Planning Statement

Smulgedon Wind Farm

01/02/2021

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INTRODUCTION

1.1 This Planning Statement is submitted in support of the subject Planning Application to the Causeway Coast & Glens Borough Council (the "Council") as Local Planning Authority on behalf of Smulgedon Wind Farm Limited, (the "Applicant"), for a proposed amendment (the "Proposed Development") to the consented Smulgedon Wind Farm which was granted consent under planning reference B/2009/0070/F, (the "Original Consent").

1.2 The Statement will address all material Planning Considerations and Issues and should be read in conjunction with the following documentation:

- Pre-Application Community Consultation (PACC) Report
- Design and Access Statement
- **Volume 1** – Non-Technical Summary (NTS)
- **Volume 2** – Environmental Statement (ES)
    - **Chapter 1** – Introduction
    - **Chapter 2** – Planning Policy
    - **Chapter 3** – Socio-economics, Recreation and Tourism
    - **Chapter 4** – Landscape and Visual Impact Assessment
    - **Chapter 5** – Ecology
    - **Chapter 6** – Ornithology
    - **Chapter 7** – Hydrology and Hydrogeology
    - **Chapter 8** – Archaeological, Architectural and Cultural Heritage
    - **Chapter 9** – Noise
    - **Chapter 10** – Existing Infrastructure and Aviation
    - **Chapter 11** – Traffic and Transport
    - **Chapter 12** – Miscellaneous Issues
    - **Chapter 13** – Shadow Flicker Assessment
- **Volume 3** – Figures; and
- **Volume 4** – Technical Appendices

1.3 Together with the information listed above, this Statement will outline the siting, design, environmental and planning policy considerations that have been taken into account when devising the Proposed Development. In doing so, it will confirm that the Proposed Development has been designed to best operate and fit into the bespoke context of the site in question whilst also demonstrating that appropriate access arrangements have been achieved and that the development accords with all relevant planning policy.

The Principle of the Development

1.4 The Proposed Development seeks consent for proposed amendments to the Original Consent for the development of the Smulgedon Wind Farm, which was granted consent under planning reference B/2009/0070/F, at land located at Smulgedon Hill, south of Legavallon Road, approx. 9km to the north east of Dungiven and 8km west of Garvagh, Co. Londonderry.

1.5 The principle of a Wind Farm development at the subject site has therefore been established with the site having been confirmed as both acceptable and suitable for such purposes, and with the development having been confirmed as commenced.

1.6 This application does not constitute the development of a new greenfield site.

The Original Consent

1.7 The development that formed the basis of the preceding consent is described as follows:

- *"…a wind farm to include 7No. wind turbines with the maximum tip height of 120.5m (hub height 85m and blade diameter of 71m) and ancillary infrastructure including external transformers and associated hardstandings and underground cabling; upgraded site access points from the public highway; new and upgraded on site tracks; substation and one 80m meteorological mast."*

Ref: B/2009/0070/F, Consent issued 02 October 2012

The Proposed Development

1.8 The proposed amendments to the Original Consent consist of a reduction in the overall tip height from 120.5m to 114.90m (5.6m) and hub height from 85m to 68.9m (16.1m), and to increase the rotor diameter from 71m to 92m (21m) for all seven turbines. This larger rotor diameter will result in the harnessing of wind energy using more modern and efficient turbines that maximise the potential of the site, with only a minor alteration. However, the reduction in tip and hub height will make the turbines less prominent. There will also be minor increases to the size of the crane pads and wind turbine foundations to accommodate the newly proposed turbine models.

1.9 The proposed amendments also incorporate a new development site entrance; relocation of the combined substation and construction compound area; and a revised access track route to service T1, T2, T5 and T6, (as per previous consent B/2013/0196/F)

1.10 The installed capacity will be 16.45MW.

The Development Site

1.11 The site is located in the countryside at Smulgedon Hill in Co. Londonderry. The nearest large settlements are the towns of Limavady located 10.5km to the north west, Dungiven which is located 9km to the south west and Garvagh which is located 8km to the east. The small village of Drumsurn lies 4km to the northwest and this is the nearest settlement.

1.12 The site boundary associated with the original application (B/2009/0070/F) is 92.4ha. However, the Application Site for this amendment application only encompasses 6.12ha The Application Site lies at an elevation of approximately 210m AOD (in the west) – 290m AOD (in the east). It is centred at approximate Grid Reference (NGR) E276110 N414740.

Major Development

1.13 In accordance with The Planning (Development Management) Regulations (Northern Ireland) 2015, applications for energy infrastructure are considered to be 'Major Developments' where the subject development exceeds 5MWs, as is the case in this instance. However, the Schedule attached to these Regulations differentiates between energy generating stations that are considered to be 'Major Developments' that are prescribed for the purpose of Section 26 (1) of the Planning Act (NI) 2011 and those that are not, i.e. where its capacity exceeds 5MWs but does not extend to 30 MWs. In the case of the Proposed Development, Section 26 Notice is not required.

1.14 As a Major Development the Proposed Development necessitates the following:

- A Proposal of Application Notice (PAN);
- A Pre-Application Community Consultation (PACC), and
- A Design and Access Statement

1.15 A separate PACC report with appended PAN has been enclosed with the subject application. The PACC report has been prepared in accordance with the following:

- The Planning Act (NI) 2011[1];
- The Planning (Development Management) (Temporary Modifications) (Coronavirus) Regulations (Northern Ireland) 2020[2];
- The Planning (Development Management) Regulations (Northern Ireland) 2015[3]; and
- The Planning (General Development Procedure) Order (Northern Ireland) 2015[4];

[1] https://www.legislation.gov.uk/nia/2011/25/data.pdf
[2] https://www.legislation.gov.uk/nisr/2020/72/made/data.pdf
[3] https://www.legislation.gov.uk/nisr/2015/71/made/data.pdf
[4] https://www.legislation.gov.uk/nisr/2015/72/made/data.pdf

- Covid-19 Emergency Planning Guidance: Pre-Application Community Consultation (PACC) – Temporary Removal of Public Event Requirement[5];
- Development Management Practice Note 10: Pre-Application Community Consultation (and Pre-Application Discussions) (April 2015)[6];

1.16 A separate Design and Access Statement (DAS), a copy of which has also been enclosed with the subject application, has been prepared in accordance with the following and:

- The Planning (General Development Procedure) Order (Northern Ireland) 2015, 'Design and Access Statements' Article 6[7]
- Development Management Practice Note 12: Design and Access Statements, 2015[8], which provides guidance on the key requirements, procedures and good practice when producing a DAS. Particular regard should be paid to Section 8 of this document that is entitled 'Summary' and confirms that:

> *"The level of information and detail in the D&AS should be proportionate to the scale, complexity and nature of the application"*

[5] https://www.planningni.gov.uk/index/advice/practice-notes/covid19-epg-pacc.pdf
[6] https://www.planningni.gov.uk/index/advice/practice-notes/dm_practice_note_10_pacc-2.pdf
[7] https://www.legislation.gov.uk/nisr/2015/72/made/data.pdf
[8] https://www.planningni.gov.uk/index/advice/practice-notes/dm_practice_note_12_das_complete-3.pdf

THE NEED FOR THE DEVELOPMENT

Background

1.17 Although the relevant pre-commencement conditions have been discharged with initial site works having been commenced, the Proposed Development, which seeks amendments to the Original Consent, is required to bring the development of the subject Wind Farm to fruition, ensuring its financial viability and longevity in a context of currently available wind energy technologies and the dynamic nature of the wider energy market. The developments purpose remains the generation of renewable energy and this proposal will facilitate the installation of modern and efficient wind turbines to maximise capacity, yield and environmental benefits.

1.18 In dealing with renewable energy development proposals on a regular basis the Council will no doubt have a full appreciation of how the Proposed Development sits in a context of relevant International, UK and Northern Irish renewable energy production and targets. However, a brief summary on this matter has been supplied below.

International Energy Policy Context

1.19 The 2005 'Kyoto Protocol'[9] came into force providing a framework for international action on climate change at a global level. As part of this, the UK committed themselves to legally binding targets to reduce their greenhouse gas emissions. The UK were party to the Conference of Parties to the United Nations Framework Convention on Climate Change in December 2015, signifying their intent to play a proactive part in the long-term emissions reduction goal that aspires to net-zero emissions after 2050 via the Paris Agreement[10].

1.20 The Paris Agreement, which came into force on the 18 December 2016, aims to boost global response to climate change, keep global temperature rise low and strengthen efforts to support these objectives. As part of the European Union, the UK signed up to the Agreement on 22nd April 2016.

UK Energy Policy Context

1.21 The following provide a framework, objectives and outline of ambitions for the achievement of 2020 renewable energy targets in the UK:

- UK Renewable Energy Strategy[11];

[9] https://unfccc.int/kyoto_protocol

[10] https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement

[11] https://www.gov.uk/government/publications/the-uk-renewable-energy-strategy

- The Overarching National Policy Statement for Energy (EN-1)[12]; and
- The National Policy Statement for Renewable Energy Infrastructure (EN-3)[13]

1.22 Further to these, the UK Climate Change Act (amended 2019)[14] sets targets for the year 2050 proposing a reduction in greenhouse gas emissions by 100% lower than the 1990 baseline, following the declaration of a "Climate Emergency" by the UK Government.

NI Energy Policy Context

1.23 Northern Ireland's short/medium term energy plan was outlined in the Department for Enterprise, Trade and Investment (DETI) published Strategic Energy Framework (SEF)[15] in 2010, which proposes that 40% of national electricity needs be sourced from renewables by 2020. The SEF also recognised that onshore wind offers the lowest cost land-based renewable energy available, highlighting the vital role it plays in meeting the 2020 renewable electricity targets.

1.24 The longer-term vision for NI has been outlined by DETI 2013 report entitled Envisioning the Future: Considering Energy in Northern Ireland to 2050[16], which builds on the SEF by highlighting what needs to be done to support the 2050 vision and predicting that NI will become a net exporter of energy in the future.

1.25 The Northern Ireland Investment Strategy 2011-2021[17] also reiterates the importance of electricity generation from renewable sources and that the UK Climate Change Act 2008 legislated for an 80% mandatory reduction in the UK's carbon emissions by 2050 of 1990 baseline levels with an interim target of 35% by 2025.

1.26 It is important to note that these figures are minimum targets and there is clear policy support to maintain progress in renewable energy provision beyond the 2020 targets. The Proposed Development will have an overall installed capacity of 16.45MW and will allow further deployment of renewable energy technology and increased electricity generation while minimising the environmental effects overall as compared to a similar development on a new site, maintaining and building on progress towards meeting renewable energy targets, in full compliance with current and future energy policy.

[12] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/47854/1938-overarching-nps-for-energy-en1.pdf
[13] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/37048/1940-nps-renewable-energy-en3.pdf

[14] https://www.legislation.gov.uk/ukdsi/2019/9780111187654
[15] https://www.economy-ni.gov.uk/articles/strategic-energy-framework-2010

[16] https://www.nienvironmentlink.org/cmsfiles/policy-hub/files/documentation/Energy/2050_main_report_-_final_version.pdf

[17] https://www.infrastructure-ni.gov.uk/sites/default/files/publications/drd/investment-strategy-for-northern-ireland-2011-2021.pdf

PLANNING HISTORY

1.27 The Council will be well aware of the background to this development and the planning history has already been touched upon in Chapter 1 of the Environmental Statement. However, the information below provides a more detailed account of the preceding planning submissions and consents that are relevant to this application.

Original Consents

Planning Reference B/2009/0070/F

1.28 The Original Consent for the Smulgedon Wind Farm was granted on 02 October 2012 under planning reference B/2009/0070/F. The development was originally being progressed by another development company and in doing so a number of additional planning applications were submitted and granted consent. These are listed below.

Planning reference B/2013/0196/F:

1.29 An application for an amendment to the previously consented application (B/2009/0070/F) to facilitate a new development site entrance, relocation of the combined substation and construction compound area and a revised access track route to service Turbine 1, Turbine 2, Turbine 5 and Turbine 6. Consent was granted on 18 August 2015. This development is also now incorporated within the proposed development

Planning reference LA01/2015/1011/F:

1.30 An application to vary the wording of Condition No 3 attached to application Ref: B/2013/0196/F, relating to the provision of wheel washing facilities for the operational lifetime of the wind farm. Consent was granted on 05 February 2016.

1.31 All necessary pre-commencement planning conditions attached to the Original Consent have been discharged and initial development was then commenced on site. However, in 2019, the project and Smulgedon Wind Farm Limited was acquired by RG Developments Limited.

Subsequent Applications

1.32 The following further planning applications have since been submitted:

Planning reference LA01/2019/0239/F:

1.33 A Section 54 application for the variation of Conditions 7, 29 and 30 of Consent B/2009/0070/F to incorporate the following proposed wording:

- Condition 7 " All above ground structures shall be dismantled and removed from the site 30 years from the date when the wind farm is commissioned to the electricity grid"
- Condition 29: " Prior to the commencement of any haulage and main stage construction traffic to site, the developer shall in association with Department for Infrastructure's Road Service Maintenance Section carry out a condition survey of all haul routes and, at the Developer's expense, shall carry out and provide to the Department a DVD detailing the condition of the existing public roads being considered as haul routes"
- Condition 30: During condition works, the Developer shall carry out and record weekly inspections of all haul routes and submit this information to the Department on a monthly basis. However, should it be identified that an associated deterioration of the haulage routes is occurring, the full requirements of the original condition 30, which required daily inspections and weekly reporting, will be reverted to."

Planning reference LA01/2020/0462/F:

1.34 An application for an additional substation building measuring 13,800mm (w) x 5,900mm (d) x 5,759mm (h) with a 13,800mm (w) x 3,000mm concrete apron to be located at approximately 185m South East of consented turbine T2 and 180m North East of consented Turbine 6, as required to facilitate the electrical grid connection of the consented wind farm, (as consented under Ref: B/2009/0070/F).

PRE-APPLICATION CONSULTATION

1.35 Prior to the submission of the subject application, the Applicant has sought to engage with both the Council, as Local Planning Authority, and both the local community and stakeholders, in order to ensure that all parties have been informed appropriately of the proposed amendments to the consented Wind Farm development.

Pre-application Consultation with the Council

1.36 Prior to the submission of the subject application, a number of meetings and discussions have taken place between the Applicant, their Agents and the Council. On 13 August 2018 personnel from the Applicant and Agent met with the Council to review the status of the project and the conditions that had been attached to the original consent. On 28 June 2019 a further meeting with the Council was undertaken to review the implications of having to utilise an alternative candidate turbine for the project, in order for the development to be brought to fruition. It was agreed at this meeting that a new application would be required but that an Environmental Impact Assessment would not be required as per Part 4, paragraph 13 of the EIA Regs (2017). Although an application was progressed on this basis, However, the Council position on this matter has now changed and so it has been agreed that an Environmental Statement (ES) be submitted, hence the reformatting of this application.

Pre-application Consultation with the Community

1.37 Engaging with communities is an essential part of an effective and inclusive planning system and the Applicant has submitted a Pre-application Community Consultation (PACC) Report with this application explaining how and when the community was consulted on the subject proposal at a pre-application stage and how the results of this consultation have both been evaluated and have influenced the proposed development.

1.38 In summary, the Applicant can confirm that although a standard Proposal of Application Notice was submitted in March 2020, the national lockdown caused by the outbreak of the Covid-19 pandemic meant that public exhibitions could no longer take place. However, as a result of Emergency Planning Regulations and Guidance18 being introduced to facilitate workaround solutions for major applications, developers and Local Planning Authorities, the Applicant had to adapt their consultation strategy to allow progression to an application stage. As will become evident from reading the PACC Report, the consultation exercise resulted in a very limited amount of feedback being received in relation to the proposed amendments with no alterations to the siting and design of the Proposed Development requested by stakeholders or consultees prior to the submission of this application.

[18] https://www.infrastructure-ni.gov.uk/sites/default/files/publications/infrastructure/covid19-epg-pacc-oct2020.pdf

THE PROPOSED DEVELOPMENT

1.39 This Section of the Chapter provides a detailed account of the Wind Farm site and the development as a whole, with a focus on the elements that form the basis of the Proposed Development.

The Overall Development

1.40 The overall development, which includes both the original consent and the proposed amendment, comprises the following:

- Seven turbines and associated infrastructure including transformers and crane pads;
- Construction of site entrance;
- Construction of access tracks;
- Construction of a temporary site compound;
- Construction of an on-site substation including the control building and underground power cables; and
- Erection of one permanent meteorological mast to monitor wind speed.

1.41 The intent is that the Proposed Development will have an operational life of approximately 30 years after commissioning. Following this period, the Proposed Development will either be decommissioned in accordance with best practice or, alternatively, the life of the Proposed Development may be extended subject to further environmental studies and planning consent.

Application Site

1.42 The site boundary associated with the original application (B/2009/0070/F) is 92.4 hectares. However, as highlighted previously, the Application Site for this amendment application only encompasses 6.12 hectares.

Site Access and Access Tracks

1.43 Site access arrangements for the Wind Farm remain unchanged from the previous B/2013/0196/F Consent with the main site access taken from the B69. The site entrance and internal access tracks are not being amended and will be constructed as per the original consents.

Transport Route

1.44 The abnormal load haul route has been changed to come from Belfast, rather than from the north as indicated in the consented development. The newly proposed route aligns with that used or proposed for use by numerous other wind farms in the area and it is thought to be more suitable for the larger loads associated with the Proposed Development. As outlined in Chapter 11 of this report, the proposed access route for Abnormal Load Vehicles (ALV) will commence in Belfast before taking the M2 north. From the M2 the vehicles will take the A26 to Ballymoney and then Coleraine before turning left onto the A29 towards Garvagh. They will then turn right onto the Craigmore Road before turning left at Ringsend onto the Boleran road. The delivery will then turn right onto the Belraugh road and then left onto Legavallon Road, where the site entrance points are located. The proposed return route is the same as the delivery route. Once the turbine components have been delivered the vehicles will be shortened so they are no longer than a typical articulated HGV. **Figure 11.1.1: Appendix 11.1A, in Technical Appendix 11.1 (CTMP) of Vol 4, shows** the route.

1.45 Normal HGV load delivery routes (including stone and concrete) would be finalised post consent. Circular routes are proposed to help ease of congestion on the local road network. The potential circular routes have been illustrated in **Figure 11.1.17: Appendix 11.1A of the CTMP in Technical Appendix 11.1 (CTMP) in Vol 4.**

Turbines

1.46 The primary element of the Proposed Development is that of the amended turbine specification. Although these newly proposed turbines will reflect the general design principles of those that were consented, the proposed amendments to the Original Consent will consist of a reduction in the overall tip height from 120.5m to 114.90m (i.e. a reduction of 5.6m) and hub height from 85m to 68.9m (i.e. a reduction of 16.1m) and to increase the rotor diameter from 71m to 92m (i.e. an increase of 21m) for all 7 turbines. These newly proposed turbines with individual generating capacities of 2.35MW and will give a combined installed capacity for the site of up to 16.45 MW.

1.47 The turbines will be finished to light grey colour in line with standard manufacturer specification and will not include any large company logos. The Applicant would suggest that confirmation of the finished colour be secured via the implementation of a pre-commencement condition.

Turbine Foundations

1.48 The turbines would be installed on concrete foundations typically measuring 17.2m in diameter with a concrete depth of approximately 2.7m (see **Figure 4**). The foundation would include a circular steel support plinth to suit the base profile of the tower section. An up stand of about 1.4m would be constructed and embedded in the foundation and would include fixing

bolts for the turbine tower and several service ducts to allow electrical and communication cable connections to be made. The whole base would be constructed of reinforced concrete and comprise circa 160m^3 of concrete and approximately 15 tonnes of reinforcing steel. On completion of the foundation, the excavation would be backfilled with previously excavated material and compacted and dressed back with subsoil and then topsoil to allow revegetation. The soil would be allowed to regenerate from the seed bank within the topsoil. A gravel access path would be left to the turbine tower entrance and a parking area at the base of the turbine.

1.49 The final turbine foundation design is based upon detailed geotechnical investigations that have taken place prior to construction and is specific to the turbine that has been nominated for use. Turbine foundations could be slightly larger or smaller depending on imposed loadings, ground conditions and drainage designs. A typical turbine foundation is illustrated in **Figure 4.** It is not anticipated that turbines would require piled foundations. The Applicant would suggest that details in relation to the final foundation design can be provided prior to construction and this can be secured via the implementation of a pre-commencement condition.

Crane Pads

1.50 Each turbine requires an area of hard standing to be built adjacent to the turbine foundation. This provides a stable base on which to lay down the turbine components ready for assembly and erection and to site the two cranes necessary to lift the three tower sections, nacelle and rotor into place. The crane hard standing would be left in place following construction in order to allow for use of similar plant should major components need replacing during the course of the wind farm's operational life. The hard-standing area would be covered with subsoil and topsoil and allowed to naturally re-vegetate. The total area of hard standing at each turbine location, including the turbine foundations and the crane pad would be approximately 1227.92m2 (24m x 45m). A typical crane hard standing is illustrated in **Figure 5.**

Transformers

1.51 As confirmed as part of the Original Consent, external turbine transformers are required to be positioned adjacent to each turbine in order to convert the electrical output from the turbine at 690V to a higher voltage of 33kV for grid connection purposes. Stepping up the voltage helps to reduce electrical losses for transmission to the grid via the underground site cable. Each transformer will be housed within a GRP enclosure measuring approximately 4.0m x 3.2m x 2.4m. These elements will each be installed upon a foundation base measuring approximately 4.0m (l) x 3.2m (w) x 0.2m (d) and constructed of reinforced concrete. The transformers will be coloured to manufacturer specification and this is usually RAL6009 Fir Green or RAL8000 Brown. The Applicant would suggest that confirmation of the finished colour be secured via the implementation of a pre-commencement condition. There are no proposed changes to the transformers consented within the Original Application.

Substation Building

1.52 The principle of a substation building has been included in the Wind Farm development and granted permission as part of the Original Consent. It is from the substation building that the electricity generated on-site would be metered and exported to the local electricity network via the grid connection. The control components housed at the substation will include metering equipment, switchgear, the central computer system and electrical control panels. The final design of the substation development is led directly by the operational, safety and space requirements of NIE. The building will measure 13,800mm (w) x 5,900mm (d) x 5,759mm (h) and will sit on a concrete plinth. It will be finished in a blockwork with marble chipping/silver sand rendering exterior with a pitched roof of black/blue or grey slates with a 3,000mm x 13,800mm area of concrete hardstanding required to link the substation to the consented access track; to be used for cranage and offloading / placing component parts. There are no proposed changes to the consented substation building.

Grid Connection

1.53 Smulgedon Wind Farm will be connecting into the Agivey grid cluster being developed by (System Operator for Northern Ireland) SONI and Northern Ireland Electricity (NIE), which is approximately 3.5km south east of the Application Site. This infrastructure received planning permission in February 2020 under planning reference LA01/2019/0132/F.

Cable Works and Ducting

1.54 Cable works were included in the Original Consent and again these will be required to run between the various elements of the Wind Farm development. Detailed construction and trenching specifications would depend on ground conditions encountered. Typically, cables would be laid in a trench 1m deep and 0.45m wide. The cable routes would generally run between the turbines and would be marked with suitable marker posts. Wherever possible, cabling would follow access track routes. Approximately 3.27km of 33kV underground cables would be required on site to connect the turbines and substation.

1.55 A Supervisory Control and Data Acquisition (SCADA) system would be installed to gather information from the individual wind turbines and provide the facility to control them from a central location. A 20mm^2 fibre optic communications cable would run alongside the power cables to link the turbines to the SCADA system. The wind turbines can be monitored remotely via a telephone link to the SCADA system.

1.56 Where practicable, vegetation over the width of cable trenches will be lifted as tufts and replaced after trenching operations, to reduce disturbance. Alternatively, cables may be installed using a cable plough, meaning that no tufts will be needed.

Site Accommodation and Temporary Works

1.57 A temporary construction compound formed part of the Original Consent and will remain as previously proposed for use during the construction process. This will provide space for:

- Temporary portable cabins for office accommodation, monitoring of incoming vehicles and welfare facilities;
- Self-contained toilets with provision for sealed waste storage and removal;
- Containerised storage areas for tools, small plants and parts;
- Parking for up to 20 vehicles and storage of larger material items;
- Generator; and
- A bunded area for storing fuels, oils and greases.

1.58 An indicative location was selected for the Original Consent to minimise environmental impacts and visibility as well as for reasons of security, practicality and to obtain suitable ground conditions. The precise location and size of the compound within this indicative area will be determined by the appointed construction contractor prior to the commencement of the construction process. The area will be constructed via topsoil excavation in a similar manner to the access tracks, then surfaced with stone to provide an adequate vehicle load-bearing surface. During construction temporary fencing will be erected, as required around the construction compound.

1.59 An area of the compound will be used for the storage of fuel and oils, and this would be contained by a small bund constructed out of site arising material and lined with an impermeable membrane in order to prevent any contamination of the surrounding soils, vegetation and water table. Alternatively, double protection containers / equipment will be used along with drip trays etc, where identified by environmental risk assessment.

1.60 Water for all construction activities would be supplied by water bowser. Temporary effluent disposal facilities would be provided by 'portaloo' type facilities and emptied as required. No mains sewers or water pipes are proposed.

1.61 On completion of the construction work these facilities will be removed, hard standing will be excavated and the respective areas will be reinstated by way of re-grading the land with the stockpiled topsoil to a natural profile and allowing the land to regenerate from the seed bank within the topsoil.

Access Tracks

1.62 On-site access tracks formed part of the previous B/2013/0196/F Consent and will remain unchanged as part of this amendment. These tracks will be constructed to allow for access for the construction, operation, maintenance and decommissioning of the wind turbines and

associated infrastructure. All tracks will be unpaved and constructed from local stone. Geosynthetic reinforcement or soil stabilisation may be used to reduce the depth of track construction. The surface will be a compacted granular material (crushed rock) up to an approximate thickness of 0.3m, dependent on the ground conditions. The access tracks will generally have a 5m wide running surface, widening at bends, junctions and crane hard standings. In addition, passing bays would be constructed (approximately 5m wide and 15m long) alongside the access tracks in positions to be determined during construction in order to facilitate traffic movement.

CONSTRUCTION, OPERATION AND DECOMMISSIONING

1.63 The reader will appreciate that the construction, operational and decommissioning processes involved in the subject Wind Farm development will be very similar to those described as part of the application that formed the basis of the Original Consent. These procedures will follow a pre-agreed construction management processes and will be operated, maintained and decommissioned in line with all relevant planning conditions that may be applicable to the consented Wind Farm development. However, this Section will provide a brief summary on each stage of the development's lifespan.

Construction

1.64 The construction of the Wind Farm is expected to take in the region of eight months.

1.65 A typical running order of the proposed works is as follows:

- Site survey and preparation;
- Carry out necessary road improvements and construct site entrance;
- Upgrade existing farm tracks to construction compound location;
- Install the site accommodation and compound;
- Construct access tracks, passing places and crane hard standings;
- Excavate turbine foundations and construct the turbine and transformer bases;
- Construct substation building and compound;
- Excavate cable trenches and lay the power and instrumentation cables;
- Install the grid connection;
- Wind turbine component deliveries and turbine erection;
- Erect the monitoring masts;
- Test and commission the wind turbines; and
- Carry out reinstatement works, remove temporary accommodation and clear the site.

1.66 Please note, however, that many of these tasks will take place concurrently in order to limit the construction phase as far as is reasonably possible.

Signage

1.67 Suitable signage will be deployed to protect the health and safety of workers, contractors and the general public at all stages in the lifespan of the Propose Development. It is intended that there will be a sign at the site entrance giving the name of the wind farm and its operator along with an emergency contact telephone number.

1.68 During construction a series of additional signs will be deployed providing directions for construction traffic and information on health and safety. During operation, each of the turbine towers would have a sign indicating turbine number, potential hazards and an emergency contact telephone number. Further signage providing health and safety information and an emergency telephone number would be erected at the proposed substation.

Construction Traffic

1.69 During the construction period, personnel would travel to the site by private car, light vehicles or minibus. In addition to these vehicles, the following HGVs would access the site:

- Low loaders and tipper lorries transporting excavators, and removing spoil;
- Low Loaders and flat-bed lorries to deliver rebar, equipment, plant and control building components;
- Tipper lorries delivering and moving material and stone for access tracks
- HGVs delivering concrete for turbine foundations;
- Extendable semi-low and platform trailers (i.e. TDVs) with escort vehicle delivering turbine components; and
- Cranes delivered as mobile units and on low-loaders.

1.70 The total number of off-site vehicle movements generated during the construction phase is estimated to be 10,590 over the eight-month period compromising of:

- 7,558 vehicle movements comprise construction personnel (LGVs);
- 2,979 movements comprise deliveries of equipment and materials to the site (HGVs); and
- 53 movements comprise deliveries of turbine components and crane (abnormal loads).

1.71 As can be seen from **Appendix 11.1C in Vol 4: Technical Appendix 11.1 (CTMP)**, the vehicle movements are not uniform throughout the construction period with a peak number of vehicle movements anticipated during month four.

1.72 HGV travel will be managed to avoid peak times, where possible, and there will also be a delivery booking system in place to avoid multipole HGV deliveries at the same time into the

site entrance point. HGV traffic movements will be limited between Monday to Saturday (i.e. none on Sunday) from 07.00 to 19.00. However, during turbine erection and commissioning, and construction of concrete foundations, or during periods of emergency work, site working could extend outside these times but at all times in accordance with the terms of any planning permission that is granted.

Operation & Maintenance

Turbine Operation

1.73 The nominated wind turbine model has a proven track record of safe operation and will incorporate inbuilt mechanisms to remove or reduce risks associated with ice build-up, lightning strike and structural failure with a Supervisory Control And Data Acquisition (SCADA) system monitoring the wind farm's operation and performance. Each turbine will be fitted with an automatic system designed to supervise and control performance (for example, start-up and shut-down, rotor direction, blade angles etc.) and to monitor wellbeing (for example, generator temperatures). The control system would automatically shut the turbine down should the need arise. Sometimes the turbines will re-start automatically, but other shut-downs would require manual investigation and restart. Any problems which the computer controller cannot resolve itself, are referred to the operator via the computer's modem link. This communication system enables remote monitoring of the turbines and minimizes the need for on-site attendance. Should the turbine develop a serious fault that cannot be rectified, the turbine would be disconnected from the grid.

1.74 Should a fault occur on the high voltage network, the site manager would diagnose the cause. If repair warranted the wind farm being disconnected from the grid, then the operator would contact NIE. However, this is a highly unlikely occurrence as most faults can be rectified without reference to the utility network by utilising the local switchgear on site.

Routine Maintenance

1.75 Routine site maintenance visits would take place approximately once a month a four-wheel drive vehicle to ensure that access tracks are in good condition and that the turbines are operating without issue. The operation and maintenance of the wind farm would provide part time employment for at least one local engineer/fitter.

1.76 As per table 11.10 in Chapter 11, routine turbine maintenance would take once per year. This will not usually involve any large machinery and site traffic would be limited to small maintenance vehicles.

1.77 Routing turbine maintenance and servicing will include:

- Maintaining bolts to the required torque;
- Adjustment of blades;

- Inspection of blade tip brakes;
- Inspection of welds and structural integrity of the tower; and
- Maintaining all hydraulic and electrical systems;

1.78 The expected productive lifetime of the turbines is estimated at about 30 years and, although subject to site specific contexts, during this period it is anticipated that a major component part, such as a generator, will need to be replaced approximately twice. If the replacement of a major component is required it would be necessary to mobilise cranes and heavy vehicles to repair the turbine or replace a major component, and it is these activities which are defined as Non-Routine Maintenance Works.

Decommissioning

1.79 One of the main advantages of wind power generation over other forms of energy production is the ease of decommissioning and the simple removal of infrastructure from the site. The residual impact on the site is limited to the continued presence of the foundations and access tracks. All above ground structures can be removed from the site and the wind farm will be decommissioned in accordance with best practice and/or in compliance with any planning conditions. Current best practice includes the removal of all above ground structures; the removal of all underground structures to one metre below ground level; and reinstatement of disturbed areas. Landowners will be given the option to retain the access tracks for their own purposes.

1.80 It is estimated that decommissioning a wind farm of this size would take approximately 8 months. It is also estimated that traffic generated as a result of the decommissioning process will be similar to the construction phase and therefore the impacts can be considered to be similar.

1.81 One will, however, appreciate that when nearing the expiration of the consented development's lifespan, the wind farm operator may consider the option to refurbish or replace the infrastructure on site. If either of these options is taken then all necessary consents will be sought via appropriate applications to extend the operational life of the wind farm and/or to incorporate any design amendments that may be dictated by technological advances or available infrastructure at that time.

PLANNING POLICY CONTEXT

1.82 This Section of the Chapter will outline the Local and Regional Planning Policy and Guidance that is applicable to the Proposed Development.

Development Plan

1.83 The Northern Ireland Planning System is currently in the midst of a transitional period that will last until such times as the individual Local Authorities have fully adopted Local Development Plans in place.

1.84 On the 1st April 2015, the four councils of Ballymoney, Coleraine, Limavady and Moyle merged to form the new Causeway Coast and Glens Borough Council (the Council). The current plan covering the Causeway Coast and Glens Borough Council (CCAGBC) area is the Northern Area Plan (NAP) 2016[19], which was adopted by the former Department of the Environment (DOE) on 22nd September 2015.

1.85 The Council is currently in the process of preparing their Local Development Plan 2035 (LDP). They are currently working towards Stage 4 of a 10 Stage plan with a view to being in a position for adoption towards the end of 2026. The Plan will set a clear vision for how the Borough should look in the future (up to 2030) by setting out a planning policy framework and details on what type and scale of development should be encouraged and where it should be located. The Plan, when adopted, will replace the NAP and the existing suite of Regional Planning Policy Statements (PPSs). It will also be the key document used when making decisions on planning applications throughout the Borough.

1.86 In this instance, there are no area specific renewable energy policies contained within the NAP document. Where development plans are not yet drafted, or if they are silent or contradict other guidance, precedence should be given to the most recent policy.

The Regional Development Strategy (RDS) 2035[20]

1.87 This document offers a long-term plan and spatial strategy for NI as a whole. The delivery of a lower carbon economy, a secure and sustainable energy supply and adaption to climate change are core elements of the RDS. The document builds upon these with the following specific Strategic Guidance:

[19] https://www.planningni.gov.uk/index/policy/development_plans/devplans_az/nap2016-volume1-strategy-framework.pdf
[20] https://www.planningni.gov.uk/index/policy/rds2035.pdf

RG5: Deliver a sustainable and secure energy supply

"Northern Ireland needs a robust and sustainable energy infrastructure. This should deliver reliable and secure sources of energy to communities and businesses across the Region…

Increase the contribution that renewable energy can make to the overall energy mix.

There will need to be a significant increase in all types of renewable electricity installations and renewable heat installations, including a wide range of renewable resources for electricity generation both onshore and offshore to meet the Region's needs."

Paragraph 3.8

RG9: Reduce our carbon footprint and facilitate mitigation and adaption to climate change whilst improving air quality

"it is important that Northern Ireland plays its part by reducing air pollution and greenhouse gas emissions and preparing for the impacts of climate change."

Paragraph 3.24

"*Consideration needs to be given on how to reduce energy consumption and the move to more sustainable methods of energy production."*

Paragraph 3.25

"Mitigation

Increase the use of renewable energies.

Energy production from fossil fuels is a major source of greenhouse gas emissions and other pollutants. Northern Ireland is largely dependent on fossil fuel combustion for electricity generation. Energy efficiency along with decarbonisation of the power sector is the key to achieving emissions reduction targets. The Strategic Energy Framework for Northern Ireland 2010 sets a target of 40% of electricity consumption from renewable sources by 2020 as well as achieving 10% penetration of renewable heat. This will require increasing numbers of renewable electricity installations and the grid infrastructure to support them. These must be appropriately sited to minimise their environmental impact.

Utilise local production of heat and/or electricity from low or zero carbon energy sources. In addition to the carbon benefits, increased use of microgeneration plays an important part in diversifying our energy mix and ensuring security of energy supply. It can allow energy to be produced and consumed locally, help alleviate fuel poverty

(especially in off-gas network areas) and play a part in meeting renewable energy targets…."

Paragraph 3.26

The Strategic Planning Policy Statement (SPPS)[21]

1.88 This document consolidates and supersedes some 20No. preceding policy documents and aims to create an improved planning system with sustainable development at its core. The SPPS also recognises that a vibrant and sustainable environment can be a driver of prosperity and job creation whilst also acknowledging that a strong economy and a prosperous society can be good for the environment. The role of the Local Authority is also outlined along with the need for appropriate local planning policy to be implemented at the earliest opportunity. The relevant sections of this document are outlined below:

Section 3: Furthering Sustainable Development

1.89 This section states:

"On the environment – protecting and enhancing the built and natural environment… seeking to ensure the planning system contributes to a reduction in energy… usage, helping to reduce greenhouse gas emissions by continuing to support growth in renewable energy sources; …promoting high quality development and good design…"

Paragraph 3.3

1.90 Under the sub-heading 'Mitigating and Adapting to Climate Change' the SPPS states:

"A central challenge in furthering sustainable development is mitigating and adapting to climate change, whilst improving air quality. This includes the need to reduce emissions of greenhouse gases that contribute to climate change and to respond to the impacts brought about by climate change. A key pledge of the Executive is 'to continue to work towards a reduction in greenhouse gas emissions by at least 35% on 1990 levels by 2025'"

Paragraph 3.10

"Climate change adaptation is the process of adjusting to the changes in our climate and planning how to prepare for the future."

[21] https://www.planningni.gov.uk/index/policy/spps_28_september_2015-3.pdf

Paragraph 3.11

"The planning system should therefore help to mitigate and adapt to climate change by:

promoting the use of energy efficient, micro-generating and decentralised renewable energy systems"

Paragraph 3.13

Section 4: Core Planning Principles

1.91 This section states that:

"When plan-making and decision-taking, planning authorities must balance and integrate a variety of complex social, economic, environmental and other matters that are in the long term public interest. This is fundamental to the achievement of sustainable development."

Paragraph 4.1

1.92 Under the sub-heading 'Improving Health and Well-Being' paragraph 4.5 of the SPPS states that, when plan-making and decision-taking, planning authorities should contribute positively to health and well-being through a number of means, the most relevant of which for this proposal are outlined below:

- encouraging and supporting quality, environmentally sustainable design;
- supporting the provision of jobs, services, and economic growth;
- supporting broader government policy aimed at addressing …health and well-being impacts arising through pollution

1.93 Under the sub-heading 'Supporting Sustainable Economic Growth' the SPPS states that:

"A modern, efficient and effective planning system is essential to supporting the Executive, and wider government policy, in its efforts to promote long term economic growth in the interests of all the people in this region."

Paragraph 4.18

1.94 The SPPS continues that:

"…planning authorities must ensure appropriate weight is given to both the public interest of local communities and the wider region."

Paragraph 4.20

1.95 Under the sub-heading 'Supporting Good Design and Positive Place-Making' the SPPS states that:

"Good design can change lives, communities and neighbourhoods for the better… It can further sustainable development and encourage healthier living…"

Paragraph 4.23

"Design involves shaping how all elements of the built and natural environment relate to each other…"

Paragraph 4.24

"Design is an important material consideration in the assessment of all proposals and good design should be the aim of all those involved in the planning process and must be encouraged across the region. Particular weight should be given to the impact of development on existing buildings, especially listed buildings, monuments in state care and scheduled monuments, and on the character of areas recognised for their landscape or townscape value, such as Areas of Outstanding Natural Beauty, Conservation Areas, Areas of Townscape Character and Areas of Special Archaeological Interest."

Paragraph 4.26

"Where the design of proposed development is consistent with relevant LPD policies and/or supplementary design guidance, planning authorities should not refuse permission on design grounds, unless there are exceptional circumstances…"

Paragraph 4.27

"All proposals for development in the countryside must be sited and designed to integrate sympathetically with their surroundings, including the natural topography, and to meet other planning policy and environmental considerations, including the policy approach to cluster, consolidate and group new development with existing established buildings."

Paragraph 4.30

1.96 Under the sub-heading 'Preserving and Improving the Built and Natural Environment' the SPPS states that:

> *"Our environment must therefore be managed in a sustainable manner in accordance with the Executive's commitment to preserve and improve the built and natural environment and halt the loss of biodiversity."*
>
> Paragraph 4.38

> *"…It is therefore critical that this vital asset is preserved and improved for the enjoyment and benefit of future generations."*
>
> Paragraph 4.39

Section 6: Subject Policies

1.97 Under the sub-heading of 'Development in the Countryside' the SPPS states:

> *"To maintain and enhance the attractiveness of the countryside as a place to invest, live and work, the countryside requires a sustainable approach to new development, consistent with the Regional Development Strategy 2035 (RDS)."*
>
> Paragraph 6.62

> *"The aim of the SPPS with regard to the countryside is to manage development in a manner which strikes a balance between protection of the environment from inappropriate development, while supporting and sustaining rural communities consistent with the RDS"*
>
> Paragraph 6.65

1.98 This Section, specifically Paragraph 6.66, also outlines the policy objectives for development in the countryside which includes *"…facilitate development which contributes to a sustainable rural economy…"*

1.99 In terms of Regional Strategic Policy, the SPPS defines a number of Residential and Non-Residential policy sub-headings, but the subject proposal does not fall into the remit of any of these and therefore it is advocated in Paragraph 6.74 that the development should be *"…considered as part of the development plan process in line with the other policies set out within the SPPS."*

1.100 Under the sub-heading of 'Economic Development, Industry and Commerce' the SPPS states:

> *"Growing a sustainable economy and investing in the future is a key strategic priority…"*
>
> Paragraph 6.79
>
> *"…the aim of this SPPS is to facilitate the economic development needs of Northern Ireland in ways consistent with the protection of the environment and the principles of sustainable development."*
>
> Paragraph 6.81

1.101 This Section, specifically Paragraph 6.82, outlines the regional strategic objectives for facilitating economic development through the planning system, which include:

- Promotion of sustainable economic development in an environmentally sensitive manner
- Sustaining a vibrant rural community by supporting rural economic development of an appropriate nature and scale
- Supporting the re-use of previously developed economic development sites
- Ensuring a high standard of quality and design for new economic development

1.102 In terms of Regional Strategic Policy, the SPPS states the following:

> *"The guiding principle for policies and proposals for economic development in the countryside is to facilitate proposals likely to benefit the rural economy and support rural communities, while protecting or enhancing rural character and the environment, consistent with strategic policy elsewhere in the SPPS"*
>
> Paragraph 6.87

1.103 Under the sub-heading 'Renewable Energy' the SPPS states that:

> *"Northern Ireland has significant renewable energy resources and a vibrant renewable energy industry that makes an important contribution towards achieving sustainable development, and is a significant provider of jobs and investment across the region."*
>
> Paragraph 6.214
>
> *"Making appropriate use of renewable energy sources is supported by wider government policy, including the Regional Development Strategy 2035 (RDS) which*

emphasises the need to increase the contribution that renewable energy can make to overall energy mix. This commitment is affirmed by the Department of Enterprise, Trade and Investment's (DETI) strategic aim for a more secure and sustainable energy system, as contained within the Strategic Energy Framework for Northern Ireland 2010."

Paragraph 6.215

"Renewable energy technologies support the wider Northern Ireland economy and also offer new opportunities for additional investment and employment, as well as benefitting our health and well being, and our quality of life."

Paragraph 6.216

"The aim of the SPPS in relation to renewable energy is to facilitate the siting of renewable energy generating facilities in appropriate locations within the built and natural environment in order to achieve Northern Ireland's renewable energy targets and to realise the benefits of renewable energy without compromising other environmental assets of acknowledged importance."

Paragraph 6.218

1.104 This Section, specifically Paragraph 6.219, outlines the regional strategic objectives for renewable energy development, which includes:

- ensuring that the environmental, landscape, visual and amenity impacts associated with or arising from renewable energy development are adequately addressed;
- ensuring adequate protection of the region's built, natural, and cultural heritage features;

1.105 In terms of Regional Strategic Policy, the SPPS states the following:

"Development that generates energy from renewable resources will be permitted where the proposal and any associated buildings and infrastructure, will not result in an unacceptable adverse impact on the following planning considerations:

- *public safety, human health, or residential amenity;*
- *visual amenity and landscape character;*
- *biodiversity, nature conservation or built heritage interests;*
- *local natural resources, such as air quality, water quality or quantity; and,*
- *public access to the countryside."*

Paragraph 6.224

"The wider environmental, economic and social benefits of all proposals for renewable energy projects are material considerations that will be given appropriate weight in determining whether planning permission should be granted."

Paragraph 6.225

Planning Policy Statement 18: Renewable Energy (PPS18)[22]

1.106 This document sets out planning policy for development that generates energy from renewable resources and that requires the submission of a planning application. Section 3 of the PPS is titled 'Policy Objectives' and states that:

"The aim of this Statement is to facilitate the siting of renewable energy generating facilities in appropriate locations within the built and natural environment in order to achieve Northern Ireland's renewable energy targets and to realise the benefits of renewable energy."

Paragraph 3.1

1.107 And continues that the objectives of the Statement are:

- *"to ensure that the environmental, landscape, visual and amenity impacts associated with or arising from renewable energy development are adequately addressed;*
- *to ensure adequate protection of the Region's built and natural, and cultural heritage features; and*
- *to facilitate the integration of renewable energy technology into the design, siting and layout of new development and promote greater application of the principles of Passive Solar Design"*

Paragraph 3.2

1.108 The relevant Policy contained within the PPS is 'Policy RE 1 Renewable Energy Development' and this has been outlined below:

"Development that generates energy from renewable resources will be permitted provided the proposal, and any associated buildings and infrastructure, will not result in an unacceptable adverse impact on:

(a) public safety, human health, or residential amenity;
(b) visual amenity and landscape character;

[22] https://www.planningni.gov.uk/index/policy/planning_statements_and_supplementary_planning_guidance/planning_policy_statement_18__renewable_energy.pdf

(c) biodiversity, nature conservation or built heritage interests;
(d) local natural resources, such as air quality or water quality; and
(e) public access to the countryside.

Proposals will be expected to be located at, or as close as possible to, the source of the resource needed for that particular technology, unless, in the case of a Combined Heat and Power scheme or a biomass heating scheme, it can be demonstrated that the benefits of the scheme outweigh the need for transportation and an end user is identified. Where any project is likely to result in unavoidable damage during its installation, operation or decommissioning, the application will need to indicate how this will be minimised and mitigated, including details of any proposed compensatory measures, such as a habitat management plan or the creation of a new habitat. This matter will need to be agreed before planning permission is granted.

The wider environmental, economic and social benefits of all proposals for renewable energy projects are material considerations that will be given significant weight in determining whether planning permission should be granted.

The publication Best Practice Guidance to Planning Policy Statement 18 'Renewable Energy' will be taken into account in assessing proposals.

Wind Energy Development

Applications for wind energy development will also be required to demonstrate all of the following:

(i) that the development will not have an unacceptable impact on visual amenity or landscape character through: the number, scale, size and siting of turbines;
(ii) that the development has taken into consideration the cumulative impact of existing wind turbines, those which have permissions and those that are currently the subject of valid but undetermined applications;
(iii) that the development will not create a significant risk of landslide or bog burst;
(iv) that no part of the development will give rise to unacceptable electromagnetic interference to communications installations; radar or air traffic control systems; emergency services communications; or other telecommunication systems;
(v) that no part of the development will have an unacceptable impact on roads, rail or aviation safety;
(vi) that the development will not cause significant harm to the safety or amenity of any sensitive receptors (i.e. habitable residential accommodation, hospitals, schools and churches) (including future occupants of committed developments) arising from noise; shadow flicker; ice throw; and reflected light; and
(vii) that above-ground redundant plant (including turbines), buildings and associated infrastructure shall be removed and the site restored to an agreed standard appropriate to its location.

Any development on active peatland will not be permitted unless there are imperative reasons of overriding public interest.

For wind farm development a separation distance of 10 times rotor diameter to occupied property, with a minimum distance not less than 500m, will generally apply.

The supplementary planning guidance 'Wind Energy Development in Northern Ireland's Landscapes' will be taken into account in assessing all wind turbine proposals."

Best Practice Guidance (BPG) to Planning Policy Statement 18 'Renewable Energy'[23]

1.109 This guide, which should be read in conjunction with PPS18, provides background information on the various renewable energy technologies that may come forward in Northern Ireland and is designed to contribute to the development management process. Section 1 of the guide deals specifically with wind and outlines general background information and all Planning issues that may be of relevance to development proposals.

Supplementary Planning Guidance 'Wind Energy Development in Northern Ireland's Landscapes (August 2010)[24]

1.110 The SPG provides broad, strategic guidance in relation to the visual and landscape impacts of wind energy development. The guidance is based on the sensitivity of Northern Ireland's landscapes to wind energy development and contains an assessment of each of the 130 Landscape Character Areas (LCAs) in Northern Ireland by referencing the characteristics and values associated with each LCA. It also does the following:

- Sets out the background to the landscapes of Northern Ireland, and to wind energy development in these landscapes;
- Explains the approach and methodology that was used to assess wind energy development in relation to the landscape of each Landscape Character Area;
- Contains general principles and guidance relating to wind energy development in the landscape and associated sensitivities, opportunities and challenges. This includes principles and guidance relating to site selection, siting, layout and design and the assessment of landscape, visual and cumulative impacts;

[23] https://www.planningni.gov.uk/index/policy/planning_statements_and_supplementary_planning_guidance/planning_policy_statement_18__renewable_energy__best_practice_guidance.pdf

[24] www.planningni.gov.uk/index/policy/planning_statements_and_supplementary_planning_guidance/spg_other/wind_energy_development_in_northern_irelands_landscapes_spg_for_pps18-2.pdf

- Considers cumulative wind energy development in Northern Ireland's distinctive landscapes in October 2007 and highlights landscape issues that need to be carefully considered in the future;
- Provides practical guidance relating to the use of this guidance and the preparation and submission of wind energy proposals.

Planning Policy Statement 21: Sustainable Development in the Countryside (PPS21)[25]

1.111 This document sets out planning policy for development in the countryside. i.e. land lying outside of the settlement limits identified in development plans. The Policy Objectives of PPS21 are outlined as follows:

- *"to manage growth in the countryside to achieve appropriate and sustainable patterns of development that meet the essential needs of a vibrant rural community;*
- *to conserve the landscape and natural resources of the rural area and to protect it from excessive, inappropriate or obtrusive development and from the actual or potential effects of pollution;*
- *to facilitate development necessary to achieve a sustainable rural economy; including appropriate farm diversification and other economic activity; and*
- *to promote high standards in the design, siting and landscaping of development in the countryside."*

Paragraph 3.2

1.112 The relevant Policy contained within the PPS is 'Policy CTY1 – Development of Countryside' and the relevant sections of this have been outlined below:

> *"There are a range of types of development which in principle are considered to be acceptable in the countryside and that will contribute to the aims of sustainable development. Details of these are set out below.*
>
> *Other types of development will only be permitted where there are overriding reasons why that development is essential and could not be located in a settlement, or it is otherwise allocated for development in a development plan.*

[25] https://www.planningni.gov.uk/index/policy/planning_statements_and_supplementary_planning_guidance/planning_policy_statement_21__pps21__sustainable_development_in_the_countryside-3.pdf

All proposals for development in the countryside must be sited and designed to integrate sympathetically with their surroundings and to meet other planning and environmental considerations including those for drainage, access and road safety. Access arrangements must be in accordance with the Department's published guidance.

Where a Special Countryside Area (SCA) is designated in a development plan, no development will be permitted unless it complies with the specific policy provisions of the relevant plan.

Non-Residential Development

Planning permission will be granted for non-residential development in the countryside in the following cases:

- *renewable energy projects in accordance with PPS 18"*

Other Material Planning Consideration

1.113 Although the abovementioned policies have been focused on for the purpose of this Chapter, as detailed throughout this ER, the following Planning Policy Statements (PPSs)[26] have also been considered relevant and have been taken into account when formulating the proposed development:

- PPS 2: Natural Heritage
- PPS 3: Access, Movement and Parking
- PPS 6: Planning, Archaeology and Built Heritage
- PPS 13: Transport and Land Use
- PPS 15: Planning and Flood Risk

1.114 The following Development Control Advice Notes (DCANs)[27] has been considered relevant and taken into account:

- DCAN 15: (2nd Edition) Vehicular Access Standards

[26] https://www.infrastructure-ni.gov.uk/publications/retained-planning-policy
[27] https://www.infrastructure-ni.gov.uk/publications/development-control-advice-notes

PLANNING MERIT

1.115 The granting of the Original Consent is evidence in itself that the principle of a wind farm development has been established as acceptable at the subject site. Furthermore, the consented development has been confirmed as commenced. However, the proposed amendments that form the basis of this application are required to bring the Wind Farm development to fruition by ensuring its financial viability and longevity in a context of available wind energy technologies and the dynamic nature of the energy market as a whole. This Proposed Development will incorporate the installation of modern and efficient wind turbines to maximise the capacity, yield and environmental benefits of the Wind Farm.

1.116 This Section will seek to weigh up the relevant planning considerations associated with the Proposed Development and will reassure the Council that compliance with planning policy has been achieved.

The Proposed Development in a Context of Planning Policy

1.117 With consideration for the information supplied in this Environmental Statement as a whole, each of the relevant Planning Policy and Guidance criteria referred to previously in this Chapter have been reviewed on an individual basis below.

1.118 The **RDS Policy RG5** advocates a robust and sustainable energy supply and infrastructure for the benefit of communities and businesses across Northern Ireland with **Policy RG9** confirming the intent to reduce our carbon footprint and facilitate mitigation and adaption to climate change whilst improving air quality. The Proposed Development, which will see the substitution of a consented turbine specification for a more productive model, is in full adherence to these policies as it seeks to further improve the secure and sustainable energy that is to be supplied by the consented green energy solution on site. This in turn will facilitate a lesser reliance on fossil fuels, helping to limit society's carbon footprint.

1.119 The **SPPS** seeks to further sustainable development, advocating support for a growth in renewable energy sources to help NI adapt to climate change, so long as proposals are sited and designed to integrate sympathetically with their natural and man-made surroundings whilst meeting other planning policy and environmental considerations. These aims are further reflected in **PPS18**. Both paragraph 6.224 of the **SPPS** and the initial sections of **Policy RE1** of **PPS18** suggest that proposals be permitted where they do not have an adverse impact on a wide array of criteria relating to amenity and environmental considerations. However, **Policy RE1** goes on to highlight a number of specific policy requirements in relation to wind and includes a replication of the criteria outlined in paragraph 6.227 of the SPPS, suggesting that a separation distance of 10 times rotor diameter to occupied property, with a minimum distance not less than 500m, will generally apply to wind farm development.

1.120 The following paragraphs will give a brief summary as to how the Proposed Development will adhere to these key Planning Policy requirements:

Public Safety, Access to the Countryside and Impact on roads

1.121 On the issue of public safety, the granting of the Original Consent is evidence in itself that a wind farm development at the subject site has been considered acceptable in principle. Whilst the subject application incorporates amendments to the Original Consent, they are not considered to have any greater impact upon public safety. Access arrangements reflect that which formed the basis of the Original Consent and will not be amended as part of the subject application. The Applicant can therefore confirm that the site entrance will be designed in accordance with DCAN15 and will achieve the required visibility splays along Legavallon Road (see **Figure 11.1.18 and 11.1.19: Appendix 11.1A: CTMP (Vol 4)**).

1.122 As indicated in Chapter 11 'Traffic and Transport', the proposed access route for Abnormal Load Vehicles (ALV) has been amended from that put forward as part of the Original Consent. This route now reflects that which numerous other wind farms in the area have used or have consent to use and as such this has been considered to be more suitable for the larger loads associated with the revised development. The proposed return route is the same as the delivery route and once the turbine components have been delivered, the vehicles will be shortened so they are no longer than a typical articulated HGV. The ALV route assessment identified that minor road improvements would be required in order to accommodate access. Normal HGV load delivery routes (including stone and concrete) would be finalised post consent. Circular routes are proposed to help ease of congestion on the local road network. In light of the established nature of the ALV route and the minor amendment and mitigations being proposed, it is not envisaged that there will be any objections from the Department for Infrastructure, Roads Team, nor any detrimental impact upon road users or public transport.

1.123 Please refer to Figures 11.1.1 to 11.1.16.: Appendix 11.1A, in Technical Appendix 11.1 (CTMP) of Vol 4, for details of the proposed routes and road improvement points. The potential circular routes for normal HGV loads have been illustrated in Figure 11.1.17: Appendix 11.1A of the CTMP in Technical Appendix 11.1 (CTMP) in Vol 4.

1.124 One will also appreciate that the Wind Farm site itself is sited on privately owned agricultural land within the countryside. Access to such land remains dependent on public rights of way, the exercise of discretionary powers by local government and tolerance by landowners. The land is not, therefore, used for public recreation. Although, the Ulster Way and North Sperrins Waymarked Way both pass the western and northern boundaries of the Wind Farm, following the existing road network and into Gortnamoyagh Forest, neither will require diversion or closure during construction, operation or decommissioning phases of the development. When construction is due to commence, notices will be put up together with details of any areas with restricted access for Health and Safety reasons.

1.125 Appropriate signage will be deployed at the entrance to the Wind Farm confirming the name of the Wind Farm itself and its operator. Signage will also be deployed to protect the health

and safety of workers, contractors and the general public by providing emergency contact details; highlighting areas of restricted access; and providing directions for construction and maintenance traffic.

1.126 As has been outlined earlier in this Chapter and the associated Design and Access Statement, all structural elements and foundations will have to adhere to strict health and safety criteria.

1.127 Chapter 12 'Miscellaneous Issues' outlines that properly designed and maintained wind turbines are a safe technology and that site design and inbuilt buffers from sensitive receptors will minimise the risk to humans from the operation of the wind turbines. The wind turbines will have full certification from an internationally recognised authority and a proven track record of safe operation; will be fitted with sensors that, in instances of unexpected extreme winds which exceed safe operating limits, the rotor blades will be braked and parked in a safe position; and, will be equipped with lightning protection equipment.

1.128 In terms of Policy considerations on 'Ice Throw' risk, the turbines will be fitted with vibration sensors which detect any imbalance which might be caused by icing, in which case the affected turbines would be shut down.

1.129 Routine site maintenance and turbine maintenance and servicing visits would take place once a month and twice per year, respectively.

1.130 The reader should also appreciate that there is no documented evidence of existing wind farms located close to roads being linked to driver distraction or effects on road safety and, accordingly, it is not anticipated that the Proposed Development will cause any significant issues in terms of highway safety due to driver distraction.

1.131 Other safety issues of relevance, such as those associated with shadow flicker and low frequency noise, will be addressed under the sub-heading 'Residential Amenity' below.

1.132 As a result of the above, it is not envisaged that there will be any unacceptable risk to public safety.

Human Health including Air Quality

1.133 There are a number of elements of Wind Farm development that could be deemed relevant to Human Health. However, those that are considered more relevant to general well-being and amenity, such as the risks associated with shadow flicker and low frequency noise, will be addressed under the sub-heading 'Residential Amenity' below.

1.134 The subject development will have significant benefits associated with Human Health in that it will generate electricity from a clean and renewable source of energy, therefore offsetting the need for power generation from the combustion of fossil fuels including coal and oil. Chapter 12 of the Environmental Statement confirms that it has been estimated that the prevention of emissions in CO_2 from the Proposed Development, when calculated both annually and for the estimated lifetime of the wind farm, will be 22,924 CO_2 tonnes and

687,732 CO_2 tonnes, respectively, which is not an insignificant step in reducing Northern Ireland's carbon footprint.

1.135 Chapter 12 'Miscellaneous Issues' also addresses the issue Air Quality during the construction, operation and decommissioning phases of the development, outlining means of mitigation measures including dust suppression, appropriate storage of aggregate or fine materials, wheel washing facilities and good housekeeping onsite, all of which will be implemented where necessary. The Chapter also confirms that as a consequence of the relative small-scale nature of the development, in combination with the high degree of dispersion of airborne pollutants that would occur prior to reaching sensitive receptors (nearby dwellings) emissions originating from onsite plant are considered to be negligible.

Residential Amenity including Noise and Shadow Flicker

1.136 Although the site is located at Smulgedon Hill, which is defined as being within the countryside, there are settlements located at Limavady, 10.5km to the north west; Dungiven, 9km to the south west; and, Garvagh, 8km to the east. The small village of Drumsurn lies 4km to the northwest and this is the nearest settlement. Although there are no dwellings immediately neighbouring the Application Site, there is sporadic residential development within the wider locale.

1.137 Chapter 9 'Noise' confirms that both noise and vibration assessments have been completed to identify and describe any likely significant noise and/or vibration effects on key Noise Sensitive Receptors (NSRs) during the operational, construction, and decommissioning phases of the proposed wind farm. Receptors were identified using the Residential Receptor Map, as submitted as part of the Further Environmental Information (FEI) documents which formed part of the original application, and with a review of the Planning NI Public Access System in order to account for all new receptors which have been build or submitted to planning since the original application. A total of 50 receptors having been assessed.

1.138 In terms of construction noise and vibrations, the Applicant has provided details of the numbers and types of plant likely to be employed during construction of various phases of the development, together with the likely noise emissions of the plant (as stated in BS 5228-2009), and their 'on-time' and minimum distances from each stage of construction to the closest noise-sensitive receptors. These factors have been used to calculate worst-case levels of construction noise for each stage of construction, following the procedure described in BS5228-2009.

1.139 With regards to construction noise, Chapter 9 confirms in Paragraph 9.62 that:

> *"…the effects of noise during the construction of the Development would be **low** and therefore **not significant**. The construction noise will remain as per the Original Consent and therefore are considered acceptable."*

1.140 The reader will also appreciate that Condition 17 of the original consent imposed limitations on times for construction, corresponding with the 'daytime' hours defined in BS5228:2009, i.e. 0700-1900 weekdays, 0700-1300 Saturdays, and it is expected that a similar conditions would be attached to any consent that is forthcoming as a result of this application.

1.141 In terms of operational noise taking into account cumulative impact, in accordance with the recommendations of ETSU-R-97, the acceptance of the proposed wind farm is established by comparing the day time and night time noise levels produced by the combined operation of the wind turbines, (based on manufacturer's data), with appropriate noise limits at nearby residential properties.

1.142 Although a number of receptors, namely 6, 40, 41 and 42, have been identified as experiencing potential impact during certain operational scenarios, programming mitigation has been proposed to ensure adherence to acceptable noise levels. To ensure there is no issue, the nominated turbine model will switch modes depending on the wind speeds and it is proposed that turbines 1 and 2 will switch into the 500kW operating mode at the wind speeds of 6-8m/s at a height of 10m. This will be during the daytime period only and only when receptors 6, 40, 41, and 42 are downwind from these turbines.

1.143 On the issue of noise Chapter 9, therefore, concludes that:

> *"The construction/decommissioning phase assessed as Temporary and **Low** impact and therefore effects are not **Significant**. This will remain the same as for the Consented Development which is already underway.*
>
> *Mitigation is not required in order for effects to be not significant... However, some construction/decommissioning phase mitigation measures have been outlined...*
>
> *The operational phase is assessed as having a **high** impact at four receptors within the study area and a low to **negligible** impact at all others. The four receptors with a **High** impact will therefore experience a **significant effect,** prior to mitigation. Mitigation has been proposed in the form of switching turbine operating modes at specific wind speeds, although the Applicant reserves the right to change mitigation option in agreement with the council, as long as the conditioned limits can be achieved. The residual impacts of the Proposed Development are **low** to **negligible** at all receptors and therefore effects are not **Significant**."*
>
> Paragraphs 9.88-90, Chapter 9, Environmental Statement

1.144 On the issue of Vibration, Chapter 9 concludes that:

> *"Given the large distance between the vibration generating activities and the NSRs and vibrations would be below background level, there will be a* ***negligible*** *impact and therefore effects are not* ***Significant****."*
>
> Paragraph 9.91, Chapter 9, Environmental Statement

1.145 On the issue of Shadow Flicker, Chapter 13 confirms that there is a total of 18 receptors located within 10 rotor diameters (i.e. 920m) of a wind turbine at this wind farm site, i.e. where shadow flicker effects generally occur. PPS18 states that shadow flicker effects should not exceed 30 hours per year or 30 minutes per day at residential receptors within 500m of a wind turbine. Therefore, effects in excess of 30 hours per year or 30 minutes per day at properties within 500m of a turbine are considered to be 'Significant'. Effects of less than 30 hours per year and 30 minutes per day or on properties more than 500m of a turbine are considered to be 'Not Significant'.

1.146 Receptors were identified using mapping and aerial photography data from 2018 and 2019, with a review of the Planning NI Public Access System in order to account for all new receptors which have been build or submitted to planning since the original application or that do not yet appear on the aforementioned data sources. All of the receptors, both built and unbuilt, have been confirmed as residential dwellings with windows on all four sides of these receptors having been analysed using their respective angles relative to true north.

1.147 In assessing the potential for impact upon these receptors, Paragraph 13.1 of Chapter 13 confirms that, based upon theoretical predicted maximum shadow flicker durations:

> *"Receptors 8, 9, 10 and 11 were each identified as potentially experiencing in excess of 30 hours of shadow flicker effect each year, while Receptors 8, 9, 10, 11 and 12 were identified as potentially receiving more than 30 minutes of shadow flicker effect each day."*

1.148 However, it should be noted that the above is based on a worst-case scenario, i.e. perfect weather conditions and the sun shining constantly and, therefore, as Paragraph 13.5 goes on to confirm:

> *"…when accounting for expected sun hours, no receptors within the 920m study area are expected to experience greater than 30 hours of mean shadow flicker per year or mean daily shadow flicker effects of more than 30 minutes per day. <u>However, without mitigation</u>* ***<u>Receptors 8 – 12</u>*** *<u>may experience greater than 30 minutes of maximum shadow flicker effects during a single day."</u>*

1.149 To mitigate this, the Applicant proposes to implement turbine shut down periods based upon the times unacceptable shadow flicker effect has been calculated for each receptor, eliminating these effects.

1.150 With regards to cumulative impact, Craiggore Wind Farm, was assessed but no shadow flicker effects upon nearby receptors were identified.

1.151 The Shadow Flicker Assessment therefore confirms that:

> *"The theoretical predicted maximum shadow flicker durations were calculated for the receptors within the study area. When accounting for expected sun hours, no receptors within the 920m study area are expected to experience greater than 30 hours of shadow flicker per year or mean daily shadow flicker effects of more than 30 minutes per day. <u>However, without mitigation five of the residential properties (Receptors 8, 9, 10, 11 and 12) within the 920m study area may experience greater than 30 minutes of maximum shadow flicker effects during a single day.</u>*
>
> *The proposed turbines will incorporate a shut-off system using a calendrical system with the worst-case data from this assessment to determine specific shut-off times. Fine-tuning of these times is possible at any time for each of the turbines. Further detail on the wind turbine shadow flicker prevention software can be found within the Enercon Shutdown System information in* ***Appendix 13C****.*
>
> *In consideration of the above, shadow flicker effects will be within acceptable limits."*
>
> Paragraph 13.15-13.17, Chapter 13, Environmental Statement

1.152 Although both Policy RE1 of PPS18 and paragraph 6.227 of the SPPS both suggest that a separation distance of 10 times rotor diameter to occupied property, with a minimum distance not less than 500m, will generally apply to wind farm development, it is important to consider this in a context of the BPG[28] to PPS18. The reference to 10 times the rotor diameter occurs within the BPG under the subheadings 'Noise', 'Safety' and 'Shadow Flicker and Reflected Light' and each reference point has been detailed below.

1.153 Under the subheading 'Noise' the BPG states that:

> *"As a matter of best practice for wind farm development, the Department will generally apply a separation distance of 10 times rotor diameter to occupied property (with a minimum distance of not less than 500m). In applying this separation distance, any significant impact on sensitive noise receptors should be minimised…"*

[28] https://www.infrastructure-ni.gov.uk/sites/default/files/publications/infrastructure/Best%20Practice%20Guidance%20to%20PPS%2018%20-%20Renewable%20Energy_0.pdf

Paragraph 1.3.43

1.154 Under the sub-heading 'Safety' the BPG states that:

"For wind farm developments the best practice separation distance of 10 times rotor diameter to occupied property should comfortably satisfy safety requirements."

Paragraph 1.3.52

1.155 Under the subheading 'Shadow Flicker and Reflected Light' the BG states that:

"Problems caused by shadow flicker are rare. At distances greater than 10 rotor diameters from a turbine, the potential for shadow flicker is very low…. Where shadow flicker could be a problem, developers should provide calculations to quantify the effect and where appropriate take measures to prevent or ameliorate the potential effect, such as by turning off a particular turbine at certain times."

Paragraph 1.3.76

1.156 The Noise Assessment confirms that 17 of 50 receptors fall within 10 rotor diameters of a turbine on site. Similarly, the Shadow Flicker Assessment confirms that 17 residential receptors have been identified in this parameter. However, both assessments confirm that there are no receptors within the PPS18 and SPPS suggested minimum separation distance of 500m and, in the both assessments, appropriate and effective mitigation has been proposed to ensure that there would be no unacceptable impacts as a result of the Proposed Development, as is advocated by the BPG.

1.157 The Applicant would take this opportunity to suggest that the reference to 10 rotor diameter separations must only be taken as a best practice guide within which flexibility must be afforded depending upon siting and design circumstance. This is not a set in stone parameter that must be adhered to and this opinion is reflected by the Planning Appeals Commission (PAC) assessment that formed part of the decision issued under reference 23018/A0199; an appeal against the Council's refusal of planning permission for a 6 turbine wind farm development at land approximately 515m east of 16 Coolkeeran Road, Armoy. Whilst the Appeal was unsuccessful, the points of consideration in relation to the application of the 10-rotor diameter guidance is pertinent. In this regard, the PAC decision states:

"…even if the minimum distance of 500m as stated in Policy RE1 does not apply to public safety, …the use of the word 'comfortably' in the BPG leads me to conclude that a degree of latitude can be applied to separation distances and that 10 times rotor diameter need not rigidly apply. I am reinforced in this matter by the text in the BPG pertaining to 'Public Safety'. It describes wind energy developments as safe technology indicating that of the very few accidents that have occurred involving injury to humans,

failure to observe manufacturers' and operators' instructions has been the cause. It goes on to say that the only possible source of danger to human life would be from the loss of a piece of the blade or in most exceptional circumstances the whole blade, but that blade failure is most unlikely. This is because many blades are composite structures with no bolts or other separate components. It continues that even for blades with separate control surfaces on or comprising the tips of the blade, separation is most unlikely.

Paragraph 18, PAC Decision reference 23018/A0199

1.158 The decision continues:

"…I note that numerous wind farms, some of similar dimensions, have been approved and are presumably operational across Northern Ireland where the separation distance to occupied property has fallen short of the 10 times rotor distance. Some of the turbines listed would be closer to occupied property than those subject to appeal and I have not been made aware of any public safety issues arising. In the evidential context provided, I am not persuaded that the proposal, even with the proposed micro-siting if necessary, would present a public safety risk."

Paragraph 19, PAC Decision reference 23018/A0199

1.159 The decision goes on to state that:

"…given that the closest dwelling would be some 623 metres to the nearest turbine, I am satisfied that the appeal proposal would not cause significant harm or result in an unacceptable adverse impact on public safety."

Paragraph 20, PAC Decision reference 23018/A0199

Visual amenity, cumulative impact and landscape character

1.160 Chapter 4 of the Environmental Statement provides a Landscape and Visual Impact Assessment based on a 35km study zone looking at the potential effects of the Proposed Development on the existing landscape and visual amenity of the Application Site and the surrounding area. In doing so, the LVIA considers the construction, operation and decommissioning phases of the Proposed Development and has taken account of all changes that have occurred within both the study zone and Northern Ireland's Planning Policy or Legislative landscape since the Original Consent's LVIA was undertaken in 2008. The LVIA includes updated Zone of Theoretical Visibility productions (ZTVs) and 20 wirelines and photomontages taken from a range of close, medium, long and distant views from across the study zone. These latter productions offer representative views providing a worst-case scenario for a range of receptors including Statutory and Non Statutory Designations, and sensitive areas such as AONBs, walking or scenic driving routes.

1.161 The LVIA has also identified and considered impact upon a variety of Statutory Designations and Non-Statutory Designations, none of which have been amended since the 2008 assessment and has reviewed the development in a context of existing Landscape Character Studies and other Wind Energy development.

1.162 In terms of Landscape Value and Landscape Sensitivity, the LVIA assesses the wider landscape and the Application Site itself and when considering the issue of Visual Impact, mitigation and both residual and cumulative effects are addressed. In conclusion, the LVIA confirms that the greatest change to the landscape across the study zone has been the increase in wind energy development, which varies from smaller scale farm turbines to large wind farm developments. However, with regards to the impact the Proposed Development will have, the Chapter goes on to conclude that:

> *"Only those receptors within close range of the Proposed Development will notice the proposed turbines greater blade sweep area and lower blade tip height. The majority of receptors will find it hard to differentiate between the two developments, given there is no change to their location within the Application Site upon Smulgedon Hill. Any potential landscape or visual effects due to the differences in the proposed and consented crane pad are negligible.*
>
> *Overall, the principles of the Proposed Development are very much the same as that of the Original Consent which has already been granted and any adverse landscape, visual and cumulative effects of both."*
>
> Paragraphs 4.276 and 4.277, Chapter 4, Landscape and Visual Impact Assessment

Biodiversity, nature conservation

1.163 Chapter 5 of the Environmental Statement addresses the Proposed Development in a context of Ecological considerations providing an assessment of potential effects that may occur and offering suggested mitigation and means of compensating/offsetting potential impact, where appropriate. Desk-based assessments were undertaken to collate available ecological information for the Application Site and the surrounding area. These assessments were based upon zone of influence parameters of 15km for International/European designations, 5km for national statutory designations, and 2km for protected/priority species.

1.164 This assessment benefitted from a data search and information on the suitability of habitats in the surrounding area for bats supplied via the National Biodiversity Data Centre (NBDC). Given the limited nature and extent of the proposals, a Habitat Regulations Assessment (HRA) was not deemed necessary. Field Survey work was also undertaken. This included an Extended Phase 1 Habitat Survey and Species Scoping Survey along with dusk transect surveys and associated remote monitoring Bat Surveys. In each of these assessments the potential impacts, including cumulative impacts, of the development at construction, operation and

decommissioning phases of the development were considered, as were measures for mitigation.

1.165 Whilst statutory designations and non-statutory designations were identified within 15km and 5km of the site, respectively, the Proposed Development does not lie within any of these, although two non-Natura statutory designated environmental sites are located within 400m. There are also two statutory designated sites outside of the 15km boundary, but with hydrological connectivity to the Proposed Development. However, it is considered that with the implementation of best practice and mitigation measures there will be no significant adverse effects on any environmental designated site connected to the Application Site.

1.166 A total of 13 habitat types were also identified within the Phase I survey area and, whilst it has been confirmed that there will be a small loss of habitat under the development footprint, this is considered to be negligible to nature conservation. Furthermore, with the implementation of best practice and mitigation measures, there will be no significant adverse effects on habitats within the Application Site. The Council will also be aware that the Original Consent included a Habitat Management Plan (HMP) for the long-term management of the Application Site and adjacent areas and the Applicant can confirm that the recommendations of this plan will be implemented accordingly.

1.167 Chapter 5 confirms that the survey area and Application Site are of low suitability for roosting, commuting and foraging for bats and no significant effects will occur upon protected and notable species. However, further mitigation in this regard can be achieved through pre-construction surveys for badger with potential shelters for animals also to be checked at the start of each working day.

Chapter 6 Ornithology

1.168 Chapter 6 'Ornithology' describes the ornithological baseline conditions and considers the potential effects of the construction, operational and decommissioning phases of the Proposed Development. This included desk-based assessments and field surveys. The desk-based assessment incorporated Ornithological designated sites up to 20km from the site and Ornithological records of up to 10km from the site. The field surveys incorporated vantage point surveys of 0.5km from the site with breeding bird surveys were undertaken both on site and on adjacent lands.

1.169 Chapter 6 confirms that two RAMSAR sites and an Important Bird Area were identified within 20km with Table 6-12 summarising the protected/notable bird species recorded within the search area, and their potential to be present within the Application Site boundary. The breeding bird and vantage point surveys confirmed that 30 species were recorded during the breeding bird season. In its summary, Chapter 6 confirms that the survey results broadly reflect those recorded as part of the assessments for the Original Consent. However, the

breeding bird survey revealed a reduction in breeding bird use of the Application Site. The summary states:

> *"…The low level of flight activity for all target bird species equates to a low collision risk.*
>
> *Potential effects on bird species …are considered Not Significant. However, small numbers of breeding birds (and particularly ground-nesting species) will be impacted directly by habitat loss and indirectly by disturbance during the construction phase. They are therefore potentially at risk, although this will amount to a Not Significant effect."*
>
> Paragraphs 6.233 – 6.233, Chapter 6, Ornithology

1.170 In terms of mitigation, the Chapter summary confirms that:

> *"To ensure that eggs, young and active nests of bird species protected under the Wildlife and Countryside Act (as amended) are not impacted, breeding bird protection will be implemented in line with the consented Construction Method Statement and Conditions 4 and 5 of the consented development. This includes pre-commencement bird surveys where construction works are to be undertaken between April and July inclusive, weekly ornithological monitoring protection during the breeding season, strict supervision of any vegetation clearance potentially affecting nesting birds, and habitat enhancement of the existing habitats away from the turbine envelope.*
>
> *Owing to increased presence of hen harrier, kestrel and lapwing during the most recent surveys when compared with 2007, buffer distances have been specified as mitigation to protect these species. The manner in which these are to be applied will remain the same as for the consented breeding bird protection measures."*
>
> Paragraphs 6.235 – 6.236, Chapter 6, Ornithology

1.171 The Chapter then concludes that:

> *"With the implementation of the outlined measures, the proposals will result in a Minor Adverse and Not Significant effect for all Important Ornithological Features (IFOs).*
>
> *No additional effects are likely when considering in-combination effects. Residual operational effects for all IFOs are Minor Adverse and Not Significant."*
>
> Paragraph 6.237 – 6.238, Chapter 6, Ornithology

Built heritage

1.172 Chapter 8 'Archaeological and Cultural Heritage' provides an evaluation of cultural heritage assets and archaeological remains relevant to the site whilst assessing any potential impacts of the Proposed Development. A previous cultural heritage impact assessment was produced

for the proposed wind farm in 2009[29] and was reviewed as a basis to produce the updated assessment which has been based upon desk-based assessment, map analysis, aerial photography and a on site assessment.

1.173 Using a study zone around the outer boundary of the Proposed Development the updated assessment includes a 5km study zone for high-grade heritage assets, such as World Heritage Sites, Scheduled Monuments (SMs) and Parks, Gardens and Demesnes of Special Historic Interest (PGDSHIs), and a 2km study zone for architectural heritage assets, such as Listed Buildings and Conservation Areas as well as non-designated sites such as those within the Northern Ireland Sites and Monuments Record (NISMR), Industrial Heritage Record (IHR), defence heritage and marine heritage. These parameters are considered appropriate and comprehensive allowing informative data to be collated to characterise the direct and indirect impacts that the proposed development may have on historical and archaeological assets within the local area. Where appropriate, sites of exceptional value or sensitivity outside the 5km and 2km study zones have also been assessed.

1.174 The assessment considers construction, operational and decommissioning phase effects and, where necessary, considers mitigation measures and, in summary, Chapter 8 concludes that:

> *"It is anticipated that during the construction phase the Proposed Development will have **no direct effects** on known assets. In addition, the potential for the Proposed Development to directly affect hitherto unknown sub-surface archaeology across the site is anticipated to be **Low**, with the highest potential for impacting upon archaeology occurring during groundworks for the turbine foundations and crane pads. However, as the presence of sub-surface remains within the Application Site is currently unknown, specific direct impacts upon the archaeological resource in the absence of any mitigation measures cannot be accurately ascertained but would be expected to be **permanent and irreversible**. With the implementation of an archaeological programme of works, including monitoring of topsoil stripping required for access tracks and excavations required for the turbine foundations, residual direct impacts upon hitherto-unknown archaeology would be anticipated to be **Not Significant** or **Imperceptible** as any sub-surface remains encountered would be sufficiently recorded and, if necessary, protected in-situ. In addition, the changes in ground disturbance resulting from the proposed amendments to the Original Consent are not considered to be significant enough to invalidate the conclusions from the Gahan and Long archaeological assessment[30] associated with the Original Consent.*
>
> *During the operational phase, no further ground disturbance or direct effects on heritage and archaeology will occur, while the Proposed Development is anticipated to have overall **Slight Adverse** indirect effects on designated and non-designated heritage*

[29] Gahan and Long (2009) Technical Appendix A10: Cultural Heritage, Annex 1: Archaeological Impact Assessment Report, in *Smulgedon Wind Farm Environmental Statement.*

[30] Gahan and Long (2009) Technical Appendix A10: Cultural Heritage, Annex 1: Archaeological Impact Assessment Report, in *Smulgedon Wind Farm Environmental Statement.*

assets and their settings within the study areas. These effects would be ***long-term and reversible*** *in nature and, as they will not result in substantial harm to any heritage assets, no mitigation measures are considered to be necessary for indirect effects.*

During the decommissioning phase, as there are no heritage assets identified within the site, it is anticipated that decommissioning effects, both direct and indirect, will be ***Imperceptible*** *upon the heritage resource. As no additional ground disturbance or visual impacts will occur as a result of the removal of this element, there will be no additional impacts."*

Paragraphs 8.124-8.126, Chapter 8, Environmental Statement

Land, Water Quality and Flood Risk

1.175 Chapter 7 of the Environmental Statement seeks to identify the geological, hydrogeological and hydrological conditions of the Application Site and surrounding area and to assess the potential impacts of the Proposed Development whilst recommending mitigation measures, where appropriate. The assessment has been prepared following consultation with Department for Infrastructure (DfI), DfI Rivers, NI Water and the NI Environment Agency and whilst taking a 10km Study Area it focuses primarily on a Core Study Area (CSA) comprising the Wind Farm itself, specifically that of the original and proposed Application Site.

1.176 The Chapter confirms that the CSA lies on undulating ground rising from approximately 210m Above Ordnance Datum (AOD) in the west to 290m AOD in the east. Local topography is broadly defined by undulating hills, with the CSA generally sloping from west to east. Two tributaries of Brockagh Water issue in the study area and drain to the east. Brockagh Water converges with Glenullin Water approximately 3km east of the CSA, before draining into Agivey River approximately 4.5km to the east. Several open agricultural field drains are present in the east of the CSA and allow for effective drainage of surface water.

1.177 In terms of Geology and Soil, Chapter 7 confirms that the majority of the land within the CSA is used for livestock grazing and does not lie within any statuary designated sites. The geological conditions of the CSA were identified utilising the GSNI interactive map (10k) and has been confirmed as is underlain by basaltic rocks of the Antrim Lava Group of Tertiary (Palaeogene) age. There are two soil types present, Till-Diamicton and Peat. A thin peat layer underlain by residual soils with a high clay content were evident during a site walkover and this was consistent with the findings of the soil profiling.

1.178 In terms of Hydrology, Chapter 7 confirms that the proposed Application Site and the surrounding area lies within the Hydrometric Area No. 3, Lough Neagh & Lower Bann and the Hydrometric Area No. 2 Lough Foyle (Water Framework Directive) Catchment Areas. Regionally, the northern and western portions of the CSA fall within the River Roe with the southern portion of the CSA falls within the regional River Bann catchment. The SCA forms a catchment divide for three catchment areas, namely; the Castle River, the Gelvin River and the

Brackagh Water catchments. A number of narrow and shallow hand-dug drainage ditches are present on-site with roadside channels present along the peripheries of the site. The site was not identified as being within any flood plains.

1.179 In terms of Hydrogeology, the CSA is predominately situated within the Coleraine-Kilrea Groundwater Body area (UKGBNI4NB001). The underlying Lower Basalt Formation is considered as a locally important aquifer. Aquifer vulnerability classifications vary throughout the CSA. NI Water have responded to pre-application consultation confirming that no clean water abstraction points would be affected by the Proposed Development.

1.180 The Chapter confirms that during construction, potential for compaction of the soil is limited and the majority of the construction work and vehicles will take place on the new tracks and crane hardstandings. A detailed site drainage design will also be implemented to take into account any severance of saturated areas to ensure hydrological connectivity is maintained, in accordance with SEPA / SNH 'Good practice during wind farm construction' in the absence of equivalent NIEA guidance. All excavated soil will be managed in order to reduce the risk of erosion and, in light of the current landuses, it is not envisaged that any contaminated soil will be identified. Further to this, a detailed Surface Water Management Plan (SWMP) will be implemented prior to the construction phase in order to effectively manage and treat all affected site runoff prior to discharging to local watercourses.

1.181 Whilst in any development, accidental spillages of contaminants are a risk, these will be effectively minimised through good practice, construction and health and safety plans with all chemicals, fuels and oils being appropriately stored and labelled. All plant machinery being monitored for faults and will be stored and refuelled in designated locations only. Spill kits will be present on site and contingency plans will be in place where necessary.

1.182 Water for all construction activities would be supplied by water bowser. Temporary effluent disposal facilities would be provided by 'portaloo' type facilities and emptied as required. No mains sewers or water pipes are proposed.

1.183 At operational stage, the limited activities that will take place onsite are considered to have negligible potential impact upon geology, soils and hydrogeology. Any slight increase in runoff due to the introduction of the foundations, access tracks, hardstanding areas, and substations will be managed to ensure greenfield run off rates area maintained.

1.184 In summary, Chapter 7 concludes that:

> *"It is considered that due to the nature of the Original Development, the proposed changes and the geology, hydrology and hydrogeology assets located within the Application Site and within close proximity, potential effects will be* ***slight to imperceptible."***

Paragraph 7.6, Chapter 7, Hydrology and Hydrogeology

Electromagnetic interference to communications and air traffic control systems

1.185 Chapter 10 of the Environmental Statement confirms that a number of installations and systems have been identified following consultation, desktop study and survey stage. Although the consultation responses provided by organisations and system operators that were considered could be affected by the original development proposal remain relevant, further consultations have been undertaken with the following prior to the submission of the subject application and in each case, no objection has been raised:

- Belfast International Airport (BIA), i.e. the nearest civil airport with radar facilities which lies approximately 52km to the southeast;
- Belfast City Airport (BCA), i.e. a civil airport with radar facilities which lies >60km to the south east;
- City of Derry Airport (CoDA), i.e. the nearest civil airport is approximately 22km to the northwest; and
- The Joint Radio Company Limited (JRC)

1.186 Accordingly, Chapter 10 concludes that:

> *"As there is a reduction in the overall height of the turbines by 5.6m, it is concluded that the amendments to the Proposed Development is unlikely to result in any additional aviation or telecommunication issues. Belfast International Airport (BIA), Belfast City Airport (BCA), City of Derry Airport (CoDA) and The Joint Radio Company Limited (JRC) have been consulted and confirmed that they have no safeguarding related concerns or objections to the proposed changes to the turbine type and they don't foresee any potential problems. Therefore, effects upon aviation and telecommunication assets are considered* ***Negligible.****"*

Paragraph 10.36, Chapter 10, Environmental Statement

Decommissioning

1.187 As indicated earlier in this Chapter, the intent is that upon expiration of any planning consent that may be forthcoming, above ground structures can be removed from the site and the wind farm will be decommissioned in accordance with best practice and/or in compliance with any planning conditions. The Original Consent included two separate condition (i.e. Condition 7 and 8), that guaranteed appropriate decommissioning and restoration works be implemented and similar conditions would be appropriate in this instance.

SUMMARY

1.188 PPS18 advocates that development proposals demonstrate their environmental, economic and social benefits as well as how any environmental and social impacts have been minimised through careful consideration of location, scale, design and other measures as has been the case in this instance. It also confirms that renewable energy development should be supported unless unacceptable adverse impact is not outweighed by benefit.

1.189 In this submission, we have established that the principle of a wind farm development at the subject site has been accepted by way of the original Consent, as issued under B/2009/0070/F, and that the final design of the proposed amendments has taken into account all relevant planning, environmental and technical considerations. The proposal has ensured that minimal changes have been made to the Original Consent and that which followed under planning reference B/2013/0196/F with the turbine locations and majority of ancillary infrastructure remaining unchanged. As with the proposal that formed the basis of the Original Consent, the Proposed Development is not considered to have any unacceptable adverse impact upon public safety or access, human health, amenity, and natural or heritage assets. One would also contend that the Proposed Development will have significant positive benefits in a context of human health and air quality by ensuring the improved production and supply of renewable energy at this consented Wind Farm site, thus reducing society's reliance upon fossil fuels.

1.190 The Proposed Development will have an operational life of approximately 30 years after commissioning and, upon expiration of this, will either be decommissioned in accordance with best practice or, alternatively, the life of the Proposed Development may be extended subject to further environmental studies and new consents.

CONCLUSION

1.191 Whilst the subject proposal will introduce a different set of infrastructural elements into the landscape, the information submitted as part of this Environmental Statement and associated documentation has once again confirmed that, with the specified mitigation and management measures in place, and when set in a context of the consented wind farm site, the proposed amendments will result in an insignificant impact upon amenity, landscape and all environmental considerations.

1.192 The submitted information has also clarified that the proposal has been taken forward following an appropriate pre-application process and that a balancing of relevant environmental, planning and technical criteria has been achieved, especially when one considers the development in a context of the wider benefits associated with modern and efficient renewable energy schemes and in terms of displacement of CO2 emissions and contributions toward regional and national renewable energy targets.

1.193 On this basis we would respectfully ask that planning permission be granted.