6 Landscape and Visual

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6 Landscape and Visual

6.1 Executive Summary

6.1.1 This chapter assesses the effects of the Revised Development against the existing baseline environment i.e. as an undeveloped site notwithstanding that there is an extant Consented Development for the site which comprises 15 turbines up to 131 m to blade tip.

6.1.2 In agreement with South Lanarkshire Council, the overall scope of the LVIA remains the same as that of the LVIA for the Consented Development, with the relevant amendments to policy, baseline receptors and the cumulative assessment where necessary. The viewpoint locations and associated photography used for this assessment remain the same as those relating to the Consented Development. To enable a direct comparison between the Consented Development and the Revised Development, a selection of comparative visualisations has been provided, as set out at Volume 4c of the E.S.

6.1.3 The main findings of the assessment are broadly similar to those for the Consented Development in that there will be some inevitable significant landscape and visual effects upon the baseline environment as a result of the Revised Development. In terms of landscape effects, there will be significant effects upon some landscape character areas located within 4 km of the proposed turbines. With respect to visual effects, there would be significant effects upon receptors located within 5 km of the proposed turbines. These landscape and visual effects are broadly similar to those assessed for the Consented Development.

6.1.4 The Residential Visual Amenity Study concludes that although there would be significant visual effects experienced at the two nearest properties, one owned by the Applicant and the other financially involved in the Revised Development, neither of these properties would become an unattractive place to live. This assessment differs from that of the Consented Development, where there were no significant effects experienced at any properties within 1.2 km of the proposed turbines. The difference arises due to the amended locations of the turbines and closer proximity to two properties to the south of the site.

6.1.5 In terms of cumulative effects, the findings are the same as those in relation to the Consented Development in that the combined effect of the Revised Development adjacent to the large grouping of wind farms north of the Douglas Valley would be significant, but this level of significance would occur in any event in the absence of the Revised Development.

6.1.6 Overall, the findings of this LVIA are broadly similar to that of the LVIA for the Consented Development.

6.2 Introduction

6.2.1 This chapter presents a Landscape and Visual Impact Assessment (LVIA) of the Revised Development, and builds upon work carried out in 2015 in relation to the Consented Development (Planning Reference: CL/15/0273).

6.2.2 The purpose of an LVIA when undertaken in the context of an Environmental Impact Assessment (EIA) is to identify 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).

6.2.3 Therefore, this LVIA considers the potential effects of the Revised Development upon:

- individual landscape features and elements;
- landscape character;
- specific views; and

- people who view the landscape.

6.2.4 In this chapter, landscape and visual effects are assessed separately although the procedure for assessing each of these is closely linked.

6.2.5 The main objectives of the landscape assessment can be summarised as follows:

- to identify, evaluate and describe the baseline landscape character of the site and its surroundings and also any notable individual landscape features within the site;
- to determine the nature of the landscape receptor (i.e. the sensitivity of the landscape) through a consideration of its susceptibility to the type of development proposed and any values associated with it;
- to identify and describe any impacts of the development in so far as they affect the landscape resource;
- to evaluate the nature of the landscape effects (*i.e.* the magnitude, duration and reversibility of the effect);
- to identify and describe mitigation measures that have been adopted to avoid, reduce and compensate for landscape effects;
- to evaluate the relative significance of residual landscape effects; and
- to determine which landscapes effects, if any, are significant.

6.2.6 The main objectives of the visual assessment are similar and can be summarised as follows:

- to identify, evaluate and describe the baseline visual context of the site and its surroundings with a focus on both specific views and the more general visual amenity experienced by people who have views of the site;
- to determine the nature of the visual receptor (i.e. the sensitivity of the viewpoint or person whose visual amenity is affected) through a consideration of the susceptibility of the viewpoint/person to the type of development proposed and any values associated with either the viewpoint or visual amenity experienced;
- to identify and describe any impacts of the development in so far as they affect a viewpoint or views experienced;
- to evaluate the nature of the visual effects (i.e. the magnitude, duration and reversibility of the effect);
- to identify and describe mitigation measures that have been adopted to avoid, reduce and compensate for visual effects;
- to evaluate the relative significance of residual visual effects; and
- to determine which visual effects, if any, are significant.

6.2.7 The LVIA also considers any cumulative landscape and visual effects which may arise as a result of the Revised Development in conjunction with other wind farm developments.

6.2.8 The main LVIA presented in this chapter is supported by figures in Environmental Statement (ES) Volume 2, appendices in ES Volume 3 and visualisations in ES Volume 4. Volume 4 is split into two separate documents with Volume 4a consisting of the baseline photography, wireframes and photomontages (including cumulative photomontages where relevant) for viewpoints 1 – 10 with Volume 4b including the corresponding information for viewpoints 11 – 20. Volume 4c consists of comparative visualisations of the Revised Development and the Consented Development.

6.2.9 The location of the Revised Development and the study area for the LVIA is illustrated on Figure 6.1. For reference, other operational, consented and proposed wind farms within 35 km which are referred to throughout this chapter are illustrated on Figures 6.2 and 6.3.

6.3 Legislation, Policy and Guidelines

Legislation

European Landscape Convention

6.3.1 The European Landscape Convention (ELC) is the first international convention to focus specifically on the landscape as a resource in its own right. The convention promotes landscape protection, management and planning, as well as European co-operation on landscape issues. Signed by the UK Government in February 2006, the ELC became binding from March 2007. It applies to all landscapes, towns and villages, as well as open countryside; the coast and inland areas; and ordinary or even degraded landscapes, as well as those that are afforded protection.

6.3.2 The UK Government has stated that it considers the UK to be compliant with the ELC's requirements and in effect the principle requirements of the ELC are already enshrined in the existing suite of national policies and guidance on the assessment of landscape and visual effects.

6.3.3 The ELC defines landscape as:

'An area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors.' (Council of Europe 2000)

6.3.4 It is important to recognise that the ELC does not require the preservation of all landscapes although landscape protection is one of the core themes of the convention. Equally important though is the requirement to manage and plan future landscape change.

6.3.5 The ELC highlights the importance of developing landscape policies dedicated to the protection, management and planning of landscapes. In this regard, South Lanarkshire Council has a suite of landscape character assessment and landscape capacity studies which enables decisions to be made with due regard to landscape character as promoted by the ELC.

Planning Policy

6.3.6 The following current planning policy documents were reviewed as part of the desk study for the LVIA:

- National Planning Framework for Scotland 3 (NPF3) (2014);
- Scottish Planning Policy (SPP) (2014);
- Glasgow and Clyde Valley Strategic Development Plan (2012);
- South Lanarkshire Local Development Plan (2015); and
- South Lanarkshire Local Development Plan Supplementary Planning Guidance 10: Renewable Energy (2016).

6.3.7 The following technical reports which provide the evidence base for the current policy were reviewed:

- South Lanarkshire Landscape Character Assessment (2010);
- South Lanarkshire Validating Local Landscape Designations (2010); and
- South Lanarkshire Landscape Capacity for Wind Farms (2016).

6.3.8 A full and detailed consideration of national and local planning policy is contained in Chapter 5 of this ES and in the accompanying Planning Statement. This section provides an overview of the local policies and designations of particular relevance to the landscape and visual issues considered in this chapter.

Local Policy

South Lanarkshire Local Development Plan (2015)

6.3.9 Policy 4 (Development and placemaking) of the Local Development Plan (LDP) states that *"All development proposals will require to take account of and be integrated with the local context and built form. Development proposals should have no significant adverse impacts on the local community and where appropriate, should include measures to enhance the environment as well as address the six qualities of placemaking*". The policy goes on to provide a long list of requirements that the Council will ensure including:

- *There is no significant adverse impact on landscape character, built heritage, habitats or species including Natura 2000 sites, biodiversity and Protected Species nor on amenity as a result of light, noise, odours, dust or particulates.*

6.3.10 Policy 15 (Natural and historic environment) of the LDP states that *"The Council will assess all development proposals in terms of their effect on the character and amenity of the natural and built environment."* The policy further states that "*The Council will seek to protect important natural and historic sites and features…from adverse impacts resulting from development, including cumulative impacts*". The policy goes on to provide a list and a table of Category 1, 2 and 3 sites as shown on the proposals map. Category 1 sites re international designations such as World Heritage Sites, Category 2 sites are of national importance and include Gardens and Designed Landscapes, and Category 3 sites are locally important designations including Special Landscape Areas, Core paths and Rights of Way and Country Parks.

6.3.11 Policy 19 of the LDP deals with renewable energy. The policy states that "*Applications for renewable energy infrastructure developments will be supported subject to an assessment against the principles set out in the 2014 SPP, in particular, the considerations set out at paragraph 169 and additionally, for onshore wind developments, the terms of Table 1: Spatial Frameworks."* The policy goes on to refer to statutory supplementary guidance which is discussed further below.

6.3.12 Table 1: Spatial Frameworks as set out in SPP establishes a three stage process for developing a spatial framework for onshore wind farms. The first stage requires the identification of 'Areas where Wind Farms will not be Acceptable'. The only designations that fall within this category (Group 1) are National Parks and National Scenic Areas, neither of which are applicable to the Revised Development Site.

6.3.13 The second stage requires the identification of 'Areas of Significant Protection'. Within these areas (Group 2) SPP states *'Recognising the need for significant protection, in these areas wind farms may be appropriate in some circumstances. Further consideration will be required to demonstrate that any significant effects on the qualities of these areas can be substantially overcome by siting, design or other mitigation*.' Notably local landscape designations such as SLAs do not fall within Group 2. None of the other designations or 'Other nationally important mapped environmental interests' are applicable to the Revised Development site.

6.3.14 Table 1 in SPP does permit Councils in drafting spatial frameworks to include community separation for consideration of visual impact and states that the Areas of Significant Protection (Group 2) may include *'an area not exceeding 2km around cities, towns and villages identified on the local development plan with an identified settlement envelope or edge. The extent of the area will be determined by the planning authority based on landform and other features which restrict views out from the settlement.'* Critically however, this does not indicate that development within 2 km of settlements should be prohibited. It is recognised that the Revised Development site does fall within 2 km of two settlements, namely Coalburn and Douglas.

South Lanarkshire Local Plan – Supplementary Planning Guidance 10: Renewable Energy (2016)

6.3.15 The South Lanarkshire Local Development Plan – SPG 10: Renewable Energy was adopted in 2016 and includes a Landscape Capacity Study for Wind Turbines, February 2016.

6.3.16 The Spatial Framework within the adopted Renewable Energy SPG identifies the Revised Development site as being located within an *Area with Potential for Wind Energy Development*. Part

of the site is located within the Douglas Valley Special Landscape Area (SLA), as illustrated on *Map 2 – Development Management Considerations for Renewable Energy*. The SPG states the following in relation to SLA's:

'Any applications for wind energy development within or around SLAs should not have a significant adverse effect on the landscape character, scenic interest and special qualities and features for which the area has been recognised as described in Validating Local Landscape Designations report (2010).'

6.3.17 SPG *Map 2 - Development Management Considerations* does identify the site as partly lying within an Area of Significant Cumulative Development (Area 7), which is derived from the Landscape Capacity Study 2016. Area 7 of the Area of Significant Cumulative Development relates to the north western portion of the site as it passes to the north of the coniferous plantation adjacent to the site.

6.3.18 The SPG states the following with regards to Area 7:

Description	*Key Development Guidance/Criteria*
An area of Rolling Moorland and Plateau Farmland between Douglas Water and the Nethan Valley with over 85 turbines in four wind farms: the operational Hagshaw Hill and Nutberry wind farms together with the consented Galawhistle and Dalquhandy wind farms. These wind farms create an area of Wind Turbine Landscape.	*1. Avoid coalescence with cumulative area 6 by limiting developments in the intervening areas of Upland River Valley (River Nethan), Rolling Moorland. Plateau Farmland and Plateau Moorland.* *2. Limit further significant extension of the cumulative area into adjacent Upland River Valley (Douglas Water) landscape to the south and southeast* *3. Give careful consideration to the position, scale and cumulative effects of developments close to the surrounding settlements including Coalburn and Douglas.*

6.3.19 The SPG then goes on to set out the requirements for cumulative impact assessments as follows:

'Requirements for Cumulative Impact Assessments

Four or more turbines:

- All applications for four or more wind turbines must contain a cumulative landscape and visual impact assessment prepared in accordance with current SNH guidance (see Appendix 1).

  35km cumulative study area - for all developments with four or more turbines.

  To include single, two and three turbine development (above 15 metres in height) up to a 10km radius of the proposed development (to be agreed with the planning authority).

Single/small scale developments (up to three turbines).

All cumulative landscape and visual impact assessments must include all operating and consented schemes and those that are the subject of valid but undetermined applications. Assessments must consider where appropriate, sequential effects that may extend beyond the Council area.'

6.3.20 The SPG also sets out the Council's requirements in relation to residential amenity surveys as follows:

'The residential visual amenity survey should assess the impact of the proposal from the following parameters:

- *distance of the property from the development*
- *extent of the development in the view from the property*
- *angle of view in relation to orientation of the property*

- *proportion of the view from the property occupied by the development*
- *local context in which the development is seen*
- *extent of other built development visible from the property, in particular vertical elements*
- *screening effect of intervening landscape elements such as local landform and vegetation (woodland tree cover and hedges).*

The residential visual amenity survey and assessment should be undertaken in accordance with best practice guidance: 'Guidelines for Landscape and Visual Assessment, 3rd Edition'.

6.3.21 Section 7 of the SPG sets out the assessment checklist for renewable energy developments. Policy RE2 - *Renewable energy developments,* sets out the requirements for renewable energy development applications which should be in accordance with the Development Management considerations and the content of the checklist at Table 7.1 of the SPG, which relates to SPP 2014 Spatial Frameworks for Windfarms. Table 7.1 includes criteria such as landscape and visual impacts, cumulative impacts, and residential visual amenity.

South Lanarkshire Landscape Capacity for Windfarms (2016)

6.3.22 The *South Lanarkshire Landscape Capacity for Windfarms* (2016) was produced to inform the South Lanarkshire Renewable Energy SPG (2016).

6.3.23 The study makes reference to landscape character types and areas defined through *the South Lanarkshire Landscape Character Assessment* (2010).

6.3.24 As the title suggests, the *Landscape Capacity for Windfarms* report attempts to determine the capacity of 15 landscape character types across South Lanarkshire in relation to onshore windfarm development.

6.3.25 The landscape capacity judgements for each character area contained within the reports are noted and considered further in this LVIA as part of the appraisal of landscape sensitivity.

6.3.26 The key settlements, transport routes and important viewpoints identified on *Figure 4.1* of the report are recognised as potential visual receptor locations and discussed as necessary in the LVIA.

Technical Report - South Lanarkshire Validating Local Landscape Designations (2010)

6.3.27 Whilst not a policy document, the above technical report is noted as it provides the evidence base for the local landscape designations in South Lanarkshire. The study undertaken by Ironside Farrar in 2010 sought to validate the local landscape designations in South Lanarkshire and refine as necessary boundaries to the designations.

6.3.28 Of particular relevance to this LVIA is Part 4 of Chapter 6 in which the Douglas Valley Special Landscape Area (SLA) is defined. It is recognised that the southern portion of the Revised Development site boundary falls within the very northern part of this SLA, but only the four most southerly turbines in the Revised Development fall within this SLA, as shown in Figure 6.4.

6.3.29 It is also recognised that the Middle Clyde Valley SLA, Upper Clyde Valley and Tinto SLA and the Leadhills and Lowther Hills SLA all lie between 5 km and 10 km of the Revised Development site.

6.3.30 The SLA designations are discussed further in relation to the Baseline Conditions (Section 6.5) of this LVIA.

Landscape Designations

6.3.31 Landscape designations within 10 km of the Revised Development site with specific geographical limits are illustrated at Figure 6.4.

National/International Landscape Designations

World Heritage Sites

6.3.32 Located just over 10 km to the north-east of the site is the New Lanark world heritage site. New Lanark is a small 18th century cotton mill village, recently restored and designated as a world heritage site in 2001. The World Heritage site lies outside of the Zones of Theoretical Visibility (ZTV).

National Parks

6.3.33 There are no national landscape designations covering the site. The nearest National Park is the Loch Lomond and Trossachs National Park, which is located approximately 65 km to the north-west of the site. At this distance, no effects will be experienced from this designated landscape.

Local Landscape Designations

Regional Scenic Area

6.3.34 The closest regional scenic area is the South Clydeside RSA, which extends to within approximately 7 km of the Revised Development in an easterly direction from the site.

Special Landscape Areas

6.3.35 There are four Special Landscape Areas (SLAs) within the South Lanarkshire Council area which fall within 10 km of the Revised Development site. The southern extent of the site boundary falls within the very northern part of the Douglas Valley SLA, but only the four most southerly turbines in the Revised Development wholly fall within this SLA, with T9 partially falling within the SLA, as shown in Figure 6.4.

6.3.36 It is also recognised that the Middle Clyde Valley SLA, Upper Clyde Valley and Tinto SLA and the Leadhills and Lowther Hills SLA all lie between 5 km and 10 km of the Revised Development.

6.3.37 It is also noted that two sensitive landscape areas (identified within the East Ayrshire administrative area) also fall approximately 6.5 km and 7 km to the west of the Revised Development site.

Conservation Areas

6.3.38 There are three conservation areas within 10 km of the Revised Development site. These are: Douglas, located approximately 1.6 km to the south-east, Lesmahagow located approximately 6.2 km to the north, and New Lanark, located approximately 9 km to the north-east.

6.3.39 Conservation Areas are referenced in this chapter as an indicator of townscape character and value associated with tracts of landscape. The LVIA also takes into consideration the visual effects as experienced by people within relevant Conservation Areas. This chapter does not, however, consider the effect on their setting in heritage terms as this is discussed as necessary within the Chapter 10 of the ES.

Registered Parks and Gardens

6.3.40 There is one registered Historic Gardens and Designed Landscapes within 10 km of the site namely, the Falls of Clyde located approximately 9.9 km to the north-east of the Revised Development. This landscape however, lies outside of the ZTV and is not discussed further within the LVIA.

Guidelines

6.3.41 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).

6.3.42 The LVIA presented in this chapter has been undertaken in accordance with the principles established in this document. It must however be acknowledged that GLVIA3 establishes guidelines not a specific methodology. The preface to GLVIA3 recognises that:

'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.'

6.3.43 The methodology for this assessment has therefore been developed specifically for this LVIA to ensure that it is appropriate and fit for purpose.

6.3.44 Consideration has also been given to the following documents:

- *An Approach to Landscape Character Assessment,* (2014) Natural England;
- *Guidelines for Landscape Character Assessment*, (2002) Countryside Agency and Scottish Natural Heritage (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 Scottish Natural Heritage (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.

6.4 Consultation

6.4.1 Consultation in respect of the proposed methodology and assessment viewpoints for the LVIA has been undertaken at various stages in the evolution of the Revised Development.

6.4.2 Discussions with both South Lanarkshire Council (SLC) and SNH were initially held in 2012 in relation to an earlier iteration of the project on the same site known as the Douglas West Community Wind Farm, and promoted by previous developers Community Windpower Limited (refer to Chapter 2 for further background).

6.4.3 At this time, an EIA Scoping Report was prepared which invited comment on landscape and visual matters from SLC, statutory consultees, other stakeholders and members of the public. The Scoping Report provided an overview of the proposed approach and methodology to be adopted in the LVIA.

6.4.4 A formal Scoping Opinion was issued by SLC on the 14 June 2012 (refer to Appendix 4.1) and this highlighted a number of issues to be addressed in the LVIA; these comments have been taken on board and addressed as appropriate (refer to Table 6.1).

6.4.5 SNH responded to the Scoping Report on 23 May 2012 (refer to Appendix 4.2) setting out various expectations of the LVIA. Again these comments have been taken on board and addressed as appropriate (refer to Table 6.1).

Table 6.1 - Summary of Scoping and Consultation Responses for Landscape and Visual

Consultee	Response	Comment
SLC 14 June 2012	*'Attached to the scoping opinion is a spreadsheet which lists all wind farm and wind turbine developments within South Lanarkshire and a map showing their location. These developments require to be taken into account in the visual and cumulative impact assessment.'* *&* *'The ES should fully assess and demonstrate the cumulative visual and landscape impacts together with the residential amenity impact of the proposed wind farm can be considered acceptable.'*	The cumulative situation within the study area has been updated and the cumulative landscape and visual effects have been assessed in this LVIA. A detailed Residential Visual Amenity Assessment has been carried out and is presented at Appendix 6.4 of this chapter.
SLC 14 June 2012	*'The impact on the [Douglas Valley Special Landscape Area] SLA requires to be fully assessed within the ES both on its own and cumulatively with other developments and proposals at application stage.'*	The LVIA addresses the impacts of the Revised Development on its own and cumulatively.

6.4.6 Discussion with SLC and SNH regarding the viewpoints commenced in 2012. On recommencement of the project in 2015, further discussion was held with SLC and SNH. Both SLC and SNH confirmed (28 April 2015 and 13 April 2015 respectively) they were happy with the final selection of 20 viewpoints shown on Figure 6.23 prior to completion of the LVIA (refer to Appendix 4.3).

6.4.7 Further consultation has taken place in relation to the Revised Development. At a meeting between the Applicant and SLC on 09 May 2017, it was confirmed that the same viewpoint and receptor locations as those within the previously submitted ES remain extant, and the photography used for the previously submitted visualisations are considered satisfactory for use for the purpose of this updated assessment.

6.5 Assessment Methodology and Significance Criteria

Types of Impact Considered in the LVIA

6.5.1 The LVIA assesses both the long term effects relating to the operational lifetime of the Revised Development and also the short term temporary effects associated with the construction of the Revised Development.

6.5.2 Where appropriate, the LVIA also considers any residual effects once the proposed wind turbines have been decommissioned and removed (assumed to be 25 years from the date of completed construction).

6.5.3 The LVIA considers both direct and indirect landscape and visual effects. It not only assesses the impacts associated with the turbines but also any related impacts resulting from the construction compound, underground cabling, site tracks, substation and access roads.

6.5.4 Consideration has been given to seasonal variations when assessing the visibility of the Revised Development.

6.5.5 The LVIA also considers any cumulative and in combination effects arising in conjunction with other wind farm schemes in the study area defined below. Best practice guidelines identify two principal types of cumulative visual impact:

- Combined visibility – where the observer is able to see two or more developments from one viewpoint;
- 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.

6.5.6 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). Both types are discussed in this LVIA. The published GLVIA3 also indicates a difference in emphasis between sequential effects that are frequent and those which are occasional.

6.5.7 In relation to both the effects of the addition of the Revised Development to the landscape on its own, and the cumulative effects with other wind farm schemes in the study area, both beneficial (positive) and adverse (negative) effects are considered. Wind farms give rise to a wide spectrum of opinions, ranging from strongly negative to strongly positive, with a wide range of opinions lying somewhere between these two positions. Some people view wind turbines as incongruous or industrial structures whilst others view them as aesthetically pleasing, elegant structures and a positive response to climate change. This spectrum of opinion has come to be referred to in relation to wind farms as the concept of valency. For the avoidance of doubt, in considering the effects of the Revised Development, a precautionary approach to the assessment has been adopted and it is assumed that, unless specifically stated otherwise, the effects of the proposal will be adverse in nature even though it is acknowledged that, for some people, the impacts could be considered to be beneficial.

Setting the Baseline against which Effects are Assessed

6.5.8 For the purposes of clarification, it is helpful to set out the baseline against which the Revised Development is assessed.

6.5.9 Notwithstanding that the site has received planning permission for 15 no. turbines up to 131 m to blade tip, this LVIA considers the Revised Development against the existing baseline landscape i.e. as an undeveloped site. For reference, and completeness of the assessment, a summary is provided at Table 6.13 which compares the LVIA findings of the previous application with the findings of this LVIA. A series of comparative photomontages have also been produced, as set out at Volume 4c of the ES, to allow direct comparison of the Consented Development and the Revised Development.

6.5.10 In terms of cumulative assessment, this LVIA adopts the approach advocated in *paragraph 7.13* of GLVIA3 which indicates that existing schemes and those under construction should be considered as part of the baseline against which the scheme is assessed.

6.5.11 The baseline for the cumulative impact assessment is extended to include other schemes that are not yet present in the landscape but are at various stages in the development and consenting process. The baseline for the cumulative impact assessment is therefore extended to include other schemes which are consented but not yet under construction and schemes which are the subject of a formal planning application.

Study Area

6.5.12 The extent of the primary study area for the landscape and visual impact assessment has been taken to be a 35 km radius from the site in all directions. The extent of this study area is illustrated in Figure 6.1. Initial site work informed by analysis of preliminary ZTVs however, indicated that significant landscape and visual effects are likely to occur within a much narrower radius from the site than this and therefore the level of assessment work in this LVIA incrementally decreases with distance from the site with the greatest focus of assessment being within broadly 10 km of the site. The intention is that the detail of the LVIA remains proportional to the likely significance of effects as advocated in GLVIA3.

6.5.13 In terms of cumulative effects, the intention has again been that assessment work is proportional to the likelihood of significant effects arising. The approach adopted in the cumulative LVIA has been to focus on other wind farms which are either operational, under construction, consented or the subject of a full planning application and which have the potential to give rise to significant cumulative effects when considered in combination with the Revised Development. Rather than simply considering every other wind farm within a set distance of the Revised Development, the approach has been to focus the assessment on those sites which genuinely have the potential to given rise to significant cumulative effects. Further details of this approach are set out in the cumulative impact assessment (Section 6.10) of the LVIA.

Landscape Assessment Methodology

6.5.14 A baseline landscape assessment was carried out to determine the current features and character of the landscape within and surrounding the site.

6.5.15 The baseline landscape assessment involved firstly a review of desk material including:

- Ordnance Survey maps at 1:250,000; 1:50,000; 1:25,000 and 1:10,000 scales;
- Aerial photographs of the site and surrounding area;
- Topography;
- Current & historical land use;
- Geology and soil maps;
- Historic Parks and Designated Landscapes;
- Relevant planning policy;
- Relevant landscape sensitivity/capacity studies;
- Relevant landscape character assessments; and
- Relevant Historic Landscape Character Assessments.

6.5.16 Field visits have been conducted in a variety of weather conditions and at different times of the year throughout the EIA process of the Revised Development. Surveys have been undertaken between June and July 2012, between March and May 2015, and during June 2017. Pre-arranged visits to residential properties within 1.2 km of the proposed turbines were also undertaken during July 2012. These properties have since been revisited twice, in March 2015 and June 2017, from publicly accessible locations (without requesting further access) to confirm the baseline situation at these properties.

6.5.17 The baseline assessment identified the existing landscape features on the site, and in the immediate vicinity, and how these elements combine to give the area a sense of landscape character. Plans and construction details of the Revised Development were used to determine the impacts of the scheme on landscape features and character.

6.5.18 The LVIA firstly assesses how the Revised Development would impact directly on any existing landscape features or elements (e.g. removal of trees etc.).

6.5.19 The LVIA then considers impacts on landscape character with reference to landscape character areas/types identified in published landscape character documents.

6.5.20 The relative significance or level of effect on landscape features and character is determined by considering in tandem the nature (sensitivity) of the feature or character with the nature (magnitude) of change. The assessment criteria used to determine sensitivity and magnitude are set out in Appendix 6.1. A professional judgement is then provided as to whether the effect is significant or not. The effects which are identified as significant are those which, in the opinion of the professional assessor are likely to be most material in the decision making process.

Visual Assessment Methodology

6.5.21 Potential visual receptors of the Revised Development were identified by interpretation of digitally generated ZTVs (see Table 6.2 for an explanation of ZTVs and how they were produced).

6.5.22 A selection of viewpoints was chosen and agreed with statutory consultees to represent a range of views and viewer types as discussed in *Visual Representation of Wind farms – Version 2.1* (SNH, December 2014) and in *Paragraphs 6.16-6.20* of GLVIA3.

6.5.23 The viewpoints cover a variety of different character areas, are in different directions from the site and are at varying elevations. Some of the viewpoints are intended to be representative of the visual experience in a general location whereas other viewpoints illustrate the view from a specific or important vantage point. The viewpoints are located at a range of distances from the Revised Development to illustrate the varying magnitude of visual impacts.

6.5.24 Visualisations were produced for each of the viewpoints; these are presented in ES Volume 4. An explanation of how they were produced and information to be read in conjunction with the visualisations is provided in Appendix 6.2.

6.5.25 Each of the representative viewpoints was visited to gain an understanding of the sensitivity of the viewpoint receptors and to make professional judgements on the likely visual effects arising from the Revised Development. Furthermore, the entire extent of the study area was visited to appreciate visibility of the development as receptors move throughout the landscape.

6.5.26 The viewpoints were used as the starting point for considering the effects on visual receptors within the entire study area. The visual assessment does not rely solely on the viewpoint assessments to determine the significance of effects on different visual receptor groups throughout the study area. It should be recognised that the viewpoints illustrated in the LVIA simply represent a series of 20 snapshots from a small selection of the locations within the study area from where the Revised Development will be visible. Following the viewpoint assessment, the LVIA considers the effect on visual amenity throughout the study area with reference to different visual receptor groups at varying distances from the site.

6.5.27 The relative significance or level of effect on views and visual amenity is determined by considering in tandem the nature (sensitivity) of the visual receptor with the nature (magnitude) of change. The assessment criteria used to determine sensitivity and magnitude are set out in Appendix 6.1. A professional judgement is then provided as to whether the effect is significant or not. The effects which are identified as significant are those which, in the opinion of the professional assessor, are likely to be a material consideration in the decision making process.

Table 6.2 - Production of ZTVs

Production of Zone of Theoretical Visibility (ZTV) Maps
A Zone of Theoretical Visibility (ZTV) illustrates the extents from which a feature would theoretically be visible within a defined study area. ZTVs are generated assuming a 'bare ground' terrain model. This means that the ZTVs presented within this LVIA have been generated from topographical data only and they do not take any account of vegetation or the built environment which may screen views of the development. It is, as such, a 'worst case' zone of visual influence and considerably over-emphasises the actual visibility of the proposed scheme. In reality trees, hedges and buildings may restrict views of the development from many of the areas rendered as within the ZTV. A further assumption of the ZTV is that climatic visibility is 100 % (*i.e.* visibility is not impeded by moisture or pollution in the air). In reality, such atmospheric conditions are relatively rare in this part of the country. Mist, fog, rain and snow are all common weather occurrences, which would regularly restrict visibility of the development from some of the areas within the ZTV; this being an incrementally more significant factor with distance from the site. Atmospheric pollution is not

Production of Zone of Theoretical Visibility (ZTV) Maps
as significant as it is in other parts of the country but is still present and would also restrict actual visibility on some occasions, again more so with distance from the site. The ZTVs were generated using Resoft WindFarm. The programme used topographical height data (OS Terrain 50) to build a terrain model. The programme then renders the model using a square grid to illustrate whether the turbines would be visible in each 50 m x 50 m square on the grid for a specified distance in every direction from the site. Digital ZTVs have been prepared to illustrate the theoretical visibility of the turbine for a radius of 35 km around the site. Two sets of ZTVs have been produced, the first shows visibility of the turbines at hub height and the second shows visibility of the turbines to blade tip when the blade is at its highest possible position. Enlargements of the ZTVs have also been produced. Cumulative ZTVs have been produced to show locations where the ZTVs of two or more operational, consented or proposed wind turbine sites overlap (in certain cases a number of wind farms which are at the same stage in development have been grouped together). In the cumulative ZTVs one colour has been used to illustrate the theoretical visibility of the Revised Development and a second colour to illustrate the visibility of a second site. Where the ZTVs of the two sites overlap a third colour has been used to illustrate this potential cumulative visual influence. It should be noted that there are several limitations to the use of ZTVs. For a discussion of these limitations please refer to *Visual Representation of Wind farms – Version 2.1* (SNH, 2014). In particular, it should be noted that the ZTV plans simply illustrate theoretical visibility and do not imply or assign any level of significance to those areas identified as being within the ZTV. The ZTVs are a tool to assist the Landscape Architect to identify where the site would potentially be visible from. The assessment of landscape and visual effects in this chapter does not rely solely on the accuracy of the ZTVs. The ZTVs have been ground proofed and professional judgement has been used to evaluate the significance of effects.

Assessment Criteria

6.5.28 The purpose of an LVIA when produced in the context of an EIA is to identify any significant landscape and visual effects within the study area to assist the determining authority in deciding the acceptability of the scheme under consideration.

6.5.29 In accordance with the *Landscape and Visual Impact Assessment Guidelines, 3rd Edition* (Landscape Institute and IEMA, 2013), the level (relative significance) of an effect is ascertained by considering in tandem the nature (sensitivity) of the baseline landscape or visual receptor and the nature (magnitude) of change as a result of the development. Professional judgement is then employed to determine whether the effect is significant or not.

6.5.30 The detailed assessment criteria used to determine landscape and visual sensitivity, magnitude of change and significance of effect are set out in Appendix 6.1.

Residual Effects

6.5.31 Best practice for EIA in general terms requires that the significance of potential effects be assessed, mitigation proposals identified and the residual effect (with mitigation in place) then re-assessed to demonstrate the effectiveness of the mitigation proposed.

6.5.32 In the case of LVIA for wind farms this presents two interrelated problems:

- Potential effects cannot be meaningfully assessed in the absence of an assumed layout; and

- Landscape and visual mitigation principally focuses on refinement of the site layout ('mitigation by design').

6.5.33 The approach taken in this study has therefore been to build landscape and visual mitigation into the final layout (refer to Chapter 2). Mitigation has been taken into account as part of the iterative design process but as this mitigation is integral to the final layout, there is no difference between the assessed effects reported in the main body of this chapter and the residual effects.

Limitations to the Assessment

6.5.34 The assessment of effects within this LVIA has been derived through the use of publicly available information only. Within such a large study area it is unfeasible to visit every single location from which the Revised Development might be visible as illustrated on the ZTVs. The authors of the LVIA have, however, spent a considerable length of time 'in the field' and visited all important viewpoints and locations within the study area.

6.5.35 Limitations to the use of ZTVs are set out in Table 6.1 above and the limitations in relation to photography, wireframes and photomontages are also set out in Appendix 6.2.

6.6 Baseline Conditions

Site Location

6.6.1 The Revised Development site is located in South Lanarkshire, Scotland. The site is centred at approximately OS Grid Reference 281702 632579. The closest settlement to the proposed turbines is the village of Coalburn, located approximately 1.32 km to the north of Turbine 2 (T02). The village of Douglas is located approximately 1.6 km to the south-east of the nearest turbine (T10).

6.6.2 The nearest main highways are the M74 which passes approximately 3 km to the east of the nearest turbine, and the A70 which passes approximately 2 km to the south-east of the site as it runs through Douglas.

6.6.3 The location of the Revised Development site is illustrated at Figures 1.1 and 6.1.

Published Landscape Character Descriptions

6.6.4 A review was undertaken of the following published sources of information regarding regional and local landscape character, landscape value and landscape capacity:

- South Lanarkshire Landscape Character Assessment, 2010, South Lanarkshire Council/Ironside Farrar;
- South Lanarkshire Validating Local Landscape Designations, 2010, South Lanarkshire/Ironside Farrar;
- South Lanarkshire – Landscape Capacity Study for Wind Energy, 2016, South Lanarkshire/Ironside Farrar;
- Glasgow and Clyde Valley Landscape Assessment, SNH Review No 116, 1999, Land Use Consultants and Glasgow University;
- Ayrshire Landscape Assessment, SNH Review No 111, 1998, Land Use Consultants;
- East Ayrshire Landscape Wind Energy Capacity Study, 2013, Carol Anderson Landscape Associates;
- Wind Energy Consultancy Landscape Capacity and Cumulative Impact, 2013, Scottish Borders Council/Ironside Farrar;
- Dumfries and Galloway Landscape Assessment, SNH Review No 94, 1998, Land Use Consultants;

- Dumfries and Galloway Wind Farm Landscape Capacity Study, 2011, Carol Anderson in association with Alison Grant;
- The Lothians Landscape Character Assessment, 1998, ASH Consulting Group; and
- Landscape Capacity Study for Wind Energy in West Lothian, 2011, David Tyldesley Associate.

6.6.5 At this point, for clarity, it is necessary to distinguish between two terms that are frequently used in published guidance and this chapter. They originate from the *'Guidelines for Landscape Character Assessment'* (Countryside Agency and SNH, 2002):-

- Landscape Character Types (LCTs) are defined as tracts of landscape, which have a generic unity of character due to the particular combinations of landform, land cover, pattern and elements. The same landscape character type can occur at several different locations throughout a study area, and
- Landscape Character Areas (LCAs) are defined as discrete geographical areas of a particular landscape character type and can only occur at a single location.

6.6.6 At a local level the Revised Development site falls within the area covered by the South Lanarkshire Landscape Character Assessment (Ironside Farrar, 2010). The landscape character assessment established 14 LCTs for the South Lanarkshire area.

6.6.7 The study also refers to Landscape Character Sub-types (LCSTs). The term sub-type is used within the study to define a further sub division of the primary character type.

6.6.8 In the case of South Lanarkshire, the relevant published studies refer mainly to LCTs/LCSTs. However, it is noted that discrete areas of a type or sub-type are often referred to. These are in effect landscape character areas.

6.6.9 LCTs and LCSTs as identified in the key landscape character assessments above are illustrated in Figures 6.5 and Figure 6.6 (out to 35 km and 10 km respectively). Additionally, Figure 6.19 presents the LCTs and LCAs within 10 km overlaid on the Zone of Theoretical Visibility.

Character Types/Areas Covering the Revised Development Site

6.6.10 Two LCTs/LCSTs cover the Revised Development site. These are LCT 7 – Rolling Moorland and LCST 5 – Plateau Farmland Opencast Mining.

6.6.11 The four most northerly turbines lie within LCT 5B - Plateau Farmland Open Cast Mining; the remaining nine turbines lie within LCT 7 - Rolling Moorland.

<u>Character Type – 5B Plateau Farmlands Opencast Mining</u>

6.6.12 The character assessment records the key characteristics, features and qualities of this LCT as follows:

- Extensive, gently undulating landform;
- Dominance of pastoral farming, but with some mosses surviving;
- Limited and declining tree cover;
- Visually prominent settlements and activities such as mineral working;
- The rural character of the Plateau Farmlands has suffered as tree cover has declined and the visual influence of windfarms, settlements, transport infrastructure and mineral working has increased.

6.6.13 Under the general description of the wider Plateau Farmland LCT, the character assessment recognises:

'Much of this character type is underlain with extensive coal deposits. Open-cast working, often undertaken on a very large scale, has taken place throughout the Plateau Farmlands.'

6.6.14 The subdivision of the type and identification of an 'opencast mining' sub type is in recognition of the extent to which this characteristic defines the landscape. In the vicinity of the Revised Development site, the former open cast workings heavily influence the northern and central part of the site (refer to Figure 3.1) and the underlying land cover is rough grassland rather than a dominance of pastoral farming as indicated in the key characteristics. The former workings have also inevitably altered the undulating landform of the surrounding landscape as recorded in the key characteristics.

6.6.15 It is also noted that the adjacent Dalquhandy Wind Farm (on the adjoining part of the former Dalquhandy Opencast Coal Site) has been consented within this LCST and that once constructed this will heavily influence its character.

Character Type – 7 Rolling Moorlands

6.6.16 The character assessment records the key characteristics, features and qualities of this LCT as follows:

- Distinctive upland character created by the combination of elevation, exposure, smooth, rolling or undulating landform, moorland vegetation and the predominant lack of modern development;
- These areas share a sense of apparent wildness and remoteness which contrasts with the farmed and settled lowlands and the windfarm-dominated Plateau Moorlands;
- There are extensive views over the surrounding Ayrshire and Lanarkshire lowlands from the hilltops.

6.6.17 Having reviewed the key characteristics outlined for LCT 7 – Rolling Moorlands, it is noted that the Revised Development site itself lies on the fringes of this character type in a transitional zone with the adjacent LCT 5 – Plateau Farmland and shares many of the characteristics of this character type. The fact that the site has been previously worked as an opencast mine is also not reflected in this particular description.

Other Character Types and Areas considered in this LVIA

6.6.18 In order to consider the indirect effects of the Revised Development on landscape character, all other LCTs, LCSTs and LCAs within 35 km of the Revised Development are illustrated in Figures 6.5 and 6.6.

6.6.19 As is evident from these figures, there are many discrete character types, sub-types and areas within 35 km of the site. An initial sieving exercise has therefore been necessary to determine which ones required detailed consideration in this LVIA. The intention has been to ensure that the level of attention given to each character type is proportionate to the likelihood of significant effects arising. The discussion below summarises the process followed in deciding which character types have the potential to experience significant effects and hence to scope out various character types from further consideration.

6.6.20 The first observation with reference to the ZTVs presented in Figures 6.7 to 6.18 is that the greatest degree of visibility would clearly occur within approximately 10 km of the Revised Development. Beyond 10 km of the Revised Development, the ZTVs indicate broad coverage of theoretical visibility only in the north-western quadrant of the 35 km study area but this would largely occur in areas within and surrounding urban areas.

6.6.21 In different circumstances, it may be possible for significant effects on landscape character to occur at distances over 10 km away from a site. However, the defining elements of landscape character as experienced at any given location in the wider study area are most commonly derived from features of the landscape in relatively close proximity. In this case, the urban infrastructure present across the north-western quadrant of the 35 km study area (including settlements, industry, highways, overhead lines and operational wind farms at for example Black Law and Muirhall) are likely to have a much greater effect on landscape character than any development in the vicinity of the Revised Development. In this instance, it was therefore considered appropriate to focus

attention on character types that extend no further than 10 km from the Revised Development. This is not to suggest that the turbines will not be visible from certain locations beyond 10 km and in some cases will have a minor effect on landscape character but rather an acknowledgement that at any given location in a landscape the physical and perceptual characteristics of the landscape in the immediate vicinity have a far greater impact on the sense of landscape character than distant features no matter how tall they may be.

6.6.22 Figure 6.19 which shows the character types within 10 km overlaid on the ZTV reveals that even within this distance there are certain character types/sub types from which there would be no or almost no visibility of the Revised Development. Notably there would be no discernible visibility of the Revised Development from character types within East Ayrshire and therefore it has not been deemed necessary to discuss these in the LVIA.

6.6.23 The ZTV indicates wide spread visibility across at least the nearest tracts of LCT 5 – Plateau Farmland and LCT 6 – Plateau Moorland to the Revised Development and therefore these two LCTs are discussed further in the LVIA.

6.6.24 Aside from the tract LCT 7 – Rolling Moorland within which the Revised Development is located, it is noted that there are other geographically separate tracts of the same type within 10 km of the site and that the ZTV indicates a variable degree of visibility from some of these. Two other areas of this character type are considered relevant; both lie to the south of the Douglas Valley separated by a commercial plantation. For the purposes of this LVIA, these two areas of LCT 7 – Rolling Moorland are grouped together and assessed as appropriate.

6.6.25 Character Type 7A – Rolling Moorland Forestry as the title suggests corresponds directly with large tracts of commercial forestry. Therefore, even where the ZTV implies theoretical visibility, there would in reality be no views of the turbines due to the enclosure afforded by forestry. It is the forestry itself that defines character in this LCT. Therefore, despite the fact that LCT 7A extends up to the boundary of the Revised Development site, it has not been deemed necessary to consider this LCT in detail in the LVIA. Similarly, despite the fact that the ZTV implies theoretical visibility within LCT 10A – Foothills Forestry, in reality there would be no effect on character here and hence it is not discussed further.

6.6.26 LCT 7B – Rolling Moorland Windfarm is, as the title suggests, defined by the presence of an existing operational wind farm. The sole example of this sub type occurs directly adjacent to the LCT within which the Revised Development is located. The ZTV indicates that visibility within this LCT would be limited to the ridges where the Hagshaw Hill turbines are already located. As the character of this LCT is already a wind farm landscape, the addition of the turbines in an adjacent LCT is highly unlikely to result in a significant effect on landscape character and hence despite its proximity to the site, this LCT is not discussed further.

6.6.27 It is recognised that there are two discrete areas of LCT 8 – Upland River Valley within 10 km of the Revised Development site (associated with Douglas Water to the south-east and River Nethan to the north-west). The ZTV indicates visibility within both of these valleys. On this basis, it has been considered appropriate to consider both these two areas of LCT 8 in the LVIA.

6.6.28 The opencast sub type of LCT 8 Upland River Valley (i.e. LCT 8B – Upland River Valley Opencast Mining) is not considered sufficiently sensitive that indirect effects arising from a wind farm in a different character area could give rise to significant effects on landscape character and on this basis is scoped out of the assessment. The same applies to LCT 6D – Plateau Moorland Opencast Mining.

6.6.29 The ZTV indicates limited visibility of the Revised Development from LCT 8A – Upland River Valley Incised and from that part of the incised valley where there would be views of the turbines, the view towards the turbines would evidently be down the valley towards the Glespin opencast workings (Glentaggart). In this context, it is not considered that limited and partial visibility of wind turbines could give rise to significant effects on landscape character and hence this LCT is also not discussed further.

6.6.30 The ZTV indicates visibility within both LCT 9 – Broad Valley Upland and LCT 10 – Foothills and therefore these two LCTs are also considered further in this LVIA.

6.6.31 Table 6.3 below provides a summary of the LCTs and LCSTs considered further within this LVIA as identified through the sieving exercise discussed above.

Table 6.3 - Landscape Character Types/Sub Types Considered in Detail

Landscape Character Type/Sub-type	Approximate Distance from Nearest Turbine
5. Plateau Farmland	0.5 km
5B. Plateau Farmland Opencast Mining	Turbines located within this character type
6. Plateau Moorland	1 km
7. Rolling Moorland	Turbines located within this character type (3 km to nearest other area of this LCT)
8. Upland River Valley	0.25 km to Douglas Water, 2 km to River Nethan
9. Broad Valley Upland	3.5 km
10. Foothills	3.5 km

Local Landscape Description and Character Appraisal

6.6.32 A plan showing the landscape features/elements within the site and its immediate context (2 km radius of the turbines) is provided in Figure 6.20. The following discussion provides an overview of the physical and perceptual characteristics of the site and immediately surrounding landscape without particular reference to established landscape character type/area boundaries.

Landform and Topography

6.6.33 Topography and relief within 35 km of the Revised Development site is illustrated in Figure 6.21.

6.6.34 The Revised Development site lies on an area of sloping rough grassland with a primarily north-eastern aspect. The topography evident today is a result of land restoration following many years of having been worked as an opencast coal mine.

6.6.35 The site occupies the lower eastern slopes of a ridge of hills that rises to the west; the nearest peaks being Henry's Hill (445 m AOD), Common Hill (488 m AOD) and Hagshaw Hill (470 m AOD) and which lie between 2 km and 3 km to the south-west of the site. It occupies a transitional zone between the moors to the west and the rolling farmland to the east.

6.6.36 The elevation of the site ranges from 220 m to 310 m above ordnance datum (AOD). The private access to the site near Junction 11 of the M74 lies at a lower elevation of approximately 200 m AOD.

6.6.37 Close to the northern edge of the site, the landform is incised by the shallow meandering path of Poniel Water which runs in a partially diverted channel.

6.6.38 To the south-east the land gently undulates before falling away to the relatively wide river valley of the Douglas Water. On the far side of the valley the land then rises through the village of Douglas to a series of hills including the hill top at Pagie Hill at approximately 388 m AOD. The Douglas Valley runs in a south-west to north-east direction. The upper reaches of the valley some several kilometres south-west are more incised and a number of other incised valleys cut a path down to Douglas Water from the moors above. To the north-east of the site, the rolling topography extends from the northern site boundary northwards towards a large flat area of marsh land.

6.6.39 To the immediate north-west of the site is the adjoining part of the disused Dalquhandy Opencast Coal Site which has significantly altered the appearance of the landscape, leaving the landform scarred and irregular in profile. The restoration of the landform within that part of the opencast has not been as complete as that undertaken within the Revised Development site. The landform of the site itself has however also been significantly altered in places as a result of past mineral workings (refer to Figure 3.1). A now dismantled railway line cuts a path from Junction 11 of the M74 to the

south of the site and a haul road to the former Dalquhandy Opencast Site also cuts through the middle of the site. An artificially levelled area of land is located near the entrance to the site which previously housed the disposal point (DP) associated with the workings on site. This now houses a biomass CHP plant which is operational, and planning permission in principle exists for a range of industrial uses on the flat land surrounding the existing DP hardstanding. Adjacent to this the land is also artificially level where are a series of former settlement ponds have been filled. South of the site, parallel to the dismantled railway line and just north of Broadlea Burn at Douglas West there is an elongated former spoil heap which has an obviously engineered profile.

Watercourses and Drainage

6.6.40 Within and surrounding the Revised Development site there are a number of waterbodies and watercourses. These comprise a mixture of natural and man-made features.

6.6.41 The northern boundary of the site lies close to the course of Poniel Water which in places has had its course reprofiled. Several small tributaries and burns flow from the east across the site to the north joining Poniel Water. Poniel Water continues to flow in a north easterly direction, combining with Coal Burn near Poniel Bridge.

6.6.42 There are several recreated ponds, lochs and lagoons within the Revised Development site. The largest of these is a small loch between T06 and T08 on the course of Longhill Burn, a small tributary which flows towards Poniel Water. Two smaller small lochs lie to the south of the haul road across the site; one on the course of Alder Burn. Although artificially created these have been designed to have a naturalistic profile and are now relatively well integrated into the restored landscape.

6.6.43 To the south of the site, Broadlea Burn flows in a west to east direction towards and through the small cluster of properties at Douglas West.

6.6.44 Surrounding the site there are numerous drainage ditches, burns and ponds, as well as numerous areas of standing water that are associated with the opencast activity.

6.6.45 Within the vicinity of the Revised Development site, the primary watercourse is the Douglas Water which is located approximately 1.3 km to the south-east of the nearest turbine (T09) at its closest point. Douglas Water meanders through a valley from the south-west in a north easterly direction before converging with the River Clyde south of Lanark. A number of small lakes occupy positions in the floodplain of the river.

Vegetation

6.6.46 The vegetation within the Revised Development site is primarily a result of landscape restoration following the opencast workings in the 1980s and 1990s.

6.6.47 The vast majority of the site consists primarily of rough grassland, especially in the south of the site. The site itself does not contain any woodland cover however; some scrub vegetation has established along the lines of the watercourses, particularly around the ponds and tributaries which run along the northern boundary of the proposed site.

6.6.48 The Revised Development is situated between two large areas of plantation woodland. The plantation, around which the Revised Development site is located, is a relatively modern commercial forest. Long Plantation which lies between the Revised Development and Douglas Valley is of more historic origins and associated with the policies of Douglas. This is a designated Ancient Woodland which is understood to have been planted in the late 19th century to screen the mineral railway line to Douglas West from Douglas Castle and the village of Douglas. Long Plantation is today owned by the Douglas and Angus Estate and the Estate's Forest Plan (July 2012) was reviewed as part of this assessment. The Forest Plan confirms that there are no proposals to clear fell the Long Plantation but there are plans for localised thinning and felling of parcels of commercial crop within the forest over the next 20 years which will then be replanted. The overall screening effect provided by the Long Plantation will therefore continue for the operational period of the Revised Development.

6.6.49 Forestry extends from Long Plantation into Happendon Wood on the opposite side of the M74 motorway.

6.6.50 A number of small woodland blocks of coniferous trees are located along the minor road which runs from Nethertown of Poniel to Craigend.

6.6.51 Some of the land in the north-east section of the site is semi-improved grassland which appears to be used for grazing. In a north easterly direction, those areas not previously worked are more typically pastoral and occasionally arable.

6.6.52 It was noted that a significant amount of reforestation/restoration is currently taking place within the vicinity of the site on the former open cast mining sites. There is extensive young plantation planting located to the east and south east of Coalburn, south of Bellfield Road. There is also evidence of forest planting further east of Coalburn, in the vicinity of Coalburn Moss, to both sides of Bellfield Road.

6.6.53 Within the Douglas Water Valley, south of Long Plantation, the vegetation takes on a parkland character with various copses, small plantations and individual parkland trees.

Built Infrastructure

6.6.54 The Revised Development site is predominantly restored rough grassland. The vast majority of the site was previously worked for minerals during the 1980s and 1990s and whilst the landscape has been substantially restored, there remains much evidence of the previous activities on site.

6.6.55 The most prominent feature is the large area of hardstanding near the north-eastern corner of the main body of the site. This was the site of the main processing activities during the works and now houses a large biomass CHP plant. The land surrounding this area of hardstanding was the last part of the site to be restored and is consequently the least well established. The footprints of some former buildings are evident as is the former weighbridge. Planning permission in principle also now exists for a range of industrial uses on the land surrounding the existing DP hardstanding as shown on Figure 6.20.

6.6.56 In the north-west corner of the site at Brackenside there is a derelict stone building with no roof which is un-inhabited and currently in an un-inhabitable state. The building sits within an enclosed area which is surrounded by a stone wall. Another stone wall surrounds a parcel of land just south of the commercial forestry on the south-western part of the site.

6.6.57 A former coal haul road which starts at the B7078, by Junction 11 of the M74, heads in a south westerly direction past a large industrial complex at Poniel. The access road initially follows the line of the dismantled Muirkirk Branch railway. At the large area of hardstanding (DP), the access road continues in a westerly direction across the proposed site. The access track then continues in a north westerly direction, through the adjoining part of the Dalquhandy Opencast Coal Site, towards the southern edge of Coalburn. A number of passing places remain alongside the road. There are also several other lesser tracks which cross the site.

6.6.58 The dismantled railway line runs along the eastern boundary of the Revised Development site. Little evidence of the railway line remains, other than the linear remains of the line travelling through the landscape and a few bridges.

6.6.59 There is an existing electricity substation just beyond the southern corner of the site at Douglas West. From here a number of overhead electricity lines cross the site or trace the southern boundary of it. One line of pylons and overhead wires cross the site and cut through the forest plantation heading for Coalburn. This line is now disused. A double row of overhead wires originates just to the south of the site. The double row runs up the entire eastern boundary of the site, and continues in a northerly direction past the M74. There is a further line of overhead wires, again originating in the same location and travelling in a westerly direction towards the Hagshaw Hill and associated extension wind farm sites.

6.6.60 From the substation, there is also an access track leading to the Hagshaw Hill turbines and this also acts as an access point to the Nutberry Wind Farm and commercial forestry activities which lie to the west of the site. This access track marks the southern extent of the site.

6.6.61 To the north-west of the site, the neighbouring part of the disused Dalquhandy Opencast Coal Site lies within close proximity of the site boundary. This mine is no longer in use and remedial planting

has taken place in an attempt to reduce the visual scarring to the landscape that has taken place. However, unlike the area that was worked on the Revised Development site, the voids left from the mining at the adjacent part of the Dalquhandy site have not been filled and therefore this tract of land retains more of a disused quarry site character.

6.6.62 In the slightly wider context, the village of Coalburn lies to the north and Douglas lies to the south-east. There are outline proposals to build new houses on the southern edge of Coalburn (Gunsgreen, Ref: CL/08/0313 and CL/13/0334).

6.6.63 To the north of the site, a narrow road leads from Nethertown of Poniel southwards towards Westerhouse and there is a small number of isolated properties nestled alongside this road. To the south of the site the nearest properties lie at Douglas West which is accessed along Station Road from the A70 on the western side of Douglas.

6.6.64 Within close proximity to the Revised Development site, there are several existing wind turbines, namely, Hagshaw Hill Wind Farm and its extension, Hazelside Farm wind turbine and Nutberry Wind Farm. Hagshaw Hill and the associated extension have a height to blade tip of 57 m and 80 m respectively. Hazelside Farm wind turbine was erected in 2016 and is 74 m to blade tip. Planning permission exists for a further turbine at Hazelside of the same dimensions but this is yet to be built. Nutberry Wind Farm consists of 6 turbines which have a maximum blade tip height of 125 m. These wind farms are serviced by an access road which travels through Douglas, along Station Road and runs along the southern boundary of the Revised Development site.

6.6.65 There are also a number of smaller scale turbines in the local landscape, namely one at Auchren Farm, one at JJ Farm, one at the Harbro Feedling Mill (Birkhill) and another at Nether Fauldhouse. These four turbines are located directly alongside the M74 corridor, north east of the Revised Development.

6.6.66 North-east of the site, accessed from the road leading to the site from Junction 11 of the M74, is a large complex of utilitarian industrial storage and distribution units used as a bonded warehouse. These are light green in colour and are particularly prominent in the surrounding landscape.

Sensory and Perceptual Characteristics

6.6.67 The Revised Development site is open and exposed with little vegetation within it. Therefore, except at the edges adjacent to the plantations, there is little sense of enclosure. As a consequence, the site and immediate surroundings have a relatively large scale. The restoration of the landscape following mineral working has been relatively successful but nevertheless the condition of the landscape is evidently diminished by its previous land use. Relicts of the minerals operations ensure that there remains a strong sense of past industrial activity.

6.6.68 Alongside the former opencast coal extraction operations on site, and associated colliery spoil heaps and mineral railway lines, the biomass CHP plant and the urban development in the surrounding landscape and commercial forestry adjacent to the site lends the landscape a sense of intensive human influence over many decades.

6.6.69 In contrast, the Douglas Water valley to the south of the site has historic character and recreational interests as recognised by its designation as an SLA. Here the character is less exposed although the width of the valley means that it is not enclosed. The scale of this landscape is smaller and the condition of the landscape features is more intact.

Forces for Future Change in the Landscape

6.6.70 It is helpful to consider the future forces for change in the baseline landscape in order for the landscape effects of the Revised Development to be set in context.

6.6.71 The landscape restoration proposals for the adjacent part of the former Dalquhandy Opencast Coal mine to the north-west of the Revised Development site includes the aspiration of restoring the land to open moorland and plantation forestry, although it is acknowledged that there may not be any further work done on this site until the consented wind farm project commences (see below).

6.6.72 Four commercial wind farm developments have been consented within 5 km of the Revised Development site, namely: the Dalquhandy development of 15 turbines (126.5 m to blade tip) on

the adjacent part of the former Dalquhandy Opencast mine noted above, the 11 turbine Cumberhead Wind Farm, the two turbines Broken Cross Small Wind Development, and the Poniel development of three turbines (100 m to blade tip). There are several other individual large and medium scale turbines consented within 5 km, mostly north of the Revised Development site between Lesmahagow and Coalburn but also two 74 m turbines at Hazelside Farm adjacent to the operational turbines at Hagshaw Hill – one of which is built and operational. Further afield (between 5 km and 10 km) there are various other wind farms which are consented including those at Penbreck, Kennoxhead and Kype Muir Extension. In accordance with the approach advocated in GLVIA3, these schemes are not taken into account in the baseline against which the Revised Development is assessed but there is a relatively high degree of certainty that these schemes will be constructed in the coming years and influence the landscape character of the study area.

6.6.73 It is widely recognised that climate change will have an impact on the future character of the British landscape.

Visual Receptors

6.6.74 Due to the height of the proposed turbines and the undulating landform in the surrounding study area, there is the potential for the development to be visible at considerable distances in several directions, most notably to the north and north-east of the proposed site. However, at an early stage in the assessment, it was determined that there was little potential for the development to result in any notable visual effects at distances over 35 km from the site and furthermore that with distance from the site, the likelihood of significant visual effects occurring incrementally decreases. Therefore, whilst the study area for this LVIA extends out to 35 km and the various figures which accompany this report illustrate a 35 km study area, sensitive visual receptors are identified with a decreasing level of detail with distance from the site.

6.6.75 Interpretation of the ZTVs (Figures 6.7 – 6.18) assisted to identify potentially sensitive visual receptors of the Revised Development. Principal visual receptors within the surrounding landscape are illustrated at Figure 6.22 and are identified below.

Residential Receptors and Settlements

6.6.76 Residential visual receptors have been identified in bands of distance from the nearest turbine with a greater level of detail provided in relation to properties nearest to the Revised Development. It is however recognised that there would be views from individual properties and clusters of properties throughout the study area.

6.6.77 There are eight residential properties within 1.2 km of the proposed turbines. Seven of these are identified and discussed in detail within the Residential Visual Amenity Study (RVAS) presented at Appendix 6.4. One property, Braidlea has been excluded from the RVAS due to the location of the property within woodland. This property has been considered separately within the visual assessment. In summary, the properties considered within the RVAS are as follows (approximate measurements are taken from nearest turbine tower to the nearest façade of the habitable part of the residential building in each case):

- Westerhouse (0.76 km);
- Craigend (0.81 km);
- West Toun House (1.05 km);
- 3 Westoun Steadings (1.02 km);
- 1 Westoun Steadings (0.97 km);
- Blackwood Cottage (0.72 km); and
- Station House (0.73 km).

6.6.78 Between 1.2 km and 2 km of the turbines, there are several other isolated properties. However, a greater number of residential properties lie within Coalburn to the north and Douglas to the south-east.

6.6.79 The southern edge of Coalburn has merged with Braehead and there are outline proposals to build new houses (Gunsgreen development) on the southern edge of these two areas which would further merge the two settlements.

6.6.80 On the eastern outskirts of Coalburn village, strung out along Bellfield Road there are a few clusters of residential properties at Bellfield, Netherfield and Nethertown of Poniel. The scattered properties located along this road fall between 1.2 km and 2 km from the site. Other isolated dwellings located to the north of the site falling within 1.2 km and 2 km include the properties at Midtown (approximately 1.5 km), and Netherton Croft (approximately 1.7 km) from the Revised Development.

6.6.81 There are some isolated properties located between the site and the village of Douglas, situated to the north and west of Douglas. These include Gardens House (approximately 1.45 km from the nearest turbine), Braidlea (approximately 1.2 km from the nearest turbine), Scrogton (approximately 1.4 km from the nearest turbine) and Scrogtonhead (approximately 1.4 km from the nearest turbine).

6.6.82 A proposed outline residential development at Gunsgreen, at the southern extent of Coalburn is not subject to a reserved matters application; however, the settlement boundary for Coalburn has been amended to address this proposed extension to the village and it is noted that there will likely be residential properties built within approximately 900 m of proposed turbine T02. It is not possible to assess the potential impacts upon the residential properties within this future development due to the lack of a final layout illustrating development layout, house types, orientation and landscape design. It is noted however that anyone moving into one of these future houses would be aware that there is an extant permission to construct the Consented Development and the Dalquhandy Wind Farm in equally close proximity to the properties.

6.6.83 Aside from the villages of Coalburn and Douglas, there are no other sizeable settlements within 5 km of the site; smaller clusters of properties between 2 km and 5 km of the Revised Development include the following:

- Glespin;
- Auchlochan;
- Cairnhouses; and
- Uddington.

6.6.84 There is only one town or village between 5 km and 10 km of the Revised Development site, namely Lesmahagow. The small village of Rigside is located approximately 5 km to the north-east.

6.6.85 Further afield and within the 35 km study area are the larger towns of Lanark, Carluke, Biggar, Sanquhar, Cumnock, Kilmarnock and Strathaven. The south-eastern edge of the city of Glasgow also falls within the 35 km study area.

Recreational and Long Distance Walking and Cycling Routes

6.6.86 There are several recreational and long distance walking and cycling routes within the 35 km study area of the Revised Development and it is acknowledged that there is the possibility to link the River Ayr Way and the Clyde Walkway through the site in the future (see Appendix 3.1). There are no national walking or cycling routes within 2 km of the site. There is one National Cycling Network route located within 5 km of the Revised Development, described below:

- NCN 74 – This cycle route connects Gretna with Glasgow, travelling via Lockerbie and Abington. This route originates in Gretna, and from Abington, the route continues in a north-westward direction travelling along the B7078 to Lesmahagow and beyond to Larkhall and Hamilton via

the minor road network. The closest section of the route to the Revised Development is located approximately 3 km to the east at the B7078 at the junction with the A70.

6.6.87 There are two long distance walking routes which originate just within 10 km of the site. These routes are as follows:

- Clyde Walkway – The Clyde Walkway is a 65 km footpath and cycleway which runs from New Lanark, approximately 9.7 km from the Revised Development, to Glasgow. It falls entirely outside of the ZTV and is therefore not discussed further.
- River Ayr Way – The River Ayr Way follows the length of the River Ayr from its source at Glenbuck Loch to the Firth of Clyde at Ayr. It falls entirely outside of the ZTV and is therefore not discussed further.

6.6.88 The potential to link the Clyde Walkway and River Ayr Way through the Revised Development site is discussed in detail within Appendix 3.1 – Access Strategy.

6.6.89 Other long distance routes between 10 km and 35 km of the site include the following (all of which are sufficiently distant that no significant effects are predicted):

- NCN 75 (approximately 29 km to the north-west the nearest turbine);
- Southern Upland Way (approximately 16 km to the south of the nearest turbine); and
- John Buchan Way (approximately 29 km to the east of the nearest turbine).

Core Paths and other Routes

6.6.90 Within the 35 km study area, there are inevitably numerous core paths and other routes and it would be impossible to describe them all in this chapter.

6.6.91 The core paths and other routes in the immediate vicinity of the site are described below. They are also illustrated within the Landscape Context Plan (Figure 6.20) and on Figure A3.1 of Appendix 3.1.

6.6.92 A number of footpaths run through the site, as well as within 2 km of the site. A core footpath, CL/5734/1 becoming CL/5735/3, travels from Coalburn, passing through the very north-eastern corner of the site (proposed access track), continuing in a south eastern direction to Long Plantation. At its closest point the footpath lies within approximately 418 m of turbine T7.

6.6.93 A wider network path originates north of turbine T01. This wider network path continues in a south-easterly direction, passing between T01 and T02, located approximately 170 m and 16 m away respectively. This footpath then exits the site boundary, passes through the plantation, and re-enters the site, terminating approximately 80 m south of turbine T08 where it joins an aspirational route heading towards Long Plantation. Leading off from this footpath within the plantation is another wider network path, continuing in a south-westerly direction along the edge of the plantation, approximately 280 m from turbine T14 at its nearest point. The footpath then continues through the plantation, travelling under the overhead wires, creating a loop to the route.

6.6.94 A series of aspirational core paths pass through the site. As well as the path mentioned above, another path travels on the eastern side of the proposed site, along the dismantled railway track (CL/5729/1). This aspirational core path is approximately 200 m from turbine T09 at its nearest point as it heads north-west to join a Wider Network Path.

6.6.95 To the south-west of Coalburn, an aspirational core path CL/5736/2 travels in a south-east direction, entering the site, passing between turbines T04 and T05, at distances of approximately 172 m and 173 m respectively. The path continues in a southerly direction past turbines T06, T07, T08 and to the south of turbine T12. The path then heads in a north-easterly direction, passing through the former DP area of the opencast mine, joining up with the aspirational core path which runs along the dismantled railway.

6.6.96 To the north-west of the site on the adjoining part of the old opencast workings, there is an extensive network of core paths, aspirational core paths and wider network paths.

6.6.97 To the north of the site there is a network of core paths and wider network paths in the vicinity of Coalburn. One core path runs along the western edge of Coalburn in a north south direction. This path is transected by another core path which runs from the plantation to the west of Coalburn, easterly, over Coalburn Road, along Manse View towards the dismantled railway. An additional core path then travels in a northerly direction along the dismantled railway.

6.6.98 A wider network of path travels along the length of Bellfield Road, with a series of small offshoots leaving Bellfield Road, along small tracks. A wider network path also travels along the main road, starting just north of Crowhill farmstead, continuing in a southerly direction to just south of Westerhouse.

6.6.99 To the east of the site, a series of core paths and wider network paths cross throughout Long Plantation. One core path, CL/3337/1, exits Long Plantation next to Gardens House, running in a southerly direction past Castle Dangerous, then splits to travel around each side of Stable Lake, CL/3332/1 and CL/3331/1, continuing to the south west towards Douglas. A network of core paths run throughout Douglas, including one in-particular which heads in a north-westerly direction along the northern boundary of the recreational ground and on towards Long Plantation, namely CL/3342/1. Core Path CL/3343/1 runs in a south-westerly direction through Long Plantation, along the dismantled railway, becoming CL/3344/1 leading towards Station Road. At the Outdoor Centre on Station Road the core path splits, with one route, CL/3452/1, continuing southwards along the dismantled railway. The other route, CL/3457/1, continues in a north-westerly direction along the southern boundary of the proposed site continuing westwards through the Hagshaw Hill Wind Farm site. An aspirational core path runs around Henry's Hill through the plantation to the north parallel to the core path CL/3458/1.

6.6.100 An Outline Access Strategy for the Revised Development which aims to improve linkage between existing path networks in the area is included in Appendix 3.1.

Road and Rail Network

6.6.101 An extensive network of major and minor roads traverses the landscape within the 35 km study area.

6.6.102 The M74, a major motorway linking Glasgow with the north of England, runs in a north north-west to south south-east direction to the east of the site. At its closest point between junctions 11 and 12 near Happendon Services, the M74 passes approximately 2.7 km to the north-east of the nearest turbine.

6.6.103 The A70 also runs to the south-east of the site through the Douglas Valley. The A70 runs between Lanark and Ayr. As this road passes through Douglas village it is approximately 2 km from the nearest proposed infrastructure.

6.6.104 Two notable B roads which run within 10 km of the site, include:

- the B7078 which runs in parallel to the M74 to the west of the site; and
- the B7055 located to the north-east of the site.

6.6.105 The nearest railway line to the site is the Carlisle to Glasgow line which passes approximately 13 km to the east of the site. The Carlisle to Glasgow line splits at Carstairs Junction, with one branch continuing towards Edinburgh. The train lines fall largely outside of the ZTV and therefore are not discussed further.

Centres of Recreational and Tourism Activity

6.6.106 The main centre of local recreational activity in the vicinity of the Revised Development is the area to the north and north-east of Douglas centred on the Douglas Castle Policies. This publicly accessible area of recreation is used principally by walkers and attracts some visitors from outside the area. The Douglas Castle Policies contains the ruins of Castle Dangerous, the remnants of a castle built in 1457, which inspired Sir Walter Scott's novel of the same name. It also hosts the Cameronian Memorial unveiled in 1968, to honour the Regiment after 300 years of service, on its disbandment and is situated a mile away from where the Regiment was raised by the Earl of Angus in 1689. The

memorial has recently been restored with new seating around it. The Polish Memorial Garden commemorates the Polish allies of the United Kingdom who were based in the Policies during the Second World War. Between the village and Castle Dangerous is Stable Lake, used for fishing by the local community during the coarse fishing season, and for curling by the Douglas Curling Club in the winter (when the lake freezes). A 1.4 km circular all abilities walkway has been created around it and throughout the valley there are picnic benches and other benches. The undulating terrain and the permanent hunt jumps, provide for the Pony Club who hold regular Hunter Trials in the shadow of Castle Dangerous.

6.6.107 Within Douglas village there is a heritage trail which includes the Douglas Heritage Museum, St Bride's Church, the war memorial and the Earl of Angus Monument amongst others.

6.6.108 The site of the former Dalquhandy Opencast Coal Mine has also been opened up to public access but until restoration proposals start to mature, at present it is not particularly appealing as a recreational centre, but there are opportunities for the future (see Appendix 3.1).

6.6.109 To the north-east of the site is the New Lanark World Heritage Site (WHS), which includes attractions such as the restored cotton mill village, a roof garden viewing platform, a visitor centre, the Falls of Clyde, restaurants and accommodation. The majority of the WHS lies in a valley from which there would be no view of the proposed turbines. Figure 6.8 illustrates that there would be no theoretical visibility of the proposed turbines from the vast majority of the WHS, with limited theoretical visibility of up to three turbine blade tips in the vicinity of Byretown, on the edge of the designated area. In reality, when taking into consideration the topographical variation between the WHS and the site, and the high degree of vegetation within the intervening landscape, the Revised Development is not likely to be visible. Therefore, effects on the WHS are not discussed further.

6.6.110 The assessment of effects on tourism and local recreation is also further assessed in Chapter 13 of this ES (Socio-Economics and Tourism), and a proposed Access Strategy is outlined in Appendix 3.1.

Viewpoints in the South Lanarkshire Spatial Framework and Landscape Capacity for Windfarms

6.6.111 The above document identifies a number of key panoramic vantage points (or viewpoints) which it considers to be of importance. A number of these located within the study area are noted below:

- Douglas Castle
- Tinto
- Hyndford Bridge
- Black Hill
- Biggar Common
- Culter Fell
- Little Sparta
- Forth
- Motherwell Heritage Centre

6.6.112 Each of the above viewpoints has been adopted as an assessment viewpoint and is discussed individually within this LVIA.

6.6.113 It is noted that Red Moss and Abington Services which are also identified in the above document and lie in relatively close proximity to the site do not fall within the ZTV and are therefore not discussed further.

Assessment Viewpoints

6.6.114 The desk studies, site visits and interpretation of the ZTVs, alongside consultation with statutory consultees, helped to identify 20 assessment viewpoints. These were considered to be representative of the range of views towards the Revised Development site. They are not intended

to cover every single possible view, but are representative of a range of distances from the site and receptor types (e.g. residents, walkers, road users).

6.6.115 Table 6.4 identifies the 20 assessment viewpoints. The locations of these assessment viewpoints are illustrated on Figure 6.23.

6.6.116 Appendix 6.3 provides a baseline description of the view from each assessment viewpoint followed by a detailed analysis and assessment of effects on the viewpoint (VP).

Table 6.4 - Assessment Viewpoints

VP No.	Location	OS Grid Reference	Approximate Distance to nearest turbine	Character Area
1	Braehead	281512, 634519	1,376 m to T04	5 – Plateau Farmland
2	M74 Overbridge	284562, 635389	3,358 m to T07	5 – Plateau Farmland
3	Douglas Castle	284119, 631737	1,743 m to T09	8 – Upland River Valley
4	Douglas	283541, 631002	1,610 m to T09	8 – Upland River Valley
5	B7078 south of Lesmahagow	283190, 637213	4,372 m to T09	5 – Plateau Farmland
6	A70 Rigside	287701, 635190	5,709 m to T07	10 – Foothills
7	Black Hill	283198, 643547	10,527 m to T04	4 – Rolling Farmland
8	Hyndford Bridge	291447, 641479	12,495 m to T07	9 – Broad Valley Upland
9	Tinto Hill	295320, 634369	12,860 m to T07	11 – Prominent Isolated Hills
10	Motherwell Heritage Centre	275004, 657069	24,451 m to T01	Urban
11	Culter Fell	305283, 629082	22,997 m to T07	13 – Southern Uplands
12	Southern Upland Way, Lowther Hill	288768, 610954	21,754 m to T13	13C – Southern Uplands Leadhills
13	Coalburn Road, north of Coalburn	281184, 636214	3,074 m to T04	5 – Plateau Farmland
14	Glespin (on A70)	282048, 628728	2,797 m to T13	8 – Upland River Valley
15	Auchensaugh Hill	285337, 627198	5,659 m to T10	
16	A721 near Kilncadzow	289047, 648400	16,891 m to T06	4 – Rolling Farmland
17	Forth	294044, 653642	23,739 m to T06	5 – Plateau Farmland
18	Little Sparta	305250, 648826	27,739 m to T07	5 – Plateau Farmland
19	Quothquan Law	298822, 638422	1,7234 m to T07	10 – Foothills
20	Brocketsbrae	282288, 639824	6,717 m to T04	5 – Plateau Farmland

6.7 Potential Effects

6.7.1 Following a brief summary of the Revised Development, this section of the report considers the effects of the Revised Development on landscape features, landscape character and visual amenity. It considers the effects at three different stages in the lifetime of the Revised Development:

- during construction of the Revised Development;
- during the operational lifetime of the Revised Development; and

- during decommissioning of the Revised Development after 25 years of operation.

6.7.2 Effects during the first and third of these phases are considered to be temporary and would have a short duration. Effects associated with the operational phase of the Revised Development are considered to be long term, reversible effects.

Project Description

6.7.3 A detailed description of the Revised Development is set out in Chapter 3. The description below summarises those details of the Revised Development that have particular relevance to the LVIA.

6.7.4 The Revised Development will principally comprise the following visible features which may have an impact on landscape character or visual amenity:

- 13 wind turbines, up to 149.9 m to blade tip (the proposed turbines are three bladed horizontal axis machines, the finish and colour of the turbines will be semi matt and pale grey in colour);
- crane hardstanding areas (50 m by 30 m);
- site access tracks (5 m wide);
- a substation and control room situated (approximately 30 m by 10 m with a height to ridge of around 5 m);
- a construction compound/concrete batching area/temporary turbine laydown area (100 m by 60 m);
- a new anemometer mast (80 m steel lattice structure) (existing 50 m mast to be removed).

Effects on Existing Landscape Features

Effects during Construction of the Revised Development on Existing Landscape Features

6.7.5 Access to the Revised Development site would be via an existing wide road which was previously the coal haul road for the Dalquhandy Opencast site. It is sufficiently wide so there would be no need to undertake any road widening and hence the access route would not result in any effect on any existing landscape features.

6.7.6 The primary spine route serving access to the turbines would follow the existing wide road through the site which was previously used as part of the opencast operations.

6.7.7 The 13 proposed turbines, the main construction compound, the new anemometer mast, their associated foundations and crane pads, and all new access tracks would all be located within areas of ground level vegetation cover, primarily rough grassland. Most of these elements of the Revised Development would occur on land previously disturbed by the workings of the former Dalquhandy Opencast mine (refer to Figure 3.1). The rough grassland removed in these locations is therefore relatively recently restored and of low landscape value. The southernmost and westernmost turbines lie in areas of open improved grassland which was not previously disturbed. However, no mature vegetation (scrub or trees) would be affected by the Revised Development.

6.7.8 Therefore, it is considered that there would be no significant effects on existing landscape features during the construction phase.

6.7.9 In summary, no notable landscape features would be affected. There are therefore no significant effects on landscape features.

Effects on Landscape Character

Sensitivity of Landscape Character to Wind Energy Development

6.7.10 The first stage in assessing the effects of the Revised Development on landscape character is to evaluate the sensitivity of the receiving landscape to the type of change proposed. As indicated

within GLVIA3 sensitivity of landscape character should be determined through a consideration of both susceptibility to change and any values associated with the landscape.

6.7.11 A number of documents assist in this process. In considering landscape susceptibility and landscape values it is helpful to draw upon the analysis contained within the *South Lanarkshire Landscape Character Assessment* (2010) and the *South Lanarkshire Landscape Capacity Study for Wind Energy* (2016).

6.7.12 Therefore, for each character type considered, a discussion is provided regarding any analysis of landscape sensitivity within the *South Lanarkshire Landscape Character Assessment*.

6.7.13 Reference is then made to the *South Lanarkshire Landscape Capacity Study for Wind Energy* (SLLCSWE) (2016). However, these two studies should be read with caution as they do not necessarily just consider landscape sensitivity (susceptibility and value).

6.7.14 Firstly, the document combines judgements about landscape character sensitivity (which is broadly the same as the concept of landscape susceptibility as defined in GLVIA3) and landscape value with judgements about visual sensitivity to formulate opinions about landscape capacity (i.e. the quantity of development that a landscape can accommodate). It is important therefore to disaggregate the relevant judgements contained within these studies such that perceived visual constraints do not factor in the judgements regarding landscape sensitivity as required for the purposes of this LVIA.

6.7.15 Furthermore, it should be noted that these documents, although only a few years old, are already dated to some extent by wind farm developments which have been either consented or constructed in the intervening period. It is therefore necessary to evaluate whether changes to the baseline (in terms of recently consented or constructed wind farms) have altered sensitivity as reported in these studies.

6.7.16 *Appendix 6* of the SLLCSWE considers the physical and perceptual characteristics of each character type to wind energy development and forms a judgement concerning the sensitivity of each characteristic before coming to an overall judgement about landscape character sensitivity (broadly the same concept as landscape susceptibility as defined in GLVIA3). The same appendix considers landscape values. Therefore, for each character type considered, the findings of the SLLCSWE in relation to landscape character sensitivity and landscape values are reported and commented upon as necessary. An overall judgement regarding landscape sensitivity taking account of landscape susceptibility and values is then formed for each character type.

6.7.17 It should be noted that the sensitivity judgements provided in this section of the report take into account the presence of other operational windfarms and those under construction (where relevant) but does not take account of other consented (but as yet unbuilt) wind farms or those in planning.

6.7.18 Key sensitivities and capacity judgements from the SLLCSWE are also identified where relevant but updated where necessary with reference to recently constructed wind farms.

<u>Character Type – 5 Plateau Farmlands</u>

6.7.19 The South Lanarkshire Landscape Character Assessment (LCA) considers the sensitivities and forces for change in relation to wind farms in Character Type 5 – Plateau Farmlands. It does not specifically consider sensitivity within sub type 5B – Plateau Farmlands Opencast Mining. The discussion focuses on two geographically distant areas of the Plateau Farmlands character type from that within which the Revised Development is located; the discussion primarily concerns two areas of LCT5 which surround the Whitelee and Blacklaw clusters of wind turbines elsewhere in the study area and hence is of little relevance to this LVIA.

6.7.20 Under the heading of '*Wind farms: Planning and Management Guidelines*' the LCA states that:

'Wind farm development has dramatically changed the backdrop and views in many locations. Landscape planning and management should aim to:

- *Discourage the erection of wind turbines or other tall structures in prominent locations particularly in areas adjacent to lower ground where the development could be visible on*

the skyline; favour areas where tall structures would be provided with a backcloth to reduce their visual and landscape impacts;

- *Maintain the separation and characteristics of wind farms between the Plateau Farmlands and Plateau Moorlands such that the boundaries between and characteristics of the two landscape types do not become blurred; avoid unacceptable cumulative impacts when siting wind farms within the Plateau Farmlands;*
- *Consider limited expansion of existing wind farms in upland areas rather than locating small numbers of turbines in Plateau Farmland, where impacts would be much greater.'*

6.7.21 In relation to the above extract, it should be noted that there has been considerable evolution in terms of the distribution of wind energy developments within LCT5 and surrounding character types. Within LCT5 and within 5 km of the Revised Development, there have been several medium to large single turbines consented or constructed along the M74 corridor but most notably alongside the Consented Development, there has also been a further large wind farm consented in LCT5 in close proximity to the Revised Development, at Dalquhandy.

6.7.22 It could therefore be observed that since the LCA was published in 2010 the distribution of subsequently consented and constructed wind energy development has come about despite this guidance and that in this regard the stated aims have essentially failed to achieve their objectives. Furthermore, in light of the distribution of consented and constructed wind energy development since 2010, it is doubtful whether these aims could now be achieved or should still be the primary planning and management objectives.

6.7.23 In relation to LCT5, *Appendix 3* of the SLLCSWE records the following judgements about landscape character sensitivity (landscape susceptibility) and landscape values:

Landscape Character Criteria	**Characteristics and Sensitivity Level**
Scale	Medium to large. Medium/ Low
Landform	Predominantly undulating. Medium/Low
Pattern	Fairly simple field and tree belt pattern. Medium/ Low
Development	Development mainly in adjacent areas but scattered small settlements/ farms/ dwellings. Motorways and main roads, electricity lines, railways. Medium
Quality	Generally, well maintained farmland but often bleak with declining tree belts. Medium
Elements and Features	Mainly tree belts and landforms. Prominent towns and villages. Occasional farms. Occasional wind turbines. Medium
Context	Setting to some towns and villages and a number of river valleys. Medium/High
OVERALL RATING	**Medium**

Landscape Value Criteria	**Characteristics and Level of Value**
Designations	Significant area in green belt, some SSSI and ancient woodland. Medium
Community value	Areas used by local residential population and visitors for formal/informal recreation. Medium

Cultural value	Some locations of interest including towns and villages. Medium
Perceptual	Landscape of variable interest with some areas well maintained diverse and mature, others declining and bleak. Medium
OVERALL RATING	**Medium**

6.7.24 It should be noted that the analysis within *Appendix 6* of the SLLCSWE applies to LCT5 as a whole and does not specifically address variations in the sub types such as LCST 5B – Plateau Farmlands Opencast Mining within which the Revised Development is located. In considering variations in landscape sensitivity across LCT5 however, the opencast mining characteristics which are locally defining in LCST 5B clearly reduce the sensitivity of landscape character to wind energy development.

6.7.25 *Figure 6.1e* of the SLLCSWE shows all of LCT5 in the vicinity of the Revised Development, and all of LSCT 5B – Plateau Farmland Opencast Mining, as having no capacity for wind energy development over 120 m to blade tip. However, this judgement takes into account perceived visual sensitivity of the character type (which is judged to be of Medium/High sensitivity).

6.7.26 *Table 6.1* of the SLLCSWE indicates that LCT5 in the vicinity of the Revised Development (including LSCT 5B – Plateau Farmland Opencast Mining) has no capacity for turbines over 120 m in height. It suggests that a significant number of further turbines within the Plateau Farmland would create an area of *Wind Turbines in Plateau Farmland which would exceed capacity*.

6.7.27 As previously indicated it is necessary to disaggregate the visual judgements in the SLLCSWE to draw conclusions about the sensitivity of landscape character to wind energy development. The analysis of landscape susceptibility and value presented above would suggest that LCT 5 has an overall medium landscape sensitivity to wind energy development, and this is the judgement used for the purposes of this LVIA.

6.7.28 However as indicated above, given the defining nature of the former Dalquhandy workings in LCT 5B, it is considered that this particular sub type has a reduced sensitivity and is of only low landscape sensitivity to wind energy development.

<u>Character Type 6 – Plateau Moorlands</u>

6.7.29 The South Lanarkshire LCA considers the sensitivities and forces for change in relation to wind farms within Character Type 6 – Plateau Moorlands and provides guidance for the development of wind energy actually within this LCA. It does not consider the sensitivity of the LCT to wind energy development beyond its boundaries. As the Revised Development does not involve the positioning of turbines in this LCT the analysis in relation to wind farms in the LCA is not discussed further.

6.7.30 In relation to LCT6, *Appendix 6* of the SLLCSWE records the following judgements about landscape character sensitivity (landscape susceptibility) and landscape values:

Landscape Character Criteria	Characteristics and Sensitivity Level
Scale	Large. Low
Landform	Predominantly undulating. Low
Pattern	Fairly simple field and tree belt pattern at edges. Arrays of wind turbines. No clear patterns elsewhere. Medium/ Low
Development	Development predominantly wind farms. Scattered farms/ dwellings around edges. Low
Quality	Generally, an uninteresting landscape significantly affected by past and present development. Medium/Low

Elements and Features	Mainly wind farms and conifer plantations on moorland. Occasional more prominent landforms and water bodies. Electricity lines. Medium/Low
Context	Background to Plateau Farmland. Viewed on horizon from some towns and villages and roads. Medium
OVERALL RATING	**Medium/Low**

Landscape Value Criteria	**Characteristics and Level of Value**
Designations	Few designated areas. Low
Community value	Some access to open spaces. Medium/Low
Cultural value	Some locations of archaeological/ historic interest. Medium/Low
Perceptual	Bleak areas of low landscape interest seen as substantially developed for wind energy. Low
OVERALL RATING	**Medium/Low**

6.7.31 It should be noted that there is a footnote to the appraisal above in the SLLCSWE which indicates that the two areas of LCT6 which lie within 10 km of the Revised Development would actually have a medium landscape character sensitivity due to 'their limited extents' which for the purposes of this LVIA is assumed to mean that they are relatively small geographical areas of this character type. However, as the Revised Development is not within these areas, the size of the units is largely irrelevant.

6.7.32 *Figure 6.1e* of the SLLCSWE shows all of LCT6 in the vicinity of the Revised Development (including LSCT 6D – Plateau Moorlands Opencast Mining) to have low capacity for wind energy development above 120 m to blade tip.

6.7.33 *Table 6.1* of the SLLCSWE indicates that LCT6 in the vicinity of the Revised Development has no capacity for turbines above 120 m which obviously contradicts *Figure 6.1* of the SLLCSWE but in any case, it should be noted that the Revised Development does not include any turbines in this character type.

6.7.34 The analysis of landscape susceptibility and value presented above would suggest that LCT 6 has an overall medium/low landscape sensitivity to wind energy development recognising that turbines in adjoining character types/areas could also affect character within this LCT. It is also noted that there is a planning application approved for 7 wind turbines of 126.5 m in height at Broken Cross within LCT 6D.

Character Type 7 – Rolling Moorlands

6.7.35 The South Lanarkshire LCA considers the sensitivities and forces for change in relation to wind farms in Character Type 7 – Rolling Moorlands. As with LCT5, the LCA does not differentiate between the various subtypes of this LCT. It states that:

'These moorlands have to date accommodated only one wind farm development, at Hagshaw Hill, which has recently been extended although still of a significantly smaller scale than those on the Plateau Moorlands. There are however, several proposals for small/medium, medium and large size wind farms within the Rolling Moorlands, three of which have been consented. Given the open, and relatively remote and wild character of these areas, the landscape would be fairly sensitive to such change.'

6.7.36 Since the publication of the LCA, large scale wind farm developments have been constructed at Nutberry, Galawhistle, Andershaw, Hazelside, Dungavel and Auchrobert whilst others have been notably consented within 10 km of the Revised Development at the Consented Development, Dalquhandy, Kennoxhead and Kype Muir.

6.7.37 Under the heading of '*Wind farms: Planning and Management Guidelines'* the LCA states that:

'Guidelines for this landscape type are as follows:

- *wind energy development in this area should be very carefully sited and limited in scale and number so as not to dominate the landscape character of this type as has occurred in the Plateau Moorlands;*
- *where possible, developments should be located away from prominent ridgelines and skylines above river valleys and provided with a degree of backclothing;*
- *the open character of the landscape means that the potential to accommodate several wind power developments or very large wind farms is likely to be limited; potential cumulative and sequential effects should be taken into account;*
- *wind farm developments should be of a small or medium scale and separated by landforms such as hills, ridgelines or valleys, thereby reflecting the topographic pattern of distinctly separated landforms.'*

6.7.38 In relation to the first bullet point in the extract above and mindful of the extant Consented Development for the site, and other schemes now constructed or consented within this LCT particularly on and in the vicinity of the Revised Development site, it can be concluded that the character of LCT7 in the immediate vicinity of the Revised Development will in the future (assuming that the consented schemes are constructed) be heavily influenced by wind turbines and that this guideline is less relevant now than it was at the time the LCA was published.

6.7.39 In relation to the second bullet point it is recognised that the Revised Development site lies adjacent to the Douglas Valley (LCT8).

6.7.40 In relation to the third bullet point the tract of LCT7 within which the site is located is relatively small and surrounded by plantations. Sub-type 7A – Rolling Moorland Forestry extends up to the boundary of the site and by definition is not open in character. Whilst the comments may apply to larger tracts of the LCT elsewhere in the study area, it is not considered that this bullet point is directly applicable to the tract of LCT7 within which the Revised Development is located (although as with any wind farm development it is recognised that cumulative effects need to be taken into account).

6.7.41 In relation to the final bullet point, it is noted that the pattern of wind energy development constructed or consented since 2010 in LCT7 has not reflected the suggestion that wind energy development within this LCT should be small or medium scale. The constructed wind farms at Nutberry, Hazelside, Galawhsitle, Andershaw, Auchrobert and Dungavel and consented wind farms at the Consented Development, Dalquhandy, Kennoxhead and Kype Muir are all large scale developments. It is also noted that the suggestion that these schemes should be separated by landforms such as hills, ridgelines or valleys has not really come about. For example, Galawhistle connects Hagshaw Hill, Hazelside and Nutberry; Dalquhandy extends east from Nutberry to the Consented Development; and further west Dungavel, Kype Muir and Auchrobert are all broadly connected (although it is recognised that there is a more strategic gap between the latter three sites and the other schemes mentioned, albeit there is an extension to Kype Muir also now proposed).

6.7.42 Therefore, the guidelines established in 2010 need to be treated with caution. In light of the distribution of consented and constructed wind energy development since 2010, including the extant Consented Development for the site, it is very doubtful these aims could now be achieved or should still be the primary planning and management objectives.

6.7.43 In relation to LCT7, *Appendix 6* of the SLLCSWE records the following judgements about landscape character sensitivity (landscape susceptibility) and landscape values:

Landscape Character Criteria	Characteristics and Sensitivity Level
Scale	Large, high. Low
Landform	Undulating to rolling hills with frequent incised watercourses and valleys. Medium
Pattern	Fairly simple field and tree belt pattern at edges. Some rhythm to the rolling summits, ridges and valleys. Medium
Development	Low level of development, including opencast mining and windfarm. Scattered farms/ dwellings in more sheltered areas. Medium
Quality	Many areas relatively natural and unaffected by development. Other areas with commercial forestry in uniform hard edged plantations. Medium
Elements and Features	Mainly rounded summits, ridges and conifer plantations. Occasional more prominent landforms and water bodies. Windfarms increasingly common. Opencast coal mining on periphery. Medium
Context	Watershed forms extensive border with Ayrshire, forming high western skyline seen from S. Lanarkshire. Background to Plateau Farmland and Upland River Valleys. Medium/High
OVERALL RATING	**Medium**

Landscape Value Criteria	Characteristics and Level of Value
Designations	Small area of local landscape designation. Significant area of SSSI/ SPA. Medium/Low
Community value	Access to open spaces via paths and tracks. Viewpoints. Medium
Cultural value	Some locations of archaeological/ historic interest. Medium
Perceptual	Lowland areas. Medium
OVERALL RATING	**Medium**

6.7.44 *Figure 6.1* of the SLLCSWE shows all of LCT7 in the vicinity of the Revised Development (including LSCT 7A – Rolling Moorland Forestry and 7B – Rolling Moorland Windfarm) as having Medium capacity for wind energy development.

6.7.45 *Table 6.1* of the SLLCSWE indicates that LCT7 in the vicinity of the Revised Development has medium capacity for wind turbines over 120 m in height in groups of 5-20. It suggests separation distances of between 5 km and 10 km between individual wind farms but this is guidance rather than a factor which affects landscape sensitivity.

6.7.46 It should also be noted that since the publication of the SLLCSWE and the SLLCA, there has been permission granted for a 30 hectare mixed use development, including SUDS, landscaping and other infrastructure, which would alter the character of the landscape within LCT7. There has also been a

wood gas combined heat and power facility (CHP) constructed within the LCT that introduces built elements into an otherwise undeveloped landscape.

6.7.47 Taking all of the above into account it is considered that LCT7 has a medium landscape sensitivity to wind energy development.

Character Type 8 – Upland River Valleys

6.7.48 The South Lanarkshire LCA does not specifically consider the sensitivities and forces for change in relation to wind farms within Character Type 8 – Upland River Valleys as it does for most other character types. It does however provide some more generic comments and guidance. Under the heading of 'Development: Sensitivities and Forces for Change' it states:

'*The valleys are also sensitive to the development wind energy, transmission and communication structures.....The valley slopes and hill ridges beyond have and may be targeted for wind turbines and or for telecommunication masts. These could introduce prominent developments on the skyline which would significantly change the perception of the hills as comparatively wild and undeveloped areas. This is particularly likely where more than one such structure or wind farm is visible from a given location or encountered when travelling through the area. Recent developments on feed in tariffs may also lead to the development of smaller farm or domestic scale wind turbines on the valley sides and floors.*

Rivers comprise a central and formative element in these landscapes. The character of these areas would be very sensitive to any measures which resulted in the loss of natural river landscapes, or the introduction of modern, engineered structures.'

6.7.49 Under the heading of 'Development: Planning and Management Guidelines' the LCA states (*inter alia*) that:

'Guidelines for this landscape type are as follows:

- *Conserve natural river landscapes by discouraging schemes which introduce engineered features or structures;*
- *Discourage wind power development in the valleys or neighbouring landscape types which would result in unacceptable cumulative impacts within a particular valley.'*

6.7.50 It is recognised that the extracts above indicate a relatively high sensitivity to wind energy development in adjoining character types.

6.7.51 It is recognised that in proximity to the Revised Development site 3 wind turbines of 100 m in height have been permitted within this LCT at Poniel, however these are not treated as part of the baseline in this section of the report. It is also recognised that there are views of the Hagshaw Hill turbines (and extension), Hazelside, and Nutberry wind farm, and there would be views of other consented wind farms in the vicinity of the Revised Development from within this LCT.

6.7.52 In relation to LCT8, *Appendix 6* of the SLLCSWE records the following judgements about landscape character sensitivity (landscape susceptibility) and landscape values:

Landscape Character Criteria	Characteristics and Sensitivity Level
Scale	Medium to small. Medium/High
Landform	Valley varying from more open, flat bottomed in lower reaches to narrower and more tightly enclosed in some upper reaches. Medium/High
Pattern	Sinuous river form. Enclosed rectilinear fields on valley floor often with lines of trees along field boundaries/ shelterbelts. More irregular pattern of moorland and forest in higher reaches Medium/High

Development	Most valleys have small scale settlement with larger settlements in lower reaches. Roads. Crossed by electricity lines. Opencast mining. Disused railways. Medium
Quality	Varies from relatively undisturbed farmland and parkland landscape at Douglas Castle to areas affected by opencast mining and mineral extraction. Medium
Elements and Features	Small settlements, roads. Crossed by electricity pylons. Field boundaries and tree belts. Medium/High
Context	Settled river valleys set between upland areas. Transport routes between M74 and Ayrshire/ Dumfries and Galloway. Medium/High
OVERALL RATING	**Medium/High**

Landscape Value Criteria	**Characteristics and Level of Value**
Designations	Extensive areas lie within SLAs. Green belt in Avon Valley. Medium/High
Community value	Setting to settlements and transport routes. Medium/High
Cultural value	Historic communication routes. Some historic settlements. Medium/High
Perceptual	Settled valleys lying within upland settings. Transition between lowland and upland character when journeying west. Wind farms on the skyline. Medium/High
OVERALL RATING	**Medium/High**

6.7.53 *Figure 6.1* of the SLLCSWE shows all of LCT8 in the vicinity of the Revised Development as having no capacity for wind energy development.

6.7.54 *Table 6.1* of the SFLCWTU also indicates that LCT8 in the vicinity of the Revised Development has no capacity for wind turbines over 120 m to blade tip.

6.7.55 Taking all of the above into account it is considered that LCT8 has a medium to high landscape sensitivity to wind energy development recognising that turbines in adjoining character types/areas could also affect character within this LCT.

Character Type 9 – Broad Valley Upland

6.7.56 The South Lanarkshire LCA does not specifically consider the sensitivities and forces for change in relation to wind farms within Character Type 9 – Broad Valley Upland as it does for most other character types. It does however provide some more generic comments and guidance. Under the heading of 'Development: Sensitivities and Forces for Change' it states:

'The landscape would be sensitive to the development of tall structures including masts, pylons and wind turbines on areas of high ground visible from within the valley and within the valley itself. Particular concerns would relate to situations where more than one upland wind farm, for example, is visible in relatively close proximity from within the valley. Recent developments on the feed-in tariff for smaller farm and domestic scale energy generation could also lead to a proliferation of smaller turbines within the valley.

Rivers comprise a central and formative element in these landscapes. The character of these areas would be very sensitive to any measures which resulted in the loss of natural river landscapes, or the introduction of modern, engineered structures.'

6.7.57 Under the heading of 'Development: Planning and Management Guidelines' the LCA states (*inter alia*) that:

'Guidelines for this landscape type are as follows:

- *Conserve natural river landscapes by discouraging schemes which introduce engineered features or structures;*
- *Discourage wind power development in neighbouring landscape types which would result in unacceptable cumulative impacts on any particular section of the Broad Valley Uplands;*
- *Carefully assess the landscape and visual impact of proposals for tall structures including wind turbines within the valleys;*
- *Consider the role of this LCT in maintaining an undeveloped buffer free of wind farms between existing areas of wind farm development in the Plateau Moorlands and Southern Uplands.'*

6.7.58 It is recognised that the extracts above indicate a relatively high sensitivity to wind energy development in adjoining character types.

6.7.59 It is recognised that this LCT has remained largely free of any operational or consented wind turbines, with the exception of Newtonhead Farm wind turbine, but that there are and would be views of other wind farms in the vicinity of the Revised Development from within this LCT.

6.7.60 In relation to LCT9, *Appendix 6* of the SLLCSWE records the following judgements about landscape character sensitivity (landscape susceptibility) and landscape values:

Landscape Character Criteria	**Characteristics and Sensitivity Level**
Scale	Medium to occasionally large. Medium
Landform	Valley with broad floodplain floor. Medium/High
Pattern	Rectilinear field pattern on valley floor broken by meandering river and occasional mineral workings. Medium/High
Development	Settlements varying from small towns and villages to scattered dwellings and farms. Roads and railway. Occasional mineral extraction. Medium/High
Quality	Generally high scenic quality and good condition. Some areas of mineral extraction detract. Medium/High
Elements and Features	Small settlements, roads, railway. Field boundaries, woodland plantations and tree belts. Occasional mineral extraction. Medium/High
Context	Broad populated rural valley with main national transport routes set between upland areas. Medium/High
OVERALL RATING	**Medium/High**

Landscape Value Criteria	**Characteristics and Level of Value**
Designations	Extensive areas lie within SLAs. SAMs and listed buildings. Medium/High
Community value	Setting to several settlements and major transport routes. Recreational value of River Clyde. Medium/High

Landscape Value Criteria	Characteristics and Level of Value
Cultural value	Historic communication routes. Historic settlement at Biggar. SAMs and listed buildings. Medium/High
Perceptual	Extensive, broad, settled valleys with main transport routes. Passing through transition between lowland, foothill and Southern Upland areas. Wind farms visible on the skyline to S and W. Medium/High
OVERALL RATING	**Medium/High**

6.7.61 *Figure 6.1* of the SLLCSWE shows all of LCT9 in the vicinity of the Revised Development as having no capacity for larger scale wind energy development.

6.7.62 *Table 6.1* of the SFLCWTU also indicates that LCT9 in the vicinity of the Revised Development has no capacity for wind turbines over 120 m to blade tip, but in any case it should be noted that the Revised Development does not include any turbines in this character type.

6.7.63 Taking all of the above into account it is considered that LCT9 has a medium to high landscape sensitivity to wind energy development recognising that turbines in adjoining character types/areas could also affect character within this LCT.

Character Type 10 – Foothills

6.7.64 The South Lanarkshire LCA considers the sensitivities and forces for change in relation to wind farms within Character Type 10 – Foothills and provides guidance for the development of wind energy actually within this LCA. It does not consider the sensitivity of the LCT to wind energy development beyond its boundaries. As the Revised Development does not involve the positioning of turbines in this LCT the analysis in relation to wind farms in the LCA is not discussed further.

6.7.65 In relation to LCT10, *Appendix 3* of the SLLCSWE records the following judgements about landscape character sensitivity (landscape susceptibility) and landscape values:

Landscape Character Criteria	Characteristics and Sensitivity Level
Scale	Large/medium. Medium/Low
Landform	Undulating to rolling hills of modest height with occasional small incised watercourses and valleys. Medium
Pattern	Variable with field and tree belt pattern in lower areas and to northeast. More open moorland to the south west. Medium
Development	Low level of development, including quarry. Scattered farms/ dwellings and small settlements in more sheltered areas. Medium
Quality	Many areas relatively natural and unaffected by development. Other areas with forestry but some of this native spp plantings. Medium
Elements and Features	Mainly rounded summits, ridges and plantations. Occasional more prominent landforms. Some mineral extraction. Medium
Context	Transitional area between lowland and upland areas forming backdrop to Upper Clyde Valley and foreground to Tinto Hill. Medium/High

Landscape Character Criteria	Characteristics and Sensitivity Level
OVERALL RATING	**Medium**

Landscape Value Criteria	Characteristics and Level of Value
Designations	Much of area under SLA designation. Medium/High
Community value	Access to open spaces via paths and tracks. Crossed by A73 tourist route and cycle route. Community Woodland. Medium
Cultural value	Some locations of archaeological/ historic interest. Medium
Perceptual	Varied landscape. Some areas with remoteness qualities and others more pastoral. Medium/High
OVERALL RATING	**Medium/High**

6.7.66 *Figure 6.1* of the SLLCSWE shows all of LCT10 in the vicinity of the Revised Development as having no capacity for larger scale wind energy development.

6.7.67 *Table 6.1* of the SLLCSWE indicates that LCT10 in the vicinity of the Revised Development has no capacity for any turbines over 50 m, but in any case, it should be noted that the Revised Development does not include any turbines in this character type.

6.7.68 Taking all of the above into account it is considered that LCT10 has a medium landscape sensitivity to wind energy development recognising that turbines in adjoining character types/areas could also affect character within this LCT.

Summary

6.7.69 For each LCT considered in detail in this LVIA, Table 6.5 below summarises the professional judgements made for the purposes of this report concerning the susceptibility to change and the value associated with each LCT before drawing a conclusion finally on the landscape sensitivity of each LCT to the type of development proposed.

Table 6.5 Summary of Landscape Sensitivity to the Development Proposed

LCT/LCST	Susceptibility to the Type of Change Proposed	Landscape Values	Sensitivity to the Type of Development Proposed
5. Plateau Farmland	Medium	Medium	Medium
5B. Plateau Farmland Opencast Mining	Low	Medium/Low	Low
6. Plateau Moorland	Medium/Low	Medium/Low	Medium/Low
7. Rolling Moorland	Medium	Medium	Medium
8. Upland River Valley	Medium/High	Medium/High	Medium/High
9. Broad Valley Upland	Medium/High	Medium/High	Medium/High
10. Foothills	Medium	Medium/High	Medium

Effects on Landscape Character during Construction

6.7.70 The Revised Development is located within LCT 5B – Plateau Farmland Opencast Mining (4 turbines) and LCT 7 – Rolling Moorland (9 turbines and most of the other ancillary development). It is recognised that there would be some additional temporary effects during construction over and

above those assessed under the heading of Operational Effects below. The additional effects resulting from construction activities would be localised and relatively incidental when viewed in the context of the turbines being erected.

6.7.71 The effects on landscape character would therefore increase incrementally as construction progresses and as more turbines and associated foundations and hardstanding are constructed.

6.7.72 As previously discussed, there would be no effect on any existing landscape features of note such as mature vegetation.

6.7.73 There would be earth movements associated with the construction of foundations, hardstandings, and other features of the Revised Development. Such activities would all result in some soil disturbance. The impact on landscape character would arise therefore from the temporary stockpiling of soil, exposure of relatively small areas of bare earth and the movement of construction vehicles. In the context of the former use of the site as an opencast mine, these earthmoving activities would be of much smaller scale and not be uncharacteristic in the local context.

6.7.74 The main construction and storage compound and concrete batching area will also result in temporary direct effects within LCT 7. The compound area would be located within the previously worked landscape and would not be completely out of character with the local landscape in terms of remnant mining activity and the new CHP plant on the remaining DP hardstanding.

6.7.75 Cranes would be involved in the erection of the turbines but these would be on-site for a relatively short period during the overall construction phase. The cranes would form noticeable vertical features in the landscape for a short period of time but be relatively incidental to the turbines being erected.

6.7.76 Overall, it is considered that there would be a low magnitude of additional change (over that during the operation phase) for the reasons outlined above. This would result in no greater than a **minor** temporary effect on the Plateau Farmland Opencast Mining LCT and the small tract of Rolling Moorland LCT within which the Revised Development is located over and above the permanent effects dealt with under the heading of Operational Effects below. The construction effects would be temporary in nature and are unlikely to all occur at the same time during the construction phase.

6.7.77 It is noted that while the main access track is situated in LCT 5 – Plateau Farmland, the route is an existing road to the former opencast mining operation; therefore, there will be no additional direct effects to this landscape character type.

6.7.78 The construction effects of the development on landscape character are deemed to be **not significant**.

Effects on Landscape Character during Operational Phase

6.7.79 The effects on landscape character are discussed below in relation to each LCT/LCST as identified in Table 6.5. The magnitude of change on landscape character as a result of the development has been determined using professional judgement based on the following factors:

- The percentage of the character type from where the site would theoretically and actually be visible;
- The distance between the character type and the site;
- The likely prominence of the turbines from the character type taking account of existing locally dominant characteristics in the character type; and
- The degree to which the physical and perceptual characteristics of the landscape would change as a result of the Revised Development.

6.7.80 To reiterate a point made earlier in the LVIA, GLVIA3 requires that the baseline against which the effects are considered in this part of the report to include other wind farms which are operational or under construction but not those which are consented (but not as yet built) and those in planning. Therefore, in the discussion below it is important to recognise that Hagshaw Hill (and extension), Nutberry, Galawhistle, and Hazelside Farm wind farms/turbines are taken into account as part of

the baseline but other recently consented wind farms (including the Consented Development, Dalquhandy and Poniel) are not taken into account; these are addressed in the cumulative impact assessment.

6.7.81 To aid the consideration of effects on landscape character, the ZTV has been overlaid on the character types within 10 km of the site. This is illustrated in Figure 6.19.

6.7.82 Beyond a short distance from the site, the ground level components of the development would not be visible and the substation/control building would not be visible beyond LCT7. Therefore, impacts on landscape character as experienced in the wider landscape arise solely in relation to the introduction of the proposed turbines into the landscape and the resultant impact on the perceptual experience of landscape character.

6.7.83 It is noted that in general, the magnitude of change in landscape character will incrementally decrease with distance from the turbines as they become gradually less prominent. Some of the character types considered in this appraisal extend from relatively close to the Revised Development out to beyond 10 km from the site. Inevitably therefore, the effect on landscape character in the tract of landscape nearest the site will be more greatly affected than the same landscape character type at a greater distance from the site. As a consequence, it has been necessary to describe the effects on landscape character for some LCT/LCST in bands of distance from the site.

6.7.84 The Revised Development (excluding existing access road) would be entirely located within LCT5B – Plateau Farmland Opencast Mining and LCT7 – Rolling Moorland, and therefore the Revised Development will have a direct effect on the character of these LCTs. Effects on surrounding LCTs/LCSTs are considered to be indirect.

6.7.85 A summary of the effects on landscape character is presented in Table 6.6. Note that for all character types stated within Table 6.6 the duration of the Revised Development is considered to be long term and the reversibility of this element is considered to be non-permanent.

LCT 5 – Plateau Farmland (excluding LCST 5B – Plateau Farmland Opencast Mining)

6.7.86 None of the proposed new structures are located within this LCT. The access route passes through a short section of it but the route utilises an existing private road and hence there would be no direct effects on this LCT. The effects discussed below are therefore indirect.

6.7.87 LCT 5 extends from the site boundary to over 10 km away and effects on landscape character will decrease with distance from the site. It should be noted that large areas of this character type in and around Coalburn have been planted with forestry in recent years and in a number of years this forestry would alter the character of the area, and would have an influence on the level of intervisibility with other character areas.

6.7.88 Analysis of Figure 6.19, which shows the ZTV to blade tip overlaid on top of the LCT boundaries, indicates that there would be clear visibility of the proposed turbines from almost all of the LCT between the site and Lesmahagow, but that north of Lesmahagow, visibility would become intermittent or restricted by landform. However, the ground level elements of the Revised Development would have no effect on this LCT.

6.7.89 Up to approximately 5 km from the Revised Development the turbines would be prominent where intervening obstructions such as woodland and buildings do not provide screening. Much of this LCT within 5 km of the proposed turbines is very open but is punctuated by infrastructure such as pylons and highways whilst the forested rolling moorland beyond the Revised Development site forms the backdrop and the Hagshaw Hill, Nutberry, Hazelside and Galawhistle turbines are clearly visible on the skyline. The Auchobert turbines are also clearly visible to the north of this wind farm cluster.

6.7.90 The Revised Development would appear to lie in the farmland at the foot of the rolling moorland beyond and be clearly separated from the Hagshaw Hill, Nutberry, Hazelside and Galawhistle turbines. As with the consented development, the turbines of the Revised Development would be well spaced and would not obstruct the views towards the hills beyond.

6.7.91 Within that part of LCT 5 – Plateau Farmland which lies west of the B7078 and south of the row of pylons which run south of Auldtonheights (i.e. within approximately 3 to 4 km of the proposed

turbines) the Revised Development would have a high magnitude of change on landscape character when considered against the established baseline. Within this part of LCT 5, there would be a **moderate** effect, which due to the prominence of the turbines, would be significant. North of this row of pylons and west of the B7078, whilst in some locations the turbines would remain highly visible, the magnitude of change in landscape character would be less as other existing built infrastructure retains greater prominence in the landscape. Therefore, up to a distance of approximately 7 km from the site there would be a medium magnitude of change resulting in a **moderate** but no longer significant effect. Beyond approximately 7 km from the proposed turbines the effect would diminish further to a low magnitude of change and a **moderate/minor** effect which would not be significant.

LCST 5B – Plateau Farmland Opencast Mining

6.7.92 Four of the 13 proposed turbines are located within the only occurrence of this LCST. LCST 5B is relatively modest in size when compared to the scale of some other character types in South Lanarkshire and as the name suggests it is defined in character terms by the former Dalquhandy Opencast mine which distinguishes it from the wider LCT 5 – Plateau Farmland.

6.7.93 Analysis of Figure 6.19, which shows the ZTV to blade tip overlaid on top of the LCT boundaries, indicates that there would be clear visibility of the proposed turbines from the vast majority of the LCST, with small localised exceptions where depressions in the landform will obscure views of the entire scheme.

6.7.94 The ground level components of the Revised Development within this LCST (i.e. the access tracks and the crane hard standing areas) would be visible from nearby positions and from localised high points across the irregular landform.

6.7.95 However, once restoration of the temporary construction works has taken place, the proposed access tracks would not be out of character with the network of other access tracks prevalent in this LCST which are remnants of the former coal mining operations. For the most part, the proposed access tracks follow the shortest routes possible between turbines and existing tracks to minimise ground disturbance and limit adverse effects. There would therefore be only a **slight** adverse effect on the pattern of tracks across this landscape character sub-type.

6.7.96 The crane hardstanding areas would be prominent in their immediate environs and from the slightly elevated parts of this landscape. In this regard, the land cover across the area would continue to be dominated by the current underlying land cover. Once weathered, it is anticipated that the appearance of the hardstanding areas will not be vastly dissimilar to the land cover prevalent across much of this LCST where there are large areas of un-vegetated spoil. When viewed from anywhere except directly adjacent to hardstandings, there would be no more than a **slight** / **no effect** change to land cover or pattern in the landscape.

6.7.97 The substation/control building would not be prominent across the vast majority of this LCST. The presence of vegetation, and variation in landform across the LCST would contribute to the filtering or screening of views of the ground level components of the Revised Development.

6.7.98 It has already been established that there would be no significant effects on existing landscape features. Therefore, the effects on landscape character within LCT5B – Plateau Farmlands Opencast Mining arise principally in relation to the introduction of the new turbines (both those actually within the LCST and those directly adjacent in LCT 7).

6.7.99 The turbines have been designed to lie at the same level as the existing ground levels across the site. In this regard, the wind turbines would not directly affect the landform or topography of the surrounding landscape to any significant degree. The profile of the plateau overlain by the regenerating rough grassland across the former opencast mine would prevail.

6.7.100 The structural form of the proposed turbines is such that a high degree of visual permeability would be maintained and hence the sense of openness experienced across the LCST would not be greatly altered by the introduction of the turbines. The proposed turbines are relatively slender structures which would not obstruct the longer distance views when experienced from any direction. Whilst undeniably tall structures, the scale of the underlying former opencast workings is of a medium to

large scale dominated by disturbed landform and regenerating land cover. Within this context the proposed turbines would not diminish the overall scale of the local landscape although in the immediate vicinity of the turbines the presence of the turbines would be clearly dominant. It is therefore recognised that the introduction of the turbines and the movement of the blades when operating will be highly prominent becoming a characterising influence on the LCST alongside its opencast legacy.

6.7.101 From within this LCST, the Revised Development would appear separate to the existing Nutberry, Hagshaw Hill, Hazelside and Galawhistle schemes; a major plantation lying between the LCST and Hagshaw Hill providing a visual break in the landscape.

6.7.102 Within LCST 5B – Plateau Farmland Opencast Mining, the Revised Development would have a high magnitude of change on landscape character when considered against the established baseline. The magnitude of effect would diminish slightly towards the north-western part of the LCST. However, across the majority of this LCST there would be a **moderate** effect which would be significant and this would be long term but non-permanent.

LCT 6 – Plateau Moorland

6.7.103 None of the proposed new structures are located within this LCT and hence there would be no direct effects on this LCT. The effects discussed below are therefore indirect.

6.7.104 LCT 6 only occurs in one location within 10 km of the site and is geographically relatively modest in size compared to some other types in the study area. It lies between 1 km and 3 km of the site. Whilst defined separately in the landscape character assessment, it shares many of its characteristics with LCT 5 as discussed above, and is in reality only differentiated by the predominance of moorland land cover instead of farmland. It should be noted that most of this area has been planted with forestry in recent years and in a number of years it would probably be appropriate to reclassify this area as LCT 6A – Plateau Moorland Forestry).

6.7.105 Analysis of Figure 6.19, which shows the ZTV to blade tip overlaid on top of the LCT boundaries, indicates that there would be clear visibility of the proposed turbines from the vast majority of the LCT although recently planted forestry is starting to restrict visibility slightly and the effect of this will increase over time. The ground level components of the Revised Development would have **no effect** on this LCT.

6.7.106 Across this area of LCT 6 the turbines would be prominent where intervening vegetation does not obstruct views and the forested rolling moorland beyond the Revised Development site forms the backdrop and the Nutberry turbines in particular are prominent on the skyline.

6.7.107 The Revised Development would appear to lie in the farmland at the foot of the rolling moorland beyond and be clearly separated from the Hagshaw Hill and Nutberry turbines.

6.7.108 Within this area of LCT 6 the Revised Development would have a high magnitude of change on landscape character when considered against the established baseline. Within this part of LCT 6 there would be a **moderate** effect, which due to the prominence of the turbines would be significant.

LCT 7 – Rolling Moorland

6.7.109 Nine of the 13 proposed turbines are located within a relatively small unit or area of this LCT (as is the substation/control building, construction compound/concrete batching area, and the anemometer masts). The Revised Development would occupy a substantial proportion of this small discrete tract of LCT 7.

6.7.110 Analysis of Figure 6.19, which shows the ZTV to blade tip overlaid on top of the LCT boundaries, indicates that there would be clear visibility of the entire Revised Development from the whole of this particular area of the LCT.

6.7.111 The ground level components of the Revised Development within this LCT (i.e. the access tracks and the crane hard standing areas) would be visible throughout the LCT but much of this infrastructure follows existing access haul routes from the former opencast workings.

6.7.112 As in LCST 5B, once restoration of the temporary construction works has taken place, the proposed access tracks would not be out of character with the network of other access tracks prevalent in this particular area of LCT 7 which are remnants of the former coal mining operations. There would therefore be only a **slight** adverse effect on the pattern of tracks across this landscape character sub-type.

6.7.113 The crane hardstanding areas would be prominent in their immediate environs but habitat enhancement proposals as set out in the Habitat Management Plan (HMP) will improve the appearance of much of the land between and surrounding the proposed turbines. In this regard, the land cover across the area would experience an overall improvement. Once weathered, it is anticipated that the appearance of the hardstanding areas will not be vastly dissimilar to the land cover currently experienced across certain parts of this area of LCT 7. When viewed from anywhere except directly adjacent to hardstandings, there would be no more than a **slight** / **no effect** change to land cover or pattern in the landscape.

6.7.114 The substation/control building and concrete batching area would be visible across much of this area of the LCT but they would be seen in the context of the former working landscape. Mitigation planting around the edges of buildings will help to soften their appearance and integrate them into the landscape.

6.7.115 It has already been established that there would be no significant effects on existing landscape features. Therefore, the effects on landscape character within LCT 7 – Rolling Moorlands principally relate to the introduction of the new turbines (both those actually within the LCT and those directly adjacent in LCST 5B).

6.7.116 As in LCST 5B the turbines would lie at the same level as the existing ground levels across the site and would not directly affect the landform or topography of the surrounding landscape to any significant degree. The profile of the plateau overlain by the regenerating rough grassland across the former opencast mine would prevail.

6.7.117 The comments provided above in relation LCST 5B concerning visual permeability and scale would apply equally to this area of LCT 7 and in particular it is reiterated that the proposed turbines are relatively slender structures which would not obstruct the longer distance views when experienced from any direction. In the immediate vicinity of the turbines, the presence of the turbines would be clearly dominant. It is therefore recognised that the introduction of the turbines and the movement of the blades when operating will be highly prominent becoming the primary characterising influence on this area of LCT 7. Whilst this discrete area of LCT 7 was also worked as an opencast mine, it has been largely restored and hence the legacy of the mining is marginally less prevalent in this area than that across LCST 5B.

6.7.118 The slight sense of detachedness from the built environment would be affected to a degree by the presence of the Revised Development although as there is such a strong industrial legacy to the site including a new CHP plant and permission for other industrial uses, and urban development in surrounding areas is clearly visible throughout the LCT, it is not the case that anyone crossing the LCT can obtain a true sense of remoteness or wildness.

6.7.119 The rotational speed of the proposed turbines is relatively sedate and therefore despite the movement of the blades the moorland would retain a slow pace of activity.

6.7.120 From within this area of LCT 7, the Revised Development would relate closely to Hagshaw Hill Extension in particular albeit with a discrete gap of approximately 0.84 km between the nearest turbines.

6.7.121 Within this area of LCT 7, the Revised Development would have a very high magnitude of change on landscape character when considered against the established baseline. Within this area of LCT 7 there would be a **major/moderate** effect on landscape character which would be significant and this would be long term but non-permanent.

6.7.122 The effect in combination with Hagshaw Hill and its extension would be to extend the Rolling Moorland Windfarm character type which exists around the Hagshaw Hill site across this area of LCT 7 creating a single larger area of the Rolling Moorland Windfarm character type.

6.7.123 Aside from the area of LCT 7 within which the Revised Development is located there are two further discrete areas of the same type to the south of the Douglas Valley and within 10 km of the Revised Development.

6.7.124 Figure 6.19, which shows the ZTV to blade tip overlaid on top of the LCT boundaries, indicates that there would be visibility of the entire Revised Development from the north facing slopes of these two areas of moorland.

6.7.125 The nearest of these two areas lies approximately 3 km to the south and extends up to approximately 6 km from the nearest turbine, and with distance from the site the effect on landscape character would diminish. At the closer edge, the proposed turbines would be prominent but seen on the same side of the valley and in the context of the Hagshaw Hill turbines and the Nutberry Wind Farm. In this context and at this distance it is considered that the Revised Development would result in a medium magnitude of change in character. This would give rise to a **moderate** effect, but one which in the context of other wind turbines visible, would not be significant in character terms.

6.7.126 The other area lies over 6 km to the south-west and extends up to approximately 10 km from the nearest turbine. Within this area of LCT 7, the turbines would be visible in some locations but at this distance would not be highly prominent. Where visible, the proposed turbines would be seen on the same side of the valley and in the context of the Hagshaw Hill turbines and the Nutberry Wind Farm. In this context, and at this distance it is considered, that the Revised Development would result in a medium magnitude of change in character. This would give rise to a **moderate** effect, but one which in the context of other wind turbines visible, would not be significant in character terms.

LCT 8 – Upland River Valley

6.7.127 None of the proposed new structures are located within this LCT and hence there would be no direct effects on this LCT. The effects discussed below are therefore indirect.

6.7.128 LCT 8 occurs in two discrete locations within 10 km of the site (associated with Douglas Water to the south-east and River Nethan to the north-west).

6.7.129 The Douglas Water area of LCT 8 lies closest and the boundary of this area is approximately 250 m to the south of the nearest proposed turbine location. The nearest part of this LCT, however, is occupied by plantation woodland (Long Plantation) from within which there would be no view of the Revised Development and hence **no effect** on landscape character.

6.7.130 Analysis of Figure 6.19, which shows the ZTV to blade tip overlaid on top of the LCT boundaries, indicates that theoretically there would be a slightly variable degree of visibility of the turbines throughout this area of LCT 8. In this case, it is important to stress the theoretical aspect of the ZTV. As mentioned above, Long Plantation lies along the northern edge of the LCT and there are further plantations elsewhere within this area of LCT 8. The result of this is that the theoretical extents of the illustrated ZTVs within LCT 8 are notably more extensive than would actually be the case once the screening effect of vegetation is taken into account.

6.7.131 For instance, the ZTV suggests theoretical visibility across the whole of Long Plantation itself from within which there would be no view of the turbines. Also in the bottom of the valley, the ZTV suggests visibility of some turbines, but from the southern edge of Long Plantation, the trees would screen the view. Moving further south from Long Plantation, views of the turbine blades would incrementally increase with distance, beyond 1 km from the site boundary. It is notable therefore that whilst the proposed turbines lie within 250 m of the LCT boundary, there would be no view of them within approximately 0.75 km in this LCT, and furthermore within 1 km views would be limited to the blade tips of the nearest turbines.

6.7.132 It is recognised however that on the southern side of Douglas Water and rising up the valley on the southern side past Douglas, some of the turbines would be prominent above Long Plantation whilst others would be screened by the vegetation. This can be seen with reference to assessment viewpoints 3, 4 and 14.

6.7.133 Whilst the turbines would be visible above it, Long Plantation provides a strong edge to the valley landscape and it would be evident that the Revised Development related to a separate landscape

somewhere beyond the valley. The scale of the turbines would be less perceptible to a certain degree by the presence of Long Plantation which would screen the lower parts of even the closest and most prominent turbines in the Revised Development.

6.7.134 It should be noted that Long Plantation would completely screen the other ancillary structures of the Revised Development.

6.7.135 The Hagshaw Hill and Extension turbines, and the Andershaw and Hazelside turbines are already visible from this same tract of land and therefore the proposed turbines would not become the first or only turbines visible from within this valley. In certain locations, they would however, be more prominent in the view by virtue of their closer proximity and larger size. Due to the angle at which they would both be viewed from within the valley, the schemes would be clearly discernible as separate developments.

6.7.136 As the turbines would not be visible (or barely visible) within 1 km in this LCT, it is not considered that they have an overbearing impact on the sense of scale or prevent an appreciation of the underlying valley to the extent that it would prevent an understanding and enjoyment of the landscape.

6.7.137 It is recognised that within this LCT, south-east of the Douglas Water (and where vegetation or buildings do not obstruct views of the turbines) that the Revised Development would give rise to a medium to high magnitude of change in the character of the valley and that this would result in a **major/moderate** effect which would be significant. However, visibility within the core of the Conservation Area at Douglas would be more limited by Long Plantation as well as buildings within the village itself and hence the magnitude of change in this area would not be so high. Within the core of the Conservation Area there would be a low magnitude of change in character and the built features of the village would clearly be the predominant characteristic of the townscape. Therefore, in landscape terms, there would be a **moderate** but not significant effect on the character of the Conservation Area in Douglas.

6.7.138 At its closest, the River Nethan area of LCT 8 lies approximately 2 km to the north-west of the nearest proposed turbine but extends to over 7 km away.

6.7.139 Analysis of Figure 6.19, which shows the ZTV to blade tip overlaid on top of the LCT boundaries, indicates that theoretically there would be variable visibility of the turbines throughout this area of LCT 8. However, in reality the southern slopes of the valley which lie closest to the site are well wooded and actual visibility would be considerably less than indicated by the ZTV.

6.7.140 From a few upper slopes of this valley the turbines would be visible where intervening vegetation does not obstruct views. The forested rolling moorland beyond the Revised Development site would form the backdrop and the Nutberry turbines in particular would be prominent on the skyline. However, the upper slopes of the LCT which lie closest to the site overlook the former Dalquhandy Opencast mine and in character terms are less sensitive.

6.7.141 The Revised Development would appear to lie in the farmland at the foot of the rolling moorland beyond and be clearly separated from the Nutberry turbines (and where visible, also the Hagshaw Hill turbines).

6.7.142 Within the part of LCT 8 which lies within 3 km of the site (and from which there are unobstructed views of the turbines) the Revised Development would have a medium magnitude of change on landscape character when considered against the established baseline resulting in a **moderate** effect. However, due to the infrequency of views available and the context of the Dalquhandy Opencast workings this would not be significant. Further afield the effect on landscape character would diminish. There would be no significant effect on any part of this area of LCT 8.

LCT 9 – Broad Valley Uplands

6.7.143 None of the proposed new structures are located within this LCT and hence there would be no direct effects on this LCT. The effects discussed below are therefore indirect.

6.7.144 LCT 9 only occurs in one location within 10 km of the site, along the Douglas Water, and at its closest lies approximately 3.5 km east of the site but it also extends to beyond 10 km away.

6.7.145 Analysis of Figure 6.19, which shows the ZTV to blade tip overlaid on top of the LCT boundaries, indicates that there would be clear visibility of the proposed turbines from the most of the LCT. However, that part of the LCT which lies within 5 km of the turbines is either within woodland, directly behind woodland or outside of the ZTV such that in reality there would be restricted visibility of the turbines within 5 km in this LCT. The ground level elements of the Revised Development would have **no effect** on this LCT.

6.7.146 Beyond 5 km and where there are no obstructions, the proposed turbines would be visible in this LCT in a south westerly direction up the broad valley with the forested moorlands as the backdrop.

6.7.147 The Hagshaw Hill turbines are visible on the horizon behind the site and the Nutberry turbines are also visible on the horizon further to the north. The Revised Development would appear to lie in the farmland at the foot of the rolling moorland beyond and whilst located in the same horizontal array as the Hagshaw Hill turbines the proposed turbines would evidently form part of a different grouping from existing wind farms.

6.7.148 In the context of other built infrastructure in the same direction (including the large industrial units at Poniel, pylons and the operational turbines outlined above as well as single turbines in the intervening farmland) the proposed turbines would not appear out of character relating as it would to an area which clearly lies beyond the valley.

6.7.149 Up to 5km from the site within this area of LCT 9 the Revised Development would have a medium magnitude of change on landscape character when considered against the established baseline resulting in a **moderate** effect, which due to the prominence of other infrastructure in the same direction, would not be significant. Beyond 5 km the effect would diminish further and up to 10 km would be **moderate** to **minor**.

LCT 10 – Foothills

6.7.150 None of the proposed new structures are located within this LCT and hence there would be no direct effects on this LCT. The effects discussed below are therefore indirect.

6.7.151 LCT 10 only occurs in one location within 10 km of the site, to the east of the M74, and at its closest lies approximately 3 km east of the site but it also extends to beyond 10 km away.

6.7.152 Analysis of Figure 6.19, which shows the ZTV to blade tip overlaid on top of the LCT boundaries, indicates that there would be clear visibility of the proposed turbines from between 3 km and 8 km of the site; on the north-west facing slopes of the foothills nearest the site, and from up to 10 km from the site from the peaks of the Foothills, including Ewe Hill, Wildshaw Hill and Robertson Law.

6.7.153 The ground level elements of the Revised Development would have **no effect** on this LCT being screened by Long Plantation.

6.7.154 Beyond 3 km and where there are no obstructions, the proposed turbines would be prominent from the nearest parts of this LCT; the turbines being seen in the plateau farmland below the forested moorlands as the backdrop.

6.7.155 The Hagshaw Hill turbines are visible on the horizon behind the site and the Nutberry and Galawhistle turbines are also visible on the horizon further to the north. The Revised Development would appear to lie in the farmland at the foot of the rolling moorland away from these existing wind farms and whilst located in the same horizontal array as these turbines, the Revised Development would evidently form part of a different grouping from existing wind farms.

6.7.156 In the context of other built infrastructure in the same direction (including the large industrial units at Poniel, pylons and the operational turbines outlined above), the proposed turbines would not appear out of character, relating as it would to an area which clearly lies beyond the foothills.

6.7.157 It is noted that the area of the LCT, which lies within the ZTV and within 10 km of the site, lies largely outside of the Regional Scenic Area, with views limited to the very peaks of the primary hills within the RSA, where the Revised Development would be seen in the context of the existing wind farm cluster north of Douglas.

6.7.158 Up to 6 km from the site within LCT 10, the Revised Development would have a medium magnitude of change on landscape character when considered against the established baseline resulting in a **moderate** effect, which due to the prominence of other infrastructure in the same direction, would not be significant. Beyond 6 km the effect would diminish further and up to 10 km would be **moderate** to **minor**.

Douglas Valley Special Landscape Area

6.7.159 The Validating Local Landscape Designations (VLLD) report produced by South Lanarkshire (Nov 2010) sets out that the various SLA descriptions should incorporate landscape character and landscape qualities. It is therefore appropriate to consider the various assessments for the relevant identified landscape character types as set out above when considering effects upon the Douglas Valley SLA.

6.7.160 The VLLD report goes on to suggest that information should be recorded for the various aspects of landscape character including: typicality, rarity or uniqueness and condition or quality as well as landscape qualities including: Scenic, Enjoyment, Cultural and Naturalness. Both landscape character aspects and landscape qualities have been taken into consideration when determining the various landscape sensitivities as set out above, and resulting effects on the various landscape character types. Therefore, the above judgements about effects on landscape character can be read as a representation of the effect on the Special Landscape Area designation.

6.7.161 The Douglas Valley Special Landscape Area comprises a number of Landscape Character types as follows:

- 5 Plateau Farmland;
- 7 Rolling Moorlands;
- 8 Upland River Valley;
- 8A Upland River Valley Opencast Mining;
- 9 Broad Valley Upland; and
- 10 Foothills

6.7.162 When referring to area '8A' Upland River Valley Opencast Mining', it is assumed that this is a typing error as the correct numbering as stated elsewhere in the Validating Local Landscape Designations (VLLD) report (South Lanarkshire Nov 2010), is '8B'. Additionally, a Landscape Character Type which has been omitted from the list within the VLLD was LCT 7 Rolling Moorland Windfarm.

6.7.163 In relation to both LCT 8B and LCT 7, it is considered that these areas are not sufficiently sensitive for indirect effects arising from a wind farm in a different character area to give rise to significant effects on landscape character and on this basis, they have not been assessed further. This reasoning is also valid when considering these portions of the Douglas Valley SLA.

6.7.164 VLLD describes the Douglas Valley SLA as follows:

"*The Douglas Valley is a sheltered valley containing a well preserved designed landscape with significant mature woodland planting. It is centred around the historic village of Douglas and provides an accessible, contained and tranquil landscape in contrast to the open and expansive rolling moorland to both the south and north of the valley*."

6.7.165 VLLD acknowledges that the expanded Hagshaw Hill Wind Farm and opencast mining in the area have, and will continue to affect the landscape. However, the document considers that these developments are relatively limited or transient features that will not affect the key landscape characteristics sufficiently to be excluded from the designated area.

6.7.166 It is noteworthy that the boundary of the Douglas Valley SLA was drawn to incorporate part of the Hagshaw Hill Wind Farm. This demonstrates that wind farm development can be accommodated both immediately adjacent to an SLA and also within the designated landscape without detrimental effects upon the overall quality and integrity of the designated landscape area.

6.7.167 VLLD goes on to identify the significance of the scenic and cultural features of the Douglas Valley SLA, which are as follows:

- *Scenic compositional qualities of a meandering upland river passing through a sheltered, mature pastoral landscape enclosed by moorland hills;*
- *Cultural features include the designed landscape of the Douglas Castle and historic village of Douglas together and their historic associations with the Douglas Family, the Cameronians regiment and literary associations with Sir Walter Scott;*
- *A network of mature policy woodlands and shelterbelts and a high quality water environment; and*
- *Frequently visited, as the M74 passes through the eastern end of the designated area and intersects with the main east-west route of the A70 which passes along the valley. The village and castle are visitor destinations with well-maintained footpaths through the designed landscape*.

6.7.168 Having regard to the scenic compositional qualities of the Douglas Valley, it is considered that the Revised Development would not detrimentally affect the notable landscape fabric of the SLA as described within the VLLD. The Revised Development would be located beyond the '*meandering upland river*' landscape, separated by the presence of Long Plantation, and as such would appear separate to the distinctive pastoral landscape of the SLA. The limited number of proposed turbines located within the SLA would be appear within the moorland landscape beyond the river valley and Long Plantation; there would be very little perception of the turbines being located within the SLA itself.

6.7.169 VLLD states, with regards to the choice of boundary for the Douglas Valley SLA, that the boundary considers the visual envelope and setting of the valley and that it includes Hagshaw Hill, which encloses the valley in views to the west and north. The north western boundary is noted to follow '*the hill crest and forestry boundary of Curly Brae towards Douglas Wes*t. *It then rises to meet the hill crest and forestry on Hagshaw Hill to join the western boundary at Wedder Hill'*. When viewed on an accompanying plan (See Figure 6iv of VLLD), it is noted that the boundary of the SLA largely reflects physical boundaries of forestry, fences, watercourses, and the interface between forestry and moorland.

6.7.170 The section of the SLA boundary which bisects the site follows a remnant fence-line, which formed part of the boundary of the Dalquhandy Opencast site. There is no public right of way at this location, rather an aspirational right of way, and thus there is no tangible landscape feature on the ground that forms the boundary unlike much of the remaining SLA. The small part of the site located within the SLA is defined by its remnant coal mining characteristics rather than the characteristics of the Douglas Valley. This small part of the site is also not considered to fall within the visual envelope of the SLA, largely due to the presence of a large spoil heap that curtails views in a southerly direction towards the valley landscape, alongside the presence of Long Plantation. There is little intervisibility between the part of the site that falls within the SLA and the wider Douglas Valley landscape.

6.7.171 It is acknowledged that T10 – T13 are located within the SLA, but the character of this small tract of the SLA landscape is markedly different to the core Douglas Water Valley landscape, with limited intervisibility between the two. As such, any direct effects upon the landscape of the site would not detrimentally alter the perception or enjoyment of the core SLA landscape, as there is no tangible evidence in the landscape that the Revised Development is located within the SLA itself.

6.7.172 In terms of impact on cultural features, whilst it is noted that the Revised Development has the potential to cause significant visual effects upon views from certain more elevated, south eastern parts of the grounds of the Douglas Castle (a C listed building), a substantial proportion of the Revised Development would be screened by the intervening landform and coniferous plantation. There would also be other views available from within the Castle grounds where the Revised Development would be entirely screened by landform and Long Plantation. It is noted that the existing Hagshaw Hill and Hazelside turbines are also visible from Douglas Castle and its grounds, and from the majority of the Douglas Valley. Whilst the proposed turbines will appear closer and as a separate grouping in most available views within the grounds of the Douglas Castle, they will not

affect the ability to perceive and appreciate the cultural features located within the Douglas Valley. Further assessment is given to the impact of the Revised Development on Cultural Heritage features within Chapter 10 of the ES.

6.7.173 The Revised Development would not adversely affect the network of mature policy woodlands and shelterbelts and a high quality water environment within the Douglas Valley.

6.7.174 In terms of the Revised Development's impact on visitor routes and attractions within the area, a detailed assessment of these potential impacts has been undertaken and it is considered that although the Revised Development would give rise to some limited worst case major effects upon routes that could be used by tourists and visitors to the Douglas Valley, such effects would not have a detrimental impact on the overall perception of the SLA as an attractive valley landscape.

6.7.175 Based on the findings of likely effects upon landscape character as set out above, it is assessed that there would be a range of landscape effects on the Douglas Valley SLA, from Major/Moderate where the Revised Development is located within or close proximity to the SLA itself, to No Effect where there is very limited intervisibility between the Revised Development and the SLA. The areas assessed as being of a Major/Moderate and significant effect are relatively localised and occur due to the close proximity of these areas to the Revised Development. It should be noted that due to the intervening landform and mature coniferous vegetation that the impacts on this SLA are limited due to the varying degrees of intervisibility across and area which is currently influenced by wind turbine development in the form of Hagshaw Hill, Hazelside Farm and Andershaw.

6.7.176 It is therefore considered that there would be an overall **Moderate** level of effect on the Douglas Valley SLA (whilst recognising that the effect would be major/moderate in some locations and less than moderate elsewhere).

6.7.177 In summary, having regard to the potential impact of the Revised Development on the key scenic and cultural features of the Douglas Valley SLA, it is considered that the worst case effects identified would not detrimentally affect the overall quality and perception of the designated landscape area.

Table 6.6 - Summary of Effects on Landscape Character

Landscape Character Type/Sub-type	Sub Area/Location	Magnitude of Change	Level of Effect	Significant
5. Plateau Farmland	West of the B7078 and south of the row of pylons which run south of Auldtonheights (ie within approx 3-4 km of the proposed turbines)	High	Moderate	Yes
	Approx 4 -7 km	Medium	Moderate	No
	Over 7 km	Low	Moderate/ Minor	No
5B. Plateau Farmland Opencast Mining	Area within which the Revised Development is partially located	High	Moderate	Yes
6. Plateau Moorland	Whole area of LCT	High	Moderate	Yes
7. Rolling Moorland	Area within which the Revised Development is partially located	Very High	Major/ Moderate	Yes
	Area 3-6 km south east	Medium	Moderate	No
	Area 6-10 km south west	Medium	Moderate	No
8. Upland River Valley	Douglas Water Valley - within 1.5 km	No Change	No Effect	No
	Douglas Water Valley - south east of the Douglas Water (and where vegetation or	Medium to High	Major/ Moderate	Yes

Landscape Character Type/Sub-type	Sub Area/Location	Magnitude of Change	Level of Effect	Significant
	buildings do not obstruct views of the turbines)			
	Douglas Water Valley – Douglas village	Low	Moderate	No
	River Nethan Valley – within 3 km	Medium	Moderate	No
	River Nethan Valley – beyond 3 km	Medium to Low	Moderate/ Minor	No
9. Broad Valley Upland	Up to 5 km	Medium	Moderate	No
	Over 5 km	Medium to Low	Moderate/ Minor	No
10. Foothills	Up to 5 km	Medium	Moderate	No
	Over 5 km	Medium to Low	Moderate/ Minor	No

Effects on Landscape Character during Decommissioning

6.7.178 It is recognised that there would be some additional temporary effects during decommissioning of the Revised Development after 25 years over and above those assessed under the heading of Operational Effects above. The additional effects resulting from decommissioning activities would be localised and relatively incidental when viewed in the context of the wind farm being removed.

6.7.179 The effects on landscape character would therefore decrease incrementally as decommissioning progresses and as more turbines and associated foundations and hardstanding are removed.

6.7.180 The effects would be similar to those during the construction phase but in reverse.

6.7.181 Overall, it is considered that there would be a low magnitude of additional change (over that during the operational phase) for the reasons outlined above. This would result in no greater than a **minor** temporary effect on the Plateau Farmland Opencast Mining LCT and the small tract of Rolling Moorland LCT within which the Revised Development is located. The decommissioning effects would be temporary in nature and are unlikely to all occur at the same time during this phase.

6.7.182 The decommissioning effects of the development on landscape character are deemed to be **not significant**.

Assessment of Visual Effects at Representative Viewpoints

Construction Effects

6.7.183 Beyond the immediate vicinity of the site, ground level activity associated with the turbine construction would not be clearly visible or discernible from the vast majority of the study area and therefore, from the majority of the assessment viewpoints, the only additional visual effects over and above those addressed under the heading of Operational Effects would arise in relation to views of the cranes erecting the turbines. The cranes would be visible for a relatively short period and would be incidental when considered in the context of the turbines being erected. There are a number of locations within the study area that may experience glimpsed views of construction activity at ground level; however, it is assessed that any view of these works will also be incidental and **not significant**, in relation to the overall effects identified as a result of the Revised Development.

Operational Effects

6.7.184 A detailed viewpoint assessment of the operational phase effects is presented at Appendix 6.3 and this considers the long term visual effects during the operational phase of the Revised Development for each of the 20 assessment viewpoints agreed with SLC and SNH.

6.7.185 For each of the representative viewpoints, a short description is firstly given of the baseline view and a judgement is provided regarding the sensitivity of the key receptors likely to experience the view.

6.7.186 This is followed by a description of the features of the development that would be visible from that viewpoint. This includes a description of how many turbine hubs and blades would be visible and also, where relevant, whether any ground level components of the development would be visible. For each viewpoint, there is a comment on how vegetation, buildings or topography would affect the actual visibility of the turbines. A judgement is then provided as to the assessed magnitude of change that would be experienced at each viewpoint.

6.7.187 Following this, a judgement is then provided regarding the resulting level of effect on the view and a statement is provided to clarify whether the effect is deemed to be significant or not.

6.7.188 A summary of the sensitivity of the view, magnitude of change in the view and level/significance of effect is given in Table 6.7. Where a viewpoint is representative of more than one type of visual receptor, the assessment carried forward to Table 6.7 is that which represents the most sensitive receptor group represented by the viewpoint.

6.7.189 It has been assessed that there would be a significant visual effect at six of the 20 representative viewpoints. These are as follows:

- Viewpoint 1 – Braehead, Coalburn;
- Viewpoint 2 – M74 Overbridge;
- Viewpoint 3 – Monument at Douglas Castle;
- Viewpoint 4 – Douglas;
- Viewpoint 5 – B7078 south of Lesmahagow; and
- Viewpoint 13 – Coalburn Road, north of Coalburn.

Table 6.7 - Summary of Operational Effects on Assessment Viewpoints

Name/Receptor	OS Grid Ref	Distance to nearest turbine	No. of hubs theoretically visible	No. of blade tips theoretically visible	Sensitivity of the Receptor	Magnitude of Change	Level of Effect	Significant
1. Braehead, Coalburn	281512 634519	1,376 m to T04	13	13	High	High	Major	Yes
2. M74 Overbridge	284562 635389	3,358 m to T07	13	13	Medium	High	Moderate	Yes
3. Monument at Douglas Castle	284119 631737	1,743 m to T09	11	13	High	High	Major	Yes
4. Douglas	283541 631002	1,610 m to T09	9	13	High	High	Major	Yes
5. B7078 south of Lesmahagow	283190 637213	4,372 m to T09	13	13	Medium	High	Moderate	Yes
6. A70 Rigside	287701 635190	5,709 m to T07	13	13	High	Medium	Moderate	No
7. Black Hill	283198 643547	10,527 m to T04	13	13	High	Medium	Moderate	No
8. Hyndford Bridge	291447 641479	12,495 m to T07	13	13	High	Low to Medium	Moderate/ Minor to Moderate	No
9. Tinto Hill	295320 634369	12,860 m to T07	13	13	Very High	Low	Moderate	No
10. Motherwell Heritage Centre	275004 657069	24,451 m to T01	2	10	Very High	Very Low	Moderate/ Minor	No
11. Culter Fell	305283 629082	22,997 m to T07	13	13	High	Very Low to Low	Moderate/ Minor	No

Name/Receptor	OS Grid Ref	Distance to nearest turbine	No. of hubs theoretically visible	No. of blade tips theoretically visible	Sensitivity of the Receptor	Magnitude of Change	Level of Effect	Significant
12. Southern Upland Way, Lowther Hill	288768 610954	21,754 m to T13	13	13	High	Very Low to Low	Moderate/ Minor to Minor	No
13. Coalburn Road, north of Coalburn	281184 636214	3,074 m to T04	13	13	Medium	High	Moderate/ Major	Yes
14. Glespin (on A70)	282048 628728	2,797 m to T13	7	9	Medium	Low	Moderate/ Minor	No
15. Auchensaugh Hill	285337 627198	5,659 m to T10	12	13	Medium	Medium	Moderate/ Minor	No
16. A721 near Kilncadzow	289047 648400	16,891 m to T06	13	13	Low	Low	Minor	No
17. A706 Forth	294044 653642	23,739 m to T06	12	13	High	Very Low	Minor	No
18. Little Sparta	305250 648826	27,739 m to T07	4	9	Very High	Very Low	Minor	No
19. Quothquan near Biggar Common	298822 638422	1,7234 m to T07	4	13	High	Very Low	Minor	No
20. Brocketsbrae	282288 639824	6,717 m to T04	13	13	High	Medium	Moderate	No

Assessment of Effects on Visual Receptor Groups

6.7.190 From analysis of the assessment viewpoints it is possible to draw some conclusions about the level of effect on views and visual amenity experienced by different receptor groups at different distances from the Revised Development.

6.7.191 In this section, the effects of the Revised Development on various different visual receptor groups are considered.

Construction Effects on Visual Receptor Groups

6.7.192 It is recognised that there would be some additional temporary visual effects during the construction of the Revised Development over and above those assessed under the operational phase.

6.7.193 The vast majority of effects, of note, when considering the construction phase would be experienced in the immediate vicinity of the site. Due to the nature of the surrounding landform and vegetation, the construction activities will not be clearly visible from surrounding areas and hence have no discernible effect on visual receptors within these areas.

6.7.194 A number of Core Paths, Aspirational Core Paths and a Wider Network paths pass within close proximity as well as through the site including, CL/5734/1, CL/5735/1, CL/5735/2, CL/5735/3, CL/3457/1, CL/5192/4, CL/5192/3 along with a number of Aspirational Core Paths and Wider Network paths as illustrated at Figure 6.20.

6.7.195 Receptors using these routes would have largely unobstructed views of at least some of the construction activities associated with the Revised Development. The clearest views would be experienced from the aspirational core path/wider path network which follows the former haul road of the Dalquhandy Opencast site, however, it is recognised that a temporary diversion of this route will be required during the construction phase (see Appendix 3.1).

6.7.196 It is assessed that there would be a worst-case medium magnitude of additional effect during construction over and above the operational phase effects assessed below. This would result in a temporary **moderate** additional effect which would be significant and these effects need to be considered in conjunction with the operational effects identified below.

Operational Effects on Visual Receptor Groups

6.7.197 Views of the ground level components of the Revised Development will be limited to a relatively short radius around the site. Except where indicated, the discussion below therefore relates primarily to views of the proposed turbines of the Revised Development.

Residential Properties within 1.2 km of the Proposed Turbines

6.7.198 There are eight residential properties within 1.2 km of the proposed turbines. One of these, Blackwood Cottage, is owned by the Applicant. Two others, Station House and Westerhouse, are financially involved in the Revised Development. Of the eight properties, one, namely Braidlea, has not been assessed within the RVAS due to its location within coniferous woodland. It has however been considered separately within the visual assessment. The remaining seven properties are identified and assessed in detail within the Residential Visual Amenity Study (RVAS) presented at Appendix 6.4.

6.7.199 The RVAS concludes that there would be significant effects experienced at two of the seven assessed properties, namely Blackwood Cottage and Station House, but the residents would not experience such an overbearing effect on visual amenity that any property would become an unattractive place to live or visit. It is acknowledged that Blackwood Cottage is owned by the Applicant, and both Station House and Westerhouse are financially involved properties in the context of the Revised Development. However, for the purposes of the RVAS all properties have been assessed in the same manner irrespective of any involvement or otherwise.

6.7.200 Of the seven assessed residential properties within 1.2 km of the nearest turbine, the residents of three of the properties (West Toun House, Westerhouse, and Craigend,) would experience

moderate effects on some views whilst the remaining two properties (1 and 3 Westoun Steadings) would experience no greater than a **moderate/minor** effect on views from the property and curtilage.

Properties Located between 1.2 km and 2 km of the Proposed Turbines

6.7.201 Between 1.2 km and 2 km of the turbines, the majority of the residential properties lie within the villages of Coalburn and Douglas. A number of individual farmsteads and small clusters of properties are scattered throughout the surrounding landscape and include a number of properties strung out along Bellfield Road, a few clusters of residential properties at Bellfield, Netherfield and Nethertown of Poniel as well as the properties at Midtown, and Netherton Croft.

6.7.202 There are some isolated properties located between the site and the village of Douglas, situated to the north and west of Douglas. These include Gardens House, Braidlea, Scrogton and Scrogtonhead. It is recognised that Braidlea is actually located within 1.2 km of the Revised Development, but as the dwelling is located within coniferous woodland and therefore has virtually no intervisibility with the Revised Development, it was not deemed necessary to consider the property as part of the RVAS. As such, the potential visual effects experienced by residents of Braidlea are discussed further below.

6.7.203 The properties at Netherfield and Nethertown of Poniel to the east of Bellfield Road will experience views of the majority of the proposed turbines above the intervening landform which rises to the south-west. The lower sections of the proposed turbine towers will be screened by this landform with the turbine hubs and blades seen above the rising land. Intervening coniferous vegetation will assist in partially screening more of the towers and there is also extensive new coniferous planting surrounding Nethertown of Poniel which will further screen views in future years. However, the visible turbines will form prominent features in the landscape. This scenario is similar to that at Midtown and Netherton Croft in that the rising landform and intervening coniferous vegetation will partially screen views of the Revised Development. It has been assessed that there will be a medium to high magnitude of change to the views in the direction of the proposed turbines. There will therefore be a **moderate** to **major** level of effect which is deemed to be significant.

6.7.204 The residential properties at Gardens House, Braidlea, Scrogton and Scrogtonhead are situated on the south-eastern side of Long Plantation and views in the direction of the proposed turbines would be partially obscured by the dense coniferous vegetation and rising landform. Interrogation of the digital terrain model has identified that the proposed turbines situated in the southern and eastern part of the site would be partially visible above this landform and vegetation from Scrogton and to a lesser degree Scrogtonhead. The primary views from these properties are along the Douglas Valley and towards the village of Douglas, and not up the hillside towards the existing plantation. The limited ability to view the proposed turbines above the vegetation from the dwellings will result in a worst-case low magnitude of change and a moderate, but not significant level of effect from Scrogton and Scrogtonhead. The clearest opportunity to view the proposed turbines will be on the approach when using Station Road. From this route, the blades and hubs of the southern and eastern turbines will be visible above the plantation. The sensitivity of this route is considered to be medium with a medium magnitude of change. This will therefore result in a **moderate** level of effect which is considered to be significant. However, the turbines would be seen in the context of the existing Hagshaw wind farm and extension, although seen as a separate development to the north east of the view.

6.7.205 Residents at Gardens House and Braidlea will not experience views of the turbines from the dwellings themselves due to their close proximity to coniferous trees and as such there would be **negligible to no effect** experienced at these two properties. However, residents will see the hubs and blades of the turbines above Long Plantation when travelling along Station Road or the routes through the Douglas Valley on the approach to the respective properties. It is assessed that there will be a medium to high magnitude of change upon such views when travelling along the minor roads towards the properties resulting in a worst-case **moderate** level of effect which is considered to be significant.

Coalburn and Braehead

6.7.206 The two linked settlements of Coalburn and Braehead are situated to the north of the site with the majority of the properties falling within 2 km of the proposed turbines. Whilst it is recognised that these two settlements are often referred to collectively as just Coalburn, for the purposes of this discussion Coalburn is considered to be that part of the settlement north of the junction between Coalfield Road and Bellfield Road whilst Braehead is that part of the settlement to the east of this junction. The visual effects on the two separate parts of the settlement are quite different.

6.7.207 Dealing first with Coalburn, the main artery road, Coalburn Road, rises in elevation to the north. Many properties within Coalburn currently experience views which are internally focused within the residential context, and long distance views in the direction of the Revised Development are not common from these properties.

6.7.208 Properties located along Coalburn Road and most of those in the residential estates either side are unlikely to experience clear or unobstructed views of the proposed turbines due to the orientation of the majority of these properties and the screening effect of other properties and vegetation. However, from peripheral positions, where properties are situated on the outer edges of the village and back onto open fields, longer distance views can be gained. Some properties, for example those on the eastern side of Manse View, the eastern side of Coalburn Road (north of School Road) and the southern side of Pretoria Avenue, would have views of the proposed turbines in the distance beyond the settlement with urban infrastructure typically in the foreground of these views. There is also likely to be intermittent views of the turbine blades when looking down Coalburn Road from a few locations, but this would be in the context of urban infrastructure such as street furniture and moving traffic.

6.7.209 Views of the proposed turbines are more likely to be gained from less sensitive first floor windows of houses but it is acknowledged that views from the ground floor will also be available from some properties within the village. It is also acknowledged that some of the properties within Coalburn are maisonettes with some three story apartment blocks, particularly along Coalburn Road. From these dwellings there would be views towards the revised development over the surrounding townscape, albeit at a very oblique angle of view. Although when visible and potentially prominent in the view, the proposed turbines would not be the defining feature within the townscape. Therefore, where views are experienced from within Coalburn, there will be a worst-case medium magnitude of change in the view, resulting in a **moderate** effect. This moderate effect is not assessed as being significant due to the distance from site and the intervening urban context.

6.7.210 At the southern edge of Coalburn, the nearest current properties fall within: Middlemuir Road and Belvedere Place - located approximately 1.3 km from the nearest turbine. There would be no view of the turbines from the properties on Belvedere Place due to screening provided by intervening vegetation and landform. The properties on Middlemuir Road are orientated eastwards away from the development site but from the gable end of the properties at the southern end of the road it is assessed that direct views of turbines T1, T2 and T3 will be possible. T1 is situated approximately 1.35 km from the properties and would be partially screened by the intervening landform. It is concluded that these southernmost properties will experience glimpsed views of the westernmost turbines and at this distance will result in a worst-case medium magnitude of change and a **moderate** level of effect. These effects are not deemed to be significant due to the restricted nature of the views.

6.7.211 Outline planning permission for a small housing development to the south of Middlemuir Road, named 'Gunsgreen', has been granted and following a request for an extension of time, is awaiting a Reserved Matters planning application. However, it is noted that this site is currently for sale (June 2017), which includes self-build plots, and thus the likelihood of a reserved matters application coming forward in the immediate future is potentially low. Nevertheless, an assessment of effects is provided for completeness of assessment.

6.7.212 The settlement boundary for Coalburn has been amended to incorporate this potential future development and the closest part of the application redline boundary is approximately 900 m to the north of turbine T02. The housing site is in the ownership of Hargreaves Surface Mining Limited and forms part of the former Dalquhandy Opencast site where offices and outbuildings were located.

An illustrative layout was submitted as part of the original design and access statement, however without a final layout it is not possible to gain an accurate understanding of the proposals and the potential visual effects as a result of the Revised Development. The land is situated at a higher level to the properties along Middlemuir Road and it is anticipated that the proposed turbines will be clearly visible from houses on the southern and eastern edge of this potential future development. Any landscape proposals would require time to establish and clear views from the properties would theoretically be available from first and ground floors (if properties are two storey) and it is assessed that the properties along the southern and eastern boundaries of the development would experience a high magnitude of change. There would therefore theoretically be a **major** effect on the view from these properties on the southern and eastern boundaries of the new estate, which is considered to be significant. It is noted that anyone moving into one of these future houses would be aware that there is an extant permission to construct the Dalquhandy Wind Farm and the Consented Development in equally close proximity to the properties.

6.7.213 Development in Braehead is mainly linear along Bellfield Road with just a few clusters of housing set back in cul-de-sacs off the main road. The closest properties are located within Braehead Place - located approximately 1.3 km from the nearest turbine, Midfield Road - located approximately 1.34 km from the nearest turbine, and along the length of Bellfield Road located at distances ranging from 1.5 km to 2 km to the nearest turbine.

6.7.214 The two properties located along the east side of Braehead Place are orientated primarily to the north-west towards the road with the rear of the property facing south-east. The curtilage of each property includes views in south and south easterly directions towards the site. The properties on the eastern side of Braehead Place will experience a worst-case high magnitude of change in the view. This will result in a **moderate/major** effect which is deemed to be significant.

6.7.215 The properties located on the southern side of Midfield Road are orientated with the rear of the properties facing in a south south-eastward direction towards the Revised Development. Assessment Viewpoint 1 illustrates the view from the end of Midfield Road and provides an indication of some of the intervening vegetation. The turbines of the Revised Development will be seen in combination with the Hagshaw Hill turbines. The properties located on the southern side of Midfield Road will experience a high magnitude of change in the view from south facing windows. It is therefore assessed that there will be a **moderate/major** level of effect that is considered to be significant.

6.7.216 Properties located on the northern side of Midfield Road, Beechmount Avenue and the properties along Railway Road would experience a worst-case low magnitude of change in the view, resulting in a **minor** level of effect which is not considered to be significant.

6.7.217 Bellfield Road is relatively long and extends eastwards from Coalburn Road in the west, through Braehead, Bellfield and Netherfield, before heading in a northerly direction to join the B7078. A number of properties along this stretch of road will experience clearer views of the Revised Development resulting in a high magnitude of change and a **moderate/major** level of effect. Namely, those along Bellfield Road including some at Railway Road, Park Street, Bellfield Place and the three bungalow properties east of Midfield Road.

6.7.218 No other significant effects have been identified from the settlements of Coalburn and Braehead.

Douglas

6.7.219 The village of Douglas is situated to the south-east of the Revised Development. Most properties are situated between 1.6 km and 2.5 km but with several properties scattered around the outskirts of the village. The entirety of Douglas and many of the surrounding properties fall within the Douglas Valley SLA. A Conservation Area designation also covers the northern part of the village. Viewpoint 3 illustrates the view from the northern edge of the village on Crabtree Street.

6.7.220 Douglas is situated on the south-eastern slope of the Douglas Valley, and many views from the village are orientated in a north-westerly direction towards the opposite valley side. Although a significant number of the residential properties within Douglas face inwards and towards other properties, the sloping hillside that Douglas is situated on allows an equally significant number of properties to experience views towards the opposing hillside of the Douglas Water Valley. The

northern part of the village has narrower streets, denser clusters of buildings and mature vegetation throughout and within communal areas, such as, the church yard of St Brides Chapel. The northern historic core therefore has relatively limited views out at ground level except along the very northern edge. South of the A70 the housing and street pattern is more modern; roads are typically wider with larger gaps between housing. As these houses occupy rising land with a north easterly aspect they tend to have more opportunities to experience views out of the village towards the surrounding landscape but less of a view of the Conservation Area.

6.7.221 Mature vegetation throughout and around Douglas is a characteristic of the village and provides some filtering of views in the direction of the site, with buildings also screening views towards the turbines from many properties. However, it is assessed that the proposed turbines are likely to be visible from several groups of properties in Douglas. When visible the proposed turbines would form prominent features in the landscape beyond the Douglas Water valley, above Long Plantation. Due to the availability of views to the west and north-west, the existing Hagshaw Hill turbines can typically also be seen from these properties.

6.7.222 The turbines that make up the Revised Development would be seen in combination with the existing Hagshaw Hill turbines with a clear separation between the two developments.

6.7.223 Notable streets and properties within Douglas and north of the A70 that are likely to experience some views of the proposed turbines include the houses at Crabtree Street and Blue Tower, Currie's Close, the bungalows along Braehead and Orchard Brae. A small number of properties and the school on Ayr Road as it leaves Douglas to the south would also experience limited views of the proposed turbines. Notably however the views along Main Street, The Loaning and Ayr Road (as it passes through the core of the village) are unlikely to be altered.

6.7.224 Certain properties south of the A70 are also likely to experience some view of the turbine blades and hubs above Long Plantation, particularly Springhill Street which wraps around the western edge of Douglas. However, this is likely to be between and over the rooftops of intervening buildings in the northern part of the village and heavily filtered by vegetation throughout the settlement.

6.7.225 The introduction of the proposed turbines would result in a worst-case medium to high magnitude of change in the view from a number of properties within Douglas. It is noted that a proportion of the Revised Development will be screened by the intervening landform and dense vegetation of the Long Plantation as it runs along the ridge. There would however be locations that experience a **moderate**/**major** effect which is deemed to be significant.

6.7.226 Many of the properties in the village however would experience either no change in the view or limited views of the proposed turbines but not to a degree that would result in significant effect.

6.7.227 Along the A70 and situated relatively close to the village of Douglas is Lady Home Hospital. This is located approximately 2.1 km from the nearest turbine. The main building is orientated in a north-east direction. A row of deciduous trees which line the road, and a cluster of trees opposite, partially filter views to the north-west. Views extend towards the undulating grasslands beyond, which includes deciduous tree belts throughout. Evergreen plantations are visible on the hillside slopes in the distance and it is assessed that the blades of some of the proposed turbines would be visible at a slightly oblique angle of view to this property, above the Long Plantation. Although the proposed turbines would form prominent features, they would be seen in the context of the wider landscape. They would also be seen in combination with the existing Hagshaw Hill turbines. The Lady Home Hospital would therefore experience a worst-case medium magnitude of change in the view, resulting in a **moderate** level of effect. This would not be a significant effect when considering the unaffected views from the building, the adjacent mature vegetation and the separation provided by the intervening landscape and plantation running along the ridge forming the skyline.

Settlements between 2 km and 5 km of the Site

6.7.228 Aside from the villages of Coalburn and Douglas, there are no other sizeable settlements within 5 km of the site; the only other reasonable large cluster of properties lying at Auchlochan, approximately 4 km north of the site.

6.7.229 Smaller clusters of properties between 2 km and 5 km of the proposed turbines include Glespin, Stockbriggs, Cairnhouses, and Uddington.

6.7.230 Auchlochan is a retirement village located approximately 4 km to the north-west of the site. There are a range of property types such a three storey flats, two storey houses and bungalows. The village and golf course to the south include a significant amount of vegetation and the overall feeling of the development provides a sense of enclosure with limited opportunities to view the wider landscape. Most views are focused inwards towards the maintained grounds which include a number of large ponds. Properties located on the southern side of the retirement village are mainly single storey with some skylights located in roof spaces. Some properties include conservatories along the southern side. However, views to the south are significantly screened by a roadside bund, layers of deciduous vegetation and fencing. It has been considered that due to the internally focused layout and enclosed nature of the retirement village that there would be no change in the view from this cluster of retirement homes, therefore **no effect**.

6.7.231 Stockbriggs is a small cluster of properties. The hamlet is relatively enclosed by deciduous vegetation and only occasional glimpsed long distance views can be gained through gaps in roadside vegetation. Any views of the proposed turbines from this area will be significantly filtered or screened by the intervening coniferous woodland within the landscape. At a distance of approximately 3 km, the turbines will not be clearly visible or form prominent features in the landscape, and taking account of the foreground visual obstructions there would be no greater than a low magnitude of change in the view. This would result in a **moderate**/**minor** effect on the view experienced by the residents of these houses. This would not be significant.

6.7.232 Uddington comprises several properties located at a relatively low part of the Douglas Water Valley strung out along an undulating section of the A70 Ayr Road. Located on the eastern side of the M74, the properties are situated within a sheltered landscape which includes large areas of woodland and tree belts in the intervening landscape to the Revised Development. Most of the properties face towards the immediate roadside and therefore would have oblique angles of view in the direction of the proposed turbines. As Uddington is situated within the Douglas Water valley, views along the valley are available and there are views of distant hill sides including opportunities to view the existing Hagshaw Hill and Nutberry turbines. It is assessed that the proposed turbines would be visible from some of these properties; however, the degree of visibility will be restricted by layers of dense vegetation and the undulating landform. At a distance of approximately 3.7 km from the nearest proposed turbine, and where visible, the turbine blades would be relatively prominent. The resulting magnitude of change is assessed as being medium. There would therefore be a **moderate** level of effect which is not considered to be significant due to the distance, layers of dense woodland and the existence of the existing Hagshaw Hill and Nutberry turbines in the view.

6.7.233 The majority of the properties associated with Glespin village are located along the A70 Ayr Road as well as Driverholme Terrace, Hillview Crescent and Hazelside Farm beyond. The properties located within Glespin currently experience primary views to the south across the Douglas Water valley. Within these views, large storage units and opencast activity can be seen beyond the A70 with distant views of the opposite valley hills also. Following a site visit and interrogation of the digital terrain model it has been assessed that there will be no views of the proposed turbines due to the rising topography to the north of the properties coupled with the screening effect of vegetation. Two farmsteads are located to the south of Hillview Crescent and it is assessed that these properties may experience glimpsed views of the proposed turbines at a distance of approximately 4 km. At this distance and in the context of adjacent associated agricultural farm buildings, it is assessed that there would be a worst-case medium to low magnitude of change and a **moderate**/**minor** level of effect. After consultation with SLC, a viewpoint was requested to illustrate the potential effects from Glespin and due to the limited visibility, Viewpoint 14 (presented at Volume 4b) was selected as the nearest suitable location to the settlement. However, it should be noted that the view from Viewpoint 14 is not typical of the view from the residential properties in Glespin. Due to the lack of visibility within Glespin it is assessed that there would be a negligible change on the vast majority of the settlement with the exception of the farmsteads located to the south. Therefore, there would be **no effect** on views from here.

Other Individual Properties between 2 km and 5 km of the Proposed Turbines

6.7.234 Outside the settlements discussed above there are a few isolated groups and individual residential properties (mainly in an arc from Auchlochan clockwise around to Douglas) which would have views of the Revised Development. Some of these properties have largely unrestricted views of the turbines within 2 km and 5 km and there would be a 'worst-case' medium magnitude of change in the view and therefore a **moderate** effect on the visual amenity of residents of these properties. The effects on these properties would be significant.

Villages, towns and other properties beyond 5 km

6.7.235 Beyond 5 km of the proposed turbines, opportunities for clear views of the turbines from built up areas would be increasingly limited.

6.7.236 Although the ZTVs imply a degree of visibility across Lesmahagow, Brocketsbrae, Hawksland, Douglas Water and Rigside at distances of approximately 5.8 km, 6.6 km, 7.3 km. 6 km and 5.0 km respectively, in reality the turbines would not be visible from ground level or from the vast majority of properties within these villages. There may be some occasional distant glimpses of the proposed turbines from upper floors of buildings but at this distance and in the context of the M74 motorway and the wider panoramas likely to be visible, the turbines would result in no greater than a **low to medium** magnitude of change tending towards a **very low** magnitude of change in the majority of views. The visual effects would not be significant from these towns and villages.

6.7.237 Whilst the ZTVs suggest that the turbines would be visible from the much of Lanark, Forth and Glasgow at distances of approximately 12 km, 23 km and 20 km respectively, in reality the turbines would not be clearly visible from ground level or from the vast majority of properties within these villages and towns. The turbines would be no more than incidental features in the distance of wider panoramic views that are likely to include existing wind farm development. At these distances and in the context of the foreground urban fringe landscapes, the turbines would result in no greater than a low magnitude of change tending towards a very low magnitude of change if any on views from Lanark, Forth and Glasgow. This would not form a significant effect.

6.7.238 It is therefore assessed that beyond 5 km of the turbines, there would be no greater than a **moderate/slight** effect on the views from any residential properties and that this level of effect would be experienced by a small percentage of the total population within the study area. The vast majority of properties beyond 5 km of the site would experience **no change** in the view. In no instance would there be a significant effect on the views from any properties over 5 km from the proposed turbines.

Core Paths and Other Routes including Long Distance and Recreational Trails

6.7.239 Throughout the 35 km study area as a whole, there are numerous core paths and other routes, several of which pass through or within close proximity to the Revised Development.

6.7.240 When in very close proximity to a commercial turbine such as the type proposed at the site, turbines can have a locally dominating impact on the view. It is anticipated that the proposed turbines would have such an effect on a few sections of some of the paths which traverse and run through the site boundary and adjoining land within which the turbines are proposed.

6.7.241 The aspirational core path, CL5736/2 leading to CL/5728/1, runs between Coalburn and the dismantled railway and runs in very close proximity to T03, T04, T05, and in close proximity to T07 and T09, as illustrated at Figure 6.20. This path will experience a very high magnitude of change in the view, resulting in a **major** and significant level of effect due to the proximity of the route to the proposed turbines. This route will also experience clear views of the proposed substation and control building but these would be seen in the context of the existing CHP facility and the consented mixed use development, once constructed. It is considered that the substation and control building will lead to a medium magnitude of change resulting in a **moderate** level of effect which is not considered to be significant due to the proximity of the ancillary development to existing buildings within the site.

6.7.242 An aspirational core path (CL/5729/1) which originates at the end of Core Path CL/5735/3 runs along the dismantled railway before coming to a cross-road junction with another Aspirational Core Path

(CL/5732/1) with a section of the route heading north-west between turbines T12 and T13. This footpath would experience a very high magnitude of change in the view as result of the introduction of the proposed turbines to the landscape, resulting in a **major** and significant level of effect.

6.7.243 The other recognised path which runs through the site is the Wider Network Path CL/5897/1 that originates north of T1, heading south-east towards T2 before leading through the plantation and emerging near T8 and joining the Aspirational Core Paths discussed above. This path will also experience a very high magnitude of change as a result of the proposed turbines. There will therefore be a **major** and significant level of effect on this path. The effect arising as a result of the substation and control room building is reduced along this path due to the limited availability of views due to the plantation and due to the presence of existing buildings in the site where visible out with the plantation. There would therefore be a worst-case medium tending to low magnitude of change and a **moderate tending to moderate/slight** level of effect which is not significant.

6.7.244 It is acknowledged that sections of Core Paths CL/5734/1, CL5735/1, CL5735/2, CL5/5735/3, CL/3457/1, CL5192/4, CL/5192/3 and CL/5192/1 will experience medium tending to high magnitudes of change in views in the direction of the proposed turbines and the resulting **moderate** and **major** effects which will be significant. Views from these footpaths will experience a **moderate** level of effect which is not considered to be significant as a result of the intervening distance, the presence of the CHP facility and the existence of hardstanding, the remnants of the site's former use, and the vernacular of the proposed built form. The consented mixed use development would also have a major influence of views from the core path network in vicinity of the site once constructed.

6.7.245 The footpaths which run within 2 km of the site through and within woodland to the south-west and east of the site will experience a very low to no magnitude of change in the view resulting in a **minor**/**no effect**.

6.7.246 Core Paths CL/3332/1 and CL/3334/1 which run around Stable Lake to the north of Douglas will experience varying degrees of visibility of the proposed turbines above Long Plantation. Viewpoint 3 represents an illustrative view from the vicinity of these paths and it is considered that while the lower parts of the proposed turbines will be screened by the intervening valley sides and dense vegetation of Long Plantation, there would be localised points along the paths where a worst-case high magnitude of change on the views will be experienced with a resulting **moderate/major** level of effect; this effect is deemed to be significant.

6.7.247 Further footpaths in the wider landscape located between the site and the villages of Coalburn and Douglas will experience no more than a medium magnitude of change in the view, resulting in a **moderate** level of effect which is not considered significant due to the presence of vegetation and built form which would curtail or interrupt views towards the turbines.

National Cycle Network

NCN74

6.7.248 The closest point of National Cycle Network route 74 to the Revised Development is where the route originates approximately 3 km to the east of the site, at the junction of the B7078 with the A70. South of the junction the route follows the B7078 from where there would be no view of the proposed turbines (as discussed further below). There would therefore be **no effect** on this section of NCN74.

6.7.249 North of the junction with the A70, the route follows the B7078 in a northerly direction towards Lesmahagow, running parallel with the M74. The Revised Development would be visible from the route in the view to the west, when travelling in a southerly direction, when travelling north the view towards the site would be screened by woodland until one passes the general direction of the site. The proposed turbines would be seen in the near to middle distance view in the context of the existing Hagshaw and Nutberry turbines. The existing Auchobert turbines are also visible in the view to the middle distance view to the north-west. There are also a number of small scale turbines that line the road which are very prominent features in the immediate view.

6.7.250 Overall, there would be a worst case medium magnitude of effect giving rise in a **moderate** effect which is considered to be significant, limited to the section of the route between junction 11 of the M74 and just south of Auldtonheights.

6.7.251 Further north of Auldtonheights, the variation in landform between the route and the Revised Development curtails the overall level of visibility of the proposed turbines and as such there would be limited views of the turbines. Where views are available, they would be at distance, and interrupted by landform and vegetation. There would be no greater than a low magnitude of change resulting in a **moderate/slight** effect that is not significant.

Roads

M74

6.7.252 The ZTV indicates that visibility of the proposed turbines from the M74 would be limited to a section between junction 12 in the south and junction 10 in the north, with intermittent patchy visibility beyond to junction 8. When travelling northwards it is possible that there would be a glimpse view of the turbine blades approximately 6 km south near Wedder Law and when traveling southwards it is possible that there would be a glimpse view of the turbine blades between Larkhall and Blackwood (at a distance of between 10 km and 16 km) however, these would be very momentary glimpses and at some distance and in reality it is unlikely that people travelling at speed would notice any discernible change at this distance.

6.7.253 When travelling northwards along the section of the M74 immediately south of Junction 12, which is shown as lying within the ZTV, views in reality would be screened by roadside planting and adjacent plantation woodland. The junction itself is also largely surrounded by mature vegetation. A short section of approximately 300 m is open immediately north of the junction and as a consequence there would be clear views of the proposed turbines in conjunction with the existing Hagshaw Hill and Nutberry turbines. The route then passes through wooded cuttings on the approach to Junction 11 and from this section of the route, and passing Junction 11, there would be no view of the Revised Development. Beyond Junction 11 the Revised Development would be behind the direction of travel and hence whilst in theory it would be possible to look backwards as a passenger, in reality the Revised Development would generally not be seen. Travelling northwards therefore, views of the turbines would be limited to a very brief section of the motorway immediately north of Junction 12, which cars travelling at typical motorway speed would pass within a matter of seconds. It is therefore considered that there would be no greater than a very low magnitude of change in the view from the M74 travelling northwards and at most a **minor** effect which would not be significant.

6.7.254 When travelling southwards from Junction 10, although the ZTV suggests constant visibility up to Junction 12, in reality views would be far more restricted and intermittent. From Junction 11 to the Bog Road overbridge the motorway either lies in cutting or is well screened by roadside vegetation and along this section there would be limited, if any view of the turbines. For the following 3 km to Junction 11, sections of the road are in cutting and other sections have roadside vegetation which would obstruct views, but there would be a number of locations where there are clear views of the proposed turbines at a distance of between 3 km and 5 km. Along this section of the route there are various built structures in the intervening landscape which would be more prominent (pylons, roadside small scale turbines, telecoms masts and utilitarian farm buildings). Beyond Junction 11 the Revised Development site would be behind the direction of travel and there would be no view of the turbines. It is therefore considered that there would be no greater than a low magnitude of change in the view from the M74 travelling southwards and at most a **minor** effect which would not be significant.

A70

6.7.255 When travelling in a north-easterly direction views of the turbines would be limited to a relatively short 2 km section of the A70 between Hazelside (just beyond Glespin) and Douglas. Further west the turbines will not be visible due to the intervening topography and after passing through Douglas the turbines would be behind the direction of travel. Passing through Douglas the turbines would be almost entirely screened by roadside buildings. It is noted that this section of the route (between

Hazelside and Douglas) has a separate cycle and pedestrian track to the north of the road and views from this track will also be available of the proposed turbines. Viewpoint 14 illustrates the view near Glespin whilst Viewpoint 4 is close to the road in Douglas, and the two photomontages demonstrate that the turbines would be in part be screened by trees in Long Plantation. At the western end of this section of the route, Hagshaw Hill and Extension turbines are already much more visible than the proposed turbines would be. Along this section of the A70, the magnitude of effect would range between low (near Glespin) and medium to high (between Townhead Wood and Douglas) resulting in a **moderate** effect. From the locations where such views are available and an appreciation of the Douglas Water valley can be enjoyed, the effects are not considered to be significant as the valley landscape would prevail as the predominant characteristic of the views, with Hagshaw Hill Wind Farm and extension already visible beyond the valley.

6.7.256 In theory, when travelling in a southerly direction, the proposed turbines would be intermittently visible from as far east as the Pentland Hills. In reality, the turbines would be barely noticeable west of Hyndford Bridge (approximately 13 km west). When travelling from Hyndford Bridge to Douglas, the turbines would become increasingly prominent but still only intermittently visible as the road travels through an undulating landscape with roadside vegetation which would regularly interrupt views of the turbines. Between Rigside and Junction 12 of the M74, a series of woodlands, copses and tree belts would increasingly obscure the view but where there are gaps in the vegetation the turbines would be prominent. Up to Junction 12, the proposed turbines would be seen in front of, and with, the Hagshaw Hill and Nutberry turbines, with the Auchrobert turbines and several small scale turbines also visible in the wider view from the road. From the route as it passes between Junction 12 of the M74 and Douglas, the turbines would be intermittently visible but regularly interrupted by roadside plantations and the presence of the stone wall that lines much of the route on the approach to Douglas. Along this section which overlooks the Douglas Valley the turbines would be seen as a separate group from Hagshaw Hill and typically the turbine blades and a small number of turbine hubs would be visible above Long Plantation. Passing through Douglas the turbines would be almost entirely screened by roadside buildings.

6.7.257 When travelling along the A70 from the west to Rigside, it is considered that there would be no greater than a low magnitude of change resulting in a **minor** effect on the A70. When travelling east along the route from Rigside to Douglas, it is considered that the magnitude of effect would range between low and medium to high resulting in no greater than a **moderate** effect. From the locations where these views are available and an appreciation of the Douglas Water Valley can be enjoyed, the effects are not considered to be significant as the valley landscape would prevail and the views would only be intermittent.

B7078

6.7.258 The B7078 runs broadly parallel and to the west of M74 with the exception of a section of the route between Junctions 11 and 12 which runs on the eastern side of the motorway and serves Happendon Services.

6.7.259 Travelling in a northerly direction, despite the theoretical visibility indicated on the ZTV, roadside woodland belts would completely screen any view of the turbines as far as Junction 11 with the exception of a very short length of road in the vicinity of the A70 junction from which there would be filtered views back across the M74 and from where the turbines would be briefly prominent. There would be no view of the turbines from Happendon Services due to intervening woodland. North of Junction 11 the turbines would be behind the direction of travel. It is therefore considered that there would be no greater than a very low magnitude of change in the view from the B7078 when travelling northwards and at most a **minor** effect which would not be significant.

6.7.260 Travelling in a southerly direction, whilst the ZTV indicates visibility on the B7078 as it passes through Lesmahagow, in reality roadside planting and intervening plantations would screen the view until well south of this town. South of Lesmahagow up to Junction 11 the turbines would be intermittently prominent but filtered by trees and shrubs beside the road. They would be visible at the foot of the rolling moorland on which the existing Hagshaw Hill and Nutberry turbines are already visible. They would also be seen in the context of other closer infrastructure such as pylons, farm buildings, and small to medium turbines in the intervening farmland. A view through the

roadside vegetation is presented at Viewpoint 5 and assessed in detail at Appendix 6.3. As the B7078 travels parallel to the M74, it will be 3 km from the turbines at its closest point. Where views of the turbines are available from the B7078, it is assessed that there will be high to medium magnitude of change, resulting in a worst-case **moderate** level of effect. This effect is considered to be significant along the section of the route between Lesmahagow and Junction 11 of the M74.

B7055

6.7.261 For the majority of the B7055 there will be no change in the view. For approximately a 2 km length of the road east of the junction with the A70 at Rigside, where elevated sections of the road provide long distance views to the south and south-west above the rooftops of Rigside and towards the proposed turbines, there will be a medium magnitude of change in the view, resulting in a **moderate**/**minor** effect. This would not be significant.

Centres of Recreational and Tourism Activity

Douglas Valley and Douglas Castle (Castle Dangerous)

6.7.262 A view which is representative of the setting at Douglas Castle is illustrated at Viewpoint 3. It will be possible to experience views of parts of the proposed turbines from Douglas Castle and within parts of the valley surrounding it. Views from such parts of the policy grounds would comprise the turbine blades and a limited number of turbine hubs seen above the intervening vegetation of Long Plantation. The nearest turbine will be located approximately 1.7 km to the west of Viewpoint 3 but it is acknowledged that views of the proposed turbines will be available from various points within the Douglas Castle Grounds, above the Long Plantation. From the castle itself, views towards the Revised Development are partially obscured by a row of mature deciduous trees, however it is acknowledged that filtered visibility of the turbines through and between the trees during the winter months will be available. Any effects on views from the immediate vicinity of the castle itself will be reduced during the summer months due to the dense foliage but the turbines will not be completely screened from view.

6.7.263 The visualisation at Viewpoint 3 illustrates how views extend across managed grassland and the Douglas Water Valley, towards Long Plantation and above the Cameronian Regimental Memorial. The land gently rises from the Douglas Water to the north-west with areas of deciduous woodland seen growing in the shelter of the undulating landform, breaking up the appearance of the grassland slopes. Areas of coniferous plantation run down the slopes and line the tops of the valley side. Stable Lake is used for most of the year and presents an area of focus to the landscape with circular walkways, coarse fishing and curling (during winter) attracting mainly local people to this part of the Douglas Valley. Mature trees scattered around the lake will limit the availability for clear views of the proposed turbines from this particular location.

6.7.264 It is noted that the existing Hagshaw Hill turbines are visible from Douglas Castle and from the majority of the Douglas Valley, and it is acknowledged that from certain locations within the valley landscape, particularly to the east of Douglas, the proposed turbines would appear alongside or in close proximity to the Hagshaw Hill turbines. However, the proposed turbines will appear much closer in the view and as such will appear as a separate wind farm development.

6.7.265 Visitors to the ruins of Douglas Castle and the Castle Grounds are of high sensitivity to change and the addition of the proposed turbines will result in a high magnitude of change in the view from parts of the policy grounds, resulting in a worst case **major** and significant effect from certain parts of the Castle Grounds where turbines are visible. A substantial proportion of the Revised Development will be screened by the intervening landform and coniferous plantation, including all ground level ancillary development, and it is noted that a defined separation between the proposed turbines and the Douglas Valley will be observed by receptors in the area and the introduction of the proposed turbines would not prevent an enjoyment of the recreational activities experienced in this landscape or an understanding of the underlying landscape which forms the setting for these activities.

Former Dalquhandy Opencast Mine

6.7.266 The adjacent part of the former Dalquhandy Opencast mine has also been opened up to public access but until restoration work has time to mature, at present it is not particularly appealing as a recreational centre, but is well used by a number of local walkers. It is acknowledged that there will be visual effects at this location as a result of the Revised Development, however, it is recognised that 15 turbines have been permitted on this part of the former Dalquhandy Opencast already. The existing turbines at Hagshaw Hill and Nutberry can currently be seen from this location due to their relatively elevated position to the south of Coalburn. Large areas of coniferous plantation forestry and remnants of the former opencast activities are also characteristic of the surrounding area while the area expresses a sense of exposure to the elements due to the lack of shelter provided by trees and shrubs.

6.7.267 From within the former opencast mine, it will be possible to view all 13 of the proposed turbines, as well as the ground level ancillary development from some locations where views down the hillside towards the buildings are available. Although it should be noted that the ancillary development will be seen in the context of the existing CHP facility within the site, and the consented mixed use development once constructed.

6.7.268 In its current form, the former mine is of low sensitivity to change due to the lack of recreational attraction. However, it is acknowledged that with time, this area could become more desirable and attract more people, thus increasing its popularity and ultimately its sensitivity to change. At the same time however, new woodland planting within the area will increasingly filter and soften views of the surrounding landscape. It is considered that there will be a high magnitude of change in the views from this area and the resulting level of effect will be **moderate**. This effect is deemed to be significant due to the proximity to the proposed turbines and the ability to experience clear views. It should be noted that this judgement is made in the hypothetical assumed absence of the consented Dalquhandy turbines which have been approved within this recreational area and which, once constructed, will fundamentally alter its character further. It is also recognised that it is a key aim of both the Revised Development and the adjacent Dalquhandy Wind Farm to improve the recreational offering of the former Dalquhandy Opencast through these two developments (see Appendix 3.1).

Visual Effects during Decommissioning

6.7.269 It is recognised that there would be some additional temporary effects during decommissioning of the turbines after 25 years over and above those assessed under the heading of Operational Effects above. The additional effects resulting from decommissioning activities would be localised and relatively incidental when viewed in the context of the turbines being removed.

6.7.270 The effects on visual amenity would therefore decrease incrementally as decommissioning progresses and as more turbines and associated foundations and hardstanding is removed. Users of the Core Paths, Aspirational Core Paths and a Wider Network paths mentioned above which pass within close proximity, as well as through the site, will experience the greatest effects during decommissioning. Receptors using these routes would have largely unobstructed views of the decommissioning activities associated with the wind turbine elements of the Revised Development.

6.7.271 The effects would be similar to those during the construction phase but in reverse.

6.7.272 Overall, it is considered that there would be a low magnitude of additional change (over that during the operation phase) for the reasons outlined above. This would result in no greater than a **minor** temporary effect on the visual amenity of people using the paths mentioned above. The decommissioning effects would be temporary in nature and are unlikely to all occur at the same time during this phase.

6.7.273 The decommissioning effects of the development on visual amenity are not deemed to be significant.

6.8 Mitigation

Mitigation Measures and Design Evolution

6.8.1 As discussed in best practice guidance for EIA, 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).

6.8.2 The primary mitigation adopted in relation to the Revised Development is embedded within the design of the Revised Development and relates to the consideration that was given to avoiding and minimising landscape and visual effects during the evolution of the Revised Development layout. This is sometimes referred to as 'mitigation by design'. A detailed discussion of the design evolution and the iterative process underpinning it is provided in Chapter 2 of this ES. Design evolution is summarised below in so far as landscape and visual matters have influenced the Revised Development.

6.8.3 Firstly, it should be noted that the site was initially selected as a potential wind farm partially in recognition that the majority of the site had been worked in the recent past as an opencast coal mine and that whilst some restoration has taken place, the former workings have scarred the landscape and reduced its quality and condition. It was therefore considered possible to develop a wind farm on this site with minimal impact on sensitive landscape features and to make use of the infrastructure which remained post mining to reduce the environmental effects of the Revised Development. Most notably, it was recognised that there was good highway access to the site which would negate the need for lengthy and visually intrusive new access roads through the landscape.

6.8.4 It should be noted that the site already benefits from planning permission for 15 turbines up to a height of 131 m to blade tip. The Revised Development is now seeking to reduce the number of turbines, maintain the maximum hub height at 85 m but increase the height to blade tip to 149.9 m.

6.8.5 Based on general good practice design principles (as set out in SNH guidelines), a review of the *South Lanarkshire Landscape Capacity Study for Wind Energy* technical report and an analysis of site-specific opportunities and constraints, the wind farm layout has been evolved to take into consideration a number of landscape and visual constraints whilst maintaining an optimal development.

6.8.6 The previously adopted design rationale to avoid inconsistent turbine spacing, large gaps, outliers or excessive overlapping turbines to minimise visual confusion and ensure a balanced / compact array from key views remains relevant to the revised development.

6.8.7 Appropriate offsets from all properties and settlements, out of the control of the applicant or other involved land owner, have been maintained to ensure that no property would experience an overbearing visual impact such that it became an unattractive place to live.

6.8.8 The principal changes to the Consented Development have been a proposed increase in the maximum rotor size and turbine height, to achieve an increase in the power output of each turbine. This has as a result meant a decrease in the overall number of turbines from 15 to 13, due to the increase in generating capacity of each machine and a new turbine layout has been designed to take account of the increase in turbine separation distances required. In the context of the revised layout, it is noted that at the time of design-freeze for the Consented Development the MoD were understood to be requiring a low flying corridor between wind farms which sterilised the southern part of the Consented Development site boundary. This is no longer required by the MoD, therefore, there is no longer any technical constraint to turbines being located within this part of the site.

6.8.9 The alignment of the proposed turbines with the consented Dalquhandy Wind Farm ensures that the two developments would appear as a continuous array and also ensures that the Revised Development represents a legible extension to the Dalquhandy Wind Farm in key views.

6.8.10 The above principles have been applied as a number of iterations to the design were made. Taking all other engineering and environmental constraints into account, the final layout of the turbines on site was specifically designed to achieve a well-balanced array of turbines when viewed from the surrounding areas in conjunction with the existing and recently consented wind farm schemes.

6.8.11 In considering the layout of other structures and ancillary features of the development, the design has sought to utilise existing infrastructure such as access tracks and former hardstandings as far as possible. The proposed primary access route through the site will therefore utilise an existing redundant haul road formerly used as part of the opencast workings. The position of the substation/control building and construction compound was also selected as it benefits from good screening/backclothing from forestry directly to the south-east and this helps to ensure that the visual impact of these structures would be minimised. The structures would also be located in close proximity to the existing CHP facility and mixed use development, once constructed.

6.8.12 The turbines themselves would be painted an off white colour with a low reflectivity semi-matt finish (or similar as agreed with the Local Planning Authority (LPA)). Such a finish is widely regarded to be the least intrusive in the landscape when seen against the sky in a host of weather conditions typically experienced within the UK.

6.8.13 In order to offset some of the effects of the Revised Development substantial investment is proposed in ecological, landscape and recreational enhancements across the Revised Development site and beyond (to be secured through planning conditions and/or legal agreements as necessary). These will be secured through two key initiatives: firstly, through creation of a new Access and Heritage Trail network and secondly through a Habitat Management Plan (HMP). Both of these initiatives are discussed in detail elsewhere in the submission, however the key features of these are summarised below.

6.8.14 The proposed Access Strategy, including proposals for a Heritage Trail, aims to develop a network of paths around and across the Revised Development site (refer to Appendix 3.1), reconnecting Douglas and Coalburn with a formal footpath link through the former Dalquhandy Opencast site. With a number of points of interest and a range of stories to be told from medieval settlements to World War 2 Prisoner of War Camps and the area's industrial heritage, there is a great opportunity to open up the area and to provide a good network of well waymarked and promoted paths. One of the key messages from public consultation was a desire to re-establish a formal, direct footpath link between Douglas and Coalburn. It is proposed to facilitate this aspiration through the provision of a direct village link and a circular village walk, making use of existing paths and taking in a number of heritage interpretation areas *en route*. Other highlights of the proposed strategy include new parking areas and formal picnic viewpoints. Implementation of the proposed Strategy would deliver significant recreational benefits.

6.8.15 The proposed HMP will seek to enhance previously disturbed areas of the opencast workings on site (refer to Appendix 7.8). Objectives of the HMP include the protection, enhancement and enlargement of the broad-leaved and coniferous plantation, scrub, acid/neutral/calcareous grassland, improved and marshy grassland as well as the dry and wet dwarf shrub heath. The HMP includes a series of prescriptions to deliver the objectives. These objectives of the HMP will deliver ecological but also landscape and visual enhancements where despoiled areas of the landscape are re-vegetated.

6.8.16 The Revised Development will make a positive re-use of the site's existing infrastructure, and both the Access Strategy and HMP will deliver significant recreational, ecological and visual improvements to a large former opencast site which will benefit the local communities of Douglas and Coalburn.

6.8.17 In the long term, when the Revised Development is decommissioned, the turbines would be removed from site and the vegetation along with the proposed access tracks would be restored in accordance with a restoration plan to be approved by the local planning authority.

6.9 Residual Effects

6.9.1 Best practice for EIA in general terms requires that the significance of potential effects be assessed, mitigation proposals identified and the residual effect (with mitigation in place) then re-assessed to demonstrate the effectiveness of the mitigation proposed.

6.9.2 In the case of LVIA for wind farms this presents two interrelated problems:

- Potential effects cannot be meaningfully assessed in the absence of an assumed layout; and
- Landscape and visual mitigation principally focuses on refinement of the site layout ('mitigation by design').

6.9.3 The primary mitigation adopted in relation to the Revised Development is embedded within the design of the Revised Development and relates to the consideration that was given to avoiding and minimising landscape and visual effects during the evolution of the Revised Development layout. The approach taken in this LVIA has therefore been to assess the final layout which is the result of an iterative design process. Therefore, the residual landscape and visual effects are largely the same as those assessed in the main part of the LVIA. The landscape enhancements to the wider site brought about through the implementation of the HMP and the Heritage Trail are notable but would not alter the significance of any of the landscape and visual effects reported in the assessment.

6.10 Cumulative Assessment

Introduction

6.10.1 All other wind energy developments that are operational, under construction, consented or subject to a valid full planning application within 35 km of the Revised Development were identified and reviewed as part of the cumulative assessment. The sites identified are shown in Figures 6.2 and 6.3.

6.10.2 It is acknowledged that this cumulative situation is constantly changing and therefore the 16 June 2017 was used as an effective 'cut off' date after which no further research was undertaken on the evolving status of wind energy development in the study area.

6.10.3 In general, schemes that are at scoping or at the pre-planning stage have not been considered due to the uncertainty that these schemes will come forward as a full application and the lack of adequate information about project details. This is in accordance with the approach advocated in GLVIA3.

6.10.4 In order that the cumulative assessment remained focussed on other schemes which have the greatest potential to give rise to significant cumulative effects it was necessary at the outset to decide which schemes realistically needed to be considered in detail and it was very quickly decided that this did not include all schemes within 35 km of the Revised Development; to do so would simply detract attention from the key issues relating to the application. As there are several large wind farms (either operational, consented or in planning) in the immediate vicinity of the Revised Development it was recognised that in this context wind farms over 15 km away were 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 Revised Development). It was also deemed appropriate to scope out turbines under 50 m, or under 80 m and over 10 km from the site. This cumulative impact assessment therefore focuses primarily on those schemes within approximately 15 km of the Revised 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.

6.10.5 The wind farms identified within Table 6.8 are therefore the schemes on which the discussion of the cumulative landscape and visual impact effects are focussed.

6.10.6 For the purposes of clarification however, it should be noted that other wind farms within 35 km of the Revised Development are shown on the visualisations where relevant.

Table 6.8: Other Wind Farms Considered in Detail in the Cumulative LVIA

Site	Blade tip height of turbines	Number of turbines
Operational		
Hagshaw Hill and Extension	57 m + 80 m	26 + 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
Clyde	125 m	152
Glenkerie	105 m + 120 m	11
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
Consented		
Cumberhead	126.5 m	11
Poniel	100 m	3
Broken Cross (Wind Farm)	126.5 m	7
Dalquhandy	126.5 m	15
Kype Muir	132 m	26
Kype Muir Extension	132 m + 152 m	6 + 12
Penbreck	125 m	9
Middle Muir	136 m +152 m	8 + 7
Kennoxhead	145 m	19
Broken Cross (small turbines)	55.7 m	2
M74 Eco-Park	98.2 m	2
Clyde Extension	125.5 m	54
In Planning		
Glentaggart	132 m	5
Priestgill	145 m	7

6.10.7 For the avoidance of doubt and to reiterate the methodology adopted in the main LVIA, the baseline against which the effects of the addition of the Revised Development to the landscape has been assessed to include all operational/built wind farms but not any consented or 'in planning' schemes. An assessment of the effects of developing the Revised Development in combination with other operational wind farms has already therefore been presented in the main section of this LVIA.

6.10.8 The purpose of the cumulative impact assessment is therefore to consider the additional effects that might arise as a result of the Revised Development if other consented and in planning (awaiting determination) schemes were also operational.

6.10.9 The baseline in the cumulative impact assessment is therefore extended to consider other schemes that are not yet present in the landscape but are at various stages in the planning process.

6.10.10 Two scenarios need to be considered which reflect the different degrees of certainty that these schemes will be constructed:

- scenario 1 - assumes that other consented (but as yet unbuilt) wind farms are operational; and
- scenario 2 - extends this further to assume that all schemes in planning are also operational.

6.10.11 By necessity this presents a rather simplistic analysis of future development scenarios. In reality, based on current trends, it is highly unlikely that all other schemes that are in planning will be approved and constructed but the latter scenario assumes all planning schemes are operational as this presents a 'worst case' scenario.

Cumulative ZTVs, Wireframes and Photomontages

6.10.12 Cumulative ZTVs (CZTVs) have been produced to illustrate the theoretical visibility of various other wind farms and combinations of wind farms with the Revised Development.

6.10.13 It should be reiterated that ZTVs imply a much greater geographical extent of influence on the landscape and views of it than would actually be the case. It therefore follows that the cumulative ZTVs also exaggerate the actual impacts of the turbines on landscape character and visual amenity as they do not take account of vegetation or buildings in the landscape, which may restrict the nature and extent of views.

6.10.14 Cumulative ZTVs have been produced for the following combinations of existing and consented wind farm sites and other sites in planning. The list below includes all those sites considered to have the potential to give rise to potential significant cumulative effects. These sites have then been carried forward into Table 6.9. The cumulative wireframes, Figures 6.45 to 6.65, include all sites within the study area for completeness.

CZTVs with Operational Windfarms:

- Cumulative ZTV with Hagshaw Hill (including extension) and Hazelside Farm (Figure 6.24);
- Cumulative ZTV with Nutberry (Figure 6.25);
- Cumulative ZTV with Galawhistle (Figure 6.26);
- Cumulative ZTV with Auchren Farm, Birkhill, JJ Farm and Nether Fauldhouse (Figure 6.27);
- Cumulative ZTV with Andershaw (Figure 6.28);
- Cumulative ZTV with Letham Farm (Figure 6.29);
- Cumulative ZTV with Auchrobert (Figure 6.30);
- Cumulative with Bankend Rig and Dungavel (combined) (Figure 6.31);
- Cumulative with Clyde and Glenkerie (combined) (Figure 6.32);

CZTVs with Consented Windfarms:

- Cumulative ZTV with Cumberhead (Figure 6.33);
- Cumulative ZTV with Dalquhandy (Figure 6.34);
- Cumulative ZTV with Broken Cross (small turbine), M74 Eco-Park and Poniel (combined) (Figure 6.35);
- Cumulative with Kype Muir, Kype Muir Extension, and South Priorhill (combined) (Figure 6.36);
- Cumulative ZTV with Middlemuir (Figure 6.37);
- Cumulative ZTV with Kennoxhead and Penbreck (combined) (Figure 6.38).

CZTVs with Other Wind Farm Schemes in Planning

- Cumulative ZTV with Glentaggert (Figure 6.39);
- Cumulative ZTV with Priestgill (Figure 6.40);

6.10.15 Full 360 degree cumulative wireframes have been produced to show all operational, under construction, consented and in planning schemes for each of the 20 viewpoints. These are presented in Figures 6.45 – 6.64.

6.10.16 In addition, cumulative photomontages have been produced for following assessment viewpoints and these are presented in Volume 4 alongside the main set of visualisations:

- Viewpoint 2 – M74 overbridge;
- Viewpoint 5 – B7078 south of Lesmahagow;
- Viewpoint 6 – A70 Rigside;
- Viewpoint 7 – Black Hill;
- Viewpoint 9 – Tinto Hill;
- Viewpoint 13 – Coalburn Road, north of Coalburn;
- Viewpoint 15 – Auchensaugh Hill; and
- Viewpoint 20 – Brocketsbrae.

6.10.17 Table 6.9 provides a summary of cumulative effects at each of the 20 assessment viewpoints.

Table 6.9 Summary of In-Combination and In-Succession Cumulative Effects by Viewpoint Location

		Visibility of Wind Farms at Each Viewpoint Location **Key: X = In Combination, O = In Succession, [ ] = theoretically visible only (i.e. not actually visible)**															
Viewpoint		**Hagshaw Hill and Ext and/or Hazelside Farm**	**Nutberry**	**Galawhistle**	**Auchren Farm, Birkhill, JJ Farm, Nether Fauldhouse**	**Andershaw**	**Letham Farm, Low Whiteside, Yonderton Farm**	**Auchrobert**	**Bankend Rig and Dungavel**	**Clyde and Ext and Glenkerie and Ext**	**Cumberhead**	**Dalqhandy**	**Broken Cross (small turbine),M74 Eco-Park and/or Poneil**	**Kype Muir and Extension, and/or South Priorhill**	**Middlemuir**	**Kennoxhead and Penbreck**	**Glentaggert**	**Priestgill**
1	Braehead, Coalburn	X	O	X	O	-	[O]	[O]	[O]	-	X	X	O	O	-	-	-	-
2	M74 Overbridge	X	X	X	X	[O]	[O]	O	[O]	-	X	X	X	[O]	-	[X]	[X]	-
3	Monument at Douglas Castle	X	-	[X]	-	-	-	-	-	-	[X]	-	[O]	-	-	[O]	[O]	-
4	Douglas	X	-	-	-	-	-	-	-	-	-	-	[O]	-	-	[O]	-	-
5	B7078 south of Lesmahagow	X	X	X	O	[X]	[O]	[O]	[O]	-	X	X	X	[O]	[X]	-	-	[X]
6	A70 Rigside	X	X	X	X	-	[X]	[X]	[X]	-	X	X	X	[X]	-	[X]	-	-
7	Black Hill	X	X	X	-	[X]	X	O	O	O	O	O	[O]	O	[X]	[X]	[X]	[X]

		Visibility of Wind Farms at Each Viewpoint Location Key: X = In Combination, O = In Succession, [ ] = theoretically visible only (i.e. not actually visible)																
Viewpoint		**Hagshaw Hill and Ext and/or Hazelside Farm**	**Nutberry**	**Galawhistle**	**Auchren Farm, Birkhill, JJ Farm, Nether Fauldhouse**	**Andershaw**	**Letham Farm, Low Whiteside, Yonderton Farm**	**Auchrobert**	**Bankend Rig and Dungavel**	**Clyde and Ext and Glenkerie and Ext**	**Cumberhead**	**Dalqhandy**	**Broken Cross (small turbine),M74 Eco-Park and/or Poneil**	**Kype Muir and Extension, and/or South Priorhill**	**Middlemuir**	**Kennoxhead and Penbreck**	**Glentaggert**	**Priestgill**
8	Hyndford Bridge	X	X	X	X	-	-	-	-	-	X	X	X	-	-	[X]	-	-
9	Tinto Hill	X	X	X	X	[X]	[X]	X	X	O	X	X	[X]	X	X	X	X	O
10	Motherwell Heritage Centre	X	X	X	[X]	X	[X]	X	X	[X]	X	X	[X]	X	[X]	-	-	O
11	Culter Fell	X	X	X	[X]	X	X	X	X	O	X	X	[X]	X	X	X	X	X
12	Southern Upland Way, Lowther Hill	X	X	X	[X]	[X]	[X]	X	[X]	O	X	X	[X]	X	X	X	X	[X]
13	Coalburn Road, north of Coalburn	X	O	X	O	[X]	O	O	[O]	[O]	X	X	[X]	[O]	[O]	-	[X]	[O]

		Visibility of Wind Farms at Each Viewpoint Location Key: X = In Combination, O = In Succession, [ ] = theoretically visible only (i.e. not actually visible)																
Viewpoint		**Hagshaw Hill and Ext and/or Hazelside Farm**	**Nutberry**	**Galawhistle**	**Auchren Farm, Birkhill, JJ Farm, Nether Fauldhouse**	**Andershaw**	**Letham Farm, Low Whiteside, Yonderton Farm**	**Auchrobert**	**Bankend Rig and Dungavel**	**Clyde and Ext and Glenkerie and Ext**	**Cumberhead**	**Dalqhandy**	**Broken Cross (small turbine),M74 Eco-Park and/or Poneil**	**Kype Muir and Extension, and/or South Priorhill**	**Middlemuir**	**Kennoxhead and Penbreck**	**Glentaggert**	**Priestgill**
14	Glespin (on A70)	X	-	X	[X]	-	-	-	-	-	-	-	[O]	-	-	O	-	-
15	Auchensaugh Hill	X	X	X	X	O	[X]	X	-	O	[X]	X	[X]	X	O	O	O	O
16	A721 near Kilncadzow	X	X	X	[X]	[X]	X	X	X	-	X	X	[X]	X	[X]	[X]	[X]	[X]
17	A706 Forth	X	X	X	[X]	[X]	-	[X]	[X]	[X]	X	X	[X]	[X]	[X]	[X]	[X]	-
18	Little Sparta	X	X	X	[X]	-	[X]	X	X	[X]	X	X	[X]	X	-	[X]	-	-
19	Quothquan near Biggar Common	X	X	X	[X]	-	[X]	X	[X]	O	[X]	X	[X]	X	-	-	-	[O]
20	Brocketsbrae	X	X	X	X	X	O	[O]	-	-	[X]	X	X	-	[X]	-	[X]	-

Cumulative Effects on Landscape Features and Character

Cumulative Scenario 1

6.10.18 It is noted that there are several consented but as yet unbuilt wind farms in the immediate vicinity of the Revised Development (as well as within the wider study area). Particularly notable schemes include the consented wind farms at Dalquhandy, Poniel, and Cumberhead, and the various single turbines across the plateau farmland north east of the site. Whilst GLVIA3 requires the main LVIA to exclude these schemes from the baseline against which the Revised Development is considered, the first cumulative scenario includes these schemes in the baseline. In the case of this application, the consented (but as yet unbuilt) wind farms in the surrounding landscape are likely to be an important material consideration in determining the acceptability of the Revised Development, as is the Consented Development.

6.10.19 As demonstrated in the main LVIA section of this report, the Revised Development would not give rise to any notable effects on existing landscape features. It follows therefore that whatever cumulative effects other operational and consented wind farms have on existing landscape features, the Revised Development would not contribute any further to this effect and therefore there would be **no cumulative effect** as a result of the Revised Development on any landscape features.

6.10.20 In the first cumulative scenario (in which amongst others the Dalquhandy, Poniel, and Cumberhead turbines form part of the baseline) the character of the landscape within which the Revised Development is located would be markedly different. With reference to the typologies referred to in the SLLCSWE, these schemes collectively create a 'wind turbine landscape' which would extend over the two character types within which the Revised Development is located.

6.10.21 With the introduction of the Dalquhandy Wind Farm, LCT 5B – Plateau Farmland Opencast Mining would in this scenario already need to be redefined as 'Plateau Farmland Opencast Mining and Windfarm' in recognition that the consented Dalquhandy turbines would become an equally defining characteristic of the LCT as the former opencast workings. In this context, the introduction of the Revised Development would not alter the defining characteristics of this LCT but would instead reinforce the existing characteristics of the baseline landscape.

6.10.22 In the case of the small area of LCT 7 in which the Revised Development is also located, the presence and influence of the immediately adjacent consented Dalquhandy, Poniel and Cumberhead turbines in conjunction with the already operational turbines at Hagshaw Hill and Nutberry would mean that whilst there are no turbines actually in this small area at the moment (notwithstanding the Consented Development), turbines would surround the area and also become a defining characteristic of this landscape. The boundaries of LCT 7B – Rolling Moorland Windfarm which is located directly adjacent would need to be redefined to take in the small area of LCT 7 within which the Revised Development is located. As in LCT 5B above, in this context the introduction of the Revised Development would not alter the defining characteristics of this LCT but would instead reinforce the existing characteristics of the baseline landscape.

6.10.23 It is acknowledged that wherever more than one wind farm is present in the landscape there will be a greater overall or combined effect on landscape character than if just one wind farm was visible in the landscape. Likewise, it is acknowledged that the more wind turbines that are constructed in any given landscape, the greater will be the magnitude of overall (or combined) change to the landscape character that prevailed prior to the introduction of the first turbines.

6.10.24 However, it is also noted that in any given landscape where turbines are already present the additional effect on landscape character of introducing further turbines may not be as significant as the initial introduction of turbines. Furthermore, in general, the greater the number of turbines in the baseline landscape the less significant the addition of further turbines may be in landscape character terms as the landscape will be more heavily characterised by turbines in the baseline situation.

6.10.25 Taking this into account it is considered that in the first cumulative scenario, the effect of introducing the Revised Development on the landscape character of LCT 5B in which the Dalquhandy Wind Farm (on the adjoining part of the former opencast site) is already present would be less significant than

previously assessed in the main LVIA. The combined effect would be significant but this level of significance would occur in any event in the absence of the Revised Development. With reference to the typologies referred to in the SLLCSWE, the area covered by LCT 5B and the small area of LCT 7 within which the site is located would be a 'wind turbine landscape' but this would be the case anyway in the absence of the Revised Development.

6.10.26 Therefore, in the first cumulative scenario, within LCST 5B and the small area of LCT 7 in which the site is located the additional effect of introducing the Revised Development would not be significant. The overall combined effect on LCST 5B and the small area of LCT 7 within which the site is located would be significant when compared to the situation prior to the introduction of any turbines in the landscape but this level of significance would occur in any event in the absence of the Revised Development as a result of existing operational and consented wind turbine development surrounding the site.

6.10.27 Within the areas of LCT 5 – Plateau Farmland and LCT 6 – Plateau Moorland which lie north of the Revised Development, there are several medium to large scale single turbines which have been recently consented but as yet are not constructed (namely, Broken Cross Small Wind Development, and M74 Eco-Park). The consented Dalquhandy and Poniel turbines when constructed will introduce turbines onto the farmland at the foot of the rolling moorland which lies further south-west, with the consented Cumberhead turbines located within plantation forest in the same landscape. In this first cumulative scenario, the character of these areas of LCT would have already altered and the influence of the single turbines within the area as well as larger windfarms to the south would be notable within it. With reference to the typologies referred to in the SLLCSWE, these areas of LCT 5 and LCT 6 would already be a 'Landscape with Wind Turbines'. In this context, the introduction of the Revised Development adjacent to the consented Dalquhandy Wind Farm development would not alter the defining characteristics of this LCT but would instead reinforce the existing characteristics of the baseline landscape. The combined effect would be significant but this level of significance would occur in any event in the absence of the Revised Development.

6.10.28 Within the area of LCT 7 – Rolling Moorland which lies to the south of the Douglas Valley, it should be noted that the consented Middle Muir turbines would lie immediately south of this area of LCT 7 whilst on the opposite side of the Douglas Valley where the Revised Development is located, the already operational turbines at Hagshaw Hill, Galawhistle, Hazelside Farm and Nutberry would be supplemented by the consented Dalquhandy, Poniel and Cumberhead turbines. In this first cumulative scenario, the character of this area of LCT would have altered and the external influence of turbines would be notable within it. With reference to the typologies referred to in the SLLCSWE, this area of LCT 7 would already be a 'Landscape with Wind Turbines'. In this context, the introduction of the Revised Development adjacent to the large grouping of wind farms north of the Douglas Valley would be less significant than previously assessed in the main LVIA. The combined effect would be significant but this level of significance would occur in any event in the absence of the Revised Development.

6.10.29 Within the Douglas Water area of LCT 8 which broadly coincides with the Douglas Valley SLA, the consented Dalquhandy turbines would have no effect; being screened by Long Plantation, and the Cumberhead turbines are located within plantation beyond the site. The Poniel turbines would however be visible from certain parts of this area of LCT 8. Towards the western end of the LCT the existing Galawhistle turbines are just visible close to the Hagshaw Hill turbines and the Andershaw and the consented Penbreck turbines would also be visible south westwards. It is also assessed that opportunities to view Middle Muir Wind Farm will be available from the north-eastern half of the LCT. LCT 8 is already influenced by the presence of the Hagshaw Hill turbines (including the extension), Galawhistle, Andershaw and Hazelside Farm turbines. The Poniel turbines would however be prominent in this area and, together with the other turbines already operational, would with reference to the typologies referred to in the SLLCSWE generate a 'Landscape with Wind Turbines'. Within this context the effect of introducing the Revised Development would be less significant than previously identified in the main LVIA. The additional effect of introducing the Revised Development in this context would reduce to a **moderate** effect (previously assessed in the main LVIA as a major/moderate effect) although this is still likely to be significant. However, with reference to the typologies referred to in the SLLCSWE, the LCT would remain a 'Landscape with Wind Turbines'. The Revised Development would be clearly distinct from both the Hagshaw

Hill/Hazelside Farm turbines and the Poniel turbines and wind energy development beyond the valley would not become the single most dominant characteristic of the landscape. The topography, vegetation and watercourse would prevail as the defining characteristics of this valley. The combined effect would therefore be significant and the effect of introducing the Revised Development would be significant but to put this into context, there would already be a significant effect on the character of this LCT (including the Douglas Valley SLA) when compared to the scenario before any turbines were constructed and the introduction of the Revised Development would not increase the level of cumulative effect of wind farm development such that the combined effect crosses the threshold into the next band of typology as defined in the SLLCSWE.

6.10.30 Within the western part of LCT 9 – Broad Valley Upland which lies north east of the site, the presence and influence of the Poniel, and Dalquhandy turbines and other single turbines in the adjacent plateau farmland (namely Broken Cross Small Wind Energy Development and M74 Eco-Park) would alter the baseline against which the effects of the Revised Development need to be considered. In this first cumulative scenario, the character of this area of LCT would have altered and the external influence of turbines would be notable within it. With reference to the typologies referred to in the SFLCWTU, this area of LCT 9 would already be a 'Landscape with Wind Turbines'. In this context, the introduction of the Revised Development adjacent to the large grouping of wind farms north of the Douglas Valley would be less significant than previously assessed in the main LVIA. The combined effect would be significant but this level of significance would occur in any event in the absence of the Revised Development.

6.10.31 Likewise, in the western part of LCT 10 – Broad Valley Upland which lies east of the site, the presence and influence of the Poniel, Cumberhead and Dalquhandy wind farms and other single turbines in the adjacent plateau farmland, and others further afield would alter the baseline against which the effects of the Revised Development need to be considered. In this first cumulative scenario, the character of this area of LCT would have altered and the external influence of turbines would be notable within it but not to the extent that they become a defining characteristic of it. With reference to the typologies referred to in the SLLCSWE, this area of LCT 10 would be best described as something between a 'Landscape with Occasional Wind Turbines' and a 'Landscape with Wind Turbines'. It couldn't strictly be considered the former as the total number of operational and consented turbines visible in the surrounding landscape is more than simply 'occasional' but at the same time it couldn't strictly be described as the latter as turbines would not become one of the defining characteristics of this character area as the scale and openness would prevail as the defining characteristic. In this context, the introduction of the Revised Development adjacent to the large grouping of wind farms north of the Douglas Valley would be less significant than previously assessed in the main LVIA. The combined effect would be significant but this level of significance would occur in any event in the absence of the Revised Development.

Cumulative Scenario 2

6.10.32 It is noted that there are two other undetermined schemes in planning located within 15km of the Revised Development, namely Glentaggert and Priestgill. The Glentaggert scheme is located immediately adjacent to the operational Andershaw wind farm, and coupled with the consented Middle Muir scheme, would simply reinforce the existing density of wind energy development considered in cumulative scenario 1 above.

6.10.33 The proposed Priestgill Wind Fran is located approximately 13km to the south east of the Revised Development and there is little intervisibility with this scheme and the concentration of wind farms in the vicinity of the site and thus there would not be any significant cumulative landscape character effects should Priestgill Wind Farm be constructed.

6.10.34 Given the relatively high number of operational and consented schemes considered in cumulative scenario 1, the change to the baseline brought about by these two other schemes in planning would be minimal. Therefore, it is not considered that the cumulative effects would be discernibly greater in cumulative scenario 2 than in scenario 1 and no additional significant cumulative effects on landscape character are predicted.

Cumulative Effects on the Douglas Valley SLA

6.10.35 For the Landscape Character Types within the Douglas Valley SLA, considering Cumulative Scenario 1, and taking into account the above cumulative assessment in relation to landscape character, there would be significant effects upon LCT 7 when compared to the situation prior to the introduction of any turbines in the landscape. However, this level of significance would occur in any event in the absence of the Revised Development as a result of existing operational and consented wind turbine development surrounding the site (such as Hagshaw Hill, Hazelside Farm, Andershaw, Dalquhandy, Cumberhead and Poniel). In other words, in cumulative scenario 1 it is recognised that there would be a significant effect on the SLA as a result of the totality of wind turbines visible in the surrounding landscape but that this level of effect would occur in any case in the absence of the Revised Development.

6.10.36 In relation to Cumulative Scenario 2 it is noted that there are just two other undetermined schemes in planning, within the wider 15 km study, but neither of these are in close proximity to the Revised Development and thus would the introduction of these two scheme to the wider landscape would not result in any additional significant cumulative effects upon the SLA.

6.10.37 Given the relatively high number of operational and consented schemes considered in cumulative scenario 1, the change to the baseline brought about by these other schemes in planning would be minimal. Therefore, it is not considered that the cumulative effects on the landscape character would be any greater in cumulative scenario 2 than in scenario 1 and no additional significant cumulative effects on the Douglas Valley SLA are predicted. Overall, it is concluded that the Revised Development would not significantly increase the level of cumulative effect of wind farm development which is already experienced within this SLA.

Combined Cumulative Effects on Visual Amenity

6.10.38 Table 6.9 above summarises the occurrence of in-combination and in-succession effects at each of the 20 assessment viewpoints.

Cumulative Scenario 1

6.10.39 Through analysis of Table 6.9 and the cumulative visualisations a few basic observations can be made.

6.10.40 Firstly, in cumulative scenario 1, it is noted that the proposed turbines would, from the vast majority of locations, be visible in combination with and appear as an extension to the consented Dalquhandy Wind Farm; the exception being from within the Douglas Valley where the Dalquhandy Wind Farm turbines will generally not be visible. This is in addition to the existing operational windfarms of Hagshaw Hill, Nutberry, Galawhistle and the Hazelside Farm turbines which together with Dalquhandy would form a concentration of turbines extending from the rolling moorland down into the foothills bordering the farmland to the east.

6.10.41 Furthermore, from most locations the proposed turbines would be visible either in combination with or in succession with the consented Poniel turbines and, also to the north of the Revised Development, either in combination with or in succession with the scattered, existing medium to large scale individual turbines in the farmland along the M74 corridor (including Auchren Farm, JJ Farm, Nether Fauldhouse, Letham Farm, Low Whiteside Farm and Yonderton Farm), and the consented M74 Eco Park, and Broken Cross Small Wind Development.

6.10.42 In general, where visible, the proposed turbines would reinforce the presence of turbines in views rather than introduce turbines into any views which are currently unaffected by turbines.

6.10.43 It is acknowledged that wherever more than one wind farm is present in the view there will be a greater overall or combined effect on visual amenity than if just one wind farm was visible in the landscape. Likewise, it is acknowledged that the more wind turbines that are visible in any given landscape, the greater will be the magnitude of overall (or combined) change to the visual amenity that prevailed prior to the introduction of the first turbines.

6.10.44 However, it is also noted that in any given view where turbines are already present the additional effect on visual amenity of introducing further turbines may not be as significant as the initial

introduction of turbines. Furthermore, in general, the greater the number of turbines in the baseline view the less significant the addition of further turbines may be in visual amenity terms as the landscape will be more heavily characterised by turbines in the baseline situation.

6.10.45 Measured against this baseline the additional effects arising as a result of introducing the Revised Development would typically be less significant than reported earlier in the main assessment.

6.10.46 Except where stated below the significance of effects reported in the main LVIA would still apply in cumulative scenario 1, however, the following observations are noted.

6.10.47 In relation to the properties within 1.2 km of the proposed turbines (as discussed in the RVAS in Appendix 6.4) it is noted that these properties would have no discernible view of the Dalquhandy Wind Farm turbines but that the properties at West Toun House, Westoun Steadings, Westerhouse and Craigend would most likely have at least some view of the Poniel turbines at a distance of between 1.1 km and 1.3 km to the nearest of these other turbines. Whilst the proposed turbines alone would not give rise to a significant effect on West Toun House, Westoun Steadings, Craigend or Westerhouse, the Poniel turbines are likely to be prominent from these properties giving rise to a significant effect on these properties in its their own right. The addition of the proposed turbines would increase the magnitude of change at these properties, and in the context of Poniel, the effects would be significant. In combination, the two schemes would result in a **major** effect on these properties but the overall effect would not be so overbearing as to render the properties an unattractive place to live.

6.10.48 Throughout parts of Coalburn and Braehead the proposed turbines would be seen as an extension of the Dalquhandy Wind Farm turbines and extend the horizontal array occupied by turbines below the rolling moorland further east. In this regard, it is noted that the turbines within the Revised Development do not extend any closer to Coalburn than those already consented within the Dalquhandy Wind Farm or the Consented Development. It is further noted that the residential properties which would have direct views of the proposed turbines are different to those which would have direct and unobstructed views of the Dalquhandy turbines. Properties on the western edge of Coalburn would have clear views of the Dalquhandy turbines but these same properties have rather more oblique and obstructed views of the Revised Development. Conversely the properties in Braehead and the southern edge of Coalburn which have more direct views of the Revised Development would have very oblique and more obstructed views of the Dalquhandy turbines. It is therefore unlikely that the additional effect of introducing the Revised Development in conjunction with other consented and operational windfarms would be significant at properties within Coalburn and Braehead.

6.10.49 From Douglas, the consented Dalquhandy turbines would not be visible but the Poniel turbines would be visible above Long Plantation slightly further down the valley from the proposed turbines at an oblique angle. The Poniel turbines would be visible as a discretely separate grouping. The existing Galawhistle turbines would not be notably discernible beyond the Hagshaw Hill turbines. The existing wind farm at Andershaw is not visible from Douglas and neither would the consented Middle Muir wind farm. The effect on residential properties within Douglas would not be notably different to that assessed in the main part of this LVIA.

6.10.50 From other residential areas in the wider landscape, as indicated above, the proposed turbines would generally be seen in conjunction with and as an extension to the large grouping of wind farms which would in this scenario include: Hagshaw Hill (and extension), Nutberry, Dalquhandy, Galawhistle, Cumberhead, Kennoxhead, Broken Cross, and Poniel. In this context, the additional effects resulting from the introduction of the Revised Development would not be significant.

6.10.51 In terms of the Core Paths and other paths in the immediate vicinity of the site, the Dalquhandy turbines and the Poniel turbines in particular would, from most locations, be prominent before the introduction of the Revised Development. For those footpaths which cross through the Revised Development site itself the significance of effect identified in the main section of the LVIA would still apply as the very close proximity of the turbines to these paths would have a locally dominating effect and a significant effect even in the presence of other consented turbines nearby. The paths which run across the adjacent part of the former Dalquhandy Opencast mine however, would experience equally dominating effect as a result of the consented Dalquhandy Wind Farm. In this

context, the effect of introducing the proposed turbines would be substantially less than that reported in the main section of the LVIA. It is further noted that the mitigation measures for public access set out in Appendix 3.1 will provide significant recreational enhancement to the local area through the Revised Development.

Cumulative Scenario 2

6.10.52 In cumulative scenario 2, the pattern of wind farm development established and reported above in relation to cumulative scenario 1 would be not be greatly altered by the introduction of Glentaggart or Priestgill (if consented and constructed).

6.10.53 The two proposed schemes Glentaggart scheme, are located at distance from the Revised Development, with limited intervisibility, and as such would not alter the baseline or 'cumulative scenario 1' to such an extent that there would be any greater cumulative effects than already reported previously.

Sequential Cumulative Effects on Visual Amenity

6.10.54 The three routes worth considering in the sequential cumulative assessment are the M74, the A70 the B7078, and NCN 74. As NCN 74 follows the route of the B7078, the effects for the cycle route and minor road are the same.

Cumulative Scenario 1

6.10.55 In relation to the M74 (which becomes the A74 (M) further south), it is recognised that the existing turbines of Clyde Wind Farm are already a prominent feature of the route and that the extension turbines will also be visible from the route when completed. There is then a section of the route between Junctions 12 and 13 where the consented Middle Muir turbines will be intermittently visible alongside the existing Andershaw turbines. As previously assessed between Junctions 12 and 10, the Revised Development would be visible briefly when travelling northwards and more frequently when travelling southwards. In cumulative scenario 1, the Poniel turbines would lie in close proximity to the motorway alongside a number of existing individual medium to large scale turbines within the farmland along the motorway corridor, as well as the proposed turbines of Broken Cross Small Wind Development and M74 Eco-Park. These turbines are, and would be, located much closer to the road than the proposed turbines, which would be set slightly further back and appear as an extension to the consented Dalquhandy and Cumberhead turbines at the foot of the rolling moorland on which Hagshaw Hill, Hazelside Farm, Galawhistle and Nutberry are already visible. Further north of Junction 10, there are intermittent views of the existing Auchrobert turbines and there may also be intermittent views of Kype Muir. Just south of Larkhall, the existing Lochhead turbines lie immediately adjacent to the motorway and are so are also visible from the route. In short, wind turbines would become a regular feature of the landscape from Junction 15 at Moffat up towards the southern edge of the Glasgow conurbation. However, in the context of the already consented and operational wind farms in this landscape, the additional effect of introducing the Revised Development would not be significant.

6.10.56 In cumulative scenario 1, the consented Poniel turbines would become visible to the north of the Douglas Valley from sections of the A70 west of the M74 junction. This is in addition to the already operational Hagshaw Hill and extension turbines, Hazelside Farm, and Galawhistle. South of the Douglas Valley there would also be intermittent views of the consented Middle Muir turbines, in the vicinity of the existing Andershaw wind farm, from the same section of the A70. Within this context the addition of the Revised Development would not appear out of character. The turbines of the Revised Development would appear as a discretely separate grouping from that of Poniel and Hagshaw Hill/Hazelside/Galawhistle. The overall effect on this section of the A70 is likely to be significant but this effect would largely occur in any case in the absence of the proposed turbines.

6.10.57 East of the M74 on the A70, where visible, the Revised Development would be seen in conjunction with the Poniel turbines and the medium to large scale turbines within the farmland along the M74 corridor including Broken Cross Small Wind Development and M74 Eco-Park, which would both lie in closer proximity to this section of the route. There are also a number of existing individual turbines located along the M74 including JJ Farm, Birkhill (Harbro) and Nether Fauldhouse. The proposed

turbines would also be seen as an extension to the consented Dalquhandy and Cumberhead turbines and the existing Hagshaw Hill, Nutberry and Galawhistle turbines. Whilst the introduction of the proposed turbines would increase the density of wind farm development in these views, the turbines would not result in a significant effect where one did not already exist as a result of existing and consented wind farms and turbines.

6.10.58 The sequential views from the B7078 and NCN 74 would be similar to those experienced along the M74 between Abington Services and Larkhall. In cumulative scenario 1, the consented Poniel turbines would lie in close proximity to the B7078 as would a number of individual medium to large scale turbines within the farmland along the motorway corridor (including Broken Cross Small Wind Development and M74 Eco-Park). These turbines would be located much closer to the route than the proposed turbines, which would be set slightly further back and appear as an extension to the consented Dalquhandy/Cumberhead turbines at the foot of the rolling moorland on which Hagshaw Hill/Galawhistle/Nutberry are already visible. Further north of Junction 10, there are intermittent views of the existing turbines at Auchrobert and they may be intermittent views of the consented Kype Muir scheme. Just south of Larkhall the Lochhead turbines are located immediately adjacent to the M74 and are visible. In short, wind turbines would become a regular feature of the landscape from Abington Services up towards the southern edge of the Glasgow conurbation. However, in the context of the already consented and operational wind farms in this landscape, the additional effect of introducing the Revised Development would not be significant.

Cumulative Scenario 2

6.10.59 In cumulative scenario 2, along the M74 and the parallel B7078, Broken Cross Wind Farm would also be constructed and would reinforce the cluster of wind farms and single turbines that occur along the road corridors. The Revised Development would be seen in the context of this concentration of turbines. The significance of introducing the proposed turbines into this baseline scenario would not be notably greater than that assessed above and no significant effects are predicted.

6.10.60 Along the A70, in this scenario, the proposed Glentaggart turbines would be visible south of the Douglas Valley in association with the consented Middle Muir turbines and the existing Andershaw scheme. However, this would simply reinforce the presence of turbines beyond the valley. Within this context the addition of the Revised Development would not appear out of character. The turbines of the Revised Development would appear as a discretely separate grouping from that of Poniel and that of Hagshaw Hill/Galawhistle. The overall effect on this section of the A70 is likely to be significant but this effect would occur in any case in the absence of the proposed turbines.

6.11 Summary

6.11.1 The Revised Development site is principally located on land associated with the former Dalquhandy Opencast workings in South Lanarkshire approximately 1.2 km to the south of Coalburn and 1.6 km to the north-west of Douglas.

6.11.2 The site does not fall within a National Scenic Area, National Park or Regional Scenic Area. The four south western turbines fall within the locally designated Douglas Valley Special Landscape Area which extends southwards from the site across the valley associated with the Douglas Water.

6.11.3 The Revised Development straddles two Landscape Character Types/Landscape Character Sub Types described in the South Lanarkshire Landscape Character Assessment (2010), namely: LCST 5B – Plateau Farmland Opencast Mining and LCT 7 – Rolling Moorland. The 4 most northerly turbines lie within LCT 5B; the remaining 9 turbines and the other main ancillary features of the Revised Development lie within LCT 7.

6.11.4 The host landscape (spanning these two character types and other surrounding areas) has seen considerable change in the past 30 years and continues to evolve dramatically and rapidly as a result of further opencast mining/restoration, forestry activities, wind farm development, industrial development and changes in agricultural practices, including a consented 30-hectare mixed use development that will introduce a number of buildings into the landscape alongside the existing CHP facility on land adjoining the Revised Development.

6.11.5 As with the Consented Development, the structures of the Revised Development have been designed to avoid any existing notable landscape features and as such there would be no effect on any existing elements of the landscape which positively contribute to landscape character. The design of the Revised Development is the result of a considered iterative process which has sought to minimise landscape and visual effects whilst achieving the technical and commercial requirements to ensure project viability.

6.11.6 As with almost any onshore wind farm development it is recognised that the Revised Development would give rise to some localised significant effects on landscape character and visual amenity. These effects would arise primarily as a result of the introduction of the wind turbines into the landscape. The substation/control building are located in a relatively discrete position near to the existing CHP facility and against a mature plantation which would screen or backcloth these structures depending on the direction of view. It is not considered that these features of the Revised Development would give rise to any significant effects in their own right on landscape character or visual amenity.

6.11.7 In the main part of the LVIA, the baseline against which the scheme is considered includes other wind farms which are operational but not those which are consented or the subject of a planning application. This accords with the requirements of GLVIA3 and in this scenario the following observations have been made.

6.11.8 The Revised Development would result in a direct significant effect on landscape character across the two relatively small and discrete areas of the character types within which the site is located: LCST 5B – Plateau Farmland Opencast Mining and LCT 7 – Rolling Moorland. The structural form of the proposed turbines is such that a high degree of visual permeability would be maintained and hence the sense of openness experienced across the LCST would not be greatly altered by the introduction of the turbines. The proposed turbines are relatively slender structures which would not obstruct the longer distance views when experienced from any direction. Whilst undeniably tall structures, the scale of the underlying former opencast workings is of a medium to large scale dominated by disturbed landform and regenerating land cover. Within this context the proposed turbines would not diminish the overall scale of the local landscape although in the immediate vicinity of the turbines the presence of the turbines would be clearly dominant. It is therefore recognised that the introduction of the turbines and the movement of the blades when operating will be highly prominent becoming a characterising influence on the LCST alongside its opencast legacy.

6.11.9 In addition, it is recognised that the Revised Development would have a significant indirect effect in some adjoining character types. Within LCT 5 – Plateau Farmland it is assessed that significant effects on landscape character would extend east to the B7078 and northwards to the row of pylons which run south of Auldtonheights (i.e. within approximately 4 km of the proposed turbines). The significant effects would also extend over the small area of LCT 6 – Plateau Moorland north of the site and which is in essence an extension of LCT 5.

6.11.10 Finally, it is recognised that there would be a significant effect on landscape character within part of the Douglas Water Valley area of LCT 8 – Upland River Valley. Significant effects in this character type however would extend only across a relatively small part of the valley. Significant effects would be limited to that part of LCT 8 which lies south east of the Douglas Water (and where vegetation or buildings do not obstruct views of the turbines) but would not include the Conservation Area of Douglas. This area lies within the Douglas Valley SLA.

6.11.11 Within this LCT, whilst the turbines would be visible above Long Plantation, it nevertheless provides a strong edge to the valley landscape and it would be evident that the Revised Development related to a separate landscape somewhere beyond the valley. The scale of the turbines would be masked to a certain degree by Long Plantation which would screen the lower parts of even the closest and most prominent turbines in the Revised Development. The Hagshaw Hill and Extension, Andershaw and Hazelside turbines are already visible from this same tract of land and therefore the proposed turbines would not become the first or only turbines visible from within this valley. In certain locations, they would however, be more prominent in the view by virtue of their closer proximity and much larger size. Due to the angle at which they would both be viewed from within the valley, the two schemes would be clearly discernible as two separate developments. As the turbines would

not be visible (or barely visible) within 1.5 km in this LCT, it is not considered that they would have an overbearing impact on the sense of scale or prevent an appreciation of the underlying valley to the extent that it would prevent an understanding and enjoyment of the designated landscape.

6.11.12 In relation to visual effects, it is accepted that the Revised Development would be visible from various nearby properties and settlements as well as the surrounding road network, public footpaths and recreational spaces. However, it has been assessed that the significant effects on visual amenity would be localised to within approximately 5 km of the proposed turbines.

6.11.13 Of the 20 representative viewpoints considered it has been assessed that there would be a significant visual effect at six locations:

- Viewpoint 1 - Braehead, Coalburn;
- Viewpoint 2 - M74 Overbridge;
- Viewpoint 3 - Monument at Douglas Castle;
- Viewpoint 4 – Douglas;
- Viewpoint 5 - B7078 south of Lesmahagow; and
- Viewpoint 13 - Coalburn Road, north of Coalburn.

6.11.14 There are eight properties within 1.2 km of the proposed turbines, seven of which have been assessed within the RVAS. The RVAS, presented at Appendix 6.4 concludes that there would no significant effects on any of these properties. It has been concluded that no property within the study area would experience such an overbearing effect on visual amenity that it would become an unattractive place to live.

6.11.15 It is recognised that certain other residential properties, concentrated mainly within Coalburn and Douglas, situated between approximately 1.2 km and 2.5 km of the proposed turbines, would experience some significant effects as a result of the Revised Development. It is also noted however that a large proportion of the properties within these settlements would experience either no effect or no greater than a minor effect.

6.11.16 Outside the settlements discussed above there are a few isolated groups and individual residential properties (mainly in an arc from Auchlochan clockwise around to Douglas) which would have views of the Revised Development. Between 2 km and 5 km of the proposed turbines and where properties have largely unrestricted views of the turbines, there would be some significant effects on the visual amenity.

6.11.17 When considering the Core Paths, Aspirational Core Paths and Wider Network paths within 2km of the site, some of these routes will experience significant effects where views of the proposed turbines are available. Notably, however, there would be no view from several of the Core Paths south of the site in the Douglas Valley. It is further noted that the mitigation measures for public access (set out in Appendix 3.1) will provide significant recreational enhancement to the local area through the Revised Development.

6.11.18 The only section of road within the study area that would experience a significant level of effect is the section of the B7078 between the southern edge of Lesmahagow and Junction 11 of the M74 motorway. There will also be a significant visual effect upon users of NCN 74 which follows the same route of the B7078 to the east of the site.

6.11.19 Some significant effects have been identified from an area of local recreational activity around Douglas Castle due to the proximity to the site and the ability to gain some views of parts of the proposed turbines above the coniferous plantation to the west. The introduction of the proposed turbines would not prevent an enjoyment of the recreational activities experienced in this landscape or an understanding of the underlying landscape which forms the setting for these activities.

6.11.20 It is also noted that the former adjacent part of the Dalquhandy Opencast mine has been restored to form accessible public open space and this area will also experience significant visual effects as a result of the Revised Development.

6.11.21 Whilst the above scenario is the one which GLVIA3 requires an LVIA to address first it is perhaps the first cumulative scenario which presents the most realistic context against which the acceptability of the Revised Development should be considered. In this scenario, other consented (but as yet unbuilt) wind farms are taken into account in the baseline against which the effects of the scheme are assessed. In the case of this application, the consented (but as yet unbuilt) wind farms in the surrounding landscape are likely to be a key material consideration in determining the acceptability of the Revised Development. It is therefore important to consider in particular, how the extant Consented Development, and the recently consented Dalquhandy, Poniel, and Cumberhead wind farms (as well as other consented wind farms in the surrounding landscape) affect the baseline.

6.11.22 In this first cumulative scenario the character of the landscape within which the Revised Development is located would be markedly different. With reference to the typologies referred to in the SLLCSWE, these schemes collectively create a 'wind turbine landscape' which would extend over the two character types within which the Revised Development is located. In this context, the introduction of the Revised Development would not alter the defining characteristics of LCST 5B or LCT 7 but would instead reinforce the existing characteristics of the baseline landscape.

6.11.23 It is acknowledged that wherever more than one wind farm is present in the landscape there will be a greater overall or combined effect on landscape character than if just one wind farm was visible in the landscape. Likewise, it is acknowledged that the more wind turbines that are constructed in any given landscape, the greater will be the magnitude of overall (or combined) change to the landscape character that prevailed prior to the introduction of the first turbines. However, it is also noted that in any given landscape where turbines are already present the additional effect on landscape character of introducing further turbines may not be as significant as the initial introduction of turbines. Furthermore, in general, the greater the number of turbines in the baseline landscape the less significant the addition of further turbines may be in landscape character terms as the landscape will be more heavily characterised by turbines in the baseline situation.

6.11.24 Taking this into account it is considered that in the first cumulative scenario, the effect of introducing the Revised Development on the landscape character of LCST 5B in which the Dalquhandy Wind Farm is already present and the adjacent area of LCT 7 would be less significant than previously assessed in the main LVIA. The combined effect would be significant but this level of significance would occur in any event in the absence of the Revised Development. With reference to the typologies referred to in the SLLCSWE, the area covered by LCT 5B and the small area of LCT 7 within which the site is located would be a 'wind turbine landscape' but this would be the case anyway in the absence of the Revised Development.

6.11.25 Therefore, in the first cumulative scenario, within LCST 5B and the small area of LCT 7 in which the site is located the additional effect of introducing the Revised Development would not be significant. The overall combined effect on LCST 5B and the small area of LCT 7 within which the site is located would be significant when compared to the situation prior to the introduction of any turbines in the landscape, but this level of significance would occur in any event in the absence of the Revised Development as a result of existing operational and consented wind turbine development surrounding the site.

6.11.26 Similar observations can be made about most of the surrounding LCTs. In each of the main LCTs considered the combined effect would be significant but this level of significance would occur in any event in the absence of the Revised Development.

6.11.27 Within the Douglas Water area of LCT 8, the consented Poniel turbines would be prominent in this area and, together with the other turbines already operational, would with reference to the typologies referred to in the SLLCSWE generate a 'Landscape with Wind Turbines'. Within this context the effect of introducing the Revised Development would be less significant than previously identified in the main LVIA. The additional effect of introducing the Revised Development in this context would reduce to a moderate effect (previously assessed in the main LVIA as a major/moderate effect) although this is still likely to be significant. However, with reference to the typologies referred to in the SLLCSWE, the LCT would remain a 'Landscape with Wind Turbines'. The Revised Development would be clearly distinct from both the existing Hagshaw Hill and Hazelside Farm turbines and the consented Poniel turbines, and wind energy development beyond the valley would not become the single most dominant characteristic of the landscape. The topography,

vegetation and watercourse would prevail as the defining characteristics of this valley. The combined effect would therefore be significant and the effect of introducing the Revised Development would be significant but to put this into context, there would already be a significant effect on the character of this LCT when compared to the scenario before any turbines were constructed and the introduction of the Revised Development would not increase the level of cumulative effect of wind farm development such that the combined effect crosses the threshold into the next band of typology as defined in the SLLCSWE.

6.11.28 Given the relatively high number of operational and consented schemes considered in cumulative scenario 1, the change to the baseline brought about by the two other schemes in planning would be minimal. Therefore, it is not considered that the cumulative effects would be discernibly greater in cumulative scenario 2 than in scenario 1 and no additional significant cumulative effects on landscape character are predicted.

6.11.29 In terms of cumulative visual effects in cumulative scenario 1 it is noted that the proposed turbines would, from the vast majority of locations, be visible in combination with and appear as an extension to the consented Dalquhandy and Cumberhead Wind Farms; the exception being from within the Douglas Valley where the Dalquhandy and Cumberhead turbines will generally not be visible. This is in addition to the existing operational wind farms of Hagshaw Hill, Galawhistle, Hazelside Farm and Nutberry, which together with Dalquhandy would form a concentration of turbines extending from the rolling moorland down into the foothills bordering the farmland to the east. Furthermore, from most locations the proposed turbines would be visible either in combination with or in succession with the consented Poniel turbines and, also to the north of the Revised Development, either in combination with or in succession with the scattered existing and consented medium to large scale individual turbines in the farmland along the M74 corridor (including Auchren Farm, Broken Cross Small, JJ Farm, M74 Eco-Park, Nether Fauldhouse, Letham Farm, Low Whiteside Farm and Yonderton Farm).

6.11.30 In general, where visible, the proposed turbines would reinforce the presence of turbines in views rather than introduce turbines into any views which are currently unaffected by turbines.

6.11.31 Measured against this baseline in cumulative scenario 1 the additional effects arising as a result of introducing the Revised Development would typically be less significant than reported earlier in the main assessment. It is recognised that there would be a significant cumulative effect however in relation to a small cluster of properties at West Toun House, Westoun Steadings, Westerhouse and Craigend as a result of the Poniel and the Revised Development being constructed in conjunction. In combination the two schemes would result in a major effect on these properties but the greater impact by far resulting from Poniel; the overall effect would not be so overbearing as to render the properties an unattractive place to live.

6.11.32 In cumulative scenario 2, the pattern of wind farm development established and reported above in relation to cumulative scenario 1 would be not be greatly altered by the introduction of Glentaggart or Priestgill (if consented and constructed).

6.11.33 The two proposed schemes are located at distance from the Revised Development, with limited intervisibility, and as such would not alter the baseline or 'cumulative scenario 1' to such an extent that there would be any greater cumulative effects than already reported previously.

6.11.34 It is recognised that there would be some sequential cumulative effects along the M74, A70, B7078 and NCN 74. However, in the context of the already consented and operational wind farms in this landscape, the additional effect of introducing the Revised Development would not be significant.

6.11.35 The overall effect on these routes is likely to be significant but this effect would largely occur in any case in the absence of the proposed turbines.

6.11.36 It is noted that whilst the effects are considered to be long term, they are not ultimately permanent and upon decommissioning the Revised Development the effects are almost entirely reversible. Therefore, there would be no permanent or irreversible effects on landscape character or visual amenity and these residual effects would not be significant.

6.11.37 It is noted that localised significant effects on landscape character and visual amenity are inevitable as a result of commercial wind energy development anywhere in the UK. Whilst the LVIA identified

some significant landscape and visual effects it is considered that the landscape has the capacity to accommodate the effects identified, particularly when the consented but as yet unbuilt wind farms are taken into account in the baseline.

6.11.38 The recent consents for other commercial scale wind farms at Dalquhandy and Poniel are particularly relevant as once built they will introduce turbines onto the farmland at the foot of the rolling moorlands. In the context of these consented turbines (and assuming that they are built) the Revised Development will sit within an area already surrounded by large scale wind turbines and in this regard, would constitute an obvious extension to the pattern and distribution of existing wind turbines.

6.11.39 Wind turbines give rise to a wide spectrum of opinions, ranging from strongly adverse to strongly positive, with a wide range of opinions lying somewhere between these two positions. Some people view wind turbines as incongruous or industrial structures whilst others view them as aesthetically pleasing, elegant structures and a positive response to climate change. In the case of the Revised Development, which occupies the site of a former opencast coal mine, the turbines and associated ancillary development may be viewed by some as a symbol of evolution in society towards a low carbon future.

6.11.40 However, in considering the effects of the Revised Development, a precautionary approach has been adopted and it is therefore assumed that the effects identified will be adverse in nature even though it is recognised that for some people the impacts could be perceived to be beneficial.

6.11.41 There are no definitive quantifiable thresholds of acceptability in landscape and visual impact assessment. The identified effects on landscape character and visual amenity therefore need to be balanced against the other benefits of the Revised Development.

Table 6.10 – Summary Table – Construction and Decommissioning Phases

Description of Effect	Significance of Potential Effect		Mitigation Measure	Significance of Residual Effect		Comparison with the Consented Development
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse	
Landscape and Visual						
Landscape Character						
Landscape Character Types and Sub-Types	Worst-case additional Minor	Adverse	N/A	Worst-case additional Minor	Adverse	No change
Visual Receptors						
Visual receptors within the study area	Worst-case additional Minor	Adverse	N/A	Worst-case additional Minor	Adverse	No change

Table 6.11 – Summary Table – Operational Effects

Description of Effect	Significance of Potential Effect		Mitigation Measure	Significance of Residual Effect		Comparison with the Consented Development
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse	
Landscape and Visual **(Bold text indicates a Significant Effect)**						
Landscape Character						
5. Plateau Farmland	**Moderate (up to approx 4km)**	**Adverse**	**N/A**	**Moderate (Up to approx 4km)**	**Adverse**	No change
	Moderate (approx 4km - 7km)	Adverse	N/A	Moderate (Approx 4km - 7km)	Adverse	No change
	Moderate/Minor (Over 7km)	Adverse	N/A	Moderate/Minor (Over 7km)	Adverse	No change
5B. Plateau Farmland Opencast Mining	**Moderate**	**Adverse**	**N/A**	**Moderate**	**Adverse**	No change

Description of Effect	Significance of Potential Effect		Mitigation Measure	Significance of Residual Effect		Comparison with the Consented Development
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse	
6. Plateau Moorland	**Moderate**	**Adverse**	**N/A**	**Moderate**	**Adverse**	No change
7. Rolling Moorland	**Major/Moderate (area within which the Revised Development is partially located)**	**Adverse**	**N/A**	**Major/Moderate (area within which the Revised Development is partially located)**	**Adverse**	No change
	Moderate (area 3-6km south east and 6-10km south west)	Adverse	N/A	Moderate (area 3-6km south east and 6-10km south west)	Adverse	No change
8. Upland River Valley	No Effect (Douglas Water Valley - within 1.5km)	N/A	N/A	No Effect (Douglas Water Valley - within 1.5km)	N/A	No change
	Major/Moderate (Douglas Water Valley - south east of the Douglas Water and where vegetation or buildings do not obstruct views of the turbines)	**Adverse**	**N/A**	**Major/Moderate (Douglas Water Valley - south east of the Douglas Water and where vegetation or buildings do not obstruct views of the turbines)**	**Adverse**	No change
	Moderate (Douglas Water Valley – Douglas village and River	Adverse		Moderate (Douglas Water Valley – Douglas village and River	Adverse	No change

Description of Effect	Significance of Potential Effect		Mitigation Measure	Significance of Residual Effect		Comparison with the Consented Development
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse	
	Nethan Valley – within 3km)			Nethan Valley – within 3km)		
	Moderate/Minor (River Nethan Valley – beyond 3 km)	Adverse		Moderate/Minor (River Nethan Valley – beyond 3km)	Adverse	No change
9. Broad Valley Upland	Moderate (up to 5 km)	Adverse	N/A	Moderate (up to 5km)	Adverse	No change
	Moderate/Minor (over 5 km)	Adverse	N/A	Moderate/Minor (over 5km)	Adverse	No change
10. Foothills	Moderate (up to 5 km)	Adverse	N/A	Moderate (up to 5km)	Adverse	No change
	Moderate/Minor (over 5 km)	Adverse	N/A	Moderate/Minor (over 5km)	Adverse	No change
Representative Viewpoints						
Viewpoints 1 and 3	**Major**	**Adverse**	**N/A**	**Major**	**Adverse**	No change
Viewpoint 4	**Major**	**Adverse**	**N/A**	**Major**	**Adverse**	Change from Moderate/Major to Major Effect
Viewpoint 13	**Moderate/Major**	**Adverse**	**N/A**	**Moderate/Major**	**Adverse**	No change
Viewpoints 2 and 5	**Moderate**	**Adverse**	**N/A**	**Moderate**	**Adverse**	No change
Viewpoints 6, 7, 9 and 20	Moderate	Adverse	N/A	Moderate	Adverse	No change

Description of Effect	Significance of Potential Effect		Mitigation Measure	Significance of Residual Effect		Comparison with the Consented Development
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse	
Viewpoint 8	Moderate/Minor to Moderate	Adverse	N/A	Moderate/Minor to Moderate	Adverse	Change from Moderate/Minor to Moderate/Minor to Moderate
Viewpoints 10, 11, 14 and 15	Moderate/Minor	Adverse	N/A	Moderate/Minor	Adverse	No change
Viewpoint 12	Minor to Moderate/Minor	Adverse	N/A	Minor to Moderate/Minor	Adverse	Change from Minor to Minor to Moderate/Minor
Viewpoints 16, 17, 18 and 19	Minor	Adverse	N/A	Minor	Adverse	No change
Residential Amenity and Settlements						
West Toun House, Westerhouse, and Craigend	Moderate	Adverse	N/A	Moderate	Adverse	No change
Blackwood Cottage and Station House	Moderate	Adverse	N/A	Moderate	Adverse	Change from a Moderate and Not Significant effect to a Moderate and Significant effect
3 Westoun Steadings	Moderate/Minor	Adverse	N/A	Moderate/Minor	Adverse	No change
1 Westoun Steadings	Moderate/Minor	Adverse	N/A	Moderate/Minor	Adverse	Change from Minor to Moderate/Minor
Some properties located within 1.2 km and 2 km	**Worst-case Moderate/Major**	**Adverse**	**N/A**	**Worst-case Moderate/Major**	**Adverse**	No change
Parts of Coalburn and Braehead	**Worst-case Major**	**Adverse**	**N/A**	**Worst-case Major**	**Adverse**	No change

Description of Effect	Significance of Potential Effect		Mitigation Measure	Significance of Residual Effect		Comparison with the Consented Development
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse	
Parts of Douglas	**Worst-case Moderate/Major**	**Adverse**	**N/A**	**Worst-case Moderate/Major**	**Adverse**	No change
Routes						
B7078 between the southern edge of Lesmahagow and Junction 11 of the M74	**Moderate**	**Adverse**	**N/A**	**Moderate**	**Adverse**	No change
NCN74 between the southern edge of Lesmahagow and Junction 11 of the M74	**Moderate**	**Adverse**	**N/A**	**Moderate**	**Adverse**	Not previously assessed as particular part of route not in existence
Other Routes within the Study Area	No greater than Moderate	Adverse	N/A	No greater than Moderate	Adverse	No change
Unnamed Aspirational Core Paths and Wider Network Path (running through the site between Coalburn and the dismantled railway on the coal haul road, originating at the end of Core Path CL /5735/3, and located in close proximity to T01 and T02)	**Worst-case Major**	**Adverse**	**N/A**	**Worst-case Major**	**Adverse**	No change
Parts of Core Paths CL/5734/1, CL5735/1, CL5735/2, CL5/5735/3, CL/3457/1, CL5192/4, CL/5192/3 and CL/5192/1	**Worst-case Major**	**Adverse**	**N/A**	**Worst-case Major**	**Adverse**	No change
Parts of Core Paths CL/3332/1 and CL/3334/1	**Moderate/Major**	**Adverse**	**N/A**	**Moderate/Major**	**Adverse**	No change
Other Core Paths, Aspirational Core Paths and Wider Network Paths within the study area	Worst-case Moderate	Adverse	N/A	Worst-case Moderate	Adverse	No change
Recreation and Tourism						
Parts of Douglas Castle Grounds Recreational Area	**Worst-case Major**	**Adverse**	N/A	**Worst-case Major**	**Adverse**	No change
Open Space at Former Dalquhandy Opencast Site	**Worst-case Major**	**Adverse**	N/A	**Worst-case Major**	**Adverse**	No change

Table 6.12 – Summary of Cumulative Effects

Phase of Development	Receptor	Proposed, Consented or Operational Development	Significance of Additional Effect from Introducing the Revised Development	Significance of Combined Effect*	Beneficial/Adverse	Comparison with the Consented Development
Landscape and Visual (Bold text indicates a Significant Effect)						
Construction & Decommissioning	Landscape Character	Scenario 1	Worst-case Minor	N/A	Adverse	No change
		Scenario 2	Worst-case Minor	N/A	Adverse	No change
	Visual Amenity	Scenario 1	Worst-case Minor	N/A	Adverse	No change
		Scenario 2	Worst-case Minor	N/A	Adverse	No change
Operational	Landscape Character LCU 5b and 7	Scenario 1	Minor	**Major***	**Adverse**	No change
		Scenario 2	Minor	**Major***	**Adverse**	No change
	LCU 8	Scenario 1	**Moderate**	**Major***	**Adverse**	No change
		Scenario 2	**Moderate**	**Major***	**Adverse**	No change
	Other Character Areas	Scenario 1	Minor	**Worst-case Major***	**Adverse**	No change
		Scenario 2	Minor	**Worst-case Major***	**Adverse**	No change
Operational	West Toun House, Westerhouse, West	Scenario 1	Worst-case Moderate	**Worst-case Major***	**Adverse**	No change
		Scenario 2	Worst-case Moderate	**Worst-case Major***	**Adverse**	No change

Phase of Development	Receptor	Proposed, Consented or Operational Development	Significance of Additional Effect from Introducing the Revised Development	Significance of Combined Effect*	Beneficial/Adverse	Comparison with the Consented Development
Landscape and Visual (Bold text indicates a Significant Effect)						
	Toun Steadings and Craigend					
Operational	Douglas Castle Grounds Recreational Area	Scenario 1	**Worst-case Moderate**	**Worst-case Major***	**Adverse**	No change
		Scenario 2	**Worst-case Moderate**	**Worst-case Major***	**Adverse**	No change
	Open Space at Former Dalquhandy Opencast Site	Scenario 1	Worst-case Minor	**Worst-case Major***	**Adverse**	No change
		Scenario 2	Worst-case Minor	**Worst-case Major***	**Adverse**	No change
Operational	All Other Receptors	Scenario 1	Worst-case Minor	**Worst-case Major***	**Adverse**	No change
		Scenario 2	Worst-case Minor	**Worst-case Major***	**Adverse**	No change

*The greater part of this effect can be attributed to another or a combination of other schemes which exist in the baseline which the Revised Development is being considered.

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