

# Appendix 4.1a EIA Consultation Responses

East Ayrshire Council

Energy Consents Unit – Meeting Minutes

Glasgow Airport

Glasgow Prestwick Airport

Historic Environment Scotland

NATS Safeguarding

Scottish Natural Heritage

Scottish Environment Protection Agency

South Lanarkshire Council – Roads and Transportation Services

South Lanarkshire Council – Planning Department

SYSTRA Ltd

West of Scotland Archaeology Service

This page is intentionally blank.

## Scottish Government - Energy Consents Unit

### NOTE OF MEETING

#### Proposed Hagshaw Hill Repowering and Douglas West Extension

SNH Offices, Cadzow Court, 3 Wellhall Road, Hamilton, ML3 9BG

Tuesday, 7<sup>th</sup> August 2018, 10.00am – 12 Noon

#### Attendees:

Theo Philip – 3R Energy  
Jennifer Chapman – 3R Energy  
Brian Denney – Pegasus  
David Bell – JLL  
Jenny Hazzard – ITP Energised  
James Wright – South Lanarkshire Council  
Lyndsey Kinnes - SNH  
Fiona O'Mahony – SNH  
Ruth Findlay – Energy Consents Unit  
Paul Taylor – Energy Consents Unit  
Lesley Tosun – Energy Consents Unit  
Carol Anne Brown – Energy Consents Unit  
Nikki Anderson – Energy Consents Unit

Item No.	Item	Action
1	Opening and Introductions	
2	<p>Forward Strategy – Background/Overview of operational and proposed wind farms.</p> <p>3R explained background to 3RE &amp; landowner, developments to date, and overall vision for the future of the Hagshaw Cluster (parts within 3R control), including: overview and remaining lifespan of Hagshaw Hill original scheme (including SPR lease position), Douglas West consented wind farm, and the proposed Hagshaw Hill Repowering and Douglas West Extn schemes.</p>	
3	<p>Landscape &amp; Visual</p> <p><u>Design rationale for proposed Hagshaw Hill Repower and Douglas West Extension:</u></p> <p>Pegasus explained approach to designing the site and ultimately choosing to proceed with 200m blade tip turbines. Initial visuals indicated landscape could accommodate turbines of this scale and SLC Tall Turbines Guidance also seems to indicate that areas which could best accommodate tall turbines include those which already host substantial wind development, such as the Hagshaw Cluster. TP also explained the economic considerations around this.</p> <p>A series of turbine heights had been tested by Pegasus who explained that they were pleased with the manner in which the 200m turbines relate to their landscape context. Overall, Pegasus consider that this relationship does not appear to be out of scale or proportion to any particularly incongruous degree</p>	

with the rest of the cluster (as constructed and consented). It was also noted that the most important local views towards the site will see the consented DW turbines at 150m in the foreground of any views towards a repowered Hagshaw. Increase in generation capacity was considered alongside design options.

3R stated, in their opinion, the visual impact of utilising 150m tip turbines (as consented at DW) and 200m tip turbines at the HHR site is not materially much different, but in project viability terms there is a considerable material difference in power generation between the two options which is critical in a subsidy free situation. The bigger machines also generate materially more community benefit and (potentially) shared ownership income.

Lighting on Turbines:

SNH suggested potentially Hagshaw Hill Repower (HHR) was a location where lighting mitigation could be considered (although noted that it is not a “dark sky” location).

(Post Meeting Note: Email from SNH dated 8<sup>th</sup> Aug on this point) **3R to provide further comment.**

3R /  
Pegasus

Pegasus confirmed the landscape assessment will be done on the basis that lighting is required and will be incorporated, with a view to confirming acceptability in this landscape. Any future confirmation of mitigation options would therefore mean additional reduction of impacts but mitigation would not be viewed as a requirement to ensure acceptability.

ECU advised 200m turbines with night time lighting had not been tested in the planning system as yet. Scot Gov supports more renewable power production and advised that it would be helpful to be able to inform the public of the larger picture for the cluster, particularly in respect of its generation potential, community benefit/shared ownership opportunities, and consideration of cumulative impacts.

Discussion over the complexity of assessing lighting of a cluster. HHR needs to be assessed on its own merits although it was agreed with Douglas West Extension (DWx), also in 3R’s control, a longer term strategy should be explained and referenced as appropriate within the EIA Report / application documentation.

Vision/ strategy for wider cluster:

Discussion over 3R’s control of a number of sites in the cluster area and how that could be presented in the EIA Report and other documents (Planning Statement, Design Statement) and particularly in respect of cumulative assessment.

It was agreed that Hagshaw Hill Extn (2008 scheme) and its likely future repowering also needs to be mentioned in the overall strategy, although physical details of any such repowering are not yet known. Suggested that this could be discussed in the Planning / Design Statement but would not feature in detail within the LVIA.

	<p>It was confirmed that DWx would be submitted to ECU for scoping before HHR Section 36 application was submitted: programmed submission date for HHR is end Sept. HHR will not be formally scoped. A 'strategy document' will be prepared to cover both applications, HHR plus DWx, to give overview.</p> <p>Public consultation for HHR will principally focus on that scheme but will also provide information on the overall strategy for the Hagshaw Cluster i.e. proposed plans for DWx.</p> <p><u>Viewpoints:</u>  Although not formally scoping HHR, comments on Viewpoints had been requested. <b>SNH / SLC agreed to provide formal comments on VP selection.</b> (post meeting note: Email from SNH dated 8<sup>th</sup> Aug on this point) (Post meeting Note: SLC agreed list of VPs at site visit 16<sup>th</sup> Aug)</p> <p><b>SNH requested an additional VP from Station Road / A70 in Douglas.</b></p> <p>3R confirmed VPs had also been sent to EAC for comment.</p> <p>2 VPs chosen for night time lighting assessment:</p> <ul style="list-style-type: none"> <li>- VP 1: Braehead, Coalburn</li> <li>- VP 16: Douglas.</li> </ul> <p>Nigh time lighting VPs agreed by SNH / ECU / SLC. Agreed that these two VPs would also work for the DWx assessment. All agreed with proposed general approach to night time lighting assessment.</p> <p>Wireframes should include annotation to note where lighting will be installed.</p> <p><u>Cumulative assessment:</u>  Cumulative assessment agreed as follows:</p> <p>Cumulative Scenario 1: to include HHR plus all nearby operational, in construction and consented turbines.</p> <p>Cumulative Scenario 2: same as Scenario 1 plus any nearby sites in scoping i.e. Douglas West Extn and Cumberhead tip height increase.</p> <p><u>Residential Visual Amenity:</u>  Re. Glespin, 3R advised that changes had been made to the layout to reduce any visibility from village and theoretical visibility of turbines was now very minimal – only very tops of blades of a couple of turbines visible in bare-earth wireline. <b>3R to email Glespin wireline.</b> (post meeting note: This wireline has been circulated by email dated 8<sup>th</sup> Aug.)</p> <p>It was agreed that 3R will undertake detailed assessment of the impact on any properties within 1km, and a 'cluster' assessment of any properties within 2km.</p>	<p>SNH / SLC</p> <p>Pegasus</p> <p>Pegasus / 3R</p>
--	--	---

	<b>Pegasus to provide a plan showing any properties within 1 and 2km of turbines.</b>	Pegasus
4	<p>AOB</p> <p><b>ECU agreed to send consultation list and a copy of the advert detail.</b> LT confirmed as ECU case officer. (Post meeting note: This was emailed by ECU to 3R on 10<sup>th</sup> August).</p> <p>ECU advised Shared Ownership guidance was currently being worked on and the lead officer in ECU dealing with this topic can be contacted for further information. 3R confirmed the matter was under discussion with landowner and local communities. <b>ECU to email details of contact within ECU dealing with shared ownership consultation.</b></p> <p><b>3R will inform ECU of proposed exhibition dates and details.</b></p>	<p>ECU</p> <p>ECU</p> <p>3R</p>

**From:** Theo Philip <[REDACTED]>  
**Sent:** 01 August 2018 17:23  
**To:** [Ruth.Findlay](#) [REDACTED]; Wright, James <[REDACTED]>  
[Lyndsey.Kinnes](#) [REDACTED]  
**Cc:** [Nikki.Anderson](#) [REDACTED]; Brian Denney [REDACTED]; Jenny Hazzard [REDACTED]; Jennifer Chapman [REDACTED]  
**Subject:** Hagshaw Hill Repowering | Proposed Scope of LVIA

Ruth, James, Lyndsey,

Further to recent communications, please find attached a document prepared by our Landscape Consultants (Pegasus Group) which sets out the proposed scope of the LVIA for our Hagshaw Hill Repowering project in South Lanarkshire. This includes a ZTV, a list of proposed viewpoints and the proposed scope of a Night-time Lighting Assessment.

I understand that Ruth has sent you separately some background information on both our Hagshaw Hill Repowering and Douglas West Extension projects which is great. In addition to that, I will tomorrow circulate a short summary document which sets out the latest position on both projects and our vision for the future of the Hagshaw Hill Wind Cluster which may be useful in advance of the meeting on Tuesday. Basic components of the Repowering project are shown in the cumulative plan attached and set out in the table below:

**Table 1 – Hagshaw Hill Wind Farm | Existing & Proposed Site Characteristics**

Characteristic	Existing Hagshaw Hill Wind Farm (1995)	Proposed Repowering of Hagshaw Hill Wind Farm (2018)
Number of Wind Turbines	26	14
Turbine Capacity	600 kW each	5 MW each
Maximum Tip Height	55 m	200 m
Maximum Rotor Diameter	40 m	132 m
Maximum Blade Length	20 m	64.5 m
Total Generating Capacity	15.6 MW	70 MW
Total Storage Capacity	None	Up to 15 MW
Total Power Generation p.a.	38.2 GWh	182.5 GWh
Community Benefit p.a.	c.£29,000	£350,000

I hope the attached information is helpful, and I look forward to seeing you all next week.

Thanks and regards,  
 Theo

**Theo Philip**  
**3R Energy**  
 Lanark Auction Market  
 Hyndford Road  
 Lanark  
 ML11 9AX

T: [REDACTED]  
M: [REDACTED]  
W: [www.3REnergy.co.uk](http://www.3REnergy.co.uk)

Confidentiality: The contents of this email and its attachment(s) are confidential to the intended recipient. It may not be disclosed, copied, forwarded, used or relied upon by any person other than the intended addressee. If you believe that you have received the email and its attachment(s) in error, you must not take any action based on them, nor must you copy or show them to anyone. Please respond to the sender and delete this email and its attachments from your system. 3R Energy is a trading name of 3R Energy Solutions Limited, a company registered in Scotland SC354680.

 *Please think of the environment before considering printing this email*

# Approach to the Assessment of Landscape and Visual Effects

## 1.1 Introduction

- 1.1.1 It is acknowledged from the outset that, in common with almost all commercial wind energy developments, some landscape and visual effects would occur as a result of the proposals, including some significant effects.
- 1.1.2 A key principle of the European Landscape Convention is that all landscapes matter and should be managed appropriately. It is also acknowledged that landscapes provide the surroundings for people's daily lives and often contribute positively to the quality of life and economic performance of an area.
- 1.1.3 It is therefore proposed that a Landscape and Visual Impact Assessment (LVIA) is undertaken as part of the EIA and an LVIA Chapter be included in the EIA Report. The LVIA will be undertaken by Chartered Landscape Architects, who are experienced in the assessment of large scale, on shore wind energy projects and are fully familiar with the landscape in and around South Lanarkshire and East Ayrshire.
- 1.1.4 It is proposed that the LVIA will consider the potential effects of the Development upon:
- Individual landscape features and elements;
  - Landscape character; and
  - Visual amenity and the people who view the landscape.

## 1.2 Baseline Description and Landscape Character

- 1.2.1 The Site is currently formed in part by the existing Hagshaw Hill Wind Farm which comprises 26 turbines with a tip height of 55m. The existing turbines occupy the plateaus of three hill summits, namely Hagshaw Hill, Common Hill and Broomerside Hill. The existing wind farm has had an influence upon local landscape character since 1995. In 2006, a further 20 turbines were consented as an extension to Hagshaw Hill with a tip height of 80m. The landscape local to the Site has seen further wind farms constructed and consented, with recent consent granted for turbines up to 149.9m to blade tip in the landscape immediately to the east and north east of Hagshaw Hill, at Douglas West.

### **Landscape Character**

- 1.2.2 The Site is located within the South Lanarkshire region. The South Lanarkshire Landscape Character Assessment was undertaken by Ironside Farrar in 2010 and forms the basis of the South Lanarkshire Landscape Capacity Study 2016 (LSC 2016), and its addendum, Tall Wind Turbines: Landscape Capacity, Siting and Design Guidance, September 2017 (TWT 2017). TWT 2017 provides further information on landscape capacity for turbines taller than 120m to blade tip, which was the limit of the assessment in LSC 2016.
- 1.2.3 The study defines fourteen landscape character types (LCT) within seven regional character areas. The landscape character types are further defined into principal landscape units. The Site is principally located within LCT 7b – Rolling Moorland Windfarm, with the landscape local to the Site located within LCT 7 – Rolling Moorland and LCT 7A – Rolling Moorland with Forestry. The character assessment acknowledges the presence of the existing wind farm at Hagshaw Hill, and the influence this has on landscape character.
- 1.2.4 The key characteristics of LCT 7b include *'distinctive upland character created by the combination of elevation, exposure, smooth, rolling, or undulating landform, moorland vegetation and the*

*predominant lack of modern development, 'areas share a sense of apparent wildness and remoteness which contrasts with the farmed and settled lowlands', and 'extensive views over the surrounding Ayrshire and Lanarkshire lowlands from the hilltops'. In relation to sub type 7b, the character is described as 'strong influence of windfarm development in landscape'.*

- 1.2.5 The TWT 2017 provides brief guidelines with regards to the location of tall turbines (defined as 120m to 200m) but does not provide guidance on landscape sensitivity. Notably in relation to repowering the guidance states that:

*"Most of the areas in which the [tall] turbines could be most comfortably located either already host substantial wind energy development, or have similar developments consented. Turbines vary between 55m and 149.9m height. The addition of larger turbines could therefore often be, or at least perceived as, an extension to an operational or consented windfarm, or would be a repowering exercise, replacing existing turbines at the end of their commercial or consented life'.*

- 1.2.6 The TWT 2017 assesses the capacity of the LCT in which the Site is located as being low in relation to turbines 150m - 200m to blade tip. However, the landscape to the immediate north of the Site, sub type LCT 7A, is assessed as having medium capacity for turbines up to 200m in height.

- 1.2.7 Notwithstanding the findings of TWT 2017, from the review of the overarching characteristics of the landscape in the area around the Site, it is considered that the landscape in which the proposed wind farm would be located does have capacity to accommodate further wind energy development of the type proposed. This matter will be considered in further detail through the assessment of landscape character to be set out within the LVIA.

## 1.3 Landscape Planning

### Landscape Designations

- 1.3.1 The Site is located within the Douglas Valley Special Landscape Area (SLA). An assessment of effects upon the SLA will be provided within the LVIA. However, it should be noted that the existing Hagshaw Hill Wind Farm is currently located within the SLA, as is the existing Hagshaw Hill Extension and the consented Douglas West Wind Farm is also partly located within the SLA. Landscape designations within 20 km of the Site are illustrated at Figure 1.

## 1.4 Consultation to Date

- 1.4.1 Initial pre-application discussions have been held with both South Lanarkshire Council (SLC) and the Energy Consents Unit (ECU) at the Scottish Government in respect of the repowering proposal. A further pre-application consultation meeting has also been arranged with SLC, ECU and Scottish Natural Heritage (SNH) to discuss the proposed scope of the LVIA and NLA, including the proposed viewpoints. East Ayrshire Council (EAC) will also be consulted on the viewpoints proposed. In respect of the proposed viewpoints, it is noted that the proposed study areas and assessment viewpoint locations have been informed by previous consultation held in relation to the consented Douglas West Wind Farm.

## 1.5 Relevant Guidance and Legislation

- 1.5.1 The LVIA shall be undertaken in accordance with the principles of best practice, as outlined in published guidance documents, notably the third edition of the Guidelines for Landscape and Visual Assessment (GLVIA3), (Landscape Institute and the Institute for Environmental Management and Assessment, 2013).
- 1.5.2 The methodology and assessment criteria proposed for the assessment has been developed in accordance with the principles established in this best practice document. It should be acknowledged that GLVIA3 establishes guidelines, not a specific methodology. The preface to GLVIA3 states:

*“This edition concentrates on principles and processes. It does not provide a detailed or formulaic ‘recipe’ that can be followed in every situation – it remains the responsibility of the professional to ensure that the approach and methodology adopted are appropriate to the task in hand.”*

1.5.3 The approach has therefore been developed specifically for this assessment to ensure that the methodology is fit for purpose.

1.5.4 As part of the development of the proposed methodology, consideration has also been given to the following documents:

- Guidelines for Landscape Character Assessment, (2002) Countryside Agency and SNH;
- Landscape Character Assessment Guidance for England and Scotland: Topic Paper 6: Techniques and Criteria for Judging Capacity and Sensitivity, (2002) The Countryside Agency and SNH;
- Assessing the Cumulative Impact of Onshore Wind Energy Developments (March 2012) SNH;
- Siting and Design of Wind farms in the Landscape, Version 3 (February 2017) SNH;
- Visual Representation of Wind farms – Version 2.2 (February 2017), SNH;
- LI Advice Note 02/17 Visual representation of development proposals (March 2017) Landscape Institute; and
- LI Advice Note 01/11 Photography and Photomontage in Landscape and Visual Impact Assessment, (2011) Landscape Institute.

1.5.5 It is also noted that SNH published a consultation draft document ‘Assessing the Impact of repowered wind farms on nature’ in June 2018. This reiterates that LVIA for repowering application should use the current guidance, as set out above, but includes some further suggested techniques which are specific to repowering schemes, albeit with the acknowledgement that their advice may evolve in response to future repowering experience. Pegasus are experienced in LVIA for Wind Farm Repowering applications, including the production of visualisations with a ‘future baseline’ where the existing turbines are digitally removed, of the kind suggested in the draft guidance. We note the request for discussion with applications regarding the approach to be taken and this is something Pegasus look forward to doing during the forthcoming meeting which has been arranged to take place with SLC, ECU and Scottish Natural Heritage (SNH).

## 1.6 Assessment Methodology

1.6.1 Full details of the methodology will be provided within the LVIA chapter of the EIA Report. The following provides an outline of the key aspects of the assessment and the proposed Assessment Criteria are set out in full in Appendix 1.

### **Distinction between Landscape and Visual Effects**

1.6.2 In accordance with the published guidance, landscape and visual effects shall be assessed separately, although the procedure for assessing each of these is closely linked. A clear distinction has been drawn between landscape and visual effects as described below:

- Landscape effects relate to the effects of the Development on the physical and perceptual characteristics of the landscape and its resulting character and quality; and
- Visual effects relate to the effects on specific views experienced by visual receptors and on visual amenity more generally.

### **Types of Landscape and Visual Impacts Considered**

- 1.6.3 The LVIA will address all phases of the Development and effects will be considered during the construction phase, when the Development is being built (temporary effects), following completion of the Development (permanent effects) and during decommissioning at the end of the project (temporary effects).
- 1.6.4 The LVIA will not only assess the impacts associated with the turbines, but also any related impacts resulting from any anemometer masts, control building/substation, underground cabling, site tracks and access roads.
- 1.6.5 Consideration shall be given to seasonal variations in the visibility of the Development and these will be described where necessary.

### **Study Areas**

- 1.6.6 In order to assist with defining the study area, a digital Zone of Theoretical Visibility (ZTV) model was created as a starting point to illustrate the geographical area within which views of development on the Site are theoretically possible. This was based on a 'bare-earth' scenario, whereby the screening effect of areas of existing vegetation or built features in the landscape are not taken into account. The ZTV was modelled to blade tip height using the currently proposed turbine height of 200m and is presented at Figure 2.
- 1.6.7 The ZTV is a useful tool used to provide a focus on the area and receptors that are most likely to be affected by a proposed development but should always be subject to verification in the field. In this regard, site visits shall always form the primary basis in understanding the actual likely visibility of development at the Site.
- 1.6.8 Having reviewed the ZTV and with regard to best practice guidance, it is proposed that the LVIA will consider an initial 35km radius study area. Detailed assessment will then be provided for a 15km section of this study area, which it is considered represents a proportionate extent of the study area and the limit within which any potential significant effects might occur.
- 1.6.9 For the cumulative assessment, consideration was initially given to a 60 km radius from the Site, as recommended by SNH best practice guidance. Following this review, it is proposed that a 20 km study area be adopted to consider cumulative effects, which is considered represents a proportionate extent of the study area and the limit within which any potential significant cumulative effects might occur. It is also proposed that for single turbines, only those which are 50m high or taller are included in the LVIA. Cumulative sites within 35 km of the site are illustrated on Figure 3 and listed in Table 1.
- 1.6.10 It is also proposed to carry out a separate Residential Visual Amenity Study covering all properties located within 2 km of all proposed turbines, should any properties lie within 2 km of a turbine in the design freeze layout. This additional assessment would be presented in an appendix to the LVIA Chapter and would complement the assessment of visual receptors within the LVIA, providing further detail in relation to the effect on the views and amenity from different parts of each property and its curtilage.

### **Visualisations**

- 1.6.11 For each of the viewpoints, visualisations will be prepared in line with SNH best practice guidance (Visual Representation of Wind farms – Version 2.2, February 2017).
- 1.6.12 A digital model will be generated to enable the production of wirelines of the Development from locations throughout the study area to help identify the scale, arrangement and visibility of the proposed turbines. These images will be reviewed on site to assess how natural and built screening would affect visibility of the Development.

- 1.6.13 Each of the wireframe models for the viewpoints within 20 km of the site will then be developed further into photomontages to help illustrate the predicted impact of the Development.
- 1.6.14 For each viewpoint where it is possible to view a long distance 360 degree panorama, a series of four 90 degree baseline photography panoramas will be produced, illustrating the full panorama as seen from the viewpoint locations. Each panorama will be accompanied with an associated wireline illustrating cumulative schemes. These will be presented so that each 90 degree angle of view is read in a clockwise direction, starting with the section which includes the Development. For those viewpoints where a wide panorama is not available, a 90 degree baseline panorama in the direction of the Site will be produced, along with any other 90 degree angles of view to illustrate the wider panorama as appropriate.
- 1.6.15 It is proposed that the existing Hagshaw Hill turbines will be digitally removed from the baseline photography in order to create a future baseline image in which the new turbines can be digitally added. It is also proposed that surrounding consented, but not yet constructed schemes will be digitally added to photomontages of baseline photographs, in order to illustrate the predicted baseline situation that will be in place when the wind farms are fully constructed.
- 1.6.16 Wirelines will include for the existing and proposed repowered wind farms shown together (with the original scheme in a 'greyed out' or otherwise distinctive colour), in line with the emerging SNH guidance.
- 1.6.17 Ancillary elements such as the permanent anemometer mast, access tracks and the substation will be shown in photomontages for viewpoints within 5 km when they would be visible. Beyond 5 km it is considered unlikely that the ancillary elements would form more than a limited element of the entire Development when compared to the turbines.
- 1.6.18 Photography for each of the viewpoints will also be taken in accordance with the guidance contained in *Visual Representation of Wind farms – Good Practice Guidance*.

#### **Visible Turbine Lighting Assessment and Visualisations**

- 1.6.19 Turbines over 150m are required to be fitted with visible red aviation warning lighting. As a consequence of this, it is best practice for LVIA's for wind farms fitted with such lighting to include an assessment of the effects which would arise from this. A detailed proposed methodology for the assessment is set out in Appendix 2 and summarised in Section 1.7, below.

#### **Significance of Effects**

- 1.6.20 The purpose of an LVIA when produced in the context of an EIA is to identify any significant effects on landscape and visual amenity arising from the proposed development.
- 1.6.21 The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 do not define a threshold at which an effect may be determined to be significant. In certain other environmental disciplines there are regulatory thresholds or quantitative standards which help to determine the threshold of what constitutes a significant effect. However, in LVIA, any judgement about what constitutes a significant effect is the judgement of a competent and appropriately qualified professional assessor.
- 1.6.22 The level (relative significance) of the landscape and visual effects is determined by combining judgements regarding sensitivity of the landscape or the viewer, the magnitude of change, duration of effect and the reversibility of the effect. In determining the level of residual effects, all mitigation measures are taken into account.
- 1.6.23 The level (relative significance) of effect shall be described as Major, Major/Moderate, Moderate, Moderate/Minor, Minor, Slight/No Effect or No Effect. No Effect may also be recorded as appropriate where the effect is so negligible it is not even noteworthy.
-

- 1.6.24 In the assessment, those effects described as Major, Major/Moderate and in some cases Moderate may be regarded as significant effects as required by the EIA Regulations. These are the effects which the authors of the LVIA consider to be most material in the decision making process.

### **Sensitivity**

#### **Landscape Features**

- 1.6.25 The nature or sensitivity of an individual landscape feature or element reflects its susceptibility to change and the value associated with it. Sensitivity is therefore a function of factors such as the feature's quality, rarity, contribution to landscape character, degree to which the particular element can be replaced and cultural associations or designations that apply. A particular feature may be more 'sensitive' in one location than in another often as a result of local value associated with the feature. Therefore, it is not possible to simply place different types of landscape feature into sensitivity bands. Where individual landscape features are affected, professional judgement is used as far as possible to give an objective evaluation of its sensitivity. Justification is given for this evaluation where necessary.
- 1.6.26 The nature or sensitivity of individual landscape features has been described as very high, high, medium, low or very low.

#### **Landscape Character**

- 1.6.27 The nature or sensitivity of landscape character reflects its susceptibility to change and any values associated with it. It is essentially an expression of a landscape's ability to accommodate a particular type of change. It varies depending on the physical and perceptual attributes of the landscape including but not necessarily limited to: scale; degree of openness; landform; existing land cover; landscape pattern and complexity; the extent of human influence in the landscape; the degree of remoteness/wildness; perception of change in the landscape; the importance of landmarks or skylines in the landscape; intervisibility with and influence on surrounding areas; condition; rarity and scenic quality of the landscape, and any values placed on the landscape including any designations that may apply. Additionally, for a consideration of landscape character during low light levels, a key further consideration is the extent to which existing artificial light sources are present in the landscape during low natural light levels.
- 1.6.28 In this assessment, the nature or sensitivity of landscape character shall be considered with reference to published landscape character areas/types. Information regarding the key characteristics of these character areas/types shall be extrapolated from relevant published studies. Together with on-site appraisal, an assessment of landscape sensitivity to visible wind turbine aviation lighting shall be undertaken, employing professional judgement.
- 1.6.29 The nature or sensitivity of landscape character shall be described as very high, high, medium, low or very low.

#### **Visual Receptors**

- 1.6.30 The nature or sensitivity of a visual receptor group reflects their susceptibility to change and any values associated with the specific view in question. It varies depending on a number of factors such as the occupation of the viewer, their viewing expectations, duration of view and the angle or direction in which they would see the site. Whilst most views are valued by someone, certain viewpoints are particularly highly valued for either their cultural or historical associations and this can increase the sensitivity of the view. Full details of visual receptor sensitivity are provided at Appendix 1.
- 1.6.31 It is important to appreciate that it is the visual receptor (i.e. the person) that has a sensitivity and not a property, public right of way or road. Therefore, a large number of people may use a motorway during dusk/ night time, for example, but this does not increase the sensitivity of the receptors using

it. Conversely, a residential property may only have one person living in it, but this does not reduce the sensitivity of that one receptor.

1.6.32 Where judgements are made about the sensitivity of assessment viewpoints, the sensitivity rating provided shall be an evaluation of the sensitivity of the receptor represented by the viewpoint and not a reflection of the number of people who may experience the view.

1.6.33 It is also important not to confuse the concept of visual sensitivity with the perception of wind turbines. It is acknowledged that some people consider wind turbines to be unattractive, but many people also enjoy the sight of them. This matter is therefore not a factor when determining sensitivity.

### **Magnitude of Change**

1.6.34 The following discussion sets out the approach to be adopted in the LVIA in relation to a specific issue arising in GLVIA3, which requires a brief explanation.

1.6.35 Prior to the publication of GLVIA3, LVIA practice had evolved over time in tandem with most other environmental disciplines to consider the level of effect (relative significance) principally as a function of two factors, namely: sensitivity of the receptor and magnitude of the effect (the term 'magnitude' being a word most commonly used in LVIA and most other environmental disciplines to describe the size or scale of an effect).

1.6.36 Box 3.1 on page 37 of GLVIA3 references a 2011 publication by IEMA entitled 'The State of EIA Practice in the UK' which reiterates the importance of considering not just the scale or size of effect but other factors which combine to define the 'nature of the effect' including factors such as the probability of an effect occurring and the duration, reversibility and spatial extent of the effect.

1.6.37 The flow diagram on page 39 of GLVIA3 suggests that the magnitude of effect is a function of three factors (the size/scale of the effect, the duration of the effect and the reversibility of the effect).

1.6.38 For certain types of development (e.g. residential) the proposed development is permanent and non-reversible. For other types of development (e.g. wind and solar energy) the proposed development is for a time-limited period and would be largely reversible at the end of the scheme's operational period. Reversibility of a proposed development is a material consideration in the planning balance but does not reduce the scale of the effect (i.e. the 'magnitude' in the traditional and commonly understood sense of the word) during the period in which the scheme is operational. In this regard, it would be incorrect to report a lesser magnitude of change to a landscape or view as a result of a time-limited effect or the relative reversibility of the effect.

1.6.39 For clarification, the approach taken in this LVIA has been to consider magnitude of effect solely as the scale or size of the effect in the traditional sense of the term 'magnitude'. Having identified the magnitude of effect as defined above, the LVIA will also describe the duration and reversibility of the identified effect, taking these factors into account as appropriate in the consideration of the level (relative significance) of the effect.

1.6.40 Full details of the magnitude criteria to be used in relation to landscape features, landscape character and visual receptors are set out at Appendix 1.

### **Assessment of Cumulative Effects**

1.6.41 The LVIA will also consider the potential for any cumulative effects to arise. The requirement for consideration of cumulative effects under the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 is set out in Schedule 4, as follows:

*'5. A description of the likely significant effects of the development on the environment resulting from, inter alia: (e) the cumulation of effects with other existing and/or approved development, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources';*

- 1.6.42 This represents a change to the wording of the previous Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2010 which stated: *'A description of the likely significant effects of the development on the environment, which should cover the direct effects and any indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects of the development'*.
- 1.6.43 There is therefore no longer any requirement under the current EIA Regulations to consider the potential for cumulative impacts in relation to other developments which are yet to be awarded consent.
- 1.6.44 Notwithstanding this, it is acknowledged that current best practice guidance for cumulative impact assessment (Assessing the Cumulative Impact of Onshore Wind Energy Developments, SNH, 2012) still refers to a consideration of proposals which are *'awaiting determination within the planning process with design information in the public domain'* and states that *'The decision as to which proposals in the planning / consenting system should be included in an assessment is the responsibility of the determining authority.'*
- 1.6.45 As such, it is proposed in this LVIA to consider cumulative effects caused by the development of the Site in conjunction with other sites which are either operational, under construction, consented or the subject of a full planning application. The SNH best practice guidelines identify two principle types of cumulative visual impact:
- Combined visibility – where the observer is able to see two or more developments from one viewpoint; and
  - Sequential visibility – where two or more sites are not visible at one location but would be seen as the observer moves along a linear route, for example, a road or public right of way.
- 1.6.46 The guidelines state that 'combined visibility' may either be 'in combination' (where two or more sites are visible from a fixed viewpoint in the same arc of view) or 'in succession' (where two or more sites are visible from a fixed viewpoint, but the observer is required to turn to see the different sites). Each of the above types of cumulative effect will be considered in the LVIA.
- 1.6.47 In order that the cumulative assessment remains focussed on other schemes that have the greatest potential to give rise to significant cumulative effects it is necessary at the outset to decide which schemes realistically need to be considered in detail, as to consider all schemes within 35 km of the Proposed Development would simply detract attention from the key issues relating to the application. As there are several large wind farms (either operational, consented, in planning, or in Scoping) in the immediate vicinity of the Proposed Development, including the existing Hagshaw Hill Extension turbines, it is recognised that in this context, wind farms over 20 km away are highly unlikely to give rise to significant cumulative effects which would not occur in any case with the existing distribution of immediately surrounding wind farms (i.e. in the absence of the Proposed Development). It is also considered appropriate and proportionate to scope out turbines under 50m within 10 km of the Site, and under 80 m over 10 km distance from the Site. The cumulative impact assessment will therefore focus primarily on those schemes within approximately 20 km of the Proposed Development although the Clyde grouping of wind farms is also taken into account as it was recognised that there was at least the potential for sequential effects to arise when travelling along the M74.
- 1.6.48 The wind farms identified within Table 1 are therefore the schemes on which the discussion of the cumulative landscape and visual impact effects will be primarily focussed. It is worth noting that the proposed Douglas West Wind Farm Extension turbines (soon to be at the Scoping, and shortly thereafter, Planning stage) will be included in the cumulative impact assessment as this scheme adjoins the Hagshaw Hill Repowering site, is within the Applicant's control, and forms a key part of the Applicant's future plans for the redevelopment of the Hagshaw Cluster.
- 1.6.49 For the purposes of clarification, it should also be noted that other wind farms within 35 km of the Proposed Development will be shown on the supporting visualisations where relevant.
-

**Table 1: Other Wind Farms to be Considered in Detail in the Cumulative LVIA**

Site	Blade tip height of turbines	Number of turbines
<b>Operational</b>		
Hagshaw Hill Extension	80 m	20
Nutberry	125 m	6
Galawhistle	121.2 m +110.2 m	4 + 18
Birkhill (Harbro)	99.5 m	1
Auchren Farm	66.6 m	1
Hazelside Farm	74 m	1 operational, 1 to be constructed
Dungavel	101.2 + 121.2 m	14
Auchrobert	132 m	12
Bankend Rig	76 m	11
Andershaw	125 m	14
JJ Farm Turbine	102 m	1
Nether Fauldhouse	78 m	1
Letham Farm	51 m	1
Low Whiteside Farm	54 m	1
Yonderton Farm	51 m	1
Lochhead	100m	5
<b>Consented/ Under Construction</b>		
Douglas West	149.9m	13
Cumberhead	126.5m	11
Poniel	100m	3
Broken Cross (Wind Farm)	126.5	7
Dalquhandy	126.5m	15
Kype Muir	132m	26
Kype Muir Extension	132m + 152m	6 + 12
Penbreck	125m	9 (note application to increase tip height of 6 of the consented turbines)
Middle Muir	136m +152m	8 + 7
Kennoxhead	145m	19
Broken Cross (small turbines)	55.7m	2
M74 Eco-Park	98.2m	2
Glenmuckloch	133.5m	8
Lethans	136m to 176m	22 - 5 at 176m, 1 at 152m, 9 at 149.9m and 7 at 136m
<b>In Planning</b>		
Glentagart	132m	5
Priestgill	145m	7

Site	Blade tip height of turbines	Number of turbines
Penbreck	145m	6 of the 9 previously consented turbines within SLC
Harryburn	149.9m	17
Lowther Hills	149m	35
In Scoping		
Douglas West Extension	200m	13

### Nature of the Effect

- 1.6.50 The assessment identifies effects which may be beneficial, adverse or neutral. Where effects are described as neutral this is where the beneficial effects are deemed to balance the adverse effects.
- 1.6.51 For some developments (e.g. wind energy developments) it is recognised that some people consider the development to be unattractive, but others enjoy the sight of it. A landscape and visual assessment for these developments therefore assumes that all identified landscape and visual effects are 'adverse' unless stated otherwise. This allows decision makers to assess a worst-case scenario.

### Duration and Reversibility

- 1.6.52 For the purposes of this assessment, the temporal nature of each effect is described as follows:
- Long Term – over 5 years
  - Medium Term – between 1 and 5 years
  - Short Term – under 1 year
- 1.6.53 The LVIA also describes the reversibility of each identified effect using the following terms:
- Permanent – effect is non reversible
  - Non permanent – effect is reversible

## 1.7 Proposed Scope of Assessment

### Landscape Receptors

- 1.7.1 The LVIA will consider effects upon landscape features within the site, such as vegetation. A detailed assessment of direct effects upon the character of the host landscape, alongside the assessment of indirect effects upon surrounding landscape character types and sub types/units will also be provided.

### Visual Receptors

- 1.7.2 There are a small number of potential visual receptors in the area surrounding the Site, including the settlements of Douglas, Coalburn and Glespin. There would be the potential for some views from the local road network, including the A70 and the M74, as well as from the Southern Upland Way as it passes through the landscape to the south southeast of the Site. A detailed consideration of the potential for impacts to the visual amenity of receptors in the landscape surrounding the Site will be set out in the LVIA. This visual assessment will be informed by a selection of representative assessment viewpoints, which are set out further in Table 2 below, each of which will be illustrated with visualisations prepared in line with SNH best practice guidance.
- 1.7.3 The locations of the proposed viewpoints are illustrated at Figure 2, overlaid with the ZTV to blade tip.

**Table 2: Proposed Assessment Viewpoints**

<b>ID</b>	<b>Proposed Viewpoint</b>	<b>Easting</b>	<b>Northing</b>	<b>Approximate distance to site boundary (km)</b>	<b>Reasons for Selection</b>
1	Braehead	281512	634519	3.5 km	Local settlement receptor
2	M74 Overbridge	284562	635389	6.2 km	Localised high point on local road allowing views to site.
3	Douglas Castle	284119	631737	4 km	Local attraction and SLA
4	B7078 south of Lesmahagow	283190	637213	6.3 km	Local road within open area of landscape
5	Rigside, East of Glespin (A70)	287701	635190	9 km	Primary vehicular route with views to site
6	Black Hill	283198	643547	12.7 km	Local hill with panoramic views within SLA
7	Hyndford Bridge	291447	641479	15.5 km	Open views along valley within SLA
8	Tinto Hill	295320	634369	15.6 km	Hill summit within SLA
9	Carmacoup (A70)	278634	628453	1.5 km	Primary vehicular route
10	Victory Park, Muirkirk	268891	627079	9.8 km	Public Open Space within local settlement receptor
11	Cairn Kinney	278473	621427	8.4m	Hill summit to the south
12	Glespin (on A70)	282048	628728	1.8 km	Primary vehicular route with views to site
13	Auchensaugh Hill	285337	627198	7 km	Local hill summit on periphery of SLA
14	Nether Wellwood (A70)	264483	625095	14.3 km	Primary vehicular route with views to site
15	Cairn Table	272573	624278	8.6 km	Hill summit within sensitive landscape area
16	Douglas	283541	631002	3.3 km	Local settlement receptor

### **Residential Visual Amenity**

- 1.7.4 A detailed consideration with regard to residential visual amenity will also be given within in the LVIA. A Residential Visual Amenity Study (RVAS) will be prepared to consider views from all properties located up to 2km of the Development in further detail.

### **Night Time Lighting Assessment**

- 1.7.5 The starting point for consideration for which locations should be illustrated with dusk period visualisations was the 16 locations proposed as assessment viewpoints for the main daytime period visual assessment. Of these viewpoints a review was then undertaken in order to establish which were likely to be representative of visual receptors during low light conditions. In this regard, viewpoints at distances of beyond 10km from the site were discounted, along with viewpoints at hills summits and on long distance footpaths which would be unlikely to be visited after daylight hours.
- 1.7.6 Following this review, it is considered that the following viewpoints would be appropriate for the production of Dusk Period Visualisations in addition to daytime visualisations:
- Viewpoint 1: Braehead, Coalburn; and
  - Viewpoint 16: Douglas.

### **Construction and Construction processes**

- 1.7.7 The LVIA will take into consideration the effects upon landscape features, landscape character and visual receptors during the construction phase of the Proposed Development.

### **Operation**

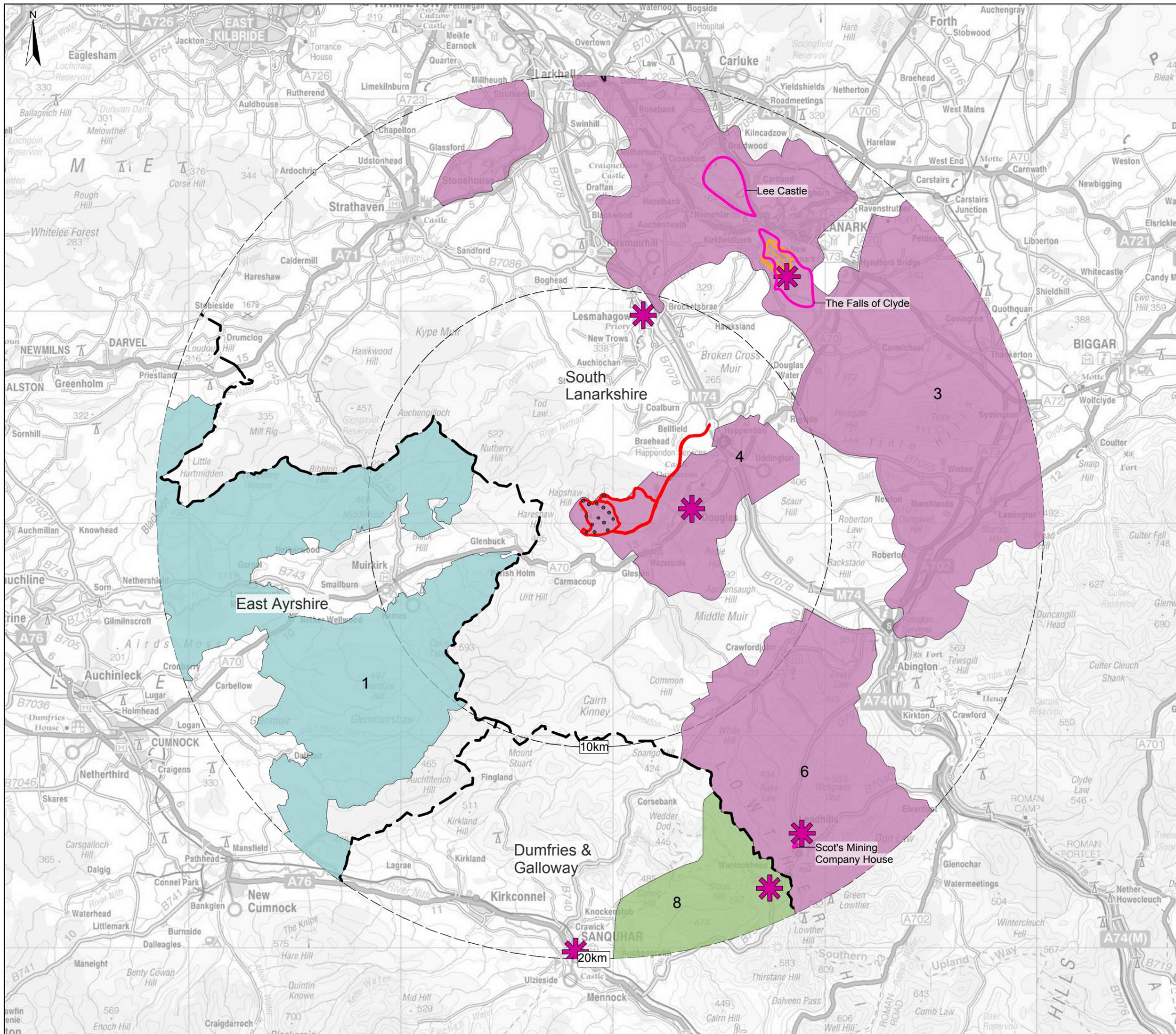
- 1.7.8 The LVIA will take into consideration the effects upon landscape features, landscape character and visual receptors following completion of the Proposed Development.

### **Decommissioning**

- 1.7.9 The LVIA will take into consideration the effects upon landscape features, landscape character and visual receptors during the decommissioning phase of the Proposed Development.

## **1.8 Potential Mitigation**

- 1.8.1 Best practice guidance for EIA states that mitigation measures may include:
- avoidance of effects;
  - reduction in magnitude of effects; and
  - compensation for effects (which may include enhancements to offset any adverse effects).
- 1.8.2 The primary mitigation to be adopted in relation to the Proposed Development will be embedded within the design of the Proposed Development and will relate to the consideration that will be given to avoiding and minimising landscape and visual effects during the evolution of the Proposed Development layout. This is sometimes referred to as 'mitigation by design'.

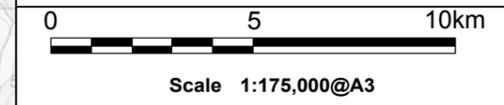


**KEY**

- Site Boundary and Proposed Turbine Locations
- Study Area Radius
- Planning authority boundaries
- World Heritage Site
- Conservation Areas
- Inventory of Gardens and Designed Landscapes

**Local Landscape Areas**

- Dumfries & Galloway Regional Scenic Areas**  
8 - Thornhill Uplands
- South Lanarkshire Special Landscape Areas**  
3 - Upper Clyde Valley and Tinto  
4 - Douglas Valley  
6 - Leadhills and the Lowther Hills
- South and East Ayrshire Sensitive Landscape Areas**  
1 - Southern Uplands SLA

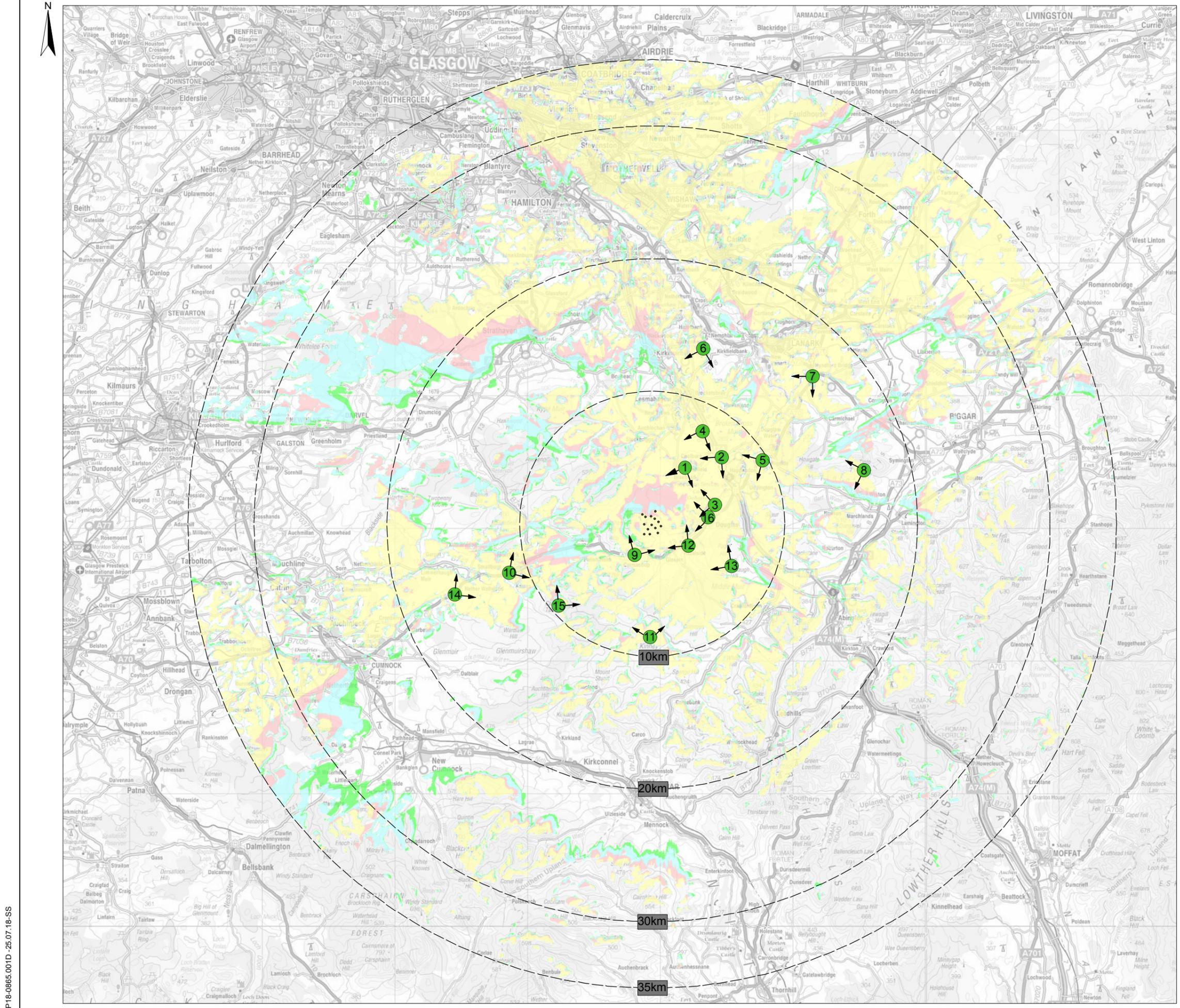


**Hagshaw Hill Repowering**

**Figure 1**

**Landscape Designations within 20km**

P18-0858A.003-25.05.18-SE



**KEY**

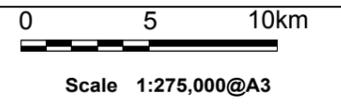
-  Proposed Turbine Locations
-  Study Area Radius
-  Viewpoint locations

1. Braehead, Coalburn
2. M74 Overbridge
3. Monument at Douglas Castle
4. B7078 south of Lesmahagow
5. A70 Rigside
6. Black Hill
7. Hyndford Bridge
8. Tinto Hill
9. Carmacoup (A70)
10. Victory Park, Muirkirk
11. Cairn Kinney
12. East of Glespin (on A70)
13. Auchenshaw Hill
14. Nether Wellwood (A70)
15. Cairn Table
16. Douglas

**Zone of Theoretical Visibility (ZTV)  
run to blade tip height of 200m**

-  1-3 turbines visible
-  4-7 turbines visible
-  8-10 turbines visible
-  11-14 turbines visible

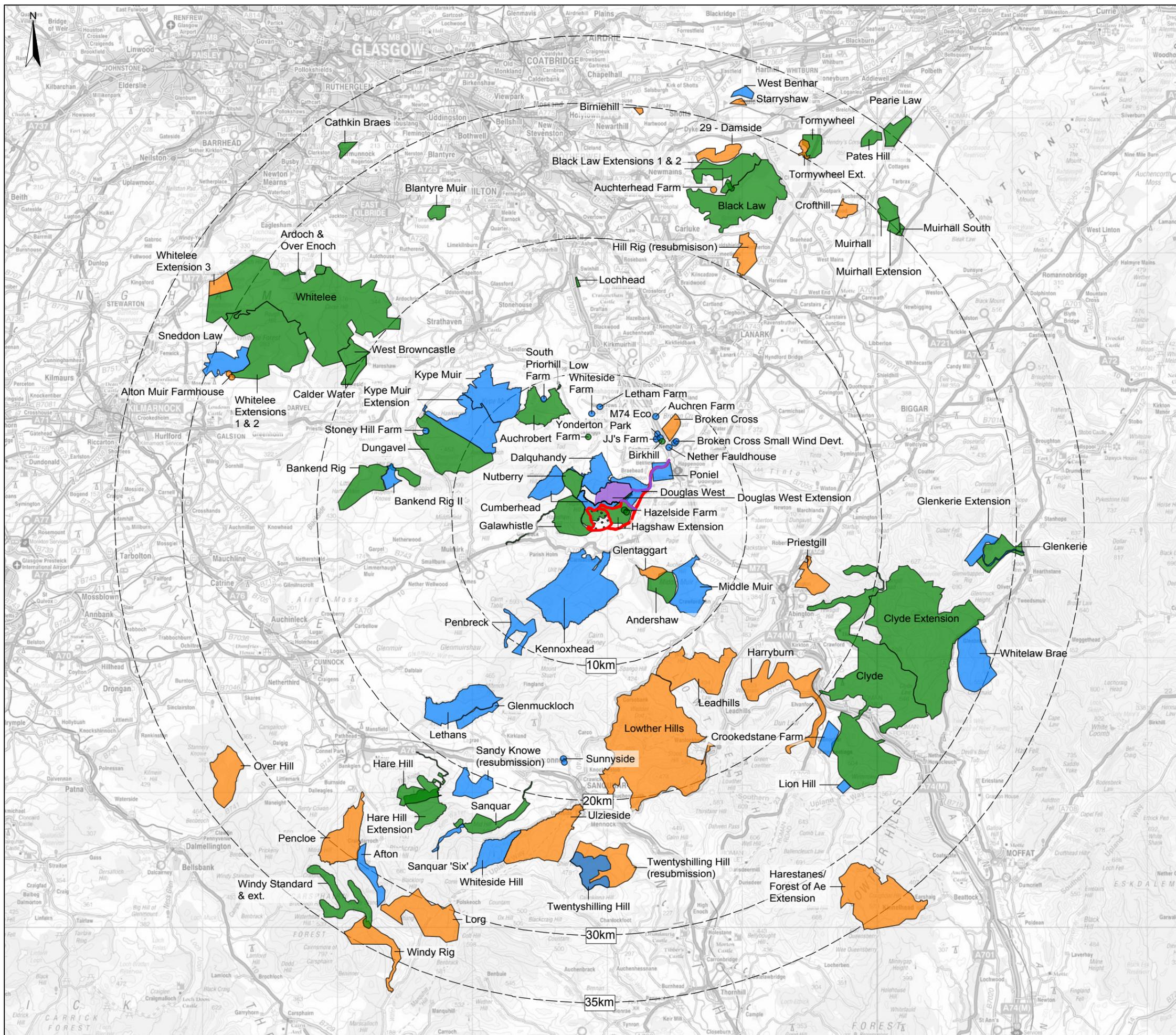
NB The Zone of Theoretical Visibility (ZTV) image illustrates the theoretical extent of where turbines will be visible from assuming 100% visibility. It is generated using terrain data only and does not take into account any screening that vegetation or the built environment may provide. It is as such a worst case ZTV and the actual extents of visibility are likely to be much less extensive.



Hagshaw Hill Repowering

Figure 2

Proposed Viewpoint Locations  
Overlaid on ZTV



**KEY**

• • • Site Boundary and Proposed Turbine Locations

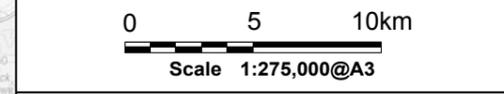
Study Area Radius

- |   |   |
|---|---|
| <p><b>Operational</b></p> <ul style="list-style-type: none"> <li>- Andershaw</li> <li>- Ardoch &amp; Over Enoch</li> <li>- Auchrobert</li> <li>- Bankend Rig</li> <li>- Birkhill</li> <li>- Black Law</li> <li>- Blantyre Muir &amp; Extension</li> <li>- Calder Water</li> <li>- Cathkin Braes</li> <li>- Clyde</li> <li>- Clyde Extension</li> <li>- Dungaevl</li> <li>- Galawhiste</li> <li>- Glenkerie</li> <li>- Hagshaw Hill &amp; Extension</li> <li>- Harehill</li> <li>- Hare Hill Extension</li> <li>- Hazelside Farm</li> <li>- Lochhead</li> <li>- Muirhall &amp; Extension</li> <li>- Nutberry</li> <li>- Pates Hill</li> <li>- Pearie Law</li> <li>- Sanquhar</li> <li>- Sunnyside</li> <li>- Tommywheel</li> <li>- West Browncastle</li> <li>- Whitelee</li> <li>- Whitelee Extensions 1 &amp; 2</li> <li>- Windy Standard &amp; Ext.</li> <li>- Yonderton Farm</li> </ul> | <p><b>Planning</b></p> <ul style="list-style-type: none"> <li>- Alton Muirhouse Farm</li> <li>- Ashmark Hill</li> <li>- Auchterhead Farm</li> <li>- Birniehill</li> <li>- Broken Cross</li> <li>- Crofhill</li> <li>- Crookedstane Farm</li> <li>- Damside</li> <li>- Glenkerie Extension</li> <li>- Glentaggart</li> <li>- Harryburn</li> <li>- Harestanes / Forest of Ae</li> <li>- Hill Rig (resubmission)</li> <li>- Kennoxhead</li> <li>- Kype Muir Extension</li> <li>- Leadhills</li> <li>- Lethans</li> <li>- Lion Hill</li> <li>- Lorg Wind Farm</li> <li>- Lower Hills</li> <li>- Muirhall South</li> <li>- Over Hill</li> <li>- Pencloe</li> <li>- Priestgill</li> <li>- Spango</li> <li>- West Benhar</li> <li>- West Tommywheel</li> <li>- Windy Standard &amp; Ext.</li> <li>- Whitelee Extension 3</li> <li>- Windy Rig</li> </ul> |
|---|---|

- |  |  |
|--|--|
| <p><b>Consented / Under Construction</b></p> <ul style="list-style-type: none"> <li>- Afton</li> <li>- Auchren Farm</li> <li>- Bankend Rig II</li> <li>- Blacklaw Extension Phases 1 &amp; 2</li> <li>- Broken Cross Small Wind Dvt.</li> <li>- Cumberhead</li> <li>- Dalquhandy</li> <li>- Douglas West</li> <li>- Glenmuckloch</li> <li>- JJ's Farm</li> <li>- Kype Muir</li> <li>- Letham Farm</li> <li>- Low Whiteside Farm</li> <li>- M74 Eco-Park</li> <li>- Middle Muir</li> <li>- Nether Fauldhouse</li> <li>- Penbreck</li> <li>- Poniel</li> <li>- Sandy Knowe</li> <li>- Sanquhar 'Six'</li> <li>- Sneddon Hill</li> <li>- Stoney Hill Farm</li> <li>- South Priorhill</li> <li>- Twentysiding Hill</li> <li>- West Benhar</li> <li>- Whiteside Hill</li> </ul> | <p><b>Scoping</b></p> <ul style="list-style-type: none"> <li>- Douglas West Extension</li> </ul> |
|--|--|

Turbines under 50m in height are not included on this plan. Single turbines between 50m-80m within 10km only are included.

Schemes that are at scoping or at the pre-planning stage have also not been illustrated or considered as part of the assessment due to the lack of certainty that these schemes will come forward and the lack of adequate project details. This is in accordance with the approach advocated in GLVIA3.



**Hagshaw Hill Repowering**

**Figure 3**

**Other windfarms within 35km**

P18-0858A.002-25.05.18-SE

## APPENDIX 1 - PROPOSED LANDSCAPE AND VISUAL ASSESSMENT CRITERIA

### Introduction

This appendix presents the assessment criteria proposed to be adopted for the assessment of landscape and visual effects arising from the proposed development.

The primary source of best practice for LVIA in the UK is *The Guidelines for Landscape and Visual Impact Assessment, 3rd Edition (GLVIA3)* (Landscape Institute and the Institute for Environmental Management and Assessment, 2013). The assessment criteria adopted to inform the assessment of effects has been developed in accordance with the principles established in this best practice document. It should however be acknowledged that GLVIA3 establishes guidelines not a specific methodology. The preface to GLVIA3 states:

*'This edition concentrates on principles and processes. It does not provide a detailed or formulaic 'recipe' that can be followed in every situation – it remains the responsibility of the professional to ensure that the approach and methodology adopted are appropriate to the task in hand.'*

The criteria set out below have therefore been developed specifically for this assessment to ensure that the methodology is appropriate and fit for purpose.

The purpose of an LVIA when undertaken in the context of an Environmental Impact Assessment (EIA) is to identify and describe any likely significant landscape and visual effects arising as a result of the proposals.

An LVIA must consider both:

- effects on the landscape as a resource in its own right (the landscape effects); and
- effects on specific views and visual amenity more generally (the visual effects).

Therefore, separate criteria are set out below for the assessment of landscape and visual effects.

### Nature (sensitivity) of landscape features

The nature or sensitivity of an individual landscape feature or element reflects its susceptibility to change and the value associated with it. Sensitivity is therefore a function of factors such as the feature's quality, rarity, contribution to landscape character, degree to which the particular element can be replaced and cultural associations or designations that apply. A particular feature may be more 'sensitive' in one location than in another often as a result of local value associated with the feature. Therefore, it is not possible to simply place different types of landscape feature into sensitivity bands. Where individual landscape features are affected, professional judgement is used as far as possible to give an objective evaluation of its sensitivity. Justification is given for this evaluation where necessary.

The nature or sensitivity of individual landscape features has been described as **very high, high, medium, low** or **very low**.

### Nature (sensitivity) of landscape character

The nature or sensitivity of landscape character reflects its susceptibility to change and the value associated with it. It is essentially an expression of a landscape's ability to accommodate a particular type of change. It varies depending on the physical and perceptual attributes of the landscape including but not necessarily limited to: scale; degree of openness; landform; existing land cover; landscape pattern and complexity; the extent of human influence in the landscape; the degree of remoteness/wildness; perception of change in the landscape; the importance of landmarks or skylines in the landscape; inter-visibility with and influence on surrounding areas;

condition; rarity and scenic quality of the landscape, and the value placed on the landscape including any designations that may apply.

In this assessment, the nature or sensitivity of landscape character is considered with reference to a number of local character areas as defined in this LVIA for the purposes of this study. Information regarding the key characteristics of these character areas has been extrapolated from relevant published studies where possible but also informed by project specific field assessment. An assessment of landscape sensitivity to the development proposed has been undertaken employing professional judgement for relevant local landscape character areas.

The nature or sensitivity of landscape character has been described as **very high, high, medium, low** or **very low**.

### **Nature (sensitivity) of visual receptors**

The nature or sensitivity of visual receptor groups reflects their susceptibility to change and the value associated with the specific view in question. Sensitivity varies depending on a number of factors such as the occupation of the viewer, their viewing expectations, duration of view and the angle or direction in which they would see the site. Whilst most views are valued by someone, certain viewpoints are particularly highly valued for either their cultural or historical associations and this can increase the sensitivity of the view. The following criteria are provided for guidance only and are not exclusive:

- **Very Low Sensitivity** – People engaged in industrial and commercial activities or military activities.
- **Low Sensitivity** - People at their place of work (e.g. offices); shoppers; users of trunk/major roads and passengers on commercial railway lines (except where these form part of a recognised and promoted scenic route).
- **Medium Sensitivity** - Users of public rights of way and minor roads which do not appear to be used primarily for recreational activities or the specific enjoyment of the landscape; recreational activities not specifically focused on the landscape (e.g. football); motel users.
- **High Sensitivity** – Residents at home; users of long distance or recreational trails and other sign posted walks; users of public rights of way and minor roads which appear to be used for recreational activities or the specific enjoyment of the landscape; users of caravan parks, campsites and ‘destination’ hotels; tourist attractions with opportunities for views of the landscape (but not specifically focused on a particular vista); slow paced recreational activities which derive part of their pleasure from an appreciation of setting (e.g. bowling, golf); allotments.
- **Very High Sensitivity** - People at recognised vantage points (often with interpretation boards), people at tourist attractions with a focus on a specific view, visitors to historic features/estates where the setting is important to an appreciation and understanding of cultural value.

It is important to appreciate that it is the visual receptor (i.e. the person) that has a sensitivity and not a property, public right of way or road. Also, the sensitivity of a receptor group is not influenced by the number of receptors. As an example, although many people may use a motorway, this does not increase the sensitivity of each receptor using it. Likewise, a residential property may only have one person living in it but this does not reduce the sensitivity of that one receptor. Whilst the number of receptors affected at any given location may be a planning consideration, for the purposes of this assessment it does not alter the sensitivity of the receptor group.

Where judgements are made about the sensitivity of assessment viewpoints, the sensitivity rating provided is an evaluation of the sensitivity of the receptor group represented by the viewpoint and not a reflection of the number of people who may experience the view.