



## **Landscape and Visual Assessment**

For

### **Proposed Three Wind Turbines at Low Drumclog, South Lanarkshire, Scotland**

Prepared for

**Clean Earth Energy**

Prepared by

Galpin Landscape Architecture

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## Landscape and Visual Assessment

For

**Proposed Three Wind Turbines at**

**Land at Low Drumclog, South Lanarkshire, Scotland**



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## 1 EXECUTIVE SUMMARY

### The Proposal

- 1.1 This proposal is for three wind turbines with a 3-bladed rotor design of a height of 180m to blade tip and a height of 102.5m to hub on land north of Low Drumclog Farm, Drumclog, Strathaven, South Lanarkshire, ML10 6QE.
- 1.2 Access to the site is via a track north of a drainage ditch and connecting to the public highway on a minor road northeast of Low Drumclog.
- 1.3 The proposal includes the access track that links all turbines, underground cabling, and temporary crane hard standing area.

### Landscape Character Assessment Summary

- 1.4 The construction activities would bring short-term and temporary construction activities on the landscape character with a Low magnitude of change.
- 1.5 The effect of the proposed turbines on the immediate landscape character would be an additional vertical element of the turbines and would have some association with other wind turbines.
- 1.6 The size and scale of the proposed turbines would fit in this location with this large landscape.
- 1.7 The proposed turbines would make a change to the immediate character due to their height.
- 1.8 The magnitude of change on the Landscape Character Type 214 - Plateau Moorland with Windfarms – Glasgow and Clyde Valley would be Low as there would be a perceptible indirect change in landscape characteristics over a localised area.
- 1.9 The magnitude of change on the Landscape Character Type 6 Plateau Moorland would be Low as there would be a perceptible indirect change in landscape characteristics over a localised area.
- 1.10 The proposed turbine is not within a landscape designation, however, the historic designation of the Battle of Drumclog is adjacent to the site and there would be a High magnitude of change.
- 1.11 There would be no effect on the Special Landscape Area - Middle Clyde Valley Special Landscape Area and the effect on the Sensitive Landscape Area of the East Ayrshire Uplands Hills would be Negligible.
- 1.12 Overall, the effect of the proposed turbines on the landscape character would be Low near the proposed turbine and Negligible overall.

## **Visual Amenity Assessment Summary**

- 1.13 The short-term temporary nature of the construction activities on the views of the visual receptors would ensure that the overall visual effects would be Low.
- 1.14 The assessment has identified key viewpoints from a range of viewpoints towards the proposed site with magnitudes of change ranging between High to Negligible and degrees of significance between Moderate to Slight / Negligible.
- 1.15 Visual receptors would include residents, recreational users, and road users.
- 1.16 The overall visual effects of the proposed wind turbines on visual receptors would be noticeable changes of views within 1.5km and then diminishing magnitude of change with the increase of the separation distance.
- 1.17 Importantly, there is a buffer zone of more than 1km from the proposed turbines and residential dwellings.

## **Cumulative Assessment Summary**

- 1.18 The cumulative effects have been assessed of the proposed turbine in combination with a number of existing wind farms and single wind turbines.
- 1.19 Other wind turbines of Calder Water wind farm and single turbines are more than 1km from the proposed turbines.
- 1.20 There would be a Low cumulative effect on the landscape character type 6 Plateau Moorland with the combination of the proposed turbines and the existing wind turbines.
- 1.21 The key viewpoints were examined in relation to other turbines in the area and identified significant cumulative visual effects on the nearest viewpoints of VP1 at Low Drumclog and VP2 near Hallfield. The other viewpoints are all assessed as having no significant cumulative visual effect. However, this would be expected where there already exists a number of turbines and where the viewers are close to the proposed turbines. Overall, the cumulative visual effects would not be significant.
- 1.22 The proposed wind turbine would reside in an area of 'Medium/Low' Landscape Character Sensitivity, 'Medium/Low' Visual Sensitivity, 'Medium/Low' Landscape Sensitivity and 'Medium/Low' Landscape Value.
- 1.23 The capacity for the landscape character for more wind turbines is 'Low Capacity' and the size and scales of the proposed turbines deem the proposed turbines as acceptable in this location.

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- 1.24 There would be 'Development Capacity' for the proposed turbines with the restrictive number of three turbines, located in a contained area near a farm and separated from settlements.

### Landscape, Cumulative and Visual Assessment Conclusion

- 1.25 **The Proposal** is for three single wind turbines on land north of Low Drumclog, near to the existing wind farm of Calder Water, coniferous woodland and on open plateau moorland.
- 1.26 The effect of the proposed turbine on **Landscape Character** would be Low near the proposed turbine and Negligible overall.
- 1.27 There would be no significant effects on any **Landscape Designations**, users of recreational routes, core paths or other visitor destinations.
- 1.28 The **Visual Amenity Assessment** has identified key views from a range of viewpoints towards the proposed site, taking into account potential visual receptors of residents, recreational users, and road users.
- 1.29 From these viewpoints, it has been established that the degree of significance would vary between Moderate / Substantial to Slight / Negligible. Some views of the development from receptors in close proximity to the site would have a Moderate / Substantial degree of significance, which would also have a **Cumulative Visual Effect** being near to existing wind turbines in the vicinity.
- 1.30 In relation to the **Cumulative Effects** on the landscape character with the addition of the proposed turbines, there would be a Low cumulative effect. The South Lanarkshire Landscape Capacity Study for Wind Energy states that the location of the proposed wind turbine is an area of 'Medium/Low' Landscape Character Sensitivity and shows a remaining capacity for the proposed turbine in the 'Medium/Low' Capacity and a 'Development Capacity'. Therefore, there is capacity to accommodate the proposed turbines in this location.

## 2 INTRODUCTION

### Introduction

- 2.1 This is a landscape and visual assessment commissioned by Clean Earth Energy and prepared by Galpin Landscape Architecture to accompany the planning application for a Three Wind Turbines at Land on Low Drumclog Farm, Drumclog, Strathaven, South Lanarkshire, ML10 6QE.

### The Proposal

- 2.2 The proposal includes three wind turbines with a 3-bladed rotor design of a height of 180m to blade tip and a height of 102.5m to hub.
- 2.3 The location is on land north of Low Drumclog Farm, Drumclog, Strathaven, South Lanarkshire, ML10 6QE.
- 2.4 Each of the proposed wind turbine locations are:
- Proposed Turbine T1: X 263136, Y 641040
  - Proposed Turbine T2: X 262952, Y 640478
  - Proposed Turbine T3: X 262653, Y 640813
- 2.5 Access to the site is via a track north of a drainage ditch and connecting to the public highway on a minor road northeast of Low Drumclog.
- 2.6 The proposal includes the access track that links all turbines, underground cabling, and temporary crane hard standing area.
- 2.7 The location of the proposed turbines have been carefully selected through the design iteration process within a buffer zone of over 1km from the nearest dwellings and existing turbines and taking into consideration a range of constraints including the peat moorland.

### The Assessment

- 2.8 This report addresses issues relating to the anticipated potential effects upon the landscape character and visual amenity of the study area, likely to result from the development.
- 2.9 This landscape and visual assessment was prepared after site visits in August 2021. This assessment describes and evaluates the change to the landscape and visual amenity and the extent to which these affect perception and views of the landscape.
- 2.10 Landscape character and visual assessment, although closely related to one another, have been considered separately for reasons of clarity and robustness.

## The Study Area

- 2.11 The potential effects of likely landscape receptors and visual receptors were initially appraised within a study area with a radius of 10km. This study area focuses on the main issues of potential landscape and visual effects within a defined study area. Beyond this area, the effects would be limited.

## Landscape

- 2.12 A study area of 10km was used for the appraisal of the effects on landscape features and landscape character.

## Visual

- 2.13 The visual assessment covers a radius of 10km from the development. The assessment focusses on key viewpoints, illustrated with photomontages, although including assessment of notable views.
- 2.14 Further to the area of 10km, a 25km ZTV has been prepared by Clean Earth Energy.
- 2.15 The SNH guidance *Visual Representation of Windfarms* states that in determining the extent of the preparation of ZTVs: *'The final distance of a ZTV should extend far enough to include all those areas within which significant visual impacts of a wind farm are likely to occur (LVIA "study area").'*
- 2.16 The most appropriate viewpoints were chosen and agreed with the LPA before preparing this LVA and these were all found to be within the 10km study area.

## 3 METHODOLOGY

### Landscape and Visual Assessment Methodology

- 3.1 This assessment has been prepared with reference to current recommended guidelines notably the Guidelines for Landscape and Visual Impact Assessment Third Edition (GLVIA) published by the Landscape Institute and the Institute of Environmental Assessment in 2013. The GLVIA relies on an appreciation of the existing landscape, a thorough understanding of the development proposals, evaluation of the magnitude of change predicted to result from the proposed development, the sensitivity of the existing landscape to change and the potential to mitigate effects.
- 3.2 Reference has also been made to the following guidelines:
- *Guidance note - Assessing the cumulative impact of onshore wind energy developments, SNH (March 2012)*
  - *Cumulative Effect of Windfarms, SNH (April 2005)*
  - *Visual Representation of Windfarms Good Practice Guidance, SNH (2007)*
  - *Visual Representation of Windfarms Guidance, SNH (2017)*
  - *South Lanarkshire Council Landscape Designations Report (2010)*
  - *Visual Representation of Development Proposals, The Landscape Institute, (2019)*
  - *Landscape Character Assessment Guidance, SNH / The Countryside Agency (2002)*
  - *Visual Assessment of Wind farms; Best Practice, prepared by University of Newcastle for SNH (2002)*
  - *Siting and Designing in the Landscape, SNH (2009)*
  - *South Lanarkshire Local Development Plan (2015) including Supplementary Guidance 10 Renewable Energy*
  - *South Lanarkshire Landscape Capacity Study for Wind Energy, Ironside Farrar (2016)*
  - *South Lanarkshire Landscape Character Assessment, Ironside Farrar (2010)*
  - *South Lanarkshire Council Spatial Framework Landscape Capacity for Wind Turbines (2013)*

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- *South Lanarkshire Council Tall Wind Turbines Review, Ironside Farrar (2019)*
- *South Lanarkshire Landscape Study for Wind Energy Part 1 (2019)*
- *Part 2 South Lanarkshire Landscape Capacity Study for Wind Turbines (2016)*
- *South Lanarkshire Council Landscape Designations Report (2010)*
- <https://hesportal.maps.arcgis.com/>
- <https://map.environment.gov.scot/>
- <https://southlanarkshire.maps.arcgis.com>

3.3 The assessment has involved five key stages:

- Defining the scope of the assessment, site reconnaissance and desktop background research;
- Establishment of the baseline conditions relating to landscape character, quality, value, and sensitivity to change of the existing landscape;
- Evaluation of the potential effects anticipated to result from the introduction of the development into the baseline context;
- Assessment of the anticipated effects based on the magnitude of change and sensitivity of the receptor; and
- Description of the anticipated effects and the degree of significance.

### Baseline Assessment Methodology

3.4 The following specific desk-based tasks have been undertaken:

- Consultation with the local planning authority;
- A review of the landscape character assessment within the 5km study area;
- A review of landscape designations from the English Heritage database and local authority sources; and
- Identification of landscape character and its key landscape elements.

3.5 A site appraisal of the landscape character and its key landscape elements was carried out. Site recording involved the completion of standardised recording forms and annotation of survey plans, supported by a photographic record of landscape character areas.

## Effects Evaluation

3.6 The aim of the landscape character assessment is to identify, predict and evaluate potential key effects arising from the development. The assessment of predicted effects involves:

- An appreciation of the nature, form and features of the development in the context of the baseline landscape character. Landscape character is a composite of physical, biological, and cultural elements. Landform, hydrology, vegetation, land use pattern and associations combine to create a common 'sense of place' and identity which can be used to categorise the landscape into definable units (character areas). The level of detail and size of the unit can be varied to reflect the scale of definition required. It can be applied at national, regional, and local levels;
- A review of the sensitivity to change of designated sites and landscape character in relation to changes proposed. This is assessed by a review of landscape value and scenic quality;
- An evaluation of the predicted magnitude of change experienced by designated sites and landscape character, assuming implementation of the development. This is in the form of quantification and description of the loss of, or indirect impact on, specific landscape components that make up the character of the various local landscape areas within the study area. Furthermore, it includes an explanation of the predicted change in the composite quality of the various areas related to such loss and influence in combination with the compatibility of the proposed forms within or neighbouring the various areas; and
- Assessment of the degree of significance of the effects of the development on the designated site or landscape character under consideration by relating the magnitude of change to the sensitivity to change.

## Landscape Sensitivity to Change

3.7 Sensitivity to change in the context of the nature and form of the development and its effect on landscape character has been evaluated with reference to scenic quality and value and has been rated as being high, medium, or low. This three-point scale uses the following criteria:

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- **High sensitivity:** a highly valued landscape of high scenic quality susceptible to change arising from the development; and/or small scale, complex landforms, and land cover characteristics with distinctive landscape features;
- **Medium sensitivity:** a medium-valued landscape of medium scenic quality, reasonably tolerant of change arising from the development; and/or medium-scale landforms and land cover in combination; occasional distinctive landscape features; and
- **Low sensitivity:** a low-valued landscape of low scenic quality, which is tolerant of change arising from the development; and/or large scale, simple landforms, and land cover characteristics with no distinctive landscape features.

### Magnitude of Change

3.8 The magnitude of change has been assessed on a four-point scale of high, medium, low, or negligible. These criteria are described as follows:

- **High:** very noticeable indirect change in landscape characteristics over an extensive area, or direct change to landscape components/character over a less extensive area;
- **Medium:** noticeable indirect change in landscape characteristics over a less extensive area, or direct change to landscape components/character over a localised area;
- **Low:** perceptible indirect change in landscape characteristics over a localised area, or direct change to landscape components/character over a very localised area; and
- **Negligible:** virtually imperceptible or no indirect change in landscape characteristics over a very localised area, or virtually imperceptible, or no, direct change to landscape components/character.

3.9 Wireline (or wireframe) diagrams and photomontages from viewpoint receptors have also been used as a tool to aid assessment.

3.10 The visibility of the development in the landscape would vary according to the weather conditions. The assessment has been carried out, as is best practice, by assuming the 'worst case' scenario, i.e., on a clear, bright day.

## Degree of Significance Assessment

- 3.11 Using professional judgement and assisted by tools such as ZTVs, photomontages and wireline diagrams, the assessment of effects compares the magnitude of change experienced by a designated site or landscape character area to its sensitivity to change of the type proposed. It also takes into account direct impacts upon existing landscape elements, features and key characteristics assessing whether these would be lost, or their relationships modified, in the context of their importance in determining the existing sensitivity of the character area in question.
- 3.12 Anticipated magnitudes of change are reported in terms of a descriptive scale ranging from substantial – moderate – slight adverse through negligible to an ascending scale of slight – moderate – substantial beneficial.
- 3.13 The criteria adopted for the assessment of landscape effects are as follows:
- **Substantial adverse (or beneficial) degree of significance:** very noticeable deterioration/improvement in the existing landscape;
  - **Moderate adverse (or beneficial) degree of significance:** noticeable deterioration/improvement in the existing landscape;
  - **Slight adverse (or beneficial) degree of significance:** perceptible deterioration/improvement in the existing landscape;
  - **Negligible degree of significance:** virtually imperceptible deterioration/improvement in the existing landscape.
- 3.14 For the purposes of this appraisal, the degree of significance of moderate and above are considered to be significant.
- 3.15 See Table 1 – Landscape Character Degree of significance for a visual guide to understanding how the magnitude of change relates to the degree of significance over different sensitivities of landscape character.
- 3.16 The predicted effects have been considered in the light of primary mitigation measures associated with site planning, culminating in a statement of the predicted effects and their overall degree of significance to the landscape resource of the study area.

## Visual Assessment Methodology

- 3.17 The assessment of visual impact has been based on the Guidelines for Landscape and Visual Impact Assessment (GLVIA) Third Edition 2013. The guidelines suggest that visual effects are assessed from a clear understanding of the development proposed and any related landscape mitigation measures. It calls for an

understanding of the visual form of the existing landscape, its quality and sensitivity to change taking into account the nature of the development.

3.18 The assessment has involved three key stages:

- Determination of the main areas where effects would occur as a result of the location and orientation of the development, and establishment of the baseline conditions relating to the visual context of the study area and the location and sensitivity of potential visual receptors;
- Evaluation of the potential effects anticipated to result from the introduction of the development into the baseline context. The susceptibility of visual receptors to change in views and how they contribute to the sensitivity. Next, the scale, extent, and duration and how they contribute to the magnitude of effects are assessed; and
- Finally, the effects of the anticipated development are assessed by an evaluation of the magnitude of change on the sensitivity to change. The resulting judgments about sensitivity and magnitude inform the judgement of the overall degree of significance.

### Baseline Assessment

3.19 The following specific desk-based tasks have been undertaken:

- Consultation with the local planning authority, within the detailed study area regarding methodology, key views, and viewpoint locations;
- Identification of the Zone of Theoretical Visibility (visual envelope) for the proposed development;
- Identification and field assessment of potential receptors within the visual envelope; and
- Appreciation of the nature and importance of existing views experienced by the identified receptors.

3.20 A site appraisal of potential impacts upon visual amenity was carried out. Site recording involved the completion of standardised recording forms and annotation of survey plans, supported by a photographic record of views from key receptor locations and using wireline projections.

### Identification of Visual Receptors

- 3.21 For there to be a visual effect, there is the need for a viewer (or visual receptor). Visual receptors include users of residential properties, recreational facilities and other outdoor sites used by the public such as roads, railways, and footpaths, which would be likely to experience a change in existing views as a result of the construction and operation of the proposed development.
- 3.22 Views from nearby key viewpoints are illustrated by photomontage, prepared using wireline diagrams and views from more distant viewpoints are illustrated by photographs; and views from those potential viewpoints with limited visibility of the proposed development are assessed but not illustrated with either wirelines or photomontages.

### Appreciation of Existing Views

- 3.23 The visual assessment involved an initial desk-based review of OS mapping to establish the wider context, followed by site surveys to establish the form and nature of specific views and the role of the proposed development area in such views.
- 3.24 Site survey notes were recorded using a standardised spreadsheet that included receptor type and number, the nature of the existing view, the distance, angle, and extent of the view of the proposed development, etc.
- 3.25 The evaluation involved the following tasks:
- Analysis of the sensitivity of the viewpoint receptors to the anticipated change in their view; and
  - Identification of the anticipated magnitude of change in existing views at these locations.

### Receptor Sensitivity

- 3.26 The sensitivity of a receptor to the proposed development has been considered in relation to the susceptibility of the receptor, for example, the inhabitants of a residential dwelling are generally considered more sensitive to change than occupiers of a factory unit. The susceptibility of visual receptors to change in views and visual amenity depends on the activity or occupation of people. The people are the visual receptors who may be residents, recreational users, visitors, and commuters. The judgement of susceptibility to change and value are assessed and how they contribute to the sensitivity of the visual receptor. The importance of the changed view to the receptor also contributes to an understanding of sensitivity to

change. Therefore, orientation, nature of use, scenic quality, and receptors' expectations of the changed view in respect of existing context are all considered as a part of this evaluation. For example, a front-on changed view from the main habitable rooms of a dwelling would result in higher sensitivity to change than a side-on or rear changed view from the same receptor. The sensitivity of a receptor, therefore, depends upon the nature of the receptor and the importance to that receptor of the view being changed.

3.27 In this assessment sensitivity is ranked on the following scale, which has been adapted from GLVIA methodology:

- **High sensitivity:** dwellings, footpaths, tracks, and vantage points where the changes form part of an important/principal view such as a renowned local viewpoint;
- **Medium sensitivity:** dwellings, footpaths, tracks, and vantage points where the changes form part of a less important view, and roads where the changes form part of an important view; and
- **Low sensitivity:** dwellings, footpaths, tracks, and vantage points where the changes form part of an unimportant view, roads where the changes form a part of a less important view, and farm buildings (not used as dwellings) and industrial buildings where the changes form part of an important view.

### Magnitude of Change

3.28 The magnitude of change considers the extent of the proposed development visible, the extent of the existing view that would be occupied by the proposed development, the influence of the proposed development within the view and the viewing distance from the receptor to the proposed development. This has involved a combination of site and desk-based analysis. Onsite, the elements of the proposed development potentially visible were recorded on the survey sheets. The analysis also involved the use of wireline projections and photomontages to assist the assessors with the evaluation.

3.29 In the assessment of visual effects, the magnitude of change is considered in terms of the type of change taking place in a view from a receptor and the degree of change that would take place in that view.

3.30 The magnitude of change is measured on the following scale, which has been adapted from GLVIA methodology:

- **High magnitude:** where the proposed development would cause a

very noticeable change in the existing view;

- **Medium magnitude:** where the proposed development would cause a noticeable change in the existing view;
- **Low magnitude:** where the proposed development would cause a perceptible change in the existing view; and
- **Negligible:** where the proposed development would cause a largely imperceptible change in the existing view.

### Assessment of Effects

3.31 The main criteria used to evaluate the visual impact are centred on the extent to which the proposed development would modify established views. The assessment of effects is based on consideration of both sensitivity to change and magnitude of change.

3.32 The determination of the effects is derived from the assessment of sensitivity to change, and the magnitude of change combined with professional judgement.

3.33 The final assessment adopts the following categories to illustrate the level of visual effects:

- **Substantial adverse (or beneficial) degree of significance:** very noticeable deterioration/ improvement in the existing view;
- **Moderate adverse (or beneficial) degree of significance:** noticeable deterioration/improvement in the existing view;
- **Slight adverse (or beneficial) degree of significance:** perceptible deterioration/ improvement in the existing view; and
- **Negligible degree of significance:** largely imperceptible deterioration or improvement in the existing view.

3.34 For the purposes of this appraisal, the degree of significance of moderate and above are considered to be significant and are applicable for landscape and visual assessments that require an EIA.

3.35 An assessment has been made of the visual effects upon receptors that would occur as a result of the proposed development at the viewpoint locations. However, the visual prominence of the development would vary according to weather conditions. The assessment has, therefore, been carried out in accordance with best practice, by assuming the "worst case" scenario; that is, as far as possible, within limitations of time constraints and local weather conditions, on a clear day. The assessment

also takes into account changes in vehicle movement patterns and other proposal-related operations.

## **Visual Baseline Conditions**

### **Viewpoints**

3.36 The following specific desk-based tasks have been undertaken:

- Consultation with the local planning authority, regarding methodology, key views, and viewpoint locations.
- Identification and field assessment of potential receptors within the visual envelope and an appraisal of their sensitivity.
- Appreciation of the nature and importance of existing views experienced by the identified receptors.

3.37 The visual assessment involved an initial desk-based review of OS mapping to establish the wider context within which views initially appear to be set, followed by site surveys to establish the form and nature of specific views and the role of the proposed development area in such views. The site survey was informed by the computer-generated ZTV mapping which indicates where the development may be visible from.

3.38 Table 4 shows the chosen viewpoints and reasons for inclusion in the assessment.

### **Methodology for Preparation of Photographs**

3.39 The site survey includes a photographic record of the viewpoints. At each of the viewpoints the following details are recorded;

- the grid reference (of the viewpoint)
- the angle of view (of the photo viewpoint)
- the ground height level or elevation
- the viewer height (measured to the lens of the camera)
- the date (of the survey)
- the direction of view (to the development)
- the distance to the development (from the viewpoint)
- the grid reference of the development
- the height of the development

3.40 The photographs have been taken using a digital SLR camera with a full-frame sensor using a 50mm fixed focal length lens, giving a focal length equivalent to 50mm on a 35mm film camera.

### Methodology for the Preparation of Wirelines

- 3.41 Wirelines (or wire frame drawings) are the visual representation of landform shown as contours laid over the bare ground. These are essential in order to prepare the photomontages.
- 3.42 The wirelines have been prepared using digital terrain software which produces a bare ground model as represented by the Digital Terrain Model (DTM). The DTM uses the Ordnance Survey's Terrain 50m DTM. While this is a reasonable representation of the landform, it is unable to represent very small topographic features precisely. The curvature of the earth and refraction through the atmosphere are taken into account but not the effects of screening due to woodland, buildings, and other surface features.
- 3.43 The wirelines were checked against the photographs and site survey notes and directions of views. The wirelines are then lined up with the photographs at a suitable scale.

### Methodology for Preparation of Photomontages

- 3.44 The photomontages are prepared by overlaying the wirelines as a transparency over the photographs to accurately position the development. This is achieved by lining up landform features in the photograph and the wirelines as well as inserting 'markers' in the DTM.
- 3.45 The visualisations of the wind turbine are presented in accordance with SNH guidance 'Visual Representation of Windfarms' version 2.2 (2017) and include the following sequence of visuals for each of the agreed viewpoints:
- Viewpoint location plan for all viewpoints shown in context
  - Individual thumbnail viewpoint location plan on each panorama and wireframe
  - 90-degree panoramic baseline photo (stitched using cylindrical projection)
  - 90-degree cumulative wireframe view (computer generated using cylindrical projection) presented below the baseline panorama for comparison and verification
  - 53.5-degree cumulative wireframe view (computer-generated with planar projection)
  - 53.5-degree photomontage view; computer-rendered using turbine 3D modelling and V-ray rendering software, overlaid onto a panorama stitched using planar projection and cropped to the correct field of view.

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- 3.46 All baseline panoramas, wireframes and photomontages are presented on A1 width sheets to be printed at 840 x 297mm at the correct image sizes stated in the guidance as follows:
- 820mm x 130mm, for 90-degree baseline panoramic photo & wireframe
  - 820mm x 260mm, for 53.5-degree wireframe and photomontage
- 3.47 The details outlined in paragraph 3.39 are included as a spreadsheet and the images are annotated as appropriate.

### Cumulative Landscape and Visual Assessment Methodology

- 3.48 Cumulative impacts are those which occur as a result of the construction of more than one wind farm or wind turbine in an area. The nature of these effects relates to the number of wind farms, scale, the landscape context, and the inter-relationship between the visual envelopes of the developments. The assessment of cumulative impacts is an evaluation of the additional change and effect that the proposed development would have on a theoretical baseline position which assumes that all other existing, consented and application wind farms have been constructed.

### Cumulative Visual Assessment

- 3.49 Cumulative effects may occur where a number of wind turbines increase the extent and is prominent within a particular view. The likely significance of these effects relates to the number of wind turbines visible and their resultant scale, location, and inter-relationship to each other within the view.
- 3.50 The methodology for the cumulative visual assessment follows the SNH guidance; Assessing the Cumulative Impact of Onshore Wind Energy Wind Farms, from both static viewpoint receptors and routes. Combined views of wind turbines may be either simultaneous or successive. The assessment also considers the potential for sequential impacts experienced from route receptors where different wind turbines become visible whilst moving through the landscape. Sequential impacts may be occasional, frequent, or constant.
- 3.51 The cumulative visual assessment included:
- Identification and analysis of the baseline wind developments from each viewpoint/route;
  - Evaluation of the potential magnitude of change to the baseline scenario resulting from the proposed turbine; and
  - Assessment of the potential cumulative effects arising from the introduction of the proposed turbine.

## The Cumulative Landscape Character Baseline

3.52 The cumulative landscape character baseline analysis involves an understanding of the existing wind turbines and the landscape characters in which they reside. Baseline information on existing and proposed wind turbines within the study area has been collected. Identification of the baseline situation involves consideration of the type of landscape character, locations of wind turbines, associations with the proposed turbine and combined with other turbines.

## The Cumulative Visual Baseline

3.53 The cumulative visual baseline analysis involves an appreciation of the existing view within the context of the baseline wind developments. Baseline information on existing and proposed wind farms within the study area has been collected. Identification of the baseline situation involves consideration of the scale, location, and nature of the baseline wind farms within the view, the proportion of the view which is occupied by wind turbines and the potential importance to the viewer.

## Cumulative Magnitude of Change

3.54 The cumulative magnitude of changes is the change with the introduction of the proposed turbine into the baseline wind development of the area. This includes the consideration of the potential nature, size, score, and location of the proposed change within the existing view, and in relation to, size, scale, and location of the proposed change within the existing view, and in relation to the existing wind turbines within the view.

## Cumulative Effects – Landscape Capacity (South Lanarkshire) Methodology

3.55 The South Lanarkshire Landscape Capacity Study for Wind Energy states the following criteria within for capacity of a landscape to accommodate wind energy developments.

- **Low Capacity:** A landscape that is both sensitive to wind turbine development and has a high value, where only a slight level of change can be accommodated without significantly affecting any of the key defining criteria
- **Medium Capacity:** A landscape that has some sensitivity to wind turbine development and has some aspects of value, where a moderate level of change can be accommodated which may significantly affect some of the defining criteria

- **High Capacity:** A landscape that has low sensitivity to wind turbine development and has low value, and can accommodate change that significantly affects most of the key defining criteria

### Cumulative Visual Effects

3.56 The cumulative magnitude of change is the change that would occur as a result of the introduction of the proposed turbine into the baseline wind development of the area. This is identified based on the consideration of the potential nature, size, scale, and location of the proposed change and in relation to the existing wind farms/wind turbines within the view. The evaluation of the magnitude of change is based on the criteria outlines in the main visual assessment methodology.

3.57 Visual Cumulative effects are the result of existing baseline wind turbines and the magnitude of change. The magnitude of change is measured on the following scale:

- **High magnitude:** the addition of the proposed development to the baseline view would result in a very noticeable increase in Wind Turbines to the extent whereby they would become a dominating or obstructive feature within view.
- **Medium magnitude:** the addition of the proposed development would result in a noticeable increase in wind turbines to the extent whereby they would become prominent but would not dominate or obstruct the view.
- **Low magnitude:** the addition of the proposed development to the baseline view would result in a perceptible increase in wind turbines but would not increase the prominence of wind turbines as a feature in the view.
- **Negligible:** the addition of the proposed development in combination with other wind turbines would not result in any discernible increase in the appearance of wind turbines in the view.

## 4 BASELINE

### Landscape Character Baseline

#### Landscape Character of the Site

- 4.1 The proposed site is part of a large landform that is exposed and open.
- 4.2 The field patterns are large scale with some medium divisions of field nearer the road.
- 4.3 The farmstead of Low Drumclog is situated adjacent to the south of the minor road and is surrounded by mature trees.
- 4.4 The open pasture moorland is set against coniferous woodland to the north and further south.
- 4.5 The landform is large, and the site is part of a large plateau area that elevates to 285m to the west and 265m to the north. The wider landform rises to the west and north and falls to the south and east and adjoining valley.
- 4.6 The land cover of the site is rough grazing for cattle and sheep and moorland with regular drainage channels across the site. There are burns and drainage ditches with some marsh/ boggy areas. The named burn is Coldwakning Burn.
- 4.7 There is a mix of field boundaries including hedgerows, scattered hedgerow trees and stock-proof fencing.
- 4.8 There are existing wind turbines to the north, west and south of the proposed site (this is detailed in the cumulative wind turbine section).
- 4.9 A power line with tall pylons is located to the west and goes from the south to the north.
- 4.10 The other existing vertical landscape elements are the forest plantation to the north and south of the site and further west.
- 4.11 There are scattered dwellings and farmsteads along the minor road joining the A71 to the east.
- 4.12 The site of the Battle of Drumclog is approximate 1km south of the proposed site, behind a woodland plantation.
- 4.13 The perceptual qualities are the simplicity and monochrome colour of the area, and the level of activity is still.
- 4.14 Overall, the proposed site can be described as grassland with bog at a large scale, which is open and adjacent to wind turbines and coniferous woodland.

### Landscape Character Type - Scottish National Heritage (SNH)

- 4.15 The wider Landscape Character Assessment prepared by Scottish National Heritage shows the site resides within the Landscape Character Type 214 - Plateau Moorland with Windfarms – Glasgow and Clyde Valley. See Plan 2 and table 2 in the appendix.
- 4.16 The Key Characteristics of this Landscape Character are:
- Large scale landform.
  - Distinctive upland character created by the combination of elevation, exposure, smooth, plateau landform, moorland vegetation.
  - Extensive wind turbine development, including the largest wind farm in Scotland at Whitelee.
  - Sense of apparent naturalness and remoteness which contrasts with the farmed and settled lowlands, although this has been reduced by wind energy development.

### Landscape Character Type - South Lanarkshire Council (SLC)

- 4.17 The South Lanarkshire Landscape Character Assessment shows the site resides within the Landscape Character Type 6 Plateau Moorland. See Plan 2 and Table 2 in the appendix.
- 4.18 The Key Characteristics, features and qualities of this Landscape Character are:
- *Distinctive upland character created by the combination of elevation, exposure, smooth, plateau landform, moorland vegetation and, with the exception of windfarms, a comparative lack of modern development;*
  - *These areas share a sense of apparent openness and exposure which contrasts with the farmed and settled lowlands but do not feel remote;*
  - *Increasingly these areas are subject to significant landscape change resulting from extensive large scale windfarm development and associated reduction in area of commercial forestry.*
- 4.19 The Key Landscape Issues affecting this landscape type include:
- *Visual impact of extensive areas of windfarms on nearby settlements and landscape effects on adjacent farmland and river valleys;*
  - *The prominence of any modern developments, including tall structures such as wind turbines, masts, and pylons in this open upland landscape;*
  - *The importance of striking a balance between large scale windfarms, conifer plantations and open moorland;*
- 4.20 The LCA guidelines in relation to Wind turbines: sensitivities and forces for change:

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- *In recent years extensive large scale windfarm development has significantly changed the character of the Plateau Moorlands. The windfarms are often visible over a considerable distance and affect the character of neighbouring areas of Plateau Farmland. Given the originally open, horizontal, and apparently wild character of these areas, the landscape type has been transformed by this concentration of wind farm development. The previously intrinsic undeveloped, open upland character has been weakened or lost, although elements of exposure, large scale and simplicity of landform still feature.*
- 4.21 The LCA guidelines in relation to Wind turbines: planning and management guidelines:
- *Further scope for wind energy development in this landscape type is limited; further developments should be very carefully sited so as to avoid further significant expansion of the visual and landscape impacts, including cumulative impacts in areas already supporting extensive windfarm development;*
  - *The spread of turbines towards or across the boundary with Plateau Farmlands should be avoided so as to avoid cumulative effects and blurring of the two landscape types;*
  - *Extensive visual effects or visual domination of Plateau Moorland turbines on nearby river valleys should be avoided.*

### Adjacent Landscape Character Types

- 4.22 The South Lanarkshire Landscape Character Assessment shows the site resides adjacent to the following Landscape Character Types:
- 5 Plateau Farmland
  - 6a Plateau Moorland Forestry
  - 6b Plateau Moorland Forestry Windfarm
- 4.23 Within the study area of 10km, although not adjacent are the following Landscape Character Types in the South Lanarkshire Landscape Character Assessment:
- 1 Urban Fringe Farmland
  - 2 Incised River Valley
  - 4 Rolling Farmland
  - 7 Rolling Moorland
  - 7a Rolling Moorland with Forest
  - 8 Upland River Valley
- 4.24 Within the study area of 10km, the following Landscape Character Types in the East Ayrshire Landscape Character Assessment:
- AYS10 Upland River Valley

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- AYS19 Plateau Moorland
  - AYS20 Plateau Moorland with Forestry
- 4.25 Within the study area of 10km, the following Landscape Character Types in the Strathclyde Landscape Character Assessment:
- STC5 Plateau Farmland
  - ST18 Plateau Moorland

### Landscape Designations

- 4.26 For locations of landscape designation, see Plan 1. See table 2 for further details.
- 4.27 The proposed turbines are not within a landscape designation nor near to a **National Park** or **World Heritage Site** or **National Scenic Areas**.
- 4.28 The site is not adjacent to or within 5km of a **Special Landscape Area**.
- 4.29 Other landscape designations are more related to biological or geological reasons including **SSSI**. However, for the purposes of this landscape assessment, the landscape value and fabric of the landscape is important to understand and assess.
- 4.30 The **Scheduled Monuments** within 5km of the site include the Battle of Drumclog and the Battle of Loudoun Hill.
- 4.31 The **Listed Buildings** include within 5km of the site include Low Drumclog, Coldwakning, Trumpeter's Well at Hillhead Farm, North Brownhill, Dungavel Prison, South Halls, Allanton, Mill Bridge Ryeyard, Loudounhill, Lochfield Farm, Calder Bridge at Caldermill, Drumclog Church, Drumclog Battle Monument, Stobieside House and Gatepiers, Avon Bridge, Underlaw, Broomhill and East Glaister.
- 4.32 There are no **Ancient Woodlands** around the periphery or within 5km of the study area.
- 4.33 There are no **Conservation Areas** within 5km of the study area.

### Baseline Views

- 4.34 A series of fourteen representative viewpoints were identified within the study area. These visual receptors are to be found within 10km of the proposed wind turbine.

### Visual Amenity Baseline Conditions

- 4.35 The area was examined onsite from different viewpoints to establish the potential effects of the proposed turbines on visual amenity to different visual receptors (recreational users, residents, road users).
- 4.36 The following viewpoints have been chosen as key representative viewpoints in the close vicinity of the proposed turbine. See Plan 3 and table 4 in the appendix.

## Proposed Three Wind Turbines at Land at Low Drumclog LVA

### VP1

4.37 Viewpoint 1 (See figures 1.1, 1.2 and 1.3) - **Low Drumclog**; representative of road users and residents. This viewpoint was chosen due to the proximity to dwellings and an agreed viewpoint with the LPA.

### VP2

4.38 Viewpoint 2 (See figures 2.1, 2.2 and 2.3) - **Hallfield**; representative of residents. This viewpoint was chosen due to the proximity to dwellings and an agreed viewpoint with the LPA.

### VP3

4.39 Viewpoint 3 (See figures 3.1, 3.2 and 3.3) – **Battle of Drumclog Monument**; representative of recreational users. This viewpoint was chosen due to the proximity to an historic setting and an agreed viewpoint with the LPA.

### VP4

4.40 Viewpoint 4 (See figures 4.1, 4.2 and 4.3) – **SW of Fore Hareshaw**; representative of recreational users. This viewpoint was chosen due to the proximity to dwellings and an agreed viewpoint with the LPA.

### VP5

4.41 Viewpoint 5 (See figures 5.1, 5.2 and 5.3) – **Drumclog Church**; representative of residents. This viewpoint was chosen due to the proximity to dwellings, historic buildings, and an agreed viewpoint with the LPA.

### VP6

4.42 Viewpoint 6 (See figures 6.1, 6.2 and 6.3) - **A71 East of Burnbank**; representative of residents and road users. This viewpoint was chosen due to the proximity to a road junction and dwellings and an agreed viewpoint with the LPA.

### VP7

4.43 Viewpoint 7 (See figures 7.1, 7.2 and 7.3) - **Brownhill Bridge**; representative of residents, recreational users, and road users. This viewpoint was chosen due to the proximity to a road junction and dwellings and an agreed viewpoint with the LPA.

**VP8**

4.44 Viewpoint 8 (See figures 8.1, 8.2 and 8.3) - **A71 East Browncastle**; representative of residents. This viewpoint was chosen due to the proximity to dwellings and a viewpoint requested by the LPA.

**VP9**

4.45 Viewpoint 9 (See figures 9.1, 9.2 and 9.3) - **Loudoun Hill**; representative of recreational users. This viewpoint was chosen as a summit of a recreational area and an agreed viewpoint with the LPA.

**VP10**

4.46 Viewpoint 10 (See figures 10.1, 10.2 and 10.3) - **Long Green**; representative of recreational users and residents. This viewpoint was chosen due to the proximity to dwellings and recreational routes and an agreed viewpoint with the LPA.

**VP11**

4.47 Viewpoint 11 (See figures 11.1, 11.2 and 11.3) - **Ardochrig - Whitelee Wind Farm Car Park**; representative of recreational users. This viewpoint was chosen due to the proximity to recreational routes and a viewpoint requested by the LPA.

**VP12**

4.48 Viewpoint 12 (See figures 12.1, 12.2 and 12.3) - **Lambhill**; representative of residents. This viewpoint was chosen due to the proximity to dwellings and an agreed viewpoint with the LPA.

**VP13**

4.49 Viewpoint 13 (See figures 13.1, 13.2 and 13.3) - **Muirkirk Road, Strathaven**; representative of residents. This viewpoint was chosen due to the proximity to dwellings and an agreed viewpoint with the LPA.

**VP14**

4.50 Viewpoint 14 (See figures 14.1, 14.2 and 14.3) - **Sandford**; representative of residents. This viewpoint was chosen due to the proximity to dwellings and a viewpoint requested by the LPA.

### Recreational Visual Receptors

- 4.51 Recreational users may be users of the recreational routes in the form of core paths, cycle ways and open access land.
- 4.52 The National Cycle route 74 is northeast of the study area and there are local cycle routes.
- 4.53 There are a number of Core Paths in the area, listed in table 2 in the appendix and shown on plan 1.

### Resident Visual Receptors

- 4.54 The context of the visual amenity within the study area includes the following urban areas; Caldermill, Drumclog, East Browncastle, Strathaven, Sandford, Stonehouse, Chapelton, Priestland and Darvel.
- 4.55 There are a number of isolated and scattered individual dwellings and farmsteads across the study area.

### Road User Visual Receptors

- 4.56 Dynamic views may be seen from the A71, A726, A723, B7086, B743 and B745.

### Cumulative Baseline

#### Other Wind Turbine Sites

- 4.57 See Plan 4 for cumulative wind turbines within the study area.
- 4.58 The following table shows wind turbine developments within 10km of the proposed turbines (See Plan 4 for cumulative wind turbines within the study area):

**Proposed Three Wind Turbines at Land at Low Drumclog LVA**

<b>Wind Turbine(s) Name</b>	<b>Number of Turbines</b>	<b>Hub Height (m)</b>	<b>Tip Height (m)</b>
Auchrobert	12	80	131.5
Bankend	11	45	62
Burnbrae Farm	1		61
Cauldcoats Farm	1		45.9
Cleughhead Farm	1	51	79
Coldwakening	1	30	45
Couplaw	1	40	67
Dungavel	8	61	80
Dungavel	5	81	121.2
Dykeshead	1	51	79
East Cauldcoats Farm	1	30.5	45
East Cauldcoats Farm	1		45
Gainerhill	2	32.2	45.7
Greenburn	1	36.7	47.1
Greenfield Farm	2	32	46.5
Greenfield Farm	2		46.5
Hallburn Farm	1	40	67
Hareshawhead Farm	1	40	63.5
Hazeldean	1	36.7	47.1
High Dyke Farm	1	60	84
Higher Waterhead Farm	1	32.2	45.7
Kype Muir	26	75	132
Kype Muir Extension	7	80	132
Kype Muir Extension	8	100	152
Logoch Farm	1	67	40
Lower Waterhead Farm	1	40	67
Nether Kypeside	1	40	67
Netherholm Farm	1	51	54

**Proposed Three Wind Turbines at Land at Low Drumclog LVA**

North Brackenridge	1	50	77
Raws Farm	1	30.5	45.9
Ryelandside Farm	2	24.8	35
Townhead Of Priestgill	1	32.2	46.5
West Kype Farm	1	30	45
West Newton	3	15	16.36
Whitelee	215	65	90
Yards Farm	1	50	77

## 5 LANDSCAPE AND VISUAL ASSESSMENT

### Landscape Character Assessment

- 5.1 The following section provides an assessment of the effects that the proposed development would have on the landscape character areas and designated sites, within the 5km detailed study area (as summarised in Table 2 of the appendix). The assessment evaluates the likely effects during construction and also in the longer term.
- 5.2 The judgement of the sensitivity of the landscape receptor and the magnitude of change informs the assessment of the degree of significance.

### The Effect on the Landscape During Construction

- 5.3 Construction activities that have the potential to affect the landscape character include:
- The erection of the Wind Turbine
  - Preparation and completion of the access track
  - Presence of machinery and plant for construction
  - Construction of the Switchgear Housing Units
  - Digging for underground cabling
  - Construction of temporary crane hard standing area (although partially built already)
- 5.4 From the description of the construction activities, as outlined above, any effects on the landscape character during the construction phase would be temporary for a short duration.
- 5.5 Therefore, the short-term and temporary nature of the construction activities on the landscape character would be **Low**.

### The Effect on the Landscape Character of the Site

- 5.6 The location of the proposed site is remote and exposed, being typical plateau moorland of large scale.
- 5.7 The proposed turbines would have a tip height of 180m would be in scale and proportion to the large-scale plateau moorland landform. The large vertical scale of the landscape has the capacity to relate compositionally to the horizontal scale of the proposed turbines.
- 5.8 The size and scale of the proposed turbines would fit in this location with this large landscape.

## Proposed Three Wind Turbines at Land at Low Drumclog LVA

- 5.9 The effect of the proposed turbines to the immediate landscape character would be an additional vertical element of the turbines and would have some association with other wind turbines.
- 5.10 The proposed turbines would make a change to the immediate character due to their height.

### Landscape Character Type - Scottish National Heritage (SNH)

- 5.11 The magnitude of change on the Landscape Character Type 214 - Plateau Moorland with Windfarms – Glasgow and Clyde Valley would be **Low** as there would be a perceptible indirect change in landscape characteristics over a localised area.
- 5.12 In relation to the Key Characteristics of this Landscape Character:
- *Large scale landform* – the proposed wind turbine would relate to this landform, in proportion, scale and compositionally.
  - *Distinctive upland character created by the combination of elevation, exposure, smooth, plateau landform, moorland vegetation* – The landcover moorland would be unaltered and the plateau landform is suitable for this type of turbine.
  - *Extensive wind turbine development, including the largest wind farm in Scotland at Whitelee* – This wind farm is adjacent to the proposed site and would have connection and association to this site.
  - *Sense of apparent naturalness and remoteness which contrasts with the farmed and settled lowlands, although this has been reduced by wind energy development* – The existing naturalness and remoteness is mostly already reduced by existing wind energy development.

### Landscape Character Type - South Lanarkshire Council (SLC)

- 5.13 The magnitude of change on the Landscape Character Type 6 Plateau Moorland would be **Low** as there would be a perceptible indirect change in landscape characteristics over a localised area.
- 5.14 In relation to *the Key Characteristics, features and qualities of this Landscape Character*:
- *Distinctive upland character created by the combination of elevation, exposure, smooth, plateau landform, moorland vegetation and, with the exception of windfarms, a comparative lack of modern development* – The landcover moorland would be unaltered and the plateau landform is suitable for this type of turbine.
  - *These areas share a sense of apparent openness and exposure which contrasts with the farmed and settled lowlands but do not feel remote* – The existing

## Proposed Three Wind Turbines at Land at Low Drumclog LVA

naturalness and remoteness are mostly already reduced by existing wind energy development.

- *Increasingly these areas are subject to significant landscape change resulting from extensive large scale windfarm development and associated reduction in area of commercial forestry* – The existing wind turbines are not extensive and form a suitable balance of three that would fit within this scale of landform.

5.15 In relation to the Key Landscape Issues affecting this landscape type:

- *Visual impact of extensive areas of windfarms on nearby settlements and landscape effects on adjacent farmland and river valleys* – An area of extensive windfarms already exists to the west of the site which contributes to the changing landscape character of the proposed site.
- *The prominence of any modern developments, including tall structures such as wind turbines, masts, and pylons in this open upland landscape* – There are existing wind turbines and large pylons with power lines to the west of the proposed site with an existing prominence.
- *The importance of striking a balance between large scale windfarms, conifer plantations and open moorland* – There is an existing good balance of conifer plantations and open moorland, with the introduction of the three proposed turbines, there still exists a balance within the composition and characteristic of the landscape.

5.16 In relation to the SLA LCA guidelines for Wind turbines: sensitivities and forces for change:

- *In recent years extensive large scale windfarm development has significantly changed the character of the Plateau Moorlands. The windfarms are often visible over a considerable distance and affect the character of neighbouring areas of Plateau Farmland.* – With the addition of the three proposed turbines in this location, the views from a distance have been checked and assessed and appear in context with the existing wind turbines.
- *Given the originally open, horizontal, and apparently wild character of these areas, the landscape type has been transformed by this concentration of wind farm development.* – There is an area transformed by a concentration of wind farm development existing to the west of the proposed site, the addition of the proposed turbines would be a smaller scale of number and not concentrated over the site, giving space for horizontal space between boundaries and woodland.

## Proposed Three Wind Turbines at Land at Low Drumclog LVA

- *The previously intrinsic undeveloped, open upland character has been weakened or lost, although elements of exposure, large scale and simplicity of landform still feature.* – The context of the proposed site is not adjoining open upland areas but is contained, albeit at a larger scale, with woodland and boundaries of the site.
- 5.17 In relation to the *LCA guidelines for Wind turbines: planning and management guidelines*:
- *Further scope for wind energy development in this landscape type is limited* – The scale of the proposal, in terms of the number being three, is suitable for the large scale of the site.
  - *Further developments should be very carefully sited so as to avoid further significant expansion of the visual and landscape impacts.* – The careful siting of the proposed turbines, ensures that they have been strategically placed, through a design iteration taking into consideration the site conditions, ecological factors, balance within the site, size, and scale.
  - *Including cumulative impacts in areas already supporting extensive windfarm development.* – The cumulative impacts are considered more in the Cumulative Section.
  - *The spread of turbines towards or across the boundary with Plateau Farmlands should be avoided so as to avoid cumulative effects and blurring of the two landscape types* – The proposed turbines would not appear in the immediate landscape as part of the existing turbines, the fabric of the landscape character would remain as an area of extensive wind farm development and the proposed site as an isolated site with a small number of turbines.
  - *Extensive visual effects or visual domination of Plateau Moorland turbines on nearby river valleys should be avoided.* – The proposed site is not near a river valley.

### Adjacent Landscape Character Types

- 5.18 There would be a Low to Negligible magnitude of change to the adjacent landscape character types of 5 Plateau Farmland, 6a Plateau Moorland Forestry, 6b Plateau Moorland Forestry Windfarm, 7 Rolling Moorland.
- 5.19 There would be a Negligible magnitude of change to the adjacent landscape character types of 7a Rolling Moorland with Forest, 8 Upland River Valley, AYS10 Upland River Valley, AYS19 Plateau Moorland and STC18 Plateau Farmland.
- 5.20 There would be no magnitude of change to the adjacent landscape character types of 1 Urban Fringe Farmland, 2 Incised River Valley and STC5 Plateau Farmland.

## The Effect on Landscape Designations

- 5.21 For locations of landscape designation, see Plan 1. See table 2 for further details.
- 5.22 The proposed turbine is not within a landscape designation and therefore there are no constraints on the immediate site that relate to the immediate landscape character of the site.
- 5.23 The proposed turbines are not near a National Park or World Heritage Site or National Scenic Areas.
- 5.24 The site is not adjacent to or within 5km of a Special Landscape Area or Sensitive Landscape Areas
- 5.25 The Scheduled Monument of the site of the Battle of Drumclog is adjacent to the proposed turbines. There are no visible reminders on the open fields of the site and the Battle of Drumclog Monument is surrounded by woodland to the south. Due to the close proximity, the magnitude of change would be High.
- 5.26 The Scheduled Monument of the Battle of Loudoun Hill and the battlefield lies mainly to the south of Loudoun Hill, where the proposed turbines would not be seen and therefore no association. From the summit and north of the hill, there is some connection, although at a distance (see also VP9).
- 5.27 The effect on the Listed Building Low Drumclog would be low due to the presence of mature trees along the northern side lessen the connection to the immediate proposed site.
- 5.28 The effect on the Listed Building Coldwakning would be Negligible, if any. This building is set back from the road and has no direct view or association with the site.
- 5.29 The effect on the Listed Building North Brownhill would be Low if any, as the setting would not be directly related to the proposed turbine due to the intervening woodland.
- 5.30 The effect on the Listed Building Drumclog Church would be Low as the setting of this church is within other buildings and at the edge of the busy A71 main road. Any connection with the proposed turbines would be mitigated by the immediate activity and built form.
- 5.31 The effect on the Listed Building Drumclog Battle Monument would be Low as the monument is surrounded by mature trees acting as a buffer and screening views from the site and the setting (see also VP3).
- 5.32 The effect on the Listed Building Stobieside House and Gatepiers would be Low. Although this building is adjacent to the proposed site, it is located where the landform falls away at the edge of a plateau. There are mature trees to the north

of the property that would partially screen views and lessen the association of the setting.

### Landscape Character Assessment Summary

- 5.33 The construction activities would bring short-term and temporary construction activities on the landscape character with a **Low** magnitude of change.
- 5.34 The effect of the proposed turbines on the immediate landscape character would be an additional vertical element of the turbines and would have some association with other wind turbines.
- 5.35 The size and scale of the proposed turbines would fit in this location with this large landscape.
- 5.36 The proposed turbines would make a change to the immediate character due to their height.
- 5.37 The magnitude of change on the Landscape Character Type 214 - Plateau Moorland with Windfarms – Glasgow and Clyde Valley would be **Low** as there would be a perceptible indirect change in landscape characteristics over a localised area.
- 5.38 The magnitude of change on the Landscape Character Type 6 Plateau Moorland would be **Low** as there would be a perceptible indirect change in landscape characteristics over a localised area.
- 5.39 The proposed turbine is not within a landscape designation, however, the historic designation of the Battle of Drumclog is adjacent to the site and there would be a **High** magnitude of change.
- 5.40 There would be no effect on the Special Landscape Area - Middle Clyde Valley Special Landscape Area and the effect on the Sensitive Landscape Area of the East Ayrshire Uplands Hills would be Negligible.
- 5.41 Overall, the effect of the proposed turbines on the landscape character would be Low near the proposed turbine and **Negligible** overall.

## **Visual Amenity Assessment**

5.42 This section addresses issues relating to the potential degree of significance upon the visual amenity of the study area likely to result from the proposed turbine (as summarised in Table 4 of the appendix and shown on plan 3). It describes and evaluates the potential change in views of the existing landscape during construction and once in operation, and the extent to which these affect residents, visitors, and users of the landscape.

### **Basis of Assessment**

5.43 The key elements and characteristics of the proposed development which may give rise to visual effects are as follows:

- The Wind Turbine
- The Access tracks
- The Switchgear Housing Unit
- Temporary presence of the Crane

5.44 All disturbed areas would be restricted as far as practicable to the specified areas.

### **The Effect on the Visual Amenity during construction**

5.45 Construction activities that have the potential to affect the landscape character include:

- Erection of the Wind Turbine
- Preparation of access track to the Wind Turbine
- Presence of machinery and plant for construction
- Construction of the Switchgear Housing Unit
- Digging for underground cabling
- Construction of temporary Crane hard standing area

5.46 From the description of the construction activities, as outlined above, any effects on the visual amenity receptors and their views during the construction phase would be for a temporary duration.

5.47 Therefore, the short-term temporary nature of the construction activities on the visual amenity receptors and their views would ensure that the overall visual effects would be Low.

### **Visual Appearance of the Proposal**

5.48 The appearance of the proposed turbine would be 3-bladed rotors at a maximum tip height of 180m.

## Proposed Three Wind Turbines at Land at Low Drumclog LVA

- 5.49 The turbine design is three-bladed, has a typical nacelle and hub and colour of neutral light grey which is in accordance with the council's 'South Lanarkshire Landscape Capacity Study for Wind Energy' which is a 'colour choice for large commercial turbines has settled on a neutral light grey with slight variations in lighter or darker shade between developments'.
- 5.50 There would be movement of the with a rotary action which would orientate in the direction of the wind accordingly.
- 5.51 The access track to the proposed turbine and the hard standing for both the crane and access from the Muirkirk Road, B743.
- 5.52 For the temporary duration of the erection of the wind turbines, a crane would be seen on the site.

### Assessment of Effects

- 5.53 As described in the baseline, 14 representative viewpoints were identified within the 10km overall study area.
- 5.54 The ZTV (plan 3) shows the area of 10km where the proposed development may be seen, however, this is a bare earth model and localised screening such as hedgerows, trees and intervening buildings are not taken into account.
- 5.55 The extent of the visibility of the proposed wind turbine shown in the ZTV is centred mostly within the 10km. There are large areas of coniferous woodland plantations that further screen views.
- 5.56 Within the ZTV the following viewpoints have been chosen as key viewpoints representative of different visual receptors in the study area – residents, road users and recreational users. See also table 4 in the appendix.

### VP1

- 5.57 Viewpoint 1 (See figures 1.1, 1.2 and 1.3) **Low Drumclog**; representative of road users and residents.
- 5.58 The **Existing View** – is across large open fields which include a backdrop across the skyline of existing wind turbines and coniferous woodland. The location of the viewpoint is near to a farmstead and along a quiet lane that links isolated dwellings in this rural location. Therefore, this view could also be for road users and similar views along this lane could be seen.
- 5.59 The landform rises gently from east to west, although is seen mostly as a large open area, bounded by the coniferous plantation to the north, hedgerows, and fencing.
- 5.60 The existing vertical elements are the existing wind turbines and woodland.

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- 5.61 The **Change in View** would be the addition of the proposed turbines, seen in front of the existing wind turbines in the background. At this close proximity to the site, the proposed turbines would appear large and dominating. The height of the proposed turbines would be in proportion to the large scale of the open plateau area and the three turbines would appear balanced compositionally.
- 5.62 The **Sensitivity of the Receptor** at this viewpoint would be **Medium** for residents and **Low** for road users.
- 5.63 The **Magnitude of Change** at this viewpoint is judged to be **High**.
- 5.64 The resulting **Degree of Significance** would be Moderate – **Moderate / Substantial** for residents and **Moderate** for road users.

### VP2

- 5.65 Viewpoint 2 (See figures 2.1, 2.2 and 2.3) - **Hallfield**: representative of road users.
- 5.66 The **Existing View** – is at close proximity to residential dwellings, although these are separated from the viewpoint location by a small area of woodland.
- 5.67 This view has a similar direction to VP1 with a view across large open fields with a backdrop of existing wind turbines and coniferous woodland.
- 5.68 The landform rises from this viewpoint location towards the existing turbines across the large open area of the field which is bounded by the coniferous plantation to the north, hedgerows, and fencing.
- 5.69 The existing vertical elements are the existing wind turbines and woodland.
- 5.70 The **Change in View** would be the addition of the proposed turbines across the open space of the large fields, balanced compositionally in relation to the heights and scale when seen alongside the existing turbines.
- 5.71 The **Sensitivity of the Receptor** at this viewpoint would be **Medium** for residents.
- 5.72 The **Magnitude of Change** at this viewpoint is judged to be **Medium**.
- 5.73 The resulting **Degree of Significance** would be Moderate – **Moderate**.

### VP3

- 5.74 Viewpoint 3 (See figures 3.1, 3.2 and 3.3) – **Battle of Drumclog Monument**; representative of recreational users.
- 5.75 The **Existing View** – this location is important historically, marking a visible monument within this battlefield. The monument is surrounded by small fencing within a wider field which is bounded by tall confers of a large woodland as well as additional deciduous tree planting. A mixed hedgerow borders the road and views from the road can only be found from the monument or the gateway where this viewpoint photo was taken.

## Proposed Three Wind Turbines at Land at Low Drumclog LVA

- 5.76 There is one blade of a turbine of the Calder Water wind farm that is visible out of the field of view at the edge of the woodland and at the skyline. Otherwise, this wind farm is screened by woodland.
- 5.77 The **Change in View** would be barely noticeable with only one blade tip of the proposed turbines visible.
- 5.78 The **Sensitivity of the Receptor** at this viewpoint would be **Medium** for recreational users.
- 5.79 The **Magnitude of Change** at this viewpoint is judged to be **Negligible**.
- 5.80 The resulting **Degree of Significance** would be Moderate – **Slight / Moderate**.

### VP4

- 5.81 Viewpoint 4 (See figures 4.1, 4.2 and 4.3) – **SW of Fore Hareshaw**; representative of recreational users.
- 5.82 The **Existing View** – this location is along a rural lane which is also a core path. The landform is undulating and rises to the skyline with has hedgerow trees. There are large pylons and power lines across the view. Other turbines can be seen on either side of this road, but not in this field of view.
- 5.83 The **Change in View** would include two of the proposed turbines being visible above the skyline and seen through trees.
- 5.84 The **Sensitivity of the Receptor** at this viewpoint would be **Medium** for recreational users.
- 5.85 The **Magnitude of Change** at this viewpoint is judged to be **Low**.
- 5.86 The resulting **Degree of Significance** would be Moderate – **Slight / Moderate**.

### VP5

- 5.87 Viewpoint 5 (See figures 5.1, 5.2 and 5.3) – **Drumclog Church**; representative of residents.
- 5.88 The **Existing View** – this view is located on the A71, near residential dwellings and Drumclog Church. This view at the junction shows further dwellings and a collection of vertical elements; lamp posts, signage, pylons, and coniferous woodland.
- 5.89 Other turbines are screened by the woodland on the horizon, although there could be the occasional small glimpses of a blade tip of Calder Water.
- 5.90 The **Change in View** would be the addition of the proposed turbines seen above the coniferous woodland.
- 5.91 The **Sensitivity of the Receptor** at this viewpoint would be **Medium** for recreational users.
- 5.92 The **Magnitude of Change** at this viewpoint is judged to be **Low**.

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5.93 The resulting **Degree of Significance** would be Moderate – **Slight / Moderate**.

### VP6

5.94 Viewpoint 6 (See figures 6.1, 6.2 and 6.3) - **A71 East of Burnbank**; representative of residents and road users.

5.95 The **Existing View** is located at a road junction and near to dwellings. In the view, there are separate dwellings and agricultural buildings, open fields, lines of hedgerows and hedgerow trees. In the foreground, there are pylons and power lines.

5.96 The **Change in View** would be the addition of the proposed turbines seen behind trees and buildings. Similarly, to the existing Calder Water turbines, the proposed turbines would be partially screened, and blades of turbines would be visible at different stages of rotation and from different angles of views.

5.97 The **Sensitivity of the Receptor** at this viewpoint would be **Medium** for residents and **Low** for road users.

5.98 The **Magnitude of Change** at this viewpoint is judged to be **Low**.

5.99 The resulting **Degree of Significance** would be **Slight / Moderate** for residents and **Slight** for road users.

### VP7

5.100 Viewpoint 7 (See figures 7.1, 7.2 and 7.3) - **Brownhill Bridge**; representative of residents, recreational users, and road users.

5.101 The **Existing View** – There is coniferous woodland across the skylines with Calder Water wind farm turbines seen above woodland in the distance. This viewpoint location is at a junction on country lanes which are also a core path and near to residential dwellings.

5.102 The **Change in View** would include the blade tips of the proposed turbines above the coniferous woodland.

5.103 The **Sensitivity of the Receptor** at this viewpoint would be **Medium** for residents and recreational users and **Low** for road users.

5.104 The **Magnitude of Change** at this viewpoint is judged to be **Low**.

5.105 The resulting **Degree of Significance** would be Moderate – **Slight / Moderate** for residents and recreational users and **Slight** for road users.

### VP8

5.106 Viewpoint 8 (See figures 8.1, 8.2 and 8.3) - **East Browncastle**; representative of residents.

## Proposed Three Wind Turbines at Land at Low Drumclog LVA

- 5.107 The **Existing View** is near to residential dwellings where there may also be similar views from residents' gardens or back of properties. The view consists of large mature trees, open fields and coniferous woodland with Calder Water wind farm seen behind a row of large pylons and powerlines.
- 5.108 The **Change in View** would be the addition of the proposed turbines with one or two turbines being visible. Along this road and from dwellings, there may be different glimpses of the proposed turbines through mature trees in the foreground. The proposed turbines would appear above and behind the coniferous woodland.
- 5.109 The **Sensitivity of the Receptor** at this viewpoint would be **Medium** for residents.
- 5.110 The **Magnitude of Change** at this viewpoint is judged to be **Low**.
- 5.111 The resulting **Degree of Significance** would be Moderate – **Slight / Moderate**.

### VP9

- 5.112 Viewpoint 9 (See figures 9.1, 9.2 and 9.3) - **Loudoun Hill**; representative of recreational users.
- 5.113 **Existing View** – This is a key viewpoint and a trig point, being a local recreational high point and historic location. The landform of Loudoun Hill is distinct in the landscape and rises above the lower valley lands. From this vantage point, there are 360-degree panoramic views.
- 5.114 The **Change in View** would be the addition of the proposed turbines alongside other existing turbines, seen along the skyline.
- 5.115 The **Sensitivity of the Receptor** at this viewpoint would be **High** for recreational users.
- 5.116 The **Magnitude of Change** at this viewpoint is judged to be **Low**.
- 5.117 The resulting **Degree of Significance** would be Moderate – **Slight / Moderate**.

### VP10

- 5.118 Viewpoint 10 (See figures 10.1, 10.2 and 10.3) - **Long Green**; representative of recreational users.
- 5.119 The **Existing View** shows undulating landform over open fields, trees, and blocks of woodland. This viewpoint is representative of recreational users, although there are also isolated residential dwellings nearby.
- 5.120 The turbines of Calder Water can be seen over coniferous woodland.
- 5.121 The **Change in View** would be the addition of the proposed turbines, seen alongside existing turbines of Calder Water wind farm. Only the blade tips of the proposed turbines may be seen to varying degrees depending on tree growth and the location of the viewer along this road.

## Proposed Three Wind Turbines at Land at Low Drumclog LVA

- 5.122 The **Sensitivity of the Receptor** at this viewpoint would be **Medium** for recreational users.
- 5.123 The **Magnitude of Change** at this viewpoint is judged to be **Negligible**.
- 5.124 The resulting **Degree of Significance** would be **Negligible / Slight**.

### VP11

- 5.125 Viewpoint 11 (See figures 11.1, 11.2 and 11.3) - **Ardochrig; Whitelee Wind Farm Car Park**; representative of recreational users.
- 5.126 The **Existing View** is dominated by the coniferous woodland, wider views can be seen in different directions. There are no wind turbines in the view from this location as they are all screened by the coniferous woodland.
- 5.127 The **Change in View** – There would be no change in view as the proposed turbines would be screened by the existing coniferous woodland.
- 5.128 If in the future, these coniferous woodlands were to be felled, the proposed turbines would be seen at a distance and the resulting magnitude of change would be Negligible.
- 5.129 The **Sensitivity of the Receptor** at this viewpoint would be **Medium** for residents and **Low** for road users.
- 5.130 The **Magnitude of Change** at this viewpoint is judged to be **None**.
- 5.131 The resulting **Degree of Significance** would be **None**.

### VP12

- 5.132 Viewpoint 12 (See figures 12.1, 12.2 and 12.3) - **Lambhill**; representative of recreational users.
- 5.133 The **Existing View** consists of woodland, hedgerow trees, isolated buildings, open fields, and a skyline of wind turbines including Calder Water, West Browncastle and Whitelee Forest wind farms.
- 5.134 The **Change in View** would be the addition of the proposed turbines seen in front of the Calder Water turbines. At this distance, the change in view would be indistinguishable to the naked eye due to the separation distance.
- 5.135 The **Sensitivity of the Receptor** at this viewpoint would be **Medium** for residents.
- 5.136 The **Magnitude of Change** at this viewpoint is judged to be **Negligible**.
- 5.137 The resulting **Degree of Significance** would be **Negligible /Slight**.

### VP13

- 5.138 Viewpoint 13 (See figures 13.1, 13.2 and 13.3) – **Muirkirk Road, Strathaven**; representative of recreational users.

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- 5.139 The **Existing View** shows a view typical of residential dwellings on the nearest location on public land. Although there is a large tree in the view, the existing turbines would be seen across the skyline across open fields. There are also farm buildings and dwellings visible within the view
- 5.140 The **Change in View** would be the addition of the proposed turbines seen alongside the existing turbines along the skyline.
- 5.141 The **Sensitivity of the Receptor** at this viewpoint would be **Medium** for residents and **Low** for road users.
- 5.142 The **Magnitude of Change** at this viewpoint is judged to be **Low**.
- 5.143 The resulting **Degree of Significance** would be **Slight / Moderate** for residents and **Slight** for road users.

### VP14

- 5.144 Viewpoint 14 (See figures 14.1, 14.2 and 14.3) - **Sandford**; representative of recreational users.
- 5.145 The **Existing View** is within the built form setting of Sandford village with a typical view for local residents. There are vertical elements pylons, powerlines, signage, lamp posts and trees. This view includes a glimpsed view of the distant skyline which includes existing wind turbines.
- 5.146 The **Change in View** would be the addition of the proposed turbines alongside Calder Water wind farm seen along the skyline at a separation distance of over 9km.
- 5.147 The **Sensitivity of the Receptor** at this viewpoint would be **Medium** for residents.
- 5.148 The **Magnitude of Change** at this viewpoint is judged to be **Negligible**.
- 5.149 The resulting **Degree of Significance** would be **Negligible / Slight**.

### Recreational Visual Receptors

- 5.150 See plan 1 and table 2 for further details. Other than the recreational users represented in the above viewpoints, there may be views seen by recreational users of the recreational routes in the form of core paths.
- 5.151 From the **core paths**, recreational users may see the proposed turbines. The views from along these routes vary and further details can be found (1) in the appendix and table 2 and (2) in VPs 4, 5, 6, 7, 8, 12 which are all located on or near a core path.
- 5.152 From local cycle routes, for recreational users, there may be views of the proposed turbines from nearby lanes. Furthermore, VP7 and VP11 are located on local cycle routes as representative viewpoints and views from recreational users.

### Residents Visual Receptors

- 5.153 For other residential views, there may be views from a number of isolated and scattered private dwellings.
- 5.154 Within the ZTV plan 3, there may be theoretical visibility of the proposed turbines, along the A71 for residents living in Drumclog, Caldermill and Strathaven. There is a viewpoint taken near Strathaven (VP13), further northwest of Strathaven, views become more screened due to the intervening trees and buildings. A viewpoint has also been included from Sandford (VP14).
- 5.155 From Chapelton, residents may have glimpses of the proposed turbines, if there is no intervening vegetation or buildings and there would be at a large separation distance.
- 5.156 There would be no views from Priestland and from Darvel, there may be glimpses of a view of one turbine blade, but mainly the proposed turbines would be unseen.

### Road User Visual Receptors

- 5.157 Dynamic views for road users would be seen along the A71 as shown in VPs 5, 6 and 13. The proposed turbines may be seen at different stages and angles of view from along this road, where there are no hedgerows, woodland or buildings that would screen any views.
- 5.158 There may be glimpses of the proposed turbines from along the A7223, A726, B7086 although these would be at over 9km separation distance and screened nearer to Strathaven by buildings and vegetation.
- 5.159 Road users on the B743 may have a view of the proposed turbines alongside the array of other wind turbines. These would be views of over 3km and would be indistinguishable from this separation distance.
- 5.160 From the short stretch of the B745 road, users may have glimpses of the proposed turbines, although this is a low area of the Glengavel Water valley and less likely or noticeable. See also VP5 from the end of this road.

### Visual Amenity Assessment Summary

- 5.161 The short-term temporary nature of the construction activities on the views of the visual receptors would ensure that the overall visual effects would be Low.
- 5.162 The assessment has identified key viewpoints from a range of viewpoints towards the proposed site with magnitudes of change ranging between High to Negligible and degrees of significance between **Moderate** to **Slight / Negligible**.
- 5.163 Visual receptors would include residents, recreational users, and road users.

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- 5.164 The overall visual effects of the proposed wind turbines on visual receptors would be noticeable in views within 1.5km and then a diminishing magnitude of change with the increase of the separation distance.

## Cumulative Landscape and Visual Assessment

### Cumulative Landscape and Visual Assessment Methodology

5.165 Cumulative impacts are those which occur as a result of the construction of more than one wind farm or wind turbine in an area. The nature of these effects relates to the number of wind farms, scale, the landscape context, and the inter-relationship between the visual envelopes of the developments. The assessment of cumulative impacts is an evaluation of the additional change and effect that the proposed development would have on a theoretical baseline position which assumes that all other existing, consented and application wind farms have been constructed.

### Other Wind Turbines

5.166 Other wind turbines identified in the study area are outlined below and also see plan 4.

5.167 From the proposed turbine between 1km and 2km, there are the following turbines:

- Single turbine of Hallburn
- Single turbine of Mount Farm (consented and not built but is included within the assessment)
- Two turbines of Coldwakning
- Two turbines of Greenfield Farm
- Four turbines of Calder Water Wind Farm (not all wind turbines of the wind farm)

5.168 From the proposed turbine between 2km and 2.5km, there are the following turbines:

- Single turbine of Rench Farm
- Five turbines of Calder Water Wind Farm (not all wind turbines of the wind farm)
- Two turbines of West Browncastle Wind Farm (not all wind turbines of the wind farm)

5.169 From the proposed turbine between 2.5km and 3km, there are the following turbines:

- Four turbines of Calder Water Wind Farm (not all wind turbines of the wind farm)
- Nine turbines of West Browncastle Wind Farm (not all wind turbines of the wind farm)

5.170 From the proposed turbine between 3km and 4km, there are the following turbines:

## Proposed Three Wind Turbines at Land at Low Drumclog LVA

- One turbine of West Browncastle Wind Farm (not all wind turbines of the wind farm)
  - Seven turbines of Whitelee Forest Wind Farm (not all wind turbines of the wind farm)
  - 2 turbines of Gainerhill
- 5.171 From the proposed turbine between 4km and 5km, there are the following turbines:
- Single turbine of Logoch Farm
  - Thirteen turbines of Whitelee Forest Wind Farm (not all wind turbines of the wind farm)
- 5.172 From the proposed turbine between 5km to 10km, there are the following turbines:
- The remainder of turbines of Whitelee Forest Wind Farm (not all wind turbines of the wind farm)
  - Single turbines
  - Kype Muir and Kype Muir Extension wind farm
  - Dungavel 1 and Dungavel wind farm
  - Bankend Rig I and II wind farms

### Cumulative Effects on Landscape Character

- 5.173 The proposed turbines are located within the landscape character type 6 Plateau Moorland. The West Brownlee wind farm already resides within this landscape character area and is located behind coniferous woodland. There is not a visual link, but there is an association between these turbines and the proposed turbines being on similar plateau moorland landscape character.
- 5.174 Adjacent and closer to the proposed turbines are the wind turbines of Calder Water. These are located mostly in the landscape character type 6a Plateau Moorland Forestry, although one turbine is in Type 6 Plateau Moorland and 3 turbines are in Type 5 Plateau Farmland. The Calder Water turbines would have the closest association with the proposed turbines and link to the wider landscape.
- 5.175 The existing combined cumulative effect of West Browncastle and Calder Water is an established presence within the landscape character and define these areas.
- 5.176 The cumulative effect would be the addition of the proposed turbines alongside the combined effects of West Brownlee and Calder Water.
- 5.177 There is some association with these turbines and the heights of the turbines are similar in size and scale.

- 5.178 There would be a Low cumulative effect on the landscape character with the addition of the proposed turbine and the existing wind turbines.

### **Cumulative Visual Amenity Assessment**

- 5.179 This section addresses issues relating to the potential cumulative effect upon the visual amenity of the study area likely to result from the proposed turbine. It describes and evaluates the potential change in views of the existing landscape during construction and once in operation, and the extent to which these affect residents, visitors, and users of the landscape. See Plan 4.

### **Assessment of Effects**

- 5.180 The cumulative magnitude of change is the change that would occur as a result of the introduction of the proposed turbine into the baseline wind development of the area. This is identified based on the consideration of the potential nature, size, scale, and location of the proposed change within the existing view, and in relation to the existing wind farms/wind turbines within the view. The evaluation of the magnitude of change is based on the criteria outlined in the cumulative visual assessment methodology.
- 5.181 A 'combined' cumulative visual effect occurs where the visual receptor is able to see two or more turbines from one viewpoint.
- 5.182 A 'sequential' cumulative visual effect occurs when the visual receptor has to move to another viewpoint to see the same of different wind turbines in addition to the proposed wind turbines whilst travelling along a linear route for road users and recreational users on recreational routes.

### **VP1**

- 5.183 Viewpoint 1 (See figures 1.1, 1.2 and 1.3) **Low Drumclog**; representative of road users and residents.
- 5.184 The **Cumulative View** – The proposed turbines would appear in front of the wind farms of Calder Water, West Browncastle and Whitelee Forest. Also, there would be a proposed and consented (but not built) single turbine of Mount Farm and a line of large pylons that are above the skyline in this view.
- 5.185 The proposed turbines would appear large in relation to the other turbines from this viewpoint and relate to the existing manmade form of similar turbines and also pylons.
- 5.186 In this instance, there would be a combined cumulative visual effect where the existing turbines would be seen together with the proposed turbine.

5.187 The **Magnitude of Change** at this viewpoint is judged to be **High**.

5.188 The **Cumulative Visual Effect** would be significant.

## VP2

5.189 Viewpoint 2 (See figures 2.1, 2.2 and 2.3) - **Hallfield**: representative of road users.

5.190 The **Cumulative View** – From this viewpoint, the proposed turbines would be seen in front of the wind farms of Calder Water, West Browncastle and Whitelee Forest, and the proposed and consented (but not built) single turbine of Mount Farm with a line of large pylons that are above the skyline in this view.

5.191 The proposed turbines would appear large in relation to the other turbines from this viewpoint and relate to the existing manmade form of similar turbines and also pylons.

5.192 In this instance, there would be a combined cumulative visual effect where the existing turbines would be seen together with the proposed turbine.

5.193 The **Magnitude of Change** at this viewpoint is judged to be **High**.

5.194 The **Cumulative Visual Effect** would be significant.

## VP3

5.195 Viewpoint 3 (See figures 3.1, 3.2 and 3.3) – **Battle of Drumclog**; representative of recreational users.

5.196 The **Cumulative View** – there is one turbine of Calder Water that is visible to the far left/northwest which is out of views from this direction of view. The one turbine of Calder Water within the field of view is screened by woodland.

5.197 The **Magnitude of Change** at this viewpoint is judged to be **Negligible**.

5.198 The **Cumulative Visual Effect** would not be significant.

## VP4

5.199 Viewpoint 4 (See figures 4.1, 4.2 and 4.3) – SW of Fore Hareshaw; representative of recreational users.

5.200 The **Cumulative View** – the proposed turbines would be seen at a lower level behind the proposed and consented (but not built) single turbine of Mount Farm. Within the field of view, there are three turbines of Calder Water wind farm that are screened by trees. However just left of this view to the north, there are three more turbines that are visible. In the distance, out of the field of view, to the right/south Bankend Rig wind turbines are visible.

5.201 There would be a low combined cumulative visual effect of the proposed turbine with the proposed and consented (but not built) single turbine of Mount Farm.

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- 5.202 There may be sequential cumulative visual effects along this road/core path as wind turbines would be seen on either side of the road. However, in the direction of the proposed turbines, there is much screening by vegetation.
- 5.203 The **Magnitude of Change** at this viewpoint is judged to be **Low**.
- 5.204 The **Cumulative Visual Effect** would not be significant.

### VP5

- 5.205 Viewpoint 5 (See figures 5.1, 5.2 and 5.3) – **Drumclog Church**; representative of residents.
- 5.206 The **Cumulative View** – there would be a combined cumulative visual effect with the proposed turbines and Coldwakning and Greenfield Farm.
- 5.207 The Calder Water, West Browncastle wind farms and the proposed and consented (but not built) Mount Farm wind turbine are mostly screened although there is one turbine blade that can be momentarily seen above the woodland as it rotates which is barely perceptible.
- 5.208 The **Magnitude of Change** at this viewpoint is judged to be **Low**.
- 5.209 The **Cumulative Visual Effect** would not be significant.

### VP6

- 5.210 Viewpoint 6 (See figures 6.1, 6.2 and 6.3) - **A71 East of Burnbank**; representative of residents and road users.
- 5.211 The **Cumulative View** – Some blade tips of Calder Water are visible above trees. The other turbines of West Browncastle and Whitelee Forest wind farms would be screened. Coldwakning and Greenfield Farm turbines may have glimpses of turbine blade tips visible.
- 5.212 The combined cumulative visual effect would be the proposed turbines and Calder Water turbines all seen behind woodland or foreground screening elements of built form or trees.
- 5.213 There may be a sequential cumulative visual effect for road users along this route, seeing turbines at different stages along the route.
- 5.214 The **Magnitude of Change** at this viewpoint is judged to be **Low**.
- 5.215 The **Cumulative Visual Effect** would not be significant.

### VP7

- 5.216 Viewpoint 7 (See figures 7.1, 7.2 and 7.3) - **Brownhill Bridge**; representative of residents, recreational users, and road users.

## Proposed Three Wind Turbines at Land at Low Drumclog LVA

- 5.217 The **Cumulative View** – Calder Water wind farm turbines would be seen in the distance, seen above coniferous woodland. The blades of the proposed turbines would also be seen above nearer coniferous woodland.
- 5.218 The combined cumulative visual effect would be lessened due to only the blades of the proposed turbines being seen.
- 5.219 Along this road and neighbouring roads, and as a core path, there would be sequential cumulative visual effects for road users and recreational users, where a sequence of views of turbines would be seen.
- 5.220 The **Magnitude of Change** at this viewpoint is judged to be **Low**.
- 5.221 The **Cumulative Visual Effect** would not be significant.

### VP8

- 5.222 Viewpoint 8 (See figures 8.1, 8.2 and 8.3) - **East Browncastle**; representative of residents.
- 5.223 The **Cumulative View** – For the right of view there are the existing wind turbines of Calder Water in view seen alongside a row of large pylons and power lines. Then the proposed and consented (but not built) single turbine at Mount Farm would be seen on the skyline and the proposed turbines would be seen above the coniferous woodland. There is localised screening by large, mature trees further left covering views of Bankend Rigg, Coldwakning, Greenfield Farm and Dungavel wind turbines.
- 5.224 The **Magnitude of Change** at this viewpoint is judged to be **Low**.
- 5.225 The **Cumulative Visual Effect** would not be significant.

### VP9

- 5.226 Viewpoint 9 (See figures 9.1, 9.2 and 9.3) - **Loudoun Hill**; representative of recreational users.
- 5.227 The **Cumulative View** – This view shows an array of wind turbines in all directions from this elevated viewpoint location.
- 5.228 Within the chosen field of view the proposed turbines would stand right of the single turbines of Logoch Farm and the proposed and consented (but not built) Mount Farm, and then three layers of wind farms of Calder Water, West Browncastle and Whitelee Forest.
- 5.229 On the right of the proposed turbine, there would be single turbines of Hallburn, Coldwakning and Greenfield Farm. Further to the right and south would be the wind farms of Kype Muir, Dungavel and Bankend.
- 5.230 The combined cumulative visual effect would be perceptible, although seen alongside the existing array of wind turbines.

## Proposed Three Wind Turbines at Land at Low Drumclog LVA

- 5.231 There may be sequential cumulative visual effects for recreational users on and around Loudoun Hill.
- 5.232 The **Magnitude of Change** at this viewpoint is judged to be **Low**.
- 5.233 The **Cumulative Visual Effect** would not be significant.

### VP10

- 5.234 Viewpoint 10 (See figures 10.1, 10.2 and 10.3) - **Long Green**; representative of recreational users.
- 5.235 The **Cumulative View** – the existing wind turbine in view include mostly Calder Water and there would be the proposed and consented (but not built) single turbine of Mount Farm also. Whitelee Forest and West Browncastle wind farms are out of view to the left and north.
- 5.236 The blade tips of the proposed turbines may be seen above the woodland and behind the Calder Water turbines.
- 5.237 The combined cumulative visual effect would be imperceptible.
- 5.238 The **Magnitude of Change** at this viewpoint is judged to be **Negligible**.
- 5.239 The **Cumulative Visual Effect** would not be significant.

### VP11

- 5.240 Viewpoint 11 (See figures 11.1, 11.2 and 11.3) - **Ardochrig; Whitelee Wind Farm Car Park**; representative of recreational users.
- 5.241 The **Cumulative View** – There would be an array of wind turbines in the distance but there is tall coniferous woodland screening the view towards all wind turbines. There are occasional glimpses of turbines from recreational paths within this wind farm.
- 5.242 The proposed turbines would be screened by the existing coniferous woodland.
- 5.243 Therefore, there would be no cumulative visual effects for this viewpoint.
- 5.244 The **Magnitude of Change** at this viewpoint is judged to be **None**.
- 5.245 There would not be a **Cumulative Visual Effect**.

### VP12

- 5.246 Viewpoint 12 (See figures 12.1, 12.2 and 12.3) - **Lambhill**; representative of recreational users.
- 5.247 The **Cumulative View** – The existing wind farms of Calder Water, West Browncastle and Whitelee Forest cover the skyline as an array punctuating the skyline. The proposed turbines would be located in front of the Calder Water

## Proposed Three Wind Turbines at Land at Low Drumclog LVA

turbines and appear at a similar height and scale connecting to the existing turbines, forming part of the array.

- 5.248 Furthermore, there are single turbines of Greenfield Farm, Coldwakning and the proposed and consented (but not built) Mount Farm that adjoin this array to the left/south.
- 5.249 The **Magnitude of Change** at this viewpoint is judged to be **Low**.
- 5.250 The **Cumulative Visual Effect** would not be significant.

### VP13

- 5.251 Viewpoint 13 (See figures 13.1, 13.2 and 13.3) – **Muirkirk Road, Strathaven**; representative of recreational users.
- 5.252 The **Cumulative View** – Across the distant skyline are the existing wind farm of Calder Water and single turbines of Hallburn Farm, Greenfield Farm, Coldwakning and the proposed and consented (but not built) Mount Farm. The wind farms of West Browncastle and Whitelee Forest are screened from view beyond woodland, built form and trees.
- 5.253 The proposed turbines would be located alongside the Calder Water wind farm turbines along the skyline.
- 5.254 The **Magnitude of Change** at this viewpoint is judged to be **Low**.
- 5.255 The **Cumulative Visual Effect** would not be significant.

### VP14

- 5.256 Viewpoint 14 (See figures 14.1, 14.2 and 14.3) - **Sandford**; representative of recreational users.
- 5.257 The **Cumulative View** – there are views of Calder Water, Dungavel and Whitelee Forest wind farms and possible glimpses of West Browncastle wind farm turbines. There are single turbines that may also be seen.
- 5.258 The proposed turbine would be seen adjacent to the wind turbines of Calder Water wind farm.
- 5.259 The combined cumulative visual effect would be just noticeable on the skyline.
- 5.260 The **Magnitude of Change** at this viewpoint is judged to be **Low**.
- 5.261 The **Cumulative Visual Effect** would not be significant.

### Cumulative Capacity

- 5.262 The South Lanarkshire South Lanarkshire Local Development Plan Supplementary Guidance 10 Renewable Energy describes the proposed wind turbine as having a 'large' size.

## Proposed Three Wind Turbines at Land at Low Drumclog LVA

- 5.263 Further to 'The South Lanarkshire Landscape Capacity Study for Wind Energy' guidelines, the proposed wind turbine is categorised as a 'small scale' in the size of development category as 'a development of 3 or fewer turbines.'
- 5.264 The proposed wind turbine would reside in 6. Plateau Moorland: (i) Western Plateau: Whitelee Moor/ Calder Water an area of 'Medium/Low' Landscape Character Sensitivity, 'Medium/Low' Visual Sensitivity, 'Medium/Low' Landscape Sensitivity and 'Medium/Low' Landscape Value.
- 5.265 The study shows that the underlying landscape capacity to accommodate wind turbines (>120m high) is 'High Capacity'.
- 5.266 The proposed limits to future development (i.e., acceptable level of wind energy developments) for future wind energy developments of the type 'over 120m' is 'Low Capacity'.
- 5.267 Furthermore, the South Lanarkshire Council Tall Wind Turbines Review shows that the proposed site at Low Drumclog has a medium capacity for turbines at a height of 150m-250m.
- 5.268 Therefore, within the remaining capacity related to the turbine size and with the spacing of 1-2km between existing turbines, the 'Low Capacity' deems the proposed turbines as acceptable in this location. The nearest existing turbine is over 1.1km from the nearest proposed turbine.
- 5.269 The study describes: a *Landscape Analysis: These are the largest areas of Plateau Moorland, with a large-scale undulating landform and commercial forestry, capable of accommodating extensive wind energy development*'. The proposed site is large scale and capable of accommodating these three proposed wind turbines.
- 5.270 The study also shows that for '*Development Capacity: Much of the high underlying capacity has been utilised by extensive development. However, further limited and carefully located development of turbines added to either of these areas would not significantly alter the landscape. Effects of proximity to settlements and other more sensitive LCTs should be considered. Extensive groups of smaller turbines would not be appropriate to this larger scale landscape: these should be separated from the main windfarms, restricted in number and located in lower more contained areas near farms and enclosure land.*'
- 5.271 The locations of the proposed turbines have been carefully selected in an area that has capacity for large wind turbines, rather than smaller turbines and with a buffer zone of more than 1km. There would be 'Development Capacity' for the proposed turbines with the restrictive number of three turbines, located in a contained area near a farm and separated from settlements.

## Cumulative Assessment Summary

- 5.272 The cumulative effects have been assessed of the proposed turbine in combination with a number of existing wind farms and single wind turbines.
- 5.273 Other wind turbines of Calder Water wind farm and single turbines are more than 1km from the proposed turbines.
- 5.274 There would be a Low cumulative effect on the landscape character type 6 Plateau Moorland with the combination of the proposed turbines and the existing wind turbines.
- 5.275 The key viewpoints were examined in relation to other turbines in the area and identified significant cumulative visual effects on the nearest viewpoints of VP1 at Low Drumclog and VP2 near Hallfield. The other viewpoints are all assessed as having no significant cumulative visual effect. However, this would be expected where there already exists a number of turbines and where the viewer is close to the proposed turbines. Overall, the cumulative visual effects would not be significant.
- 5.276 The proposed wind turbine would reside in an area of 'Medium/Low' Landscape Character Sensitivity, 'Medium/Low' Visual Sensitivity, 'Medium/Low' Landscape Sensitivity and 'Medium/Low' Landscape Value.
- 5.277 The capacity for the landscape character for more wind turbines is 'Low Capacity' and the size and scales of the proposed turbines deem the proposed turbines as acceptable in this location.
- 5.278 There would be 'Development Capacity' for the proposed turbines with the restrictive number of three turbines, located in a contained area near a farm and separated from settlements.

**APPENDICES**

**Table 1 Landscape Character Degree of Significance**

The following table is a visual guide to understanding how the magnitude of change relates to the degree of significance over different sensitivities of landscape character. As the assessment is based on subjective judgement and not formulaic calculations, this table is for guidance only.

Magnitude of Change	Degree of Significance		
<b>High</b>	Moderate	Moderate / Substantial	Substantial
<b>Medium</b>	Slight / Moderate	Moderate	Moderate / Substantial
<b>Low</b>	Slight	Slight / Moderate	Moderate
<b>Negligible</b>	Negligible	Negligible / Slight	Slight
	<b>Low</b>	<b>Medium</b>	<b>High</b>
	Landscape Receptor Sensitivity		

**Table 2 Landscape Receptors – Sensitivities, Magnitude of Change and Degree of Significance**

<b>Designation/ Feature/ Character Area</b>	<b>Approximate distance from the proposed wind turbines (at the closest point)</b>	<b>Rationale for judgement</b>	<b>Sensitivity to Change</b>	<b>Magnitude of Change</b>	<b>Degree of Significance</b>
<b>Landscape Character Types</b>					
5 Plateau Farmlands	435m	This is an adjacent landscape character type, and the proposed turbine would not affect the key characteristics of this landscape character type.	Medium	Negligible	Negligible / Slight
6 Plateau Moorlands	On site	Landscape character type – the proposed wind turbine resides in this landscape character. There would be localised changes to the landscape character type.	Medium	Negligible	Negligible / Slight

**Low Drumclog Wind Turbine LVA**

<b>Designation/ Feature/ Character Area</b>	<b>Approximate distance from the proposed wind turbines (at the closest point)</b>	<b>Rationale for judgement</b>	<b>Sensitivity to Change</b>	<b>Magnitude of Change</b>	<b>Degree of Significance</b>
6a Plateau Moorland	0.5m	This is an adjacent landscape character type, and the proposed turbine would not affect the key characteristics of this landscape character type.	Medium	Low	Slight / Moderate
<b>National Parks / AONB</b>					
None	n/a	n/a	n/a	n/a	n/a
<b>Special Landscape Area / Sensitive Landscape Areas</b>					
None	≤5km	n/a	n/a	n/a	n/a
<b>Core Paths (up to 3km)</b>					
West Browncastle EK/5845/1	2.6km	Some open sections of the route where the proposed turbines would be visible, other sections of route screened by intervening woodland.	Medium	Negligible to None	Negligible / Slight to None

**Low Drumclog Wind Turbine LVA**

<b>Designation/ Feature/ Character Area</b>	<b>Approximate distance from the proposed wind turbines (at the closest point)</b>	<b>Rationale for judgement</b>	<b>Sensitivity to Change</b>	<b>Magnitude of Change</b>	<b>Degree of Significance</b>
East Browncastle – Laigh Alderstocks EK/3799/1	2.9km	Possible glimpses of proposed turbines, other sections of route screened by intervening woodland.	Medium	Negligible to None	Negligible / Slight to None
Hareshaw-Whitelee EK/5881/1	1.7km	Views from near to the site and then no views as mostly screened by woodland.	Medium	Negligible to None	Negligible / Slight to None
Hareshaw Rd to Darvel EK/3695/1	1km	Some open sections of the route where the proposed turbines would be visible, other sections of route screened by intervening woodland.	Medium	Medium to None	Moderate to None
Old Railway Drumclog EK/5604/2	2.5km	Possible glimpses of the proposed turbine, mostly screened by localised vegetation.	Medium	Low to None	Slight / Moderate to None
Ryeland – Holmhead EK/1455/1	3km	Possible glimpses of the proposed turbine, but unlikely and mostly screened by localised vegetation.	Medium	Negligible to None	Negligible / Slight to None
Fore Hareshaw- Westertown EK/5849/1	1.5km	Some open sections of the route, the proposed turbines would be visible, other sections of route screened by intervening woodland.	Medium	Medium to None	Moderate to None
Drumclog Highway to Loudoun Hill EK/5850/1	2km	Some views of the proposed turbines closer to the site, further away views would be less likely.	Medium	Low to None	Slight / Moderate to None

**Low Drumclog Wind Turbine LVA**

<b>Designation/ Feature/ Character Area</b>	<b>Approximate distance from the proposed wind turbines (at the closest point)</b>	<b>Rationale for judgement</b>	<b>Sensitivity to Change</b>	<b>Magnitude of Change</b>	<b>Degree of Significance</b>
Laigh Alderstocks - Little Calder Bridge EK/3800/1	2km	Possible glimpses of the proposed turbine, but unlikely and mostly screened by localised vegetation.	Medium	Negligible to None	Negligible / Slight to None
EAC: Hareshaw Rd EK/3696/1	2.5km	From a section of route nearest to the proposed turbines, there would be some views, but further away, views are limited by intervening woodland (see also VP4)	Medium	Negligible to None	Negligible / Slight to None
<b>National Cycle Routes</b>					
None	≤5km	N/a	N/a	N/a	N/a
<b>Scheduled Monuments</b>					
BTL21 Battle of Drumclog	Adjacent to site	Historic site as the opening battle of the 1679 Covenanters uprising. The setting of this site would be directly in association with the proposed turbines.	High	High	Substantial

**Low Drumclog Wind Turbine LVA**

<b>Designation/ Feature/ Character Area</b>	<b>Approximate distance from the proposed wind turbines (at the closest point)</b>	<b>Rationale for judgement</b>	<b>Sensitivity to Change</b>	<b>Magnitude of Change</b>	<b>Degree of Significance</b>
BTL36 Battle of Loudoun Hill	4km	The Battle of Loudoun Hill is significant as one of the first victories of King Robert I against the English forces, then under Aymer de Valence, following his inauguration as King. The battlefield lies mainly to the south of Loudoun Hill, where the proposed turbines would not be seen. From the summit and north of the hill, there would be views of the proposed turbines (see VP9)	High	Low	Moderate
Tweediehall, Mound	9.5km	No connection to the site.	High	None	None
Avondale Castle, Strathaven	8km	No connection to the site.	High	None	None
Burnbrae, Barrow	8.3km	No connection to the site.	High	None	None
Dungavel Hill, Cairn	6.8km	No connection to the site.	High	None	None
<b>Conservation Areas</b>					
Darvel Central (CA403)	7.5km	No connection to the site and out of ZTV.	High	None	None

**Low Drumclog Wind Turbine LVA**

<b>Designation/ Feature/ Character Area</b>	<b>Approximate distance from the proposed wind turbines (at the closest point)</b>	<b>Rationale for judgement</b>	<b>Sensitivity to Change</b>	<b>Magnitude of Change</b>	<b>Degree of Significance</b>
Morton Park (CA404)	7km	No connection to the site and out of ZTV.	High	None	None
Strathaven (CA395)	8km	No connection to the site.	High	None	None
Sandford (CA394)	9km	No connection to the site.	High	Negligible	Negligible / Slight
<b>Listed Buildings</b>					
LB1275 Low Drumclog	Adjacent to site	These buildings form a courtyard and mature trees along the northern side lessen connection to the immediate proposed site. Although close to the site, the setting of the building would be mitigated due to these mature trees.	High	Low	Moderate
LB1284 Coldwakning	1km	This building is set back from the road and has no direct view or association with the site.	High	Negligible, if any	Slight, if any
LB1322 Trumpeter's Well at Hillhead Farm	3km	No direct association and effect on the setting.	High	Negligible, if any	Slight, if any

**Low Drumclog Wind Turbine LVA**

<b>Designation/ Feature/ Character Area</b>	<b>Approximate distance from the proposed wind turbines (at the closest point)</b>	<b>Rationale for judgement</b>	<b>Sensitivity to Change</b>	<b>Magnitude of Change</b>	<b>Degree of Significance</b>
LB1324 North Brownhill	2.5km	Setting would not be directly related to the proposed turbine due to the intervening woodland.	High	Low	Moderate
LB6612 Dungavel Prison	4.2km	No connection to the site.	High	None	None
LB1288 South Halls	4km	No connection to the site.	High	None	None
LB12573 Allanton	4.1km	No connection to the site and out of ZTV.	High	None	None
LB13824 Mill Bridge Ryeyard	4.2km	No connection to the site and out of ZTV.	High	None	None
LB12547 Loudounhill	4km	No connection to the site and out of ZTV.	High	None	None
LB12548 Passford Bridge	5km	No connection to the site and out of ZTV.	High	None	None
LB12549 Lochfield Farm	4.5km	No connection to the site and out of ZTV.	High	None	None

**Low Drumclog Wind Turbine LVA**

<b>Designation/ Feature/ Character Area</b>	<b>Approximate distance from the proposed wind turbines (at the closest point)</b>	<b>Rationale for judgement</b>	<b>Sensitivity to Change</b>	<b>Magnitude of Change</b>	<b>Degree of Significance</b>
LB1283 Calder Bridge at Caldermill	3.2km	No connection to the site due to intervening buildings.	High	None	None
LB1270 Drumclog Church	2km	The setting of this church is within other buildings and at the edge of the busy A71 main road. Any connection with the proposed turbines would be mitigated by the immediate activity and built form.	High	Low	Moderate
LB1269 Drumclog Battle Monument	0.8km	This monument is surrounded by mature trees acting as a buffer and screening views from the site and the setting (see also VP3).	High	Low	Slight / Moderate
LB1289 Stobieside House and Gatepiers	1km	This building is adjacent to the site, to the south, where the landform falls away at the edge of a plateau. There are mature trees to the north of the property that would partially screen views and lessen the association of the setting.	High	Low	Slight / Moderate
LB12572 Avon Bridge	4.3km	No connection to the site and out of ZTV.	High	None	None
LB12546 Underlaw	4km	No connection to the site.	High	None	None

Low Drumclog Wind Turbine LVA

<b>Designation/ Feature/ Character Area</b>	<b>Approximate distance from the proposed wind turbines (at the closest point)</b>	<b>Rationale for judgement</b>	<b>Sensitivity to Change</b>	<b>Magnitude of Change</b>	<b>Degree of Significance</b>
LB12545 Broomhill	4.3km	No connection to the site and out of ZTV.	High	None	None
LB12544 East Glaister	4.6km	No connection to the site and out of ZTV.	High	None	None
<b>Ancient Woodlands</b>					
None	≤5km	n/a	n/a	n/a	n/a
<b>National Scenic Areas</b>					
None	≤5km	n/a	n/a	n/a	n/a
<b>Special Landscape Areas</b>					
None	≤5km	n/a	n/a	n/a	n/a
<b>World Heritage Sites</b>					
None	≤5km	n/a	n/a	n/a	n/a

Low Drumclog Wind Turbine LVA

<b>Designation/ Feature/ Character Area</b>	<b>Approximate distance from the proposed wind turbines (at the closest point)</b>	<b>Rationale for judgement</b>	<b>Sensitivity to Change</b>	<b>Magnitude of Change</b>	<b>Degree of Significance</b>
<b>Special Area of Conservation</b>					
None	n/a	n/a	n/a	n/a	n/a
<b>Country Parks and Gardens</b>					
None	n/a	n/a	n/a	n/a	n/a
<b>Gardens &amp; Designed Landscape</b>					
None	n/a	n/a	n/a	n/a	n/a

**Table 3 Visual Amenity Degree of Significance**

The following table is a visual guide to understanding how the magnitude of change relates to the degree of significance for different sensitivities of visual receptors. As the assessment is based on subjective judgement and not formulaic calculations, this table is for guidance only.

Magnitude of Change	Degree of Significance		
<b>High</b>	Moderate	Moderate / Substantial	Substantial
<b>Medium</b>	Slight / Moderate	Moderate	Moderate / Substantial
<b>Low</b>	Slight	Slight / Moderate	Moderate
<b>Negligible</b>	Negligible	Negligible / Slight	Slight
	<b>Low</b>	<b>Medium</b>	<b>High</b>
	Visual Receptor Sensitivity		

**Table 4 Viewpoint Locations, Sensitivities, Magnitude of Change and Degree of Significance**

Ref. VP	Location	Distance and direction to the nearest turbine	Grid Reference	Reason for Inclusion (Visual Receptors)	Rationale for Judgement / Change in View	Sensitivity	Magnitude of Change	Degree of Significance
VP 1	Low Drumclog	629m (T2) 314.22°	263495 640161	Representative of road users and residents	The proposed turbines would be seen in front of the existing wind turbines in proportion to the large scale of the open plateau area.	Medium (Residents) Low (Road users)	High	Moderate / Substantial (Residents) Moderate (Road users)
VP 2	Hallfield	1.312km (T1) 279.04°	264360 640570	Representative of residents	The proposed turbines would be seen across open balanced in front of existing turbines.	Medium (Residents)	Medium	Moderate (Residents)

**Low Drumclog Wind Turbine LVA**

Ref. VP	Location	Distance and direction to the nearest turbine	Grid Reference	Reason for Inclusion (Visual Receptors)	Rationale for Judgement / Change in View	Sensitivity	Magnitude of Change	Degree of Significance
VP 3	Battle of Drumclog Monument	961m (T2) 28.93°	262529 639614	Historic setting and representative of recreational users	Only one blade tip of one of the proposed turbines would be visible.	Medium (Recreational users)	Negligible	Negligible / Slight (Recreational users)
VP 4	SW of Fore Hareshaw	2.142km (T3) 67.08°	260684 639968	Representative of recreational users	The proposed turbines would be visible above the skyline and seen through trees.	Medium (Recreational users)	Low	Slight / Moderate (Recreational users)
VP 5	Drumclog Church	1.901km (T2) 321.69°	263972 638873	Representative of residents	The addition of the proposed turbines are seen above the coniferous woodland.	Medium (Residents)	Low	Slight / Moderate (Recreational users)

**Low Drumclog Wind Turbine LVA**

Ref. VP	Location	Distance and direction to the nearest turbine	Grid Reference	Reason for Inclusion (Visual Receptors)	Rationale for Judgement / Change in View	Sensitivity	Magnitude of Change	Degree of Significance
VP 6	A71 East of Burnbank	2.131km (T2) 291.37°	264874 639557	Representative of recreational users	The proposed turbines would be seen behind trees and buildings and similar to the existing Calder Water turbines.	Medium (Residents)  Low (Road users)	Low	Slight / Moderate (Residents)  Slight (Road users)
VP 7	Brownhill Bridge	2.712km (T1) 215.16°	264706 643251	Representative of residents, recreational users, and road users	The change in view would include the blade tips of the proposed turbines above the coniferous woodland.	Medium (Residents and Recreational users)  Low (Road users)	Low	Slight / Moderate (Residents and Recreational users)  Slight (Road users)

**Low Drumclog Wind Turbine LVA**

Ref. VP	Location	Distance and direction to the nearest turbine	Grid Reference	Reason for Inclusion (Visual Receptors)	Rationale for Judgement / Change in View	Sensitivity	Magnitude of Change	Degree of Significance
VP 8	East of Browncastle	2.311km (T1) 183.60°	263077 643350	Representative of residents	The proposed turbines would appear above and behind the coniferous woodland with one or two turbines being visible.	Medium (Residents)	Low	Slight / Moderate (Residents)
VP 9	Loudoun Hill	3.313km (T2) 17.95°	260873 637898	Representative of residents	The proposed turbines would be seen alongside other existing turbines along the skyline.	High (Recreational users)	Low	Slight / Moderate (Recreational users)

**Low Drumclog Wind Turbine LVA**

Ref. VP	Location	Distance and direction to the nearest turbine	Grid Reference	Reason for Inclusion (Visual Receptors)	Rationale for Judgement / Change in View	Sensitivity	Magnitude of Change	Degree of Significance
VP 10	Long Green	5.492km (T3) 88.96°	257161 640869	Representative of recreational users and residents	Only the blade tips of the proposed turbines may be seen alongside existing turbines of Calder Water wind farm.	Medium (Recreational users)	Negligible	Negligible / Slight (Recreational users)
VP 11	Ardochrig; Whitelee Wind Farm Car Park;	5.818km (T1) 187.06°	263782 646821	Representative of recreational users	There would be no change in view as the proposed turbines would be screened by the existing coniferous woodland.	Medium (Recreational users)  Low (Road users)	None	None (Recreational users)

**Low Drumclog Wind Turbine LVA**

Ref. VP	Location	Distance and direction to the nearest turbine	Grid Reference	Reason for Inclusion (Visual Receptors)	Rationale for Judgement / Change in View	Sensitivity	Magnitude of Change	Degree of Significance
VP 12	Lambhill	6.526km (T1) 280.09°	269521 639692	Representative of residents	The proposed turbines would be seen in front of the Calder Water turbines and indistinguishable from this distance.	Medium (Residents)	Negligible	Negligible / Slight (Residents)
VP 13	Muirkirk Road, Strathaven	7.121km (T1) 249.52°	269587 644053	Representative of residents	The Change in View would be the addition of the proposed turbines seen alongside the existing turbines along the skyline.	Medium (Residents) Low (Road users)	Low	Slight / Moderate (Residents) Slight (Road users)

**Low Drumclog Wind Turbine LVA**

Ref. VP	Location	Distance and direction to the nearest turbine	Grid Reference	Reason for Inclusion (Visual Receptors)	Rationale for Judgement / Change in View	Sensitivity	Magnitude of Change	Degree of Significance
VP 14	Sandford	9.123km (T1) 257.3°	272016 643133	Representative of residents	The proposed turbines would be seen alongside Calder Water wind farm at a distance.	Medium (Residents)	Negligible	Negligible / Slight (Residents)