



Rigged Hill Windfarm Repowering

Planning Statement

July 2019

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Rigged Hill Windfarm Repowering Planning Statement

1 Introduction

1.1 The Application

1. JUNO Planning & Environmental Limited ("JUNO") has prepared this Planning Statement ("the Statement") on behalf of ScottishPower Renewables UK Ltd. ("the Applicant") to accompany the planning application ("the Application") for the proposed decommissioning and repowering of the Operational Rigged Hill Windfarm ("the Development") submitted to Causeway Coast & Glens District Council ("the Council").
2. The Development will consist of up to seven wind turbines (up to 137 metres(m) to tip height) and associated infrastructure. Planning permission is sought for the Development.

1.2 The Applicant

3. ScottishPower Renewables is part of the Iberdrola Group, a world leader in clean energy with an installed capacity of over 29,000 MW, and the leading wind energy producer worldwide.
4. ScottishPower Renewables, with its Headquarters in Glasgow, is helping to drive the Iberdrola Group's ambition of being the Utility of the Future and is at the forefront of the development of the renewables industry through pioneering ideas, forward thinking and outstanding innovation. The ambitious growth plans include offshore windfarms in East Anglia, leading the Group's international offshore development.
5. With over 40 operational windfarms, all sites are managed through the innovative and world leading Control Centre at Whitelee Windfarm, located outside of Glasgow in Scotland.
6. The Applicant has an established interest in Northern Ireland and currently owns and operates five onshore windfarms in the Country (Corkey, Rigged Hill, Callagheen, Elliots Hill and Wolf Bog Windfarms) together with Barnesmore Windfarm in the Republic of Ireland. Through their long-term presence in Northern Ireland, the Applicant has contributed over £200,000 of community benefits, contributing to an assortment of groups and organisations including donations made to and managed by the Fermanagh trust and funding local primary schools. This has supported a range of projects, such as improving community centre accessibility, sponsoring local youth group activities and creating a sensory garden for a playgroup.
7. The development of ScottishPower Renewables West of Duddon Sands Offshore Windfarm, in the Irish Sea (operational since 2014), enabled the construction of the c. £50 million bespoke facility at Belfast Harbour which began in early 2012, creating the first purpose built offshore wind installation and pre-assembly harbour in the UK and Ireland, supporting up to 300 jobs in the process.
8. Through the construction of East Anglia ONE Offshore Windfarm in the North Sea, Lamprell (in partnership with Harland and Wolff) in 2017, were also awarded a significant foundation contract. The value of this contract was c. £30 million, with an average labour force of 200 people across the duration of the project.
9. To date, the Applicant has experience of developing, constructing and operating repowered onshore windfarm projects throughout the UK, including Carland Cross Windfarm in Cornwall, Coal Clough Windfarm near Burnley and Llandinam Windfarm in Wales.

1.3 Environmental Impact Statement

10. Under the Planning (Environmental Impact Assessment) Regulations 2017 ("the EIA Regulations") an Environmental Impact Assessment ("EIA") must be undertaken for certain types and scale of development. Developments that always require, or may require, an EIA to be undertaken, are described in Schedule 1 and 2 of the EIA Regulations, respectively.
11. The Development does not fall into any of the development descriptions specified in Schedule 1. Specific thresholds and criteria are in place for Schedule 2 windfarm developments (as defined in Schedule 2(3)(j) which states that where the (i) development involves the installation of more than two turbines, or (ii) the hub height of any turbine or height of any structure exceeds 15 metres", an EIA must be undertaken where there is likely to be significant effects on the environment by virtue of factors such as its nature and size of the Development or located within a sensitive area. Given the scale and nature of the development, it is considered that the Development is EIA Development. An EIA has been undertaken and the findings reported in the Environmental Statement ("the ES") which accompanies the Application. The EIA process was informed by a Scoping Opinion issued by the Council on the 26th January 2018.

1.4 Purpose and Structure of the Planning Statement

12. The purpose of the Statement is to consider whether the Development accords with the Development Plan and any other material considerations identified as being relevant to the Development, in determining the Application.
13. This approach is in accordance with Section 45 of 'The Planning (Northern Ireland) Act 2011' ("the Planning Act") which states:

"Subject to this Part and section 91(2), where an application is made for planning permission, the Council or, as the case may be, the Department, in dealing with the application, must have regard to the local development plan, so far as material to the application, and to any other material considerations..."

14. The Statement is set out as follows:

- Section 1: Introduction
- Section 2: Need for Development
- Section 3: The Application Site
- Section 4: Pre-Application Community Consultation
- Section 5: Local Development Plan Assessment
- Section 6: Material Considerations
- Section 7: Conclusion

2 Need for the Development

15. This section of the Statement outlines the need for the Development based on an assessment of the need to implement legally binding national climate change targets by encouraging appropriate renewable energy development throughout Northern Ireland.

2.1 Windfarm Repowering

16. The repowering of a windfarm involves the removal of existing wind turbines from a site and replacing them with new and more efficient turbines. This process normally results in an increased overall site generating capacity and output as well as generally reducing the total number of turbines within the Site.

Repowering a windfarm site supports an ongoing use of the land at Rigged Hill (the Site) by a renewables asset, which is vital to Northern Ireland maintaining and building upon its renewable energy and climate change targets, as outlined in the Strategic Framework for Northern Ireland¹. Repowering also presents an opportunity to sustain and create additional jobs and to encourage continued investment in the renewable energy industry in Northern Ireland. The repowering of a windfarm

¹ Department for the Economy (2010) Strategic Framework for Northern Ireland. Available online at: <https://www.economy-ni.gov.uk/publications/energy-strategic-framework-northern-ireland> [Accessed on 31/10/2017]

differs from that of developing a greenfield site as the area has previously been developed, has demonstrated its suitability for use as a windfarm site, and will continue to be used for the same activity. As a result, the consenting and EIA process can draw on any information already available for the site to assess effects.

17. As well as the inherent benefits of creating and expanding upon the existing mix of renewables in Northern Ireland's electricity system, repowering offers a number of major opportunities:
- Increased site generation;
 - Reduces dependency on fossil fuels resulting in lower carbon dioxide (CO₂) emissions and output;
 - Reduced number of turbines, utilising the latest turbine technology, sustaining and growing the level of renewable energy in Northern Ireland;
 - Sustains existing development and construction jobs, and creates opportunities for new supply chain jobs;
 - With a supportive planning framework, it can help create a long-term, stable investment platform for a clear pipeline of repowering projects, easing pressure on consenting authorities; and
 - Utilises over two decades of industry knowledge to inform and improve the siting, design and construction techniques to create more efficient projects.
18. The Operational Rigged Windfarm is consented in perpetuity, and the repowering of the windfarm with more efficient machines will maximise the benefits of re-using an existing site whilst minimising new environmental effects. Operating for a longer period enables the Applicant to continue to drive down the overall cost of energy with benefits to the Northern Irish consumer and provides opportunities to incorporate emerging technologies such as energy storage.
19. The proposed repowering project has the potential to result in an increase in the installed capacity of the Site from 5 MW up to around 28-29 MW, c. 5 times the existing installed capacity, it should be noted that the final wind turbine installed capacity will be determined as part of a turbine tender exercise, held nearer to the time of construction which will allow the Applicant to avail of the latest turbine technology, within any envelope specified within the ES and/or planning consent given. The proposed larger generator size, coupled with greater wind yields from the use of taller turbines with bigger rotors, and the improved efficiency of the latest turbine models will result in a major increase to total power generated at the Site. Please refer to **section. 1.7.6** of this Statement which sets out the need for and benefits of Energy Storage.

2.2 International Energy Policy

20. International energy policy is based on the demand to battle climate change and reduce carbon dioxide (CO₂) emissions and, therefore, is relevant to renewable energy development.
21. The United Nations Framework Convention on Climate Change (UNFCCC)², implemented by the United Nations in May 1992, determined a long term objective to lessen greenhouse gases in the atmosphere, with the purpose of preventing anthropogenic interference with the climatic system. Subsequently, the Kyoto Protocol was implemented in 1997³. National governments who signed up to the Kyoto Protocol are committed to reducing their greenhouse gas emissions.
22. The Paris Agreement⁴ marks the latest step in the development of the UN regime on climate change. Its central objective is to boost global response to climate change, keep global temperature rise low and strengthen efforts to support this. The European Union signed The United Kingdom of Great Britain and Northern Ireland up to the Agreement on 22nd April 2016 and it came into force on the 18th December 2016.
23. European and national energy policy has been established from the Kyoto Protocol and Paris Agreement requirements and will continue to be framed by emerging guidance and scientific information. For example, the IPCC 2018 report⁵, "Global Warming of 1.5°C", presents a summary for policymakers of the implications of predicted climate change, and potential actions that could limit future climate change, such as "reaching and sustaining net zero global anthropogenic CO₂ emissions".

² The United Nations Framework Convention on Climate Change (UNFCCC) (1992). Available online at: <http://unfccc.int/resource/docs/convkp/conveng.pdf> [Accessed 02/10/2017]

³ The Kyoto Protocol (1997). Available online at: <http://unfccc.int/resource/docs/convkp/kpeng.pdf> [Accessed 02/10/2017]

⁴ The Paris Agreement (2015). Available online at: <https://unfccc.int/resource/docs/2015/cop21/eng/l09r01.pdf> [Accessed 02/10/2017]

⁵ IPCC (2018). Global Warming of 1.5°C. Available at: https://report.ipcc.ch/sr15/pdf/sr15_spm_final.pdf [accessed on 01/02/2019].

2.3 European Energy Policy

24. The European Union's (EU) energy policies are set out and powered by three main objectives:
- To ensure all energy providers operate in a competitive environment that ensures affordable prices for homes, businesses, and industries;
 - To secure energy supplies to ensure reliable energy delivery whenever and wherever it is needed; and
 - To have sustainable energy consumption, through lowering dependence on fossil fuels and decreasing greenhouse gas emissions and pollution.
25. The EU produced the Renewable Energy Directive 2009/28/EC⁶, revised in 2016, to make the EU a global leader in renewable energy and ensure that the target of the final energy consumption being at least 27% renewables is met by 2030.
26. Subsequently, in 2015, the EU set itself a long-term goal of reducing greenhouse gas emissions by 80-95%, when compared to 1990 levels, by 2050. The Energy Roadmap 2050⁷ sets out the transition and cost effective pathways for key economic sectors for achieving an 80-95% reduction in EU emissions by 2050. To achieve this goal, significant investment is needed in new low-carbon technologies and infrastructure, energy efficiency and renewable energy.
27. The 2050 target will not be shifted into national targets via EU legislation, but allows more flexibility for Member Countries to meet their greenhouse gas emission reduction targets in the most cost effective method in regards to their own specific circumstances.

2.4 UK Energy Policy

28. The UK Renewable Energy Strategy⁸ sets out to identify how the required growth in renewable energy use could be delivered. The objectives of the Strategy include clearing implementation barriers, increasing investment in emerging technologies and pursuing new sources of renewable energy supply and creating opportunities to harness renewable energy. The strategy supports the precedent to ensure the UK can deliver 30% renewable electricity by 2020.
29. The Overarching National Policy Statement for Energy (EN-1) and The National Policy Statement for Renewable Energy Infrastructure (EN-3) states that projections suggest that by 2020, 30% or more of the UK's electricity generation could come from renewable sources.
30. The UK Climate Change Act⁹ sets a target for the year 2050 for a reduction in greenhouse gas emissions by 80% lower than the 1990 baseline year. A recent amendment to the act (dated 26th June 2019), to be introduced from July 2019 onwards, commits the UK to a reduction in greenhouse gases by 100% lower than the 1990 baseline, following the declaration of a "Climate Emergency" by the UK Government. The amendment to this act will have direct implications on Northern Irish Energy Policy in the future.

2.5 Northern Ireland Energy Policy

31. In 2010, the Department for Enterprise, Trade and Investment (DETI) published the Strategic Energy Framework¹⁰ (SEF) which details Northern Ireland's energy future over the next ten years and sets out the renewable electricity targets for 2020 identifying that the equivalent of 40% of national electricity needs must be sourced from renewables. However, it is noted that the 2020 targets were not maximum targets. Consultations with the Department for Infrastructure (DfI) Strategic Planning section indicated that as of March 2019 39.25% of NI electricity is being provided by renewable energy sources.

⁶ The Renewable Energy Directive 2009/28/EC. Available online at: <http://eur-lex.europa.eu/legal-content/en/ALL/?uri=CELEX%3A32009L0028> [Accessed 02/10/2017]

⁷ The EU 2050 Strategy. Available online at: <https://ec.europa.eu/energy/en/topics/energy-strategy-and-energy-union/2050-energy-strategy> [Accessed 02/10/2017]

⁸ The UK Renewable Energy Strategy (2009). Available online at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/228866/7686.pdf [Accessed 02/10/2017]

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¹⁰ Department of Enterprise, Trade and Investment (2010). Strategic Energy Framework. Available online at: <https://www.economy-ni.gov.uk/publications/energy-strategic-framework-northern-ireland> [Accessed on 12/10/2017]

32. The 2010 SEF recognises that electricity generation from onshore wind is the most established, large scale source of renewable energy in Northern Ireland. It is also the lowest cost land-based renewable energy available. Furthermore, it states that onshore wind farms will play a vital role in meeting the new 2020 renewable electricity target.
33. DETI produced a report in 2013 titled *Envisioning the Future: Considering Energy in Northern Ireland¹¹ to 2050* which details a vision for energy supply in Northern Ireland up to 2050. The Vision builds on the SEF and determines what can be achieved by 2050 and what early decision need to made to support the 2050 vision. The scenarios produced in the report envisage that greenhouse gas emissions will be reduced by 55% to 80% by 2050 and that Northern Ireland will become a net exporter of energy. In light of declaring of a '*Climate Emergency*' by the UK Government, it is clear that a further review and work towards a new Energy Strategy for Northern Ireland is required.
34. Additionally, the Northern Ireland Investment Strategy 2011-2021¹² underlines the importance of renewable sources in electricity generation. It focuses on long-term targets, emphasising that the UK Climate Change Act 2008 legislated for an 80% mandatory reduction in the UK's carbon emissions by 2050 (compared to 1990 baseline levels), with an interim target of 35% by 2025.
35. For the 12 month period January 2018 to December 2018, 38.2% of total electricity consumption in Northern Ireland was generated from renewable sources located in Northern Ireland. This represents an increase of 3.5% on the previous 12 month period (January 2017 to December 2017) and is the highest rolling 12 month proportion on record. Additionally over the 12 month period January 2018 to December 2018, of all the renewable energy generated in Northern Ireland, 83.1% was generated from wind. This compares to 84.3% for the previous 12 month period (January 2017 to December 2017)¹³. The Onshore Renewable Energy Action Plan (OREAP) 2013-2020¹⁴ recognises the importance of the contribution of onshore renewable technologies to the 40% renewable energy target by 2020. It considers the impact onshore wind has on the energy network in Northern Ireland, referring to the requirement for grid infrastructure upgrades prior to transmission reinforcement, and noting that this is required in order to achieve the 40% target. It also notes "*the need to increase the rate of deployment of renewables to achieve the 40% target at least cost to the consumer*". The Mid-Term Review of the OREAP¹⁵ was published in 2017, and noted progress on actions set out in the OREAP, including towards the removal of grid constraints.

2.6 Energy Storage

36. The previous Northern Ireland Affairs Committee published its 'Third Report of Session 2016–17, Electricity Sector in Northern Ireland', on 1 May 2017 as House of Commons Paper HC 51, therein it stated that Northern Ireland is anticipated to fall into a deficiency of supply by 2021. The report goes on to state:

“Electricity storage presents a particular opportunity for Northern Ireland, where these technologies could allow the market to take full advantage of the significant investment that has been made in renewable generation in recent years. The ability to store renewable energy—capturing excess electricity at times of high generation so that it can be used when the wind does not blow—has the potential to dramatically increase the contribution of renewables to the system, reduce costs for consumers through lower wholesale prices and constraint payments, and allow for the more efficient

¹¹ DETI (2013) *Envisioning the Future: Considering Energy in Northern Ireland* Available at https://www.nienvironmentlink.org/cmsfiles/policy-hub/files/documentation/Energy/2050_main_report_-_final_version.pdf [Accessed 09/05/2019]

¹² Northern Ireland Executive (2015). *Investment Strategy for Northern Ireland 2011 – 2021*. Available online at: <https://www.infrastructure-ni.gov.uk/publications/investment-strategy-northern-ireland-2011-2021> [Accessed: 12/10/2017]

¹³ Department for the Economy , March 2019, *Electricity Consumption and Renewable Generation in Northern Ireland January 2018 to December 2018*, Available online at: <https://www.economy-ni.gov.uk/publications/electricity-consumption-and-renewable-generation-northern-ireland-january-2018-december-2018> [Accessed 15/5/19]

¹⁴ Department of Enterprise, Trade and Investment (2013). *Onshore Renewable Electricity Action Plan*. Available online at: <https://www.economy-ni.gov.uk/articles/onshore-renewable-electricity-action-plan> [Accessed: 12/10/2017]

¹⁵ Department of Enterprise, Trade and Investment (2017). *Mid-Term Review of the Onshore Renewable Electricity Action Plan*. Available online at: <https://www.economy-ni.gov.uk/sites/default/files/publications/economy/Mid-term-Review-OREAP-Report.pdf> [Accessed: 31/01/2019]

management of the electricity grid through better control of supply and demand and reduced congestion on the network”¹⁶.

37. Balancing the electricity grid to ensure demand is met by supply is a key requirement of Northern Ireland Electricity (NIE).
38. When unforeseen demand is put on the network, such as when a large power station suddenly comes offline, the energy storage element of the Development will provide a flexible and rapid release of electricity to allow NIE to regulate electricity supply and demand without any greenhouse gas emissions. Conversely, it will also have the capacity to absorb electricity quickly which will allow for the oversupply of the grid to be managed.
39. As noted previously, in March 2019 the 2020 target of 40% renewable energy is close to being met. 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 Operational Rigged Hill Windfarm has an overall installed capacity of 5 MW. The Development will have an overall installed capacity of c. 29.9 MW which is approximately five times the current capacity. The Development 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.

3 The Application Site and Development Description

3.1 Introduction

40. This section of the Statement sets out a description of the site on which the Development is proposed ("the Application Site") and its surroundings, including relevant planning history.

3.2 The Application Site

41. The Site is located within the Causeway Coast & Glen Borough Council area and is located approximately 6km east/ south east of Limavady in County Derry/ Londonderry. The Operational Rigged Hill Windfarm is located within the Site as detailed in the following section and shown in **Figure 3.2** of the Environmental Statement (ES). A comparison with the Operational Rigged Hill Windfarm layout is also provided in **Figure 3.3** of the ES.
42. The Site is located on the summit of Rigged Hill, 377 metres (m) above ordnance datum (AOD), which takes the form of a north-south running ridge set between Temain Hill to the south of the Site (376 m AOD) and Boyd's Mountain (329 m AOD) to the north. Elevations of the Site range from approximately 110 m AOD in the west of the Site, to 377 m AOD at the summit of Rigged Hill. The Site is characterised by moorland cover and the steep upper slopes of Rigged Hill, which lead to an elevated plateau, where the Operational Rigged Hill Wind Farm is currently located.
43. The upper areas of the Site are predominantly moorland cover, the main land use, in conjunction with the Operational Rigged Hill Windfarm, is agricultural grazing. There are a number of small unnamed watercourses and man-made open field drains within the Site, most of which drain in a westerly direction into the Castle River 3 km west of the Site, before discharging into the River Roe north of Limavady.
44. The historical land ownership pattern of this area is based on the land being divided into small plots. This has led to a dispersed settlement pattern, whereby individual dwellings occur frequently across the landscape, accessed by a network of rural roads. The closest settlements to the Site include the small village of Drumsurn located approximately 3.6 km south-west of turbine 4 and the town of Limavady, 6 km to the north-west of turbine 7.
45. A commercial coniferous plantation is located immediately north and west of the Site and three telecommunications masts are located on Temain Hill approximately 900 m to the south of the Site Boundary.

¹⁶ Third Report of Session 2016–17, Electricity sector in Northern Ireland, 1 May 2017, House of Commons Paper HC 51, Accessed 15/1/19, <https://publications.parliament.uk/pa/cm201617/cmselect/cmniaf/51/5106.htm>

46. The Ulster Way Walking Route currently passes through the Site, which in the past was rerouted in order to utilise the Operational Rigged Hill Windfarm access track, as it passes from Temain Hill in the south towards Boyd's Mountain. The route originally ran through the Cam Forest to the east of the Site.

47. Domestic scale and single wind turbines are a frequent feature in the valley landscape often associated with farmsteads or domestic dwellings. Larger commercial windfarms are also a feature, typically seen on the elevated upland areas broadly to the north and south of the Site. The closest operational wind farm is the Dunbeg / Dunmore cluster 5 km to the north, while the consented Craiggore Windfarm is 2 km to the south. There are two existing wind turbines located north-east of the Development, at a distance of approximately one kilometre. Both turbines have a tip-height of 45 metres.

3.3 Description of the Operational Rigged Hill Windfarm

48. The Operational Rigged Hill Windfarm was developed and constructed by RES and B9 Energy Services in 1995, and then acquired by ScottishPower Renewables UK Ltd (the Applicant) who own and operate the site. The Operational Rigged Hill Windfarm has consent in perpetuity and consists of ten 500 kilowatt (kW) Nordtank turbines with tip heights of 57 m and associated infrastructure including access tracks, substation and a meteorological mast. The ten existing turbines associated with the Operational Rigged Hill Windfarm are located in two north – south orientated rows running roughly in parallel with the ridgeline of Rigged Hill.

49. The Operational Rigged Hill Windfarm is currently accessed via a track through Cam Forest. The Applicant has recently submitted a separate application for a new site entrance and access track to service the Operational Rigged Hill Windfarm approaching the Site from the west with the main Site entrance now proposed off Terrydoo Road, this planning application remains to be determined at the time of writing, It is proposed that the same site entrance and main access track will form part of the Development, and modifications will be required in order to accommodate the larger wind turbine components, Therefore for the purposes of the EIA for the Development , in order to construct a worst case scenario for assessment purposes, this has been treated as a proposed new site entrance and main access track, also incorporating the required modifications for the delivery of the larger turbine components, and therefore forms part of the development description.

50. The Development is for, in addition to the above new access, the decommissioning and repowering of the Operational Rigged Hill Windfarm, which will entail replacing the operational wind turbines and infrastructure including the substation and meteorological mast, while existing infrastructure will be re-used insofar as possible. The substation, together with a number of redundant tracks and hardstanding areas will be removed with materials being reused within the construction processes wherever possible; these areas will then be re-instated in accordance with reinstatement principals outlined within **Chapter 3** of the ES, and **Draft Habitat Management Plan (HMP), the Outline Draft Construction Environmental Management Plan (DCEMP) and Chapter 12 of the ES 'Access, Transport and Traffic.'**

3.4 The Development Description

51. The Development will consist of the following phases:

- Decommissioning of the Operational Rigged Hill Windfarm (Initial Phase of the Development);
- Construction of the Development (likely to occur in tandem with the above phase);
- Operation of the Development; and
- Decommissioning of the Development (Final Phase).

52. The decommissioning of the existing 10 turbines and related infrastructure is assessed as part of the ES and forms part of the development description. This element is treating this phase as a connected and related project. The failure to properly assess both the decommissioning and construction would have the potential to understate the identification of effects. We note that there may be debate on whether or not aspects of the decommissioning are considered permitted development, however we consider that as the decommissioning of the existing Operation Rigged Hill windfarm forms part of a project which is determined as EIA development permitted development rights do not apply. In addition, the permission for the existing Operational Rigged Hill windfarm does not contain a decommissioning planning condition. The decommissioning of the Operational Rigged Hill Windfarm and the construction of the Development is likely to occur partly in tandem and would have a lesser effect than if the two processes were to arise at different times. This represents a worst-case scenario for assessment purposes. Any effects arising as a result of the future decommissioning of the Development are considered to be no greater than the effects arising when these two phases are combined. As a result, the final decommissioning phase has not been considered further in the ES.

53. The Development will comprise of the following main components:

- Decommissioning of the existing 10 turbines;
- Removal and restoration of the existing substation building and compound in accordance with the Outline DCEMP and Draft HMP;
- Removal and restoration of other redundant infrastructure in accordance with the Outline DCEMP and Draft HMP;
- The erection of seven three bladed horizontal axis wind turbines of up to 137 m tip height
- Turbine foundations
- Construction of approximately 4.82 km of new access tracks;
- Upgrade of approximately 1.75 km of existing access tracks;
- Construction of temporary and permanent hardstanding areas for each turbine to accommodate turbine component laydown areas, crane hardstanding areas and external transformers and/or switchgears;
- Temporary construction compound/laydown areas (some areas may be reinstated temporarily if required for future operational and decommissioning purposes);
- Turning heads and passing places incorporated within the site access infrastructure;
- New road junction with Terrydoo Road;
- Five new water crossings;
- Meteorological Mast;
- Buried underground electrical and communication cables;
- Substation, with roof mounted solar panels, and associated compound, including windfarm and grid connection operating equipment;
- Energy Storage Unit;
- Removal of self-seeded trees in east of the Site; and
- Associated ancillary works
- Micrositing allowance of 50m deviation from the indicative design footprint, within in the red line boundary, avoiding any third party oversail.

54. The layout of the Development is shown in **Figure 3.2** of the ES and details of each component are provided below in **Table 3.1**. The additional land-take for the Development is shown below and compared to that of the Operational Rigged Hill Windfarm footprint. The total land-take required for the operational phase of the Operational Phase will require approximately 0.98 ha of redundant land to be reinstated and 8.53 ha of additional land take. **Figure 3.3** of the ES shows the comparative layouts for both the Operational Rigged Hill Windfarm and the Development.

55. Table 3.1: Land Take and Re-instatement Areas

Development Element	Existing Site area (ha)	Redundant area to be re-instated (ha)	Additional Land-take for the Development(ha)	Total site area for the Operational Phase (ha)
Turbine Foundations	-	-	0.49	0.49
Crane Hardstandings, including earthworks and verges	Included in access track figure below	-	2.17	2.17
Blade Laydown Areas, including earthworks and verges	-	-	-	-
Access Tracks, including junction improvements	2.11	0.98	2.85	4.96
Substation Compound including Energy Storage Units compound	-	-	0.09	0.09
Windfarm Construction Compound	-	-	0.82	0.82
Total	2.11	0.98	6.42	8.53

3.5 The Development Components

3.5.1 Wind Turbines

56. Planning permission is being sought for the erection of up to seven three-bladed horizontal axis wind turbines with a maximum height from base to tip that will not exceed 137 m (with the blade in the vertical position). **Figure 3.4** of the ES illustrates a typical turbine of this type. The blades will be made of fiberglass reinforced epoxy and mounted on a tapered tubular steel, or steel and concrete tower. The turbines will be of a typical modern, three blade, horizontal axis design, light grey in colour and the finish of the tower and blades will be semi-gloss and semi-matt respectively.

Each of the turbines comprises of the following components

- Blades;
- A Tower;
- A Nacelle;
- A Hub; and
- An External transformer, and/or external switchgear.

57. The final choice of turbines will be guided by an assessment of the wind conditions, this EIA together with feedback from consultation, and a pre-construction tendering exercise which will take account of the available technology at the time of construction. Currently it is considered likely that turbines with around 4 MW capacity may be available within the envelope of the proposed physical parameters as defined within **Table 3.2**. For the purposes of the assessments a “candidate turbine” has been selected based on the precautionary principle of assessing the worst-case scenario.

Table 3.2 Turbine Physical Parameters

Turbine Parameter	Assessment Envelope
Turbine tip height	Up to 137 m
Rotor diameter	Up to 120 m
Tower height	Up to 81 m

58. It is industry standard practice to present a range of turbine physical parameters and then to assess the potential worst-case turbine model of that parameter range. This assessment incorporates the worst-case wind turbine parameters, for example, an overall tip height, rotor blade diameter, and turbine noise output. The turbine tip height will not exceed 137 m with the blades in the vertical position. Should a smaller rotor blade be used it is likely that a correspondingly taller tower would be selected in order to maintain the overall tip height. The candidate turbine has therefore been specified as a rotor diameter of 120 m and a tip height of 137 m, as this is deemed to be worst-case scenario.

59. This approach is supported by nationally accepted windfarm guidance such as the ‘Good Practice Guide to the Application of ETSU-R-97 for the Assessment and Rating of Wind Turbine Noise’ (“Good Practice Guide for the Assessment & Rating of Wind Turbine Noise”).

60. The worst-case scenario for the Landscape and Visual Impact Assessment (LVIA) (**Chapter 6**) has been determined as being the largest possible diameter of the rotors within the maximum blade tip height parameter. This is considered to be the worst case from the majority of locations as these would have the largest swept area, which makes the biggest contribution to the perceived scale of the turbines. This is particularly the case when compared with other features within the landscape. The choice of specific model would not make any material difference to the effects the turbines would have, such as how they appear.

61. The candidate turbine utilised for the noise assessment (**Chapter 10**) is the Vestas V117 4.2 MW which has a hub height of 80 m equating to the Development’s maximum tip-height of 137 m. This approach is consistent with the guidance of the ‘Good Practice Guide for the Assessment and Rating of Wind Turbine Noise’ which notes that most windfarm sites at planning stage will not have selected a preferred turbine and therefore a candidate turbine representative of a range of turbines should be selected to provide appropriate noise levels. Once noise levels have been predicted at the potentially affected properties, compliance with noise levels can be assessed and design advice provided if compliance with noise limits is considered unlikely. This is the recognised best practice approach to windfarm noise assessment.

62. The assessment of effects of collision risk on birds (**Chapter 9**) assumes a 120 m rotor diameter, which also represents a worst case. Where effects considered in other assessments could be affected by turbine size, a worst-case approach has been taken, generally based on the candidate turbine dimensions.
63. Turbines are typically of a variable speed type, so that turbine rotor speed will vary according to the energy available in the wind. Turbines with parameters similar to those set out in **Table 3.2** typically have a rotational speed of between 9 and 19 revolutions per minute (rpm), depending on variations in wind speed, generating power for all wind speeds between c. 4 and c. 25 metres per second (m/s). At wind speeds greater than c. 25 m/s, the turbines will automatically shut down for self-protection.
64. The turbines are computer controlled to ensure that at all times, the turbine faces directly into the wind to ensure optimum efficiency. The rotors of all seven turbines will rotate in the same direction, however the localised wind conditions will determine the orientation of each turbine individually.
65. In high wind speeds, the wind turbines will yaw out of the prevailing wind as instructed by their own control software, in an attempt to maintain their operation prior to cutting out should the high wind speed conditions exceed the wind turbine's safe operating limits.
66. When operating, the rotational speed of the blades is transferred and increased through the gearbox, to drive the generator. This produces a three-phase power output typically at 690 Volts (V), which is transferred from the generator to the turbine transformer. The turbines will be controlled and monitored from within the proposed substation and will also be remotely monitored from the Whitelee Windfarm Control Centre in Scotland, where performance details and statistical information for each turbine will be recorded. Staff servicing the turbines on a routine basis will be based in Northern Ireland. Table 3.3 details the locations of the turbine bases.

Table 3.3: Proposed Turbine Locations

Turbine ID	Co-ordinate (ITM)	
	Easting	Northing
1	275417	420790
2	275450	420290
3	275581	419544
4	275166	419361
5	274994	419813
6	274906	420334
7	275017	420957

3.5.2 Turbine Foundations and Crane Hardstandings

67. A full ground investigation will be completed prior to construction, however a typical turbine foundation will consist of an octagonal or circular reinforced concrete base approximately 20.8 m in diameter. A typical turbine foundation is shown in **Figure 3.5** in the ES. The area of excavation will be sized accordingly to allow for a stable, clear and safe working area around the concrete turbine foundation. Where possible the areas of the redundant foundations and turbine hard standings which currently form part of the Operational Rigged Hill Windfarm will be re-used to form part of the new hardstanding and laydown areas.
68. Construction of the turbine foundations will generally require the excavation of subsoil to expose a suitable formation material. The formation will be levelled off prior to the in-situ casting of a steel-reinforced concrete foundation. It is estimated that each foundation will require approximately 430 cubic metres (m³) of concrete and up to 90 tonnes (t) of steel reinforcement. Various cable ducts and other ancillaries will be installed within and adjacent to the foundation. The area above the foundations will be backfilled using suitable granular fill materials up to the turbine foundation plinth, and will form part of the permanent crane hardstanding area for each turbine. The final foundation design will be specific to the turbine selected and the site conditions as verified during detailed site investigations undertaken prior to construction commencing.

69. Each turbine requires an area of hardstanding adjacent to the turbine foundation to provide a stable base on which to site the turbine components and crane for the erection of the turbine. The working area at each hardstanding area will be approximately 65 m x 25 m. However, the final arrangement of the hardstanding will depend on the selected turbine manufacturer and model, the method of erection and exact specification of the cranes chosen by the turbine erection contractor. The hardstandings will be sufficiently level and with a suitable load-bearing capacity to ensure the safe storage of turbine components and operation of the cranes. Turning areas are provided to facilitate the transportation of turbine components, assembly cranes, and construction traffic onsite. A typical hardstanding arrangement is shown in **Figure 3.6** of the ES and their indicative location and configuration shown in **Figure 3.2** of the ES. The crane hardstandings and turning areas will remain in place during the lifetime of the Development to facilitate maintenance works
70. Surface water and groundwater levels will be managed to ensure that natural drainage patterns are maintained and that water levels within excavations do not rise beyond appropriate and safe limits. Various cable ducts and other ancillaries will be installed within the foundations and under the access track crossing points. Further detail on drainage is included within the Outline DCEMP, in **Technical Appendix A3.1.Transformers and Cabling** of the ES.
71. Depending on the final choice of turbine, transformers will either be located within the nacelle which sits at the top of each turbine tower (with internal switchgear), within the tower itself or externally, close to the base of the tower. An external transformer will normally be placed within steel or glass reinforced plastic (GRP) housing along with an external switchgear, on a concrete foundation pad as allowed for as part of the Development and illustrated in **Figure 3.5** and **Figure 3.6** of the ES. The size of transformer and switchgear will depend on the type of turbine selected but in general it will be approximately 4 m by 7 m in plan and 3 m in height above surrounding ground level (**Figure 3.4** of the ES), located adjacent to the turbine within the hardstanding area.
72. The transformers will be either oil-filled with a bunded footing to remove any risk of spillage or a solid cast resin type which is effectively non-polluting. The transformers will increase the electrical voltage from 690V to 33 kilovolts (kV).
73. Turbines will typically each be connected by 3no. 33 kV single phase power cables which will be laid in shallow trenches alongside the access tracks and areas of hardstanding. The excavated trenches will also include SCADA cables or fibre optic cables. This will allow interrogation and control of individual turbines as well as remote monitoring. A copper cable will also be located in the trench and will be connected to the substation and each turbine to provide an earthing system for protection against lightning strikes and electrical faults. Details of typical trenches are shown in **Figure 3.7** of the ES.
- ### 3.5.3 Onsite Substation and Associated Compound
74. A new substation will be required as part of the Development. This will be sited within the substation compound and be designed to the standard required by Northern Ireland Electricity (NIE) Networks for the accommodation of substation equipment.
75. The compound as shown in **Figure 3.8** of the ES is approximately 35 m x 55 m and contains the substation building and ancillary equipment, including the transformers, switch gear, fault protection, metering, energy storage units, component storage, car parking and other ancillary elements necessary for the operation of the Development.
76. The approximately 16.5 m x 11.5 m x 5 m (to peak of roof) sized substation building will contain control elements of the windfarm. The control components housed at the substation will include metering equipment, switchgear, the central computer system and electrical control panels. A spare parts store and workshop will also be located in the substation. It will have a suitably sized footpath around it and an adjacent parking area. The appearance and finish of the substation building will be similar to an agricultural building, while the final appearance would be agreed with the Council via the use of an appropriately worded planning condition.
77. The wastewater will drain to the septic tank located adjacent to the substation building. If technically feasible, a rainwater harvesting system will be installed as a source of non-potable water for flushing of toilets, etc. Any rainwater not captured by this system will be drained from the substation building compound footprint to a soakaway or a suitable surface water discharge point located in a suitable area nearby. Should oil storage be required, a bunded area will be constructed in a suitable location within the compound. The bund will be designed to have a capacity of 110% of the maximum volume of oil

required to be stored within it, and bund design would meet best practice as set out in Guidance for Pollution Prevention 2 (GPP2¹⁷): Above Ground Oil Storage Tanks.

78. The proposed location and indicative layout of the substation compound is shown in **Figure 3.2** and **Figure 3.8** of the ES. The indicative elevation drawings and floor plan for the substation building are presented in **Figure 3.10** and **Figure 3.11** of the ES, respectively.

79. The finishes of the buildings will match the existing agricultural architecture, and by constructing the new substation in a visually enclosed position, close to the existing Substation, potential environmental effects would be minimised. By locating the Energy Storage Unit alongside the substation, the footprint of the Development is minimised and the Energy Storage Units are seen in the context of other Development infrastructure. This will limit its additional landscape and visual effects as buildings will not be introduced into areas of the Site where they are less familiar features. Within the Site the electrical cables will run underground, adjacent to the access tracks where possible, to the new substation.

3.5.4 Energy Storage Unit

80. The Energy Storage Units will be located within the substation compound and are ancillary to the Development. This is likely to be made up of a number of units which will typically consist of containers each approximately 6.1 m x 2.44 m x 2.2 m high. The indicative locations of these units are shown on **Figure 3.8** and typical details are included in **Figure 3.9** of the ES.

81. The current energy storage technology favoured today is Li-ion batteries. These batteries are used widely due to their fast response time, which makes them preferable for grid-scale deployment. The Li-ion batteries vary in cell chemistries (e.g., Lithium Iron Phosphate, Lithium Nickel Manganese Cobalt Oxide, Lithium Cobalt Oxide, Lithium-Titanate) and cell arrangement (e.g., cylindrical, pouch, prismatic). Chemistry and arrangement will dictate the batteries' performance characteristics. The final selection of energy storage technology used will be based on the latest technology available at the time of construction, and it is requested that final details of this ancillary element be secured via the use of an appropriately worded planning condition,

3.5.5 Grid Connection

82. Underground cabling, laid where possible alongside the new access tracks, will link the turbine transformers to the onsite substation building. Where existing track is being re-used, the cables will be laid in a cable trench alongside the existing track. Generally, the redundant cable will be removed and recycled or cut off and left in situ as appropriate and in accordance with the Outline DCEMP and Draft HMP, in order to minimise disturbance to the environment.

83. It is envisaged that a new connection to the electrical grid will be required to accommodate this Development. Based on initial discussions with NIE to date, the Applicant is currently investigating connecting to the Agivey 'cluster' substation, which is approximately 9 km south-east of the Site. Although the application for connection of the Development to the electrical grid will fall under a separate consenting regime, a high-level desk based assessment of possible routing options has been undertaken, in order to evaluate the feasibility of the proposed grid connection. This assessment has been based on a 33 kV overhead wooden pole line. Statutory designations have been plotted and three broad routes, each approximately 1 km in width have been identified (see **Figure 3.15** of ES). The final route selection will be determined by NIE.

3.5.6 Meteorological Mast

84. One permanent meteorological mast is proposed as part of the Development, located at IGR 275407, 419205. This will be used to provide on-going measurement of wind speed to provide information for the control and monitoring of the operation of the Development. The location of the met mast has been selected to provide the best representation of wind speeds across the Site.

85. The meteorological mast will be up to 80 m in total height and will be a galvanised steel lattice construction. It will have a concrete foundation with approximate dimensions of 5 x 5 x 0.5 m and erected using an appropriately sized crane. A typical meteorological mast is shown in **Figure 3.12** of the ES. An access track is not required to service the mast, as construction and operation can be undertaken by all-terrain vehicles.

¹⁷¹⁷ Above ground oil storage tanks: GPP 2, NIEA, SEPA, Natural Resources Wales, Accessed 01/11/2017, <http://www.netregs.org.uk/media/1317/gpp-2-pdf-feb-2017.pdf>

3.5.7 Temporary Decommissioning and Construction Compounds and Laydown Areas

86. Two temporary decommissioning and construction compounds are proposed as shown in **Figure 3.2** of the ES. The main compound is located in the core area of the Site, adjacent to the substation building straddling the access track, while a smaller compound is located adjacent to the site entrance. These locations have been selected to minimise environmental effects, particularly on any more sensitive peatland habitats. The main compound is split into two areas to the west and east of the access track with approximate dimensions of 110 x 30 m and 90 x 35 m respectively an indicative compound arrangement is shown in **Figure 3.13** of the ES. The smaller compound close to the site entrances measures approximately 50 x 50 m. The main compound lies in part on areas of previously disturbed ground associated with previous operations relating to the Operational Rigged Hill Windfarm.

87. The compounds will comprise a hardstanding area for parking and for receipt and storage of plant, equipment and delivered materials. In addition, they will form a laydown area for the decommissioned turbine components prior to their removal from the Site. A waste management area will also be provided along with temporary office and welfare facilities, including Portakabin-style toilets with provision for sealed waste storage and removal. Facilities will be provided for diesel storage and generators and an area designated for re-fuelling. The compounds will be restored following the completion of the decommissioning and construction works.

88. The area will be stripped of topsoil and subsoil to expose a suitable formation. The stripped material will be stored close by for future re-instatement. A geosynthetic material base or similar will then be laid, followed by a layer of suitable rock material, and then a further geosynthetic material laid prior to the top surface of blended finer aggregate.

89. Following completion of the decommissioning and construction phases, the compound will be removed and the areas restored. These areas may be reinstated in support of any future operational maintenance and decommissioning activity as required.

3.5.8 Access to the Development

90. The Operational Rigged Hill Windfarm has historically been accessed through the Cam Forest north of the Site. This operational access is due to be replaced, independently of the Development, with a new access track entering the Site from the west, off Terrydoo Road and extending up Rigged Hill, subject to planning consent. The access route is considered largely suitable for the new turbines, however minor areas of realignment and junction improvements may be required.

91. A transport assessment has been undertaken in support of the application for the Development and this provides details on offsite access route options for decommissioning and construction vehicles and provides an estimate of trip generation during these phases. The transport assessment includes a routing study to establish the feasibility of the access route for turbine delivery from either Belfast or Larne in the east or Derry / Londonderry in the west, to the Site entrance. Details of this and assessment of traffic impacts during the initial decommissioning, construction and operational phases of the Development are provided in **Chapter 12: Access, Traffic and Transport** of the ES.

3.5.9 Onsite Access Tracks

92. Where possible the existing spine road and access tracks serving the Operational Rigged Hill Windfarm will be retained, utilised and upgraded as necessary to access the proposed turbine positions as shown in **Figure 3.3** of the ES. Tracks required to access new elements of the Development will be retained throughout the operational life of the Development to enable maintenance of the turbines and replacement of any turbine components. In total, approximately 4.82 km of new access tracks will be required, of which 3.02 km is made up of the submitted access track route for the Operational Rigged Hill Windfarm, with approximately 1.75 km of existing Site access track requiring localised widening.

93. The access track layout has been designed taking into account a range of environmental and technical constraints, including breeding birds, active peat, sensitive habitats and steep slopes. All tracks are designed to respond to turbine supplier track requirements and will provide a 5 m wide running surface with localised widening on corners or areas of steeper slopes and will enable access to the turbine locations. The track spurs will have 'dead-ends' with turning heads provided where necessary; these turning heads will reuse areas of existing and redundant infrastructure where possible. Tracks will have passing places where necessary.

94. Access tracks are likely to be constructed with a 'cut track' design (as shown in **Figure 3.14** of the ES). This construction method will be used as there is less than 1.2 m depth of soft ground in all proposed track locations, and there is no potential peat instability as a consequence of surface loading of the peat. Analysis of peat-depth survey data, collected as part of the

EIA process (see **Chapter 7: Hydrology, Hydrogeology, Geology and Peat**, and **Appendix A7.1, Peat Slide Risk Assessment** of the ES), suggests that the entirety of the proposed new track (4.82 km) is within topsoil or peat of depth less than 1 m (the average depth being less than 0.5 m). In the event that during the construction phase deeper peat is found in isolated pockets, floating road may be considered as an alternative option.

95. Access tracks will be constructed with graded stone aggregate won from cut activities, re-use of existing materials from redundant infrastructure or stone imported from local quarries to provide a level surface and will incorporate geosynthetic layers to strengthen the track as necessary. The running surface will be made of a durable surfacing material resistant to crushing, formed from selected crushed and compacted stone.

96. Construction of a 'cut track' design involves the topsoil and peat being stripped to expose a suitable formation on which to build the track. The track will then be constructed on the formation by laying and compacting crushed rock to a depth dependent on ground conditions and topography, although generally the surface of the track will be flush with, or raised slightly above, the surrounding ground level. Geosynthetic layers will be incorporated at the formation and/or within the crushed rock as required to minimise the amount of material required. The upper soil/peat horizon, together with any vegetation, will be placed to one side for later reinstatement, if appropriate.

3.5.9.1 Access Track Drainage and Watercourse Crossing

97. The areas of new access track have been designed to ensure run-off water is adequately drained by ditches into swales and small ponds if necessary and appropriate in accordance with the Outline DCEMP, in order to attenuate flows and remove sediments before the treated run-off is shed onto vegetation or otherwise re-enters the wider hydrological system. The proposed use of channels at the track edges and the use of a wide arched culvert for the five new watercourse crossings will ensure disruption to the existing drainage regime will be minimised, as described in **Chapter 7: Hydrology, Hydrogeology, Geology and Peat** of the ES.

98. The type and design of each watercourse crossing will be dependent on the stream morphology, peak flows, local topography and ecological requirements, and will be chosen so as to avoid or minimise potential environmental effects. Any crossing would be designed in accordance with Construction Industry Research and Information Association (CIRIA) Culvert design and operation guide (C689)¹⁸, to ensure sufficient capacities and in consultation with Department for Infrastructure Rivers Department.

99. The new tracks will have adequate crossfalls or cambers to allow rainwater to be shed and, where gradients are present, lateral drains will intercept flow along the track. A drainage ditch will be formed on the upslope side of new access track where required to collect run off from the upper slopes, with exact arrangements dependent on detailed drainage design.

100. Cross pipes will be laid as required on site to permit good track drainage and will be introduced where the position of the access track would cause ponding to one side. As far as possible, these will coincide with naturally occurring drainage channels.

101. Where existing tracks are being re-used existing drainage measures will be checked to confirm they are still appropriate and operating successfully. Should this not be the case the drainage measure will be upgraded in line with those proposed for new tracks.

102. Features such as silt traps, silt fences and settlement lagoons will be used where necessary to minimise the potential for sediment to enter watercourses, as described in **Chapter 7: Hydrology, Hydrogeology, Geology and Peat** of the ES in accordance with the Outline WCEMP which will form part of the Outline DCEMP.

3.5.10 Site Signage

103. During the decommissioning and construction phases, the Development Area will have suitable signage to protect the health and safety of workers, contractors and the general public.

¹⁸ Culvert design and operation guide (C689)

https://www.ciria.org/Resources/Free_publications/Culvert_design_and_operation_guide.aspx (access 21/11/2018)

104. During the operational phase, there will be a sign giving the operator's name, the name of the Development and an emergency contact telephone number. On the turbines and the substation, there will be further signs giving information about the component, potential hazards, the operator's name, the location grid reference and the emergency telephone number. The final location and design of the signage will be defined prior to the Development becoming operational.
105. The current routing of the Ulster Way passes through the Site, as noted in Section 3.2 the route originally ran through the Cam Forest to the east of the Site, however was rerouted to make use of the access tracks of the Operational Rigged Hill Windfarm. During the decommissioning and construction phases, the right of way will need to be closed for health and safety reasons, and a temporary alternative route provided. Appropriate signage will be put in place to advise users of the Ulster Way of any disruption and details of alternative temporary routeing, During the operational phase of the Development, the intent would be to retain this connectivity and the Applicant will work with the Council, with regards to agreeing to locate any interpretive signage, which would support connectivity with the wider network of paths in the area, and in support of helping realise any CCGBC access improvement strategies, within the land which it has control over, leading to overall improvements to this resource.

3.5.11 Micro-Siting

106. In the event that unsuitable ground conditions are encountered during the construction works, there may be a requirement to micro-site elements of the Development infrastructure in order to further mitigate against any unfavourable ground conditions, or unforeseen environmental constraints. It is proposed that the relocation of turbines and other infrastructure by up to 50 m in all directions, up to the red line boundary, and avoiding any oversail of any uninvolvement third party land, may be carried out subject to approval of the Ecological Clerk of Works (ECoW). It is then requested that any relocation of Development components to distances of more than 50 m will require the written approval from the Council.
107. The potential for micro-siting was considered when the detailed survey and assessment work was undertaken. For example, the habitat and archaeological surveys covered a wider area than just the footprint of the proposed turbine and access track locations (full details of survey areas can be found in the relevant assessment chapters). Any likely significant effects arising from micro-siting have been considered in the preparation of the ES, and specific areas to be avoided have been identified in technical chapters where necessary.

3.6 Decommissioning and Construction Programme

108. The first phase of the Development will comprise the initial decommissioning phase and removal of the existing turbines, any external transformers and the existing wind monitoring mast from the Site. It is anticipated that the turbines and external transformers will be carefully dismantled and transported offsite, possibly for resale in the second-hand market. For the purposes of undertaking the EIA, it is assumed that the initial decommissioning and construction phases are likely to commence in 2023. The date can only be confirmed following consent for the Development and confirmation of the grid connection timelines by NIE. It will also be influenced by any prevailing market conditions and requirements.
109. The dismantling of the Operational Rigged Hill Windfarm is expected to take approximately two months following an initial period of four weeks during which a temporary decommissioning / construction compound will be constructed and existing tracks and crane hardstandings will be cleared of vegetation and upgraded for use by decommissioning vehicles as required.
110. Following initial track construction and upgrade, cranes will be used to split the turbines into suitable sections, which will then be transported from the Site by heavy goods vehicles (HGVs). Following removal of the blades, power cables will be disconnected and lowered with control cables left in place, before the tower sections are lowered, taking into account any specific requirements set out in the **Draft HMP**.
111. It is expected that the construction phase of the Development will run in parallel with the decommissioning of the Operational Rigged Hill Windfarm and take approximately 8 months in total. This period is somewhat weather dependent and could be affected by onsite conditions. It is envisaged that the decommissioning / construction programme would follow the broad outline as detailed in **Table 3.4**.

Table 3.4 Indicative Decommissioning / Construction programme

Activity	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8
Site Establishment								
Decommissioning of existing turbines								
Access road, upgrade, widening, removal and construction								
Substation and Energy Storage Unit construction								
Excavation and construction of turbine foundations and hardstandings								
Cable installation and electrical works								
Turbine delivery and erection								
Turbine commissioning								
Site restoration								

112. Whilst the decommissioning / construction programme will be developed taking into account the bird breeding season, potential disturbance to breeding birds must be weighed against the requirements to undertake construction work within the peatland areas of the Site at the driest time of year in order to minimise disturbance to the peatland habitats and further minimise any potential peat slide risk.
113. Construction over the drier summer months is also beneficial during the construction or upgrade of access tracks and other infrastructure to minimise the risks to site watercourses through the release of sediments during the site excavations, reducing potential risks to downstream watercourses.
114. Other benefits of working over the summer months include:
- Longer daylight hours enable longer days of working and provide significant Health and Safety (H&S) benefits to site workforce as working in low light/night time conditions will be limited;
 - Typically the spring/summer months exhibit lower wind speeds for turbine erection works, which have positive H&S and programme implications; and
 - Overall quality of works in general is more likely to be negatively impacted outside the spring/summer months, e.g., cold weather concreting in winter, weather downtime during high rainfall/high wind events, restrictions on working at height, etc.

3.6.1 Working Hours

115. In general, working hours for decommissioning / construction will be from 07:00 to 19:00 throughout the week, with reduced working hours at weekends. It should be noted that during the turbine erection phase, operations may proceed around the clock to ensure that lifting operations are completed safely. Hours of working will be agreed with the Council prior to the commencement of construction. Any extensions to working hours would be agreed in advance with the Council.

3.7 Site Restoration

116. The outline plan for soil management and restoration includes methods used for reinstatement of both disturbance from the decommissioning and construction activities as well as re-instatement of redundant infrastructure. This forms an integral part of the post-construction restoration programme to be carried out in accordance with the HMP. These methods will be agreed with the CCGBC in consultation with relevant statutory bodies prior to the commencement of restoration works.
117. Site restoration will involve the restoration of track and hardstanding verges and the temporary decommissioning and construction compounds to provide a natural ground profile with non-geometric surfaces and tie-ins with existing undisturbed ground levels to prevent the collection of surface water where appropriate. Restoration will be undertaken at the earliest opportunity to minimise storage of turf and other materials. The key elements of the restoration plan are, in summary:

- Track and hardstanding verges on the downhill side will be covered with a layer of turf and associated soil. They will then be left to allow natural succession to take place; this turf will be obtained from areas where shallow organic deposits or otherwise shallower peat deposits ('acrotelmic' peat) have been excavated. A mixture of habitats is expected to develop on track and hardstanding verges on the downhill and uphill sides, because of local variation in soil depth/type and the variety of drainage conditions that will be present, including wet heath, marshy grassland, dry heath and acid grassland;
- The decommissioning and construction compounds will be restored with peat / other organic deposits as appropriate capped with a layer of associated turf. Due to the flat nature of the area where the compounds will be located, it is expected that a mixture of marshy grassland, wet heath along with dry heath/acid grassland will develop;
- Cable trenches would be similarly reinstated. Where practicable, vegetation over the width of the cable trenches would be lifted as turfs, and replaced after trenching operations, to reduce disturbance;
- The upgraded access tracks serving the new turbines will be left in place after completion of the construction phase, as they will provide access for maintenance, repairs and the eventual decommissioning phase;
- Hardstanding and turning areas constructed at each turbine location will be retained for use in ongoing maintenance operations, including component replacement as necessary, and the decommissioning phase; and
- Redundant infrastructure will be removed or broken out to a depth of 1 m and a number of the areas reinstated in accordance with the Draft HMP.

118. Should future works be required to maintain the Development the temporary construction areas may be reused and temporarily reinstated as required for maintenance purposes.

3.8 Decommissioning and Construction Environmental Management Plan

119. The Applicant will appoint an Infrastructure Contractor who will have overall responsibility for environmental management on the decommissioning/construction site (the Contractor). The services of specialist advisors will be retained as appropriate, such as an archaeologist and ecologist/appointed ECoW, to be called on as required to advise on specific environmental issues. The appointed Contractor will ensure construction activities are carried out in accordance with the mitigation measures **outlined in the ES**.

120. An Outline DCEMP is provided as **Technical Appendix A3.1 of the ES**. This sets out SPR's standard outline requirements for inclusion within a **detailed DCEMP** including guidance and best practice for adoption during the decommissioning and construction phases of the Development. The **Outline DCEMP** provides an overview of the environmental management and decommissioning and construction best practice designed to reduce the potential for any environmental effects during these phases.

121. To ensure that the mitigation and management measures detailed within the ES are carried out, construction personnel and contractors will be required to adhere to the **DCEMP** which will form an overarching document for all decommissioning and construction site management requirements.

122. Contractors will also be required to adhere to the following to minimise environmental effects of the construction process:

- Conditions required under the Consent;
- Requirements of statutory consultees including the Department of Agriculture, Environment and Rural Affairs (DAERA) and the CCGBC;
- Any other relevant mitigation measures identified in **Chapter 15: Summary of Effects and Mitigation** of the ES, including how the Contractor will implement this mitigation and monitor its implementation and effectiveness e.g. the control of noise and dust, waste, etc.;
- How the contractor will respond to queries raised by members of the public; and
- How the Contractor will abide by all relevant statutory requirements and published guidelines that reflect 'good practice'.

123. **The DCEMP will** be agreed with the relevant statutory bodies prior to commencement of construction, and performance against **the DCEMP** will be monitored by the Applicant's Construction Project Manager throughout the construction period.

124. Particular environmental impacts and associated mitigation measures required to be addressed within the **DCEMP** are discussed in the relevant sections of the ES. Such as:

- Noise and vibration;

- Dust and air pollution;
- Surface water and groundwater;
- Ecology and ornithology (including the protection of habitats and species);
- Cultural heritage;
- Waste, pollution and incidence response; and
- Site operations, including working hours and health and safety onsite.

125. The **DCEMP** will work in conjunction with other documents produced prior to construction including any **Construction and Traffic Management Plan**, whereby there will also be a requirement to manage other aspects of the Development such as the movement of traffic, to and from the Site, including for the movement of abnormal loads and daily workers commute, including mitigation for impacts to public transport and local private access arrangements..

3.9 Operational Phase

126. No time limit on the operational lifespan of the Development has been assumed for the purposes of this assessment. The Operational Rigged Hill Windfarm currently operates in perpetuity without a time limited planning condition. We respectfully request that there is no time limited planning condition restricting the operational life of the Development. This will maintain the current status quo and the operational timeline of the Operational Rigged Hill Windfarm.

3.9.1 Turbine and Infrastructure Maintenance

127. Turbine maintenance will be carried out in accordance with the manufacturer's specification. The following routine turbine maintenance will be undertaken:

- Initial service;
- Routine maintenance and servicing;
- Gearbox oil changes;
- Blade, gearbox and generator inspections; and
- Replacement of blades and components as required.

128. Operational site inspections will be undertaken by the Applicant's staff, on a weekly basis and the servicing of turbines will be undertaken as per the turbine manufacturers requirements, usually once per year, but with monthly visits by the manufacturer's servicing team.

129. Ongoing track maintenance will be undertaken to ensure safe access is maintained to all parts of the Development all year round.

130. In common with the wind turbines the Energy Storage Unit (ESU) will be designed to operate remotely, and only rare maintenance visits would be required once operational.

131. It is expected that the Development will continue to employ approximately 3 or 4 people on a permanent basis, for regular operational and maintenance activities.

3.10 Decommissioning

132. In the event that the Development requires to be decommissioned, the process would be similar to the decommissioning of the Operational Rigged Windfarm. Given the fewer number of turbines, the potential effects arising from such decommissioning will be less than the effects arising as a result of the combined initial decommissioning and construction phases described above. These phases combined therefore represent the worst case parameters for assessment purposes.

3.11 Planning Application Reference No.LA01/2019/0052

There is currently a planning application submitted for a new site access to the existing Operational Rigged Hill windfarm from the Terrydoo road. The planning application at the time of writing, is currently in the planning system and being processed by the Council. The Development proposes to utilise the recently applied for site entrance and new access from Terrydoo road, and as mentioned above this has been assessed as a new site entrance and track for the purposes of this planning application and submitted ES, as it is not yet consented or built.

4 Pre-Application Community Consultation

4.1 Overview of Pre-Application Community Consultation Process

133. A Pre-Application Community Consultation (PACC) Report is submitted alongside this Planning Statement, in line with the statutory requirements of section 28 of the Planning (NI) Act 2011. The PACC process formally commenced in April 2019 with the submission of a Proposal of Application Notice (PAN) by JUNO Planning to Causeway Coast & Glens Borough Council. The PAN outlined how the consultation process consisted of three stages namely in August 2017 (prior to submission of PAN) and June 2019 (two events). Both stages of consultation were focussed around information events at the Garvagh Community Centre and the Rose Valley Arts & Cultural Centre. The events were advertised in the local press and invitations to the events were sent to all residential properties within 5km of the Development Site.

4.2 Pre-Application Community Consultation

134. As stated above, three rounds of Public Information Days (PIDs) were undertaken for this Development. The first round of PIDs were held on the 24th and 25th August 2017 at the Garvagh Community Centre and Roe Valley Arts & Cultural Centre respectively. The events ran from 2pm until 8pm on the 24th with the event on the 25th finishing slightly earlier. The aim of the first round of information days were to invite comments and obtain feedback in the early design stages to ensure that local considerations helped to inform design decisions. Attendees completed feedback forms.
135. The second round of PIDs were held on the 6th and 7th of June 2019 at the Roe Valley Arts & Cultural Centre and the Garvagh Community Centre respectively. The event on the 6th ran from 2pm until 8pm, with the event on the 7th finishing slightly earlier. The aim of this second round of information days was to present the final design reached following the rigorous EIA process. The final round of PID was held on 26th June 2019 at Roe Valley Arts & Cultural Centre, between the 1.30pm – 5pm. The aim of this third round was to offer the public a final opportunity to review the final design of the Development.
136. Further information on all the PIDs, including feedback from attendees and responses as relevant is provided in the Pre-Application Community Consultation (PACC) Report submitted as part of this planning application. The PACC Report has been submitted to the Council as a standalone document as part of the planning application. The PACC Report summarises the consultation that has been undertaken with the local community, detailing how comments received were responded to.

5 Development Plan Assessment

5.1 Introduction

137. Section 45 of the Planning Act 2011, 'Determination of Planning Applications' states:

"45.-(1) Subject to this Part and section 91(2), where an application is made for planning permission, the council or, as the case may be, the Department, in dealing with the application, must have regard to the local development plan, so far as material to the application, and to any other material considerations....."

5.1.1 The Local Development Plan

138. In this legislative context regard must be had to the Northern Area Plan 2016. The Northern Area Plan 2016 (NAP 2016) is the current statutory Local Development Plan (LDP) for the Council area.
139. The NAP 2016 comprises of Volume 1- the Plan Strategy & Framework and Volume 2- Proposals. Volume 1 Plan Strategy & Framework sets out the background to the preparation of the Plan, defines its Aim, Objectives and Plan Strategy, and, with reference to the Regional Policy Context, sets out the Strategic Plan Framework comprising allocations, policies, and designations relating to the Plan area as a whole. Despite the relative recent adoption date of the NAP 2016 (Sept 2015), the NAP 2016 has a protracted history.

140. The draft NAP was published in July 2005. Progress on the Draft NAP was significantly delayed due to a judicial challenge in relation to its Strategic Environmental Assessment considered by NI High Court and the European Court of Justice. The Planning Appeals Commission (PAC) undertook the 'independent examination' of the Draft NAP in September 2010 (strategic objections) and January 2012 (site specific objections). The former Department of Environment (DoE) received the PAC report in June 2014 with the NAP 2016 being adopted in September 2015. The publication of the Draft NAP 2016 and associated adoption of the NAP 2016 policy predates the adoption of the Strategic Planning Policy Statement (SPPS).

5.2 Development Plan Assessment

141. The Development Plan policies relevant to the Development are set out in **Chapter 5** of the ES. The policies are not replicated in the Statement; rather the Statement assesses the Development against the policies in order to determine the compliance of the Development with the Development Plan.

142. Planning policy considerations are presented under key environmental topics which correspond to the chapter headings of the ES. Material considerations comprising regional and national planning policy and guidance, including emerging policy, are considered in **section 6** of this Statement.

5.2.1 Renewable Energy Policy

143. The NAP 2016 does not have specific renewable energy policy provision or planning policy relating to energy storage development and therefore is of limited assistance in determining this planning application. Renewable energy is referenced in the context of 'Public Services & Utilities.' The 'Public Services & Utilities' section of NAP 2016 references prevailing regional planning policy, namely PPS18 Renewable Energy as relevant to renewable energy infrastructure development. In the absence of relevant local renewable energy policy, both PPS18 and the SPPS will inform planning application as relevant material considerations albeit the SPPS being the current, most up to date form of planning policy, in the content of renewable energy developments, will take precedence.

5.2.2 Ecology, Fisheries and Ornithology

144. The NAP 2016 (Environment & Conservation) states that Planning Policy Statement 2: Planning and Nature Conservation (PPS2), sets out the current regional policy for the protection of conservation interests and is silent on specific local planning policy provision for ecology, fisheries and ornithology. The NAP 2016 references the sites protected at a European level (Special Protection Areas (SPAs) and Special Areas of Conservation (SAC)) and at a national level (Areas of Special Scientific Interest (ASSI) and Nature Reserves). **Chapter 8 Ecology & Fisheries** of the ES identifies the SPAs and SACs in the proximity to the Development and notes that the River Roe & Tributaries SCA is located approximately 3.1km to the north, while the Lough Foyle SPA is located 11km to the north-west. The River Roe Estuary NNR is located 10.4km northwest of the Development while the Lough Foyle ASSI is located 11.2km to the north-west.

145. Potential effects on water quality in the River Roe catchment are addressed in **Chapter 7: Hydrology, Hydrogeology, Geology, Soils and Peat**. Potential pathway effects on the 'River Roe and Tributaries' SAC are addressed in **Appendix A8.2: Habitats Regulations Assessment (HRA)**. **Chapter 8 Ecology and Fisheries** of the ES, informed by the HRA, concludes the Development will not cause any significant negative effects on designated sites subject to embedded hydrological mitigation measures which are outlined in outline **Demolition / Construction Environmental Management Plan (DCEMP, Technical Appendix A3.1)** of the ES and the **Water Construction and Environmental Plan (WCEMP, Technical Appendix A7.2) of the ES**.

146. Although there are also distant hydrological connections to other designated sites in the Roe catchment (e.g. the Roe Estuary ASSI and the Lough Foyle SPA), any measures taken to avoid or minimise impacts on the 'River Roe and Tributaries' SAC would also avoid or minimise impacts on these other designated sites. **Chapter 9 Ornithology** of the ES details that there are no potential significant effects or pathways identified for any designated site feature / species in relation to ornithology, including for any effects upon the Lough Foyle SPA and its citation species.

5.2.3 Landscape & Visual Assessment

147. The NAP 2016 (Countryside and Coast) states that PPS 2: Natural Heritage sets out the Department's planning policies for the conservation, protection and enhancement of our natural heritage, which is defined as 'the diversity of our habitats, species, landscapes and earth science features'. Some local planning policy relating to the protection of landscape settings is provided, however this specifically relates to the protection of the 'The Giants Causeway & the Causeway Coast World Heritage Site.' The Development is not located within the 'Distinctive Landscape Setting of the Giants Causeway and Causeway Coast World Heritage Site' and therefore this policy is not relevant.

5.2.4 Hydrology, Hydrogeology, Geology, Soils & Peat

148. The NAP 2016 does not include specific planning policy provision for hydrology, hydrogeology, geology or soils and peat. Therefore, the regional planning policy documents outlined at **section 6.1.2.2.6-** of the SPPS, 6.1.4.3- PPS2, 6.1.4.1-PPS18 and 6.1.4.7- PPS15 (Revised) Planning & Flood Risk will inform the planning application determination as material considerations.

5.2.5 Noise

149. The NAP 2016 does not include specific planning policy on noise and notably there is no noise planning policy relating to renewable energy proposals. Therefore, the regional planning policy documents outlined at **section 6.1.2 and 6.1.4.1** namely the SPPS and PPS18 will inform the planning application determination as a material consideration.

5.2.6 Archaeology & Built Heritage

150. The NAP 2016 states that Planning Policy Statement 6: Planning, Archaeology and the Built Heritage (PPS6) and PPS6 Addendum: Areas of Townscape Character set out the current regional policy for the protection of archaeology and built heritage interests. The NAP 2016 does not contain local archaeology and built heritage policy, rather it references regional planning policy. Therefore, the regional planning policy documents outlined at **section 6.1.2 and 6.1.4.4** namely the SPPS and PPS6 will inform the planning application determination as material considerations.

5.2.7 Access, Transport & Traffic

151. The NAP 2016 states that transport and traffic planning policy is provided for by the Planning Policy Statement 3 Access, Movement and Parking (PPS 3), and PPS 13 Transportation & Land Use. There is no specified transport and traffic planning policy in the LDP. The SPPS, PPS3 and PPS13 should therefore inform the planning application determination as material considerations.

5.2.8 Tourism, Recreation and Socio-Economics

152. The NAP 2016 states that PPS 16 Tourism provides the planning policy for the safeguarding of tourism assets from development likely to impact adversely upon the tourism value of the environmental asset. Furthermore, the NAP 2016 outlines that prevailing regional planning policy provides the framework for identifying appropriate development opportunities and safeguarding tourism assets from harmful development. The NAP is silent in planning policy on tourism. In the absence of specific local tourism planning policy, the planning policy provisions of the SPPS and PPS16, as outlined in **section 6.1.2 and 6.1.4.7**, should inform the planning application determination as material considerations.
153. Policy OSR1 of the NAP 2016 seeks to protect the route, character, function or recreational value of the Ulster Way, the National Cycle Network, public rights of way or permissive paths. The Ulster Way passes through the Site and currently utilises the existing tracks associated with the Operational Rigged Hill Windfarm. The Ulster Way is a 1,000 km long circular walking route in Northern Ireland. When Rigged Hill Windfarm became operational in 1994, a section of the Ulster Way between Dungiven and Castlerock was diverted to make use of the tracks associated with the windfarm (see **Figure 13.2** of the ES). As a long-distance footpath, it is of regional importance (at the Northern Ireland level), and of medium sensitivity in terms of the potential environmental impact. In addition, the Ulster Way also utilises tracks within Cam Forest which is located immediately adjacent to the northern and eastern boundaries of the Site and is managed by the Northern Ireland Forest Service (NIFS) (see **Figure 13.2** of the ES). The Forest is important at the scale of Causeway Coast and Glens and is therefore assessed as being of low sensitivity (see **Table 13.3 of Chapter 13** of the ES).
154. **Chapter 13- 'Tourism, Recreation and Socio Economics'** of the ES assesses the impact of the Development upon potential tourism and recreation receptors which includes the Ulster Way, Cam Forest, the National Cycle Network and public rights of way or permissive paths. During the decommissioning/ construction phase of the Development the area of the Ulster Way which passes through the Site would be temporarily diverted through forestry to the east, on what was the historical routing of the Ulster Way. The temporary diversion has been discussed with the Planning Officer and Access Officer at the Council, who agreed the principle of the diversion route.
155. Chapter 13 concludes that a moderate temporary, and therefore a temporary significant effect has been identified during the decommissioning/construction phases of the Development on the Ulster Way. The effect was found to be significant for 1 km either side of the Site and of a minor and not significant effect for the remainder of the route. Additionally, a temporary moderate, and therefore significant effect was identified at The Views self-catering cottage, caused only by views of the initial decommissioning and construction activity associated with the Development. This would be significant for an approximate period of 8 months when the decommissioning/construction activity occurs. The effects of the Development on all other

tourism and recreation receptors during the decommissioning/construction phases, including cumulative effects are assessed as negligible, which is not significant in terms of the EIA Regulations.

156. In planning policy terms, it is noted that there will be a level of impact upon the Ulster Way however this will be for a temporary period only (during decommissioning/ construction). Mitigation measures, which included embedded design measures and a temporary rerouting of the Ulster Way to address the impact have been agreed in principle with the Council. During the operational phase of the Development, the Applicant will work with CCGBC, with regards to agreeing to locate any interpretive signage, which would support connectivity with the wider network of paths in the area, and in support of helping realise any CCGBC access improvement strategies, within the land which it has control over. Therefore, we consider that the Development complies with **Policy OSR 1** of the **NAP 2016**.

6 Material Considerations

6.1 Regional Planning Policy

157. The Planning (Northern Ireland) Act 2011 states that when determining a planning application, the determining authority shall have regard to the relevant provisions of the Development Plan and to all other material considerations. The weight to be given to each material consideration is a matter for the determining authority.

158. Given the vintage of the local development plan (NAP 2016), the regional planning policy (Strategic Planning Policy Statement (SPPS)) is more up to date than the adopted local development plan policy. Furthermore, the NAP 2016 is silent on numerous local planning policy issues, notably renewable energy policy and references regional planning policy documents (PPSs) as prevailing policy in a local context rather than specifying local planning policy. Any conflict between the SPPS and any retained policy (PPS) must be resolved in favour of the provisions of the SPPS. For example, where the SPPS introduces a change of policy direction and/or provides a policy clarification that would conflict with the retained policy the SPPS should be accorded greater weight in the assessment of individual planning applications. However, where the SPPS is silent or less prescriptive on a particular planning policy matter than retained policies this should not be judged to lessen the weight afforded to the retained policy.

159. The following regional planning policy documents are considered material in the determination of the Application:

- The Regional Development Strategy 2035 (RDS 2035)
- The Strategic Planning Policy Statement (SPPS)
- Planning Policy Statement 2- Natural Heritage (PPS 2)
- Planning Policy Statement 3- Access, Movement and Parking (PPS 3)
- Planning Policy Statement 6- Planning, Archaeology & Built Heritage (PPS 6)
- Planning Policy Statement 10- Telecommunications (PPS 10)
- Planning Policy Statement 13- Transportation & Land Use (PPS 13)
- Planning Policy Statement 16- Tourism (PPS 16)
- Planning Policy Statement 18- Renewable Energy (PPS 18)
- Planning Policy Statement 21- Development in the Countryside (PPS21)

6.1.1 The Regional Development Strategy 2035 (RDS 2035)

160. The RDS 2035 strategic guidance actively promotes the shift to a lower carbon economy, the mitigation and adaptation to climate change and the delivery of a secure and sustainable energy supply. The RDS sets out supplementary regional guidance within the document which seeks to increase the contribution of renewable energy to the overall energy mix, to strengthen the grid infrastructure, and to develop 'smart grid' initiatives. Importantly the increase of renewable energy provision is highlighted as a key climate change adaption measure. The climate change adaption measures identified by the RDS include the re-use of land, buildings and materials and the protection and extension of eco-systems and habitats that can reduce or buffer the effects of climate change.

161. The Development supports the strategic objectives of the RDS 2035, through an increase in the provision of renewable energy, and it represents innovation in the renewable energy sector being among the early Repower projects in NI. The provision of around 28-29MW of electricity from the Development aligns with the shift to a lower carbon economy, the mitigation and adaption to climate change and also the delivery of a secure and sustainable energy supply. The Development will utilise existing infrastructure, wherever possible to minimise the impact upon the receiving environment. The ancillary

energy storage element of the proposal will strengthen grid infrastructure and the co-located rooftop solar facilities represents an opportunity to deploy another form of renewable technology.

6.1.2 The Strategic Planning Policy Statement (SPPS)

6.1.2.1 Overview

162. The SPPS is the regional planning policy document for Northern Ireland. It contains a suite of planning policy and is a material planning consideration in the determination of all planning applications in Northern Ireland. As the local development plan is silent on renewable energy policy the policy provision of the SPPS is an important material consideration, particularly in respect of renewable energy policy.

163. The SPPS (section 3.7) is supportive of sustainable development and expounds that:

"furthering sustainable development also means ensuring "furthering sustainable development also means ensuring the planning system plays its part in supporting the Executive and wider government policy and strategies in efforts to address any existing or potential barriers to sustainable development. This includes strategies, proposals and future investment programmes for key transportation, water and sewerage, telecommunications and energy infrastructure (including the electricity network)."

164. The SPPS also provides that the planning system should help to mitigate and adapt to climate change through (amongst other measures) the promotion of renewable energy provision. The SPPS acknowledges that NI has significant renewable energy resources and a vibrant renewable energy sector noting that:

"Renewable energy reduces our dependence on imported fossil fuels and brings diversity and security of supply to our energy infrastructure. It also helps Northern Ireland achieve its targets for reducing carbon emissions and reduces environmental damage such as that caused by acid rain. 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."

165. Furthermore, the SPPS (section 6.218) states that the:

"aim of the SPPS in relation to renewables 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."

166. The SPPS (section 6.219) details the regional strategic development objectives for renewable energy which are to:

- ensure that the environmental, landscape, visual and amenity impacts associated with or arising from renewable energy development are adequately addressed;

- ensure adequate protection of the region's built, natural, and cultural heritage features; and The PfG contains a target for a reduction in greenhouse gas emissions by at least 35% on 1990 levels by 2025.

- 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

167. The Development is sited at the existing Operational Rigged Hill Windfarm where the existing local and wider landscape visually accommodates this windfarm. The Development, where possible, utilises existing windfarm infrastructure to minimise environmental and amenity impacts. The Development supports the move to a low carbon economy, helps combat climate change, creates opportunities for investment and employment within the Council area and NI (detailed in **Chapter 13- 'Tourism, Recreation, Land- Use and Socio Economic'** of the ES. The Development incorporates other innovative renewable technologies including roof-top solar provision and an ancillary energy storage element.

6.1.2.2 Renewable Energy Policy

168. SPPS planning policy outlines that renewable energy development proposals will be permitted where the proposal will not result in an unacceptable adverse impact on (i) public safety, human health, or residential amenity, (ii) visual amenity and

landscape character, (iii) biodiversity, nature or built heritage assets, (iv) local natural resources, such as air quality, water quality or quantity, and (v) public access to the countryside.

6.1.2.2.1 Public Safety & Human Health

169. A Human Health Impact Assessment (HHIA) is included as part of the overall EIA process. This is summarised and detailed in **Chapter 14-Other Issues** in the ES. With respect to the Development, this draws together the findings of other assessments undertaken as part of the ES. The HHIA had regard to the findings of the following assessments:

- Traffic and Transportation (**Chapter 12: Access, Traffic and Transport**);
- Noise (**Chapter 10: Noise**);
- Residential Amenity (**Technical Appendix A6.2**);
- Shadow Flicker (**Section 14.3 of the EE**); and
- Health and Safety at Work including best practice.

170. Regarding public safety **Chapter 14** of the ES outlines that properly designed and maintained wind turbines are a safe technology. Site design and inbuilt buffers from sensitive receptors will minimise the risk to humans from the operation of the turbines. Risks associated with ice build-up, lightning strike and structural failure are removed or reduced through inbuilt turbine mechanisms in modern machines and have been scoped out of the public health and human safety assessment. Further guidance is provided by the Institute of Environmental Management Association (IEMA) (2017) Health in Environmental Impact Assessment. A Primer for a Proportionate Approach¹⁹ and Health and Safety Executives Report entitled "The Study and Development of a Methodology of the Estimation of the Risk and Harm to Persons from Wind Turbines"²⁰. This report concludes that the risk of fatality from wind turbines (at 2 hub heights or greater from the turbine) is low in comparison to other societal risks. It is roughly equivalent to the risk of fatality from taking two aircraft flights per annum. All residential properties are located beyond ten times rotor diameter separation distance from the Development's turbines. Potential health impacts are therefore related primarily to decommissioning/construction related impacts, and operational impacts on residential amenity

171. Regarding public safety and human health, the submitted **HHIA** indicates that the Development is unlikely to negatively impact people's health and wellbeing in its widest sense. There are no effects that:

- Cause potentially severe or irreversible negative effects;
- Affect a large number of people to an unacceptable level; or
- Specifically, may affect groups of people who already suffer poor health are socially excluded to an unacceptable level.

172. There are no significant effects upon public safety or human health predicted for any phase of the Development

6.1.2.2.2 Residential Amenity

173. The submitted ES reviews the impact upon residential amenity across a number of ES chapters including:

- **Noise (Chapter 10- Noise)**
- **Shadow Flicker (ES Chapter 14-Other Issues)**

174. In addition to the ES documents, a **Residential Visual Amenity Assessment** is submitted as a stand-alone document as part of the planning application.

175. An assessment of the effects of noise due to the Development has been undertaken and is detailed in **Chapter 10** of the ES. **Chapter 10** details that owing to the reutilisation of existing site infrastructure minimising the amount of construction work, and the large separation distance between the Site and noise sensitive receptors, no significant construction or decommissioning effects are anticipated. Notwithstanding this, Best Practice mitigation measures will be adopted to manage

¹⁹ IEMA (2017) Health in Environmental Impact Assessment. A Primer for a Proportionate Approach. [Online] Available at <https://www.iema.net/assets/newbuild/documents/IEMA%20Primer%20on%20Health%20in%20UK%20EIA%20Doc%20V11.pdf> [Accessed 11/01/2019]

²⁰ Health and Safety Executive, 2013, RR968, Study and development of a methodology for the estimation of the risk and harm to persons from wind turbines, Available Online at <http://www.hse.gov.uk/research/rrpdf/rr968.pdf> [Accessed May 2019]

noise emissions, including restrictions on working hours during the initial decommissioning, and construction phases of the Development.

176. The assessment of operational noise has been undertaken in accordance with the recommendations of ETSU-R-97 *The Assessment and Rating of Noise from Wind Farms (1996)*, the method of assessing wind turbine noise recommended by Northern Ireland Executive guidance, and following the current best practice methods described in the Institute of Acoustics' *Good Practice Guide to the Application of ETSU-R-97 for the Assessment and Rating of Wind turbine Noise (2013)*. It has been shown that noise due to the Development, including consideration of cumulative noise effects arising from the Development in combination with other windfarms and wind turbines, would comply with the requirements of ETSU R-97 at all receptor locations.
177. The 'Shadow Flicker Assessment' is contained within **Chapter 14** of the ES. The ES details the effects of shadow flicker upon sensitive receptors, including residential units, during the operational phase of development. In line with prevailing guidance (PPS18 Best Practice Guidance) and additional UK guidance (Planning Practice for Renewable and Low Carbon Energy) a 'Study Area' of ten times rotor diameter distance (1,200 m) and 130 degrees either side north around each proposed turbine location was mapped, and the potential impact upon residential units within the study area assessed. No dwellings are located within ten times rotor diameters. The nearest dwelling is 90 Terrydoo Road (273725, 419673) located approximately 1,242 m to the west of Turbine 5. Given the distance between this property and the closest turbine, no significant shadow flicker effects are predicted, and no further assessment was undertaken in respect of the Development and shadow flicker.
178. The **Residential Visual Amenity Assessment (RVAA)** details an assessment for each property or property cluster within specified distances from the proposed turbines. The RVAA identifies no residential properties within 1.2km of the Development, five within 1.2 to 1.5km, and a further 33 within 1.5 to 2 km. The significance of the effect on residential visual amenity experienced at each property is dependent on a range of factors considered in the sensitivity and the magnitude of change resulting from the Development. These judgements on sensitivity and magnitude are combined to arrive at an overall assessment as to whether the Development would have an effect that is significant or not significant on residential visual amenity.
179. The **RVAA** details that the difference between significant visual effects and what might be considered to be an unacceptable or overbearing effect on residential visual amenity has evolved through Public Local Inquiry (PLI) decisions over the past decade. The factors considered in such an assessment are widely recognised by professional Landscape Architects and decision makers and are often referred to as 'the Lavender test' after the Inspector who first developed the concept. The factors considered in the so called 'Lavender test' requires a level of visual effect to arise which is greater than a significant visual effect in EIA terms, for the impact to be unacceptable in planning terms. This is referred to as the Residential Visual Amenity Threshold. The magnitude of effect must be to such a degree that a property would become widely regarded as an unattractive place in which to live. This public interest test therefore has a higher threshold than 'significant' in EIA terms. This approach is commonly applied to the assessment of visual effects on residential amenity. The approach has been refined through decisions for Inquiries and Appeals into wind farm applications across the United Kingdom and recognises that, given no person is entitled to a view in law, it is not sufficient for a property to simply sustain a significant visual effect for its residential amenity to be unacceptably harmed. For residential visual amenity to be harmed a higher threshold requires to be triggered, whereby the turbine(s) are at such proximity to a house, or in such number, that they lead to an overwhelming or overbearing effect on the property to the extent that it becomes an unattractive place in which to live. Where this occurs, the matter affects the public interest, as such an outcome would be considered to harm the provision of good housing stock.
180. Of the 31 residential properties considered within **the RVAA Stage 3**, 26 are found to have significant effects. On the basis of the **RVAA** assessment for the Development, it is not considered that the visual effect on any of the assessed nearby residential properties would lead to an exceedance of the Residential Visual Amenity Threshold. None of the properties within the 2 km radius were assessed as having a high magnitude of change and therefore none would require a Step 4 assessment to further determine Residential Visual Amenity Threshold. Therefore, the **RVAA** concludes that residential visual amenity of existing and committed residential receptors will not be adversely affected to such a degree that the impact results in a property becoming an unattractive place to live.
181. The Development will therefore not have an unacceptable adverse impact upon public safety, human health or residential amenity.

6.1.2.2.3 Visual Amenity & Landscape Character

182. **Chapter 6 Landscape & Visual Assessment** of the ES provides a comprehensive assessment of the impact of the Development upon the visual amenity and landscape character upon an agreed (with statutory consultees and CCGBC during the EIA Scoping process) within a defined radius of 30 km Study Area of the Site.

183. In order to minimise negative effects on landscape and visual receptors, a number of design principles were considered through the iterative design process. These principles sought to reduce significant effects through alterations to layout, design and siting (insofar as was possible given the other technical and environmental constraints), management practices and mitigation. The design principles relate to the characteristics of the existing landscape and visual environment and are set out as follows:

- To consider the latest wind turbine technology available, larger rotor sizes, and turbine hub heights to arrive at a turbine tip height considered appropriate for the Site;
- To create a visually legible design, insofar as was possible on a Site which is constrained by other environmental and technical issues, and create a simple, positive layout, viewed consistently from different positions;
- To ensure that the views of the Development from the Binevenagh AONB, in particular those from Viewpoint:13: Binevenagh Mountain, minor road and NCR, appear legible and the turbines relate well to a single landform and each other;
- To create as compact a scheme as the technical aspects of the larger turbine spacing allows, which relates to the underlying landform, with turbines laid out to extend along the simple ridgeline created by Rigged Hill;
- To reuse, where possible, areas within the Site that have been altered by the Operational Rigged Hill Windfarm infrastructure, in particular existing tracks and the hard standing/previously disturbed area at the existing control building;
- To ensure that the requirements for cut and fill are minimised when siting the infrastructure, in particular the new access road;
- Designing the new access road so that the existing landform provides some screening and so that it follows the existing contours and natural breaks in the slope/vegetation cover as far as possible;
- To group turbines to create a balanced and coherent image, avoiding where possible 'stacking' or overlapping of turbine rotors in lines, favouring an evenly spaced and elevated group, that reflects the nature of the undulating landscape;
- To Site buildings within low lying areas that are on the less visible north-east side of Rigged Hill; and
- To group the infrastructure in order to limit the number of areas affected.

184. In respect of effects on landscape elements, the assessment found no significant effects would arise in relation to the loss of the rough grass moorland as a result of the decommissioning of the Operational Rigged Hill Windfarm and construction of the Development. The losses would comprise only a small proportion of a much wider landscape element and would occur in an area where an operational windfarm is currently sited. Effects have been minimised by deploying a design strategy to utilise existing infrastructure associated with Operational Rigged Hill Windfarm wherever practical. Rough grass moorland would be reinstated in those areas where infrastructure would be removed during the decommissioning of Operational Rigged Hill Windfarm and areas such as the construction compounds used during the construction of the Development.

185. In respect of effects on landscape character, the assessment found there would be significant effects within a localised 2 km radius of the Development where views are obtained during the combined decommissioning and construction phase and the operational phase of the Development. These effects would arise within the Binevenagh Landscape Character Area ("LCA") and the Roe Basin LCA, where they lie within the area defined as the Immediate Landscape Setting (0 to 2 km radius). The effects on landscape character would be moderated by the existing, baseline presence of Operational Rigged Hill Windfarm which would be replaced by the Development. Not all areas within this 2 km radius would incur significant effects owing largely to the screening effect of landform and forestry. All LCAs beyond this radius would not incur significant effects.

186. The following 'Landscape Planning Designations' have the potential to incur significant effects:

- Sperrin Area of Outstanding Natural Beauty (AONB);
- Binevenagh Area of Outstanding Natural Beauty (AONB);
- Dog Leap Supplementary Site (Register of Parks, Gardens and Demesnes of Special Historic Interest Northern Ireland (NIEA 2007))

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187. The assessment found that the effects of the Development on the Binevenagh and Sperrin AONBs and the Dog Leap SS would be not significant. All other designated areas in the Study Area would remain unaffected during the decommissioning of Operational Rigged Hill Windfarm and the construction and operational phases of the Development.
188. In respect of effects on visual amenity, the assessment of the effects of the Development has found that significant effects would occur during the initial decommissioning and construction phase at five of the 19 viewpoints and during the operational stage at six of the 19 viewpoints.
189. Of the views from the 18 routes and settlements, which were identified as having the potential to undergo significant effects on visual receptors, there is the possibility of significant effects on the views from parts of the settlements of Drumsurn, Ringsend and Limavady from locations where there would be open views of the Development during its operation. The effects during the combined decommissioning and construction phase would also be significant from parts of Drumsurn and Limavady but would be not significant from Ringsend due to the screening influence of intervening forestry, which would screen most of the construction processes. From the routes assessed as visual receptors there would be significant effects along a section of the A66 where the road runs north of the site at relatively close proximity. There would also be significant effects on views from sections of the B68, B70, NCN 93 and the Ulster Way LDR during the combined construction and decommissioning and the operational phases. This tends to occur over relatively short sections of these routes or would be intermittent along a longer section (B70). These viewpoints and locations of the visual receptors are listed below.
- Viewpoint 1: Terrydoo Road
 - Viewpoint 2: Temain Road to Aghansillagh and Temain Hill
 - Viewpoint 3: Edenmore Road, Limavady
 - Viewpoint 5: Drumsurn, Beech Road
 - Viewpoint 6: Ringsend (combined decommissioning and construction phase only)
 - Viewpoint 19: B66, west of Ringsend, north of Site
 - Drumsurn
 - Ringsend (Operational phase only)
 - Limavady
 - B68
 - B70
 - NCN 93
 - Ulster Way LDR
190. The viewpoints where it has been identified there may be significant visual effects all lie within 7 km of the Development. The most distant part or section of a settlement or route where the visual effect was assessed as being significant is at a range of 6.9 km from NCN 93 from south of Limavady to the crossing of the River Roe where there would be intermittent clear visibility of the Development along a 1.2 km section of the route. This illustrates that the locations identified where there are likely to be significant visual effects are all representative of close to middle range views. Effects beyond this range are unlikely to be significant.
191. There are several factors that are worth noting in relation to this finding. The distance over which significant effects may arise is not as widespread as might have been expected to arise if the Development was a new influence on the Site and not a repowering project. The baseline views are characterised by the ten, 57 m to blade tip, turbines of the Operational Rigged Hill Windfarm so that a windfarm in this location is already a familiar influence in views. At greater distances the scale of the Development becomes less influential and the fact that there was previously a windfarm on the Site reduces the magnitude of change than would otherwise have been the case.
192. At closer ranges the magnitude of the change in the views between the baseline views of Operational Rigged Hill Windfarm and the Development is more marked due to its larger turbines and slightly wider horizontal spread. In close views from the west there is the additional visibility of the access tracks across the hillside. Therefore, significant visual effects can occur at closer proximity where views are obtained.
193. Within the wider landscape, although there are many visual receptors within the settled valleys to the west and east, these areas are not remote or undeveloped and they are influenced by infrastructure and buildings as well as views of windfarms and single turbines. The part of the north to south running ridgeline upon which the Development is located is unremarkable and lower than the more notable forms of the hills at either end of the ridge so that the Development does not generally

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- influence the key focus of views from these locations. This further reduces the potential magnitude of change in the views from the west and east as a result of the Development.
194. The more sensitive and valued upland areas of the Binevenagh and Sperrin AONBs are located to the north and south of the Development respectively. Intervening landform largely screens views available to visual receptors within these locations. In locations where the Development would be visible it would be seen across its shorter width as part of a relatively large scale upland landscape. Closer proximity locations are also often characterised by forestry or other windfarms. These factors all contribute to limiting the spread of significant effects on visual amenity.
195. The identified effects of the Development take into account the baseline operational windfarms that are located within the wider area. The Operational Rigged Hill Windfarm currently contributes to the overall cumulative windfarm distribution and presence so that the cumulative magnitude of change is reduced as a result of the Development and the difference this makes to an existing cumulative situation. The Development has fewer but taller turbines than the Operational Rigged Hill Windfarm and it covers a slightly wider extent with the further visibility of access tracks seen to the west, which will be more visible during the decommissioning and construction phases. However, it is located within the same part of views as the Operational Rigged Hill Windfarm so that its influence as a windfarm in this location is not new.
196. The magnitude of change of the Development, itself, would need to be of a sufficiently high level in order to instigate a material change to the current and accepted potential future cumulative (windfarm and turbines consented) situation. For this reason, it is considered that this could only occur where the magnitude of change in relation to the Development, itself, results in a medium or higher level of magnitude of change during the operational phase, as occurs in relation to the identified landscape and visual receptors.
197. The cumulative effects of the Development on these identified receptors was considered for two potential future baseline scenarios. Scenario 1 adds in the consented and under construction windfarms to the baseline containing the operational wind farms and Scenario 2 adds application or appeal stage windfarms to Scenario 1. It is assessed in **Section 6.8** of the ES which considers cumulative windfarms shown on **Figure 6.12** of the ES that may contribute to a cumulative context where the effect of the Development would be significant. This discounted some of the smaller or more distant windfarms from the scenarios assessed where there would be no prospect to contribute towards a significant effect.
198. Significant cumulative visual effects would arise only in the context of the Scenario 1 windfarms at Viewpoint 6: Ringsend, in views from a 5 km section of the B66 when travelling west and in views from the section of the route between Ringsend and north of the Garvagh Forest. No further significant effects would arise in the context of the Scenario 2 windfarms or in views from other viewpoints, routes or settlements. In terms of significant immediate landscape setting effects in the Scenario 1 context there are potentially significant effects to the south and the south-east of the Development and no further significant effects elsewhere. In the Scenario 2 context, there are likely to be significant effects to the immediate landscape setting to the north, south and south-east of the Development and no further significant effects elsewhere.
199. In summary, the Development would give rise to significant effects on landscape character during the decommissioning of Operational Rigged Hill Windfarm, and the construction and operation of the Development, albeit contained within the localised extent of approximately 7 km. The Development would give rise to significant effects on visual amenity out to approximately 7 km during the decommissioning of Operational Rigged Hill Windfarm, and the construction and operation of the Development, in instances where views of the Development are obtained. While landscape and visual receptors beyond the 7 km radii may be affected by the influence of the Development, these effects would not be significant. All effects during the decommissioning of Operational Rigged Windfarm and the construction of the Development would be short term and reversible and all effects during the operation of the Development would be permanent and reversible.
200. The Development will not have an unacceptable adverse impact upon Visual Amenity and Landscape character. The Development shares a very similar zone of visibility with the Operational Rigged Hill Windfarm, with the significant visual effects contained within close proximity (a 7 km range) of the Development. In this context, Para 6.230 of the SPPS states *“wind farm developments are by their nature highly visible yet this in itself should not preclude them as acceptable features in the landscape”*.
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6.1.2.2.4 Biodiversity & Natural Heritage

201. **Chapter 8- 'Ecology & Fisheries'** and **Chapter 9- 'Ornithology'** of the ES evaluates the effects of the Development on ecosystems and their components, including designated sites, habitats, flora and fauna. **Chapter 8 of the ES** is supported by the following Technical Appendix documents provided in **Volume 3 Technical Appendices**:

- **A8.1** Habitat and Peat Assessments;
- **A8.2** Habitats Regulations Assessment;
- **A8.3** Bat Report;
- **A8.4** Bat Monitoring and Mitigation Strategy; and
- **A8.5** Fisheries Report;
- **A3.1** Draft Construction Environmental Management Plan ("DCEMP")
- **A3.2** Habitat Management Plan ("HMP")

202. Chapter 9 of the ES is supported by the following figures, in **Volume 2 Figures**, and Technical Appendices, in **Volume 3 Technical Appendices**:

- A9.1: Ornithology Surveys 2014 - 2019;
- A9.2: Data Review;
- A9.3: Collision Risk Modelling (CRM);
- A9.4: Operational Phase Bird Monitoring Plan; and
- Figures 9.1 – 9.58 of the ES.

203. The ecology and fisheries assessment was informed by key legislation relating to nature conservation in Northern Ireland as follows:

- Wildlife and Natural Environment Act (Northern Ireland) 2011;
- Environment Order (Northern Ireland) 2002;
- Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995;
- Nature Conservation and Amenity Lands Order 1985;
- Wildlife (Northern Ireland) Order 1985; and
- Fisheries (Northern Ireland) Act 1966

204. Subject to the successful implementation of the proposed mitigation measures, the Development will have neutral or slight-positive effects (biodiversity net gain) on all Important Ecological Features. In particular mitigation measures are proposed for bats and fisheries (through the hydrological mitigation measures for fisheries). Therefore, the Development will not cause any unacceptable effects on designated sites, habitats, legally protected species, or any other features of ecological importance.

205. Proposed mitigation measures include a HMP which encompasses a range of proposed habitat reinstatement and compensation measures. An Ecological Clerk of Works (ECoW) will be employed for the duration of the construction works. The role of the ECoW is to assist the contractor with the interpretation and implementation of the ecological mitigation measures, including the HMP (**Appendix A3.2 of the ES**) and other relevant documents.

206. Further details on the potential impact of the Development on active peatland habitat is provided in **section 6.1.2.3** below. The Development will not have an unacceptable adverse impact on Biodiversity or Natural Heritage and will result in biodiversity net gains subject to the implementation of the proposed mitigation measures. In particular, there are specified mitigation measures for bats, outlined in **Technical Appendices A7.4: Bat Monitoring and Mitigation Strategy**.

207. **Chapter 9- Ornithology of the ES** details that the Development has incorporated ornithological constraints, where possible, including avoidance of extant priority species and habitats within the Development. **Chapter 9** concludes that there are not considered to be significant effects from the Development on ornithology, subject to implementation of mitigation and monitoring recommendations which can be prescribed via planning conditions.

6.1.2.2.5 Built Heritage Assets

208. **Chapter 11 'Archaeology and Built Heritage of the ES'** evaluates the effects of the Development on the archaeology and cultural heritage resource within an agreed study area (agreed with Statutory Consultees and CC&GBC during EIA Scoping). Statutory protection for archaeology is principally outlined in:

- Historic Monuments and Archaeological Objects (Northern Ireland) Order 1995²¹; and
- The Planning (Listed Buildings) Regulations (Northern Ireland) 2015²², as amended.

209. **Chapter 11** concludes that there would be no direct effects likely upon known archaeological features within the Core Study Area. Due to the deliberate re-use of infrastructure associated with the Operational Rigged Hill Windfarm, the potential for damage to or destruction of unknown buried archaeological remains is very low. Should unrecorded archaeological remains occur within the Development, these are most likely to relate to post-medieval transhumance utilisation of uplands area, although earlier, isolated findspots could occur. Unknown post-medieval remains, if present, would likely survive near extant farmsteads along lower elevations rather than the exposed areas where the turbines are to be located. As the cartographic coverage is good and has likely identified many of the archaeological remains, the potential for unrecorded post-medieval remains to survive is low. Within the core study area there are 15 cultural heritage assets, as shown in **Figure 11.1** of the ES. These heritage assets consist of crop marks and agricultural buildings, primarily from the post-medieval period. The access track within the Development has the potential to directly affect a possible cropmark site. Mitigation is recommended in the form of a watching brief during construction to ensure that if this cropmark site is present, it can be recorded and documented ensuring preservation by record. No further mitigation is required for known archaeology within the Development. Furthermore, it is recommended that potential impacts upon unknown archaeology can be further mitigated by the implementation of a programme of archaeological evaluation, likely to consist of a targeted watching brief in undisturbed portions of the Site, leading to preservation by record.

210. The assessment considered the potential effect of the turbines in relation to the setting of heritage assets beyond the Core Study Area. This included consideration of designated heritage assets out to 5 km from the Development and one additional feature, a Scheduled Monument in State Care (LDY 024:011), included at the request of Historic Environment Division (“HED”) of Department for Communities (“DfC”). No significant indirect effects on the setting of heritage assets were identified under the terms of the EIA Regulations.

211. The cumulative effect of the Development considers where the Development, in combination with other windfarm developments, has the potential to affect heritage assets. As the Development is a replacement of an existing operational wind farm, the change in the upland landscape context, in which the Development is sited, would be slight consisting of a small increase in the scale of turbines which constitutes a change of negligible magnitude and is not significant in terms of EIA Regulations.

212. There would be no significant indirect effects, associated with changes to settings, upon heritage assets in the surrounding historic environment from the Development, either in isolation or cumulatively with other windfarm development.

213. The Development will therefore not have an unacceptable adverse impact on Built Heritage Assets.

6.1.2.2.6 Local Natural Resources- Air Quality & Water Quality or Quantity

214. **Chapter 7 of the ES** evaluates the effects of the Development on the hydrology, hydrogeology, geology and peat resource. The chapter is supported by the following ES Technical Appendices documents provided in **Volume 3 of this ES**:

- A3.1: Outline Decommissioning/Construction Environmental Management Plan (DCEMP);
- A3.2: Draft Habitat Management Plan;
- A7.1: Peat Slide Risk Assessment (PSRA);
- A7.2: Water Construction and Environmental Management Plan (WCEMP), this will form apart of the final DCEMP;
- A7.3: Dipwell Monitoring Results; and
- A7.4: Peat Management Plan

215. The hydrology and hydrogeology Study Area is based on the Site Boundary at the time of EIA Scoping (the Study Area), and a second wider study area includes a 10 km radius from the Study Area (the Wider Study Area) in order to assess the potential effects of the Development on the wider hydrological environment. The study area for potential effects on public and

²¹ Historic Monuments and Archaeological Objects (Northern Ireland) Order 1995. Available at <http://www.legislation.gov.uk/nisi/1995/1625/contents/made> [Accessed 22/11/2017]

²² The Planning (Listed Buildings) Regulations (Northern Ireland) 2015. Available at <http://www.legislation.gov.uk/nisr/2015/108/contents/made> [Accessed 22/11/2017]

private water supplies is defined as a 2 km radius of the Site Boundary as agreed at the time of EIA Scoping. Further detail on the potential impact of the Development on peat is provided in **section 6.1.2.3** of this planning statement.

216. Embedded mitigation measures are set out within the **outline DCEMP** (provided as **Technical Appendix A3.1**). This document is supplemented by the **WCEMP**, provided as **ES Technical Appendix A7.2**, which sets out specific mitigation relating to this Development. The **WCEMP** contains additional good practice methods that are established, and effective measures focused on the hydrological environment. There is confidence in the effectiveness of the measures set out in both documents for them to be treated as part of the Development and therefore are considered embedded mitigation. The requirement of a **DCEMP** which would also contain the provisions outlined within the proposed **WCEMP**, secured as part of a planning condition, and this is considered standard practice for Developments of this nature
217. **Chapter 7** assessed the likely significance of effects of the Development on hydrology and hydrogeology. With the embedded mitigation measures proposed, the Development has been assessed as having the potential to result in effects of negligible or low significance, the same conclusions are drawn in respect the cumulative assessment undertaken, and therefore not significant under the terms of the EIA regulations. **Chapter 12 of the ES** assesses the impact of the increase of traffic associated with the Development upon air quality. The assessment considers that as the increase in traffic on haul routes is temporary and reversible that the effect on air quality is negligible and not significant in terms of the EIA Regulations.
218. The Development will not have an unacceptable adverse impact upon the local resources which includes air quality, water quality or water quantity.

6.1.2.3 Active Peatland

219. The SPSS highlights that active peatland is of particular importance to Northern Ireland for biodiversity, water and carbon storage qualities. Renewable energy development on active peatland will not be permitted unless there are imperative reasons of overriding public interest as defined under The Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 as amended.
220. **Chapter 7-** of the ES '**Ecology & Fisheries**' assesses the impact of the Development upon active peat. The assessment was also informed by the following ES documents:
- **A8.1- Habitats and Peat Assessment**
 - **A7.1- Peat Slide Risk Assessment**
 - **A3.2- Draft Habitat Management Plan (Draft HMP)**
221. In recognition of the high importance afforded to active peatland in the Department of the Environment's Planning Policy Statement 18: Renewable Energy (2012) and the Strategic Planning Policy Statement for Northern Ireland: Planning for Sustainable Development (2015), detailed assessments were undertaken for any habitats that could qualify as 'active peat'. It is acknowledged that the classification of active peat habitats can be complex, particularly in disturbed habitats and around the margins of peatland bodies, so a bespoke classification system has been developed for this Development, in order to provide a systematic and transparent approach. The first step involved classifying habitats into three categories, as follows:
- Active peat: these areas supported the NVC M19 community, had a peat depth of >1 m, and intact hydrology;
 - Possible active peat: these areas supported modified blanket bog (including drained / oxidised areas on deep peat), wet heath or heath - mire transition habitat, and peat depths of >0.5 m; or
 - Not active peat: these areas did not support heath or bog vegetation, had a peat depth of <0.5 m, and/or a highly-modified hydrological regime.
 - Further assessments and fine-scale mapping were undertaken within the 'active peat' and 'possible active peat' zones, based on the presence of indicator plant species, the depth of the underlying peat layer, and the hydrological condition of the peatland unit (based on the NIEA-NED Guidance note on Active Peat²³). Further detail of the approach to peat surveys is outlined in **Chapter 7: Hydrology, Hydrogeology, Geology, Soils and Peat**.
222. Initial habitat and peat assessments were carried out at the locations of all proposed turbines and hardstands in order to characterise the habitat. This comprised five randomly-located quadrats (of 1 m x 1 m dimensions) across the extent of the

²³ NIEA 2012. *Development Management Team Advice Note: Active Peatland and PPS18*

hardstand and access tracks. A patchwork of active peat was also observed at the at the proposed locations of T1 and T3, so an additional 25 quadrats (providing 30 in total) were taken within the footprint of the hardstand and access track, in order to determine whether or not the majority of the area was active peat. The following data was collected for each quadrat:

- Peat depth, accurate to 0.1 m;
- The coverage of vascular plants and bryophytes, measured using the DOMIN scale;
- The cover of each Sphagnum and Eriophorum species, and their combined total;
- Cover of atypical plants (e.g. grasses, rushes) and bare peat;
- Hydrological condition, including anthropogenic modifications (e.g. vertical peat banks caused by turf cutting or erosion), and micro-topographical features (hummocks and hollows); and
- A decision on whether or not the habitat could be classified as active peat, and a rationale for the decision.

223. Active peat assessments for all aspects of the proposed development are described in **Chapter 8** of the ES. The proposed locations of Turbines 1, 2 and 3 will be on wet modified bog and wet heath habitats that have localised pockets of active peat, but in all cases the majority of the affected area is not active peat. The proposed locations for Turbines 4, 5, 6 and 7, including the connecting access track, will be on shallow peat that is transitional between wet heath and acid grassland. No other aspects of the Development are on active peat.

224. The proposed habitat management measures, detailed in **A3.2- Draft HMP** will involve the restoration of approx. 43.4 ha of degraded blanket bog, with the aim of restoring most of these areas to intact blanket bog. These measures will reduce the rate of water loss from the bog, and thus will create wetter conditions at the peat surface, providing favourable conditions for the re-establishment of active peat in areas that are currently inactive. As noted above, it will take some years for these management measures to achieve their effect, but in the short to medium term the development will have a slight positive effect on local status of active peat.

225. Therefore, as the loss of active peat during the initial decommissioning/construction works will be negligible at all locations, and the habitat management measures are expected to increase the extent of active peat in the Site, the Development will have a slight to moderate positive effect on active peat in the medium term.

226. All turbines will have a micro-siting flexibility of up to 50 m to account for local ground conditions. Turbines 3 - 7 are located in areas of relatively homogenous habitat, so micro-siting of these turbines would not change the significance of any ecological effects. However, Turbine 2 is surrounded on all sides by intact blanket bog (which is active peat), and it is possible that micro-siting could increase the impact on this habitat. Turbine 1 is located on a transition between wet modified bog and wet heath, and if moved to the east, it could increase the effect on cutover bog. Therefore, the ECoW will review any proposed micro-siting for Turbines 1 and 2 in order to ensure that there is no additional effect on sensitive habitats. Similarly, any micro-siting of turbines within the 50m / 20m exclusion zones around streams / drains will be reviewed by the ECoW.

227. With the implementation of the proposed mitigation measures, including the outlined HMP measures, the Development will have a slight to moderate positive effects on active peat, with the active peatland condition at the site improved overall. Therefore, the Development will not cause any significant negative effects on active peat and is compliant with this aspect of planning policy. This approach is consistent with the PAC decision on Planning Appeal Ref No.2012/A0070 (5 no. turbines at Altnagolan, Co.Tyrone) whereby the Commissioner highlighted that in respect of potential impact upon active-peat, non-active blanket bog and upland heathland NIEA-NED were “*satisfied that appropriate habitat management measures will be implemented on the site that would compensate for the loss of and damage to Northern Ireland priority habitats.*” Having regard to PAC decision on Planning Appeal Ref No.2012/A0186 (11 no. turbines at Meenablagh, Co.Tyrone) the applicants have ensured that adequate mitigation and compensatory measures are detailed in the submitted ES documents (**Chapter 7, A8.1- Habitats and Peat Assessment, A7.1- Peat Slide Risk Assessment, A3.2- Draft Habitat Management Plan**) to provide surety to the consenting authorities that the proposed mitigation and compensation measures are technically achievable.

6.1.2.4 Impact Upon Designated Landscapes & Wider Environmental, Economic and Social Benefits of Renewable Energy

228. The SPPS espouses a cautious approach for renewable energy proposals within designated landscapes such as AONBs and World Heritage Sites. SPPS policy states that the wider environmental, economic and social benefits of renewable energy proposals are material considerations that will be given appropriate weight in the planning application determination process.

Policy also provides that renewable energy proposal will not be permitted unless there are imperative reasons of over-riding public interest as defined under 'The Conservation Regulations (NI) 1995', as amended.

6.1.2.4.1 Impact Upon Designated Landscapes

229. The Development is not located within any designated landscapes, and therefore this element of the SPPS policy is not relevant. However, Chapter 6 of the ES - 'Landscape & Visual Assessment' then goes on to assess the impact of the Development upon designated landscapes including the Binevenagh and Sperrin's Areas of Outstanding Natural Beauty (AONBs). The Development lies between the Sperrin AONB to the south (5.8 km) and Binevenagh AONB in the north (2.2 km). The Causeway Coast lies at a greater distance of 22.1 km to the north-east. The Sperrin AONB covers an extensive upland area that spans across much of the south-western part of the Study Area. The Binevenagh AONB is smaller and covers an upland area that is strongly associated with the coast and Lough Foyle. The Causeway Coast AONB is strongly associated with the coast and views out over the sea. In respect of landscape designations, the assessment found that the landscape and visual effects on the Binevenagh and Sperrin AONBs would be not significant.

6.1.2.4.2 Wider Environmental, Economic and Social Benefits of Renewable Energy

230. The SPPS states that 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. **Chapter 13 'Tourism, Recreation, Land-use & Socio-Economic'**, prepared by Biggar Economics and Arcus Consulting assesses the impact of the Development on the social and economic resource of Causeway Coast and Glens (local) and on Northern Ireland as the wider region. Chapter 13 is supported by Technical Appendix A13.1: Rigged Hill Wind Farm: Socio-Economic Assessment.

231. Biggar Economics were engaged to assess the economic impact of the Development and review the social and environmental benefits. Regarding economic benefits arising from the Development. **Chapter 13** outlines that during the development/decommissioning/ construction phases the following positive **direct** benefits will be accrued:

Positive Direct Economic Benefits- Development/Decommissioning/ Construction

- SPR will hold a series of meet-the-buyer events as early as possible, allowing local contractors to learn more about opportunities to bid for contracts, and time to upskill prior to any tender process. SPR has significant experience in organising these types of events and has a good understanding of the local area's capacity, given that it currently operates the existing Rigged Hill Windfarm.
- Where possible, training and support for local businesses can be organised to increase their capacity to bid. SPR can work and encourage the main infrastructure contractor to work with partners such as the Department for Energy and the Northern Regional College, which has branches in Ballymoney, Coleraine and Ballymena.
- In addition, SPR can via their technical evaluation during a tender process, give additional weight to primary contractors that show a commitment to increasing local content in their supply chains. An auditing process could also be undertaken so that the amount of local content sourced during the initial decommissioning/construction phases is recorded.
- As described in **Technical Appendix A13.1 Socio Economic Assessment**, the economic impact assessment has been undertaken on the basis of 7 turbines with up to 4MW of generating capacity each, with total generating capacity of an assumed 28MW to 29 MW for the purposes of the socio economic assessment. The average expenditure on the construction and development of windfarms can be estimated based on the average spend per MW, the average spend per turbine, or a combination of the two, as appropriate.
- Employment opportunities that may be available during the decommissioning and construction phases for local contractors include:
 - Development and Planning;
 - Balance of plant;
 - Turbines; and
 - Grid connection.
- The economic effect of the initial development and decommissioning/construction phases was estimated for socio-economic each of the study areas (Local/Regional). In order to do this, it was necessary to estimate the proportion of each type of contract that might be secured in each of these two Study Areas. Research by BiGGAR Economics²⁴ into windfarms that are currently operating found that the largest proportion of capital expenditure was on turbine related contracts (64%), followed by balance of plant (16%), grid connection (12%) and development and planning (8%). To

²⁴ BiGGAR Economics (2015), Onshore Wind: Economic Benefits in Northern Ireland

estimate the expenditure for each contract in each of the Study Areas these percentages were applied to the estimated size of each component contract. The assumptions were based on the average from the NIRIG research, analysis of the industries and professions in each of the study areas, BIGGAR Economics previous experience and information provided by developers.

- It was estimated that Causeway Coast and Glens could secure contracts worth £2.1 million which is equivalent to 7% of capital expenditure. It is considered that this represents a temporary effect of minor positive significance to the Local Study Area.
- It was estimated that Northern Ireland as a whole could secure contracts worth £8.9 million which is equivalent to 29% of capital expenditure. It is considered that this represents a temporary effect of minor positive significance to the Regional Study Area.
- The employment effects during the initial development and decommissioning/construction phases are reported in job years rather than Full-time Equivalents (FTE's) because the contracts would be short term. It is anticipated that the initial development and decommissioning/construction phases would support 15 job years, of which 10 would be provided on the basis of the balance of plant/main infrastructure contract, in the Local Study Area, and 63 job years within the Regional Study Area. Given the high levels of unemployment at the Borough level and in Northern Ireland, this represents a temporary, beneficial effect of minor significance to the Local and Regional Study Areas.

232. **Chapter 13** then goes on to outline the positive **indirect** economic benefits arising from the Development during decommissioning/ construction including:

Positive Indirect Economic Benefits- Development/Decommissioning/ Construction

- It is likely that those who benefit from direct employment during the development and initial decommissioning/construction phases will have an indirect benefit on the wider economy when they spend their salaries. Research undertaken by RenewableUK in 2012²⁵ found that the average salary for employees in the onshore wind sector is £34,600. It was therefore estimated that £2.2 million would be paid to staff directly employed during the development and initial decommissioning/construction phases of the Development. Assumptions were made regarding the location of employee expenditure. It was assumed that employees that live in Causeway Coast and Glens would spend 40% of their salaries in that area, and workers living in the rest of Northern Ireland would spend 74% of their salaries in Northern Ireland.
- The economic effect of this increase in expenditure was estimated using the average Gross Value Added (GVA) /turnover and turnover/employee for the whole economy as reported in the Annual Business Survey²⁶. In this way it was possible to estimate the induced effect direct employees would create during the development and initial decommissioning/construction phases. It was estimated that direct employees would spend £0.2 million in Causeway Coast and Glens, supporting around £0.1 million GVA and 1 job. In Northern Ireland, direct employees could spend £1.6 million, supporting £0.5 million GVA and 10 jobs. It is considered that this represents a temporary, beneficial effect of minor significance to the Local and Regional Study Areas.

Summary of Positive Direct & Indirect Economic Benefits- Development/Decommissioning/ Construction

- The total effect during the development and initial decommissioning/construction phases is the sum of direct effects and indirect effects from expenditure of direct employees. The total combined effect is estimated to be £2.1 million and 16 job-years in Causeway Coast and Glens, and £9.4 million and 73 job years in Northern Ireland. It is considered that this represents a temporary effect of minor positive significance to the Local and Regional Study Areas.

233. **Chapter 13** identifies the positive **direct** economic benefits arising from the Development during operational phase (an illustrative period of 30 years has been used for the purposes of the modelling) including:

Positive Direct Economic Benefits- Operational Phase

- Once operational, the Development will require routine maintenance and servicing. Expenditure on operations and maintenance was estimated based on analysis undertaken in the NIRIG report²⁷. Overall taking account of both direct

²⁵ Department of Energy and Climate Change, RenewableUK (2012), Onshore Wind: Direct and Wider Economic Impacts

²⁶ Office for National Statistics (2018), Annual Business Survey 2017 Provisional

²⁷ Biggar Economics (2015). The impact of the onshore wind sector in Northern Ireland on behalf on NI-RIG.

and indirect effects, it was estimated that the annual operations and maintenance expenditure associated with the Development could be up to £0.9 million per annum. As an illustration of the effect over time, after 30 years this could amount to £28.8 million.

- To estimate the economic effect of the operation and maintenance it was first necessary to estimate the proportion of contracts that could be secured in each of the two Study Areas. These assumptions were based on the contract proportions reported in the NIRIG, analysis of the industries present in each of the Study Areas and existing arrangements. It is estimated that the Causeway Coast and Glens area (Local Study Area) could secure 38% of the operation and maintenance contracts worth £0.4 million annually, and £10.3 million over an illustrative period of 30 years. In Northern Ireland (Regional Study Area) as a whole, it was estimated that it could secure 53% of contracts, worth £0.5 million annually and £14.1 million over an illustrative period of 30 years. It is considered that this represents a permanent, but reversible effect of minor positive significance to the Local and Regional Study Areas.
- As with the initial development and decommissioning/construction phase, the contract values awarded in each of the defined Study Areas represents an increase in turnover in those areas. It is estimated that turnover generated by the operation and maintenance could support 2 jobs in Causeway Coast and Glens, and 3 jobs in Northern Ireland. It is considered that this represents a permanent but reversible effect of minor positive significance to the Local and Regional Study Areas.
- In addition to land-owner rents, the Development would be liable for non-domestic rates, the payment of which would contribute to public sector finances. It is estimated that the Development could contribute £0.3 million annually to public finances. Over a 30-year period this would be expected to contribute £9.4 million, although the actual contribution would depend on variables such as the actual load factor.

234. **Chapter 13** then goes on to identify the positive **indirect** economic benefits arising from the Development during the operational phase including:

Positive Indirect Economic Benefits- Operational Phase

- As with the initial decommissioning/construction expenditure, those directly employed during the operation and maintenance phase will have a wider benefit on the economy by spending their salary. This was estimated in the same way as the initial decommissioning/construction phases. It is estimated that effects on the wider economy during the operation and maintenance phase would be £0.4 million per annum and 3 jobs in Causeway Coast and Glens, and £0.5 million per annum and 4 jobs in Northern Ireland. It is considered that this represents a permanent but reversible effect of minor positive significance to the Local and Regional Study Areas. .
- Adding together the direct and induced impacts from the spending of direct employees during the operation and maintenance it was estimated that the total impact would be £0.4 million and 3 jobs in Causeway Coast and Glens, equal to £10.6 million over an illustrative period of 30 years, and £0.5 million and 4 jobs in Northern Ireland, equal to £14.9 million over an illustrative period of 30 years.
- SPR intends to provide benefits to the community which will be in line with industry best practice for community benefits funds. For the purpose of the model and assessment, it has been assumed that the value of the community benefit package will equate to £1,000 per MW of installed capacity per year (index linked). As the Development is assumed to have a capacity of c.28MW, the annual contribution to the fund will be up to £28,000 which equates to £0.8 million over an illustrative period of 30 years. The actual value of the community package, its shape, and means of administration of the community fund will be discussed and agreed with the local community, dialogue is ongoing. Subject to an administrative community function being in place, this will be formalised nearer to the time of decommissioning/construction commencing.
- In June 2018, the Drumsurn Village Plan was drafted which identified key issues in the community. A detailed Action Plan has been drawn up to take these themes forward that identifies priorities, timeframes, indicative costs and potential partners. Initially, four actions have been prioritised:
 - Providing additional facilities at the community centre to support its necessary refurbishment;
 - Improving the village signage including directional signage to the community centre;
 - develop a natural pathway between the playgroup and the primary school which would be available for the whole community; and
 - develop community allotments and the community garden to improve green spaces.
- These projects each require various levels of initial or ongoing funding. The community benefit funding could be used to support these projects.

235. The Development will have positive direct and indirect economic benefits in the Council area and wider NI region during development/decommissioning/ and construction phases which are detailed in **Chapter 13** of the ES and summarised in this statement. There will be continued direct and indirect economic benefits accruing from the Development during the operation of the Windfarm. However, despite the positive economic impact of a Community Fund it is noted that section 5.71 of the SPPS states that such voluntary funds cannot be considered material considerations in decision-taking.
236. In 2010, the Department for Enterprise, Trade and Investment (DETI) published the Strategic Energy Framework²⁸ (SEF) which details Northern Ireland's energy future over the next ten years and sets out the renewable electricity targets for 2020, identifying that the equivalent of 40% of national electricity needs must be sourced from renewables. Consultations with the Department for Infrastructure (DfI) Strategic Planning section indicated that as of March 2019, 39.25% of NI electricity is being provided by renewable energy sources. However, it is noted that the 2020 targets were not maximum targets and the provision by the Development of up to 28-29MW of electricity from wind energy represents an uplift of approximately five times of the current energy output from the Operational Rigged Hill windfarm, building upon the current contribution made from Operational Rigged Hill Windfarm.
237. The Development represents innovation in the renewable energy sector being one of the first windfarm Repowering planning applications in Northern Ireland. The utilisation of existing infrastructure minimises the impact upon the receiving environment whilst seeking to maximise the energy output from the Development, arising from the use of the latest, more productive wind turbine technology with co-located solar technology. The ancillary energy storage element of the Development will reinforce grid infrastructure and support the stabilisation of energy provision at the Development.
238. The Development will have positive economic, environmental and social benefits which will be a material consideration to be afforded appropriate weight during the determination of the planning application.

6.1.2.5 Residential Separation Distances

239. The SPPS states that a separation distance of 10 times rotor diameter with a minimum distance of not less than 500m will generally apply between windfarms and occupied properties. The SPPS does not provide further context on this policy guidance however Para 6.229 of the SPPS states "*proposals will also be assessed in accordance with normal planning criteria, including such considerations as: access arrangements, road safety, good design, noise and shadow flicker; separation distance; cumulative impact; communications interference; and, the inter-relationship between these considerations.*" In the context of separation distances further consideration is given to noise, shadow flicker and visual impacts and public safety and human health.
240. There are no residential properties located within the ten times rotor diameter distance- 1,200m. Therefore, the Development complies with the recommended turbine to residential property separation distances specified.

6.1.3 Energy Storage

241. The SPPS does not contain any planning policy relating to energy storage.

6.1.3.1 SPPS- Renewable Energy Policy- Conclusion

242. The Development complies with the renewable energy provision of the SPPS. As the NAP 2016 is silent on renewable energy, the renewable energy policy provisions of the SPPS will be an important material consideration in the determination of the planning application. This should be afforded material weight in the determination of the planning application.

6.1.3.2 SPPS- Ecology, Fisheries & Ornithology Policy

243. SPPS planning policy (Natural Heritage) outlines that planning permission will only be granted for a development proposal that, either individually or in combination with existing and/or proposed plans or projects, is not likely to have a significant effect on a European site (Special Protection Area, proposed Special Protection Area, Special Areas of Conservation and Sites of Community Importance) or a listed or proposed Ramsar site. A development which could adversely affect the integrity of a European or Ramsar site may only be permitted in exceptional circumstances as laid down in relevant statutory provisions. **Chapter 8 (Ecology & Fisheries) & Chapter 9 (Ornithology)** of the ES provides a comprehensive assessment of potential impacts upon European sites. These Chapters combined with the submitted **Appendix A8.2: Habitats**

²⁸ Department of Enterprise, Trade and Investment (2010). Strategic Energy Framework. Available online at: <https://www.economy-ni.gov.uk/publications/energy-strategic-framework-northern-ireland> [Accessed on 12/10/2017]

- Regulations Assessment** conclude that the Development is not likely to have a significant effect on any European designated sites. **Chapter 8** details that subject to hydrology mitigation measures the Development is not likely to have a significant effect on Lough Foyle SPA and the River Roe and Tributaries.
244. The SPPS (Natural Heritage) also details that planning permission will only be granted for a development proposal that is not likely to have an adverse effect on the integrity of 'Areas of Special Scientific Interest', 'Nature Reserves or National Nature Reserves' and "Marine Conservation Zones.' The SPPS specifies that development proposals within AONBs must be sensitive to the distinctive special character of the area and quality of their landscape. **Chapter 8' Ecology & Fisheries', Chapter 7: 'Hydrology, Hydrogeology, Geology, Soils and Peat' and Appendix A8.2:'Habitats Regulations Assessment'** assessed the potential impact of the Development upon the River Roe and Tributaries. SAC and the Roe Estuary ASSI and concluded that the Development was not likely to have an adverse impact upon the integrity of the ASSI. The Development is not located within an AONB- refer to **section 6.1.2.4.1** for further details of the impact of the Development upon designated landscapes including AONBs. Chapter 6 'Landscape & Visual Assessment' provides further detail of the of the assessment undertaken in respect of the Development upon designated landscapes.
245. The SPPS (Natural Heritage) states that planning permission will only be granted for a development proposal that is not likely to harm European protected species except in exceptional circumstances. Exceptional circumstances are defined as 'there are no alternative solutions' and 'it is required for imperative reasons of over-riding public interest' and 'there is no detriment to the maintenance of the population of the species at favourable conservation status'; and 'compensatory measures are agreed and fully secured.' SPPS policy states that planning permission will only be granted for a development proposal that is not likely to harm other statutorily protected species. **Chapter 8** of the ES assesses the impact of the Development on European protected species or other statutorily protected species. **Chapter 9 of the ES** assesses the impact of the Development upon ornithology including statutorily protected bird species.
246. Subject to the successful implementation of the proposed mitigation measures in Chapter 8 of the ES, in particular in relation to Leisler bats, and Chapter 9 of the ES the Development will have neutral or slight-positive effects on all Important Ecological Features. Therefore, the Development will not cause any significant negative effects on designated sites, habitats, legally protected species including ornithology, or any other features of ecological importance.
247. The SPPS (Natural Heritage) details that planning permission should only be granted for development proposals which are not likely to give rise to unacceptable adverse impact on; (i) priority habitat, (ii) priority species, (iii) active peatland, (iv) ancient and long established woodland, (v) features of earth science conservation importance, (vi) features of the landscape which are of importance for wild flora and fauna, (vii) rare or threatened native species, (viii) wetlands (including river corridors) or, (ix) other natural heritage features worthy of protection, including trees and woodland. The SPPS states that a development proposal which is likely to result in an unacceptable adverse impact on, or damage to, habitats, species or features listed above, may only be permitted where the benefits of the proposed development outweigh the value of the habitat, species or feature. In such cases, appropriate mitigation and/or compensatory measures will be required. **Chapter 8** of the ES details the impact of the Development upon the existing habitats. Subject to the successful implementation of the proposed mitigation measures outlined in Chapter 8 & 9 of the ES, and the HMP the Development will have neutral or slight-positive effects on all Important Ecological Features. Therefore, the Development will not cause any significant negative effects on designated sites, habitats, legally protected species, or any other features of ecological importance. Therefore, the Development meets these tests and will not result in an unacceptable adverse impact on priority habitats and species, and the other policy tests identified by this SPPS policy.
248. Chapter 9 (Ornithology) details that the Development will have negligible magnitude and not significant effects on extant bird species, subject to the implementation of mitigation measures.
249. Some moderate and minor effects are predicted for some species, mainly due to decommissioning and construction activities on hen harrier, snipe, red grouse and small passerines and some displacement for hen harrier, snipe and small passerines during the operational phase compared to baseline and some collision risk for secondary species, which are nesting within the 2 km Survey Area. These predicted effects have been mitigated via specific measures to reduce likelihood and magnitude of effects including spatial and temporal construction management; management of habitats (as part of an HMP) which will benefit snipe, hen harrier and other small passerine species, and all priority species are spatially protected by appropriate set-back distances. In addition, various management and monitoring measures are outlined for implementation as part of the windfarm operational policies.

250. The proposed Development design has incorporated ornithological constraints, where possible, including avoidance of extant priority species, and it is noted that several of the priority species in close proximity to the Operational Rigged Hill Windfarm are present based on a temporally available habitat (including hen harrier, long-eared owl, merlin, kestrel, buzzard, sparrowhawk and raven) and have selected to nest in close proximity to the Operational Rigged Hill Windfarm.
251. Further measures are outlined on the basis of published research, and best practice, to prevent nesting bird disturbance as required under wildlife legislation. In order to further test and examine residual effects, if any, there is a comprehensive monitoring programme which has been detailed. Based on available cumulative data there is not considered to be any potential for significant cumulative effects to arise. The further measures proposed will ensure that there is no potential for cumulative effects resulting from the Development, in combination with the other sites considered.
252. Following implementation of proposed mitigation, and best practice measures, Chapter 9 concludes that there are no significant effects of the proposed Development on ornithology. The implementation of the measures outlined within Chapter 9 and the proposed monitoring recommendations can be secured via planning conditions. The Development will not result in unacceptable adverse impacts upon Ornithology.

6.1.3.3 SPPS- Hydrology & Hydrogeology

253. The SPPS section entitled 'Development at Surface Water (Pluvial) Flood Risk Outside Floodplains' requires that all development proposals that exceed 1 hectare will require the submission of a 'Drainage Assessment' (DA) as part of the planning application. Development requiring a DA will be permitted where it is demonstrated through the DA that adequate measures will be put in place so as to effectively mitigate the flood risk to the proposed development and from development elsewhere.
254. Regarding the 'Artificial Modification of Watercourses', the SPPS prescribes that Planning Authorities should only permit the artificial modification of a watercourse in the exceptional circumstance where the culverting of a short length of watercourse is necessary to provide access to a development site (or part thereof), or where such operations are necessary for engineering reasons unconnected with the development proposal.
255. **Chapter 7 Hydrology, Hydrogeology, Geology, Soils & Peat** of the ES evaluates the effects of the Development on the hydrology, hydrogeology, geology and peat resource. **Chapter 7 of the ES** is supported by the following Technical Appendices documents provided in **Volume 3 of the ES**:
- A3.1: Outline Decommissioning/Construction Environmental Management Plan (DCEMP);**
A3.2: Draft Habitat Management Plan;
A7.1: Peat Slide Risk Assessment (PSRA);
A7.2: Outline Water Construction and Environmental Management Plan (WCEMP), which is intended to form part of the final DCEMP;
A7.3: Dipwell Monitoring Results; and
A7.4: Peat Management Plan.
256. Flood Maps (NI) show that the Study Area is located outside floodplains for river and coastal flooding. The design of the Development layout has incorporated a buffer zone between watercourses and turbine bases of 50 m to watercourses where possible, meaning any overtopping of minor watercourses is unlikely to reach infrastructure during extreme flooding events. A buffer zone distance of 20 m has been applied to anthropogenic drains and smaller natural watercourses. As such, the Development is not considered to be at risk of flooding and is unlikely to contribute to the displacement of pluvial flood water.
257. **Chapter 7** details that whilst alterations to natural flow watercourses will not be introduced during the operational phase, any changes during construction will continue through operation, as the majority of infrastructure will remain in place. Alterations to natural flow pathways/ watercourses will be reduced through adoption of good practice design and construction methods, as set out in the Outline DCEMP, such as cross drainage, use of shallow drainage ditches and prevention of blockages
258. With the embedded mitigation measures proposed, the Development has been assessed as having the potential to result in effects of negligible or minor significance, which are not significant under the terms of the EIA regulations, upon hydrology, and hydrogeology. Therefore, the Development complies with the policy provisions of the SPPS relating to hydrology and hydrogeology.

6.1.3.4 SPPS- Noise

259. The SPPS does not reference any specific noise planning policy over and above the references made to noise in the renewable energy policy. As detailed in **section 6.1.2.2.2** of this statement the submitted noise assessment concluded that all noise effects likely to arise from the Development were not significant, and met with recognised noise limits, applied to neighbouring residential properties. Decommissioning/construction noise will be limited in duration and confined to working hours, as agreed with CCGBC, and therefore can be adequately controlled through the application of good practice measures and secured by planning condition,

6.1.3.5 SPPS- Archaeology & Built Heritage

260. The SPPS has an additional archaeology and built heritage policy, to the SPPS renewable energy policy. This additional policy outlines that developments which would adversely affect the integrity of scheduled monuments or the integrity of their setting will only be permitted in exceptional circumstances. There are 13 Scheduled Monuments within the 5 km Study Area identified in Chapter 11 of the ES. Chapter 11 concludes that the integrity of the scheduled monuments, or the integrity of their setting will not be adversely affected by the Development. Additionally, Chapter 11 assesses the impact of the Development upon one scheduled monument in state care (following a request by DfC-HED) and concluded that the Development would not affect the integrity of the monument or integrity of its setting.

261. The SPPS details that development proposals which would adversely affect archaeological remains of local importance or their settings should only be permitted where the planning authority considers that the need for the proposed development or other material considerations outweigh the value of the archaeological assets or their setting. Within the core study area there are 15 cultural heritage assets, as shown in **Figure 11.1 of the ES**. These heritage assets consist of crop marks and agricultural buildings, primarily from the post-medieval period. The access track within the Development has the potential to directly affect a possible cropmark site. Mitigation is recommended in the form of a watching brief during construction to ensure that if this cropmark site is present, it can be recorded and documented ensuring preservation by record. This approach is consistent with the SPPS which identifies appropriate mitigation options, including for the preservation of remains in situ, licensed excavation or recording examination and archiving of the archaeology by way of planning condition. Furthermore, it is recommended that potential impacts upon unknown archaeology can be further mitigated by the implementation of a programme of archaeological evaluation, likely to consist of a targeted watching brief in undisturbed portions of the Site, leading to preservation by record.

262. The SPPS outlines that planning permission for developments that would lead to the loss of, or cause harm to, the overall character, principal components or setting of 'Historic Parks, Gardens & Demesnes' will not be permitted. In assessing applications for development in or adjacent to 'Historic Parks, Gardens & Demesnes', particular account should be taken of the impact of the proposal on the archaeological, historical or botanical interest of the site. Within the 5 km Study Area there is one Historic Demesne, Drenagh (L-006), which lies 5.4 km north-west of T7, and two supplementary historic parks and gardens, Roe Valley Park (L-002) and Dog Leap (L041), both which lie 7 km west of T6. *L-006 Drenagh*. Chapter 11 of the ES concludes that the Development will not lead to the loss of, or cause harm to the principal components or settings of the Historic Demesne Drenagh or the supplementary historic parks of Roe Valley Park and Dog Leap.

263. There would be no significant indirect effects, associated with changes to settings, upon heritage assets in the surrounding historic environment from the Development, either in isolation or cumulatively with other windfarm development, and consequently the Development adheres to the SPPS policy provision. Additionally, **Chapter 6 Landscape & Visual Assessment** details that the Development will not lead to the loss of, or cause harm to, the overall character or principal components or setting of any 'Historic Parks or Gardens & Demesnes.'

6.1.3.6 SPPS- Transportation

264. The SPPS states that in assessing development proposals, planning authorities must apply the Department's published guidance and recommends that planning authorities should require the submission of a Transport Assessment (TA) for proposals that are likely to generate a significant volume of traffic. **Chapter 12- 'Access, Traffic & Transport'** of the ES assesses the impact of the Development upon the existing traffic and transport environment. **Chapter 12** is supported by **'Appendix A12.1 Abnormal Load Route Assessment.'**

265. **Chapter 12** concludes that sufficient residual capacity is available on each route (from the three options considered for the turbine abnormal haul routes considered from Belfast, Larne and Foyle Port respectively, and the all traffic routes considered within the Study Area can accommodate the temporary increase in traffic which will occur during the initial decommissioning and construction phases of the Development. It is therefore concluded that the effect of traffic generation on routes within the

Study Area is low and not significant in terms of the EIA Regulations. Notwithstanding the aforementioned, the final abnormal load route, traffic management provisions and delivery arrangements will form part of an agreed 'Transport Management Plan' to be agreed with DfI Roads prior to the commencement of the Development.

6.1.3.7 SPPS- Tourism

266. The SPPS highlights the importance of built and natural heritage of Northern Ireland regarded as tourism assets, citing examples such as historical and archaeological sites, certain beaches and AONBs. SPPS planning policy states that planning permission should not be granted for development that would, in itself or in combination with existing and approved development in the locality, have an adverse impact on a tourism asset, such as to significantly compromise its tourism value

267. **Chapter 13 Tourism, Recreation, Land-use & Socio-Economic** of the ES assesses the impact of the Development upon tourism assets. **Chapter 6 Landscape & Visual Assessment** of the ES assesses the impact of the Development upon the AONB designations and the natural heritage assets, as discussed in **Section 6.1.3.5. Chapter 11- 'Archaeology and Built Heritage** of the ES' evaluates the impact of the Development upon built heritage assets and is discussed in section 6.1.2.2.5 of this statement.

268. **Chapter 13** of the ES addresses tourism and recreation resources are located within the Site Boundary and identifies a tourism and recreation study area and then goes on to consider the tourism assets located therein and assigns levels of sensitivity. Tourism assets within the study area include;

- The Ulster Way passes through the Site and currently utilises the existing tracks associated with the Operational Rigged Hill Windfarm. The Ulster Way is a 1,000 km long circular walking route in Northern Ireland. When Rigged Hill Windfarm became operational in 1994, a section of the Ulster Way between Dungiven and Castlerock was diverted to make use of the tracks associated with the windfarm (see **Figure 13.2 of the ES**). As a long-distance footpath, it is of regional importance (at the Northern Ireland level), and of medium sensitivity;
- In addition, the Ulster Way also utilises tracks within Cam Forest which is located immediately adjacent to the northern and eastern boundaries of the Site, and is managed by the Northern Ireland Forest Service (NIFS) (see **Figure 13.2 of the ES**). Cam Forest covers an area of 1,300 hectares (ha) and contains approximately 35 km of tracks which are frequently used by walkers, runners, mountain bikers and horse riders²⁹. The Forest is important at the scale of Causeway Coast and Glens, and is therefore assessed as being of low sensitivity;
- Gortnamoyagh Forest, 3 km south-east of the Site Boundary, is used for outdoor activities including walking and mountain biking. The Forest is important at the scale of Causeway Coast and Glens, and is therefore assessed as being of low sensitivity;
- Springwell Forest, 3 km north of the Site Boundary has no formal recreational facilities but has a small car park with picnic tables. The Forest is used for walking, with the Ulster Way passing through the Forest³⁰. The Forest is important at the scale of Causeway Coast and Glens, and is therefore assessed as being of low sensitivity;

269. **Chapter 13** concludes that the effects of the Development on tourism and recreation (excluding the impacts upon the Ulster Way and The Views, a self-catering cottage in proximity to the Site) during the decommissioning/construction and operational phases, including cumulative effects, are assessed as negligible. The potential impact upon the Ulster is discussed in detail in section 5.2.8 of this statement. Chapter 13 details that the decommissioning/ construction phase of the Development will result on moderate and significant effects on 'The Views' however this will be on a temporary period only. Chapter 13 concludes that taking into account the baseline situation that includes views of the Operation Rigged Hill Windfarm turbines, and that no other aspects of the operational experience would be affected, the change in recreational amenity is assessed as being of low magnitude and as such the operational affects on this receptor would be negligible.

270. **Chapter 13** also reviews the 'public perception' of visitors, tourists and tourism organisations towards windfarms. The evidence and studies reviewed highlighted the varying opinions of visitors regarding wind energy development; however, they suggest that the majority of those surveyed do not have negative attitudes towards windfarms.

271. All effects on the tourism and recreational receptors were assessed as negligible because of the very low levels of change which would result from the Development, and the addition of any other application stage windfarm sites to the baseline is not expected to alter this position. It is noted that there will be a level of impact upon the Ulster Way and 'The View Self Catering

²⁹ Cam Forest. Available online at <http://www.outdoorni.com/local-outdoors/venues/cam-forest/> [Accessed 29/04/2019].

³⁰ Springwell Forest. Available online at <https://www.nidirect.gov.uk/articles/springwell-forest> [Accessed 29/04/2019].

Cottage' however the effects will be for a temporary period only (during decommissioning/ construction). Mitigation measures to address the temporary impact upon the Ulster Way have been agreed in principle with the Council. During the operational phase of the Development, the Applicant will work with CCGBC, with regards to agreeing to locate any interpretive signage, which would support connectivity with the wider network of paths in the area, and in support of helping realise any CCGBC access improvement strategies, within the land which it has control over. Therefore, no tourism asset will be significantly compromised, as a result of the Development. The potential effects on 'The Views Self Catering Cottage' will be for a temporary period during the decommissioning/ construction phase of the Development with negligible effects predicted during the operational phase of the Development.

6.1.4 Planning Policy Statements

272. The suite of existing planning policy statements are material planning considerations in the determination of planning applications. There is currently a transitional period in planning policy terms that will operate until such time as the Local Development Plan 'Plan Strategy' for the Council has been adopted. During the transitional period planning authorities will apply existing retained policy (including PPSs) together with the SPPS. Relevant supplementary and best practice guidance will also continue to apply. Where a Council adopts its Plan Strategy, existing policy retained under the transitional arrangements shall cease to have effect in the district of that council and shall not be material from that date, whether the planning application has been received before or after that date.
273. Any conflict between the SPPS and any retained policy (PPS) must be resolved in favour of the provisions of the SPPS. For example, where the SPPS introduces a change of policy direction and/or provides a policy clarification that would conflict with the retained policy the SPPS should be accorded greater weight in the assessment of individual planning applications. However, where the SPPS is silent or less prescriptive on a particular planning policy matter than retained policies this should not be judged to lessen the weight afforded to the retained policy. PPS 18 and its associated best practice guidance (BPG) and supplementary planning guidance (SPG) are retained as regional planning policy.
274. For the purposes of this Planning Statement it will be clarified whether the respective PPS policy is consistent with the corresponding SPPS policy. If the SPPS introduces a change of policy direction this will be highlighted in the context of the retained PPS policy. If the PPS are more prescriptive in particular policy areas the Development will be assessed in respect of the more prescriptive PPS policy. This approach will facilitate a more coherent planning policy review and avoid duplication in terms of policy assessment.

6.1.4.1 Planning Policy Statement 18 (PPS 18)

275. PP18 planning policy (Policy RE1) aligns with the SPPS renewable energy policy insofar as it propagates that renewable development proposals will be permitted, provided the proposal will not result in an unacceptable adverse impact upon; (a) public safety, human health or residential amenity, (b) visual amenity and landscape character, (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. Notably PPS 18 policy states that the wider environmental, economic and social benefits of renewable energy proposals will be given significant weight in the determination of planning applications. The SPPS states that the wider environmental, economic and social benefits of renewable energy proposal are material considerations, will be given appropriate weight in the planning application process. This represents a slight change in policy direction, where lesser weight will be afforded to the wider environmental, economic and social benefits of the Development. The conclusions outlined at **section 6.1.2.2.2** of this Statement, that the Development complies with the renewable energy provision of the SPPS is also applicable to the overarching policy provision of PPS 18 Policy RE1.
276. Policy RE1 specifies additional provision noting that wind energy proposals will be required to demonstrate that; (i) the development will not have an unacceptable impact on visual amenity and landscape character, (ii) that the development has taken into consideration the cumulative impact of existing and approved turbines, (iii) that it 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 communication installations, (v) that the development will not have an unacceptable impact on rails, roads or aviation safety, (vi) that the development will not cause significant harm to the safety or amenity of sensitive receptors and that (vii) above-ground redundant plant and associated infrastructure shall be removed and the site restored.
277. In respect of the additional policy provision further commentary is provided to demonstrate that the Development adheres to PPS 18 policy in addition to the provisions of the SPPS. **Section 6.1.2.2.3 of this Statement** outlines that the Development will not have an unacceptable impact upon the visual amenity and landscape character. All ES chapters assessed the

cumulative effects of the Development with existing and approved turbines, and those at application stage, within a study area agreed with the Council and statutory consultees during the EIA Scoping process.

278. The submitted '**Peat Slide Risk Assessment' (PSRA) (Appendix A7.1) and Chapter 7-'Hydrology, Hydrogeology, Geology, Soils & Peat'** of the ES, reviews the potential peat slide risk associated with the Development. The '**Peat Slide Risk Assessment'** was carried out in accordance with the 'Peat Landslide Hazard & Risk Assessment- Best Practice Guide for Proposed Electricity Generation Development.' Within the Development footprint, the assessment concluded the majority of the Development lies in an area of 'low risk'. Out with the Development footprint, some localised medium and negligible risk zones were identified. On this basis, in the absence of mitigation, the Development is considered to result in a potential effect of negligible significance and would therefore be not significant, in accordance with the EIA Regulations. Good practice measures are embedded in the design principles and adoption of further best practices, will further reduce any effect of peat instability.

279. **Chapter 14- 'Other Issues'** of the ES assessed whether the Development will give rise to electromagnetic interference to communications installations and concludes that the Development will not give rise to unacceptable electromagnetic interference to communication installations. **Chapter 12- 'Access, Traffic & Transport'** of the ES details that Development will not have an unacceptable impact upon roads or road users. **Chapter 13- 'Other Issues'** of the ES outlines that potential effects on aviation as a result of the Development, allowing for infra-red aviation lighting, will be negligible and therefore will not result in an unacceptable impact upon aviation safety. The requirement for infra-red aviation lighting, and details and positions of the proposed turbines can be secured via the use of an appropriately worded planning condition.

280. Section 6.1.2.2.2 of this Statement details that the Development will not cause significant harm upon the safety or amenity of sensitive residential receptors. No further sensitive receptors were identified during the EIA process beyond those considered and addressed within the ES. A future decommissioning plan for the Development can be secured through the application of an appropriately worded planning condition.

6.1.4.2 Planning Policy Statement 2-Natural Heritage (PPS 2)

281. The policy provisions of PPS 2 align with the Natural Heritage planning policies of the SPPS. Section 6.1.3.2 of this Statement details the policy assessment in respect of the Development in terms of the SPPS. This assessment is also applicable to PPS2 planning policy and the conclusions are consistent. The Development complies with PPS2 planning policy.

6.1.4.3 Planning Policy Statement 3-Access Movement and Parking (PPS 3)

282. In terms of PPS3, there is considered to be no conflict with the equivalent provisions in the SPPS, therefore until the Council adopts its Plan Strategy, PPS3 will apply, together with the SPPS, with no less weight attached to PPS3 policy. Policy AMP 2- Access to Public Roads outlines that planning permission will only be granted for a development proposal involving direct access, or the intensification of the use of an existing access, onto a public road where: such access will not prejudice road safety or significantly inconvenience the flow of traffic and the proposal does not conflict with Policy AMP 3 'Access to Protected Routes'. Policy AMP7 'Car Parking and Servicing Arrangements' details that development proposals will be required to provide adequate provision for car parking and appropriate servicing arrangements.

283. **Chapter 12** concludes that the development will not have an unacceptable negative impact upon the existing road network. A 'Transport Management Plan' will be agreed with DfI Roads prior to the commencement of the Development. The new site access will not prejudice road safety or significantly inconvenience the flow of traffic. The Development does not conflict with Policy AMP 3 of PPS3. The measures associated with the decommissioning/construction phases of the Development have been thoroughly assessed and will not prejudice road safety, road users or inconvenience the traffic flow to an unacceptable level. Additionally, the operational phase of the Development has been assessed and it is concluded that that Development (including new site access) will not prejudice road safety, road users, or significantly inconvenience the flow of traffic.

6.1.4.4 Planning Policy 6- Planning, Archaeology & Built Heritage (PPS 6)

284. The planning policy provisions of PPS 6 and the SPPS are consistent. **Section 6.1.3.5** of this Statement details the policy assessment in respect of the Development in terms of the SPPS. The assessment is also applicable to PPS6 and the conclusions are consistent. The Development complies with PPS 6 planning policy.

6.1.4.5 Planning Policy Statement 10- Telecommunications (PPS 10)

285. Policy TEL2- Development and Interference with Television Broadcasting Services of PPS10 was cancelled by the provisions of the SPPS and is no longer a material planning consideration.

6.1.4.6 Planning Policy Statement 13- Transportation & Land Use (PPS 13)

286. The policy provisions of PPS13 are consistent with the policy provision of the transportation policies in the SPPS. **Section 6.1.3.6** of this Statement details the policy assessment in respect of the Development in terms of the SPPS. This assessment is also applicable to PPS13 and the conclusions are consistent. The Development is consistent with the policy provisions of PPS13.

6.1.4.7 Planning Policy Statement 15- Planning & Flood Risk

287. The planning and flood risk policy provision of PPS 15 an the SPPS is largely consistent. **Section 6.1.3.3** of this Statement details the policy assessment in respect of the Development in terms of the SPPS. This assessment is also applicable to PPS15 and the conclusions are consistent. The Development is consistent with the policy provision of PPS15.

6.1.4.8 Planning Policy Statement 16- Tourism (PPS16)

288. The tourism policy provision of PPS16 and the SPPS is largely consistent. PPS 16 provides clarification on the definition of ‘tourism assets’ while the SPPS does not provide the same clarification. ‘Tourism assets’ are defined by PPS 16 as “*any feature associated with the built or natural environment which is of intrinsic interest to tourists.*” **Section 6.1.3.7** of this Statement details the policy assessment in respect of the Development in terms of the SPPS. This assessment is also applicable to PPS16 and the conclusions are consistent. The Development is consistent with the policy provisions of PPS16.

6.1.4.9 Planning Policy Statement 21- Development in the Countryside (PPS 21)

289. Policy CTY1- 'Development in the Countryside' details the types of development considered suitable in the countryside. In relation to 'renewable energy' projects in the countryside Policy CTY1 states that renewable energy proposals will be permitted provided that they are in accordance with PPS 18. **Section 6.1.4.1** of this Statement details that the Development adheres to the policy provision of PPS18 and is also compliant with the provisions of PPS21.

6.1.4.10 Planning Policy Statements- Conclusions

290. The Development complies with the retained PPS policy provision. This is important in the areas where the NAP 2016 is silent and in particular on renewable energy policy in PPS18, whereby in the absence of local development policy greater material weight should be afforded to regional planning policy.

6.2 Regional Planning Policy & Guidance: Strategic Planning Policy Statement Strategic Planning Policy Review for Onshore Renewable Energy Development

291. At the time of submitting this planning application a review of SPPS renewable energy planning policies is ongoing. The review commenced in September 2016. The strategic review is being undertaken by Element Consultants on behalf of the Department for Infrastructure (DfI). The completion of the strategic review and associated DfI recommendations have been delayed by the absence of the NI Executive and a DfI Minister. In late May 2019, DfI Planning Policy unit advised they are not in a position to provide a timeframe for the completion of the strategic review process and the publication of new renewable policy. Therefore, limited material weight is afforded to the direction of the ongoing review process as there is extremely limited detail currently available.

6.3 Preparation of New Local Development Plan for Causeway Coast & Glens Borough Council

292. At the time of submitting this planning application, the Council are in the process of preparing their Local Development Plan for the Council Area – Causeway Coast & Glens Local Development Plan 2030 (LDP)- refer to Table 6.2 below for the Local Development Plan timetable (indicative). The Council published their Preferred Options Paper in Summer 2018. It is anticipated that the draft Plan Strategy will be published in Autumn / Winter 2019 with the independent examination due to take place in Spring/ Summer 2020. The target date for adoption of the Plan Strategy is Summer/ Autumn 2021.

Table 6.2: Causeway Coast & Glens Local Development Plan Indicative LDP Timetable

Causeway Coast & Glens Local Development Plan Indicative LDP Timetable	
Robust Evidence Gathering	Spring- Winter 2016
Publish Plan Timetable & Statement of Community Involvement	Winter 2016

Publish Preferred Options Paper Publish Preferred Options Paper (12 week consultation period)	Spring/Summer 2018
Publish Draft Plan Strategy (8 week consultation period)	Autumn/Winter 2019
Independent Examination of Draft Plan Strategy	Spring/Summer 2020
Adopt Plan Strategy	Summer/Autumn 2021
Publish Draft Local Policies Plan (8 week consultation period)	Autumn 2022
Independent Examination of Draft Local Policies Plan	Spring 2023
Adopt Local Policies Plan	Winter 2023
Monitoring & Review of Plan	Ongoing

293. Given the early stage of the new LDP preparation, i.e., the draft plan strategy has not yet been published or consulted upon, limited material weight is afforded to the provisions of the 'LDP-Preferred Options Paper' in the context of the Development.

7 Other Material Considerations

7.1 The Operational Rigged Hill Windfarm

294. Repowering a windfarm site supports an ongoing use of the land at Rigged Hill (the Site) by a renewable energy asset. Repowering also presents an opportunity to sustain and create additional jobs and to encourage continued investment in the renewable energy industry in Northern Ireland. The repowering of a windfarm differs from that of developing a greenfield site as the area has previously been developed, has demonstrated its suitability for use as a windfarm site, and will continue to be used for the same activity. Importantly the Operational Rigged windfarm can operate in perpetuity and the Development will increase the efficiency of the existing renewable energy asset. The established renewable energy use at the Operational Rigged Hill windfarm, the adaptability of the local environment and population to wind energy provision, the increased energy output efficiency of the Development should be material considerations in the determination of the planning application.

7.2 Relevant Planning Appeal Cases

7.2.1 Planning Appeal Reference No.2017/A0023- Proposed Extension to Dunmore Windfarm

295. In June 2018, the Planning Appeals Commission (PAC) allowed the planning appeal for the 8 no. turbine (tip height of 126m) extension of the Dunmore windfarm at Dunmore, Limavady, Co.Derry/ Londonderry following refusal by Causeway Coast & Glens Borough Council. Of note in the PAC report are the following comments by the PAC Commissioner:

The Northern Area Plan 2016 (NAP) operates as the local development plan for the area. In the NAP the site lies within the rural area, as well as being identified for information purposes as lying within the Binevenagh AONB. The NAP is silent on the subject of windfarm developments and is therefore of limited assistance in determining this appeal.

296. And;

The provisions of the Strategic Planning Policy Statement for Northern Ireland – Planning for Sustainable Development (SPPS) is material to all decisions on individual planning applications and appeals. The SPPS sets out transitional arrangements that will operate until the new Councils have adopted new LDP's for their areas. In the interim period, the SPPS will apply, together with policy contained in existing regional Planning Policy Statements, as listed in paragraph 1.13 of the SPPS.

297. The PAC Commissioner sets out the relevant planning policy context and clarifies that the NAP 2016 is of limited assistance in the determination of windfarm planning applications. The approach to the planning policy review undertaken by the PAC in respect of a wind energy planning in the Council is a material consideration in the determination of the planning application. The PAC decision indicates that both the SPPS and PPS 18 and other retained PPS's will be material considerations in the

assessment of wind energy planning applications and will be afforded greater material weight than the NAP 2016 during the determination of planning applications.

8 Conclusion

298. In accordance with the Section 45 of the Planning Act (Northern Ireland) 2011, the Statement has assessed the Application against the provisions of the Local Development Plan (Northern Area Plan 2016) and relevant material considerations.
299. Considerable support can be drawn from regional and national energy policy which continues to be supportive of renewable energy development, recognising its contribution towards sustainable development and tackling climate change, to safeguarding the UK and Northern Ireland's energy supply.
300. The Development will sustain and build upon a contribution (up to 29.9MW) towards NI's and the UK's legally binding targets for reductions in carbon emissions and energy from renewable resources. The UK Climate Change Act sets a target for the year 2050 for a reduction in greenhouse gas emissions by 80% lower than the 1990 baseline year. A recent amendment to the ct (dated 26th June 2019), introduced from July 2019 onwards, commits the UK to a reduction in greenhouse gases by 100% lower than the 1990 baseline, following the declaration of a "*Climate Emergency*" by the UK Government. This amendment will have direct implications on Northern Irish Energy Policy in the future. The Statement acknowledges that the 2020 energy target of 40% of energy supply provided by renewable energy is close to being met (currently at 39.25%) but highlights that these figures are minimum targets and there is clear policy support to maintain progress in renewable energy provision beyond the 2020 targets. Importantly the Development will be one of the first planning applications made to repower an existing operational windfarm in Northern Ireland and will maintain and increase the renewable energy output at an already established renewable energy asset.
301. Based on the findings of the accompany ES and the assessment of the Developments compliance with the relevant policies of the Local Development Plan, the Developments compliance with the relevant regional planning policies and associated Supplementary Guidance it is concluded that the Development fully accords with the Development Plan and regional planning policy guidance (which is an important material consideration where the Local Development Plan is silent on policy issues) when read as a whole.
302. The development process adopted by the Applicant has represented a good practice approach to the responsible development of a renewable energy scheme, minimising the potential impact of the Development by utilising existing infrastructure where possible and through multiple design iterations and modifications to minimise the impact on the receiving environment and ensure compliance with the suite of planning policy. The layout of the Development presented in the Planning Figures and ES represents the optimum fit with the technical and environmental parameters of this project having specific regard to the existing infrastructure of the Operational Rigged Hill Windfarm.
303. The primary aim of the Development is to generate energy from a renewable resource and to provide ancillary energy storage solutions to support the renewable energy resource. With this there are tangible environmental, economic and social benefits (identified in **Chapter 1** and **Chapter 13** of the ES) which include:
- Up to and no more than 29.9MW of installed renewable energy electricity generating capacity with ancillary energy storage, and roof top solar, that will contribute to regional and national renewable energy targets;
 - The Development will increase the renewable energy output from the existing Operational Rigged Hill Windfarm c. sixfold increasing the efficiency of an established renewable energy asset;
 - The Development will utilise existing infrastructure associated with the Operational Rigged Hill windfarm including access tracks and hardstands to minimise the environmental impact;
 - The Development will (development/decommissioning/construction phases) would support 15 job years, of which 10 would be provided on the basis of the balance of plant/main infrastructure contract, in the Local Study Area, and 63 job years within the Regional Study Area.
 - It is estimated that turnover generated by the operation and maintenance could support 2 jobs in Causeway Coast and Glens and 3 jobs in Northern Ireland. It is considered that this represents a temporary effect of minor positive significance to the local and regional economy.

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- In addition to land-owner rents, the Development would be liable for non-domestic rates, the payment of which would contribute to public sector finances. It is estimated that the Development could contribute £0.3 million annually to public finances. Over a 30-year period this would be expected to contribute £9.4 million, although the actual contribution would depend on variables such as the actual load factor of the Development.
 - The electricity generated from the Development, and the ancillary energy storage facility supporting the renewable energy provision, will contribute towards increased site electricity generation, reduce dependency on fossil fuels lowering carbon dioxide emissions and output, sustain existing development and construction jobs and create opportunities for new supply chain jobs.
 - Within a supportive planning framework, the Development will help create a long-term, stable investment platform for a clear pipeline of repowering projects, easing pressure on consenting authorities.
 - The Development utilises over two decades of industry knowledge and expertise to improve the siting, design and construction techniques for wind energy developments to create more efficient renewable energy projects.

³⁰⁴. Having regard to the NI energy targets, the direction of future energy policy and targets, and local and regional planning policy and guidance presented and assessed within this Statement, it is important that renewable energy developments which are acceptable in planning policy terms, such as the Development, are given consent. The Applicant therefore respectfully requests that consent is granted subject to appropriate planning conditions.

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