

Sustainability, Energy & Climate Change Statement

Scout Moor II Further Environmental Information

June 2026



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Client Cubico UK Development (Wind 1) Ltd

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Executive Summary

Government's Clean Power 2030 Action Plan sets out the critical importance of moving fast to deliver a once in a generation upgrade of Britain's energy infrastructure, including a target for at least 27 gigawatts (GW) of new onshore wind capacity by 2030 as a key contribution to the UK's legally-binding net zero 2050 target. Greater Manchester, within which the Proposed Development partly sits, has the ambition to become a zero carbon city region by the earlier date of 2038. Rossendale Borough Council and Rochdale Metropolitan Borough Council which the Site straddles have pledged to achieve zero carbon boroughs by 2030 and 2038 respectively, and for which the development of new renewable energy sources is identified as a key opportunity.

When determining planning applications for renewable energy development, the National Planning Policy Framework (NPPF) requires "significant" weight be given to their associated benefits and their contribution to a net zero future (and with this weight increasing to "substantial" in the proposed NPPF update).

However, national and local planning policy also recognises that such benefits need to be considered alongside wider environmental effects including noise, pollution, flood risk, and effects on sensitive habitats and important carbon sinks such as upland peat bogs.

The Proposed Development of 12 wind turbines up to 68.4 megawatts (MW) is forecast to generate over 9 million megawatt hours (MWh) of zero carbon electricity over its lifetime, sufficient to power over 84,000 typical UK homes

each year; equivalent to circa 65% of the number of households in Rossendale and Rochdale combined, and with annual operational greenhouse gas (GHG) emission savings equivalent to taking over 53,000 cars off UK roads. The proposals also represent an increase of 59% in currently installed wind energy generation capacity across the combined Rossendale and Rochdale Council areas.

GHG emissions will inevitably occur from various sources during construction (e.g. turbine manufacture, foundation and road construction, peat excavation etc), operation (e.g. back-up power generation) and decommissioning (e.g. turbine decommissioning) of the Proposed Development. However, operational GHG savings resulting from reduced demand for fossil-fuel power generation elsewhere on the national grid are forecast to balance out project GHG emissions within 2 years of it becoming operational. That is, GHG emissions are forecast to balance out GHG savings within less than 4% of the 40-year operational timeframe for which consent is sought.

The moorland habitats present on Site are acknowledged to be severely degraded as a result of factors including unsuitable management and drainage, illegal off-roading and inconsistent livestock stocking levels. Degraded peatlands can release carbon into the atmosphere and can in extreme cases increase flood risk due to reduced drainage, and therefore restoration of these habitats is vital.

A Moorland Restoration and Management Plan (MRMP) is proposed to improve the condition of the currently degraded peatland to a favourable condition, restore habitats that will be disturbed or damaged during the construction and maintenance of the proposals, provide monitoring and management prescriptions required to enhance the restoration areas from 'poor' to 'good' condition, and facilitate long-term maintenance of the restoration areas.

Currently 16.84 hectares (ha) of peatland is expected to be lost to facilitate the development, with the objective to restore circa 160 ha of habitat in line with a 1:10 ratio. Following site surveys and aerial mapping, 116.7 ha of land has been identified as suitable for peatland restoration, with a further 228 ha identified where purple moor grass will be cut. The outcome of this restoration will be a moorland in improved condition, with reduced pressures from factors that have contributed to its habitat degradation including sheep grazing, drainage and illegal off-roading.

The Proposed Development will also increase the biodiversity of the area, resulting in an overall biodiversity net gain for area habitats of 10.81%, and for watercourse habitats of 10.62%. An outline Habitat Management and Monitoring Plan (HMMP) proposes to compensate and enhance for loss of peatland habitats and grassland habitats to support this biodiversity net gain, and to create a Habitat Management Group to oversee the peatland restoration through the 40-year lifespan of the proposals. Outline prescriptions include: the enhancement of 49.49 ha of poor condition modified grassland to good condition other upland acid grassland, and the creation of 0.67 ha of other mixed woodland; the installation of bat and bird boxes and creation of 'hibernacula' for amphibians and reptiles, and; monitoring during construction and operation to document habitat restoration and bird populations, plus a review of the use of faunal enhancements by relevant species groups.

The Outline Peat Management Plan (OPMP) sets out the iterative design process which has sought to avoid areas of peat as far as possible and to limit peat excavation and the potential for 'peat slide'. The total volume of excavated peat associated with the infrastructure footprint and excavated slopes and drains has been calculated at 96,674m³, comprising 16,746m³ acrotelmic peat and 79,928m³ catotelmic peat. Excavated peat will be re-used the temporary infrastructure area and peatland restoration area and result in full re-use of excavated peat with potential for further re-use opportunities if required. The OPMP provides the framework for the preparation and implementation of a detailed Peat Management Plan (PMP) by the appointed Principal Contractor prior to commencement of construction and in consultation with relevant stakeholders.

A comprehensive range of ecological surveys and desk studies has been undertaken, an iterative design process adopted that has given due consideration to site habitats and species, and a range of mitigation measures proposed to reduce adverse effects and enhance beneficial effects. This includes compensating for the excavation of peat necessary to facilitate the development with the restoration of 116.7 ha of currently degraded peat bog. As a result, the only significant ecological effects in EIA terms that are forecast relate to significant ecological benefits to this currently degraded blanket bog habitat that will result from the proposed moorland restoration.

Regarding ornithology, again following the implementation of a range of mitigation measures including pre-construction surveys and employment of an Ecological Clerk of Works (ECoW) during construction and decommissioning, no significant effects in EIA terms are identified during the construction, operation or decommissioning, including from bird collision.

Regarding wider environmental effects, potential land contamination from made ground and former mine workings, which poses potential risks to construction and site maintenance workers, will be mitigated through suitable working methods and appropriate personal protective equipment.

Further site investigation and assessment is proposed in relation to the existing mine workings, with the design process locating scheme elements away from such features where possible. Similarly, a range of measures are proposed to mitigate potential effects to known and unknown archaeological remains, both above and below ground, during construction, operation and decommissioning of the Proposed Development.

Regarding flood risk, the Proposed Development comprises 'essential infrastructure' in accordance with the NPPF and is considered a suitable development within Flood Zone 1 (i.e. low risk of flooding) in which the Site is wholly located. Various recommendations are made regarding finished floor levels and external level design to manage the residual risk of overland surface water flows. The proposed Drainage Strategy accords with sustainable drainage principles and allows the Site to mitigate flood risk during storm events whilst ensuring no increase in flood risk off-Site (including a 45% uplift allowance for future climate change), and whilst avoiding deterioration of the water environment.

Predominant noise sources in the rural area of the Site include wind-induced noise (i.e. wind passing through vegetation and around buildings), local watercourses, agricultural noise and birdsong. At some locations closer to the settlements the soundscape may include road traffic noise, and there is also noise from a number of existing operational wind turbines in the area of the Proposed Development. A suite of good practice noise mitigation measures will form part of the Construction Environmental Management Plan (CEMP). Operational noise has been a key consideration throughout the design process (including cumulative effects from existing turbines), and which strikes a balance between maximising the potential for renewable energy generation while providing appropriate protection of residential amenity.

Additional mitigation in the form of wind turbine mode management for a limited number of turbines and specific range of wind speeds and directions,

and implementation of an Operational Noise Management Plan will ensure that operational noise limits are met. Following implementation of these measures, no residual noise effects which are significant in EIA terms are concluded during either the construction or operation of the Proposed Scheme.

Similarly, no significant air quality effects are forecast during the construction or operational phases.

Regarding decommissioning and the circular economy, the Applicant has undertaken a circularity analysis which calculates that circa 91% of total materials arising from the Proposed Development at its end of life are recyclable, and for which three potential waste material processing facilities have been identified for the principal waste streams (metals, blades and concrete).

In conclusion, therefore, the Proposed Development will result in significant benefits to zero carbon power generation and grid decarbonisation and as such contribute directly to net zero objectives at the national, regional and local authority levels. The iterative design process that has been taken has helped ensure that such benefits are optimised whilst adverse impacts are minimised where not altogether avoided in line with planning policy requirements.

Scout Moor II FEI

Sustainability, Energy & Climate Change Forecasts



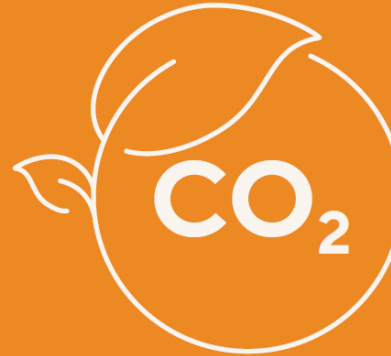
228,289,000 kWh

Annual zero carbon electricity generation



84,552

Equivalent number of typical UK homes powered annually



**Less than 2 years
(~4% of operational lifespan)**

Carbon Payback Period i.e. how long it will take for operational savings to balance out emissions during construction, operation and decommissioning



53,547

Equivalent number of cars taken off UK roads



116.7 ha

Area of degraded peat bog to be restored



10%

Biodiversity Net Gain



~91%

Of decommissioning materials are forecast to be recyclable

Turley

1. Introduction

1.1 Introduction

This Sustainability, Energy & Climate Change Statement has been prepared by Turley Sustainability & ESG ('Turley') on behalf of Cubico UK Development (Wind 1) Ltd ('Cubico' / 'the Applicant'). It is submitted as part of the provision of Further Environmental Information ('FEI') pursuant to the applications for full planning permission ('the Applications') relating to the construction and operation of a new onshore wind farm (to be known as 'Scout Moor II') together with a comprehensive moorland restoration scheme (hereafter referred to as 'the Proposed Development') on land at Rooley Moor and Scout Moor ('the Site').

As the Site crosses the administrative boundary between Rossendale Borough Council ('RBC') and Rochdale Metropolitan Borough Council ('RMBC') the applications have been submitted to both Councils, with each being responsible for the consideration and determination of those elements of the Proposed Development within their administrative area.

The Applications were originally submitted in July 2025 and were validated in August 2025 (RBC ref. 2025/0267 and RMBC ref. 25/00680/FUL) ('the 2025 Submission'). Following the completion of an extended period of consultation with the Councils, statutory and non-statutory consultees, the public and other interested parties, the Applicant has undertaken a thorough review of the Proposed Development. This design evolution has resulted in revisions to the

Proposed Development (and associated application drawings and documents) which are hereby submitted for consideration by the Councils as FEI ('the FEI Submission').

This Statement wholly supersedes the version submitted with the 2025 Submission.

A grid connection of up to 100 megawatts (MW) has been secured from the National Energy System Operation ('NESO') and SP Electricity North-West (the Distribution Network Operator) to connect the Proposed Development to the national grid in 2029. The Proposed Development will have an installed capacity of at least 68.4MW (based on 12 turbines with a generation rating of 5.7 MW each), with the final capacity subject to final turbine procurement selection – it will not exceed 99.9MW so as not to surpass the Nationally Significant Infrastructure Project threshold.

Planning permission is sought for a temporary period of 40 years after which the wind turbines and associated infrastructure would be decommissioned and the Site restored in accordance with a detailed restoration scheme to be agreed with the Councils.

The Applications are supported by an Environmental Statement and a range of other drawings and technical assessments, as agreed with RBC and RMBC through pre-application engagement.

Chapter 2 of this Statement sets out the drivers and planning policy context for the Proposed Development at the national, Greater Manchester (given RMBC is part of Greater Manchester) and RBC and RMBC local authority levels. **Chapter 3** then reports the response of the Proposed Development to this policy context.

1.2 The Applicant

Headquartered in London, with its UK development team based across Manchester and Glasgow, Cubico Sustainable Investments is a global renewable energy business with a growing footprint in the UK. The company owns and operates more than 18 onshore wind and solar farms across the country, totalling over 250MW of installed capacity. With plans to invest approximately £300 million in new UK projects across a range of clean energy technologies, Cubico is committed to helping deliver reliable, homegrown and affordable energy for British homes and businesses. The company takes a long-term approach to partnerships with stakeholders, working closely with local communities to deliver projects that bring both economic and environmental benefits and create lasting value for the people who live and work near its projects.

1.3 Application Site

The Site encompasses 1,023.3 hectares (ha) of land (623.7ha in RBC and 399.6 in RMBC), as shown in **Figure 1 Site Location Plan**. It comprises an area of open moorland between the urban areas of Rochdale, Bury, Blackburn, Accrington and Halifax, consisting of Rooley Moor, Scout Moor, Cowpe Moss and Brandwood Moor that collectively form part of the Southern Pennines.

The Site is strategically located within proximity of the existing Scout Moor Wind Farm ('SMWF') which is positioned on open moorland between Edenfield, Rawtenstall and Rochdale. SMWF, which comprises 26 No. turbines with a total

installed capacity of 65MW, was commissioned in September 2008 and is owned and operated by ENGIE.

The Site comprises three parcels:

- The main parcel, which will encompass the wind farm development and moorland restoration works. This parcel is bounded by Cowpe Reservoir, Lee Quarry Mountain Bike Trail and Whitworth Quarry to the north; the land adjacent to Cowm Reservoir and Spring Mill Reservoir to the east; Catley Lane Head to the south; and parcel of open moorland, characterised by expansive and undeveloped terrain with a mix of rough grassland;
- Grid Connection Route Option A, which extends northwards from the main parcel, following the alignment of Rooley Moor Road, connecting into Rakehead Lane and Brandwood Road, before heading westwards following the alignment of the A681 Newchurch Road / Bacup Road / Bocholt Way, terminating at the Rossendale Bulk Supply Point (BSP); and
- Grid Connection Route Option C. This extends westwards from the main parcel, following the alignment of an existing farm track connecting to the A680 Rochdale Road and heading northwards via the B6527 Market Street / Burnley Road / Moorlands View / Bury Road, terminating at the Rossendale BSP.

There are no residential properties located within the Site. However, there are some existing properties located along Rooley Moor Road to the south. Further residential properties are located within Whitworth, to the east, as well as a cluster of properties situated to the north in the hamlet of Cowpe.

The Site's topography is defined by the significant changes in elevation and natural topographic features. It sits at an elevation of between 247m Above Ordnance Datum (AOD) and 476m AOD.

1.4 Surrounding Area

The main parcel of the Site is situated 2.5km south of Rawtenstall, 4km north of Rochdale, 6.5km northeast of Bury. The immediate surroundings of the main parcel are predominately open and undeveloped, characterised by upland moorland. The existing and operational SMWF, along with the associated track routes, is immediately to the west of the main parcel of the Site.

Built development exists in the wider context, including clusters of mainly residential settlements and commercial uses. To the north, development extends along the A681 Newchurch Road, comprising a mix of industrial uses and housing units. The settlement of Whitworth forms the main built area to the east. The southwest of the Site mainly comprises agricultural land. Edenfield and Ramsbottom, situated along the A56, are to the west of the Site.

1.5 Proposed Development

The description of development is as follows:

“Construction and operation of up to 12 wind turbines with a maximum height to the tip of the blade of 180 metres (above ground level), together with associated ancillary infrastructure comprising crane pads and hardstandings; new access tracks; improvement and widening works to Scout Road; onsite substation; underground electrical infrastructure and cabling; fencing and boundary treatments; external lighting; drainage infrastructure; habitat and moorland restoration works; public right of way works; landscaping; temporary construction compound and staging area; underground electrical grid connection to the Rossendale Bulk Supply Point; and associated engineering works; with micro siting allowance; alongside the retention of and improvements to existing access tracks associated with the existing Scout Moor Wind Farm”

See **Figure 2 Infrastructure Layout Plan**.

Refer to the **Planning, Design & Access Statement** for further details.

Figure 1: Site Location Plan

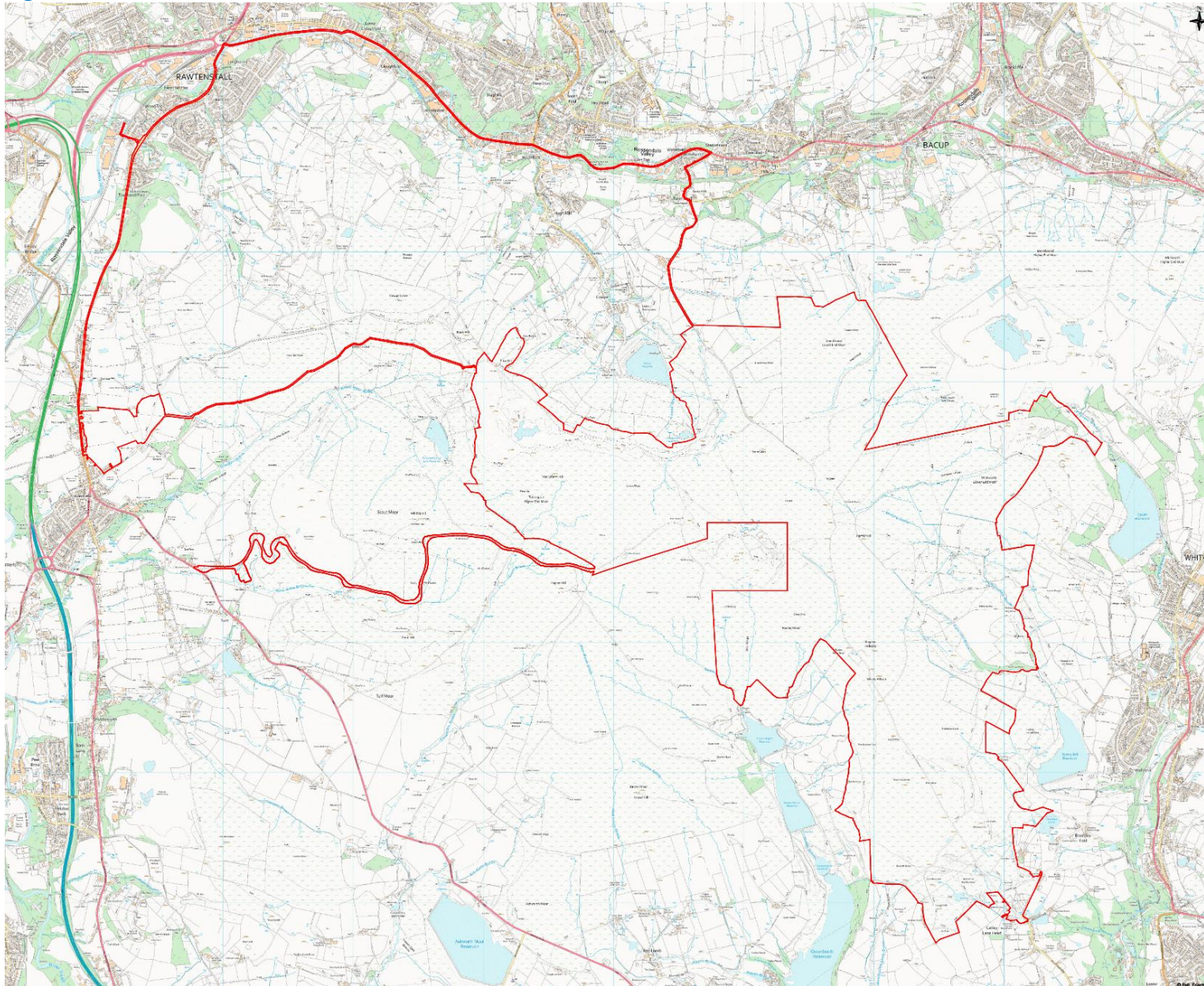
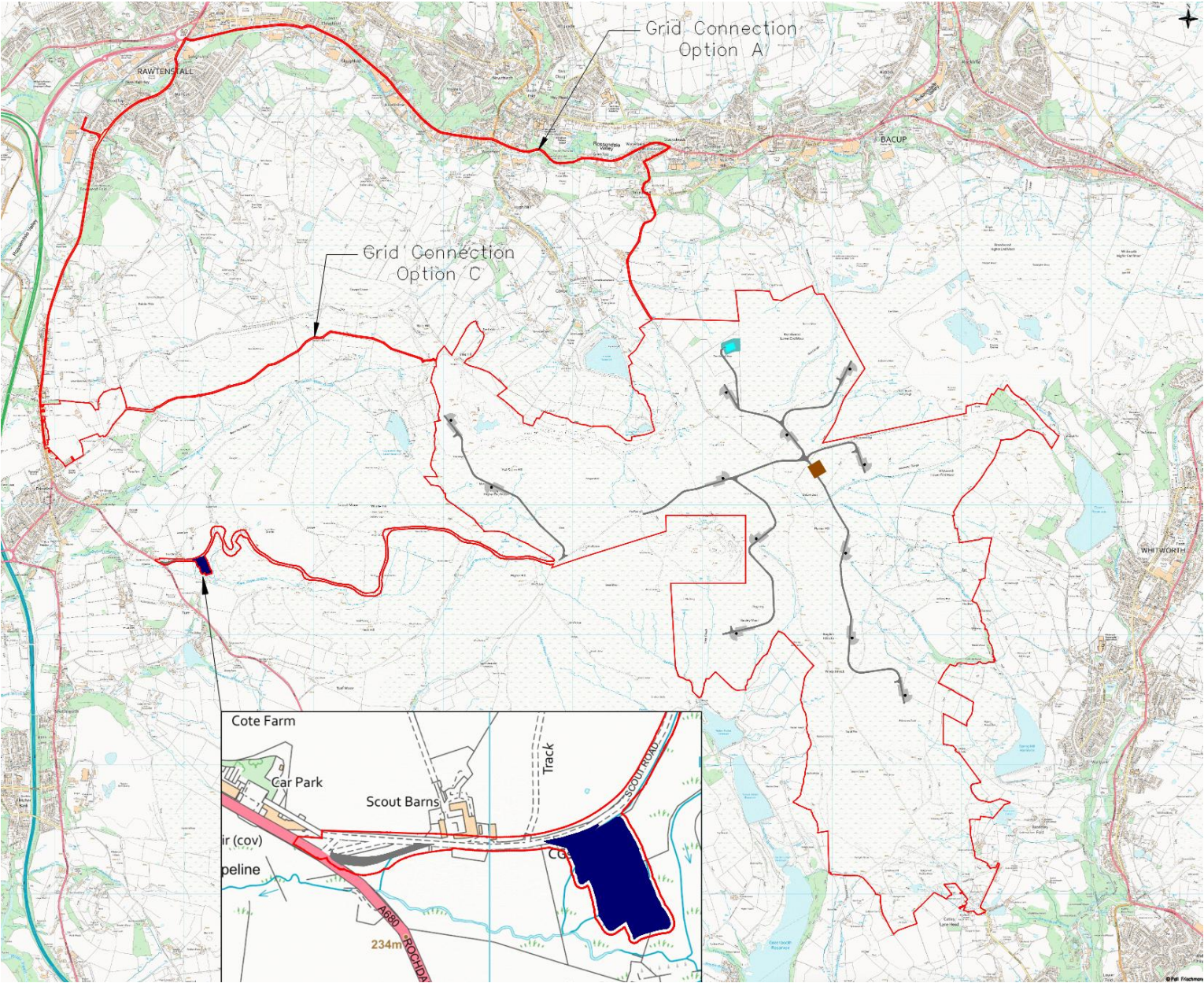


Figure 2: Infrastructure Layout Plan



1.6 Cubico's Approach to Environment, Social & Governance (ESG)



The Applicant's latest (2025) Environment, Social & Governance (ESG) Report¹ sets out their commitment to the global shift toward net-zero carbon, with a sustainability strategy that is core to their operations and ensures their activities promote sustainable and responsible energy development.

Cubico aims to ensure that sustainability influences all aspects of their business. From generating clean energy and managing resources efficiently to engaging with local communities and supporting employees, their goal is to create long-term value while minimising environmental impacts.

Cubico's key 2025 ESG performance headlines include:

- The generation of 6,486 gigawatt hours (GWh) of renewable energy (up from 6,234 GWh in 2024);
- Avoided GHG emissions of 1,615 kilotonnes of carbon dioxide equivalent (ktCO₂e), up from 1,480 ktCO₂e in 2024;
- 2.15 billion litres of water used (down 2% from 2024);
- 6% and 94% of hazardous and non-hazardous was recycled (down from 7% and 97% respectively in 2024); and
- \$2.91m CSR initiatives spend (USD).

¹ <https://www.cubicoinvest.com/download/3025/?tmstv=1778496900>

2. Policy Context

2.1 National Policy

2.1.1 National Planning Policy Framework

Paragraph 7 of the National Planning Policy Framework² (NPPF) explains the purpose of the planning system is to contribute to sustainable development. Paragraph 8c) explains that sustainable development has three overarching objectives that should be pursued in mutually supportive ways, with the environmental objective (to which this Statement relates) including protecting and enhancing the natural, built and historic environment, mitigating and adapting to climate change, and supporting the transition to a low carbon economy.

NPPF paragraph 161 explains the planning system should support the transition to net zero by 2050, and support renewable and low carbon energy and associated infrastructure. Paragraph 163 requires the need to mitigate and adapt to climate change to be considered when preparing and assessing planning applications, taking into account the full range of potential climate change impacts. Paragraph 164 states that new development should be planned for in ways that avoid increased vulnerability to climate change, and reduce GHG emissions through its location and design.

Paragraph 168 further explains that, when determining planning applications for renewable and low carbon energy development and associated infrastructure, local planning authorities should give significant weight to the associated benefits and the proposal's contribution to a net zero future.

On December 2025, Government published a consultation on proposed reforms to the NPPF and other changes to the planning system together with a revised draft NPPF³. A key proposed change relates to renewable and low carbon energy development and electricity network infrastructure ('W3') where "substantial" weight (currently "significant" weight) should be given to the benefits of such developments by local planning authorities in decision-making, including supporting the transition to net zero;

The NPPF recognises the key role of planning in supporting the UK's pursuit of the 17 United Nations Sustainable Development Goals ('UNSDGs')⁴ which address social progress, economic wellbeing and environmental protection. Example UNSDGs relevant to the Proposed Development are presented in **Figure 3**.

² <https://assets.publishing.service.gov.uk/media/675abd214cbda57cacd3476e/NPPF-December-2024.pdf>

³ <https://www.gov.uk/government/consultations/national-planning-policy-framework-proposed-reforms-and-other-changes-to-the-planning-system>

⁴ <https://sdgs.un.org/2030agenda>

Figure 3. Relevant UN Sustainable Development Goals



2.1.2 Planning Practice Guidance

Planning Practice Guidance (PPG)⁵ provides guidance on various planning issues, underpinning NPPF policies including those linked to sustainability, energy and climate change. Regarding energy infrastructure, PPG highlights the importance of maximising the supply of renewable and low carbon technologies to ensure UK energy security whilst reducing GHG emissions.

⁵ <https://www.gov.uk/government/collections/planning-practice-guidance>

⁶ <https://www.legislation.gov.uk/ukxi/2019/1056/contents/made>

⁷ <https://www.legislation.gov.uk/ukpga/2023/52>

⁸ <https://labour.org.uk/wp-content/uploads/2024/03/Make-Britain-a-Clean-Energy-Superpower.pdf>

2.1.3 Climate Change Act 2008

The Climate Change Act (2008) as amended⁶ sets a legally binding target for the UK to reduce CO₂ emissions to net zero by 2050, the world's first major economy to do so. The Act requires Government to set legally-binding 'carbon budgets' to act as stepping-stones towards the 2050 target, establishing a cap on the amount of greenhouse gases emitted over a five-year period. Seven carbon budgets have been put into law to date and run up to 2042, aiming to reduce GHG emissions by at least 87% between 2037 and 2042 relative to 1990 levels.

2.1.4 Energy Security Act 2023

The Energy Security Act 2023 became law in October 2023, and seeks to transform the UK's energy system by strengthening energy security, supporting the delivery of net zero, and ensuring household energy bills are affordable in the long term⁷.

2.1.5 Make Britain A Clean Energy Superpower

Make Britain A Clean Energy Superpower (2024)⁸ explains Government plans to cut energy bills, create jobs and deliver energy security with cheaper, virtually zero carbon electricity by 2030.

2.1.6 National Energy Systems Operator (NESO)

The National Energy System Operator (NESO) is the nationalised energy system operator for the UK. Previously owned by National Grid plc, it is a public corporation which operates both the electricity and gas distribution systems from 1 October 2024.

NESO's Strategic Priorities⁹ including enabling a zero carbon electricity system by adopting a whole system approach, encouraging innovation and collaboration. Whilst acknowledging it is a “huge challenge”, NESO has prepared Clean Power 2030 Pathways to establish the location and type of new investment and infrastructure needed to deliver Labour Government's ambition for a virtually zero carbon national electricity grid by 2030.

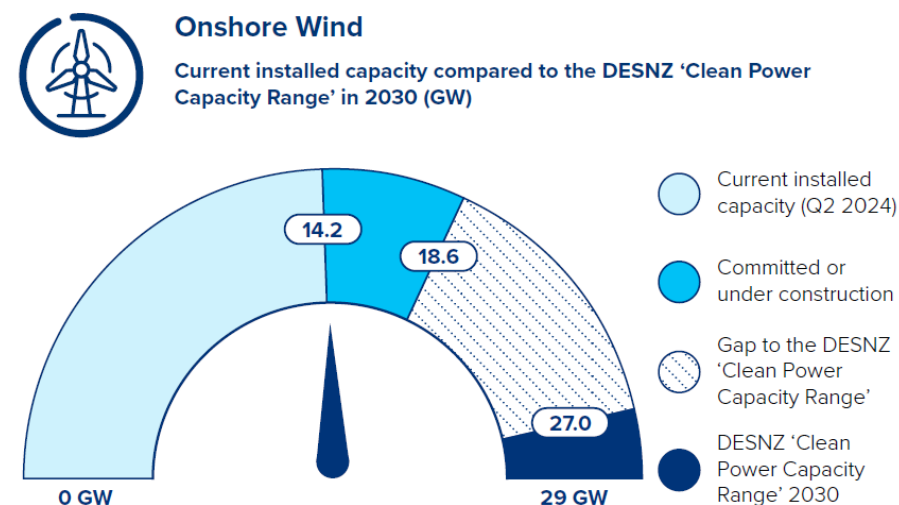
2.1.7 Clean Power 2030 Action Plan

UK Government's Clean Power 2030 Action Plan¹⁰ accepts the independent advice from NESO regarding the energy infrastructure required to deliver Clean Power 2030. In a typical weather year, the 2030 power system will see clean sources produce at least as much power as Great Britain consumes in total over the whole year, and at least 95% of Great Britain's generation; reducing the carbon intensity of our generation from 171gCO₂e/kWh in 2023 to well below 50gCO₂e/kWh in 2030.

The Plan explains the importance of moving fast to deliver the once in a generation upgrade of Britain's energy infrastructure, and how the Labour Government has already removed the NPPF's previous de facto ban on onshore wind in order to support Government's ambition for between 27 and 29 gigawatts (GW) of new onshore wind capacity by 2030, compared to 14.2 GW of current (2024) onshore wind capacity as illustrated in **Figure 4**.



Figure 4. Onshore Wind – Current installed capacity and 2030 Clean Power Capacity Range [Clean Power 2030 Action Plan]



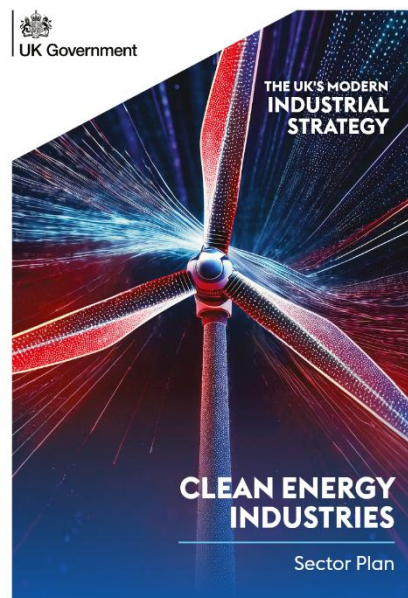
⁹ <https://www.neso.energy/about/strategic-priorities>

¹⁰ <https://assets.publishing.service.gov.uk/media/677bc80399c93b7286a396d6/clean-power-2030-action-plan-main-report.pdf>

2.1.8 UK's Modern Industrial Strategy: Clean Energy Industries Sector Plan

Published June 2025, the UK's Modern Industrial Strategy: Clean Energy Industries Sector Plan (2025)¹¹ sets out the approach proposed by Government to back the UK's strengths and ambitious plans for eight high-growth sectors, including the 'Clean Energy Industries' sector. Regarding onshore wind energy, the Strategy states:

- *"Where Britain has strengths, the Government will double down on them. We will: ...unleash the pent-up power of onshore wind, maintaining momentum after the Government lifted the ban on this growing technology"* (page 8);
- *"The onshore wind supply chain sector is comparatively underdeveloped in the UK compared to offshore wind – this is a missed opportunity. The onshore wind sector directly supported 6,600 full-time equivalent (FTE) jobs, supported a further 13,100 FTE indirectly, and generated £191 million in exports, in 2022. The Government estimates that the onshore wind sector could support up to 45,000 direct and indirect jobs in Great Britain by 2030"* (page 47); and



- *"Installed capacity is planned to almost double by 2030. Given the future growth in [the onshore wind] sector, there is significant economic opportunity for the UK, particularly in areas of existing strengths: development, balance of plant and operations in the onshore wind sector"* (page 47).

2.2 Lancashire / Rossendale

RBC is one of Lancashire's twelve districts, and as a result county planning policy and related guidance is relevant to the Proposed Development.

2.2.1 Lancashire 2050

Lancashire 2050¹² is a strategic framework is organised around eight key priority areas, which includes "Environment and Climate". To meet Lancashire's low carbon ambitions, promote clean energy and enhance our rich natural environment, the key objectives of this topic are:

- To substantially reduce carbon emissions and energy demand;
- To increase energy generation from low carbon sources, including renewables;
- To improve the resilience of infrastructure assets and services to climate change;
- To significantly grow the low carbon and environment sectors of Lancashire's economy; and
- To retain rich biodiversity and natural environment.

¹¹ https://assets.publishing.service.gov.uk/media/69256e16367485ea116a56de/industrial_strategy_policy_paper.pdf

¹² <https://www.lancashire2050.co.uk/our-priorities/environment/>

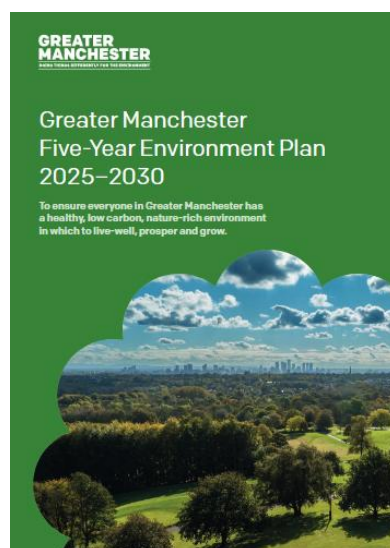
2.3 Greater Manchester / Rochdale

RMBC is one of Greater Manchester's ten boroughs, and as a result Greater Manchester planning policy and related guidance is relevant to the Proposed Development.

2.3.1 Greater Manchester Five-Year Environment Plan 2025–2030

The *Greater Manchester Five-Year Environment Plan 2025–2030*¹³ explains that Greater Manchester declared a climate emergency in 2019, launched its first Five-Year Environment Plan (2019–2024), and set a target to become a carbon neutral city region by 2038.

The Plan identifies achieving a low carbon energy system, including new large-scale onshore wind, as key opportunities to support its ambitions for carbon neutrality by 2038. Direct actions identified by the Plan include increasing the capacity of large-scale renewable energy generation and storage including onshore wind. The target for 2030 is to add 375MW of new renewable energy generation, equivalent to 103 ktCO₂ of associated carbon savings, based on a pathway up to 2038.



2.3.2 Whole System Smart Energy Plan: Greater Manchester

The vision of the Whole System Smart Energy Plan: Greater Manchester¹⁴ is for Greater Manchester is to be *“a carbon neutral city region, with an energy system which is smart and fit for the future, low carbon and economically, environmentally and socially sustainable”*.

The intention is to play a leading role in the low carbon transition, aiming to become an Energy Transition Region. The plan aims to ensure sustainable clean growth, which is smart, economically viable and provides energy security to Greater Manchester's households, communities and businesses across the city region.

As increased national and local standards begin to drive innovation, it will also be crucial to stimulate skills and training in the sector, to enable roll out of retrofit measures and new infrastructure at the scale required. Presently, a shortage of suitably skilled contractors and labour force means that the sector is being held back from progressing at the rate that is comparable to other European countries.

2.3.3 Places for Everyone

Places for Everyone Joint Development Plan 2022-2039 (2024)¹⁵ ('PfE') is the strategic spatial plan setting out the planning policy framework for nine Greater Manchester boroughs (including Rochdale) to achieve sustainable and inclusive growth. The Plan seeks to support Greater Manchester's ambition to be a carbon neutral city region by 2038, whilst being *“at the forefront of climate action with clean air and a flourishing natural environment”* is key to the Plan's vision.

¹³ https://www.greatermanchester-ca.gov.uk/media/alnI0fsy/gmca_5-year-plan_final_digital_v3-ua.pdf

¹⁴ <https://es.catapult.org.uk/report/smart-energy-plan-greater-manchester-combined-authority/>

¹⁵ <https://www.greatermanchester-ca.gov.uk/media/9578/places-for-everyone-joint-development-plan-document.pdf>

PfE Objective 7 Playing our part in ensuring that Greater Manchester is a more resilient and carbon neutral city-region seeks the following actions of relevance to the Proposed Scheme:

- Promote carbon neutrality of new development by 2028;
- Promote sustainable patterns of development that minimise the need to travel and contribute to cleaner air;
- Locate and design development to reduce car dependency;
- Facilitate provision of infrastructure for cleaner vehicles; and
- Improve energy efficiency and the generation of renewable and low carbon energy.

PfE Objective 7 Objective 8: Improve the quality of our natural environment and access to green spaces meanwhile seeks to:

- Enhance special landscapes, green infrastructure, biodiversity and geodiversity;
- Improve access to the natural environment and green spaces including parks; and
- Promote the role of green space in climate resilience and reducing flood risk.

Key sustainability-related policy of PfE of relevance to this Statement and the Proposed Scheme is summarised below.

Policy JP-S1: Sustainable Development: To help tackle climate change, development should aim to maximise its economic, social and environmental benefits simultaneously, minimise its adverse impacts, utilise sustainable construction techniques and actively seek opportunities to secure net gains across each of the different objectives.

For Greater Manchester to meet its carbon neutrality commitments there has to be an increase in renewable energy generation, the benefits of which will need to be balanced against any potential impacts such as on residential amenity, local environment and landscape character, sites of conservation and heritage value, telecommunications, aviation and air quality.

Policy JP-S2: Carbon and Energy: The aim of delivering a carbon neutral Greater Manchester no later than 2038, with a dramatic reduction in GHG emissions, will be supported through a range of measures including taking a positive approach to renewable and low carbon energy schemes whilst also increasing the range of nature-based solutions including carbon sequestration through the restoration of peat-based habitats.

Policy JP-S4: Flood Risk and the Water Environment: An integrated catchment-based approach will be taken to protect the quantity and quality of water bodies and managing flood risk, by:

- Returning rivers to a more natural state, where practicable;
- Working with natural processes and adopting a natural flood management approach to slow the speed of water drainage and intercept water pollutants;
- Locating and designing development so as to minimise the impacts of current and future flood risk;
- Expecting developments to manage surface water runoff through sustainable drainage systems (SuDS) and as close to source as possible; and
- Ensuring that SuDS are designed to provide multifunctional benefits wherever possible, including for water quality, nature conservation and recreation.

Policy JP-S5: Clean Air: A comprehensive range of measures will be taken to support improvements in air quality, including by:

- Requiring applications for developments that could have an adverse impact on air quality to submit relevant air pollution data so that adverse impacts on air quality can be fully assessed and development only permitted where they are acceptable and/or suitable mitigation can be provided; and
- Restricting developments that would generate significant point source pollution such as some types of industrial activity and energy generation.

Policy JP-S6: Resource Efficiency: The achievement of a circular economy and a zero-waste economy will play a key role in meeting Greater Manchester's ambition of becoming a leading green city region by 2038. Measures that will help achieve this include using sustainable design and construction techniques to reduce carbon emissions, adapt and future proof to the impact of climate change, reduce and recycle waste and minimise water use.

2.4 Local Policy

2.4.1 Rossendale Local Plan

Environmental Objectives of the Rossendale Local Plan 2019 to 2036 (2021)¹⁶ include (page 8) the need to reduce impacts from, and adapt to, climate change including through 'green energy projects'. Strategic Priorities (page 9) similarly include the need to address the climate change emergency through measures including 'renewable energy projects'. Key Local Plan policies relating to environmental sustainability are summarised below.

Strategic Policy SD1: Presumption in Favour of Sustainable Development:

When considering development proposals the Council will take a positive approach that reflects the presumption in favour of sustainable development contained in the NPPF. Planning applications that accord with the policies in this Local Plan will be approved without delay, unless material considerations indicate otherwise.

Strategic Policy ENV1: High Quality Development in the Borough: All proposals for new development will be expected to take account of the character and appearance of the local area, including, as appropriate:

- Safeguarding and enhancing the built and historic environment;
- Being sympathetic to surrounding land uses and occupiers, and avoiding demonstrable harm to the amenities of the local area;
- Not having an unacceptable adverse impact on neighbouring development by virtue of it being over-bearing or oppressive, overlooking, or resulting in an unacceptable loss of light;
- Providing landscaping as an integral part of the development, protecting existing landscape features and natural assets, and habitat creation;

¹⁶ <https://www.rossendale.gov.uk/downloads/file/17076/rossendale-local-plan-2019-to-2036-written-statement>

- There is no adverse impact to the natural environment, biodiversity and green infrastructure unless suitable mitigation measures are proposed, and the Council will seek biodiversity net gain consistent with the current national policy;
- That proposals do not increase the risk of flooding on the site or elsewhere, where possible reducing the risk of flooding overall, having regard to the surface water drainage hierarchy;
- Designs that will be adaptable to climate change, incorporate energy efficiency principles and adopting principles of sustainable construction including Sustainable Drainage Systems (SuDS); and
- Ensuring that contaminated land, land stability and other risks associated with coal mining are considered and, where necessary, addressed through appropriate investigation, remediation and mitigation measures.

Strategic Policy ENV2: Historic Environment: The Council will support proposals which conserve or, where appropriate, enhance the historic environment of Rossendale.

Strategic Policy ENV3: Landscape Character & Quality: The distinctive landscape character of Rossendale, including large scale sweeping moorlands, pastures enclosed by dry stone walls, and stonebuilt settlements contained in narrow valleys, will be protected and enhanced. The Council will expect development proposals to conserve and, where possible, enhance the natural and built environment, its immediate and wider environment, and take opportunities for improving the distinctive qualities of the area and the way it functions.

Strategic Policy ENV4: Biodiversity, Geodiversity and Ecological Networks: Development proposals that have potential to affect a national or locally-designated site, as shown on the Policies Map and its immediate environs, or on protected habitats or species, will be expected to be accompanied by relevant surveys and assessments detailing likely impacts. A sequential

approach should be followed to avoid harm and where possible enhance biodiversity, and where not possible, provide appropriate mitigation and, as a last resort, on and off-site compensatory measures to offset the impact of development. Any development that adversely affects or damages a Site of Special Scientific Interest (SSSI) will not normally be granted permission.

Strategic Policy ENV5: Green Infrastructure Networks: Development proposals will be expected to support the protection, management, enhancement and connection of the green infrastructure network, as identified on the Policies Map. Proposals which enhance the integrity and connectivity of the green infrastructure network will be supported. Development proposals should seek first to avoid or, if not feasible, mitigate biodiversity impacts on-site.

Strategic Policy ENV6: Environmental Protection: Development which has the potential, either individually or cumulatively, to result in pollution that has an unacceptable impact on health, amenity, biodiversity (including designated sites), air or water quality, will only be permitted if the risk of pollution is effectively prevented or reduced and mitigated to an acceptable level.

Strategic Policy ENV7: Wind Turbines: Areas suitable for commercial wind turbines have been identified on the Policies Map. New larger turbines or re-powering of existing ones may be considered on the “High Moorland Plateau Areas Suitable for Wind Turbines” shown on the Policies Map, provided areas of deep peat (over 40cm depth) and blanket bog are avoided. Commercial proposals for new wind turbines or re-powering of existing schemes outside Suitable Areas defined on the Policies Map should demonstrate that the criteria used for designating these areas have been fully addressed, as well as covering the criteria set out below:

- The impacts identified by the local community have been taken into account and fully addressed;
- The scale, height and siting of the turbine(s) is appropriate to the area;

- It would not result in the loss of, or significantly detract from, key views of scenic landmarks or landscape features;
- The design, colour, layout and arrangement of turbines are appropriate to their setting;
- The proposal would not result in unacceptable visual clutter in combination with other existing structures including cumulative impacts;
- There would be no unacceptable harm to neighbour amenity, protected species or the use of public rights of way or bridleways or highway safety;
- Shadow and Reflective Flicker impacts on buildings and Public Rights of Way are fully assessed with a precautionary approach taken to mitigation;
- The scheme would not result in unacceptable noise impacts, including amplitude modulation, on residential properties and other sensitive users;
- The impact on geology, including former mine workings, peat and hydrogeology is fully appraised and issues identified addressed, including restoration plans as appropriate;
- No development is proposed on areas of peat of over 40cm depth;
- Impacts on designated species and ecological assets are avoided or minimised;
- The proposal does not cause unacceptable harm to any heritage assets and their setting;
- The impact on recreational assets is assessed and impacts on key routes such as the Pennine Bridleway and Rossendale Way are avoided or if this is not possible, mitigated;
- The scale, siting and design of any ancillary structures and access tracks are appropriate to the character of the area and the landscape setting;

- The submission contains a Construction Management Plan, including impacts on the Highway network, and incorporates proposals for managing the de-commissioning and removal of the turbines and the restoration of the site;
- Any landscape features removed or altered to enable the erection of the turbine are reinstated and the design, materials and scale of any new fencing or walling needed is appropriate to the character of the local area;
- Issues with respect to shadow and reflective flicker, TV and phone reception, and air traffic radar reception are appropriately addressed; and
- A de-commissioning scheme is included.

Strategic Policy ENV8: Other forms of Energy Generation: The Council will take a positive approach to renewable energy proposals in the Borough, such as solar and hydro-electric schemes, including community led initiatives, subject to the Authority being satisfied that any negative impacts, including of any supporting infrastructure, can be minimised. Proposals for decentralised energy generation and distribution will be given positive consideration subject to their wider environmental impacts.

Strategic Policy ENV9: Surface Water Run-Off, Flood Risk, Sustainable Drainage and Water Quality: All development proposals will be required to consider and address flood risk from all sources. A sequential approach will be taken and planning permission will only be granted for proposals which would not be subject to unacceptable flood risk, or materially increase the risks elsewhere, and where it is a type of development that is acceptable in a Flood Risk location.

Strategic Policy ENV10: Trees and Hedgerows: Development proposals must seek to avoid the loss of, and minimise the risk of harm to, existing trees, woodland, and/or hedgerows of visual or nature conservation value. Any harm to ancient and veteran trees should be avoided unless wholly exceptional circumstances can be demonstrated.

2.4.2 Rossendale Climate Change Strategy

RBC's Climate Change Strategy (2020)¹⁷ explains that the Council declared a Climate Change Emergency in September 2019 and committed to taking urgent action. The Council's aims are to make their own activities net-zero carbon by 2030, and to work in partnership to reduce carbon emissions for the whole of Rossendale.

The Strategy recognises that the generation of more renewable energy is key to tackling climate change, alongside a reduction in the overall consumption of energy.

2.4.3 Rossendale Climate Change SPD

RBC's Climate Change Supplementary Planning Document (SPD) (2022)¹⁸ explains that climate change is a significant issue which requires urgent action, including new development which mitigates GHG emissions and is itself resilient to the impacts of climate change. The SPD covers four key principles, including the promotion of renewable energy generation within the borough.

2.4.4 Rochdale Core Strategy

The *Rochdale Core Strategy (2016)*¹⁹ sets out the long-term spatial strategy for future development of Rochdale Borough. Key environmental challenges set out in the Strategy include (p1) "promoting sustainable and renewable energy sources". Key Core Strategy sustainability policies are summarised below.

Policy SD1: Delivering Sustainable Development: The Council will take a positive approach that reflects the presumption in favour of sustainable development contained in the NPPF. Planning applications that accord with the policies in this Local Plan will be approved without delay, unless material considerations indicate otherwise.

Policy P2: Protecting and enhancing character, landscape and heritage: The Council will protect and enhance the borough's character, the distinctiveness of its town centres, housing areas and countryside, and the qualities of its landscapes.

Policy G3: Renewable and low carbon energy developments: Any proposal and associated infrastructure must avoid harm to the health and safety of the public, including through nuisance or adverse impact on highway safety by conflict with or undue distraction to road users. Any harm to the following must be minimised and appropriately mitigated:

- The visual character and quality of the landscape or townscape and the physical record of the historic and cultural evolution of the landscape;
- The setting of heritage assets including Scheduled Ancient Monuments, Conservation Areas and Listed Buildings;
- Local residents and their amenity;

¹⁷ <https://www.rossendale.gov.uk/downloads/file/16648/rossendale-council-climate-change-strategy>

¹⁸ <https://www.rossendale.gov.uk/downloads/file/17881/climate-change-spd>

¹⁹ <https://www.rochdale.gov.uk/downloads/file/405/core-strategy>

- Biodiversity including protected species, statutory and locally designated sites and important habitats, and geodiversity;
- The value of the borough's peatlands as an ecological and hydrological resource and as a carbon sink;
- The value of the surrounding area for relaxation and recreation;
- Water quality;
- Land which is used for water catchment purposes and which is critical to the delivery of water supply; and
- Highway safety.

Any proposal must demonstrate the best use of location, topography, siting, design and colour to minimise its visual and other impacts, including any cumulative impacts. Any ancillary structures and access roads should employ sensitive design and the use of local materials to respect the character and appearance of the setting. The visual impact of infrastructure associated with renewable energy developments should be satisfactorily addressed, including by routing power lines underground wherever possible.

All proposals should seek to minimise the length of cable connection in order to reduce the visual impact of such structures when sited above ground. It must be demonstrated that the proposal will not result in electro-magnetic interference with local television reception and specialist radio communication networks.

Policy G6: Enhancing green infrastructure: The Council will sustain and enhance a green network to support growth and regeneration in the borough and provide a high quality environment that meets the needs of our community and visitors to the borough. Priority objectives include managing and responding to environmental risks such as flooding and the impacts of climate change. Priorities for the South Pennine uplands should be on the protection and enhancement of its natural beauty, cultural and ecological value.

Policy G7: Increasing the value of biodiversity and geodiversity: The Council will ensure that sites and features of biodiversity and geodiversity importance are given full and appropriate recognition and protection. Opportunities for enhancing biodiversity and geodiversity, creating new sites and features of interest and improving opportunities for public enjoyment will be supported. No development should result in a net loss of biodiversity or geodiversity interest in the borough and overall development in the borough should result in a net gain.

Priorities for the South Pennine Moors include maintaining and enhancing the peatland habitats of the moorland and to support development, land and water management activities which provide an opportunity to conserve and enhance the value of moorland for upland breeding birds of conservation significance and the habitats on which they depend and which do not harm biodiversity value.

Policy G8: Managing water resources and flood risk: The Council will ensure that new development (including flood risk mitigation measures) does not lead to any form of increased flooding locally or further downstream, does not impede natural water and flood risk management, is not detrimental to existing or potential flood storage areas, contributes where possible to alleviating existing flood risk, is itself well protected from flood risk and ensures prudent use of water resources.

Policy G9: Reducing the impact of pollution, contamination and land instability: The Council will reduce all forms of pollution, contamination and land instability in the borough through measures including:

- Requiring that development does not have impacts that lead to an unacceptable increase in air, water, noise, light or other pollution; and
- Requiring that any risks arising from contaminated land or land instability, and appropriate actions to address these risks, are identified prior to any development taking place on that land and the identified actions taken.

Policy G11: Managing waste: The Council will support sustainable waste management and ensure that Rochdale borough makes an appropriate contribution towards Greater Manchester’s waste management needs through measures including the promotion of Site Waste Management Plans in major construction projects within the borough.

Replaced Rochdale Local Plan Policies: PfE Table A.5 Replaced Rochdale Local Plan Policies (Appendix A) sets out the following Rochdale Local Plan sustainability policies which have been replaced by associated PfE policies as set out in **Table 1**.

Table 1. Rochdale Local Plan Sustainability Policies Replaced by PfE Policies

Rochdale Core Strategy Policy	Replaced by PfE Policy	Superseded Sections
G1 Tackling and adapting to climate change	JP-S1, JP-S2 and JP-S3	All
G2 Energy and new development	JP-S1, JP-S2 and JP-S3	All
G3 Renewable and low carbon energy developments (Partially)	JP-S1, JP-S2 and JP-S3	Delete first paragraph. The general approach to renewable and low carbon energy developments is more up to date and provided in more detail within PfE policies

2.4.5 Rochdale Climate Change Adaptation SPD

RMBC’s Climate Change Adaptation SPD (2012)²⁰ relates primarily to traditional built environment development such as new homes and other buildings, and as such is not considered relevant to the Proposed Scheme.

2.4.6 Rochdale Climate Change Strategy & Delivery Plan

RMBC’s Climate Change Strategy & Delivery Plan 2021-25²¹ explains how the Council declared a climate emergency in 2019, and has committed to become a carbon neutral borough by 2038. Key features of a carbon neutral Rochdale that are identified include

- Everyone benefitting from clean and smart energy production and consumption;
- Energy is generated locally and able to meet local demand; and
- Low carbon and renewable energy businesses operating in the borough with local people employed in the sector.

Regarding measuring progress, RMBC has set a target to increase renewable energy generated in the borough from 15 gigawatt hours (GWh) to 141 GWh by 2030.

2.5 Summary

The planning policy context for the Proposed Development from an environmental sustainability perspective can be summarised as follows:

- The planning system must contribute to sustainable development including supporting the transition to the UK’s legally-binding net zero

²⁰ <https://www.rochdale.gov.uk/downloads/file/550/climate-change-adaptation-spd>

²¹ <https://www.rochdale.gov.uk/downloads/file/1120/climate-change-strategy-and-delivery-plan>

2050 target through measures including the delivery of new renewable energy generation and associated infrastructure;

- When determining planning applications for renewable energy generation, significant weight should be given to the associated benefits including contribution to a net zero future;
- Great Manchester's vision is to become a carbon neutral district by the earlier date of 2038, and for which increasing the capacity of large-scale renewable energy generation including onshore wind is recognised as key;
- Both RBC and RMBC have declared a climate emergency and recognise that new renewable energy generation is needed; and
- It is however important that new renewable energy generation minimise impacts to residents and the natural and historic environment in terms of landscape, heritage, amenity, biodiversity, hydrology, and the value of peatland as a carbon sink.

Refer to the **Planning Design and Access Statement** for a full appraisal of the Proposed Development's planning policy context and its response to this context. The following Chapter focuses on the Proposed Development's sustainability, energy and climate change performance.

3. Sustainability, Energy & Climate Change Performance

3.1 Introduction

This chapter explains how the Scout Moor II proposals respond to the planning policy and legislative context set out in **Chapter 2**. It does so under the following sustainability topic headings to ensure a comprehensive approach:

- GHG emissions, savings and clean energy generation
- Ecology
- Ornithology
- Outline Habitat Management and Monitoring Plan
- Moorland Restoration and Management Plan
- Biodiversity Net Gain
- Outline Peat Restoration Plan
- Flood Risk Assessment
- Drainage
- Ground conditions
- Archaeology
- Transport

- Noise & Vibration
- Air quality
- Circular Economy

3.2 GHG Emissions, Savings & Clean Energy Generation

Introduction

Volume 1, Chapter 15 (Climate Change) and **Volume 2, Appendix 15.1 (Carbon Calculator)** of the **Environmental Statement** report the approach to, and findings of, a detailed and comprehensive greenhouse (GHG) assessment covering the whole project lifecycle (i.e. construction, operational and decommissioning stages). This assessment has utilised the Scottish Environmental Protection Agency's (SEPA) Carbon Calculator for Wind Farms on Scottish Peatlands²² which quantifies GHG emissions and savings from various sources as summarised in **Table 2** together with the project stage during which these emissions and savings occur.

²² <https://www.gov.scot/publications/carbon-calculator-for-wind-farms-on-scottish-peatlands-factsheet/>

Table 2. SEPA Carbon Calculator – GHG Emissions & Savings Sources

GHG Emissions Sources	GHG Savings Sources
Turbine life (construction & decommissioning)	Generation of zero carbon electricity reducing demand for fossil-fuel power on the grid (operation)
Back-up generation (operation)	Improvement of degraded bogs (construction & operation)
Reduced carbon fixing potential of peat (construction)	Removal of drainage from foundations & hardstanding (decommissioning)
Losses from soil organic matter (construction)	
Dissolved Organic Carbon ('DOC') and percentage of total gaseous loss of carbon that is leached as DOC ('POC') leaching (construction)	

Whilst developed for onshore windfarms on Scottish peatlands, the tool accepts input data that is specific to the scheme and site in question (e.g. peat type, depth, dry bulk density, drainage conditions, average air temperature, scheme design, and site decommissioning restoration proposals etc) as well as published benchmarks where such data is not available, and as such is considered readily applicable to onshore windfarm proposals on peatland in other parts of the UK.

The Carbon Calculator was created at the University of Aberdeen and further developed under the steerage of various statutory bodies, ensuring it is rooted in science. It has been applied successfully to many onshore windfarm projects since its development, and as such represents a significantly more objective approach than could be achieved if the Applicant were to seek to develop their own bespoke methodology. Examples of consented wind farms that have applied the SEPA Carbon Calculator outside of Scotland include Upper Ogmire Wind Farm, Bridgend, Wales²³, and Garn Fach Wind Farm, Newtown, Wales²⁴.

Furthermore The Carbon Calculator quantifies carbon emissions, savings and net GHG effect across the full project lifecycle in line with the ISEP guidance on Assessing GHG Emissions and Evaluating their Significance (2026)²⁵, and establishes the 'carbon payback period', being the period of time in years after the start of project operation at which GHG emissions forecast across the construction, operational and decommissioning stages are balanced out by forecast annual operational GHG savings.

The online version of the Carbon Calculator tool (<https://informatics.sepa.org.uk/CarbonCalculator/>) is not available at the time of writing, as a result a Microsoft Excel version (v 2.14.1) has been used.

Scottish Government's NPF4 Planning Guidance; Policy 2 Climate Mitigation and Adaptation (June 2025)²⁶ recognises that the Carbon Calculator tool has been subject to a recent review by Climate Xchange, but concludes that the tool *"currently remains the best available means by which carbon calculations can be provided in a consistent and comparable format, until such a time as there is an alternative or replacement of the calculator"*.

²³ <https://www.upperogmore-windfarm.co.uk/media/2638353/appendix-033-carbon-balance-assessment.pdf>

²⁴ <https://www.edf-re.uk/wp-content/uploads/2023/04/2023-03-24-EXINFO-Mar-23-Appendix-10-8-Carbon-Balance-Assessment-2023.pdf>

²⁵ <https://www.isepglobal.org/media/iimlrnqw/2026-04-comms-policy-ia-ghg-assessment.pdf>

²⁶ <https://www.gov.scot/binaries/content/documents/govscot/publications/advice-and-guidance/2025/06/npf4-planning-guidance-policy-2-climate-mitigation-adaptation/documents/npf4-planning-guidance-policy-2-climate-mitigation-adaptation/npf4-planning-guidance-policy-2-climate-mitigation-adaptation/govscot%3Adocument/npf4-planning-guidance-policy-2-climate-mitigation-adaptation.pdf>.

Input Data & Assumptions

All input data for the Carbon Calculator and associated assumptions provided by the peat, hydrology, ecological and engineering specialists on the team is set out in **Volume 2, Appendix 15.1 (Carbon Calculator)** of the **Environmental Statement**. This information relates to various factors pre-construction, post-construction and post-decommissioning including peat depth and condition, water table depth, extent of drainage around drainage features, turbine foundations and hardstandings, access tracks, cable trenches, additional peat excavation, proposed decommissioning and habitat restoration measures, and the time required for the degraded bog habitat to improve following implementation of these measures.

It should be noted that the Carbon Calculator combines GHG emissions forecast across the construction, operational and decommissioning stages so that the carbon payback period can be established by dividing these lifecycle GHG emissions by the annual operational GHG savings to derive the carbon payback period. Furthermore, the tool assumes that 100% of carbon stored within peat excavated during construction is lost to the atmosphere as carbon dioxide (CO₂), whereas the appropriate management and restoration of this peat on Site as it arises will minimise or avoid such losses. As such forecast construction-stage GHG emissions are worse-case.

A further worse-case assumption has been made in relation to the operational stage that each turbine will be rated at 5.7 megawatts (MW) whereas turbine power ratings up 6 or 7 MW are under consideration. Carbon sequestration that will be achieved by the proposed 6.8 ha of new upland woodland planting is also excluded from the assessment.

Baseline conditions

The most appropriate geographical scale at which to evaluate GHG emissions and savings from the Proposed Development is the combined RBC and RMBC administrative areas. Baseline GHG emissions for the most recent period (2023 calendar year) have been obtained from UK local authority and regional greenhouse gas emissions statistics²⁷, comprising 425,365 tCO₂e and 871,819 tonnes of carbon dioxide equivalent (tCO₂e) for RBC and RMBC, respectively, or total emissions of 1, 297,183 tCO₂e for RBC and RMBC together.

Regarding currently installed onshore wind energy generation capacity, RBC and RMBC had 114.3 MW and 1.3 MW installed, respectively, as of the end of 2024²⁸, equating 115.6 MW in total for these authorities.

Regarding baseline GHG conditions at the Site, less than 13% of peatland in England is considered to be in a near natural state which stores rather than emits carbon²⁹, and even in an undisturbed state, peatlands emit the GHG methane whilst accumulating carbon derived from the atmosphere. The main habitat present on Site is highly degraded blanket bog, with signs of historic burning and drainage in all areas, and with the blanket bog species communities being highly eroded and species-poor. It is therefore considered likely that significant GHG emissions occur on Site from the degraded peatland in the baseline scenario. It is, however, highly challenging to estimate these baseline GHG emissions from degraded peatland within the Assessment Boundary with any accuracy. For the purposes of the GHG assessment therefore, baseline GHG emissions that occur from within the Site are assumed to be zero.

²⁷ <https://assets.publishing.service.gov.uk/media/667ad5b45b0d63b556a4b305/2005-22-uk-local-authority-ghg-emissions.xlsx>

²⁸ https://assets.publishing.service.gov.uk/media/68da76d2c487360cc70c9e9d/Renewable_electricity_by_local_authority_2014_-_2024.xlsx

²⁹ <https://researchbriefings.files.parliament.uk/documents/POST-PN-0668/POST-PN-0668.pdf>

The University of Manchester's Tyndall Centre has published carbon budgets (relating to the energy system only) for RBC³⁰ and RMBC³¹ which are derived from the commitments enshrined in the Paris Agreement and informed by the latest climate change science. These carbon budgets are effectively therefore a future baseline of energy-related GHG emissions necessary to achieve net zero by 2050. **Table 3** presents these future carbon budgets proposed for RBC and RMBC both separately and combined, with stated figures being total GHG emission limits for each of 5-year carbon budget periods.

Table 3. RBC and RMBC Carbon Budgets (Energy System Only, tCO₂)

Period	RBC	RMBC	RMB + RMBC
2028-2032	400,000	1,000,000	1,400,000
2033-2037	200,000	500,000	700,000
2038-2042	100,000	300,000	400,000
2043-2047	100,000	100,000	200,000
2048-2100	100,000	100,000	200,000

Mitigation

A range of measures are proposed to minimise GHG emissions during construction, including:

- Avoiding areas of peat greater than 1m in depth;
- The use and upgrading of approximately 4,884 m of existing track;
- The construction of approximately 752 m of floating track across areas of deep peat (>1m) to minimise impacts to this peat;

- The implementation of Peat Management Plan pursuant to planning conditions. This will be prepared in line with the framework established by the **Outline Peat Management Plan (OPMP)**, which details the volumes of peat to be excavated; how and where the peat could be excavated, stored, translocated and managed; and defining how eroded or degraded peat could be restored and necessary management processes; and
- The implementation of a **Moorland Restoration and Management Plan (MRMP)** to enhance existing habitats and providing a net gain in irreplaceable habitats whilst having wider benefits such as enhancing climate resilience.

Regarding operation of the Proposed Development, consent is sought for up to 12 turbines and a total power rating of 68.4 megawatts (MW) comprising turbine with a power rating of 5.7 MW.

The key benefit of renewable energy technology such as wind energy is the generation of zero carbon electricity which reduces demand on traditional forms of energy generation such as fossil fuels. As such it is the operation of the proposed wind turbines which represents the key form of GHG mitigation for the Proposed Development.

³⁰ <https://carbonbudget.manchester.ac.uk/reports/E07000125/print/>

³¹ <https://carbonbudget.manchester.ac.uk/reports/E08000005/print/>

Results

GHG Emissions

Table 4 presents total ‘expected’, minimum’ and ‘maximum’ GHG emissions forecast across the construction, operational and decommissioning stages of the Proposed Development. For the purposes of this assessment, all such emissions are assumed to occur during construction which is scheduled to take 2 years. To facilitate comparison with baseline RBC and RMBC GHG emissions reported above, estimated annual GHG emissions are also presented.

Table 4: Forecast GHG Emissions

GHG Emissions Source	GHG Emissions (tCO ₂ e)		
	Expected	Minimum	Maximum
Turbine life (e.g. manufacture, construction & decommissioning)	58,299	58,299	58,299
Back-up	53,714	53,714	53,714
Reduced carbon fixing potential	2,586	800	7,879
Soil organic matter	21,776	7,198	24,382
Dissolved Organic Carbon (DOC) and percentage of total gaseous loss of carbon that is leached as DOC (POC) leaching	2,512	0	12,099
Felling of forestry	0	0	0
Total	138,896	120,011	156,373
Annual (2 year construction period)	69,448	60,006	78,187

In summary, total ‘maximum’ (i.e. worse-case) GHG emissions from the Proposed Development of 156,570 tCO₂e are forecast, equating to annual emissions of 78,187 tCO₂e under the worse-case assumptions these losses all occur during construction (which will not be the case given back-up generation

emissions will occur during construction, and a proportion of turbine life emissions will occur during decommissioning).

These forecast worse-case annual GHG emissions from the Proposed Development equate to circa 6.0% of the combined baseline GHG emissions reported above for RBC and RMBC.

GHG Savings

Table 5 presents GHG savings that are forecast from the operation of the Proposed Development relative to the fossil fuel grid mix of electricity generation, and from the proposed improvement of the degraded peat bogs on site. Negative values represent GHG emissions savings.

Table 5: Forecast GHG Savings

GHG Savings Source	GHG Emissions (tCO ₂)		
	Expected	Minimum	Maximum
Windfarm CO ₂ emissions relative to fossil fuel grid mix of electricity generation (tCO ₂ /year)	-102,326	-102,326	-102,326
Total CO₂ emissions due to improvement of Site (tCO₂e)			
Improvement of degraded bogs	0	0	-29,267
Improvement of felled forestry	0	0	0
Restoration of peat from borrow pits	0	0	0
Removal of drainage from foundations & hardstanding	-3,446	0	-8,776
Total	-3,446	0	-38,033

In summary, total GHG emissions from Site improvement of -3,446 tCO₂e, 0 tCO₂e, and -38,033 tCO₂e (i.e. GHG emission savings) are forecast for the ‘expected’, ‘minimum’ and ‘maximum’ scenarios respectively.

Annual GHG emissions of -102,326 tCO₂ (i.e. GHG savings) are forecast from the operation of the Proposed Development relative to the fossil fuel mix of electricity generation on the national grid. These annual GHG savings equate to circa -7.9% of the combined baseline GHG emissions reported above for RBC and RMBC.

Carbon Payback Period / Net GHG Effect

Table 6 presents GHG emissions and savings forecast from the construction, operation and decommissioning of the Proposed Development. Annual combined RBC and RMBC carbon budgets (estimated by Turley by dividing the 5-year carbon budgets presented in **Table 3** by 5 i.e. assuming an equal split of emissions within each budget across its 5 years). Negative values represent emissions savings, and the table cell shaded green highlights the year in which carbon payback is forecast, being the point at which operational GHG savings balance out GHG emissions forecast from construction, operation and decommissioning (which are all assumed to occur during construction).

Table 6: Forecast GHG Emissions, GHG Savings, Net GHG Effect, and Carbon Payback Period

Year	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Project Stage	Construction -->		Operation -->							
Construction GHGs	78,285	78,285	--	--	--	--	--	--	--	--
Operational GHGs ⁽¹⁾	--	--	-102,326	-102,326	-102,326	-102,326	-102,326	-102,326	-102,326	-102,326
Net GHGs	78,285	78,285	-102,326	-102,326	-102,326	-102,326	-102,326	-102,326	-102,326	-102,326
Cumulative net GHGs	78,285	156,373	54,047	-48,082 ⁽²⁾	-150,605	-252,931	-355,257	-457,583	-559,909	-662,235
RBC + RMBC annual carbon budget	280,000	280,000	280,000	280,000	280,000	140,000	140,000	140,000	140,000	140,000
Net GHGs as % of RBC + RMBC annual carbon budget	27.92%	27.92%	-36.55%	-36.55%	-36.55%	-73.09%	-73.09%	-73.09%	-73.09%	-73.09%
Notes										
⁽¹⁾ Assumes constant fossil fuel electricity generation mix on the national grid										
⁽²⁾ Forecast maximum carbon payback period against the fossil fuel grid mix is 1.5 years (18.3 months) after the Proposed Development becomes operational										

In summary, forecast annual worse-case construction stage GHG emissions (78,187 tCO₂e) equate to circa 27.9% of the estimated annual combined carbon budgets proposed for RBC and RMBC for 2028 and 2029. As noted above, this figure includes emissions that will occur during operation (from back up) and decommissioning (from turbine life) and the assumption that all carbon present within excavated peat is lost to the atmosphere so is worse-case. It should also be borne in mind the RBC and RMBC carbon budgets relate to emissions from the energy system only, and that a good proportion of construction stage GHG emissions will relate to manufacture and transport of wind farm components and which are likely to occur outside RBC, RMBC and potentially the UK given the global nature of renewable energy technology manufacturing.

Once the Proposed Development becomes operational in 2030, annual GHG emissions of -102,326 tCO₂e (i.e. GHG savings) are forecast relative to the fossil fuel grid mix of electricity generation. These annual GHG savings represent -36.5% of the estimated annual combined carbon budgets proposed for RBC and RMBC up to 2032, increasing to -73.1% for the period 2033 to 2037.

Based on forecast worse-case GHG emissions and operational GHG savings, a maximum (i.e. worse-case) carbon payback period of 1.5 years (i.e. 18.3 months) is forecast. That is, forecast worse-case GHG emissions during construction, operation and decommissioning are predicted to be balanced out after 1.5 years (i.e. in 2031) by operational GHG savings relative to the fossil fuel grid mix of electricity generation, with net GHG savings (i.e. negative emissions) accumulating over subsequent years. As such the

maximum forecast carbon payback period equates to just 3.8% of the 40-year operational period for which planning consent is sought.

Forecast annual operational GHG savings of -102,326 tCO₂e equate to taking 53,547 average UK cars off UK roads (based on annual average mileage of 7,100 miles³² and the UK Government emissions factor for average car, unknown fuel of 0.2692 kgCO₂e/mile³³).

It is acknowledged that GHG savings achieved by the Proposed Development in future years will be dependent on the 'counterfactual' fossil fuel grid electricity generation mix at that time. However the Proposed Development is forecast to generate some 9,131,564 megawatt hours (MWh) of zero carbon electricity over its lifetime, sufficient to power 84,552 typical UK homes each year (based on a typical UK home consuming 2,700 kWh of electricity each year³⁴); the equivalent of circa 65% of the total number of households (130,240) in Rossendale (32,770) and Rochdale (97,470) combined³⁵.

As such the Proposed Development will continue to contribute to UK net zero even following any full decarbonisation of the national electricity grid. And should 7 MW rated wind turbines be used rather than 5.7 MW as assessed, maximum forecast carbon payback period will reduce to 17.5 months, and the equivalent number of typical UK homes that would be powered will increase to 103,835, equivalent to ~80% of the total number of homes in Rossendale and Rochdale.

As a result, the Proposed Development is concluded to have a significant beneficial climate change effect and make an appropriate contribution to UK

³² <https://assets.publishing.service.gov.uk/media/68a35b1e50939bdf2c2b5e64/nts0901.ods>

³³ <https://assets.publishing.service.gov.uk/media/6846a4f55e92539572806125/ghg-conversion-factors-2025-full-set.xlsx>

³⁴ <https://www.ofgem.gov.uk/information-consumers/energy-advice-households/average-gas-and-electricity-use-explained>

³⁵ https://assets.publishing.service.gov.uk/media/668545157541f54efe51b926/CTSOP_summary_tables.xlsx

and Greater Manchester net zero ambitions, Government's Clean Power 2030 Action Plan, and both RBC and RMBC climate emergency declarations and associated action plans.

3.3 Ecology

Volume 1, Chapter 9 (Biodiversity) of the **Environmental Statement** reports the assessment of likely significant effects in relation to ecology, specifically: construction-stage effects on the Knowl Moor Site of Biological Interest (SBI) and Scout Moor Biological Heritage Site (BHI), degraded blanket bog habitat, acid grasslands, species-poor soft rush, watercourse and waterbodies, bats, badger, water vole, otter, reptiles and amphibians, as well as operational-stage effects on bats, badger, water vole, otter and reptiles.

Such construction-stage and decommissioning-stage effects include habitat loss, habitat modification through hydrological change, altered hydrological pathways, disturbance (via noise and light), fragmentation of species ranges or habitats, and injury / mortality from construction activities. Operational-stage effects include disturbance (via noise and light), fragmentation of species ranges or habitats, and injury / mortality from turbine collision.

Surveys

A series of studies have informed the assessment, undertaken between November 2024 and May 2026 and including: Desk Study; Preliminary Bat Roost Assessment; Bat Static Surveys; Great Crested Newt eDNA and Population Surveys, National Vegetation Classification (NVC) Survey; UK Habitats Survey and Condition Assessment; Protected species surveys (badger, water vole and otter); Biodiversity Net Gain (BNG) Calculations, and; River Condition Assessment Surveys.

Baseline Conditions

Knowl Moor, an SBI, is located within the Site itself and comprises an extensive area of moorland which incidentally supports important upland breeding birds (see **Ornithology** below). The main habitats are acid grassland and blanket bog, which occur in a mosaic with localised ericaceous heath and wet flushes. The majority of these habitats are habitats of principal importance (HPIs). The blanket bog, a HPI, is most extensive in the south of the Site, however the bog is degraded and, in most areas, could not be described as 'active' bog. Scout Moor BHS is situated adjacent to the Site and supports modified blanket bog, flushes and acid grassland.

The NVC survey recorded vegetation communities that are considered to be of potential conservation interest or potential Groundwater Dependent Terrestrial Ecosystems (GWDTE) comprising two sub-communities: mires, flushes and swamp, and; grasslands and tall herb.

A number of the recorded communities within the Site are considered to have conservation value at a European or national level including blanket bogs, degraded raised bogs still capable of natural regeneration, and active raised bogs. A total of 64 ponds are identified within 250m of the Site, and Fern Isle Brook, Prickshaw Brook, Grain Brook and Cowpe Brook run through the Site along with numerous ditches and drains.

Regarding species of conservation concern, foraging opportunities for bats presented by the open habitat on the Site are limited, however, survey work found low to moderate levels of activity therefore bats could be impacted during the construction and operational stages in the absence of mitigation.

One active badger sett was found within the Site and, while this sett will be avoided, there is the potential for sett creation within 30m of the Site prior to the commencement of the construction stage given a highly mobile species.

Whilst no records or evidence of water vole was found, the ditches within the Site provide some suitability for water vole to utilise. Regarding otter, records within 2km suggest the ditches / streams / brooks within the Site have potential be used for commuting.

The great crested newt (GCN) population is considered to be small and limited to the one pond in the south located 1km from the Site, and would therefore not be impacted by direct construction effects. Whilst this pond is well separated from the works and GCN utilising this pond will not be impacted, construction works (in the absence of mitigation), could result in the death or injury of individual reptiles / amphibians, if present. Effects of reptiles and amphibians have therefore been considered on a precautionary basis.

If the current land management practices were to continue, it is likely that the range and condition of habitats currently present would deteriorate further given the grazing, drainage and management pressures as evidenced through the declining condition of many of the bog and heath habitats recorded during surveys. Other changes over time may occur as a result of climatic change; these are difficult to predict but are likely to involve increased precipitation and gradual increases in average temperatures. Some change in the vegetation assemblage is likely to occur as a result of these changes.

Mitigation

The design of the Proposed Development has evolved iteratively to minimise the effect on potential GWDEs and peat habitats and ecological receptors through taking account of ecological survey results and hydrological assessments, protected species survey results and the location of watercourses, for example infrastructure maintaining a 30 m buffer from the active badger sett and 1 km away from the pond which supports a small population of GCN. Other design measures include minimising works in the

vicinity of mapped watercourses and the need for new water crossings in order to reduce the risk of pollution and changes to watercourse morphology. Further mitigation measures include:

- Good practice construction measures will be employed via a Construction Environment Management Plan (CEMP) including: best practice measures for pollution prevention of watercourses / waterbodies; fencing of areas not subject to works to protect habitats / species present; daytime working; employment of Reasonable Avoidance Measures (RAMs) for protected species; presence of an Ecological Clerk of Works (ECoW); pre-construction surveys; covering of excavations and / or provision of ramps to avoid trapping wildlife, and; no use of overnight lighting near habitat features;
- New roads / tracks will be designed at an appropriate camber with drainage and filters / screens to ensure any leaching or pollutant spill is avoided into adjacent waterbodies. A Pollution Risk Assessment will be carried out identifying materials, areas and activities of greatest risk and laying out controls on these. From this a Pollution Prevention Plan (PPP) will be prepared and form part of the CEMP. All works will be carried out in accordance with the CIRIA Control of water pollution from construction sites: Guidance for consultants and contractors (C532) to protect water quality;
- Whilst four new watercourse crossings would be required for the proposed new access tracks surrounding turbines T10, T13 and T16, potentially requiring installation of a culvert, habitat loss on banks and disturbance whilst completing these works will be minimised;
- Any security fencing around the Proposed Development will be designed with regular small gaps at the base to allow the passage of mammals such as hedgehog and badger. This will prevent the

Assessment Boundary from becoming inaccessible to them for foraging / commuting;

- Protective fencing will be installed and appropriate signage implemented to define the working area and avoid encroachment onto Knowl Moor SBI and Scout Moor BHS. The mitigation measures proposed would be developed within the CEMP. There would also be an emergency plan for the construction stage to deal with accidental spillages;

Other ecological mitigation measures within the CEMP include:

- Reinstatement of habitats – best practice techniques for vegetation and habitat reinstatement would be adopted and implemented on areas subject to disturbance, such as the temporary construction compound area, as soon as is reasonably practicable;
- Materials and other temporary infrastructure would be removed off-site and all temporary construction areas will be reinstated;
- The surface layer of soil and vegetation would be stripped separately from the lower soil layers, stored separately, and replaced as intact as possible once the construction stage is complete. Turf material will be replaced as far as reasonably practicable in similar locations to where it was removed;
- Soils removed from the excavated area would be stored separately in piles, no greater than 3m in height, directly adjacent to, or near the tracks on ground appropriate for storage of materials. (i.e. relatively dry and flat ground, a minimum of 50m away from watercourses);
- Wherever reasonably practicable, reinstatement of ground disturbed to facilitate construction of the track would be carried out as track construction progresses;

- No refueling would be permitted at works locations within 50 m of watercourses (where reasonably practicable);
- There would be no direct dewatering to watercourses during the construction stage. All outflows from drainage associated with construction would be by diffuse overland drainage at appropriate locations;
- The time between excavating and backfilling of individual sections of cable trench would be minimised near GWDTEs. As a rule, these should be backfilled within three days to minimise drying and disturbance;
- Impermeable barriers and / or clay plugs would be used to avoid the trenches acting as preferential conduits of groundwater; and
- Areas of identified sensitivity (GWDTE, priority peat) would be marked out / fenced to prevent accidental vehicular access.

Proposed operational stage mitigation measures include:

- In the unlikely event that a pollution event occurred with the potential to affect Knowl Moor SBI and / or Scout Moor BHS a Suitably Qualified Ecologist would be sought, with any further mitigation required as a result of their advice installed;
- Hardstanding areas at each turbine location would be retained for use in ongoing maintenance operations, with the edges as far as reasonably practicable blended to the adjacent contours with natural vegetation being allowed to re-establish;
- A site speed limit of 15 mph would be in place to reduce the risk of faunal collisions with maintenance vehicles; and
- The substation lighting will be bat friendly, directed away from any bat features, including watercourses which will also safeguard otter

and water vole, and will be activated by motion sensors to reduce any night-time illumination impacting any foraging or commuting bats. There will be no other new lighting within the Assessment Boundary with the exception of aviation warning lights placed at the height of each turbine.

Approximately 26.63 ha, 5.08 ha and 4.75 ha of the blanket bog, raised mire and bog pool, respectively, are predicted to be lost in order to facilitate the Proposed Development. To compensate peatland loss in Scotland, NatureScot guidance states that a 1:10 (lost :restored) area ratio of priority peatland should be undertaken. Following this guidance, total priority peatland loss during construction accounts for 36.46 ha; therefore 364.6 ha would require restoration. As outlined in the MRMP, an area of 116.7 ha has been identified under the current restoration plan within areas of priority peatland habitat, and is considered a significant enhancement when considered in the context that guidance defines priority peatlands as peatlands which show 'evidence of being undisturbed and actively forming peat' whilst the majority of habitat to be lost is not actively peat forming and is being actively drained and with degradation also being caused by unmanaged grazing, off-road vehicle use and historic burning.

Water levels will be increased within identified locations across the Site, accounting for 71 ha, via ditch blocking, gully reprofiling and bog creation. Purple moor grass management utilising flailing will be undertaken to encourage natural regeneration of vegetation. Plug planting of suitable species, sport turving and patch repair will work to increase the cover and diversity of Sphagnum species across 47 ha within the Site boundary.

Losses to HPIs and habitats that qualify as Annex 1 should be avoided; however, given that these losses are unavoidable under the Proposed Development, their degraded state which limits their current conservation value, and opportunities provided to restore larger areas than those being lost, it is assessed that the enhancements proposed are sufficient to

adequately offset losses to these HPI / Annex 1 habitats with confidence near certain.

Conclusions

Following implementation of the range of construction-stage mitigation measures outlined above, negligible effects are concluded in relation to Knowl Moor SBI and Scout Moor BHS. Minor to moderate beneficial effects are concluded for the degraded blanket bog habitat as a result of the proposed moorland restoration, except in relation to sphagnum where a minor adverse effect is anticipated. Minor adverse effects are also concluded for acid grasslands and waterbodies & watercourse, and negligible adverse effects concluded for species-poor soft rush, and bats, and negligible to minor adverse effects concluded for, badger, water vole, otter, reptiles and amphibians.

Regarding the operational stage, minor adverse effects are concluded for bats (foraging and commuting), and negligible adverse effects concluded for other fauna (badger, otter, water vole, reptiles and amphibians).

As such the only significant ecological effects that are forecast relate to ecological benefits to the currently degraded blanket bog that will result from the proposed moorland restoration.

3.4 Ornithology

Volume 1, Chapter 10 (Ornithology) of the **Environmental Statement** reports the assessment of likely significant effects in relation to ornithology, specifically: increased mortality due to collision on breeding Lapwing, Curlew, and Kestrel, and to non-breeding Merlin during operation of the Proposed Development; displacement due to loss and degradation of habitats, and disturbance on breeding Waders (Curlew, Lapwing and Dunlin) and Merlin during the construction, operational and decommissioning stages; and population decline of breeding upland birds within the West Pennine Moors SSSI (Breeding Merlin, Lapwing, Dunlin and Curlew) during construction, operational and decommissioning stages.

Baseline conditions

Three designated sites with avian qualifying features were identified within 10 km of the Proposed Development (extending to 20 km for National Site Network Sites with qualifying interests for geese and / or gulls). There are also six non-statutory designated sites within the Site or within the 2 km buffer across RBC and RMBC that have birds listed as part of the designation. Bird species include Barn owl, Black redstart, Black-headed gull, Black-tailed godwit, Curlew, Dunlin, Golden Plover, Greylag goose, Hobby, Kestrel, Lapwing, Lesser black-headed gull, Merlin, Peregrine, Pink-footed goose and Red kite.

If the current land management practices were to continue, it is likely that the range and condition of habitats currently present would deteriorate further given grazing, drainage and management pressures as evidenced through the declining condition of many of the bog and heath habitats recorded during surveys. Off-roading quad / motorbikes and also sheep grazing within the Site may also reduce bird populations, whilst climate change may also affect the range of species using the area.

Mitigation

Measures proposed to mitigate impacts to ornithology during construction of the Proposed Development via the Construction Environmental Management Plan (CEMP) will include:

- preparation of a Construction Method Statement (CMS) in advance of the commencement of construction on- Site; and
- construction works will be overseen by an Ecological Clerk of Works (ECoW) with their role and responsibilities will be detailed in the CEMP.

A toolbox talk will be provided during the induction process, detailing the sensitive bird species which may be present on Site and identifying any restrictions on work which may be in place and the process for flagging potential issues to the ECoW.

Wherever possible, vegetation clearance will take place outside the bird breeding season (i.e. September – mid-March). Should this not be possible, then the vegetation to be removed will be searched by a suitably qualified ecologist no more than 24 hours before clearance commences. During construction, within the breeding season, regular breeding bird checks will be carried out in proximity to active construction areas to identify bird nests.

Nests of non-Schedule 1 or non-Annex 1 species present will be marked with a buffer (likely to be 5m, but can be less with ECoW oversight) to prevent damage to the nest. This buffer can only be removed with ECoW approval once they have confirmed the nest is no longer in use.

In the 12 months before construction commences, breeding raptor surveys should be undertaken (and should also be carried out during construction if construction falls within a breeding season) with the aim of identifying the presence of any Annex I or Schedule 1 species which may be disturbed by the construction work.

Should the nest of an Annex 1 or Schedule 1 species be located, then disturbance buffers based on appropriate guidance will be established around the nest and no construction activity should be allowed within this area. The ECoW will carry out a risk assessment if access roads are within the buffer distance of the nest to establish if they can be used without unlawfully disturbing specially protected species.

Regarding the operational stage, a Habitat Management and Monitoring Plan (HMMP) has been prepared to monitor the occurrence of sensitive species on-Site with a view to identifying adaptive habitat management measures to support any species which appear to be declining. This has been provided in outline and will be submitted to RBC and RMBC for approval, in consultation with Natural England, before construction commences. It aims to particularly improve the quality of blanket bog habitats on-Site, and the extent of native habitats through the promotion of rewilding in the wider area. This would have the potential to increase the suitability of the Site for upland species.

Construction works will also be overseen by an ECoW, with their role and responsibilities detailed in a Decommissioning Environmental Management Plan (DEMP), and employing similar mitigation measures to the construction stage.

Conclusions

Following proposed mitigation, no significant impacts relating to displacement from habitat loss and degradation or from disturbance during construction are anticipated on Curlew, Lapwing, Dunlin or Merlin. Regarding population decline of breeding upland birds within the West Pennine Moors SSSI during construction, no significant adverse effects are also concluded. Whilst there is potential for a loss in the number of breeding Curlew, these are associated with the breeding population of the Site and as such, there would no impact on the West Pennine Moors SSSI.

Once operational, no significant adverse effects are concluded in relation to turbine collision risks for Curlew, Lapwing, Merlin or Kestrel. Operational stage impacts are also associated with ongoing disturbance / displacement as a result of the presence of the infrastructure associated with the Proposed Development where currently there is no such infrastructure, along with ongoing maintenance. Species for which this impact was assessed as having potential to be significant were breeding Curlew, Lapwing, Dunlin and breeding and non-breeding Merlin.

No significant impacts of displacement or increased mortality have been identified to the bird populations within the Assessment Boundary. Given the distance between the Assessment Boundary and the SSSI, the not-significant impacts are likely to fall on individuals which do not form part of the SSSI population and so there would not be significant impacts of displacement or increased mortality on the SSSI populations. For example, impacts on Curlew are likely to fall mainly on birds from the Assessment Boundary population. As a result, there are no pathways by which the impacts could rise to the level of significance on the SSSI population, given the total low level of impact assessed. As such, there would be no significant impact on the SSSI populations of Merlin, Lapwing, Dunlin and Curlew.

In conclusion no significant adverse ornithological effects are identified during construction or operation of the Proposed Development.

3.5 Biodiversity Net Gain

A **Biodiversity Net Gain report** has been prepared for the application by Atmos Consulting Ltd which: summarises the legislative requirements for biodiversity net gain; summarises the habitat baseline and condition of the Site; demonstrates the process followed in line with the biodiversity gain hierarchy; quantifies the baseline biodiversity value of the Site and the measures required to achieve a minimum of 10% biodiversity net gain; and indicates the potential need for longer-term monitoring over 40-years based on the habitats to be enhanced or created.

The 1,002.01 ha Site is dominated by blanket bog, other upland acid grassland and modified grassland. The Proposed Development results in a small loss of 25.19 ha, which includes a loss of 16.84 ha of blanket bog, which is classified as an irreplaceable habitat. In line with guidance, bespoke compensation has been developed within the **Moorland Restoration & Management Plan (MRMP)** to account for this loss of habitat.

The Proposed Development will increase the biodiversity units of the area through the enhancement of 116.7 ha of poor-condition blanket bog to moderate-condition blanket bog, the enhancement of 49.49 ha of poor-condition modified grassland to good-condition other upland acid grassland, and the creation of 0.67 ha of other mixed woodland. The method of enhancement of these areas are outlined further within MRMP and outline **Habitat Management and Monitoring Plan (HMMP)**, also submitted with the planning application.

The Proposed Development will increase the biodiversity units of the watercourse habitats through the enhancement of 2.84 km of moderate-condition other rivers and streams to fairly good condition habitat through riparian planting of shrubs, scrubs and trees along the bank tops and bank faces.

It has been demonstrated that the Proposed Development will achieve the minimum statutory requirement for biodiversity net gain, resulting in an overall biodiversity net gain for area habitats of 10.81% and for watercourse habitats of 10.62%.

3.6 Outline Habitat Management and Monitoring Plan

An **Outline Habitat Management and Monitoring Plan (HMMP)** has been prepared for the application by Atmos Consulting Ltd, informed by the results of baseline ecology, ornithology, and peat studies and by the Environmental Impact Assessment (EIA) that has been undertaken. Its main objective is to compensate and enhance for loss of peatland habitats and grassland habitats as per the requirements of Biodiversity Net Gain. Additional objectives relate to additional habitat and faunal enhancements, the creation of a Habitat Management Group to oversee the peatland restoration proposals and restoration progress throughout the 40-year lifespan of the Proposed Development, with bat and ornithological monitoring requirements also included.

The HMMP is an iterative document which will be revised, updated, and re-issued throughout the construction and operational phases of the Proposed Development. In this way, the HMMP, through an agreed monitoring programme, will take account of the successes and failures of the proposed management measures and modifications to the management regime can then be proposed as necessary. The mechanism for communicating results and proposed adaptive actions, will be secured via the Section 106 Legal Agreement ('S106') to be signed by the Applicant, RBC and RMBC.

The Outline HMMP considers the specific features of the Site, the local area, existing and future land use, and the Proposed Development in making recommendations based on best information currently available. If aspects relating to the Proposed Development are altered, or new ecological

information emerges, then the HMMP will be required to be adapted accordingly, in accordance with the terms of the S106.

This Outline HMMP considers the management of the habitats and species over the expected 40- year lifespan of the Proposed Development. It is separate to the MRMP, in the fact it covers non-irreplaceable habitats and fauna enhancements, and does not contain any details of moorland or peatland restoration.

The management and monitoring of any ecological impacts associated with the construction of the Proposed Development, and any immediate re-instatement of habitats post-construction, will also be covered within the **Construction Environmental Management Plan (CEMP)**. The CEMP will be prepared in accordance with relevant SEPA guidance and include site-specific measures to avoid risk of impacts on habitats and species identified on the Proposed Development. The CEMP will be secured via planning condition.

As the developer, the Applicant is ultimately responsible for meeting the commitments made in this Outline HMMP and future detailed HMMP. The implementation of a detailed HMMP would be secured via the S106, overseen by a suitably qualified person or persons, appointed by the Applicant. All management tasks defined within the HMMP would be carried out by suitably experienced contractors and all monitoring would be conducted by suitably qualified and experienced ecologists and/or hydrologists.

As a whole, the moorland habitats within the Site and on a wider scale are considered to be sub-optimal and degraded, with surveys highlighting that the Site lacks species diversity and contains large areas dominated by purple moor-grass.

Outline prescriptions included in the HMMP include:

- Acid grassland enhancement across the northern portion of the Site (49.49 ha);
- Mixed woodland planting (up to 0.67 ha);
- Tree planting within margin riparian habitat (2.84 km total);
- Installation of bat and bird boxes plus the creation of ‘hibernacula’ (a shelter, often underground, used by animals such as amphibians and reptiles for overwintering);
- Establishment of a Habitat Management Group (HMG); and
- Monitoring during construction and operation to document habitat restoration and bird populations plus a review of the use of faunal enhancements by relevant species groups.

3.7 Outline Peat Management Plan

An **Outline Peat Management Plan (OPMP)** has been prepared for the application by Fluid. The design of the Proposed Development has been undertaken as an iterative process to avoid areas of peat as much as possible to limit peat excavation and to limit the potential for peat slide and supported by five peat probing campaigns during design iteration.

The OPMP has been developed due to identification of the presence of peatland and peat habitats and provides the framework for the preparation and implementation of a detailed Peat Management Plan (‘PMP’) by a specialist peat restoration contractor to work alongside the appointed Principal Contractor (‘PC’) prior to commencement of construction. The detailed PMP will be secured via planning condition and will be developed in consultation with key stakeholders including Natural England, the Environment Agency and the LPAs.

The potential volumes of peat extracted and re-used have been calculated based on an area specific or infrastructure specific basis, using a modelled peat contour plan developed on a high-density probing grid where excavations will be undertaken. In this manner the peat contour is more accurate as a distinct boundary is produced where the peat depth changes, rather than the model smoothing out the variations.

The OPMP addresses the management of peat during the construction period, as well as site restoration both during and following construction. In line with Environment Agency guidance, as much peat as possible will be reused onsite.

A high-density grid of 11,507 peat probes and associated cores has been completed at all site infrastructure between May 2024 and April 2026 to obtain a detailed understanding of peat variability, depth and characteristics.

Of the 11,485 locations probed, a total of 4,820 probes (42.0%) recorded depths of 0.3 m or less (no peat), 964 probes (8.38%) recorded depths of penetration between 0.3 m and 0.4 m, 4,137 probes (36.0%) recorded depths of penetration between 0.4 m and 1.0 m, and 1,564 probes (13.6%) recorded depths of penetration >1.0 m.

The total volume of excavated peat associated with the infrastructure footprint and the excavated slopes and drains has been calculated at 96,674m³ with 16,746m³ of acrotelmic peat and 79,928m³ of catotelmic peat.

The potential reuse of excavated peat has been calculated based on Environment Agency guidance within the temporary infrastructure and reuse in an extensive restoration area in north west of the Assessment Boundary which results in full reuse of excavated peat with potential for further reuse opportunities if required.

Based on the peat depth, characteristics and distribution investigations undertaken across the development area and the final layout, a surplus of peat is not expected to be generated by the Project for Assessment. All estimated

excavated peat is planned for re-use for restoration work during the construction and post-construction phases of the Project for Assessment.

Further investigations will be undertaken prior to works commencing to confirm peat depth, distribution and characterisation. The additional survey data will be used to inform any micro-siting, and potentially further minimise the volume of peat extracted.

A detailed PMP will be prepared by the PC, having regard to any additional survey data and micro-siting of infrastructure, as well as consultation with key stakeholders (including the Environment Agency, Natural England and the LPAs). This is proposed to be secured via planning condition.

The PC will maintain a record of actual peat volumes excavated and the subsequent peat re-use to compare the predicted and actual peat volumes. This record during the construction, operation and decommissioning phases will be made available for review by regulators as and when required.

3.8 Moorland Restoration and Management Plan

A **Moorland Restoration and Management Plan (MRMP)** has been prepared for the application by Atmos Consulting Ltd. It has been drafted using NatureScot guidance for developments on peatland in the absence of comparable guidance for England. This guidance includes measures for peatland restoration at a ratio of 1:10, i.e. for every 1 ha of peatland habitat lost, 10 ha of further peatland will be enhanced.

The moorland habitats present within the Site are acknowledged to be severely degraded, caused by numerous factors including unsuitable management and drainage, illegal off roading and inconsistent livestock stocking levels. Degraded peatlands can release carbon into the atmosphere and can in extreme cases increase flood risk due to reduced drainage, and therefore restoration of these habitats is vital.

Alongside the development of the proposed Scout Moor II Wind Farm there is the opportunity to restore and enhance large parts of this degraded moorland habitat. This MRMP identifies the areas of degraded peatland, and sets out clear and concise prescriptions to enhance and restore these areas.

The restoration strategy comprises two distinct approaches:

- 'Controlled Restoration' – traditional peatland enhancement; and
- 'Community Restoration' – community led enhancement measures, working with those who rely on the moor for grazing and other activities.

The MRMP aims to restore the moorland to an attractive, biodiverse and functional peatland, increasing its ability for carbon sequestration, providing consistent grazing for stock and overall enhancing the important habitats to favourable condition. The MRMP is separate to the Habitat Management and Monitoring Plan (HMMP) as it specifically focuses on the 'irreplaceable' peatland habitats present within the Application Site.

The objectives of the MRMP are as follows:

- To improve the condition of the moorland habitats within the MRMP restoration areas to a favourable condition;
- Restore all habitats that are disturbed or damaged as part of the future construction and maintenance of the proposed wind farm;
- Provide the monitoring and management prescriptions required to enhance the restoration areas from 'poor' or degraded condition to 'good' condition; and
- Facilitate long term maintenance of the MRMP restoration areas.

The MRMP restoration areas were selected following a site search assessment to identify suitable areas for restoration without limitations on

prescription activities. Two different types of restoration area have been identified:

1. 'Controlled Restoration': Areas outside of active Common Land – 116.7 ha (99.77 ha in Rossendale District and 16.93 ha in Rochdale District). These areas will be enclosed with stock proof fencing and used as peat translocation and reseeded locations. These areas will be controlled and fenced to reduce pressures from stock and illegal offroading vehicles; and
2. 'Community Restoration' Areas within Common Land – 228 ha (115ha in Rossendale District, 113 in Rochdale District). Areas within Common Land will not be managed using traditional 'hard' restoration prescriptions but instead will be managed via cutting schedules and stock rotation as needed to benefit the less degraded peatland areas, without impacting on the rights of the common land.

The objective will be for all of the land to eventually come under community restoration as the translocated and enhanced peat becomes established.

Currently, 16.84 ha of peatland is expected to be lost to facilitate the Proposed Development, hence the objective is to restore circa 160 ha of habitat. Following site surveys and aerial mapping, 116.7 ha of land within the area identified for controlled restoration has been identified as suitable for peatland restoration, using traditional and peer reviewed measures. These areas, together with those for 'community restoration' (228ha) where only Molinia cutting will be completed, remain above the 1:10 ratio.

Key prescriptions proposed for the MRMP include:

- Peatland restoration through increasing water levels (drain blocking and backfilling, peatland turve re-use, gully reprofiling);
- Increasing the cover and diversity of Sphagnum species through controlling purple moor grass and undergoing plug planting;
- Natural regeneration of vegetation;
- Post-construction habitat monitoring through a programme of fixed-point photography and quadrat monitoring to document habitat restoration progress; and
- Establishment of a Habitat Management Group and Ecological Clerk of Works.

3.9 Flood Risk Assessment

A **Flood Risk Assessment** has been prepared for the application by Pell Frischmann. The Proposed Development comprises “Essential Infrastructure” in accordance with Annex 3 of the NPPF and is considered a suitable development within Flood Zone 1 (i.e. low probability of flooding). In summary:

- The site is wholly within Flood Zone 1 (Low Probability);
- Local documentation and geology suggests the Site is at low risk of groundwater flooding;
- The Site is considered to be at moderate risk of flooding from surface water, with a surface water flow route identified through the centre of the Site;
- There are no identified public surface or foul sewers within the Site. Drainage and sewers along the grid connection routes are considered to be low risk; and

- There are no canals nearby to the Site that would pose a risk of flooding, therefore the risk of flooding from the Site is negligible.

Recommendations are made in respect of appropriate consideration of finished floor levels and external level design to manage the residual risk of overland flows by conveying water away from infrastructure/buildings and towards positively drained areas.

Interception drainage is recommended to capture existing overland flows and route them around any components of the Proposed Development, to maintain existing conveyance routes within the catchments. This will ensure the Proposed Development is free from flood risk, while also ensuring no impact upon the hydrological conditions within each sub-catchment. Further details are included within the associated Drainage Strategy report.

In accordance with the requirements of the NPPF, the Flood Risk Assessment has demonstrated that the Proposed Development could proceed without being subject to significant flood risk, and also complies with relevant local plan policies relating to flood risk. Furthermore, the Proposed Development will not result in increased flood risk to third parties if there is suitable management of surface water runoff.

3.10 Drainage Strategy

A **Drainage Strategy** has been prepared for the application by Pell Frischmann in accordance with sustainable drainage principles and to allow the Site to mitigate flood risk during design storm events, whilst ensuring no increase of flood risk to offsite receptors and avoiding deterioration of the water environment.

In summary, the proposed access tracks will be served by a network of surface water drainage ditches adjacent to the tracks. The trackside drainage will utilise relief drains crossing the access track longitudinally to ensure the drainage ditches do not surcharge. The proposed drains should utilise silt

traps/catch pits at the inlet of all cross drains to prevent the pipes becoming blocked. These trackside drains will be drained to the existing drainage sub-catchments across the site at a controlled rate to ensure no increase in flows.

The proposed trackside drainage should be designed so that it allows wildlife to cross safely, with erosion protection utilised at all inlets and outlets.

It is proposed that runoff from the proposed substation platform, laydown area, construction compound and the wind turbine hardstandings is captured by basin/swale features that will treat and attenuate the flows before being discharged back to the downstream catchments at greenfield runoff rates.

Watercourse crossings shall be designed to ensure that no detrimental impact is caused, and the Contractor retains overall responsibility for the detailed design and specification of the new water crossings. All surface water flows generated from new hardstanding across the site will be captured, treated, attenuated and discharged at the equivalent greenfield runoff rates to ensure that downstream flood risk is not increased. This includes a 45% uplift allowance for future climate change.

The detailed drainage design is proposed to be secured through pre-commencement planning conditions attached to the future full planning permission.

3.11 Ground Conditions

A **Preliminary Risk Assessment** has been prepared for the application by Pell Frischmann. The Site has a history of mining and quarrying including deep coal mining and sandstone mining and quarrying. Approximately 20% of the Site is classified as a high development risk zone associated with underlying coal-bearing formations. Historical records indicate multiple former deep coal mines both onsite and in the surrounding area, highlighting a significant

legacy of coal mining that may pose potential ground stability and development constraints.

The British Geological Survey (BGS) artificial ground mapping identified areas of Made Ground and infilled/worked ground on Site, with these areas typically correlating with areas of former mining and quarrying. It is also considered likely that Made Ground will be present in localised parts of the site beyond the BGS artificial ground mapped areas. Where Made Ground is present on Site, the potential for contamination to be present within this material cannot be discounted, however most of the Made Ground is likely to be of natural origin reworked quarry and mine spoil. Based on the nature of the proposed scheme, this is unlikely to present significant contamination risks; however, the likelihood of contaminated Made Ground onsite will need to be accounted for in the contractor's risk assessment and method statement (RAMS).

Mining hazards associated with subsidence/voids (e.g. mine shafts, adits and shallow underground workings) will need to be considered as part of the ongoing design process. It is understood that there have been several iterations to date in relation to the design around specific constraints identified within this report. Future work to design-out-risks will be to undertake confirmatory drilling to prove the presence/absence of underground mining features throughout the scheme footprint. Any works that could disturb underground mining features will need to consider potential risks for mobilising ground gas; however, land contamination ground gas risk assessment will not be required with respect to the completed scheme due to the lack of receptors, except for the substation building or any notable structures or engineered voids where ground gas could potentially accumulate.

With respect to the temporary works, namely the earthworks-based road widening on Scout Road (west), historical mapping and waste records indicate that a landfill has operated within the footprint of Scout Moor

Quarries. This will require further investigation with respect to potential health and safety during enabling/construction (and to inform geotechnical design). If Made Ground/fill is encountered within the footprint of the proposed temporary works, then additional risk assessment may be required.

Additionally, depending on the location of the substation, basic radon protection measures may be required. It is however noted that substation buildings tend to be well ventilated by design, and this should be factored into the risk assessment process.

Further investigation and assessment will be required with respect to the existing mine entries and shallow underground mine workings onsite (to include dynamic sampling and rotary core drilling in areas of proposed infrastructure) and where possible the ongoing design process should aim to locate scheme elements in lower risk areas. Such investigation is expected to be completed post-application where it will support requisite detailed design and may also be secured under an appropriately worded planning condition.

As geotechnical ground investigation and mining investigation will be required within the scheme footprint (including access tracks/roads, each wind turbine location and areas of significant earthworks), it would be prudent to undertake geochemical analysis of any Made Ground encountered to provide geochemical data that the contractor can reference to inform their risk assessment and method statements.

3.12 Archaeology

Volume 1, Chapter 13 (Archaeology) of the Environmental Statement reports the assessment of likely significant effects in relation to archaeology. It focuses on the loss or disturbance of known archaeological assets, potential unknown buried archaeological remains, and potential loss or reduction in deposits preserving paleoenvironmental remains as a result of dewatering activities.

Baseline conditions

The only designated asset located within the Site is Catley Lane Head Conservation Area, which extends into its southern tip, following a section of Rooley Moor Road. An additional Conservation Area (Prickshaw and Broadley Fold) and 21 No. Grade II Listed Buildings lie within 1km of the Site. No World Heritage Sites, Scheduled Monuments, Registered Battlefields or Registered Parks and Gardens are present within the Assessment Boundary or the surrounding 1 km study area.

The earliest of the recorded heritage assets recorded within the Assessment Boundary are two small flint implements, thought likely to be of Mesolithic date and found by chance on Rooley Moor and at Ding Quarry respectively. In the late 19th century, Neolithic flints were also found on Brandwood Moor and on Hunger Hill / Turnshaw Hill. Two possible Bronze Age cairns are located on and just below the crest of Bagden Hillocks. There is no recorded evidence of Roman activity within the Assessment Boundary or the 1km study area.

There is a paucity of direct archaeological or historical evidence for Early Medieval activity within the Assessment Boundary and the study area. Similarly much of the region is poorly attested in the Medieval Domesday survey, and the exercising of traditional common rights during this period would generally leave limited archaeological remains.

Regarding the Post-medieval to Modern period (i.e. 1540 to present day), several of the farmhouses and barns within the study area contain surviving 16th, 17th and early 18th century fabric. On the western side of Bagden Hillocks, the ruined remains of the Moor Cock Inn are located adjacent to Rooley Moor Road. The Inn is marked on post-medieval maps and though it no longer stands, the surrounding intake walls and masonry associated with small, mapped outbuildings are identifiable.

The remaining recorded assets within the Assessment Boundary are heavily biased towards post-medieval extraction activities, primarily sandstone quarrying and coal mining, though the surviving assets may have had earlier origins.

Mitigation

The following measures are proposed to mitigate potential archaeological effects from the Proposed Scheme during its construction:

- Localised site clearance will be undertaken at the temporary laydown area / construction compound, substation site access tracks / crossings and the wind turbine locations with associated hardstanding (e.g. crane pads);
- The retention via avoidance and demarcation (where appropriate) of heritage assets during the site clearance works including Foe Edge Sandstone Quarry, Old Sink Colliery, and Rooley Moor Road;
- The proposed grid connection route follows part of the line of the Cowpe Lowe/Cragg Quarry Tramway which is used as a public footpath. Within the Site, the former tramway primarily has a gravel surface although some lengths of stone surface survive south of Cragg High Level Tank. In areas of surviving stone surface, the cable will be laid outside of the track surface to allow for its preservation in situ;

- Where new tracks are proposed across areas of deep peat (>1m), floating road construction techniques will be used to limit the potential for ground penetration and damage to the underlying peatland;
- No turbines will be sited in areas where the depth of peat deposits exceeds 1m, where possible;
- Internal site track layout design to limit vehicular crossings of Rooley Moor Road as a non-designated heritage asset and public route. A layer of terram (or similar geotextile) will be laid over the existing road surface to prevent aggregate migration, followed by a geogrid with a layer of crushed stone to create the crossing surface. The historic road will be reinstated to its original form for the operational life of the wind farm, with a maintenance track junction re-graded to match the roads original levels; and
- New signage and interpretation boards will be installed at the remains of the Moor Cock Inn as well as other locations within the Assessment Boundary considered to be leisure destinations or landscape / heritage / ecological assets.

Conclusions

While the importance of hitherto unknown remains is unknown, it is considered that the completion of any agreed archaeological mitigation works would result in direct impacts upon buried archaeological remains being mitigated via programmes of archaeological investigation. This would allow any remains that were to be destroyed to be 'preserved by record'.

In conclusion, the residual effects upon unknown buried archaeological remains (prehistoric artefacts and features) would depend upon the nature of any encountered remains and the mitigation strategy employed but has

the potential to be significant. The residual effects upon all other unknown buried archaeological assets are not significant.

3.13 Transport

A **Transport Assessment** has been prepared for the application by Pell Frischmann. The proposed development will be accessed from an existing priority junction from the A680 which currently provides access to Scout Moor Wind Farm and Scout Moor Quarry (via Scout Road). The access junction will provide access to the Site for all abnormal loads associated with the turbine deliveries, as well as access for HGVs delivering construction materials and general site traffic.

A combination of new and existing traffic data established a base point for determining the impact during the construction phase and was factored to future levels to help determine the effect of construction traffic on the local road network. The construction traffic would result in a temporary increase in traffic flows on the road network surrounding the proposed development. The peak of construction in terms of vehicular movements will be 208 daily movements (100 Car/Lights and 108 HGV journeys). Over the course of a typical 12 hour working day on the Site, this would equate to approximately 9 two-way HGV movements per hour.

No link capacity issues are expected on any of the roads assessed due to the additional movements associated with the proposed development. The effects of construction traffic are temporary in nature and are transitory.

A series of mitigation measures and management plans have been proposed to help mitigate and offset the impacts of both the construction and operational phase traffic flows. It is considered that these can be secured by planning condition or legal obligation with the local highway authorities.

The proposed development will lead to a temporary increase in traffic volumes within the Study Area during the construction phase only, however

this can be appropriately and effectively managed. It is therefore concluded that there are no transport related matters which would preclude the consenting and construction of the proposed development.

3.14 Noise & Vibration

Volume 1, Chapter 7 (Noise & Vibration) of the Environmental Statement reports the outcome of the assessment of likely significant environmental effects of the Proposed Development in relation to noise and vibration. This assessment focuses on noise disturbance to residential properties from construction noise during construction and decommissioning activities, and also from operational noise.

Baseline conditions

The Site is located within a rural location where the predominant noise sources in the area include wind induced noise (wind passing through vegetation and around buildings), local watercourses, agricultural noise and birdsong. At some receptors within / closer to the settlements near to the Assessment Boundary, the soundscape may include road traffic noise. There is also noise from a number of existing operational wind turbines near to the Proposed Development.

Such existing noise sources are unlikely to substantively change over time, except for traffic flows which are generally expected to increase in line with expectations for macro-economic expansion though vehicle noise levels are expected to reduce over time. Therefore, contributing noise sources are unlikely to fundamentally change over time in the absence of the Proposed Development.

Mitigation

A range of good practice measures will be detailed in the Construction Environmental Management Plan (CEMP) and employed to minimise noise emissions during the construction stage. Good site management practices would be implemented to minimise effects. Additional noise mitigation measures include construction of the temporary laydown area on Scout Road during the weekday daytime hours (07:00 - 19:00) and Saturday daytime hours (07:00 - 13:00) to avoid the evening and weekend periods, and the use of diesel generators for lighting and similar will be avoided within the temporary laydown area during night-time hours (23:00 - 07:00), wherever possible.

Operational noise has been a key consideration throughout the design process for the Proposed Development. The design presented in this assessment is the result of an iterative process, to ensure that the final wind turbine layout and their locations strike a balance between maximising the potential for renewable energy generation while providing appropriate protection of residential amenity.

Nevertheless, additional mitigation will be required in the form of wind turbine mode management, applicable to a limited number of turbines for a specific range of wind speeds and directions to ensure that noise limits are met. Following confirmation of the choice of turbine to be installed on the Site, an Operational Noise Management Plan will be devised and enacted to ensure that no exceedances of relevant noise limits will occur. This will take the form of a scheme of low noise operational modes to be used under specific wind conditions.

Conclusions

Following the implementation of the mitigation measures outlined above, noise limits would be met at all locations during daytime and night-time periods. As such, there would be no significant residual effects. Wind turbine noise would

need to meet the noise limits set out in any planning permission regardless of the final choice of turbine and any turbine micro-siting.

3.15 Air Quality

An **Air Quality Assessment** has been prepared by Logika Group. In summary, a range of best practice mitigation measures will be implemented during the construction works to reduce dust emissions as part of Construction Environment Management Plan (CEMP).

The Proposed Development will generate additional traffic on the local road network during the construction and operational phases, however the assessment has concluded there will be no significant effects at any existing, sensitive receptor locations. In conclusion, no significant air quality effects are anticipated during either the construction or operation of the Proposed Development.

3.16 Circular Economy

Cubico's Corporate Waste Management Performance

Cubico's 2025 ESG Report explains (page 16) how improving waste management is essential for environmental stewardship to reduce pollution, conserve resources, minimise lifecycle impacts and prevent soil and water contamination.

Cubico is committed to minimising waste across our operations and developing circular solutions that drive waste reduction, recycling and circularity throughout the business. While renewable energy operations – such as solar panel production, battery storage and wind turbine maintenance – can produce hazardous byproducts, the company works to manage the disposal of these byproducts responsibly and mitigate the risks of pollution.

The recycling of non-hazardous waste is another key part of Cubico's sustainability approach which can bring economic benefits to local communities through job creation across the value chain, and by reducing public costs and

minimising the environmental impact of waste. By working closely with recycling partners and leveraging modern recycling technologies, the company focusses on increasing material recovery and promoting reuse wherever possible.

In 2025 6% of hazardous waste was recycled, equating to some 4,193 tonnes, and with 94% of non-hazardous waste recycled, equating to some 16,795 tonnes.

DNV ReWind Decommissioning Report

In order to help promote waste minimisation and circular economy principles for the Proposed Development, the Applicant has utilised DNV's ReWind software³⁶ which seeks to maximise circularity of wind energy projects at lowest cost. The assessment is based on a 5.7 MW Nordex n149 candidate turbine, together with information on the wider Proposed Development regarding turbine foundations, access tracks, cables, and site decommissioning proposals.

ReWind models the material composition of the wind farm including the turbines and balance of plant using DNV's advanced concept design model library Renewables.Architect (RA). RA uses a mixture of load analysis, geometry optimisation and scaling law models to design and optimise a representative turbine according to the input specifications. The software is heavily benchmarked against DNV's expansive expertise within wind turbine design.

Some 32,543 tonnes of material are forecast to arise from the Proposed Development at decommissioning, of which 29,730 tonnes are forecast to be recovered, resulting in overall "project circularity" of 91.36%.

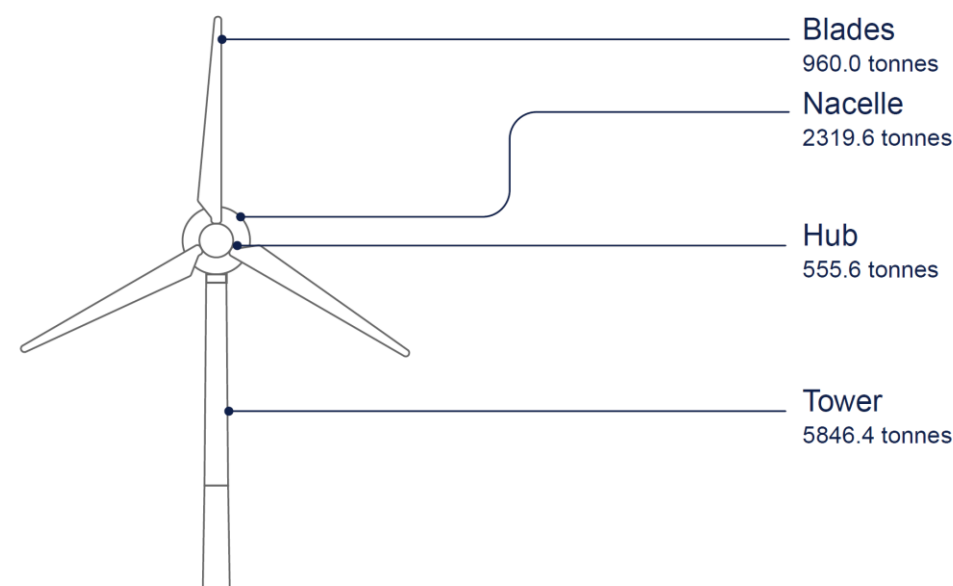
Calculating the circularity percentage of a wind farm gives a measure of the proportion of the project that can be usefully recycled, re-used or recovered at the end-of-life and that will not end up in landfill.

DNV defines circularity as any material processing activity which avoids waste material from the wind farm going to landfill. When defined in terms of the waste hierarchy this means that the following activities are considered circular:

- Re-use
- Recycle
- Recover

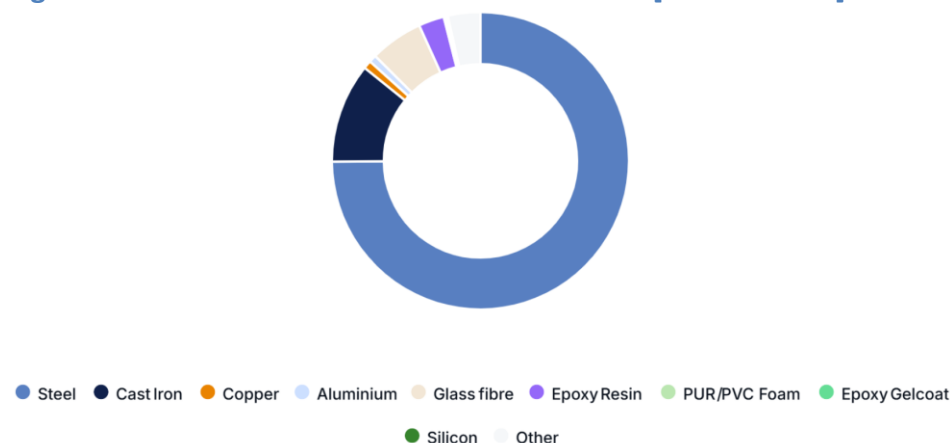
The 12 turbines comprise largely steel (~75%), cast iron (~11%), glass fibre (~6%), other materials (~4%) and epoxy resin (~3%), with all remaining materials each making up less than 1% of the total weight, as presented in **Figures 5 and 6**.

Figure 5. Forecast Turbine Material Weights [DNV ReWind]



³⁶ <https://store.veracity.com/rewind>

Figure 6. Forecast Turbine Materials Breakdown [DNV ReWind]



Regarding the balance of plant, decommissioning of turbine foundations is forecast to result in 19,530 tonnes (~88%) of concrete, 1,596 tonnes (~7%) of other materials, and 972 tonnes of steel (~4%), whilst array cables and export cables are forecast to give rise to 71.9 tonnes and 691.2 tonnes of waste respectively, largely copper, steel, aluminium and other materials.

DNV's ReWind analysis concludes overall project circularity (i.e. recyclability) of ~91%, broken down as follows for the various project components:

- Turbines: ~90%
- Blades: ~62%
- Hubs: ~98%
- Nacelle: ~80%
- Tower: ~98%
- Foundations: ~93%
- Array cables: ~65%
- Export cables: ~70%
- Substation: ~92%

Regarding potential waste material processing facilities for these arisings, three have been identified for the primary waste materials, namely metals, blades and concrete. These are: EMR Group, Rochdale (ferrous and non-ferrous metals); Enva, Ayrshire (turbine blades), and; Enva, Manchester (ferrous metals, non-ferrous metals and non-metal wastes). The location(s) at which materials recovery and recycling is undertaken will depend on which waste processing facilities are available following decommissioning of the Proposed Development.

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