlines indicators that inform value of the view, susceptibility, and sensitivity of visual receptors. The basis of the assessment is made clear in the evaluation of each visual receptor.

Table 0-2 Sensitivity of visual receptors

Criteria	Higher Sensitivity	⟷	Lower Sensitivity
Value	Views protected by designation, or nationally recognised, or recorded on maps/guidebooks or with cultural associations. Views that have high scenic qualities relating to the content and composition of the view.		Views which are not documented or protected with minimal or no cultural associations. Views that exhibit low scenic qualities relating to the content and composition of the view.
Susceptibility	Viewers whose attention or interest is focused on their surroundings; Residential properties and settlements where views contribute to the landscape setting enjoyed by residents; and		People whose attention or interest is not focused on their surroundings and where the view is incidental to their enjoyment; People travelling more rapidly on major roads, rail or transport routes not recognised as scenic routes;

Criteria	Higher Sensitivity	⟷	Lower Sensitivity
	People engaged in outdoor recreation including users of cycle routes, recreational routes, core paths and visitors to heritage assets where views of the surroundings are an important contributor to experience.		People engaged in outdoor recreation which does not involve or depend upon appreciation of views of the landscape; and People at their place of work whose attention is not on their surroundings.

Magnitude of Effects

Landscape magnitude of effect refers to the extent to which the Project would alter the existing characteristics of the landscape. It is an expression of the size or scale of change to the landscape, the geographical extent of the area influenced, and its duration and reversibility. Notes and Clarifications on Aspects of GLVIA3 Technical Guidance Note LITGN-2024-01 sets out that the size/scale of effect is likely to be the most important factor with geographical extent and duration/reversibility considered as 'modifiers'. The variables involved are:

- the extent of existing landscape elements that would be lost, the proportion of the total extent that this represents and the contribution of that element to the character of the landscape;
- the extent to which aesthetic or perceptual aspects of the landscape are altered either by removal of existing components of the landscape or by the addition of new components;
- whether the change alters the key characteristics of the landscape that are integral to its distinctive character;
- the geographic area over which the change will be experienced (for example within the Project Boundary, the immediate setting around that boundary, at the local landscape character area scale, or on a larger scale influencing broader areas of landscape character); and
- the duration of the change (i.e. short term, medium term, or long term), as defined in Chapter 5 EIA Approach and Methodology, and its reversibility (i.e. whether it is permanent, temporary, or partially reversible).

Landscape change can be both direct, through alteration of physical components, or indirect, resulting from changes to perceptual aspects of character and how it is experienced.

An overall assessment of the magnitude of landscape change resulting from the Project on landscape receptors will be made by combining the above judgements using evidence and professional judgement. The levels of landscape magnitude of effect are described as being very high, high, medium, low, very low and none as defined in **Table 1-3**.

Table 0-3 Magnitude of Effect on landscape receptors

Magnitude	Criteria
Very High	Substantial alteration to the landscape receptor or may impact an extensive area or unique and important characteristics. May be longer term, permanent or reversible.
High	Large alteration to the landscape receptor or may impact an extensive area or unique characteristics at a regional level. Likely to be longer term, permanent or reversible.
Medium	Partial alteration to the landscape receptor or may impact a wide area or characteristics at a local level. Likely to be medium term, permanent or reversible.
Low	Slight alteration to the landscape receptor or may impact a restricted area and few key characteristics. Likely to be short to medium term, permanent or reversible.
Very Low	Very slight alteration to the landscape receptor or may impact a limited area or no key characteristics. Likely to be short term, permanent or reversible.
None	No change to the landscape receptor.

Visual magnitude of effect relates to the extent to which the Project would alter the existing view and is an expression of the size or scale of change in the view, the geographical extent of the area influenced and its duration and reversibility. Notes and Clarifications on Aspects of GLVIA3 Technical Guidance Note LITGN-2024-01 sets out that not all components of magnitude of effect are equally weighted. It is considered that the scale of change and degree of contrast are likely to be the most important factors with the nature of view, angle of the view and duration/reversibility considered as 'modifiers'. The variables involved are described below:

- the scale of the change in the view with respect to the loss or addition of features in the view and changes in its composition, including the proportion of the view occupied by the Project;
- the degree of contrast or integration of any new features or changes in the form, scale, composition and focal points of the view;
- the nature of the view of the Project in relation to the amount of time over which it will be experienced, and whether views of this will be visible fully, partially or glimpsed;
- the angle of view in relation to the main activity of the receptor, distance of the viewpoint from the Project and the extent of the area over which the changes would be visible; and
- the duration of the change (i.e. short term, medium term or long term), as defined in Chapter 5 EIA Approach and Methodology, and its reversibility (i.e. whether it is permanent, temporary or partially reversible).

An overall assessment of the magnitude of visual change resulting from the Project on the visual receptor has been made combining the above judgements using evidence and

professional judgement. The levels of visual magnitude of change are described as being very high, high, medium, low, very low and none as defined in **Table 1.4.**

Table 0-4 Magnitude of Effect for visual receptors

Magnitude	Criteria
Very High	A substantial change to the composition of the view or change that may be viewed in the foreground or directly. May be longer term, permanent or reversible.
High	A pronounced change to the composition of the view or change that may be viewed in the foreground or directly. May be longer term, permanent or reversible.
Medium	A noticeable change to the composition of the view or change that may be viewed in the middle ground or indirectly. May be medium term, permanent or reversible.
Low	An unobtrusive change in the composition of the view or change that may be viewed in the background or obliquely. May be short to medium term, permanent or reversible.
Very Low	A barely perceptible change in the composition of the view or change that may be viewed in the background and/or very obliquely. May be short term, permanent or reversible.
None	No change to the view.

Significance of Effects

Determination of the significance of landscape and visual effects will be undertaken by employing professional judgement and experience to combine the magnitude of effect with the identified sensitivity of landscape and visual receptors.

The landscape assessment will take account of direct and indirect changes to existing landscape elements, features, key characteristics and evaluates the extent to which these would be lost or modified, in the context of their importance in determining the existing baseline character.

The visual assessment will take account of the likely changes to the visual composition, including the extent to which new features would distract or screen existing elements in the view or disrupt the scale, structure, or focus of the existing view.

The significance of landscape and visual effects are described with reference to the criteria presented in **Table 0-5**. Effects predicted as likely to be Negligible or Minor are considered to be 'Not Significant'. Effects assessed as Moderate or Major are considered to be 'Significant'.

Table 0-5 Significance of Effect

Significance of Effect	Landscape	Visual
Major	Highly noticeable change affecting key characteristics of a very highly sensitive landscape,	Considerable change affecting a large extent of a very highly

Significance of Effect	Landscape	Visual
	resulting in a fundamental change to its character.	sensitive view and becoming a dominant feature.
Moderate	Noticeable change affecting some key characteristics in a highly sensitive landscape or very noticeable change in a medium sensitivity landscape, resulting in a change to the overall impression of its character.	Noticeable change affecting an important part of a highly sensitive view or a wider extent of a medium sensitivity view, becoming prominent or detracting from the existing focus.
Minor	Small change affecting few characteristics in a medium to highly sensitive landscape or noticeable change to a less sensitive landscape, resulting in a limited or localised change to the impression of its character.	Small change affecting a limited and/or unimportant part of a medium to highly sensitive view or an important part of a less sensitive view, unlikely to distract from the existing focus.
Negligible	Very little change from baseline conditions, resulting in a barely distinguishable or indistinguishable change.	Where there is no discernible improvement or deterioration in the existing view.
No change	No alteration to any of the components that contribute to the existing landscape resource.	No change to the existing view.

Assessment Terminology

Terminology used in the LVIA is set out in **Table 1-6** Assessment Terminology, taken from GLVIA3.

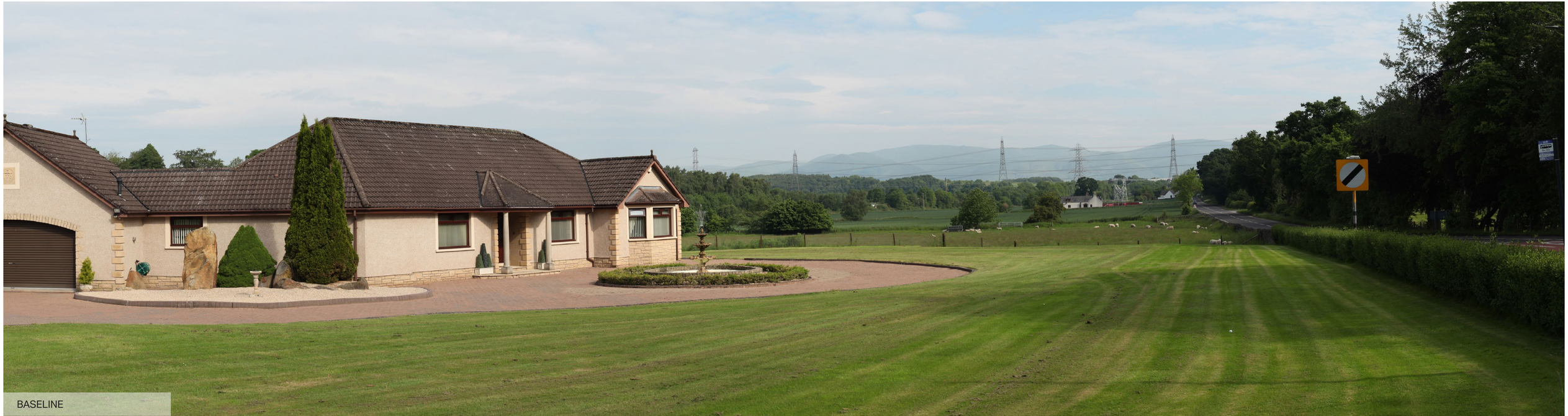
Table 0-6: Assessment Terminology

Term	Definition
Landscape	An area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors.[1]
Townscape	means the landscape within the built-up area, including the buildings and the relationships between them.2
Seascape	means landscapes with views of the coast or seas, and coasts and the adjacent marine environment.[2]
Landscape effects	are effects on landscape as a resource in its own right.[3]
Visual effects	are effects on specific views and on the general visual amenity experienced by people.[3]

Term	Definition
Impact	the action being taken.[4]
Effect	the change resulting from that action.[4]
Representative viewpoints	represent the experience of different types of visual receptor.[5]
Specific viewpoints	key and sometimes promoted viewpoints within the landscape.[5]
Illustrative viewpoints	chosen specifically to demonstrate a particular effect or specific issues.[5]
Susceptibility	"the ability of a defined landscape or visual receptor to accommodate the specific proposed development without undue negative consequences". In this LVIA a low susceptibility equates to an ability to accommodate the proposed development. A high susceptibility equates to an inability/reduced ability to accommodate the proposed development.
ZTV	Zone of Theoretical Visibility determined by computer analysis of a digital terrain model (DTN) which may be bare-earth (terrain only) or screened (including woodland and/or buildings as screening elements in addition to terrain).

p14, [2]p17, [3]p21, [4]p9, [5] p109: GLVIA3.

Appendix 7.2: Annotated Photo Viewpoints



Extent of 50mm single frame image

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Paper Size:	A1	Direction of View:	North West				
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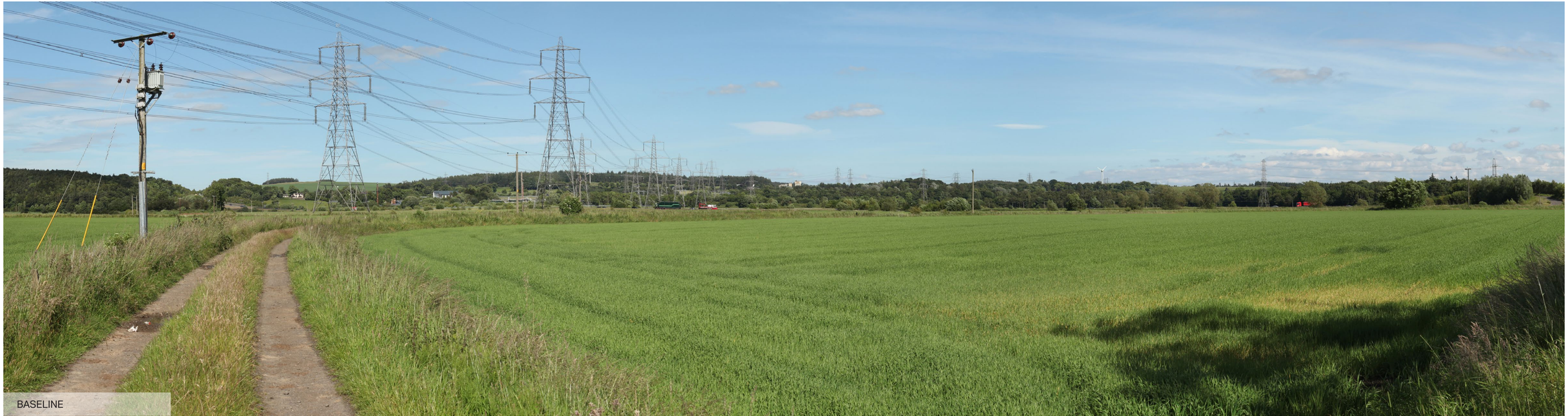
Kincardine North Substation

VP01 - Broomknowe Drive



Extent of 50mm single frame image

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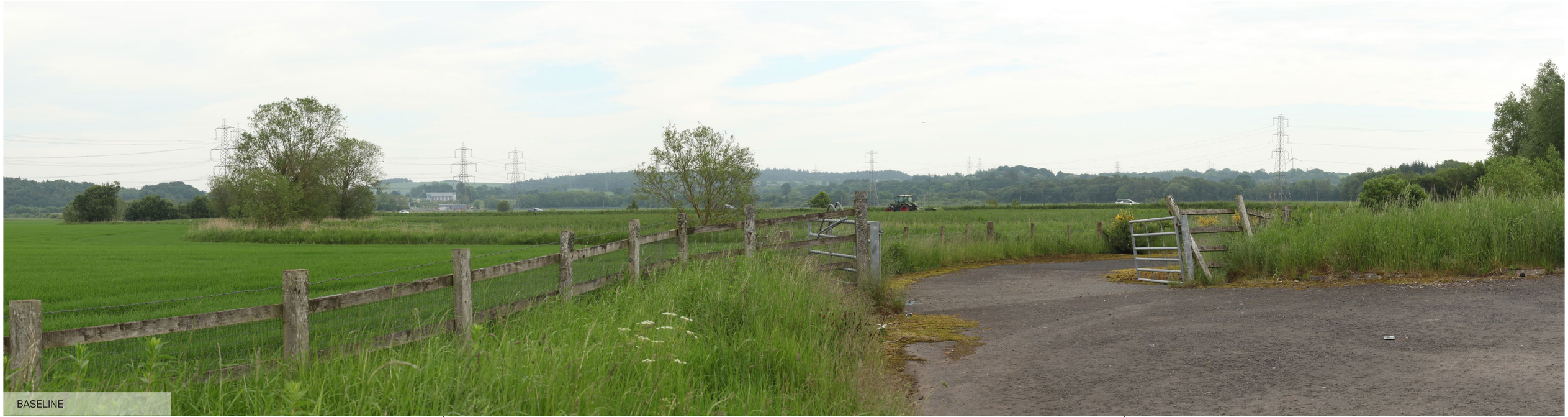
Kincardine North Substation

VP02 - Farmstead along National Cycle Route 76



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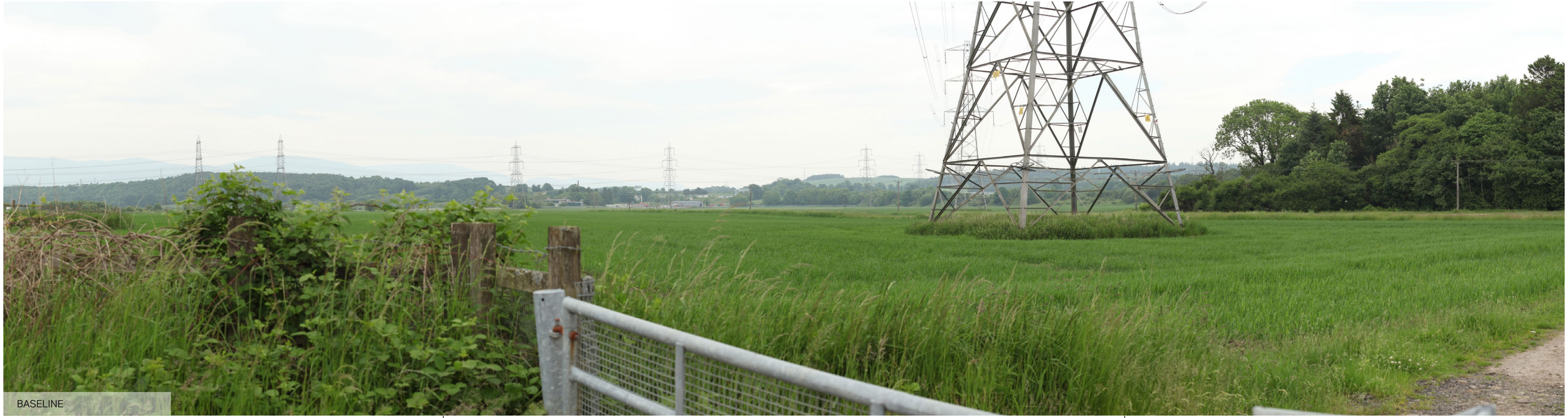
Kincardine North Substation

VP03 - National Cycle Route 76 at Canal Burn



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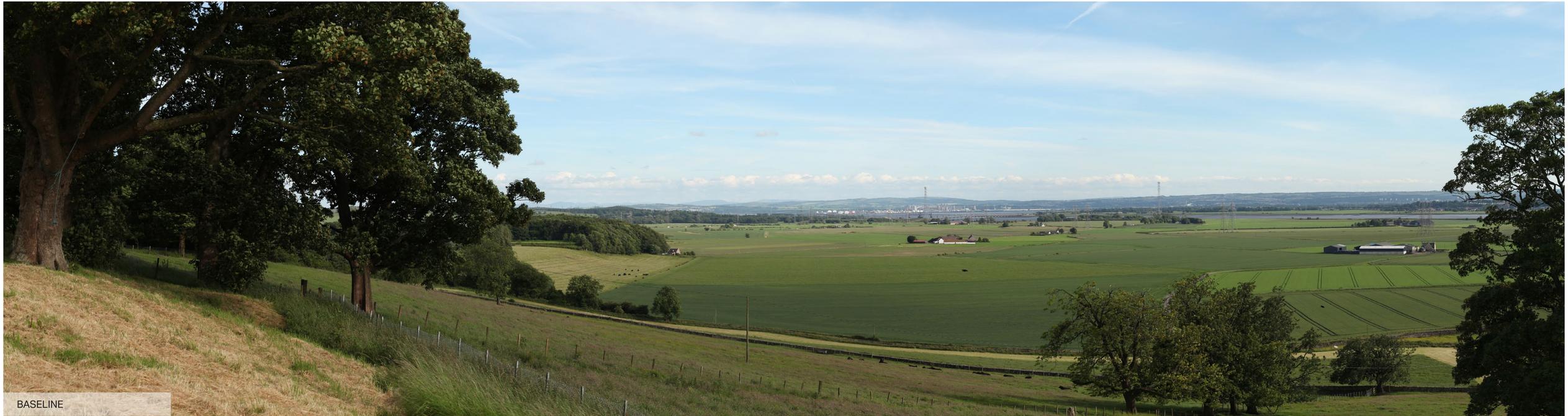
Kincardine North Substation

VP04 - National Cycle Route 76 near Hawkhill Farm



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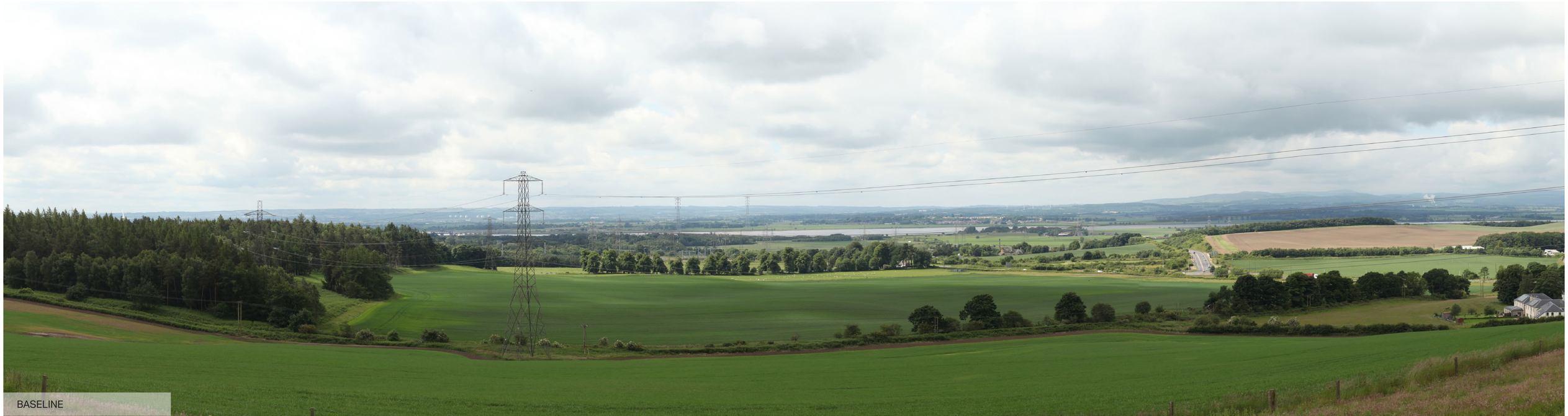
Kincardine North Substation

VP05 - Clackmannan Tower



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Visualisation Type:	1	Camera:	Canon EOS 5D MKII	Eye level:	93.3m	**Note:**	Kincardine North Substation
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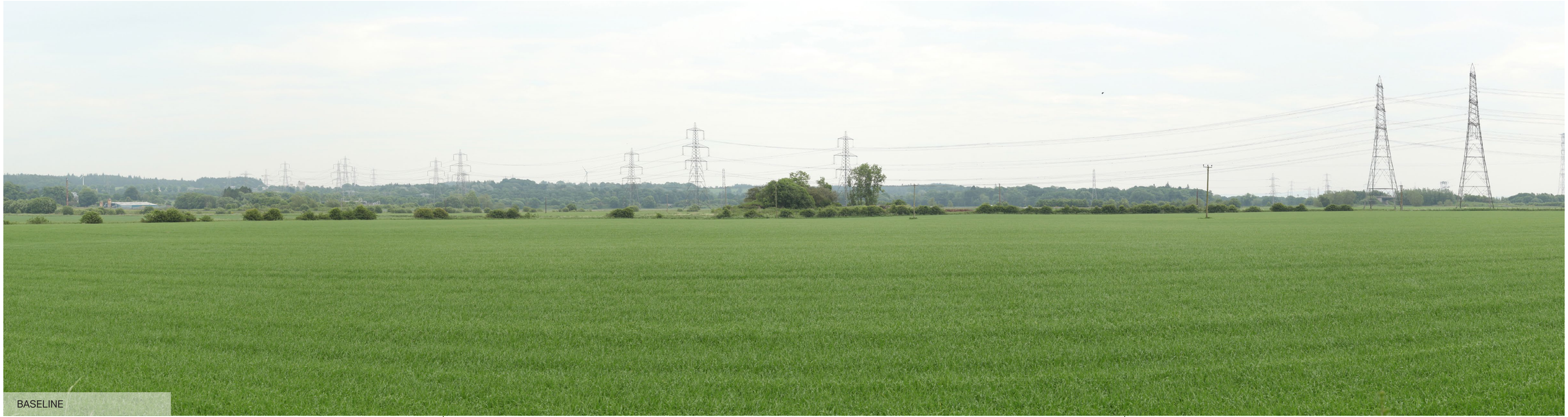

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Visualisation Type:	1	Camera:	Canon EOS 5D MKII	Eye level:	7.9m	**Note:**	
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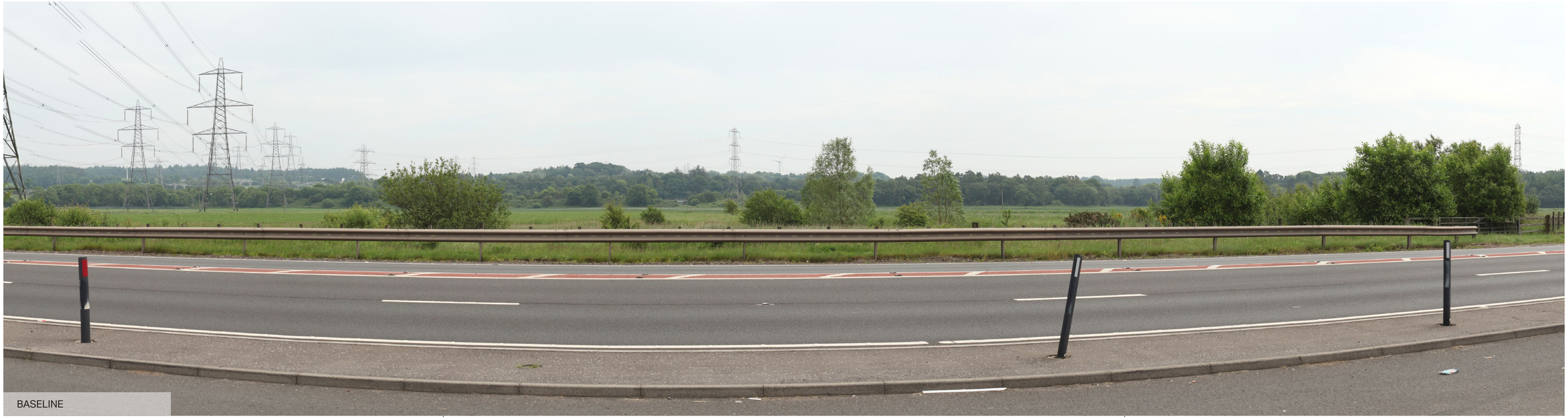
Kincardine North Substation

VP07 - Kennet Pans/ Kennet Core Path



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AECOM Delivering a better world

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Kincardine North Substation

VP08 - A876 Northbound Layby