



CONVATEC LTD

CONVATEC GREEN MANUFACTURING HUB, RHYMNEY

DESIGN AND ACCESS STATEMENT

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DESIGN AND ACCESS STATEMENT

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1 INTRODUCTION

1.1 Purpose of Design and Access Statement

1.1.1 This Design and Access Statement forms part of the planning application for the proposed Convatec Green Manufacturing Hub (hereafter the 'Proposed Development') in Rhymney, in the county borough of Caerphilly, South Wales (Figure 1). The Site is located to the east of the A469, at the head of the Rhymney River Valley on land east of Gelli-Gaer Common and northeast of Bryn Pyllog Tips. The Site is adjacent to the Heads of the Valleys industrial estate where Convatec UK has a major manufacturing facility.



Figure 1: Site location (Source: Google Earth, 2024)

- 1.1.2 Convatec Ltd (hereafter 'the Applicant') propose to construct a wind and solar farm. The Proposed Development exceeds the 10MW threshold for Local Authority decisions in Wales and is therefore considered to be a 'Development of National Significance' (DNS) requiring submission to Planning and Environment Decisions Wales (PEDW) for determination by Welsh Ministers.
- 1.1.3 This Design and Access Statement has been prepared in accordance with the requirements under the Planning (Wales) Act 2015, the Town and Country Planning (Development Management Procedure) (Wales) Order 2012 (as amended), and in line with the objectives of good design as set out in Planning Policy Wales (PPW) and Technical Advice Note 12: Design (TAN 12).

2 SUMMARY OF PROPOSAL

2.1 Site Location and Surrounding Area

- 2.1.1 The existing Site consists of several fields of improved grassland, bound by a mix of scrub, hedgerows, and open/featureless boundaries. It is used for grazing animals.
- 2.1.2 The town of Rhymney lies circa (c.) 230 metres (m) to the east on the opposite side of the A469.
- 2.1.3 The town of Merthyr Tydfil is located c. 1.86 kilometres (km) to the west, and the village of Fochriw is located c. 1.96 km to the south.
- 2.1.4 The A465 'Heads of the Valleys' trunk road is located c. 200m to the north of the Site.

2.2 Proposed Development

- 2.2.1 The Proposed Development comprises of wind and solar technologies, connected via private wire to Convatec Rhymney's manufacturing facility, with any excess to be exported locally.
- 2.2.2 The main elements of the Proposed Development are as follows:
 - Three wind turbines of approximately 150m tip height, with a combined installed capacity of approximately 15MW, each with external transformers, foundations, crane hardstandings and storage areas;
 - Ground mounted solar photovoltaic panels with an installed capacity of approximately 5MW;
 - Electrical substation and control building;
 - Access tracks;
 - Underground power cables to link the turbines and solar array to the substation and Convatec's manufacturing facility;
 - Steel tower anemometer mast for monitoring wind speeds and turbine performance;
 - Temporary construction and storage compounds.

3 THE BRIEF AND VISION

- 3.1.1 The Convatec manufacturing facility uses large quantities of energy to produce medical products that are used worldwide. Due to its current reliance on fossil fuels,

it is not presently equipped to tackle the Climate Emergency declared by the Welsh Government or Caerphilly County Borough Council.

- 3.1.2 Decarbonising manufacturing and industry is a key action that needs to be urgently undertaken to achieve the Welsh Government's ambitious targets for Wales to meet the equivalent of 100% of its annual electricity demand from renewable sources by 2035 and to achieve net zero by 2050.
- 3.1.3 Therefore, to support the transition to net zero, Convatec are undertaking this project to provide renewable energy to power the manufacturing facility and also to provide any surplus as a source of clean energy for the wider local area. The vision is for this to create energy security that will protect the company against fluctuating energy costs associated with fossil fuels, but also support long term manufacturing jobs in the local area through the effective management of operational costs and the reduction of waste.
- 3.1.4 The Proposed Development will demonstrate that the manufacturing industry can be decarbonised and powered by renewable energy whilst supporting economic growth. The Proposed Development will also contribute towards achieving Convatec's corporate target to be net zero carbon by 2045.

4 SITE AND CONTEXT ANALYSIS

- 4.1.1 The Design Commission for Wales (2017) guidance 'Design and Access Statements – Why, What and How' advises that a Design and Access Statement should demonstrate how a proposed development has considered the context of the site and its surroundings, evaluating options, and describing how the design reflects this iterative process. This iterative process can be described under a number of headings, including amount, use, scale, layout, landscape and access. These matters are described below.
- 4.1.2 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 is 26 Ha and currently consists of several fields of improved grassland, bound by a mix of scrub, hedgerows and open/featureless boundaries.



Figure 2: View from site looking to the south

- 4.1.3 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 (Figure 2) and an un-named local road, unimproved grassland and disused tips to the west.



Figure 3: Current bridleway on site, looking towards the north

- 4.1.4 There are several recreational routes within the site and surrounding area. Footpath RHYM/FP96/1, RHYM/FP95/5 and RHYM/FP91/1 are the main footpaths. Figure 3 displays the footpath on site, which shows the topography and access track location.

5 INTERPRETATION

5.1.1 Figure 4 is a draft diagram showing the proposed inter-relationships in energy generation and preferred local supply for surplus energy. The Convatec Green Manufacturing Hub will produce c.4,000 MWh of zero carbon electricity to meet the energy demands for the Rhymney site via a private wire connection. It is estimated that an additional 4,000 MWh of heat generated energy will be exported to the site. The proposed 90% surplus electricity (c.22,000 MWh) and will be exported through the project grid connection. This will be used to supply the Convatec Deeside facility with c.5000 MWh of electricity via a PPA, and c.2,000 MWh of heat. Remaining capacity will be shared with local users through local distribution network. Convatec are also exploring using a direct supply arrangement for a new school in the local area. The above is subject to change as the design progresses.

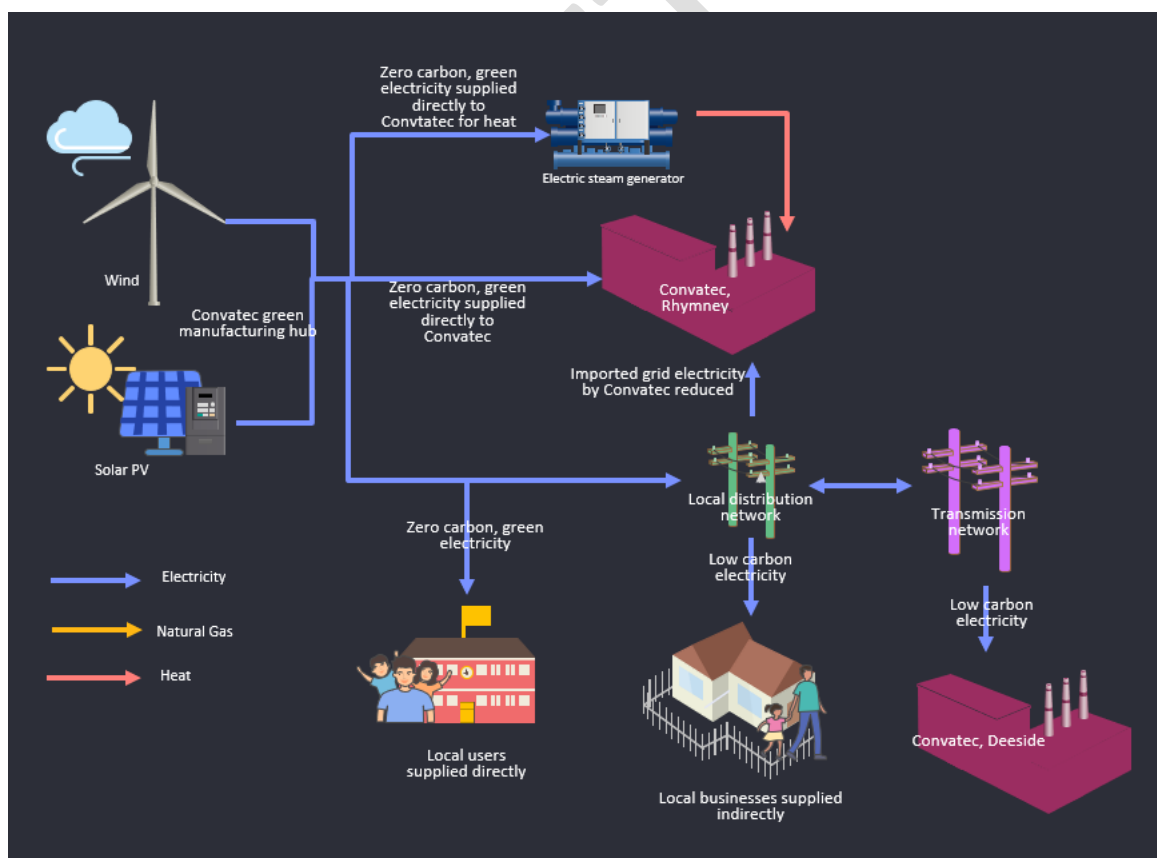


Figure 4: Inter-relationships in energy generation and preferred local supply for surplus energy

6 DESIGN DEVELOPMENT

6.1.1 The Design Commission for Wales (2017) guidance '*Design and Access Statements – Why, What and How*' advises that a Design and Access Statement should demonstrate how a proposed development has considered the context of the site and its surroundings, evaluating options, and describing how the design reflects this iterative process. This iterative process can be described under a number of headings, including amount, use, scale, layout, landscape and access. These matters are described below.

6.2 Development Constraints

6.2.1 The most common practical constraints that might limit the suitability of a particular site for wind or solar development are:

- Technical and commercial constraints:
 - Road and site access;
 - Gradient;
 - Grid connection;
 - Land remediation and ground stabilisation;
 - Current and future land use.
- Policy and planning constraints:
 - Proximity to dwellings;
 - Ecological factors;
 - Soil type and ALC;
 - Aviation safeguarding;
 - Landscape and visual impact;
 - Shadow flicker;
 - Electromagnetic interference;
 - Proximity of mining areas
 - Archaeological and historic environment factors; and
 - Public access.

6.3 Design Progression

6.3.1 The Proposed Scheme went through a series of principal design iterations, largely responding to environmental and technical surveys, as well as feedback from statutory and non-statutory consultees as part of the scoping opinion and full consultation.

Changes to the design of the Proposed Development, as highlighted within Chapter 6, have related to:

- The three wind turbines were originally located further north within the Site, closer to the ridgeline.
- The western-most turbine (T1) was originally closer to the western site boundary.
- The solar array was also originally located further to the north, amongst the turbines, again closer to the ridgeline.
- The preferred turbine model has changed due to availability. Originally a slightly smaller candidate turbine was proposed but the manufacturer has withdrawn the model from the market. This has resulted in a slightly larger turbine model with a greater installed capacity becoming the primary candidate turbine.
- The turbines are now located further to the south, which reduces their landscape and visual impact.
- T1 has moved to the east to maintain topple distance from the overhead 33kV power cable just beyond the option area.
- The solar array is now located towards the southern boundary to avoid steep slopes, reducing its visibility.

6.3.2 Mitigation measures have been identified and incorporated into the proposals in order to avoid, remove or reduce any adverse environmental effects that cannot be adequately addressed through design. Further information on the specific mitigation measures proposed are set out within the relevant technical chapters of this ES.

6.3.3 Figure 5 shows the indicative site layout for the Proposed Development.

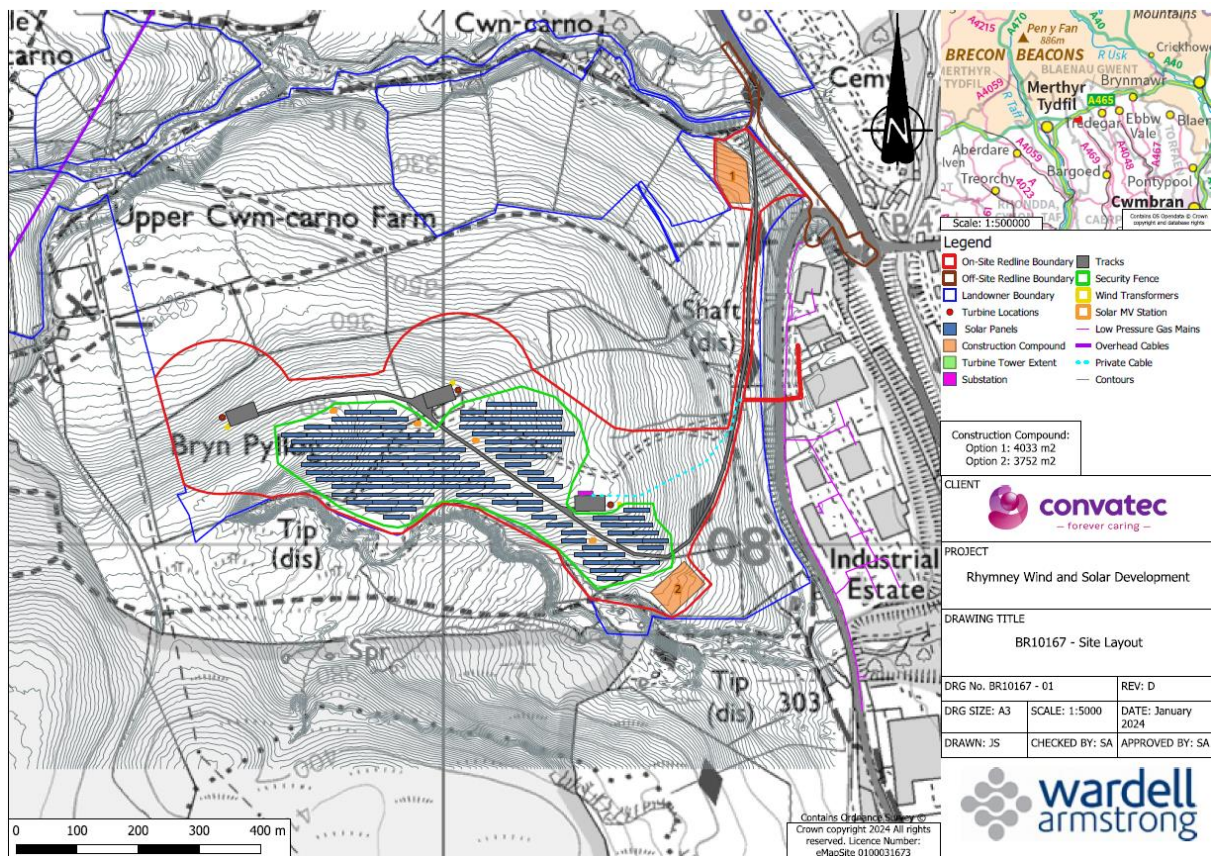


Figure 5: Indicative Site Layout

7 THE PROPOSAL

7.1 Character

7.1.1 The Proposed Development is supported in principle by PPW as it is a renewable energy development which seeks to provide the Applicant with renewable electricity for their factory, to offset demand for fossil fuels and reduce carbon emissions. Surplus energy will also benefit the local community and support Wales ambitious decarbonisation targets for the National Grid.

7.1.2 The Site is not located within a National Park or Area of Outstanding Natural Beauty. The Landscape and Visual Impact Assessment (Chapter 7 of the ES) demonstrates that the Proposed Development would not have an unacceptable adverse impact on the environment, including the character of the local area.

7.2 Access

7.2.1 The Transport Statement demonstrates how the Proposed Development will meet the relevant policies. Access to and within the Site has been considered, transport issues identified, and safe access addressed during the design process. Below is a brief

description of the transport arrangements for the development. A further detailed traffic management plan will be prepared prior to construction.

Access to the Transport Network

- 7.2.2 Abnormal Indivisible Loads (AIL) access will be required to achieve aspects of the development, particularly for delivery of the wind turbines and some of the electrical/substation components.
- 7.2.3 The proposed solution is for direct access from the A469 north of the roundabout interchange with the B4257/Heads of the Valleys Industrial Estate Access Road. Alternative options were considered but were found not to be feasible.
- 7.2.4 The proposed access would require some road improvements, temporary removal of street lighting and other highway equipment, and temporary restrictions to road users. The Highways Authority will need to be contacted and permission obtained. Preliminary management and communication measures are set out in the outline Delivery Management Plan (DMP) proposals.

Access to the Site

- 7.2.5 Construction and primary maintenance and operational access to the Proposed Development would be from the A465 Heads of the Valleys trunk road via the A469, the A469/B4257 (Carno Street) roundabout, the Heads of the Valleys Industrial Estate access road, an unnamed private access road, and the private access to Cwm Carno Farm. The private access roads are in the ownership of the Applicant. Where needed, access roads and existing tracks within the Site would be reinforced and improved to safely accommodate 16.5m HGVs during construction.
- 7.2.6 During the operation phase, traffic access to the Site is limited to occasional light vehicles used for maintenance and servicing purposes. Access to the Site for agricultural, ground, and ecological management is also anticipated on an occasional basis and existing access routes will be used.

7.3 Movement

- 7.3.1 The Proposed Development will promote the existing sustainable modes of transport to, from, and within the Site, to reduce reliance on the use of private cars. These include safe walking routes, designated cycle paths, and the use of public transport. Proximity to the railway station and bus services within Rhymney town centre means there is reasonable accessibility to the Site by means other than the car.

Minibuses for Workers

- 7.3.2 At peak times during construction, some 40 people are anticipated to be working on the Site at any given time with some supervisory/inspection access by light vehicles. Four minibuses with local points of departure will be provided for use by construction workers to encourage sustainable means of travel while working onsite.

National Cycle Network

- 7.3.3 National Cycle Network Route (NCN) 468 runs the length of the Rhymney Valley (bar a gap to the south), through Rhymney town centre, and up to the A465 via the A469. NCN 468 comprises a segregated and lit cycle track of approximately 2m width alongside the eastern side of the A469. This route will be retained within the Site boundary.

Public Rights of Way

- 7.3.4 There is also an informal pedestrian crossing of the A469 north of the interchange with the B4257, signed Rhymney and the Heads of the Valleys Industrial Estate access road. All Public Rights of Way (PROW) and their users within the Site boundary would be protected through the use of warning signage, local communications, weekend traffic bans (as necessary), and additional management of the existing PROW (as needed).

7.4 Environmental Sustainability

Landscape / Habitat

- 7.4.1 Rhymney Town is a Conservation Area and there are a number of designated heritage assets that may have visibility to the Site, including Grade II listed buildings as detailed within the Heritage Impact Assessment. Care has been taken to reduce the impact on the views to a minimum through use of appropriate screening, including altering the position of the turbines, and optimising the functioning of the solar panels via the type, height, and orientation, and angle of the panels deployed. There is no physical impact on any listed buildings from the proposed wind or solar farm.
- 7.4.2 Current land use at the Site is agricultural in the form of grazing and the new land uses would complement existing grazing on the Site. The Proposed Development seeks to retain and improve existing hedgerows wherever possible, utilising existing access points where feasible. Where hedgerow or tree removal is necessary, suitable replacements will be provided which adhere to Biodiversity Net Gain (BNG)

requirements. The Site will be restored to its previous land use once the development has been decommissioned.

Energy and Resource Efficiency

- 7.4.3 The Proposed Development will not generate emissions during operation and will contribute to national decarbonisation targets.
- 7.4.4 General maintenance and servicing to check and clean the solar arrays will be undertaken annually to ensure efficiency, with maintenance crews using small vehicles (e.g. 4x4 or a small van) to access the Site.
- 7.4.5 Routine maintenance or servicing of turbines is carried out twice a year, with a main service generally taking place in the summer and a minor service in the six months following. In year one, there is commonly an initial three-month service after commissioning. The turbine being serviced will be switched off for the duration of its service.

Water and Waste Management

- 7.4.6 The Water Resources ES Chapter (Chapter 20) demonstrates that the Proposed Development would not have a significant adverse impact upon the water environment and would not pose an unacceptable risk to the quality of controlled waters.

7.5 Community Safety

Public Access

- 7.5.1 The Site lies outside of the settlement boundary for Rhymney, although the nature of the Proposed Development means that it would not be compatible with developed areas, due to noise and safety constraints associated with power generation. Public access within the Site boundary will be restricted to existing PROW and NCN routes, with clear wayfinding to ensure users safety when navigating in the vicinity of the Proposed Development.

Traffic Management

- 7.5.2 The Construction Traffic Management Plan (CTMP) will include an Abnormal Loads Delivery Management Plan (DMP). The DMP will set out all traffic management and mitigation measures required to ensure safe and efficient transport of these loads. Rolling road closures (where necessary) will help to ensure safety. It is assumed that

the CTMP and DMP process will ensure any effects on local communities and road users are minimal.

7.6 Response to Planning Policy

7.6.1 The relevant planning policies and how the Proposed Development has been designed to address these concerns are identified in detail within the Planning Statement and technical documents which support the planning application, and these are not repeated within this Design and Access Statement.

7.6.2 Given the scale and location of the Proposed Development, the Applicant has undertaken an Environmental Impact Assessment (EIA) to assess potentially significant environmental effects. Initial measures outlined in the proposals are based on experience of similar projects and current knowledge of the Site. The Proposed Development is considered appropriate within the countryside, and the Environmental Statement (ES) demonstrates that impacts are acceptable.

7.6.3 The Welsh Government has set targets for Wales to meet the equivalent of 100% of its annual electricity demand from renewable sources by 2035 and to achieve net zero by 2050. The principle of the development of a renewable energy project in this location is supported by national planning policy. Future Wales at Policy 17 states:

“The Welsh Government strongly supports the principle of developing renewable and low carbon energy from all technologies and at all scales to meet our future energy needs. In determining planning applications for renewable and low carbon energy development, decision makers must give significant weight to the need to meet Wales’ international commitments and our target to generate 70% of consumed electricity by renewable means by 2030 in order to combat the climate emergency”.

7.6.4 The Proposed Development has been designed in line with national and local planning policy for wind and solar farms and will contribute to achieving the Welsh Government’s vision and Future Wales ambition.

8 SUMMARY

8.1.1 A number of design iterations were used to develop the scale of the proposed wind turbines, the orientation and number of the solar arrays, and their physical location within the Site boundary. The final design solution and current application has been adopted to maximise the renewable energy generation potential whilst minimising or eliminating potential adverse environmental effects.

- 8.1.2 A range of studies demonstrating this iterative process are included with the Environmental Statement (ES) which accompanies the planning application. The highways access to the Site at Rhymney has been carefully assessed.
- 8.1.3 The Proposed Development is considered appropriate within the countryside, and the ES demonstrates that impacts are acceptable.
- 8.1.4 The proposed layout meets the aims and intent of the Design and Access Statement process in Wales as required under the Planning (Wales) Act 2015, Planning Policy Wales (PPW) and Technical Advice Note 12: Design (TAN 12).

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