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# 16. Socio-economics including recreation and land use

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## 16.1 Introduction

16.1.1 This chapter presents the assessment of the likely significant effects of the Proposed Development with respect to socio-economics, including recreation and land use. It should be read in conjunction with the Project description provided in **Chapter 4: Description of the Proposed Development** and with respect to relevant parts of the following chapter:

- **Chapter 6: Landscape and Visual Impact Assessment** which assesses the visual effects on tourism and recreational receptors including regional trails and country parks.

16.1.2 This chapter describes:

- The legislation, policy and technical guidance that has informed the assessment (**Section 16.2**);
- Consultation and engagement that has been undertaken and how comments from consultees relating to socio-economics have been addressed (**Section 16.3**);
- The methods used for baseline data gathering (**Section 16.4**);
- Overall baseline (**Section 16.5**);
- Embedded measures relevant to socio-economics (**Section 16.6**);
- The scope of the assessment for socio-economics (**Section 16.7**);
- The methods used for the assessment (**Section 16.8**);
- The assessment of socio-economic effects: climate change and energy security effects (**Section 16.9**);
- The assessment of socio-economic effects: economy and community (**Section 16.10**);
- The assessment of socio-economic effects: recreation (**Section 16.11**);
- The assessment of socio-economic effects: land use (**Section 16.112**);
- Any assessment of cumulative (inter-project) effects (**Section 16.133**);
- A summary of the significance conclusions (**Section 16.14**); and
- An outline of any further work to be undertaken for the Environmental Statement (ES) to be submitted with the application (**Section 16.15**).

## Limitations and assumptions

16.1.3 The ES has been produced to fulfil the Applicant's consultation duties and to enable consultees to develop an informed view of the likely significant effects of the Proposed Development. There are no limitations relating to socio-economics that affect the robustness of the assessment of the likely significant effects of the Proposed

Development. The assessment has been completed using professional judgement and has been informed by the findings of the LVIA (**Chapter 6**).

## 16.2 Relevant legislation, planning policy and technical guidance

16.2.1 This section identifies the legislation, planning policy and technical guidance that has informed the assessment of effects with respect to socio-economics. Further information on policies relevant to the Proposed Development is provided in **Chapter 5: Legislation and policy overview**.

### Legislation

16.2.2 A summary of the relevant legislation is given in **Table 16.1**.

**Table 16.1 Legislation relevant to the socio-economics assessment**

Legislation	Legislative context
<b>Climate Change Act 2008 (as amended)</b>	The Climate Change Act 2008 (as amended) introduces a clear, credible, long-term framework for the UK to achieve its goals of reducing carbon dioxide emissions and for adapting to the impacts of climate change. One of the key provisions of the amended Act is the introduction of legally binding targets on greenhouse gas emissions comprising reductions of at least 100% greenhouse gas emissions by 2050, against a 1990 baseline. The generation of electricity by renewable means such as wind energy is considered to be a key contributor towards meeting these targets.
<b>Well-being of Future Generations (Wales) Act 2015</b>	This Act places a duty on public bodies (including Welsh Ministers) to carry out sustainable development through their decision making. The Act puts in place seven well-being goals to help ensure that public bodies are all working towards the same vision of a sustainable Wales. The wellbeing goals act together to ensure outcomes across economic, environmental and social sustainability strands.
<b>Environment (Wales) Act 2016 (as amended)</b>	The Environment (Wales) Act 2016 (as amended), under Part 2, places a duty on the Welsh Ministers to ensure that the net Welsh greenhouse gas emissions account in 2050 is at least 100% lower than the 1990 baseline.

### Planning policy

16.2.3 A summary of the relevant national and local planning policy is given in **Table 16.2**.

**Table 16.2 Planning policy relevant to the socio-economics assessment**

Policy	Policy context
<b>National planning policy</b>	
<b>Future Wales: The National Plan 2040<sup>1</sup></b>	<p><b>Policy 9</b> Resilient Ecological Networks and Green Infrastructure notes that Common Land can form part of a local green infrastructure network.</p> <p><b>Policy 17</b> Renewable and Low Carbon Energy and Associated Infrastructure states that decision makers must give significant weight to the need to meet international climate change commitments and Welsh Government targets to generate 70% of consumed energy by renewable means by 2030. The policy sets a presumption in favour of large-scale wind farms being developed in Pre-Assessed Areas for Wind.</p> <p><b>Policy 18</b> Renewable and Low Carbon Energy Developments of National Significance states that proposals qualifying as Developments of National Significance will be permitted subject to Policy 17 and the criteria listed under Policy 18. Criteria 2 requires that there are no unacceptable adverse visual impacts on nearby communities and individual dwellings. The cumulative impacts of existing and consented renewable energy schemes should also be considered.</p> <p><b>Policy 33</b> National Growth Area – Cardiff, Newport and the Valleys sets out the overall strategic view for development in the South East which includes the area covered by Blaenau Gwent and Torfaen County Borough Council. Amongst other provisions, the Policy sets out support for investment in the Valleys that improves well-being, increases prosperity and addresses social inequalities.</p>
<b>Planning Policy Wales, Edition 12, (2024)<sup>2</sup></b>	<p>Paragraph 5.5.1 states that tourism can be a catalyst for investment, growth and job creation whilst 5.5.2 states that the planning system should encourage sustainable tourism where it contributes to economic regeneration.</p> <p>Paragraph 5.5.5 states that (inter alia) rights of way are important tourism and recreation assets both in their own right and as part of linking other attractions.</p> <p>Paragraph 6.3.18 states that Common Land is a finite resource that should not be developed unnecessarily, that it is important for a number of reasons and that access should not be impeded unnecessarily.</p>
<b>TAN 16: Sport, Recreation and Open Space (2009)<sup>3</sup></b>	TAN 16 sets out the importance to Public Rights of Way (PROW) and their ability to connect wider open space and recreational corridors.

<sup>1</sup> Welsh Government (2021) Future Wales: The National Plan 2040 (Online) available at: <https://www.gov.wales/sites/default/files/publications/2021-02/future-wales-the-national-plan-2040.pdf> (Accessed August 2024).

<sup>2</sup> Welsh Government (2021) Planning Policy Wales, February 2024, Edition 12. (Online) Available at: <https://www.gov.wales/sites/default/files/publications/2024-07/planning-policy-wales-edition-12.pdf> (Accessed August 2024)

<sup>3</sup> Welsh Government (2009) TAN 16: Sport, Recreation and Open Space. (Online) Available at: <https://gov.wales/sites/default/files/publications/2018-09/tan16-sport-recreation-open-space.pdf> (Accessed August 2024).

Policy	Policy context
<b>TAN 23: Economic Development (2014)</b> <sup>4</sup>	TAN 23 supports the economic development of Wales and highlights the importance of delivering sustainable growth in rural areas.
<b>Common Land Consents Guidance (2014)</b> <sup>5</sup>	Guidance sets out how the Welsh Ministers and PINS Wales will process and determine applications under section 38(1) and section 16(1) and, so far as is relevant, in relation to other statutory provisions (see paragraph 4.15 below). It notes that every application to the Welsh Ministers must, however, be considered on its own merits and that a determination may, in exceptional circumstances, depart from the guidance if it appears appropriate to do so.
<b>Local planning policy</b>	
<b>Blaenau Gwent County Borough Council Local Plan November 2012</b> <sup>6</sup>	<b>Policy SP7</b> Climate Change encourages more of the County Borough's electricity to be generated by renewable and low/zero carbon technologies.
	<b>Policy SP9</b> Active and Healthy Communities promotes the delivery of active and healthy communities including protecting and enhancing accessibility to natural greenspaces
	<b>Policy EM4</b> Low and Zero Carbon Energy provides criteria against which development, such as onshore wind farms will be considered. It requires that such development be safely accessed to permit regular maintenance without an unacceptable adverse impact to the environment or the public rights of way network and will not have and unacceptable adverse effect on local amenity.
<b>Torfaen County Borough Council Local Plan December 2013</b> <sup>7</sup>	<b>Policy M4 Preferred Areas</b> identifies the western end of Tir Pentwys as a site likely to have high specification aggregate and lower quality general fill material. It notes that the site can only be accessed from Torfaen County Borough and development is dependent upon that part of the site lying in Torfaen receiving planning permission.
	<b>Policy BW1 Development Proposals</b> criteria relevant to this ES topic is that the proposal does not have an unacceptable impact upon the amenities of the occupiers of adjoining or neighbouring properties.
	<b>Policy C3 Rural Development and Diversification</b> this policy concerns applications for rural development and farm diversification and supports such schemes, subject to caveats where they are complimentary to the agricultural operations of the farm and do not prejudice the operation of existing businesses.

<sup>4</sup> Welsh Government (2014) TAN 23: Economic Development (Online). Available at: <https://gov.wales/sites/default/files/publications/2018-09/tan23-economic-development.pdf> (Accessed August 2024).

<sup>5</sup> Welsh Government (2014): Common Land Consents Guidance (Online) Available at: <https://gov.wales/sites/default/files/publications/2018-01/common-land-consents-guidance.pdf> (Accessed August 2024).

<sup>6</sup> Blaenau Gwent County Borough Council Local Plan (Online). Available at: <https://www.blaenau-gwent.gov.uk/en/resident/planning/local-development-plan/adopted-local-development-plan-2006-2021/adopted-ldp/> (Accessed August 2024).

<sup>7</sup> Torfaen County Borough Council Local Development Plan (2013) (Online). Available at: <https://www.torfaen.gov.uk/lgs/en/ForwardPlanning/LocalDevelopmentPlan/Local-Development-Plan.aspx>. (Accessed August 2024).

Policy	Policy context
	<p><b>Policy S2 Sustainable Development</b> requires development proposals to demonstrate they have taken into account eight principles, where they are relevant which include the conservation and enhancement of the natural environment, promotion of economic growth.</p> <p><b>Policy S3 Climate Change</b> encourages development proposals to mitigate the cause of climate change and provides support where they demonstrate consideration of a hierarchy of criteria.</p> <p><b>Policy M1 Mineral Safeguarding</b> Development proposals that would permanently sterilise will not be permitted unless the mineral has already been recovered or the developer has satisfactorily demonstrated that the extraction of the mineral is impracticable, uneconomic or environmentally unacceptable.</p> <p><b>Policy M3 Tir Pentwys Preferred Area for Aggregates</b> allocates land at Tir Pentwys as a preferred area for aggregate extraction of up to 7.2 million tonnes whilst <b>Policy M4b</b> identifies a Minerals Sites Buffer Zone around the allocation preventing any development which might prejudice the extraction of the aggregate.</p> <p><b>Policy HE2 Blaenavon Industrial Landscape World Heritage Site</b> states that development proposals within and adjacent to the site will only be permitted where it can be demonstrated that it is sympathetic to the character, does not adversely affect important views into the WHA, contributes to its preservation and does not adversely affect the overall integrity and its landscape or historic setting.</p>

## Technical guidance

- 16.2.4 There is no specific guidance for undertaking an assessment of socio-economic effects and no prescribed method for determining either the sensitivity of socio-economic receptors or the significance of effects on receptors. However, the guidance in National Policy Statement (NPS) EN1 (DECC, 2011)<sup>8</sup> section 5.12 has been taken into account in forming the scope of the assessment which focuses on the number of jobs created, the economic value of the scheme, effects on recreation and cumulative effects. The NPS also notes that socio-economic impacts may be linked to other impacts (notably potential visual impacts on tourism).

## 16.3 Consultation and engagement

### Overview

- 16.3.1 The assessment has been informed by consultation responses and ongoing stakeholder engagement. An overview of the approach to consultation is provided in **Section 2.4 of Chapter 2: Approach to Environmental Impact Assessment**.

<sup>8</sup> Department of Energy Security and Net Zero (2023) Overarching National Policy Statement for Energy (EN-1). It is recognised that the NPS no longer forms part of the policy provisions against which the Proposed Development will be assessed however the guidance on assessment of socio-economics is considered relevant as an approach.

## Scoping Direction

- 16.3.2 A Scoping Direction was issued by the Planning and Environmental Decisions Wales (PEDW, formerly Planning Inspectorate Wales), on behalf of the Welsh Ministers, on 06 August 2021 in relation to the Applicant's previous proposal for an eight turbine wind farm on the same site. The Direction is considered relevant to this proposal for a seven turbine wind farm. A summary of the relevant responses received in the Scoping Direction in relation to socio-economics and confirmation of how these have been addressed within the assessment is presented in **Table 16.3**.

**Table 16.3 Summary of EIA Scoping Direction responses for socio-economics**

Consultee	Consideration	How addressed in this ES
<b>PEDW ID.42</b>	Tourism: The Inspectorate agrees that this matter can be scoped out of the ES based on the available information.	This has been scoped from the assessment other than in the wider context of recreation.
<b>PEDW ID.43</b>	Land Use: The Inspectorate welcomes the assurance that the potential effects on Mynydd Llanhilleth Common will be addressed in the ES.	Consideration is given to the potential for effects upon Mynydd Llanhilleth Common in Section 16.12.
<b>Blaenau Gwent County Borough Council</b>	Land use: the site is within a variety of minerals designations, including aggregates safeguarding areas, buffer zones etc.	This chapter considers the potential for the project to affect mineral extraction in Section 16.12.
<b>Torfaen County Borough Council</b>	Land Use: We would specifically request that the potential for aggregate extraction and transportation at Tir Pentwys Quarry and whether the two land uses could sit alongside one another.	This chapter considers the potential for the project to affect mineral extraction in Section 16.12 from an economic perspective.

## Statutory Consultation

- 16.3.3 The Applicant undertook statutory consultation on an earlier proposal for an eight turbine wind farm at Mynydd Llanhilleth between 28 November 2022 and 23 January 2023. Comments received in relation to socio-economics remain relevant to this proposal and how these have been addressed within the assessment, where appropriate is summarised in **Table 16.4** below.

**Table 16.4 Summary of statutory consultation responses for socio-economics**

Consultee	Consideration	How addressed in this ES
<b>Torfaen County Borough Council</b>	Local ownership: The council notes that the Applicant is a wholly Welsh owned company based in South Wales which therefore complies with the Welsh Governments requirement for an element of local ownership in each renewable energy generation proposal and thereby would contribute towards the WG target of 1GW of renewable electricity and heat	Noted. See Section 16.9



Consultee	Consideration	How addressed in this ES
	capacity in Wales to be locally owned by 2030 (current proposal for increase of target to 1.5 GW by 2035).	
	Land Use: It is also noted that the site falls within the Minerals Safeguarding area designated by adopted LDP policy M1 and more specifically the Tir Pentwys Buffer Zone demarcated by Policy M4(b). As such, the potential impact on the aggregates reserves will need to be addressed.	This chapter considers the potential for the project to affect mineral extraction in Section 16.12 from a land use perspective.

## Technical engagement

- 16.3.4 The Applicant has also engaged with the commoners and other interested parties of Mynydd Llanhilleth Common to understand how it is used and to explain its' proposals. The Applicant also undertook consultation on the common land between 28 November 2022 and 23 January 2023 and also undertook three common land workshops on 06 July 2021, 08 July 2021 and 17 January 2023, these were in relation to the previous, eight turbine proposal. The following responses of potential relevance to the socio-economic assessment were received:
- That the 'land bridge' understood to be the existing access track through Tir Pentwys does not need to be deregistered. It is only necessary to close it for safety purposes during installation. Plans to permanently deregister this land will be opposed (Open Space Society); and
  - There is a restricted byway leading from Blaenycwm Road into The Canyon, very close to the lagoon and visitors using this byway would not be illegally accessing the area.

## 16.4 Data gathering methodology

- 16.4.1 There is no prescribed methodology or standard guidance for this aspect of an EIA. The method adopted is therefore one of determining the existing circumstances (the baseline) through desk-based analysis, utilising a range of statistical information. This statistical information has been drawn from a number of sources and covers various geographies, from ward level through to the national level.

### Study area

- 16.4.2 The study area for baseline data covers the site contained within the proposed red line application boundary ('Site boundary') and grid connection corridor, together with the wider county borough, regional and national context.

### Climate change and energy security

- 16.4.3 The baseline study covers the national (Wales) area as a whole but includes for the County Boroughs and regional (Cardiff capital region) level also.

## Economy and Community

- 16.4.4 The baseline study covers Wales, Blaenau Gwent and Torfaen County Borough Council areas, and the wards of:
1. Abertillery and Six Bells;
  2. Cwm;
  3. Cwmtillery;
  4. Llanhilleth;
  5. Abersychan;
  6. Pontynewynydd & Snatchwood;
  7. Trevethin & Penygarn;
  8. Pontypool Fawr; and
  9. Crumlin.

## Recreation

- 16.4.5 PEDW agreed that tourism could be scoped out from further assessment following consideration of the Scoping Report submitted for the earlier, eight turbine proposal. This assessment does however consider recreation in the context of users of Public Rights of Way (PRoW), longer-distance trials and recreational areas and open access land (and separately common land which is not a recreational use per se). It has focussed on the local context within 10km as informed by the LVIA in **Chapter 6 Landscape and Visual**.

## Land use

- 16.4.6 Consideration of potential effects upon land use includes for land directly affected (within the Site) and the wider Llanhilleth Common. With regard to minerals (aggregates) this is extended to consider the County Boroughs as a study area.

## Desk study

- 16.4.7 A summary of the organisations that have supplied data, together with the nature of that data is outlined in **Table 16.4**.

**Table 16.4 Data sources used to inform the socio-economics assessment**

Organisation	Data source	Data provided
<b>Department for Energy Security and Net Zero</b>	Renewable electricity by local authority 2014-2022 <sup>9</sup>	Installed capacity of renewable energy for Blaenau Gwent and Torfaen County Borough Councils.
<b>Welsh Government</b>	Energy Generation in Wales 2022 Report <sup>10</sup>	Renewable energy generation stats
<b>Nomisweb StatsWales</b>	Local Authority Profile <sup>11</sup> Population estimates by local authority, region and age <sup>12</sup> 2011 Ward Profiles <sup>13</sup>	Data related to demography, occupations, employment/unemployment, out-of-benefits for Blaenau Gwent and Torfaen County Boroughs and at ward level.
<b>Welsh Government StatsWales</b>	Welsh Index of Multiple Deprivation 2019 <sup>14</sup>	Data for measures of deprivation by Lower Super Output Area (LSOA).
<b>Natural Resources Wales</b>	GIS of PRow	The location of PRow was confirmed using the Definitive maps. The presence of common land has also been obtained.

## Survey work

16.4.8 No survey work has been undertaken to inform the assessment of potentially significant effects related to socio-economics. The assessment is based on published data sources.

## 16.5 Overall baseline

### Current baseline

#### Renewable energy – economic value in Wales

16.5.1 A study of the economic opportunities from onshore wind development in Wales was undertaken in 2013 for the Welsh Government (Regeneris Consulting Ltd and Welsh Economy Research Unit, 2013)<sup>15</sup>. The research highlighted the potential economic

<sup>9</sup> DESNZ (2023) Renewable electricity by local authority 2014-2022. (Online) Available at: <https://www.gov.uk/government/statistics/regional-renewable-statistics> (Accessed August 2024).

<sup>10</sup> Welsh Government (2023) Energy Generation in Wales 2022. (Online) Available at: <https://www.gov.wales/sites/default/files/publications/2023-11/energy-generation-in-wales-2022.pdf> (Accessed August 2024).

<sup>11</sup> Nomisweb (2022) Local Authority Profiles (Online). Available at: <https://www.nomisweb.co.uk/reports/lmp/la/contents.aspx> (Accessed August 2024).

<sup>12</sup> StatsWales (2020) Population estimates by local authority, region and age. (Online) Available at: <https://statswales.gov.wales/Catalogue/Population-and-Migration/Population/Estimates/Local-Authority/populationestimates-by-localauthority-region-age> (Accessed August 2024).

<sup>13</sup> Nomisweb (2021) 2011 Ward Profiles (Online) Available at: <https://www.nomisweb.co.uk/reports/lmp/ward2011/contents.aspx> (Accessed August 2024).

<sup>14</sup> Welsh Government (2019) Welsh Index of Multiple Deprivation (Online). Available at: <https://statswales.gov.wales/Catalogue/Community-Safety-and-Social-Inclusion/Welsh-Index-of-Multiple-Deprivation> (Accessed August 2024).

<sup>15</sup> Regeneris Consulting Ltd and Welsh Economy Research Unit, Cardiff Business School for Renewables UK Cymru, Welsh Government (2013) Economic Opportunities for Wales from Future Onshore Wind Development (Online)

benefits from onshore wind development which may be felt in the local areas in which wind farms are developed and within the wider Welsh economy. Economic benefits derive from investment involved in the planning and development of schemes, construction of the turbines and in operation through ongoing maintenance. The research noted that the extent to which economic benefits from construction will flow directly into the Welsh economy will partly depend on the availability of skilled labour and manufacturing capacity, but that local suppliers are often well placed to supply some types of goods, such as aggregates and non-specialist engineering services. There are generally greater opportunities for investment in operations and maintenance to remain in the Welsh economy, including opportunities for locally-based maintenance staff.

- 16.5.2 Overall, the study concluded that there is an opportunity for Wales to secure gross value added (GVA) of £2.3 billion between 2012 and 2050, with over 2,000 full time equivalent (FTE) jobs created in this period based on delivering 2GW of onshore wind capacity by 2025. It was noted (in 2013) that this would require measures to overcome barriers in the planning system and in the grid and road infrastructure, as well as a proactive approach to supply chain development. It was also noted that those local economies that stood to gain the most from development were those with a strong presence of construction and manufacturing firms.

## Renewable energy – capacity in Wales

- 16.5.3 Welsh Government Ministers have a duty to ensure the Welsh carbon emissions in 2050 are 100% lower than the 1990 baseline (alternatively known as ‘net zero’) placed on them by the Environment (Wales) Act 2016 (as amended). Additionally, in September 2017, the Welsh Cabinet Secretary for Energy, Planning and Rural Affairs (Welsh Government, 2017)<sup>16</sup> proposed the following targets for Wales:
- Wales to generate 70% of its electricity consumption from renewable energy by 2030;
  - 1GW of renewable electricity capacity in Wales to be locally owned by 2030; and
  - By 2020 all new renewable energy projects to have at least an element of local ownership.
- 16.5.4 The 70% electricity consumption target features within the Update to Future Wales – The National Plan 2040 (Policy 17) as a target to which decision-makers must give significant weight when determining planning applications.
- 16.5.5 In January 2023 the Welsh Government (Welsh Government, 2023a)<sup>17</sup> announced an updated target to meet 100% of its electricity needs from renewable sources by 2035 and to achieve 1.5GW of renewable energy capacity within local ownership by 2035. These targets have now been adopted<sup>18</sup>.
- 16.5.6 The Energy Generation in Wales 2022 report<sup>10</sup> sets out the latest data on energy generation from renewables. The report states that capacity has increased in Wales in

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Available at: <https://www.renewableuk-cymru.com/wp-content/uploads/Wales-Onshore-economic-benefit.pdf> (Accessed August 2024).

<sup>16</sup> Welsh Government (2017) Welsh Cabinet Secretary for Energy, Planning and Rural Affairs - Energy Generation Targets for Wales: Statement to Assembly Members (Online) Available at: <https://gov.wales/lesley-griffiths-high-ambition-clean-energy> (Accessed August 2024).

<sup>17</sup> Welsh Government (2023a) Climate Change Minister - Wales aims to meet 100% of its electricity needs from renewable sources by 2035 (Online) Available at: <https://www.gov.wales/wales-aims-meet-100-its-electricity-needs-renewable-sources-2035> (Accessed August 2024)

<sup>18</sup> Welsh Government (2023b) Written Statement: Publication of Summary of Responses to the Consultation on Wales’ Renewable Energy Targets (Online). Available at: [Written Statement: Publication of Summary of Responses to the Consultation on Wales’ Renewable Energy Targets \(14 July 2023\) | GOV.WALES](#) (Accessed August 2024).

recent years with Wales now generating the equivalent of approximately 59% of its electricity consumption from renewable sources led largely onshore and offshore wind as well as solar PV. Solar PV and heat pumps both continued to see a significant increase in deployment in 2022. The report acknowledges that more work will be needed to reach the target of 70% but is encouraged by the pipeline of projects including offshore wind and states that whilst 2022 was a significant improvement upon deployment rates in 2020 it still remained the second lowest in the last decade. 2022 saw lower deployment rates than 2021 (see below).

- 16.5.7 With regard to local ownership there is now (in 2022) a total of 970 MW of locally owned renewable capacity with additional locally owned renewable electricity and heat project commissioned in 2022 helping Wales close in to 97% of its goal for 2030.
- 16.5.8 In 2022 43 MW of renewable electrical capacity (down from 116 MW in 2021) and 53 MW of renewable heat capacity (up from 29 MW in 2021) was installed. The year saw the second lowest increase in onshore wind capacity since 2005 with just 6 kW commissioned compared to the next lowest increase, which was 3.4 MW installed in 2021. 7.9TWh of electricity in Wales was generated from renewables and by the end of 2022 Wales had 1,266MW of onshore wind capacity, equivalent to 35.6% of renewable electricity capacity in Wales. The report<sup>10</sup> also illustrates that Blaenau Gwent and Torfaen County Borough Councils have some of the lowest installed capacities for renewable energy with the report's data tables for 2022 stating that this stands at 24MW and 16MW respectively (each contributing less than 1% to total Welsh renewable energy generation).

### Economy and community – employment and benefit claimant status

- 16.5.9 As described in **Section 16.4** the study area includes the ward level geographies that will be used to assess the potential impact of the Proposed Development. The Proposed Development is located within Blaenau Gwent and Torfaen County Boroughs, which have a population of 66,900 and 92,300 respectively (Census, 2021)<sup>19</sup>.
- 16.5.10 The UK 2021 census results show that the population of Blaenau Gwent has reduced from 69,814 in 2011 whilst Torfaen has increased from a 2011 figure of 91,075.
- 16.5.11 In terms of Blaenau Gwent wards, the Site predominantly falls within the wards of Llanhilleth with a small part of the access track crossing into Abertillery and Six Bells.
- 16.5.12 The Site mainly lies within the Torfaen wards of Abersychan, Pontnewynydd and Snatchwood, and Pontypool Fawr wards.
- 16.5.13 As economic effects do not necessarily cease at local boundaries the labour market profiles of Abertillery and Six Bells, Cwm, Cwmtillery and Crumlin (Blaenau Gwent) and Trevethin and Penygarn, Pontypool Fawr (Torfaen) have also been included as local wards which include the closest urban areas. Crumlin (Caerphilly) is also included. These wards, along with the County Boroughs of Blaenau Gwent and Torfaen and the Welsh context, are included in **Table 16.5**.

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<sup>19</sup> Population and household estimates, England and Wales: Census 2021  
<https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/bulletins/populationandhouseholdestimatesenglandandwales/census2021#population-sizes-and-changes-for-regions-and-local-authorities>  
 (Accessed August 2024).

**Table 16.5 Labour Market Profiles (Key Statistics)**

Area		Population age 16-64*	Employed (economically active)*+	Unemployed*+	Out of work claimants**
<b>Wales</b>	Total	1,893,000	1,401,000 (Apr 2024-Jun 2024) Nomis Labour Force Survey	55,000 (Apr 2024-Jun 2024) Nomis Labour Force Survey	69,604 (July 2024) Nomis ONS Claimant Count
	Percentage	61.0% (Census 2021)	68.9% (Apr 2024-Jun 2024) Nomis Labour Force Survey	3.8% Apr 2024-Jun 2024) Nomis Labour Force Survey	4.6%
<b>Blaenau Gwent County Borough</b>	Total	41,600 (Nomis ONS Population estimates 2021)	32,400 (Nomis ONS annual population survey Apr 2023-Mar 2024)	1,200	1,795 (July 2024)
	Percentage	62.1%	71.3%	3.7%	4.3%
<b>Torfaen County Borough</b>	Total	56,100	42,500	1,400	2,280 (July 2024)
	Percentage	60.6%	73.6%	3.3%	4.1%
<b>Abertillery and Six Bells</b>	Total	4,068	2,898	165	170
	Percentage	63.3%	71.2%	5.5%	4.3%
<b>Cwm</b>	Total	2,503	1,839	107	90
	Percentage	63.5%	73.5%	5.6%	3.3%
<b>Cwmtillery</b>	Total	2,747	1,833	120	125
	Percentage	61.7%	66.7%	6.3%	4.2%
<b>Llanhilleth</b>	Total	2,789	1,804	143	120
	Percentage	63.3%	64.7%	7.5%	4.1%
<b>Abersychan</b>	Total	4,068	2,797	313	160
	Percentage	60.6%	68.8%	5.8%	3.6%
<b>Pontnewynydd and Snatchwood</b>	Total	2,452	1,738	104	115
	Percentage	64.7%	70.9%	5.8%	4.9%

Area		Population age 16-64*	Employed (economically active)*+	Unemployed*+	Out of work claimants**
Pontnewydd	Total	4,589	3,339	186	200
	Percentage	64.3%	72.8%	5.4%	4.6%
Pontypool Fawr	Total	4,462	3,191	165	205
	Percentage	60.0%	71.5%	5.1%	4.7%
Trevethin and Penygarn	Total	3,215	2,084	152	195
	Percentage	60.5%	64.8%	7.0%	5.2%
Crumlin	Total	3,549	2,653	142	110
	Percentage	61.2%	74.8%	5.2%	2.9%

Source: Nomis (2024) Official Census and Labour Market Statistics

\*2021 ONS Census for Wales and LAs Nomis Local Area Report 2021 for wards.

\*+ Nomis Labour Force Survey (Apr 2024-Jun 2024) for Wales, Economic activity status, England and Wales; Census 2021 for LAs. 2021 Census data for ward figures.

\*\* Nomis ONS Claimant County (July 2024). Some of Ward areas listed in the first column have recently merged, following Government reorganisation. In these case, percentages figures in the final column (out-of-work claimants) have been calculated by creating an average using former Ward figures.

- 16.5.14 Blaenau Gwent County Borough has a smaller working age (16-64) population to Torfaen County Borough, and the number of people who were economically active in Blaenau Gwent as of March 2024 was 34,300 which is lower than Torfaen 44,300. The proportion of those who are economically active is greater in both areas than the Welsh average. Both areas also have a lower percentage of people who are unemployed than the average for Wales.
- 16.5.15 Of the nine wards in the study area, the two wards which are in Blaenau Gwent and where the Proposed development would be located have a lower percentage of people classed as economically active (Llanhilleth 64.7%, Abertillery and Six Bells 71.2%) than the Blaenau Gwent average (71.3%). For Torfaen, in the four wards within which parts of the Proposed Development would be located, all are below the levels of economic activity represented by the average for Torfaen (73.6%).
- 16.5.16 Cwm has the highest proportion of its population economically activity of all wards profiled in **Table 16.5** above (73.5%). It contrasts with the wards of Llanhilleth, Cwmtillery, and Abersychan which have significantly lower percentages of 64.7%, 66.7% and 68.8% respectively. In general, most wards exhibit higher levels of unemployment than their respective County Borough averages.

## Economy and community – Local Economic Activity

- 16.5.17 As noted above, the proportion of working age population of Blaenau Gwent County Borough and Torfaen County Borough is slightly greater than the Welsh average (see **Table 16.5**). The proportion of the workforce in various occupation groups is however different from both the Welsh average and between the authorities (see **Table 16.6**). For example, the percentage of people employed in management and professional occupations (groups 1-3) across Wales as a whole (totalling 47.3%) is substantially higher

than Blaenau Gwent (39.2%) but much closer to the equivalent occupation groups in Torfaen (46.1%). With a lower percentage of people in Groups 1-3 it stands to reason that Blaenau Gwent has a higher proportion of workers in the remaining groups than the Welsh average. The largest differences occurring in the process plant and machine operatives group where the proportion in Blaenau Gwent is 13.7% compared to 6.5% in Wales, a difference of 7.2%.

- 16.5.18 Across the nine wards which make up the study area Pontnewydd has 37% of its workforce in the Groups 1-3 contrasting with Llanhilleth which has 25.3%. All wards have proportions which are below their local authority or the national average. The larger occupation groups within the wards tend to be Group 9 (Elementary Occupations) and between Groups 5 to 9 all have a workforce percentage greater than (or matching) the Welsh average (with the majority also exceeding their local authority average). Other variances perhaps provide less of a pattern although it is relevant to note that Trevethin and Penygarn, and Llanhilleth wards have substantially greater percentages of their workforces in Group 9 (Elementary) occupations than the Welsh, local authority and adjoining ward averages. Llanhilleth ward also has a much greater proportion of those working in Group 8 (Process plant and machine operatives) at 18.5%.



**Table 16.6 Employment by occupation (percentage)**

Occupation Group	Wales	BG	Torfaen	Abertillery and Six Bells	Cwm	Cwmtillery	Llanhilleth	Abersychan	Pontnewydd and Snatchwood	Pontnewydd	Pontypool Fawr	Trevethin and Penygarn	Crumlin
<b>1. Managers, directors and senior officials</b>	8.7	7.0	9.6	7.4	7.4	7.4	8.0	8.8	8.3	9.5	9.1	8.1	9.0
<b>2. Professional occupations</b>	23.0	15.8	17.8	11.6	10.8	10.2	8.9	12.5	12.8	15.2	14.5	9.9	13.0
<b>3. Associate professional and technical occupations</b>	15.4	16.2	18.5	10.0	10.8	10.4	8.4	10.8	13.2	12.3	11.7	9.5	11.9
<b>Group 1-3 total</b>	47.3	39.2	46.1	29.0	29.0	28.0	25.3	32.1	34.3	37.0	35.3	27.5	33.9
<b>4. Administrative and secretarial occupations</b>	9.8	8.0	8.6	8.6	9.2	8.0	7.8	8.5	9.4	10.8	9.4	7.7	10.6
<b>5. Skilled trades occupations</b>	9.9	13.2	8.2	11.3	12.1	11.7	11.6	14.3	14.1	10.7	12.4	13.8	12.3
<b>6. Caring, leisure and other service occupations</b>	9.7	10.7	11.4	14.4	14.1	15.2	12.8	15.0	11.7	11.7	11.9	14.0	10.6
<b>7. Sales and customer service occupations</b>	7.2	6.9	8.9	8.1	8.7	9.4	7.8	7.6	7.3	8.8	7.2	9.6	6.7

Occupation Group	Wales	BG	Torfaen	Abertillery and Six Bells	Cwm	Cwmtillery	Llanhilleth	Abersychan	Pontnewydd and Snatchwood	Pontnewydd	Pontypool Fawr	Trevethin and Penygarn	Crumlin
<b>8. Process plant and machine operatives</b>	6.5	13.7	8.9	15.6	12.8	13.7	18.5	10.7	10.4	8.7	10.5	10.4	13.5
<b>9. Elementary occupations</b>	9.4	8.1	7.6	12.8	14.1	13.9	16.2	11.8	12.8	12.4	13.3	16.9	12.3

Source: Nomis (2024) For Wales and LAs using ONS Annual population survey Apr 2023-Mar 2024  
Labour Market Profiles using 2021 Census data for Wards

## Economy and community – Earnings

16.5.19 The earnings by place of residence for Blaenau Gwent and Torfaen County Boroughs are shown in **Table 16.7**. The table shows that earnings are higher in Torfaen (£606.50) but lower in Blaenau Gwent. (£598.40). Compared to 2022 figures, earnings in each of the areas have risen, however, in Torfaen, earnings have only slightly increased from £595.20 in 2022. While in Blaenau Gwent and Wales, earnings have increased more significantly, with Blaenau Gwent's earnings increasing from £579.00 and Wales' earnings increasing from £604.30.

**Table 16.7 Earnings by place of residence 2023**

	Wales	Blaenau Gwent County Borough	Torfaen County Borough
<b>Gross Weekly Pay (£)</b>	636.10	606.50	598.40

Source: ONS annual survey of hours and earnings - resident analysis

## Economy and community – Business Enterprises

16.5.20 The Welsh Government measures active businesses within Wales each year. The percentage increase in the number of active businesses between 2010 and 2021 was higher in Blaenau Gwent County Borough (18.8%) than across Wales as a whole (15.6%). Active business enterprises have also seen a slightly higher percentage increase than at the national level in Torfaen (see **Table 16.8**).

**Table 16.8 Active business enterprises actual/percentage change (2010-2021)**

Location	2010	2015	2021	Percentage increase
<b>Wales</b>	90,435	95,010	104,520	15.6%
<b>Blaenau Gwent</b>	1,250	1,315	1,485	18.8%
<b>Torfaen</b>	2,085	2,220	2,455	17.7%

Source: StatsWales Active Business Enterprises by area and year (2022)

## Economy and community – Deprivation

16.5.21 The Welsh Index of Multiple Deprivation (WIMD, 2019<sup>14</sup>) is an official Welsh Government measure of deprivation in Wales. The WIMD includes a number of different measures in small geographic areas called Lower Super Output Areas (LSOA). The WIMD is designed to allow comparison of deprivation across the country with LSOAs ranked from 1 (most deprived) to 1,909 (least deprived).

16.5.22 As part of the WIMD a ranking for each LSOA is provided for eight measures of deprivation (income, employment, health, education, access to services, community safety, physical environment, and housing). An overall score is also given (the Index). **Table 16.9** sets out the ranking for the LSOAs for the wards within which part of the Proposed Development is located.

**Table 16.9 Welsh Index of Multiple Deprivation (WIMD) Ranking**

LSOA	Overall	Income	Employment	Health	Education	Access to services	Community safety	Physical environment	Housing
Llanhilleth 1	215	233	121	187	472	436	822	1317	596
Llanhilleth 2	239	263	188	293	387	269	423	539	922
Llanhilleth 3	250	433	253	507	165	541	363	370	130
Six Bells 1	227	335	252	430	202	570	253	870	61
Six Bells 2	757	611	802	848	727	1080	536	1111	379
Abersychan 1	311	402	413	173	279	397	629	1060	559
Abersychan 2	197	151	201	93	410	1062	471	145	1518
Abersychan 3	1048	1062	1032	883	767	1095	493	1207	750
Abersychan 4	285	342	231	299	262	477	175	1634	1192
Abersychan 5	837	799	656	595	968	1504	342	878	987
Snatchwood	381	470	279	417	426	1153	273	259	638
Pont-newynydd	661	757	735	601	569	908	482	803	358
Wainfelin 1	1117	1223	1036	772	1119	1477	555	1097	360
Wainfelin 2	530	629	732	460	611	335	615	981	316

Source: Welsh Index of Multiple Deprivation (2019)

16.5.23 The WIMD identifies the most deprived of the LSOAs as being Abersychan 2 Llanhilleth 1 and Six Bells 1) each being within the top 20% most deprived LSOAs in Wales (with Abersychan being in the top 10%). Each of these LSOAs ranks low in terms of health, employment and income, with Abersychan 2 having a health indices ranking of 93 putting it well within the top 10% most deprived for health nationally (the WIMD health domain covers a number of specific indicators including GP recorded chronic conditions, limiting long term illness, premature deaths and cancer incidence). Across other indices there is a reasonable variation of ranking with some of the LSOAs showing relatively low levels of deprivation for housing and physical environment for example with others significantly higher (eg Snatchwood physical environment rank of 273 compared with Llanhilleth 1 at 822).

## Recreation

16.5.24 There are a number of Public Rights of Way (PRoWs) that cross the site, which are illustrated in **Figure 16.1**:

- There is a bridleway which crosses the site north to south (337/118/1). It links with the footpath 423/20/1 which continues in a north south direction through that parcel of the

Site south of Blaen-Y-Cwm Road. The bridleway would run within 50m of the rotor blade west of Turbine 3;

- 418/135/1, 413/90/1, 413/88/1 and 331/176/1 together combine to provide access alongside and sometimes upon the access road which begins as Farm Road before diverging at the point Farm Road becomes British Road. This access road would be used by vehicles constructing the wind farm. The grid connection would run to the south of but parallel to this track. The grid connection would cross 413/80/1 close to the proposed point of connection;
- Within the main sections of the turbine array public rights of way run in an easterly-to-westerly direction. 413/83/1 and 423/1031 run north and south respectively of Turbine 2, within the 50m offset from the rotor blade. 413/83/1 would also pass within the 50m rotor blade offset of Turbine 1;
- A public right of way 423/44/1 would pass within the 50m rotor blade offset of Turbine 6;
- 423/20/1 would run outside the rotor blade offset but close to the east of Turbine 8; and
- Internal site tracks would cross some public rights of way.

16.5.25 Open Access Land (Open Country) which relates to the Countryside and Rights of Way Act (CRoW Act) (2000). The Proposed Development does not affect Open Access Land which lies to the North, North East and South West.

16.5.26 Beyond the Site lie a number of regional and national recreational trails. Within 5km are located national cycle routes and the Torfaen Trail. Within 10km can also be found the Rhymney Valley Ridgeway Walk and Cistercian Trail. There are other walks beyond this distance from the site.

16.5.27 The Torfaen Trail is advertised as a 56km figure of eight route, with significant ascents which encompasses the whole of Torfaen, from Cwmbran in the south through Pontypool to Bleanavon in the north. The trail takes in ancient woodlands, forestry, country lanes and open mountain top.

16.5.28 The Rhymney Valley Ridgeway Walk is a 45km walk encircling the Rhymney Valley.

16.5.29 The Cistercian Trail is a 969km footpath running north to south through the Welsh border counties and mid-Wales.

16.5.30 Tirpentwys Trails is a selection of six mountain bike trails located in a semi-forested hillside close to the Tirpentwys Nature Reserve, both located to the south east of the Site.

## Land use

16.5.31 The Site is in agricultural use, used predominantly for the grazing of livestock. Between the open areas of land proposed to accommodate Turbines 3, 4, and 6 and Turbine 8 lies a forested area which includes the former Tir Pentwys Quarry. The former quarry is allocated within the Torfaen Local Development Plan as the Tir Pentwys Preferred Area (Policy M3) and is surrounded by a Mineral Site Buffer Zone (Policy M4b). The Site is allocated as an Aggregate Safeguarding Area and the approximate southern half as a Coal Safeguarding Area. There is no current aggregate extraction taking place. Similar designations are replicated within the Blaenau Gwent Local Development Plan and both local authorities planning policy designations are shown on **Figure 16.2 Local Plan Policy Tir Pentwys Quarry**.

### Common Land

- 16.5.32 A substantial area of land within the Site is within Mynydd Llanhilleth Common which is designated as common land. Because work will take place within this designation the Applicant will be required to prepare and submit an application to the PEDW under the Commons Act 2006. The common land is in agricultural use, with commoners exercising grazing rights for sheep and cattle grazing. The common is also crossed by a network of PRoWs which are used for recreation.

### Future baseline

- 16.5.33 It is unlikely that the future baseline will alter markedly in the short to medium term. With regards to climate change and renewable energy generation, there can be expected to be an ongoing gradual shift away from fossil fuels towards renewables with the move to renewable energy continuing to be supported by national energy and planning policy.
- 16.5.34 The economic profile of Blaenau Gwent and Torfaen is expected to be based largely on the same sectors as set out within the current baseline. The number, and percentage, of those who are economically active is expected to continue broadly consistent with the existing baseline with no significant changes to demographics or employment activities that would suggest changes to these key baseline statistics.
- 16.5.35 Recreational activity is assumed to follow similar patterns to present with no proposals identified to substantially improve access onto the mountain for example. There is the potential for Tir Pentwys Quarry to reopen given that it is a Preferred Area within the Torfaen and Blaenau Gwent Local Development Plans.

## 16.6 Embedded measures

- 16.6.1 A range of environmental measures have been embedded into the Proposed Development as outlined in **Section 4.8. Table 16.10** outlines how these embedded measures will influence the socio-economics assessment.

**Table 16.10 Summary of the embedded environmental measures**

Receptor	Potential changes and effects	Embedded measures	Compliance mechanism
<b>Construction</b>			
<b>Recreation</b>	Potential conflict between PRoW users and site traffic	Access along some PRoW will be required to be temporarily managed during construction. Safety signs will also be required during construction and operation.	CTMP (with PRoW Management Plan (PRoWMP) which will be secured via a condition of the DNS.
<b>PRoW</b>	Potential conflict between PRoW users and site traffic	Whilst PRoW users should in most circumstances be able to use the footpath and bridleway network during construction it is accepted that some may choose not to do so. The	CTMP (with PRoWMP) which will be secured via a condition of the DNS.

Receptor	Potential changes and effects	Embedded measures	Compliance mechanism
		Applicant will therefore provide a temporary, permissive route away from the areas subject to construction for use by walkers and horse riders prior to the commencement of construction	
<b>Land use – Common Land</b>	Temporary loss of common land as a result of construction activities and potential interaction between commoners livestock.	Areas of construction activity such as excavations would be fenced off to protect livestock. Plant and machinery removed to construction compound overnight. The temporary loss will be compensated for with a new area of land designated as common.	CTMP and Commons Act 2006.
<b>Operation</b>			
<b>Recreation</b>	Potential conflict between PRow users and operational stand-off from turbine will be addressed through diversions of the bridleway	Recreational users are likely to be walkers and horse riders using the local public rights of way network. All PRow will remain open for use during the operational phase. However, the Applicant will provide alternative permissive footpath and bridleway provision to provide routes that extend beyond a 200m buffer from the wind turbines.	Condition of the DNS.
<b>PRow</b>	Potential conflict between PRow users and operational stand-off from turbine will be addressed through diversions of byway	Details for operation as set out above.	Condition of the DNS.
<b>Land use – Common Land</b>	Permanent loss of common land used for access tracks, turbine pads and on-site substation. Potentially restricting the grazing area available to commoners livestock.	4ha of compensatory land provided at construction as common land to replace the 2.9ha lost to development retained permanently. The 2.9ha of land will be reinstated as common land following the decommissioning of the wind farm.	Commons Act 2006
<b>Land use – Minerals</b>	Presence of wind turbines within buffer zone affecting the viability of future mineral extraction.	Wind turbines would have a limited lifespan of 30 years.	Time limit for the operational phase subject to a condition secured via the DNS consent.

## 16.7 Scope of the assessment

### The Proposed Development

- 16.7.1 All the activities and consequent environmental changes associated with the construction, operation and decommissioning of the Proposed Development, as set out in **Chapter 4**, have been considered.

### Spatial scope

- 16.7.2 The spatial scope of the assessment of socio-economic effects covers the area of the wind farm site contained within the red line planning boundary, the grid connection corridor, together with the wider county, regional and national context, which has formed the basis of the study area described in **Section 16.4**:
- **Climate change and energy security** – the assessment covers the national (Wales) area as a whole;
  - **Economy and community** - the assessment covers Wales, Blaenau Gwent County Borough, Torfaen County Borough and the wards of:
    - ▶ Abertillery and Six Bells;
    - ▶ Cwm;
    - ▶ Cwmtillery;
    - ▶ Llanhilleth;
    - ▶ Abersychan;
    - ▶ Pontynewynydd & Snatchwood;
    - ▶ Trevethin & Penygarn;
    - ▶ Pontypool Fawr;
    - ▶ Crumlin.
  - **Recreation** – considers Public Rights of Way (PRoW) and trails, cycle routes and parks, and has focussed on the local context within 10km as informed by the LVIA in **Chapter 6**; and
  - **Land Use** – considers minerals and common land at the Site and County Borough level.

### Temporal scope

- 16.7.3 The temporal scope of the assessment of the socio-economic effects is consistent with the period over which the development would be carried out and therefore covers the construction and operational periods. It is assumed that the construction would take approximately 22 months with the start of development (and therefore completion) dependent on the consenting timescales. The scheme is designed for an operational lifespan of 30 years.



## Potential receptors

- 16.7.4 The socio-economics receptors that have been identified as being potentially subject to effects are summarised in **Table 16.11**.

**Table 16.11 Socio-economic receptors subject to potential effects**

Receptor	Reason for consideration
<b>Climate change and energy security</b>	The Proposed Development includes the provision of renewable energy which may have an effect on meeting targets for addressing climate change, renewable energy provision and energy security.
<b>Economy and community</b>	There is potential for effects through the provision of jobs and economic benefits for the local area.
<b>Recreation</b>	The Proposed Development has the potential for effects on recreation, principally the variety of PRow within and close to the Site.
<b>Land use</b>	The Proposed Development has the potential to affect the future operation of the current closed Tir Pentwys Quarry and to restrict the ability to access future mineral supplies. The Proposed Development may also have the potential to temporarily (30 years) affect the use of common land.

## Likely significant effects

- 16.7.5 The assessment is based on determining potential effects on the baseline conditions informed by an understanding of previous wind farm developments and using professional judgement. The effects on socio-economic receptors which have the potential to be significant and have been taken forward for detailed assessment are summarised in **Table 16.12**.

**Table 16.12 Socio-economic receptors scoped in for further assessment**

Receptor	Likely significant effects
<b>Climate change and energy security</b>	Delivery of national climate change mitigation targets and renewable energy generation targets.
<b>Economic and community</b>	Potential job creation; effects on expenditure within the local community, region and nationally; community benefits accruing from the Proposed Development.
<b>Impacts on Public Rights of Way and recreation</b>	Direct effects on the use of PRow that cross the Site for recreational purposes. Potential for indirect effects upon users enjoyment of PRow and regional trails, parks and gardens.
<b>Land use</b>	Potential effects upon future local businesses in the form of the local quarry and potential future proposal to access mineral supplies. Also, potential to affect activities on common land.

## 16.8 Assessment methodology

- 16.8.1 The generic project-wide approach to the assessment methodology is set out in **Chapter 2: Approach to Environmental Impact Assessment**, and specifically in **Sections 2.5 to 2.8**. However, whilst this has informed the approach that has been used in this socio-economics assessment, it is necessary to set out how this methodology has been applied, and adapted as appropriate, to address the specific needs of this socio-economics assessment.
- 16.8.2 As discussed in **Section 16.7**, the assessment methodology adopted is based on determining potential effects on the baseline conditions using knowledge gained from previous wind farm developments and using professional judgement. Where possible, the significance will be assessed by way of a comparison of the factor (e.g. construction jobs) with the variance of related factors within the local economy. Where effects cannot be quantified, the assessment of significance will be undertaken using professional judgement and experience.

### Significance evaluation methodology

- 16.8.3 The EIA Regulations require that a final judgement is made about whether or not each effect is likely to be significant. The effects have been evaluated on the basis of a professional assessment of the magnitude of the effect and the value of the receptor or importance of the policy. In this assessment, effects are considered to be significant or not significant according to the matrix in **Table 16.13**.
- 16.8.4 In respect of the policy context the sensitivity definitions used for the socio-economic assessment are: National (Wales), Regional (South-East Wales – Cardiff capital region), County (Blaenau Gwent and Torfaen County Borough Council areas) or local (within the wards identified in **Section 16.7**).

## Climate Change and energy security

16.8.5 The impact on climate change is assessed in the context of applicable policy and targets. The significance is based on the magnitude of change towards achievement of the policies and targets that apply to Wales.

## Economy and Community

16.8.6 Conclusions on potential effects are reached based upon the magnitude of the predicted change likely to occur to the baseline situation. The sensitivity of the receptor is a further consideration to be taken into account.

## Recreation

16.8.7 The effect on recreation has been assessed using surveys commissioned by a range of organisations into the public perception of wind turbines both in Wales and other parts of the UK. For the purpose of this assessment a 5km study area was drawn around the Proposed Development in order to identify the main recreational routes and rights of way that have the potential to be affected by the Proposed Development. This has extended to 10km for regional trial and parks with cumulative effects further afield and informed by the LVIA study area. Effects are most likely to result from the direct impact of the Proposed Development upon public rights of way during construction. Potential effects have been considered using professional judgement.

## Land use

16.8.8 The effect on land uses has been assessed based upon the proportion of land directly or indirectly affected as a percentage of the overall total available and the ability of landowners and occupiers to continue to use the land for its current purposes. With regard to minerals this includes for consideration of the extent of the preferred area and safeguarding areas within Torfaen and Blaenau Gwent and the likelihood of the Tir Pentwys Quarry reopening together with the potential for the Proposed Development to have the potential to deter its reopening. When considering the proportion of common land lost to development, consideration is given to the area of land to be provided as compensation.

16.8.9 The predicted levels of significance are set out within **Table 16.13**.

**Table 16.13 Matrix of EIA Significance**

		Magnitude of change			
		High	Medium	Low	Very low
Sensitivity	High – Wales	Major (Significant)	Major (Significant)	Moderate (Significant)	Minor (Not significant)
	Medium – Regional level	Major	Moderate	Minor	Negligible

	Magnitude of change			
	High	Medium	Low	Very low
<b>(South East Wales)</b>	(Significant)	(Significant)	(Not significant)	(Not significant)
<b>Low – County level (BGCBC, TCBC)</b>	Moderate (Significant)	Minor (Not significant)	Negligible (Not significant)	Negligible (Not significant)
<b>Very Low – local (within 5km)</b>	Minor (Not significant)	Negligible (Not significant)	Negligible (Not significant)	Negligible (Not significant)

## 16.9 Assessment of socio-economic effects: Climate change and energy security

### Baseline conditions

16.9.1 The current baseline is set out in **Section 16.5**.

### Predicted effects and their significance

#### Operation

- 16.9.2 The Proposed Development has an installed capacity of up to 34MW dependent on the final turbine chosen for the scheme (a combination of turbines generating between 4MW and 6MW are available to be deployed although the amount of energy they can produce is dictated by the grid connection agreement which is for a maximum of 34MW). The annual generation for a 7 turbine scheme of up to 34MW would be sufficient to supply the domestic electricity needs of approximately 21,641 average households<sup>20,21</sup>. By way of comparison for the potential number of homes to be provided with power, the BGCBC area is estimated to have 31,371 households as of 2020 with Torfaen 40,813 (StatsWales, 2021c)<sup>22</sup>.
- 16.9.3 In the context of national policy for greater renewable energy, the Proposed Development makes a positive contribution. Future Wales records the Welsh Government's overall target for renewable sources to generate 70% of consumed electrical power by 2030. Energy Generation in Wales 2022 (Welsh Government, 2023) estimates the current figure (2022) is approximately 59%. Furthermore, it notes that Blaenau Gwent and Torfaen both

<sup>20</sup> Figures are derived as follows: 33.6 MW × 8,760 hours/year × 0.282 (capacity factor) = 83,990 MWh.

<sup>21</sup> Homes Equivalent = rated capacity of wind farm (kW) × average load factor for wind × number of hours in a year / average household energy consumption (MWh) (annual UK average domestic household consumption is 3,881 kWh)

<sup>22</sup> StatsWales (2021) Households by Local Authority and Year (Online) Available at: <https://statswales.gov.wales/Catalogue/Housing/Households/Estimates/households-by-localauthority-year> (Accessed August 2024).

generate approximately 1% of Wales current renewable energy generation with no material increase in capacity in either local authority coming forward since 2020. In 2021, with the exception of diesel technology at the Rassau Industrial Estate (Blaeanu Gwent) renewable deployment was limited to solar pv and in 2022 only one onshore wind farm with a capacity of 6 kW was commissioned. Given the potential for up to 34 MW capacity to be delivered via Mynydd Llanhilleth, and compared with an existing renewable capacity of 24 MW and 15 MW in Blaeanu Gwent and Torfaen respectively and a total of 970 MW renewable heat and electricity in the Cardiff capital region 2021 (of which 311 is onshore wind and 421 solar pv), this is considered to be substantial within the context of local and regional renewable energy generation. No onshore wind has been commissioned in the Cardiff capital region between 2020 and 2022.

- 16.9.4 Additionally, Welsh Government has set targets for local ownership of 1GW of renewable energy capacity by 2030 and for new energy projects to have at least an element of local ownership. Currently 970MW of generated power from renewable sources is within local ownership (Welsh Government, 2022). The applicant (Pennant Walters) is a business registered in Wales, and therefore meets the Welsh Government's definition of local ownership (Welsh Government, 2020<sup>23</sup>). The Proposed Development would lead to an exceedance of the Welsh Government's local ownership target of 1GW by 2030.
- 16.9.5 The scale of the Proposed Development will go some way to meeting national wind energy priorities and help ensure that Wales moves towards net zero carbon in 2050, which is a legal duty placed on Ministers under the Environment (Wales) Act 2016 (as amended). Welsh Government is looking to accelerate the move towards net zero having consulted upon an updated target in January 2023, to meet 100% of its electricity needs from renewable sources by 2035 and to achieve 1.5GW of renewable energy capacity within local ownership by 2035. These targets have now been adopted.
- 16.9.6 The social and economic benefits that are derived from the Proposed Development will include the strengthening of the nation's security of supply and the mitigation of climate change.
- 16.9.7 The Proposed Development is also relevant in the national and local policy context of action to tackle CO<sub>2</sub> emissions, with its potential to reduce the levels of CO<sub>2</sub> emitted to the air. **Table 16.14** shows how the proposed wind farm could reduce emissions going into the atmosphere by replacing that generated through fossil fuels.

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<sup>23</sup> Welsh Government (2020) Policy Statement: Local ownership of energy generation in Wales – benefitting Wales today and for future generations. (Online) Available at: <https://gov.wales/sites/default/files/publications/2020-02/policy-statement-local-ownership-of-energy-generation-in-wales.pdf> (Accessed August 2024).

**Table 16.14 Emissions to atmosphere if wind farm output replaces fossil fuel output based on a wind farm of 34 MW operating at 28.2% average load factor**

Emissions to atmosphere avoided (tonnes) <sup>24</sup>		
	Annual	Total (30 years)
<b>Carbon dioxide (CO<sub>2</sub>)</b>	36,283	1,088,490

Note: Carbon dioxide is the main gas implicated in global warming.

16.9.8 Overall, the Proposed Development is considered to have moderate positive (significant) effects on this receptor at the County level.

## 16.10 Assessment of socio-economic effects: Economy and community

### Baseline conditions

16.10.1 The current baseline is set out in **Section 16.5**.

### Predicted effects and their significance

#### Construction - Employment and expenditure

- 16.10.2 The total average construction phase cost for onshore wind farms in Wales has been estimated as £1.13m per MW of installed capacity (Regeneris Consulting Ltd and Welsh Economy Research Unit, 2013<sup>25</sup>). The construction of Mynydd Llanhilleth could therefore involve an investment of approximately £38.4m (based on a maximum output of up to 34MW) at 2012 prices. The study estimated that 35% of the development cost would remain in Wales equating to an estimated £13.4m expenditure in Wales during construction of the Proposed Development.
- 16.10.3 The construction phase would create the opportunity for direct economic benefits to Wales, and in particular the local authority areas of Torfaen and Blaenau Gwent together with the wider South-East region through the opportunities available to local firms to bid for mechanical, electrical and civil engineering contracts. Criteria for selecting the wind turbine manufacturer and civil and electrical contractors would be based on price specifications and guarantees to ensure that performance and technical specifications are met in full.
- 16.10.4 The Regeneris Welsh Economic Research Unity Study 2013 recognises that across Wales it is the south east region with its industrial base which is best suited to take advantage of the opportunities presented by projects such as Mynydd Llanhilleth. Most of the jobs associated with the Proposed Development would occur in the construction phase and there is the strong potential for some of the work to be undertaken by local firms given that Pennant Walters is part of the wider Walters Group, a civil engineering

<sup>24</sup> Based on BEIS Digest of UK Energy Statistics estimated carbon dioxide emissions per GWh of electricity supplied by all of fossil fuels of 440 tonnes per GWh of electricity supplied.

<sup>25</sup> Regeneris Consulting and the Welsh Economic Research Unit. Economic Opportunities for Wales from Future Onshore Wind Development 2013. <https://www.renewableuk-cymru.com/wp-content/uploads/Wales-Onshore-economic-benefit.pdf> Accessed August 2024).

company with significant experience in Welsh wind farm construction, headquartered in Hirwaun and with an extensive local supply chain. The Proposed Development is expected to involve the creation of up to 57 FTE based upon a study undertaken by Renewables UK (Working for a Green Britain 2011<sup>26</sup>), or 408 FTE direct, indirect and induced jobs during the construction and project development phase based upon the research undertaken by Regeneris and the Welsh Economic Research Unit 2013. In relation to the baseline, which shows a mix of economic performance within the local wards the development may therefore support some local employment generation.

- 16.10.5 Other indirect benefits to the local economy would come through an increased spend in bed and breakfast and other accommodation and the use of other local services and facilities during the construction phase.
- 16.10.6 Overall, the construction of the wind farm is likely to have a minor (not significant) positive effect on the socio-economic profile of the area, as there is potential for economic benefit to local construction firms, quarries, accommodation establishments and other local services.

### Operation - Employment and expenditure

- 16.10.7 It is expected that the Proposed Development would directly employ 4 FTE for maintenance during the operational phase. Their duties will include compliance with statutory environmental requirements. It has been estimated that the operation and maintenance of onshore wind farm involves an average expenditure of £38,600 per MW per annum, with 76% of that expected to be retained in Wales (Regeneris Consulting Ltd and Welsh Economy Research Unit, 2013). For a scheme of up to 34MW that would result in approximately £1.3m of expenditure annually, with approximately £0.99m being retained in Wales.

### Operation - Community Benefits

- 16.10.8 The Applicant (Pennant Walters Ltd.) is conscious of its role and the Proposed Development's role within the community and wishes to ensure that the local community shares some of the financial benefits of the having the wind farm in the area. This will be implemented by a Community Fund, the mechanism of which will be decided post consent, should the application be permitted with further detail set out in the accompany Project Benefits Report. The Applicant has already provided some £4m in payments to qualifying projects within Wales<sup>27</sup>.

## 16.11 Assessment of socio-economic effects: Recreation

### Baseline conditions

- 16.11.1 The current baseline is set out in **Section 16.5**.

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<sup>26</sup> Renewables UK. Working for a Greener Britain 2011. Volume 1. [https://cdn.ymaws.com/www.renewableuk.com/resource/resmgr/publications/reports/Working\\_for\\_a\\_Green\\_Britain1.pdf](https://cdn.ymaws.com/www.renewableuk.com/resource/resmgr/publications/reports/Working_for_a_Green_Britain1.pdf) (Accessed August 2024).

<sup>27</sup> See <https://pennantwalters.co.uk/site/> for details of community funds provided to other schemes.

## Predicted effects and their significance

### Construction

- 16.11.2 The PRowWs that cross the Proposed Development site are discussed in **Section 16.5**. As outlined in **Section 16.6** there will be a requirement for measures to address any effects on these PRowWs, including via appropriate management, and temporary diversions via permissive paths created by the Applicant (where necessary). There is potential for some disruption to the PRowWs, although the measures identified in the previous section should reduce the likelihood of any significant issues for users.
- 16.11.3 Indirect effects resulting from the construction activities, such as the use of the local highway network for deliveries which could potentially affect road users travelling to the area, are discussed within **Chapter 12** of this ES.

### Operation

- 16.11.4 The measures for diversion of PRowW outlined in **Section 16.6** also apply during the operational phase. Whilst members of the public will still be able to access all current PRowWs it is accepted that some may wish to pass by them at a greater distance, particularly in the case of the bridleway. Permissive routes will therefore be established leading to and from the existing PRowW network. The permissive routes would cover similar terrain as existing routes and help to maintain the access for users across and around the Site over the operational lifetime. The routes will reduce the likelihood of significant issues for user experience over the lifetime of the Proposed Development. The implementation of these measures should ensure no significant effects on these receptors.
- 16.11.5 Visual effects upon PRowW users have been assessed in the LVIA section of the ES (**Chapter 6**). The assessment considered PRowWs and open access land within the site, and at 5km thresholds out to 15km. Effects within the site are assessed as being significant given the proximity of the wind turbines to the PRowWs with effects ranging from significant to not significant the further the PRowW from the site.
- 16.11.6 Visual effects on tourism and recreational receptors have been assessed in the LVIA section of the ES (**Appendix 6L** and summarised in **Chapter 6 Table 6.24**). The assessment has considered promoted routes, the national cycle network, country parks and registered historic parks and gardens over a broad LVIA study area of up to 26km. It concludes that none would be affected significantly.
- 16.11.7 Torfaen CBC within its previous response to statutory consultation on the eight turbine proposal identified that in relation to the Blaenavon Industrial Landscape World Heritage Site (WHS) that the most significant visual impacts would occur on higher elevation ground above Blaenavon (Keepers Pond and Fox Hunters), principally on the south and south east facing slopes of Mynydd y Garn-fawr and the ridge line of the Blorenge. The **ES Chapter 7 Historic Environment** reports that with regard to matters of setting that no significant effects have been identified on any historic parks or cultural heritage assets that might be part of the recreational resource in the area.
- 16.11.8 Whilst Torfaen CBC's consultation response to the previous eight turbine proposal relates to visual effects as opposed to recreational it is to be noted that views from Foxhunter and Keepers Pond car parks include, at Foxhunter car park, a nearby existing transmitter station.
- 16.11.9 Foxhunter car park is named after a famous showjumper which is buried nearby denoted by a memorial. Walks are advertised as leading from the car park to the Blorenge.



Features identified to look out for on relevant websites<sup>28 29</sup> include The Sugar Loaf, Pen-y-Fan and Corn Du in addition to the River Usk and features in Abergavenny. Whilst views into the WHS are available they would be set within the wider panorama and against the wider set of landscape features referred to in the walking guides. With both car parks approximately 9km to the north of the application site it is therefore considered unlikely that visitors would be dissuaded from using the car parks, the walks or would have their enjoyment of the WHS affected by the Proposed Development.

- 16.11.10 A number of studies have in the past been commissioned into the potential effects of wind turbines upon tourists they have demonstrated that the effect of wind farms on tourism is negligible at worst, with many respondents taking a positive view to wind farms. For example studies undertaken in Scotland and published in 2021 found no correlation between a decrease in tourism numbers and the presence of wind farms, looking at 44 case studies<sup>30</sup>.
- 16.11.11 With direct reference to Wales, a survey commissioned for RenewableUK Cymru (YouGov, 2013)<sup>31</sup> in 2013 found 64% of respondents in Wales supported the development of wind power in their local area. For South-East Wales this was higher at 74%. The survey also found that 65% of people said a wind farm would not put them off visiting an area whilst only 26% suggested that it might dissuade them. For South-East Wales, these figures stood at 72% and 19% respectively.
- 16.11.12 Furthermore, a 2014 study for Welsh Government (Regeneris Consulting and The Tourism Company for Welsh Government, 2014)<sup>32</sup> regarding the impact of wind farms and their associated grid infrastructure on the Welsh tourism sector, found that there is:
- A negligible impact on the national tourism sector from wind farms;
  - Limited evidence of local tourism impacts to date;
  - A clear majority of people that do not react negatively to wind farm developments or change their visiting behaviour as a result;
  - Complex reactions to wind farms which may change over time;
  - Higher sensitivity to wind farms for certain visitor markets;
  - Some potential for positive impacts, often requiring further investment;
  - No evidence that wind farms on visitor routes deter tourists; and
  - No negative impacts during construction.
- 16.11.13 The study found that there was no evidence of significant impacts on tourism in areas where wind farms have had an established presence for a number of years (Powys, Anglesey and the South Wales Valleys).

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<sup>28</sup> [https://roamingspices.com/bloreng-walk/?utm\\_content=cmp-true](https://roamingspices.com/bloreng-walk/?utm_content=cmp-true) (Accessed June 2023)

<sup>29</sup> <https://www.alltrails.com/en-gb/trail/wales/monmouthshire/the-bloreng-circular> (Accessed June 2023)

<sup>30</sup> Biggar Economic Wind Farms & Tourism Trends in Scotland: Evidence from 44 Wind Farms <https://biggareconomics.co.uk/wp-content/uploads/2021/11/BigGAR-Economics-Wind-Farms-and-Tourism-2021.pdf> (Accessed August 2024)

<sup>31</sup> YouGov (2013) YouGov RenewableUK Cymru Poll Results. Commissioned by RenewableUK Cymru

<sup>32</sup> Regeneris Consulting and The Tourism Company for Welsh Government (2014) Study into the Potential Economic Impact of Wind Farms and Associated Grid Infrastructure on the Welsh Tourism Sector (Online) Available at: [https://gov.wales/sites/default/files/publications/2019-06/potential-economic-impact-of-wind-farms-on-welsh-tourism\\_0.pdf](https://gov.wales/sites/default/files/publications/2019-06/potential-economic-impact-of-wind-farms-on-welsh-tourism_0.pdf) (Accessed August 2024).

- 16.11.14 Overall, there is no evidence to suggest that the tourism (and recreation) industry has been affected by wind farms operating in Wales or across the UK and whilst tourism has been scoped from this assessment, the study findings are considered to have some relevance to the consideration of the WHS, country parks, historic parks and gardens, regional trails and the National Cycle network in particular. It is concluded that the Proposed Development would not have a significant adverse effect upon recreation.

### Grid connection corridor

- 16.11.15 The grid connection would cross PRow 413/80/1 close to the proposed point of connection. During the construction phase it may be necessary to manage the interaction between those constructing the grid connection and users of the PRow. This will be to ensure that safe construction practices are adhered to and to avoid any potential conflict with PRow users (as set out in the embedded measures). The Applicant will prepare a PRow Management Plan for agreement with the local authorities (in the case of the grid connection this would be Torfaen). No measures will be required during operation as the footpaths will be able to be fully open and in use. No significant effects are likely.

## 16.12 Assessment of socio-economic effects: Land use

### Predicted effects and their significance

#### Common Land

- 16.12.1 An area of the Site includes the Mynydd Llanhilleth Common. Commoners exercise their rights to graze sheep and cattle. Embedded mitigation measures would ensure that livestock is protected from construction activities through the use of temporary site fencing around excavations and areas used for the storage of equipment. Furthermore, the Applicant would liaise with landowners and with commoners in advance of construction commencing to explain the proposed phasing of activities and to provide them with the information they may require to ensure the safety of livestock.
- 16.12.2 Two of the proposed turbines (T3 and T4) would be constructed on the common. The remaining five will be constructed within the freehold land holdings which adjoin the common. A small portion of the access tracks to turbines 1, and 2 also fall within the common together with improvements to the track through Tir Pentwys to turbine 8 which is also within the common (the 'Land Bridge'). In total, the Proposed Development would result in the loss of 2.87ha of common land. The Applicant would provide 4ha to compensate with this area of land remaining as common land once the wind farm has decommissioned.
- 16.12.3 In view of the mitigation proposed, the effect of the Proposed Development during its construction and operation is considered to be not significant. The means of managing the construction interface with the commoners will be set out in the CEMP whilst, for operation, the compensatory land would be delivered via the Commons Act 2006.
- 16.12.4 Reference was made at consultation to the 'Land Bridge' across the quarry. Whilst it is the Applicant's intention to use this existing track through the quarry to access part of the wind farm during construction, such activity would be managed via the CEMP with a view to retaining the same level of access as that currently available at all times. If there are limited times where management requires temporary closure on safety grounds, publicity including signage would be issued in advance and in discussion with Torfaen CBC.

## Minerals

- 16.12.5 The Proposed Development surrounds the site of Tir Pentwys Quarry. The quarry is vacant but is identified within Policy M1 Minerals Safeguarding of the Torfaen Local Development Plan and as a Preferred Area for Aggregates (Policy M3). This Preferred Area is surrounded by a Mineral Site Buffer Zone (Policy M4). The access track to Turbine 8 which follows an existing track would cross north to south through the Preferred Area. Whilst no turbines would be located within the Preferred Area, Turbines 6 and 8 would lie within the Buffer Zone with Turbine 4 immediately to the north. See **Figure 16.2** for the relationship of the turbines to the Local Plan policy related to the Safeguarding, Preferred Area and Buffer Zone.
- 16.12.6 The Tir Pentwys policy allocation relates to the removal of aggregate from the eastern overburden mound to the former open cast coal site with additional sandstone aggregate in an adjacent area. A substantial area of land within the Preferred Area is also designated as a Regionally Important Geological Site which would potentially prevent part of the area from becoming the subject of mineral extraction. Whilst at the time the Local Development Plan was prepared proposals to extract the aggregate were the subject of a planning application, this was subsequently refused on appeal due to concerns regarding the proposed access to the quarry.
- 16.12.7 The project promoter for the quarry submitted an ES Scoping Report in 2022 which identified a route into the quarry which it considers addresses a previous reason for refusal. The access would be from the B4248 south of Llanelly Hill but would use part of the same road network as the Proposed Development when in proximity to Tir Pentwys itself. There is the potential for the quarry operator and the applicant to use the road network closest to their sites at the same time. However, given that the application for the quarry remains to be submitted it is potentially unlikely that both it and the Proposed Development would be in construction simultaneously. Furthermore, the promoter of the quarry wrote to PEDW in the context of the previous, eight turbine application to state that it had been in discussion with the promoter of the Mynydd Llanhilleth wind farm (the applicant) and that both parties would continue to work together to ensure both projects could co-exist (the letter of 17 January 2024 is attached as **Appendix 16.A**). The CTMP prepared to accompany the application for Llanhilleth Wind Farm will be the subject of further iteration as required by a condition associated with the granting of planning permission. The final CTMP can therefore be modified to include measures for access, routing and the timing of deliveries to ensure that cumulative significant effects with Tir Pentwys do not occur, (and once further information on that project is available).
- 16.12.8 Returning to the policy allocations it is considered that the presence of wind turbines outside the Preferred Area should not be determinant upon whether aggregate extraction takes place at some time in the future. Two turbines lie within the Buffer Zone. Policy M4 states that development which could prejudice the extraction of a mineral will be refused. The two turbines would be located at a distance of approximately 100m and 125m within the 200m buffer zone. However, wind turbines are not sensitive development (the policy rationale for the 200m buffer) and their operation should not be affected by operations undertaken at a future, re-opened quarry. Sensitive development is defined in paragraph 70 of the Minerals Technical Advice Note (Wales) 1: Aggregates (2004) which states that the purpose of a buffer zone is to prevent sensitive development being located within it. MTAN defines sensitive development as *“any building occupied by people on a regular basis and includes housing areas, hostels, meeting places, schools and hospitals where an acceptable standard of amenity should be expected”*. The same point is made in paragraph 5.14.44 of Planning Policy For Wales - Edition 12, February 2024.
- 16.12.9 Whilst not sensitive development there is the theoretical potential for infrastructure such as wind turbines to be affected by quarrying activities, most obviously, by blasting.

However, modern mineral extraction processes limit the effects of blasting vibration by following good practice measures. It is not in the interest of quarry operators to waste blasting energy and modern mineral extraction now employs electronic initiation which is more measured in the process of detonation and aims to create a series of mini blasts in very quick succession rather than a single, large blast. The aim is to 'slump' the rock face. This means vibration effects and risk to surrounding infrastructure are minimised.

- 16.12.10 Policy M1 identifies the quarry, and the Proposed Development site as an Aggregate Safeguarding Area. Both LDPs contain policies designed to prevent the permanent sterilisation of minerals and aggregates. It should also be noted that the Safeguarding areas cover a significant proportion of each County Borough (BCCBC and TCBC) such that the area within which the Proposed Development would be sited represents a fraction. Furthermore, the Proposed Development has a finite life of 30 years at which point it may be decommissioned. Minerals and/or aggregate would not therefore be sterilised permanently.
- 16.12.11 The effects arising from its construction and operation of the wind farm upon the adjoining Tir Pentwys Quarry would not be significant. The quarry is itself Pentwys Quarry is subject to environmental designations, it and the land upon which the Proposed Development would be located presents a small part of the substantial areas of land safeguarded of mineral extraction, the wind farm would not be a sensitive development and modern methods of extraction minimise vibrations and therefore effects on surrounding infrastructure.

## 16.13 Assessment of cumulative (inter-project) effects

- 16.13.1 A cumulative effects assessment (CEA) has been undertaken for the Proposed Development which considers the combined impacts with other developments on the same single receptor or resource (inter-project effects). The detailed method followed in identifying and assessing potential cumulative effects is set out in **Section 2.8** of **Chapter 2**.
- 16.13.2 Consideration has been given as to whether any of the socio-economic receptors that have been taken forward for assessment in this chapter are likely to be subject to cumulative socio-economic effects because of socio-economic effects generated by other developments.

### Overview

- 16.13.3 The socio-economic cumulative assessment is concerned with the evaluation of the effects that could be generated were the Proposed Development to be constructed and operational along with other wind farm developments proposed in the study area.

## Cumulative socio-economic effects

### Energy security, climate change and economic

- 16.13.4 Cumulative effects can arise from the construction and operation of other wind farms and developments, which can lead to cumulative economic, energy security and climate change benefits. The Proposed Development is located within the same or adjoining county borough to six proposed Development of National Significance (DNS) wind farm applications which are either submitted or at scoping stage – Abertillery Wind Farm (6 turbines, scoping), Manmoel Wind Farm (5 turbines, submitted), Mynydd Maen Wind Farm (15 turbines, scoping) and Trecelyn Wind Farm (submitted), Mynydd Bedwellte

(9 turbines, scoping) and Convatec Green (3 turbines, scoping) plus one recently approved wind farm - Mynydd Carn y Cefn Wind Farm (8 turbines). These and other wind farms further from the Proposed Development would if consented contribute further to Welsh Government's target for increasing the amount of electrical power generated by renewable means and would represent a step change in deployment given the very low number of MWs deployed within the Cardiff capital region since 2020 and particularly within Blaenau Gwent and Torfaen CBCs. The cumulative effect would therefore be beneficial and significant at the county level.

- 16.13.5 Cumulatively the wind farms would also create additional local and regional impacts on the economy, which would be beneficial during construction and operation for:
- Employment (directly and indirectly); and
  - The related industries of wind energy and the supply chain.
- 16.13.6 It is also likely that local communities that would surround the wind farms would benefit from operation of community funds by the wind farm developers.

## Land use

- 16.13.7 With regard to land use whilst the named wind farm projects are generally associated with similar landcover and hence similar land use practices, primarily grazing; it is unlikely that cumulatively they would lead to a reduction in the ability of individual businesses to continue their agricultural activities given that it is common practice for such activities to continue within the turbine array. Furthermore each landowner would receive payment for hosting the wind farm on their land.
- 16.13.8 The proposed Abertillery Wind Farm would be sited on two areas of common land, (Common Land Unit 16 Gwastad Common and Common Land Unit 17 Llanhilleth Common). There is therefore the potential for cumulative effects upon Llanhilleth Common when considered with Mynydd Llanhilleth although the extent of loss and the provision of compensatory land is unknown from the information provided within the prospective applicant's scoping report. It is also noted that PEDW agreed that socio-economics could be scoped out of the EIA for that project (DNS case reference DNS/3278009).
- 16.13.9 The Mynydd Bedwellte Wind Farm would also be located on common land but this land does not include Llanhilleth Common. No cumulative effects with Mynydd Llanhilleth are therefore anticipated.
- 16.13.10 With regard to mineral sterilisation, significant proportions of the relevant local authority boundaries include areas safeguarded for mineral extraction (aggregate), including land identified for the Mynydd Carn y Cefn, Abertillery and Manmoel Wind Farms and in the case of Trecelyn and Mynydd Maen Wind Farms for sandstone. The majority of the Mynydd Bedwellte is also within aggregate safeguarding area (Convatec Green which is in Caerphilly CBC is not safeguarded for mineral/aggregate extraction).
- 16.13.11 Should some or all of the wind farms be consented, this would be for a maximum of 30 years ensuring that longer term access to the aggregate would be possible. There are no known current proposals to extract minerals within or in the vicinity of these wind farms (with the exception of Mynydd Llanhilleth) and the safeguarded areas cover substantial areas of all local authorities within which the wind farms would be located. Cumulative effects upon land use, including minerals is considered to be Not Significant.

## Recreation and Public Access

- 16.13.12 **Chapter 6 Landscape and Visual Assessment** has considered the potential for cumulative visual effects between the Proposed Development and other schemes which are existing or in planning or scoping (known in Chapter 6 as Scenario B). Consideration has been given to the potential for significant cumulative visual effects with a focus upon the selected photoviewpoints. The approach adopted in Chapter 6 is to focus upon receptors where the assessment of visual effects arising from Mynydd Llanhilleth alone would be not significant but where, in combination with other schemes, it could become significant. With regard to PRowS, promoted routes, parks and gardens etc the conclusion reached is that additional significant, cumulative visual effects could occur from PVP19 (Rocking Point scenic viewpoint) and PVP24, the Rhymney Valley Ridge Walk.
- 16.13.13 The Rhymney Valley Ridge Walk runs for 45km which begins and ends in Caerphilly. It encircles the Rhymney Valley and takes in valley sides and mountain tops. Although the majority of the Proposed Development appears at a sufficient distance to be a very small component of the view at PVP24, the cumulative situation results in the skyline containing wind farm development across a considerable proportion of it whilst the site of the Convatec Green Wind Farm includes a stretch of the Ridge Walk.
- 16.13.14 Rocking Point is a scenic viewpoint situated within an area of open access land. The focus of this view is the gently undulating valley side seen in the centre ground. The Proposed Development would be visible in combination with the other wind farms shown on Chapter 6 Figure 6.35 Cumulative Wireframes Photoviewpoint 19 a-d with the consented Mynydd Carn y Cefn and Manmoel the most prominent. From this location cumulative effects which have been recorded as significant would still be significant without Mynydd Llanhilleth's contribution.
- 16.13.15 Cumulative, significant visual effects could potentially dissuade recreational users from walking the routes identified. However, the research reported in Section 16.11 suggests that the response of tourists and visitors to onshore wind farms developments is neutral at worst. In addition, the extent to which long distance trails such as the Rhymney Valley Ridge Walk pass through urban areas, valley sides, woodlands as well as open moorland suggests that there will be many locations where wind farms will not be seen. The Rhymney Valley Ridge Walk is promoted as providing an insight into the industrial history of Wales with views across to Cardiff and Bristol and enjoyment and use of this route is considered unlikely to be reduced by the presence of the proposed wind farms. Indeed the wind farms could be viewed as representing the continued evolution of man's influence upon the landscape.
- 16.13.16 In conclusion Chapter 6 concludes that there will be a cumulative significant visual effect but that this will not be exacerbated by the addition of Mynydd Llanhilleth. For this assessment of recreational use, it is concluded that given the context within which the regional trails are promoted and used, and informed by research into the responses of walkers and visitors to the presence of wind farms that cumulative recreational effects will be not significant.
- 16.13.17 On the matter of public access, whilst there is presently insufficient detail with regard to the approach taken by some of the wind farms identified within the cumulative baseline it is assumed that each will maintain existing levels of public access once operational with any PRowS directly affected potentially diverted to the satisfaction of the relevant local authority. It is assumed that the presence of a wind farm would not prevent access across the sites and therefore land would not become un-accessible in the same way that the Proposed Development would continue to allow public access where it is presently permitted. Any requirement to divert PRowS either during construction or operation would

be done via the appropriate regulatory regime and with the agreement of the relevant local authority. Cumulative significant effects in terms of public access would be not significant.

### *The British*

- 16.13.18 In addition to the above wind farms there is a proposal at the British. The British is land that is predominantly previously developed having been the location for the British ironworks. There are historic features on the site that current proposals seek to enhance; they also propose to improve drainage, reprofile and remediate the land with a view to full remediation. The public have been invited to help in the realisation of the masterplan and it is assumed that in the longer term development proposals will enhance public access. In view of the fact that this proposal seeks to improve access it is considered that cumulative negative effects associated with the British proposals in combination with Mynydd Llanhilleth will be not significant.

## **16.14 Significance conclusions**

- 16.14.1 A summary of the results of the socio-economic assessment is provided in **Table 16.15**.

**Table 16.15 Summary of significance of effects**

Receptor and summary of predicted effects	Sensitivity/ importance/ value of receptor <sup>1</sup>	Magnitude of change <sup>2</sup>	Significance <sup>3</sup>	Summary rationale
<b>Climate change and energy security - operational</b>	National/County	Low	Moderate (Significant - County)	The Proposed Development would provide up to 34MW of electricity which is enough to power around 21,641 homes. The installation of up to 34MW represents a considerable increase in capacity within Torfaen CBC and BGCBC and would contribute to the achievement of the Welsh Government's target for 70% of energy consumption to be provided by renewable sources by 2030 and the target for local ownership of renewable energy generation in Wales.
<b>Economy and community employment and expenditure – construction phase</b>	Regional	Low	Minor (Not Significant)	Positive contribution to the Welsh economy with potential investment of £13.4m during the construction phase. Much of this spend would take place in the region. Employment of around 57 FTE would be expected in the construction phase.
<b>Economy and community employment and expenditure – operational phase</b>	National	Very low	Minor (Not significant)	Expenditure of around £0.99m into the Welsh economy. Expected ongoing employment of around 4 FTE.
<b>Recreation – construction phase</b>	Local	Medium	Negligible (Not significant)	A number of PRowS cross the site. The implementation of suitable environmental measures will ensure that no significant effects are experienced by receptors.
<b>Recreation – operational phase</b>	County	Medium	Minor (Not significant)	<p>There would be some impact on the existing PRowS but they will remain accessible during the operational phase. The Applicant will provide alternative permissive paths to provide access around the wind turbines should walkers, cyclists and horse riders prefer to pass at a greater distance. However, the embedded environmental measures would ensure that the user experience is not significantly impacted.</p> <p>There would be some visual impact on some locations of existing recreational receptors including promoted routes, the National Cycle</p>



Receptor and summary of predicted effects	Sensitivity/ importance/ value of receptor <sup>1</sup>	Magnitude of change <sup>2</sup>	Significance <sup>3</sup>	Summary rationale
				Network, country parks and historic parks. However, overall the visual impacts are not considered significant. Furthermore, studies suggest that wind turbines do not dissuade visitors. No significant effects are concluded.
<b>Land use, Common Land – construction phase</b>	County	Low	Negligible (Not significant)	Measures would be put in place via the CEMP to protect grazing animals from construction activities whilst an area of compensation would be provided prior to construction commencing. The area of land lost to construction would be less than the compensation area.
<b>Land use, Common Land – operation phase</b>	County	Low	Negligible (Not significant)	The compensation area will remain a permanent part of the Common. Grazing animals will have full access to the common, including the wind farm.
<b>Land use, Minerals - construction phase</b>	County	Low	Negligible (Not significant)	Construction will take place prior to any plans to reopen the Tir Pentwys Quarry based upon the assumption that no applications are currently in consideration for its reopening. Should development of the quarry accelerate a condition with any planning consent for the wind farm can require that measures to manage construction traffic take into account the traffic movements associated with the quarry when updating and finalising the CTMP.
<b>Land use, Minerals – operational phase</b>	County	Low	Negligible (Not significant)	<p>The turbines would operate outside the area demarcated on the Local Development Plan as the Tir Pentwys Preferred Area although within the buffer zone. The wind farm is not classified as a sensitive development and modern quarrying techniques should ensure that both land uses can co-exist. There is currently no planning application submitted to reopen the Quarry although it is understood that proposal are in place.</p> <p>Whilst the wind farm would be located in an area identified as a Mineral (aggregate) Safeguarding Area, this designation</p>

Receptor and summary of predicted effects	Sensitivity/ importance/ value of receptor <sup>1</sup>	Magnitude of change <sup>2</sup>	Significance <sup>3</sup>	Summary rationale
				compromises much of the open land within TCBC and BGCBC. The area of land therefore occupied as a proportion of the whole is exceptionally small. The wind farm is a temporary development with a lifespan of 30 years. There are currently no plans to quarry aggregate within or adjacent to the site of the Proposed Development.

1. The sensitivity/importance/value of a receptor is defined using the criteria set out in **Section 16.8** and is defined as very low (local), low (county), medium (regional) and high (national).
2. The magnitude of change on a receptor resulting from activities relating to the development is defined using the criteria set out in **Section 16.8** and is defined as very low, low, medium and high.
3. The significance of the environmental effects is based on the combination of the sensitivity/importance/value of a receptor and the magnitude of change and is expressed as major (significant), moderate (potentially significant) or minor/negligible (not significant), subject to the evaluation methodology outlined in **Section 16.8**.

## 16.15 Conclusion

- 16.15.1 This Chapter presents the assessment of socio-economic effects which could arise as a result of the construction and operation of the Proposed Development (decommissioning effects would be the same or less than construction). The chapter scopes into the assessment a variety of receptors for consideration which include for employment and the local economy, the contribution to Welsh Government's targets for renewable energy generation, effects upon recreation, including PRowS and land use.
- 16.15.2 Baseline conditions (Section 16.5) indicate that the proportion of electricity generated by renewable means within Torfaen CBC and BGCBC is relatively low and that across Wales, the deployment of onshore wind projects has stalled. However, progress towards Welsh Government's target of generating 70% of electricity by renewable means by 2030 is being made and Welsh Government did consult upon an updated target to meet 100% of its electricity needs from renewable sources by 2035. This updated target has been adopted.
- 16.15.3 Local economic conditions within the two county boroughs is mixed with some wards performing consistent with or better than the county borough or Welsh averages with others less so.
- 16.15.4 The Proposed Development site is crossed by a number of PRowS whilst part of the site is designated as common land. Regional trails and long-distance walks can be found within the local area and beyond.
- 16.15.5 The assessment of effects arising from the construction and operation of the Proposed Development identifies significant effects associated with its operation and the generation of renewable electricity as a contribution towards national targets and a significant increase in renewable electricity at the county borough level. Other effects, for both construction and operation, are considered to be not significant. BGCBC has raised concerns with regard to the potential for the Proposed Development to affect possible future extraction of minerals at Tir Pentwys. The assessment confirms that the wind turbines would not be located within the Preferred Area for extraction but that two turbines would be located within the 200m buffer zone, (identified in relation to potential effects arising from blasting). Paragraph 70 of the Minerals Technical Advice Note (Wales) 1: Aggregates (2004) makes clear that the purpose of a buffer zone is to prevent sensitive development being located within it. MTAN defines sensitive development as "*any building occupied by people on a regular basis and includes housing areas, hostels, meeting places, schools and hospitals where an acceptable standard of amenity should be expected*". The same point is made in paragraph 5.14.44 of PPW. A wind turbine is not sensitive development as it does not fall into the categories of development listed above. Effects upon land use, including any future working of the quarry are therefore considered to be not significant.
- 16.15.6 The Proposed Development does not come forward in isolation and there are six other wind farm proposals within or adjacent to the host County Boroughs plus one wind farm already approved. Together these wind farms propose a significant uplift in renewable electricity generating capacity within the County and wider Cardiff capital region. The positive effects upon climate change and energy security are beneficial and significant. The potential for significant cumulative effects upon land use and public access has also be considered with the conclusion that they will not be significant.