

1 INTRODUCTION

1.1 Background

- 1.1.1 Convatec Ltd is proposing to construct three wind turbines, a solar generating facility and associated infrastructure, on land adjacent to its industrial units at the Heads Of The Valley Industrial Estate, Rhymney, Tredegar NP22 5RL. The Proposed Development will be known as the 'Convatec Green Manufacturing Hub'.
- 1.1.2 An Environmental Impact Assessment (EIA) of the Project has been undertaken in accordance with The Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017. This Environmental Statement (ES) presents the findings of the EIA process and accompanies the planning application for the project, which due to its scale and installed capacity, is considered to be a Development of National Significance (DNS). As a result, the application will be determined by Planning and Environment Decisions Wales (PEDW), on behalf of the Welsh Government.
- 1.1.3 The EIA identifies and assesses the likely significant adverse and beneficial effects that have the potential to occur during the life of the project, i.e. from the planning and construction phase, through operation to eventual decommissioning.

1.2 Overview of the Project Site

- 1.2.1 The Site lies on the east/south-east facing hillside adjacent to the west boundary of the Heads of the Valley Industrial Estate in the town of Rhymney, Caerphilly, South Wales. The Site currently consists of several fields of improved grassland, bound by a mix of scrub, hedgerows and open/featureless boundaries.
- 1.2.2 The Site is broadly bound by the Nant Carno stream, local roads with scattered properties and further improved grassland to the north, the Heads of the Valley Industrial Estate and the A469 to the east, further unimproved grassland and disused tips to the south and an un-named local road, unimproved grassland and disused tips to the west.
- 1.2.3 The A465 'Heads of the Valleys' Road is located c. 200m to the north of the Site. (see Figure 1.1 and Figure 1.2 in Volume 2 showing an overview location plan and detailed location plan respectively).
- 1.2.4 The Biffa Trecatti Landfill site and opencast workings are located c. 800m and c. 1.4km to the south-west, respectively. An overhead line and pylons pass through the western parts of the site on a broadly south-west to north-east direction.

- 1.2.5 The nearest bodies of standing water are c. 100m to the north and c. 600m to the south.
- 1.2.6 The town of Rhymney lies c. 230m to the east on the opposite side of the A469. The town of Merthyr Tydfil is located c. 1.86km to the west, and the village of Fochriw is located c. 1.96km to the south.
- 1.2.7 A scoping response was received from PEDW on the 7th March 2024. The consultation process for each technical discipline is detailed in the relevant chapter.
- 1.2.8 In fulfilment of the Scoping requirements from PEDW and discussions with consultees on the scope of the EIA, this ES sets out to:
- describe the Project;
 - describe the physical components of the Project, its land use requirements during construction and operation and the associated ancillary infrastructure required for the establishment and operation of the Site;
 - describe the existing environmental character of the Site and the surrounding area in respect of the environmental parameters and receptors likely to be affected by the Project;
 - assess and predict the likely significant environmental effects of the Project;
 - describe the measures which would be taken, or have been incorporated in the design stage to avoid, reduce, minimise, offset or remedy likely adverse environmental effects and impacts;
 - provide PEDW and the consultees with sufficient information to help them in making a decision on the planning application for the Project; and
 - provide the public with detailed information on the Project and how it might affect their locality.
- 1.2.9 Copies of the ES are available from Wardell Armstrong LLP, Sir Henry Doulton House, Forge Lane, Etruria, Stoke-on-Trent ST1 5BD. Printed copies are priced at £400 and CDs are available at £10. All submitted planning applications are made available free-of-charge in electronic format on PEDW's website.

1.3 Brief Description of the Project

- 1.3.1 The development comprises up to three upwind, three-bladed, horizontal axis wind turbines, with a maximum tip height of 150m. The turbines will be labelled west to east as T1, T2 and T3. Final choice as to the make and model of the turbines will be

dependent on the findings and requirements of the EIA and market availability at the time of procurement (although the parameters above will not be exceeded regardless of final turbine selection).

- 1.3.2 A Solar PV farm with a 5MW of generation capacity will be installed adjacent to the turbines.
- 1.3.3 The EIA will be undertaken based on the candidate turbines which will be selected to provide a worst-case scenario for each element of the assessment (or another turbine within the envelope of the maximum tip height if necessary) to ensure compliance with the EIA Regulations. The same assumptions will apply to the panels selected for the Solar PV array.
- 1.3.4 The development will include other ancillary works including access tracks, crane hard-standings and a sub-station. However, detailed location planning for these elements has not yet been carried out. The wind turbines will to be subject to a 70m micro-siting allowance, whilst the access tracks and other infrastructure are likely to be subject to a 5m micro-siting allowance, except where environmental sensitivities preclude this.
- 1.3.5 The turbines will be connected to the Convatec manufacturing facility through a private wire via underground cabling. The intention is to provide surplus power to local businesses via further private wire connections. However, this will be confirmed once power surplus supply has been established, potential off-takers have been identified and PPA arrangements have drawn up.
- 1.3.6 Scaled drawings of the turbines, foundations, access tracks and any other relevant design matters are included within this ES in Chapter 5.
- 1.3.7 The turbine components, together with the cranes needed for assembling of the turbines, would be delivered via the trunk road network as Abnormal Indivisible Loads (AILs). Access and transportation are considered in detail in Chapter 14 of this ES.
- 1.3.8 The onsite construction period would be approximately six-eight months and will not commence prior to Summer 2024.
- 1.3.9 For more detail on the Project please refer to Chapter 5 of this ES.

1.4 Statement of Need

- 1.4.1 There is a clear and pressing need for renewable energy development to provide electricity from renewable and low carbon sources.
- 1.4.2 The Paris Agreement is a legally binding treaty on climate change, adopted by 196 parties at the UN Climate Change Conference in Paris on 12th December 2015. It came into force in November 2016, with an overarching goal to limit the global average temperature to well below 2°C above pre-industrial levels, and to pursue efforts to limit the temperature increase to below 1.5°C. In order to achieve this important target, greenhouse gas emissions must peak before 2025 and decline by 43% by 2030.
- 1.4.3 Under the 2008 Climate Change Act, the UK committed to a net reduction in Greenhouse Gas (GHG) emissions by 2050 of 80% against the 1990 baseline. In June 2019, secondary legislation was passed that extended that target to at least 100% against the 1990 baseline by 2050. The Sixth Carbon Budget requires a reduction in UK greenhouse gas emissions of 78% by 2035 relative to 1990 levels.
- 1.4.4 The British Energy Security Strategy and the UK Net Zero Strategy seek to ensure that by 2035, the UK is powered entirely by clean electricity. Achieving Net Zero sets out that *“While emissions have reduced steadily over recent years, particularly in the power sector, achieving net zero will require wide-ranging changes across society and the economy at a pace which leaves little room for delay”*. The UK Energy White Paper states that *“Clean electricity will become the predominant form of energy, entailing a potential doubling of electricity demand and consequently a fourfold increase in low-carbon electricity generation”*. The UK Clean Growth Strategy sets out actions to enhance the UK’s energy security by delivering a more diverse and reliable energy mix.
- 1.4.5 The Well-being of Future Generations (Wales) Act requires public bodies to act in pursuit of sustainable development to promote well-being in Wales. The Environment (Wales) Act 2016 Part 2 relates to Climate Change, and sets out a target that net emissions in Wales in 2050 are at least 80% lower than the baseline (1990 in the case of CO₂ emissions).
- 1.4.6 The Site is located within the jurisdiction of Caerphilly County Borough Council (CCBC). The Local Development Plan (LDP) was adopted in 2010 and aims *“to ensure that new development minimises emissions of greenhouse gases as far as is practically possible in order to mitigate the effects of climate change”*.

- 1.4.7 These policies and related statements are examined in some detail in the Planning Statement which accompanies the planning application for the Project.

1.5 The Applicant

- 1.5.1 Convatec Ltd are a global products and technologies company, which employs more than 800 people across two sites based in Wales, including a site at Rhymney.
- 1.5.2 In April 2019, the Welsh Government declared a climate emergency. Caerphilly County Borough Council have also declared a climate emergency, committing to becoming carbon neutral by 2030.
- 1.5.3 Increasing the generation of clean, renewable electricity will contribute to the Welsh Government's future net zero target of 100% of the nation's energy being supplied by renewable sources by 2035. To aid the decarbonisation of manufacturing and industry, Convatec aim is to become net zero worldwide by 2045.
- 1.5.4 The proposals for the Convatec Green Manufacturing Hub would generate a combined installed capacity of 20MW. The energy generated is likely to exceed the amount needed to power Convatec's operations at Rhymney, providing a surplus for use in their Deeside factory and potentially other local suppliers and consumers via private wire connections.

1.6 Design Iteration

- 1.6.1 The final design and layout of Convatec Green Manufacturing Hub has been reached through an iterative process based on information gathered during the preparation of the ES. This evolution is described in detail within Chapter 6 of this ES. Figure 5.1 (Volume 2) illustrates the proposed layout of the Site, which is the subject of the planning application.
- 1.6.2 The purpose of the design process has been to seek an appropriate balance between environmental and land use considerations and the technical parameters of the proposal. Therefore, the final layout of the Project has taken account of the sensitivity of the site, the locality and environmental considerations in order to achieve the most appropriate design to minimise and avoid adverse effects.
- 1.6.3 In line with best practice, Convatec adopts the approach that potential environmental impacts should be identified and understood as early as possible in the process and that the design of the Project is adapted to avoid or mitigate these impacts.

1.6.4 The final design of the Project has focussed on optimising the generation of renewable energy whilst being responsive to its environmental setting and minimising any potentially adverse effects.

1.7 Consideration of Alternatives

1.7.1 The EIA Regulations [Part 5 (Para 17.3.d) and Schedule 4: Regulation 17(3), (Para 2)] require that consideration be given to alternatives and that this should be recorded within the ES as part of the EIA. Details of the alternatives considered prior to, and during the process of completing this ES are given in Chapter 6.

1.8 EIA Methodology

1.8.1 This Environmental Statement (ES) reports the findings of an assessment of the likely significant environmental effects of the scheme. The following issues have been technically assessed as part of the EIA:

- 1) Introduction
- 2) EIA Process
- 3) Planning Policy
- 4) Site Description
- 5) Project Description
- 6) Assessment of Alternatives
- 7) Landscape and Visual Impact Assessment
- 8) Noise Assessment
- 9) Historic Environment
- 10) Ground Conditions
- 11) Ecology
- 12) Ornithology
- 13) Soils
- 14) Transport
- 15) Climate Change
- 16) EMI
- 17) Aviation
- 18) Glint
- 19) Shadow Flicker
- 20) Water Resources
- 21) Socio Economics

- 22) Human Health
- 23) Residual Effects
- 24) Cumulative Effects

1.8.2 Following the identification of possible issues, technical assessments were undertaken in order to assess the likely significant effects that could potentially be associated with the Proposal. In general terms, the technical studies undertaken for each topic area and chapter include:

- Methodology
- Description of baseline conditions;
- Topic specific design evolution
- Identification of potential environmental effects;
- Description and evaluation of likely significant environmental effects;
- Mitigation;
- Residual effects; and
- Cumulative effects.

1.9 Baseline Studies

1.9.1 Initial baseline studies commenced in 2021 focussing mainly on ecological constraints. Baseline studies for other key environmental constraints have been undertaken at various stages over the previous 12 months.

1.9.2 Topic specific methodologies that require the use of a different baseline, e.g. assessment against a national level, have been dealt with as part of the individual chapter where required.

1.10 Iterative Assessment

1.10.1 Initial conclusions emerging from the baseline studies have been incorporated into the developing the combined solar and windfarm proposals, informing the design process and minimising the potential for significant adverse effects.

1.11 Consultation

1.11.1 An extensive consultation process has been undertaken involving statutory and non-statutory consultees and the public.

1.11.2 Consultee replies and comments (where they exist) have been included in the appropriate chapters of the ES or their associated Technical Appendices.

1.11.3 In addition to the consultations with PEDW and the various statutory and non-statutory consultees, two public consultations and one exhibition have been undertaken with full details given in Chapter 18 and the Statement of Community Involvement (SoCI) that accompanies this ES.

1.12 The EIA Project Team

1.12.1 The EIA project team has comprised the following specialists:

Table 1.1: Project Team	
Subject	Consultant
Planning	Wardell Armstrong
Landscape and Visual Impact	Wardell Armstrong
Noise	Ion Acoustic
Cultural Heritage	Wardell Armstrong
Ground Conditions	Wardell Armstrong
Ecology	Avian Ecology
Ornithology	Avian Ecology
Soils and Agriculture	Wardell Armstrong
Highways & Transport	Wardell Armstrong
Climate Change	Wardell Armstrong
Telecommunications	Wardell Armstrong
Aviation	Wardell Armstrong
Glint	Wardell Armstrong
Shadow Flicker	Wardell Armstrong
Hydrology, Hydrogeology & Flood Risk	Wardell Armstrong
Socioeconomics	Wardell Armstrong
Human Health	Wardell Armstrong
Public Consultation	Grasshopper

1.12.2 The EIA process and preparation of an ES for this project have:

- initially determined the need for an EIA through an internal screening process;
- assessed the scope of the ES through consultation with PEDW and statutory consultees;
- undertaken and reported the findings of the environmental studies;
- provided an objective assessment of impacts and effects; and
- involved wider input from statutory and non-statutory consultees and the general public.

1.13 Report Structure

1.13.1 This ES consists of four documents:

Non-technical Summary

ES Volume 1: Main text (*refer to Volumes 1A and 1B in printed version*)



ES Volume 2: Figures and visualisations

ES Volume 3: Appendices

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