

## 21 SOCIO-ECONOMIC

### 21.1 Introduction

21.1.1 This Chapter presents the assessment of the likely socio-economic effects of the Proposed Development in terms of employment, local economy, exposure to pollution and traffic, tourism, livelihoods, recreation, local services, and well-being during construction, operation and decommissioning phases of the Proposed Development.

### 21.2 APPLICABLE LEGAL FRAMEWORK AND GUIDANCE

#### *National Legislation*

#### *The Well-being of Future Generations (Wales) Act 2015*

21.2.1 There are seven well-being goals of this act, which revolve around becoming a more prosperous, resilient, healthier, more equal and globally responsible Wales, as well as becoming a Wales of cohesive communities and of vibrant culture and thriving Welsh Language.

21.2.2 A prosperous Wales aims to develop a skilled and educated population, with wealth and employment opportunity, through innovation, productivity and the efficient use of resources. Secondly, an economically resilient Wales, with the capacity to adapt to change, is a priority within this Act. There is also a focus on creating a more equal Wales, providing equal opportunity, regardless of socio-economic circumstances, alongside, creating cohesive, safe, and well-connected communities. Within its seven wellbeing goals, the Act also acknowledges Wales's Global responsibility in making a positive impact on global well-being.

#### *The Socio-economic Duty Equality Act 2010*

21.2.3 Also known as the Equality Act, this Act sets the applicable definition of socio-economic disadvantage<sup>1</sup>, as well as inequalities of outcome<sup>2</sup>, and how disadvantage can include (but is not limited to) factors such as area deprivation, low/no wealth, low/no income or material deprivation.

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<sup>1</sup> "Living in less favourable social and economic circumstances than others in the same society."

<sup>2</sup> "Inequality of outcome relates to any measurable difference in outcome between those who have experienced socio-economic disadvantage and the rest of the population."

*Planning Policy Wales Edition 12 (2024)*

- 21.2.4 The Placemaking Wales Charter is introduced within this Policy, outlining the importance of nourishing the relationship between a development, and its wider setting, aiming to create public spaces that promote health, happiness and well-being. “Placemaking adds social, economic, environmental and cultural value to development proposals resulting in benefits which go beyond a physical development boundary and embed wider resilience into planning decisions”. There are six Placemaking principles: people and community, location, movement, mix of uses, public realm and identity.
- 21.2.5 The Key Planning Principles highlight the importance of taking into account social and economic receptors when planning, including who the Proposal will impact, how it will impact them and the consequences of development on community. In addition to this, employment production, growth and economic activity, alongside cultural considerations, such as protecting areas of cultural, historical or tourism significance are topics that when considered within decision making and planning, achieve the creation of sustainable places.
- 21.2.6 This document also links to The Well-being of Future Generations (Wales) Act 2015, in how creating active, and social places can help reach the seven well-being goals. For example, a more *Equal Wales* can be achieved through securing socially inclusive development, while also valuing the strengths of existing communities. Following this, *Cohesive Communities* can be achieved through diverse and accessible future development.
- 21.2.7 *Productive and Enterprise Places*, is another key pillar of ensuring planning policy contributes to the economic, social and cultural well-being of Wales. A *Prosperous, Resilient, more Equal, Cohesive* and *globally responsible* Wales, can be achieved through the following exemplar measures:
- Increasing economic activity;
  - Lifelong learning and training opportunities;
  - Reliable communication networks;
  - Tourism development;
  - Sustainable agriculture;
  - Distribution of economic wealth;

- Sufficient enterprise and employment opportunities;
- Fulfilling work;
- Sustainable transport infrastructure; and
- Encouraging globally responsible business.

21.2.8 In addition to this, creating *Distinctive and Natural Places*, can help reach Wales’s well-being goals, by acknowledging the role that landscapes play in tourism, business, employment and local communities.

*National Development Framework “Future Wales – the National Plan 2040”*

21.2.9 This framework sets the direction of development in Wales, up to 2040. It sets a direction for where investments in infrastructure should head and sets out how planning can maximise benefits of a project.

21.2.10 Some of Wales’s biggest recognised challenges and opportunities, highlighted within this development framework, include climate change, renewable energy, travel and a changing society. Specifically, a primary opportunity of the country is to encourage a “low carbon economy”, which provides employment as businesses grow, while preparing the market for future demands.

21.2.11 The future Wales outcome includes a Wales where people live and work in healthy, connected and inclusive places, where the needs of a diverse population are met. In addition, rural areas, alongside cities, towns and villages are well connected using sustainable transport, and are balanced between promoting and retaining cultural character, and providing employment opportunity and innovative development. Following this, socio-economic inequalities are to be tackled, through sustainable growth, including nurturing community connections, with each region building on their strengths.

21.2.12 The Southeast, including Cardiff, Newport and the Valleys (including Rhymney), is an Area of National Growth, and Connectivity, as well as an area in which the metro is being developed. The Southeast also is the “focus for strategic economic and housing growth; essential services and facilities; advanced manufacturing; transport and digital infrastructure”.

*Wales Infrastructure Investment Strategy 2021*

- 21.2.13 This strategy sets out the Welsh Government's ten-year vision of the outcome of investments of infrastructure. It highlights the relationship between investment in infrastructure, and well-being.
- 21.2.14 In line with the National well-being goals for Wales, there are four domains that run parallel to investment outcome: environmental well-being, social well-being, economic well-being and cultural well-being.
- 21.2.15 Social well-being includes the protection and enhancement of physical and mental health, safety and well-being. This also encompasses reducing social inequalities and improving access to key public services. Alongside this, investment in infrastructure is to improve economic well-being, through increased employment, household income, educational outcomes and business productivity.
- 21.2.16 Cultural well-being can also be improved through investment decision, through investment in communities, specifically access to Welsh Language, arts and heritage, and sports and recreation.

***Regional Planning Policy***

*Towards A Regional Economic Framework for Southeast Wales 2021*

- 21.2.17 The Economic Framework for the Southeast of Wales provides detail on the challenges and opportunities specific to the Region. For both people and business, physical and digital connection is to be improved, through the creation of jobs, better transport infrastructure and improved housing.
- 21.2.18 Challenges in the area that need addressing, include, below average Gross Value Added (GVA), low level of skills and disproportionate variation in unemployment rates, and pay.

***Local Planning Policy***

*Caerphilly County Borough (CCB) Local Development Plan (LDP) (up to 2021) adopted 2010*

- 21.2.19 The CCB LDP identifies several objectives for the County around socio-economics, including providing accessible green spaces, ensuring new development is accessible to walkers, cyclists and public transport route users, provide diverse employment opportunities, encourage year-round tourist and accommodation, as well as providing

a range of community facilities while protecting the character of local towns and villages.

21.2.20 The regional plans are presented in the document, in which Rhymney is identified as a potential *tourism gateway* into the County Borough, from the Hed of the Valley. In addition, employment of the rural environment is a potential area of growth, due to the recreation facilities, cycle routes and footpaths in the area. Following this, the transition of industrial estates within local towns, allow new and diverse employment opportunities.

21.2.21 Policy TR8 aims to improve the road network at key locations, in particular the substandard section of the A469 between New Tredegar and Pontlottyn.

*Heads of the Valleys Regeneration Area Masterplan 2020*

21.2.22 The Heads of the Valleys Regeneration Area is located in the northern part of Caerphilly County Borough, and comprises the Darren, Upper Rhymney and Upper Sirhowy Valleys, including the Principal Town of Bargoed and the Local Centre of Rhymney.

21.2.23 As identified in other Regional Planning documents, some of the Regional challenges include high levels of economic inactivity, low levels of education and formal qualifications, infrequent and unreliable transport, as well as isolated communities with limited provision of facilities and services. However, there are several paths within the Plan, which lay out routes to take opportunities that create positive impact to the area. These include integrating with nearby initiatives, such as Ebbw Vale's Enterprise Zone. Following this, improving the social and economic resilience of the area, through training and education would tackle deprivation, while increasing the economic state of the area.

21.2.24 A large part of the Regional Plan focuses on connectivity, through improving transport, enhancing green community spaces, as well as community, leisure and recreation facilities. It pays particular attention to the need for economic regeneration to be equitable, and diverse, in who engages with, and receives benefit of community development.

21.2.25 Rhymney specifically (in three areas), is a focus of the Head of the Valleys Regeneration Area, which is a recipient of redevelopment. This includes a focus on the

following areas: carer support, relevant soft and technical skill development, upskilling and providing links between local business and education facilities.

21.2.26 In addition, it identifies education as a key area of development, aiming to reduce the number of schools in poor conditions, including the following proposed areas of development:

- “New build school to replace the existing Upper Rhymney Primary School”;
- “Relocation of Brynawel Primary School pupils to Upper Rhymney Primary and Idris Davies Schools”; and
- “Refurbishment of a school site to relocate Ysgol y Lawnt”.

#### *EIA Legislation*

21.2.27 The applicable EIA legislation (covered more in depth in Chapter 2) is also considered withing this Chapter, including:

- Town and Country Planning (Environmental Impact Assessment (EIA)) (Wales) Regulations 2017 (EIA Regulations);
- The Developments of National Significance (Wales) Regulations 2016;
- The Environment (Wales) Act 2016;
- Planning (Wales) Act 2015; and
- Government of Wales Act 2006.

#### *International Standards*

21.2.28 In the absence of established United Kingdom (UK) specific guidance on socio-economic impact assessment, the socio-economic chapter uses the following guidance for social impact assessments and additionality assessments:

*International Association for Impact Assessment (IAIA), Social Impact Assessment: Guidance for Assessing and Managing the Social Impacts of Projects (2015).*

21.2.29 The IAIA guidance suggests how Social Impact Assessment (SIA) can manage social issues within a project, throughout the project’s lifecycle. SIAs have developed over time, previously, primarily focused on the negative impact(s) the project may cause, with more current practice providing a wider focus of how a project can be enhanced to improve benefits and mitigate community concern. The use of an SIA goes beyond legislative regulation; it can be used as a tool to meet expectation of stakeholders,

including project partners, financial backers, industry organisation, as well as local communities.

### 21.3 STUDY AREA

#### *Project and Site Information*

21.3.1 The Site of the Proposed Development is located directly west of the town of Rhymney. The nearest residential property is the Cwm Carno Farm, 530m north of the Site (owned by the project Site Landowner). Further residential properties are located 640m east of the Site, on the edge of the settlement of Rhymney, and 650m northwest of the Site at Blaencarno Farm.

21.3.2 As described in Chapter 5, the Proposed Development is located in 28 Ha of greenfield land and is planned to comprise three wind turbines with a generating capacity of around 5MW each and a maximum tip height of 150m, alongside around 5MW ground mounted solar PV arrays to generate approximately 20MW of energy.

21.3.3 For this assessment, it is anticipated that all turbine components will be transported to Site from the port of Swansea, via the A465 and A469 and the Industrial Estate access road to the Proposed Development location. The development of new access tracks is expected within the Site to deliver the turbines. In addition, a 2.4m high fence will be installed inside the development boundary to increase security.

21.3.4 Full time equivalent (FTE) staffing levels on site during construction of the solar PV are expected to be around 25 people, while FTE staffing requirement on Site during construction of the wind turbines are expected to be approximately 30 people, as follows:

- Ten staff during civils operations;
- Five staff during substation works; and
- 15 staff during turbine erection.

21.3.5 General maintenance will be undertaken annually to clean and check the solar panels. Maintenance crews visiting the Site will use small vehicles (e.g. four-by-four or small van) to access the Site. Teams of two people with a four-by-four/van would undertake the servicing. It is estimated that two people (on average) would take up to two days to service each turbine. Routine maintenance or servicing of turbines is carried out twice a year, with a main service generally taking place in the summer and a minor

service in the six months following. In year one, there is commonly an initial three-month service after commissioning. The turbine being serviced will be switched off during the duration of its service.

### ***Current Land Use***

21.3.6 The town of Rhymney is built around a rich heritage of heavy industry and mining, with the establishment of the Union Ironworks in 1801 using local coking coal, iron ore and limestone. From the mid-19<sup>th</sup> century, steam coal pits were sunk to the south of the town. The Site of the Proposed Development has been historically mined since at least the earliest historical mapping record in 1875 until the early 1900s.

21.3.7 The Site consists of grassland which is privately owned and currently used for agricultural grazing, primarily of sheep and few horses. The Site has a Grade Five Agricultural Land Classification pertaining to very poor-quality agricultural land. However, the grazing provides opportunity for maintaining livestock.

21.3.8 According to early stakeholder engagement feedback (Grasshopper Communications, 2023), there is a complex relation with mining and industrial heritage within the local area. The Site of the Proposed Development was reportedly commissioned for coal mining historically and early stakeholder engagement in the Area of Influence (AoI, see Section 4.4) has shown that local towns are proud of their local industrial heritage. However, the historical disaster in Aberfan in 1966, less than ten miles southwest of Rhymney, remains as a vivid and deeply engrained legacy of mining impacts in the area.

### ***Administrative Structure***

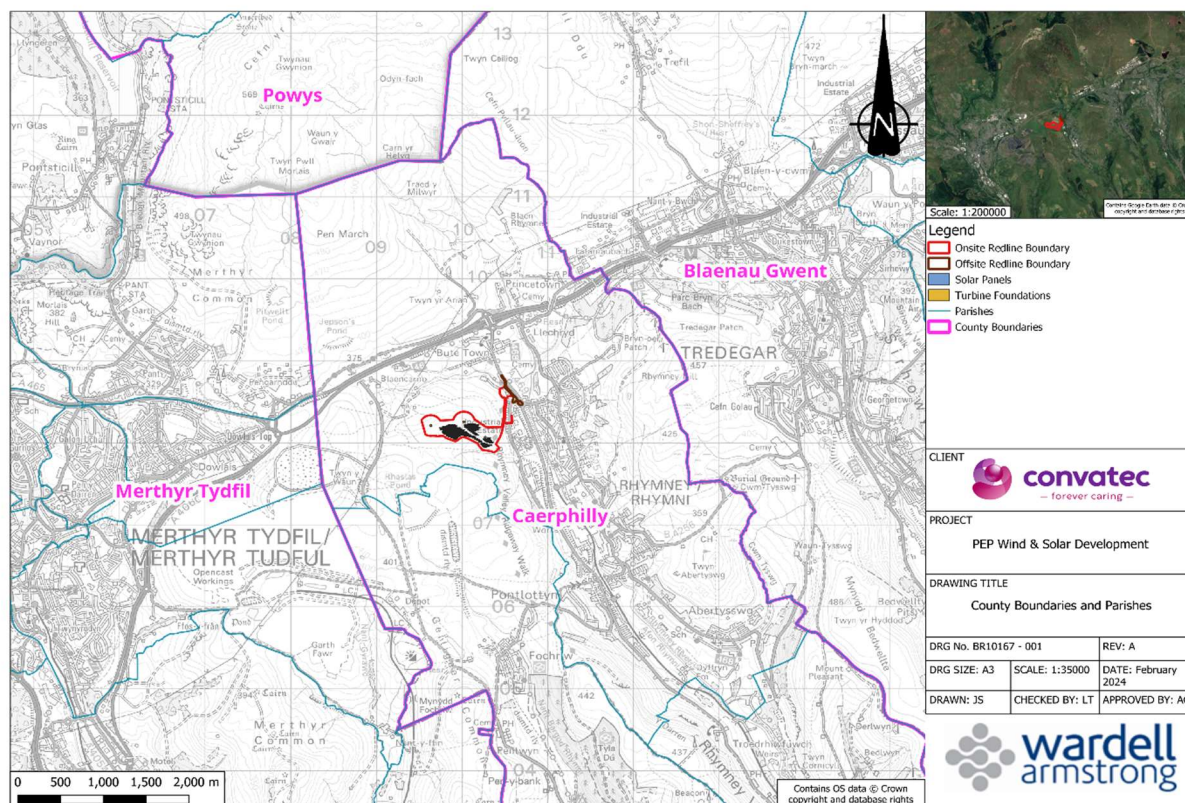
21.3.9 The administrative area known as Rhymney includes the town of Rhymney, as well as Pontlottyn, Abertysswg, Butetown and Twyncarno, all comprised in the statutory boundary of the unitary authority of Caerphilly County Borough (CCB). Rhymney is located in the northernmost tip of CCB, (see **Error! Reference source not found.**) and is adjacent to the County Boroughs of Merthyr Tydfil to the west, Blaenau Gwent to the east, and Powys to the north.

21.3.10 The Authority of CCB is then divided into wards. Rhymney lies in the following wards (see Figure 21.1):

- Twyn Carno;



- St David's;
- Moriah; and
- Pontlloftyn.



**Figure 21.1: The County Boundaries and Parishes around Rhymney, Caerphilly**

- 21.3.11 Rhymney is often referred to within documentation as “The Upper Rhymney Valley”, which encompasses the wards of Twyn Carno, Moriah, Darran Valley, New Tredegar, Pontlloftyn, Bargoed, Aberbargoed and Gilfach. The Parliamentary Constituency of Rhymney is “Merthyr Tydfil and Rhymney”, in which the town is represented in UK Parliament.
- 21.3.12 Census statistics break downward boundaries into output areas (OAs). Rhymney is contained within one of the four Middle layer Super Output Areas (MSOAs) of the Upper Rhymney Valley, and is made up of the following Lower Super Output Areas (LSOAs<sup>3</sup>) :

<sup>3</sup> Lower layer Super Output Areas (LSOAs) are made up of groups of Output Areas, usually four or five. They comprise between 400 and 1,200 households and have a usually resident population between 1,000 and 3,000 persons.

- Twyn Carno 1 and 2;
- Pontottyn; and
- Moriah 1, 2 and 3.

### **Social Area of Influence**

- 21.3.13 The approach to determine a study area for socio-economic aspects consists of identifying the localities (cities, towns, households) in relation to the Site location and County Boroughs. In this case, the study area primarily comprises the town of Rhymney in Caerphilly, as well as the neighbouring County Boroughs of Merthyr Tydfil and Blaenau Gwent which will also be assessed due to their proximity to Rhymney. The area of study to identify community effects is often not entirely correlated with the statutory boundary. For example, residents of an area may use other facilities located within towns, districts, counties or regions outside the statutory boundary.
- 21.3.14 Within the study area, the social Area of Influence (AoI) is used to help assess the potential impacts on local people or communities (i.e., “receptors” in EIA terms) from the Proposed Development. The social AoI will be defined within two levels: the Direct and the Indirect AoI.
- 21.3.15 The Direct AoI relates to the area where direct effects from socio-economic impacts are expected, including the most immediate localities (cities, towns, households) that are linked through social, cultural or economic interactions to the Site. The Direct AoI for the Proposed Development includes the town of Rhymney (specifically its northern area), Bute Town and local farmhouses. The Direct AoI includes predominantly residential buildings, and alongside this, local tourism-based businesses, education facilities, railway station and leisure, recreation and religious establishments (see Figure 21.2).
- 21.3.16 The Indirect AoI relates to the adjacent area where indirect and other cumulative effects from socio-economic impacts are expected, including other localities and receptors that are linked through wider transport networks, economic activities, and links to ecosystem services (e.g. downstream effects). The Indirect AoI for the Proposed Development includes the rest of Rhymney Town in Caerphilly (including Pontlottyn, Abertysswg, Fochriw, Pentwyn), Tredegar in Blaenau Gwent (including

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(<https://www.ons.gov.uk/methodology/geography/ukgeographies/censusgeographies/census2021geographies>)

Cefn Golay, Nantybwch, Dukestown and Sirhowy) and the East area of Merthyr Tydfil (including Pant and Dowlais) (see Figure 21.2). Some of the key connectors between the Counties include roads, the A465 or “Heads of the Valleys” Road, and the electricity transmission lines between the Counties.

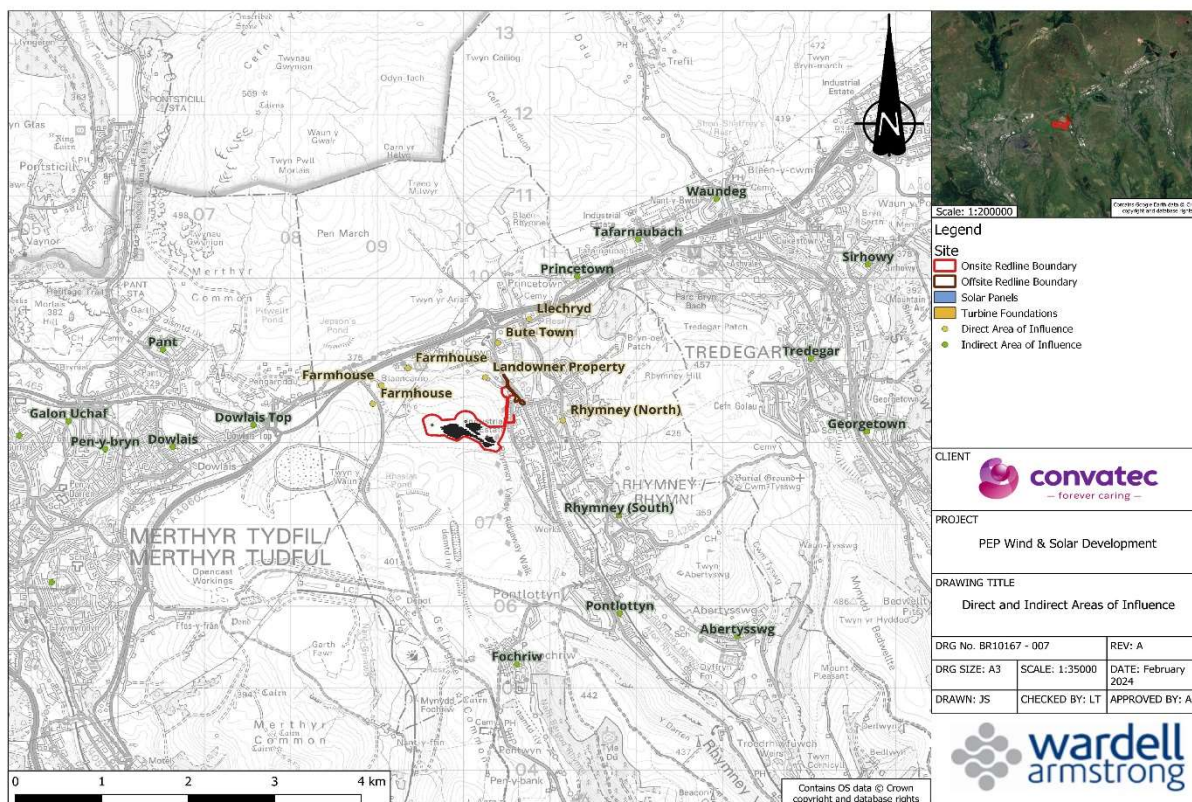


Figure 21.2: Direct and Indirect Area of Influence.

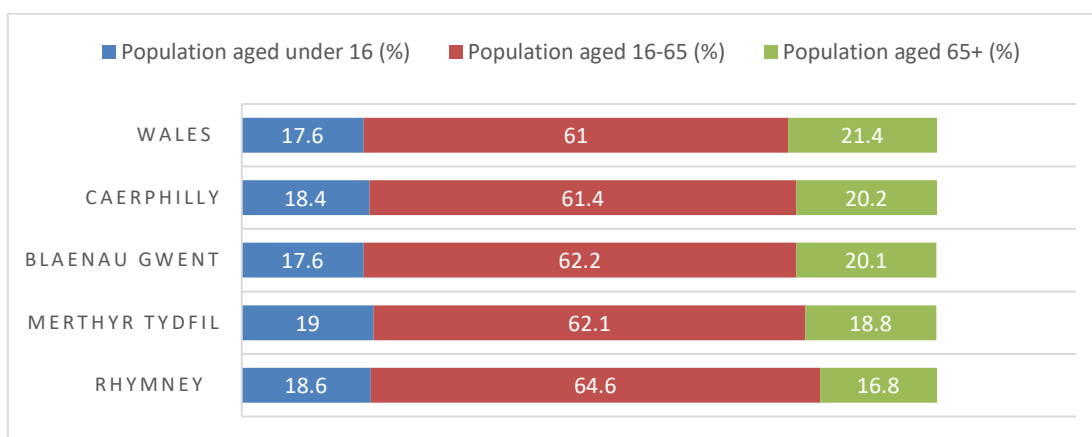
## 21.4 BASELINE CONDITIONS

### Population

21.4.1 According to the 2021 Census of Wales, Rhymney has a population of 8,543 people with approximately 3,900 households. The ethnicity of the population is predominantly white, with 98.2% of the population in Rhymney listing under this demographic, compared to the national rate of 93.8%.

21.4.2 There is a higher than national percentage of people in Rhymney within working age. An age breakdown of the town and its County can be seen in Figure 21.3 below. In addition, life expectancy is below the UK as a whole.





**Figure 21.3: Age profile of Rhymney, Neighbouring County Boroughs and Wales (Census, 2021)**

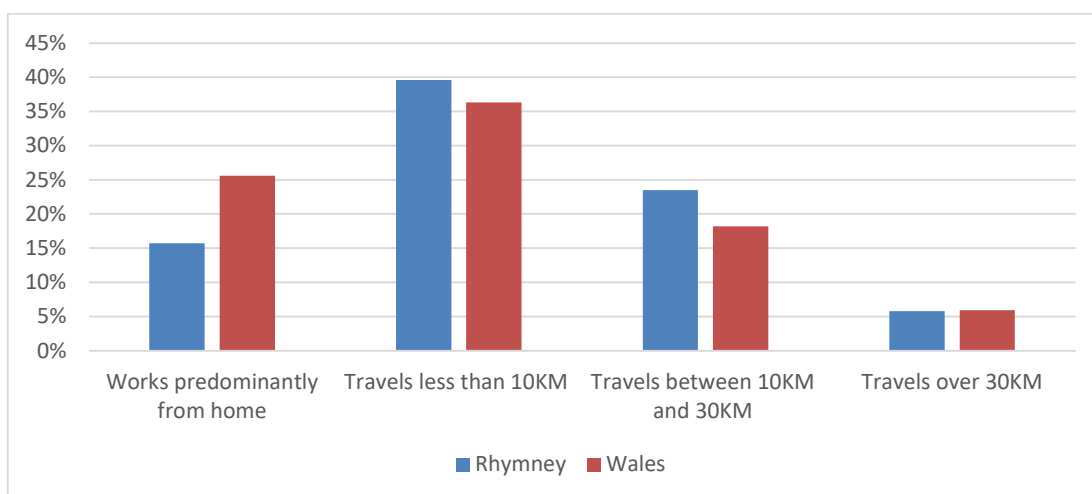
21.4.3 Analysis of Census data suggests that the population of Wales is projected to rise by a further 3.7% by 2043. Wales as a whole is expected to have 30.6% more people aged 65 and over, and 64.9% more people aged 75 and over by 2043.

21.4.4 According to the 2021 Census, Welsh speaking ability in Caerphilly County was reported at 10.5% of the population, a decrease by 0.7% from 2011. As mentioned in section 0, the LPP reiterates the importance of local community to propagate their heritage throughout language for future generations.

21.4.5 The majority of the population (58.9%) self-describes as having no religion (Wales, Census 2021). However, there are several Christian churches within Rhymney, and a cemetery, which lies approximately 120m east of the site boundary.

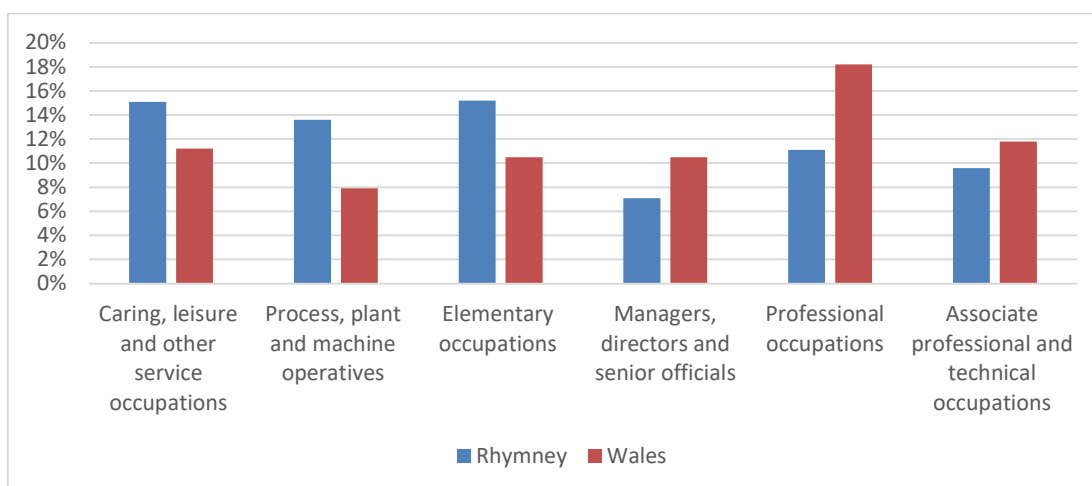
### ***Economy and Employment***

21.4.6 In Rhymney, the percentage of population travelling less than 10km and those travelling between 10km to less than 30km, is higher than national rates, with slightly less of Rhymney's population traveling over 30km to work, compared to the National rate. This data may suggest there are local jobs in Rhymney which are in line with the existing skillset from the workforce. Workers in Rhymney have a lower rate of working from home (15.7%) compared to the national average (25.6%) (see Figure 21.4 below).



**Figure 21.4: Distance travelled to work in Rhymney, compared to National rates (Census, 2021).**

21.4.7 According to the 2021 Census, Rhymney has higher-than-national rates of employment in caring, leisure and other service occupations, process, plant and machine operatives and elementary occupations (see Figure 21.5 below). Alongside this, lower-than-national rates can be seen in occupations such as managers, directors and senior officials, professional occupations and associate professional and technical occupations (see Figure 21.5 below). These trends can be seen across Caerphilly, and neighbouring Counties, Merthyr Tydfil and Blaenau Gwent.

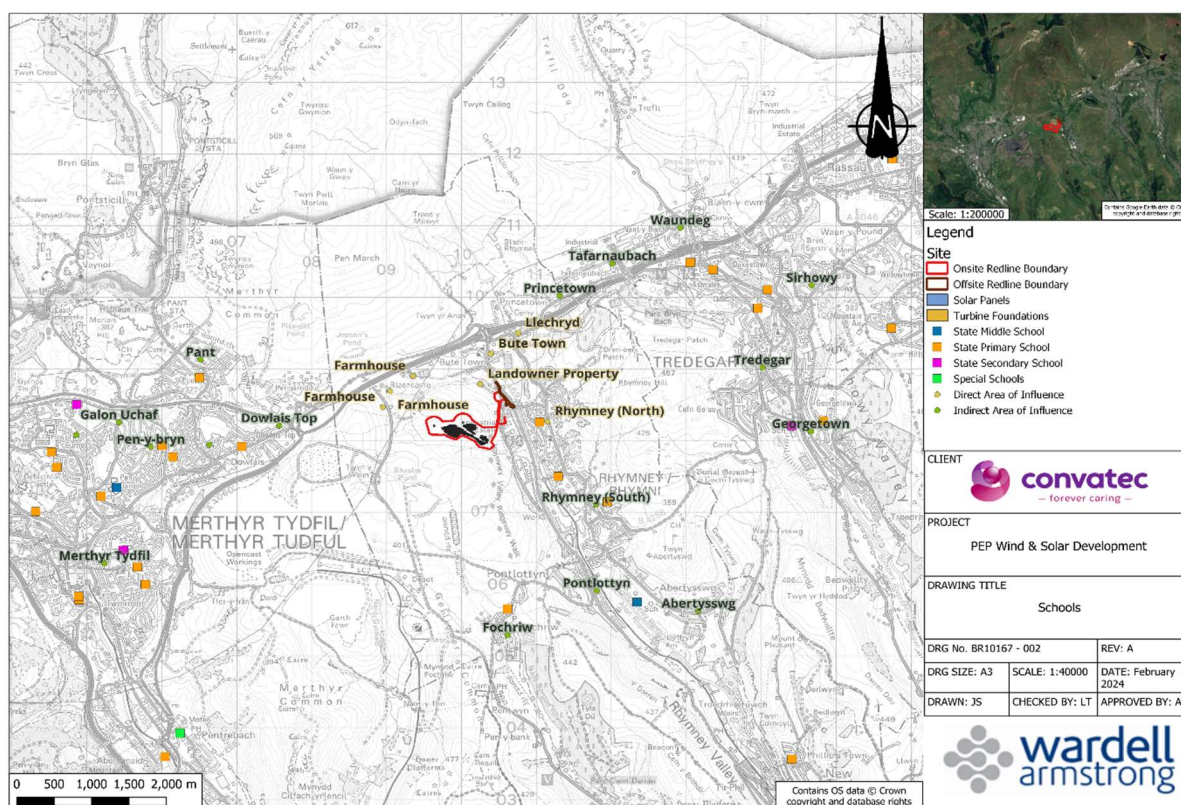


**Figure 21.5: Industry of employment of Rhymney, in terms of strongest and weakest industries, compared to National rates (Census, 2021)**

21.4.8 The economic activity status of the working age population in Rhymney varies from national levels, with a higher percentage of unemployed people (49.1%, compared to 43.5%). In addition, there is a higher proportion of the population that have never worked (33.2%, compared to the national figure of 23.1%).

## Education

21.4.9 In the town of Rhymney there are two Primary Schools, (one Welsh, one English), two Secondary Schools, (one Welsh, one English) and a pre-school (see Figure 21.6). There is also a nearby school for three- to 19-year-olds with special educational needs, a military school and an online college offering skill training courses. However, there is little information available on what level of qualifications can be obtained at this institution. According to early stakeholder engagement records, local proposals have been discussed to create a new school building with shared facilities to accommodate the Ysgol Y Lawnt, Upper Rhymney Primary School, and for wider community use.



**Figure 21.6: Education Facilities within Rhymney and social Area of Influence.**

21.4.10 Institutions offering university level degrees include: the University of South Wales, Cardiff University, Cardiff Metropolitan University and Swansea University, all of which are within 40 miles of Rhymney. In addition, the Universities of the Heads of the Valleys Institute (UHOVI), is 14 miles from central Rhymney, primarily offering foundations degrees.

21.4.11 Full-time students in Rhymney comprise 4.6% of the population, compared to the national figure of 7.6%, according to the 2021 Census data.

21.4.12 The percentage of the population holding no qualification in Rhymney is higher than the national average. Although those holding Level 1, 2, or 3 qualifications exceeds the national average, those holding a level 4 or above, is much lower, as shown below (see Figure 21.7).

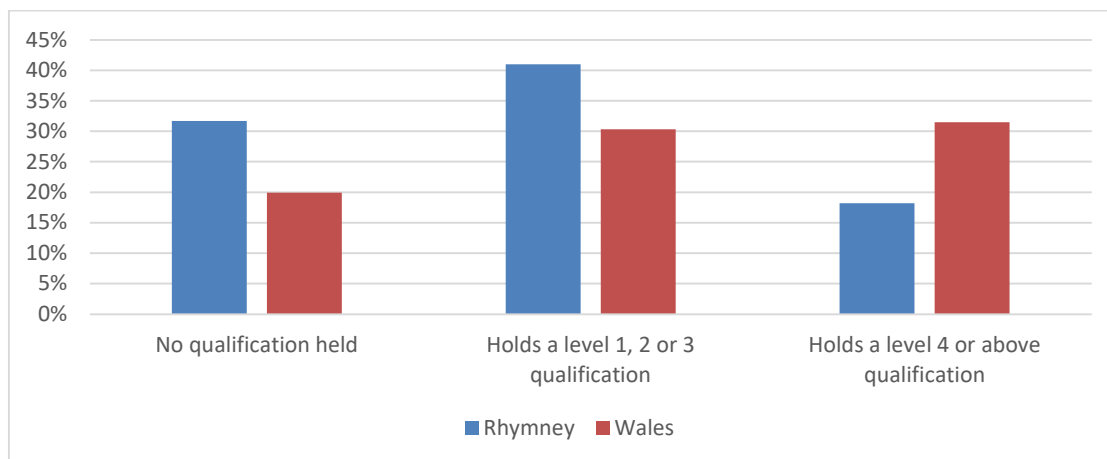
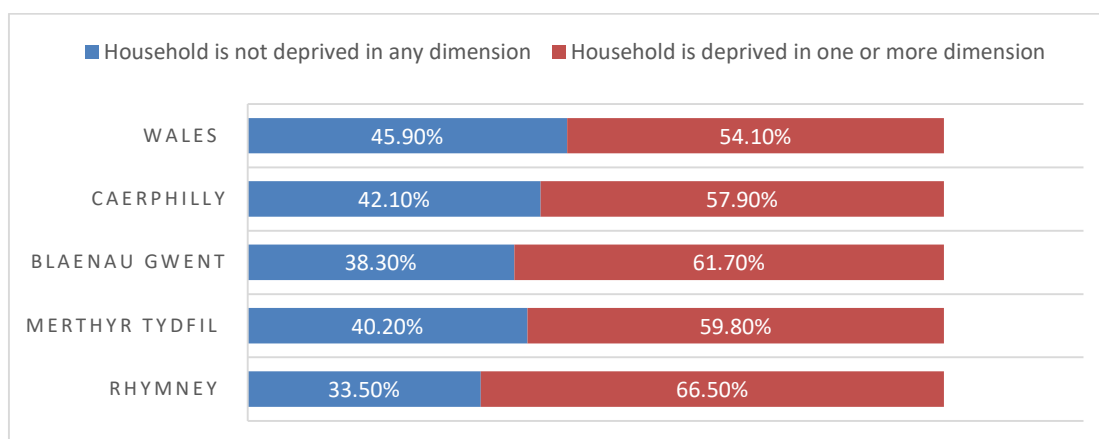


Figure 21.7 A qualification breakdown on the population of Rhymney, compared to wider Wales (Census, 2021).

### Deprivation

21.4.13 According to the 2021 Census, Rhymney has high rates of household deprivation, with 66.5% of households deprived in one or more dimension<sup>4</sup>, compared to the national average of 54.1% (see Figure 21.8). Rhymney has a higher deprivation rate compared to the average rates of the nearby County Boroughs (Wales, 2021 Census).

<sup>4</sup> The Welsh Index of Multiple Deprivation, based on Census 2021 data classifies households in England and Wales by four dimensions of deprivation: employment, education, health and disability and household overcrowding.



**Figure 21.8 Household Deprivation of Rhymney in percentage, in relation to its County Caerphilly, neighbouring Counties Merthyr Tydfil and Blaenau Gwent, and wider country (Wales) (Census 2021).**

- 21.4.14 The Welsh Index of Multiple Deprivation (WIMD) from 2019 highlights that there are significant levels of deprivation in pockets across the County Borough. The Caerphilly County has 62.7% of its LSOAs within the top 50% most deprived category; this is the fifth highest proportion in Wales. Neighbouring Blaenau Gwent has the highest proportion at 85.1%, followed by Merthyr Tydfil at 77.8% (WIMD, 2019).
- 21.4.15 In addition, Caerphilly is home to four LSOAs of deep-rooted deprivation<sup>5</sup>. Three of them are located in the Aol: Twyn Carno 1, located in the Direct Aol, and Tredegar Central and West 2 located within the Indirect Aol.
- 21.4.16 The Caerphilly County borough local area well-being assessment (2022) highlights that Twyn Carno 1 lies within the ten most deprived areas for the Employment and Education domains. It also lies within the 10% most deprived in terms of Income, Health, and Community Safety. In addition, WIMD indicator data shows that 43% of people in Twyn Carno 1 were in income deprivation in 2016-17.

### ***Tourism and Business***

- 21.4.17 The town of Rhymney is predominantly comprised of local independent traders, with limited retail offerings. The Proposed Development borders the Head of the Valley Industrial Estate (including the Convatec facilities approximately 30m from the Site). Rhymney also holds the Capital Valley Industrial Park which is approximately 900m

<sup>5</sup> Those that have remained within the top fifty most deprived, small areas in Wales for the last five publications of The Welsh Index of Multiple Deprivation ranks, based on Census 2021.



from the Site. In addition, the Biffa Trecatti Landfill site and opencast workings are located approximately 800m and 1.4km to the south-west, respectively.

21.4.18 Rhymney's closest attractions including the following:

- Winding House Museum;
- Madocs Castle, Morlais Castle and Cae Burdydd Castle;
- Mynydd Llangynidr (Mountain), Ebbw Vale (Valley) and Mynydd Merthyr (Ridge); as well as
- Brecon Beacons National Park and the Brecon Mountain Railway.

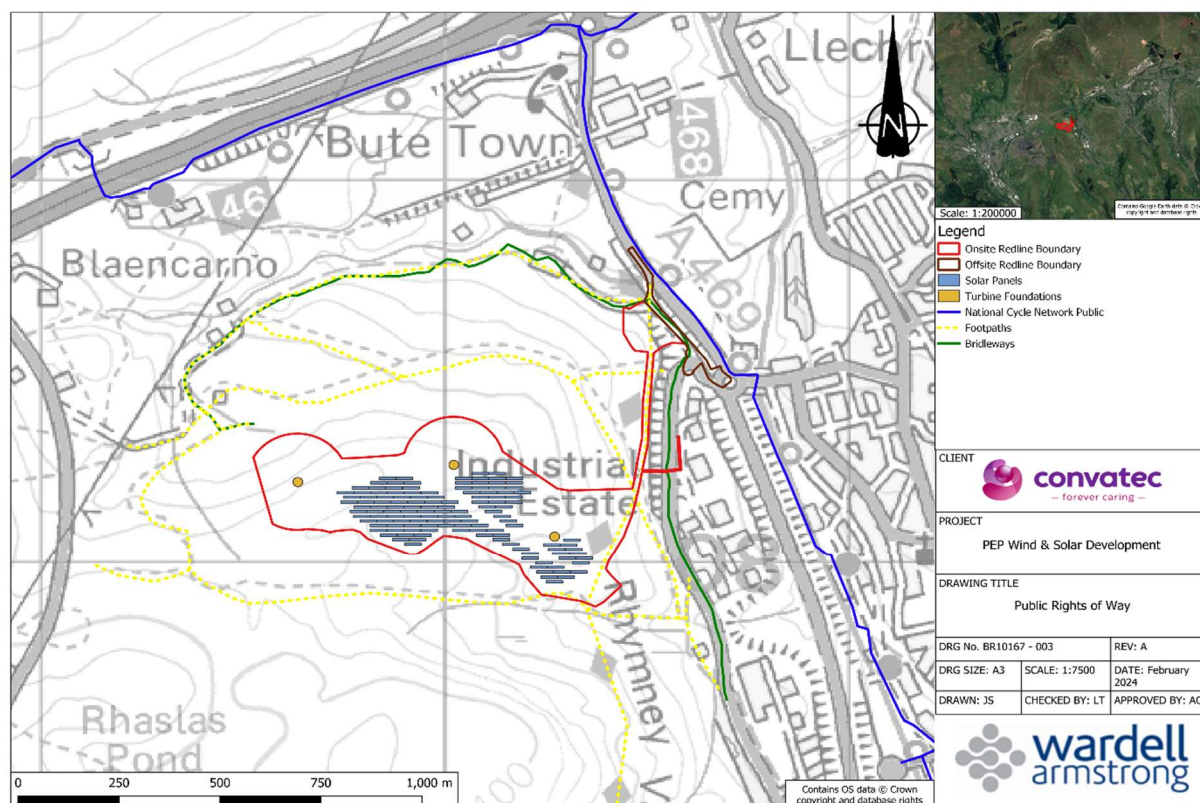
21.4.19 Accommodation services in Rhymney include:

- The Rhymney House Hotel (approximately 600m from the Site); and
- Lord Nelson, Pontlottyn.

***Public Right of Way and Green Space***

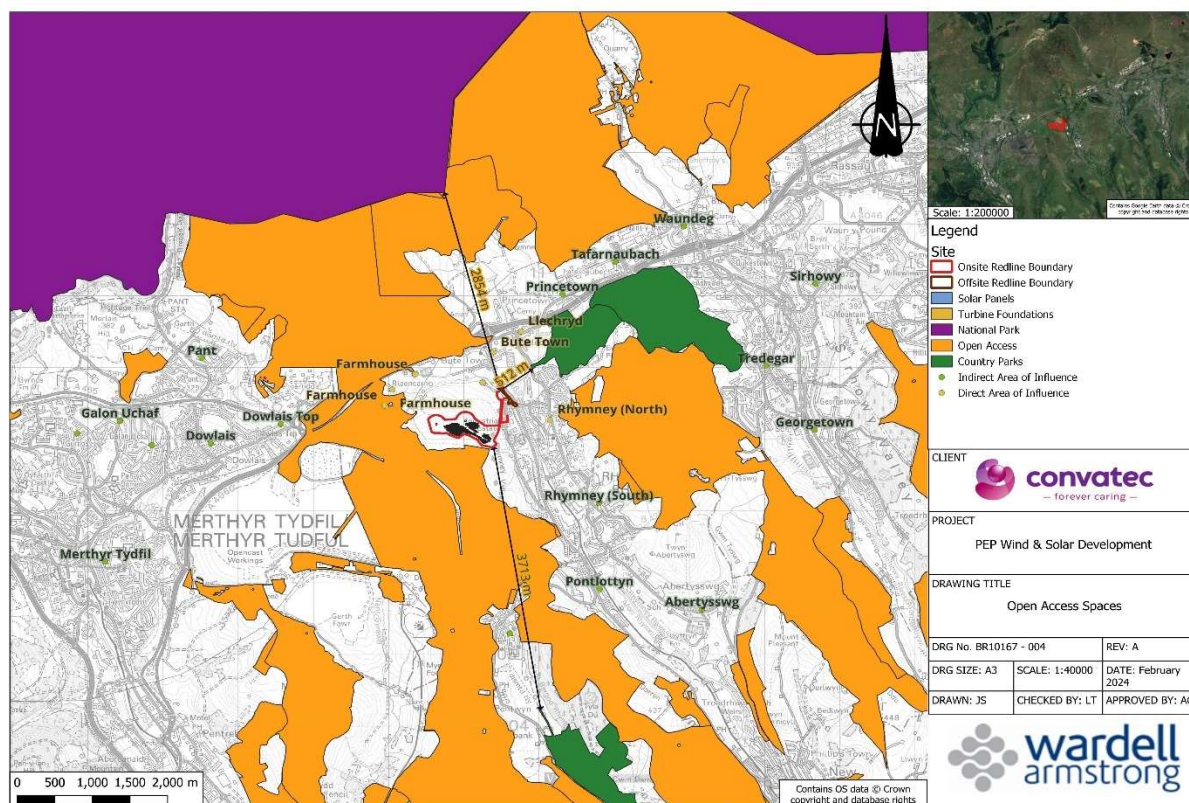
21.4.20 There are several public rights of way (PRoW) running in and around the Site. These include RHYM/FP90/2, RHYM/FP95/6, RHYM/FP91/1, as well as a bridleway (RHYM/BR93/1/ RHYM/BR92/1) (see Figure 21.9). However, consultation has shown it is a cul-de-sac route and only enters the Site by approximately 50 metres. There are bridleways to the North of the Site, which will also be considered within the Aol.

21.4.21 In a wider radius, the Rhymney Valley Cycle route, (route 468 of the National Cycle Network) runs through Rhymney, from Pengam north (just south of Gilfach) towards New Tredegar, with it partly bordering the Site (see Figure 21.9).



**Figure 21.9: The Public Right of Way, including National Cycle Routes, footpaths and bridleways around the Site.**

- 21.4.22 The A465 Heads of the Valleys Road runs through the north of the County Borough and provides good road links to Merthyr Tydfil, Swansea, and West Wales to the west, and to Ebbw Vale and the Midlands to the east. The north of the County Borough links to the M50 and M5 via the Heads of the Valleys Road and the A449.
- 21.4.23 The town of Rhymney is also connected to local communities including Blackwood to Merthyr Tydfil via the A469.
- 21.4.24 Alongside this, there are several open access spaces and within the Aol (see Figure 21.10).



**Figure 21.10 Open access spaces and parks within the Area of Influence.**

### ***Transport***

21.4.25 The Rhymney Valley Railway line provides direct links to Cardiff, through the County Borough, with stations located in Rhymney, Pontlottyn, New Tredegar, Bargoed and Gilfach. However, it is a single train that runs hourly, which does restrict accessibility to and from Rhymney. Development of the South Wales Metro is expected to facilitate access to Cardiff, with the line to Rhymney currently undergoing an upgrade, through “Transport for Wales” (as well as lines to Aberdare, Coryton, Merthyr Tydfil and Treherbert) (see Chapter 14 Transport for information of transport links).

21.4.26 In addition, there are public bus routes that run from Rhymney to Merthyr Tydfil, Tredegar and Barhoed.

### ***Leisure and Community Life***

21.4.27 As covered, Rhymney provides many opportunities to participate in outdoor activities. This is extended to angling, which is popular in the local Bute Town Reservoir located across the road from the village (approximately 675m from the Site boundary). In addition, the District Angling Society conducts fishing on the Rhos Las Reservoir, also

known as Rhaslas Pond, which is a 15-acre reservoir, as well as on the Bryn Brith Pond. This location is also accessible via the Rhymney Valley Cycle route.

21.4.28 Community facilities in Rhymney include the public library and St David’s Community Centre, which hosts arts and crafts sessions. Additionally, the Community Centre holds the Cwtsh Café, where talking groups events are held, that reportedly help build community members’ confidence, social skills and mental well-being. Community groups include the Rhymney Rugby Football Club, a Walking Football Group, the Rhymney Valley Music Club, and the Abertysswg Youth Club.

21.4.29 Places of worship within Rhymney and Pontlottyn include St David’s Church, Emmanuel Baptist Church, Beulah Baptist Church, Jerusalem Baptist Church, Penuel Baptist Church, St John’s, Bethel Baptist Church, St Tyfaelog, St Aidan, Zoar Baptist Church, St Michael and Salem Elim Church. In addition, the Rhymney Cemetery lies approximately 120m east of the Site boundary.

## 21.5 ASSESSMENT METHODOLOGY

### ***General Methodology***

21.5.1 Impact significance will be determined through the interrelation between social receptor sensitivity and impact magnitude (see Table 21.1 and Table 21.2 below) in two steps: before and after the implementation of mitigation measures, resulting in *pre-mitigation* significance and *post-mitigation* significance. An impact that is assessed as moderate or above is considered to be “Significant” (in EIA terms).

21.5.2 As part of the pre-mitigation assessment, embedded mitigation measures are considered, including those existing in the Proposed Development design or required for compliance with applicable national regulations. Impacts are evaluated per Project stage (construction, operation, decommissioning), although in some cases, impacts may remain across the lifecycle or be relevant in multiple phases of Project Development.

21.5.3 The post-mitigation assessment will consider additional mitigation measures for adverse impacts of moderate and major significance and enhancement measures for beneficial impacts, regardless of significance. This post-mitigation evaluation will result in the residual impact significance.

### ***Receptor Sensitivity***

21.5.4 In contrast with environmental receptors, the degree of sensitivity of social receptors is based on an individual or group's abilities and capacity to adapt to changes and maintain their quality of life, livelihood and health conditions. Sensitivity can be understood in terms of resilience to change (e.g., capacity to cope with socio-economic changes) and the individual's access to resources to adapt to them. Sensitivity can be further determined by several factors such as a receptor's age, gender, ethnicity, access to employment opportunities, livelihood, education, health, level of marginalisation/deprivation and dependence on natural or common resources. A qualitative definition of these is presented in Table 21.1, below.

<b>Table 21.1: Social Receptor sensitivity Scale.</b>	
<b>Sensitivity of Receptor</b>	<b>Description of Receptor</b>
Negligible	A receptor with no need to adapt to change or has a high capacity to adapt completely and almost immediately. Receptor has no shortage of access to adequate resources (material, financial, social) and will have no difficulty adapting to changes.
Low	A receptor with capacity and means to adapt to change and maintain/improve current conditions on its own after a certain time. Receptor has a high level of access to resources and has a high capacity to adapt to changes.
Medium	A receptor with limited capacity and means to adapt to change and maintain/improve current conditions. Adaptation may take time and/or may only be partial and can require support from mitigation measures. Receptor has some access to resources and retains capacity to partially adapt to changes.
High	An already vulnerable receptor with very little capacity and means to adapt to change and maintain/improve current conditions. Receptor has very limited access to resources, resulting in multiple levels of vulnerability that limits capacity to adapt to changes.

### ***Magnitude Criteria***

21.5.5 Magnitude elements and criteria are outlined in Table 21.2:

<b>Table 21.2: Elements of Impact Magnitude.</b>	
<b>Element</b>	<b>Description</b>
Type	Beneficial (positive): An impact that is considered to represent an improvement to socio-economic baseline conditions or the introduction of a new desirable factor. Adverse (negative): An impact that is considered to represent an adverse change from socio-economic baseline conditions, or the introduction of a new undesirable factor.
Duration	Short term: Impacts that are predicted to last for a limited period (i.e., during construction) or will cease within less than a year.



	<p>Medium term: Impacts that are predicted to last through construction and the beginning part of operations or for a period of one to five years.</p> <p>Long term: Impacts that are estimated to occur throughout construction and last through operations, or for a period of more than five years and up to 25.</p> <p>Very long term: Impacts that affect a receptor throughout the development lifecycle and will remain post-closure.</p>
Reversibility	<p>Reversible: Impacts are predicted to be reversed after the end of the development activities or on application of mitigation.</p> <p>Irreversible: Impacts that cause a permanent change in the affected receptor or resource that endures substantially beyond the development lifetime, despite mitigation.</p>
Spatial Extent	<p>Local: Include the Direct and Indirect Area of Influence.</p> <p>Regional: Includes Southeast Wales.</p> <p>National: Encompass most of Wales.</p>
Intensity	<p>None: no effects on livelihoods and well-being of people</p> <p>Low: no substantial effects on livelihoods and well-being of people.</p> <p>Medium: moderate effects on livelihoods and well-being of people.</p> <p>High: substantial effects on livelihoods and well-being of people.</p>

### **Impact Magnitude**

21.5.6 Following this step, a definition of the overall magnitude (i.e., degree of change) is made considering the combination of elements is presented in Table 21.3, below.

Table 21.3: Magnitude of Change Scale.	
Magnitude Level	Description
Negligible	Potential impact will not result in any measurable or perceivable changes to baseline conditions. Short-term, reversible, and local, with no intensity.
Low	A potential impact that is expected to have a limited measurable effect on people so that the baseline conditions will not be considerably affected. Short-term, reversible, local or regional, with low to medium intensity.
Medium	A potential impact that is expected to be short or medium term, local or regional extent, reversible, and medium to high intensity.
High	Potential impact will result in measurable change on baseline conditions and is expected to cause change on a moderate scale. Long or very long term, regional or national extent, may or may not be reversible depending on specific conditions, and medium or high intensity.

### **Significance Criteria**

21.5.7 The level of significance is defined through the matrix in Table 21.4, below. An effect that is moderate or higher is considered to be “Significant”, while negligible or low impacts are seen as “Not Significant” (in EIA terms).

Table 21.4: Significance Criteria.	
	Magnitude of Change

Receptor Sensitivity	Negligible	Low	Medium	High
Negligible	Negligible	Negligible	Minor	Moderate
Low	Negligible	Minor	Minor	Moderate
Medium	Negligible	Minor	Moderate	Major
High	Minor	Moderate	Major	Major

## 21.6 EVALUATION ASSUMPTIONS

### *Design Assumptions*

21.6.1 The following design assumptions have been made, in assessing the socio-economic impacts of the Proposed Development:

- At this stage it is assumed the cabling will be installed below ground, minimising the effect on land use within the cable route connecting the solar array and wind turbines to the applicable substation;
- It is assumed that no residential properties will require acquisition for the development of the Site and the selected cable route will be chosen to make sure this is the case;
- WA assumes that the FTE and roles required for the Proposed Development will be sought locally, although no specific plans for local employment have been shared (see enhancement measures in section **Error! Reference source not found.**);
- The lifespan of the Proposed Development has been assumed to be 30 years;
- An assumption has been made that other Chapters have fully assessed the environmental impact of the Proposed Development, regarding their primary focus (e.g., noise, traffic); and
- Workforce numbers were assumed based on similar developments in the area and will be cumulative where activities are taking place over the same periods and may be increased or reduced should the construction schedule require it.

### *Embedded Mitigation*

21.6.2 Embedded mitigation measures relevant to socio-economic receptors includes those described in Chapter 14, Traffic. Construction traffic will follow a Construction Traffic Management Plan (CTMP), which will form part of the Construction Environmental Management Plan (CEMP) and set out measures to:

- Make sure safe management and monitoring of construction traffic, particularly for delivery of good and equipment and for efficient travel to Site for construction workers;
- Generate minimal disruption to people using PROWs; and
- Maintain highway safety and the free flow of traffic on the public highway.

21.6.3 The CTMP will provide for the majority of contractor staff to arrive to the Site by minibus. Car trips will be minimised to reduce traffic and environmental effects of the Proposed Development.

21.6.4 The CTMP will also include an Abnormal Loads Delivery Management Plan (DMP), setting out all traffic management and mitigation measures required for safe and efficient transport of these loads. All abnormal load movements are regulated by the South Wales Trunk Road Agent and will be subject to separate agreement with the relevant highway authorities and police through the ESDAL system. It is assumed that the DMP process will ensure any effects on local communities and road users are minimal.

### ***Social Receptor Sensitivity***

21.6.5 Identified receptors, alongside their sensitivity in relation to the Proposed Development are outlined in Table 21.5 below:

<b>Table 21.5: Receptor sensitivity summary.</b>		
<b>Receptor</b>	<b>Description</b>	<b>Sensitivity</b>
Local residents within the Direct Aol	People in the Direct Aol have limited transport connections, limited employment opportunity, high levels of deprivation, and limited resources to adapt to change without the assistance of external assistance.	Medium
Local residents within the Indirect Aol	People in the Indirect Aol also have limited transport connections, limited employment opportunity, and high levels of deprivation. However, they have greater connections and links to bigger towns and mobility options for livelihood activities than the residents of Rhymney.	Low
Local Workforce within the Direct Aol	The Economically Active Population (EAP) has limited job opportunities within Rhymney due to restricted presence of labour sectors, which partly contributes to deprivation levels in the area in addition to the limited public transport links to other local areas. Change in employment may take time, with limited opportunity and in need of re-skilling.	Medium
Local Workforce within the Indirect Aol	The EAP in the Indirect Aol have higher levels of infrastructure connectivity in terms of road access to other towns and more diverse labour sectors, and are therefore more able to adapt to change in labour opportunities. Change in employment may take less time, with some degree of re-skilling.	Low
Businesses within the Aol	Businesses in both the Direct and Indirect Aol have access to resources that the general population may not, meaning they are more adaptable to change. In addition, there is the option to improve its conditions through the will of the business.	Low



Road users within the AoI	Road users in both the Direct and Indirect AoI have limited alternatives if one road is blocked/damaged and added or extended time to re-route in case of affectations. Public health and safety risks will be critical to the use of local roads. Limited opportunity to adapt to change.	Medium
Users of local PRoW (footpaths, bridleways, cycle paths)	Access to PRoW is expected to remain open throughout development. However, cyclist and users of footpaths have limited alternative access to outdoor spaces in Rhymney, as well as limited transport routes within the AoI to reach other open spaces.	Medium
Site workers	Although in close proximity to construction impacts from soil disturbance and pollution pathways, there is presumed embedded mitigation measures put in place to prevent impact on this receptor. Skilled workers within one of Wales's highest employing industries suggests receptor is able to adapt to change.	Low
Landowner	The Site owner has entered voluntary negotiations to host the Proposed Development and is likely that the resources from providing access and use of the land will provide capacity to adapt to change.	Low
Vulnerable groups	People in vulnerable groups have such as elderly adults, children, and minority groups have more difficulties to adapt to change. This vulnerability is amplified by high levels of existing deprivation, including household, economic and educational limitations, suggesting difficult to access resources and services, as well as limited presence from support networks.	High

## 21.7 IMPACT ASSESSMENT

### *Construction Impacts*

#### *Generation of local employment and increase in contribution to local economy*

21.7.1 There will be a beneficial (positive) impact on employment within the construction phase of development, creating short-term employment opportunities. The influx of construction workers, which will be limited, will likely also increase spending and gross value added (GVA) without the risk of massive workforce influx to the Site.

21.7.2 Although it is assumed that local workers will be preferred, workers within the Direct AoI could face difficulties to benefit directly from the expected employment opportunities, in particular for skilled work. Workers could likely come from outside the AoI, limiting the potential benefit for local workers. Workers within the Direct AoI have a medium sensitivity and workers within the Indirect AoI have a low sensitivity. This impact is expected to be short-term, reversible, local for Direct AoI workers and regional for Indirect AoI workers, beneficial, with medium intensity for Direct AoI workers and low intensity for Indirect AoI workers, resulting in low magnitude and **minor significance**.

21.7.3 Businesses within the region are likely to benefit from the Proposed Development, from an increase in disposable income from local construction workers and increased supply chain work. Both the EAP of the wider County and businesses within the AoI

have a low sensitivity. This impact is expected to be short-term, reversible, regional, beneficial, with low intensity, resulting in low magnitude, and **minor significance**. Without enhancement measures, this impact is **not significant**.

*Restricted mobility options for public right of way*

21.7.4 People walking, cycling and riding horses on PRoW in the AoI are expected to be affected by PRoW closures during construction. Particularly in the vicinity of the Site access there is potential for conflicting manoeuvres between people and development-related traffic, which includes HGVs and some abnormally large HGVs.

21.7.5 Restricted access to green space and leisure areas may occur throughout construction for the Health and Safety (H&S) of local residents, which will likely block footpaths (PRoW) within and adjacent to the Site of the Proposed Development. At this stage, it is expected within the design that PRoWs will not be blocked at any stage of development. However, H&S buffer areas could extend to these PRoWs and reduce the already restricted mobility options in the AoI.

21.7.6 Users of PRoW have a medium sensitivity. This impact is expected to be short-term, reversible, local, adverse, with medium intensity, resulting in low magnitude and **minor significance**. Although there is no need for additional mitigation measures, some recommended mitigations are presented below. This impact is **not significant**.

*Displacement of economic activity*

21.7.7 Agricultural grazing of sheep will be temporarily displaced during the construction phase. However, given the voluntary nature of land lease negotiations and financial gain from the Proposed Development, it is expected that adjustment to this temporary displacement will be feasible. In addition, the rest of the Site will be available for sheep. Nonetheless, some level of annoyance may be experienced by the livestock which is not assessed here.

21.7.8 As a receptor, the Site landowner has a low sensitivity and can adapt to change. This impact is expected to be short-term, reversible, local, adverse, with low intensity, resulting in low magnitude and **minor significance**. This impact is therefore **not significant**.

### *Increased commuting times*

- 21.7.9 The movement of equipment, construction components, material and personnel throughout construction is expected to increase the levels of traffic (covered in more detail in Chapter 14) and result in increasing commuting times for local residents. The presence of HGVs and vehicles carrying abnormal loads can pause traffic altogether at certain turns, which can also increase exposure to unplanned events (e.g., traffic accidents) with construction vehicles and the employee minibus.
- 21.7.10 Road users within the AoI have a medium sensitivity This impact is expected to be short-term, reversible, regional, adverse, with low intensity, resulting in a low magnitude and **minor significance**. Although this impact would not require additional mitigation measures than the implementation of the traffic management plan (TMP), additional measures are presented in the next section. This impact is **not significant**.

### *Operation Impacts*

#### *Generation of local employment and increase in contribution to local economy*

- 21.7.11 There will be a beneficial impact on employment within the operation phase of development, through the creation of long-term employment opportunities. However, work opportunities during this stage are expected to be very limited.
- 21.7.12 Workers within the Direct AoI have medium sensitivity and would benefit the most from these opportunities. However, it is likely that the operation jobs will require skilled qualifications which are limited in the Direct AoI. Workers within the Indirect AoI and businesses within the AoI have low sensitivities. This impact is expected to be long-term, reversible, local for Direct AoI workers and regional for the abovementioned receptors, beneficial, with low intensity for the workforce and negligible intensity for businesses, resulting in low magnitude for workers and negligible magnitude for businesses. The pre-mitigation impact has **minor significance** for both workforces and **negligible significance** for businesses. Without enhancement measures, this impact is **not significant**.

#### *Restricted mobility options for public right of way*

- 21.7.13 Security fencing is expected to be placed around the solar panels and wind turbines on Site. Although PRoWs are expected to remain accessible through the operation of the Proposed Development, the presence of fencing may alter or deviate their existing

paths. Stakeholder engagement in the Aol has also reported that local bridleway-users could be concerned about the potential annoyance of wind turbines on horses.

- 21.7.14 Users of PROWs have a medium sensitivity. This impact is expected to be long term throughout the operation stage, reversible, local, adverse, with low intensity due to the previous change from the construction stage, resulting in low magnitude. However, given the long-term extent of this impact, it is expected to result in **moderate significance**. Without mitigation measures, this impact is **significant**.

*Increase in energy security*

- 21.7.15 The amount of generated energy is likely to exceed the energy demand of Convatec's energy demand, providing an opportunity to supply exported energy to third parties. Reportedly, some options include providing energy to the Deeside Factory and to the wider industrial consumers in the local area of Rhymney, with any surplus set to be exported to the local distribution system with a possibility of grid connection. While direct changes to energy rates for local communities are not expected, the availability of energy security could facilitate community-led initiatives or other local enterprises in Rhymney, while reducing local fossil fuel consumption. In addition, energy security could also result in job security for Convatec employees, linked to the economic stability provided by a secured energy source.

- 21.7.16 Businesses within the Aol have a low sensitivity and Local residents within the Direct Aol have a medium sensitivity. This impact is expected to be long term, reversible, local, beneficial, with low intensity for businesses but medium intensity for local residents, resulting in medium magnitude for both receptors. The impact is of **minor significance** to local businesses and **moderate significance** to local residents. For this impact to effectively remain as a moderate benefit to the local residents, a specific enhancement measure is presented in the next section. This impact is **not significant for businesses** and is a **significant impact for residents**.

*Change in sense of place*

- 21.7.17 The presence of the Proposed Development could result in a change in place-based attachment and a sense of place for users of local PROWs and local residents within the Direct Aol. Specific visual and landscape impacts of the Proposed Development are detailed in Chapter 7. The profile change from grazing land to a renewable industrial site could have an effect on local perception of the town of Rhymney, and

could change leisure time spent near the Site, including recreation in the local reservoir. This is a concern established from initial Stakeholder Engagement activities. In particular, the proximity of the adjacent cemetery could disrupt the family and relatives' visiting areas which overlook the Site.

- 21.7.18 Users of local PRoWs and local residents within the Direct AoI have medium sensitivity. This impact is expected to be long-term, reversible, local, adverse, with medium intensity for both receptors, resulting in medium magnitude and **moderate significance**. Without the implementation of specific mitigation measures (detailed in the next section) this is a **significant impact**.

### ***Decommissioning Impacts***

#### *Generation of local employment and increase in contribution to local economy*

- 21.7.19 There will be a beneficial (positive) impact on employment within the decommissioning phase of development, creating short-term employment opportunities, followed by a loss of jobs as the Proposed Development ends. The extent of this stage will be similar to the construction stage, approximately a year.
- 21.7.20 Similar to the construction and operation impacts, workers are likely to come from outside the AoI without specific enhancement measures, creating limited employment opportunities within the AoI. Workers within the Direct AoI have medium sensitivity, while workers in the Indirect AoI and businesses in the AoI have low sensitivities. This impact is expected to be short-term, reversible, local for Direct AoI workers, and regional for Indirect AoI workers and businesses, with medium intensity for the former and low intensity for the latter two receptors, resulting in low magnitude and **minor significance** for these receptors. Without enhancement measures, this impact is **not significant**.

#### *Restricted mobility options for public right of way*

- 21.7.21 Restricted access through PRoW may occur throughout decommissioning for the Health and Safety of local residents, this will block footpaths (PRoW) within the Site of the Proposed Development. Users of PRoWs have a medium sensitivity. This impact is expected to be short term similar to the construction stage, reversible, local, adverse, with medium intensity due to the manoeuvring required to transport the dismantled equipment, yet still resulting in low magnitude, and **minor significance**. Although

there is no need for additional mitigation measures, some recommended mitigations are presented below. This impact is **not significant**.

*Displacement of economic activity*

21.7.22 Similar to the construction stage, agricultural grazing of sheep will be temporarily displaced during this phase as the equipment is dismantled and transported outside of the Site. However, the rest of the Site will be available for grazing and no additional impacts are expected from the paused activity.

21.7.23 The Site landowner has a low sensitivity. This impact is expected to be short-term, reversible, local, adverse, with low intensity, resulting in low magnitude and **minor significance**. This impact is therefore **not significant**.

*Increased commuting times*

21.7.24 Throughout decommissioning, the dismantling of equipment and mobilisation of personnel is expected to increase traffic in a similar manner as during the construction stage. Increased travel times and potential pauses in road usage are expected to avoid road traffic accidents.

21.7.25 Road users within the AoI have a medium sensitivity This impact is expected to be short-term, reversible, regional, adverse, with low intensity, resulting in a low magnitude and **minor significance**. This impact would not require additional mitigation measures beyond the implementation of the traffic management plan (TMP). However, some additional measures are presented in combination with additional stakeholder engagement activities. This impact is **not significant**.

*Displacement of economic activity*

21.7.26 Agricultural grazing is to be temporarily removed during this phase. However, likely financial gain of the Proposed Development is likely to exceed loss from the pause of this activity.

## 21.8 MITIGATION MEASURES

*Mitigation and Enhancement*

21.8.1 The following measures aim to reduce the magnitude of adverse impacts, and enhance the magnitude of beneficial impacts, where possible. The following measures are linked to the significant impacts assessed above.

*Measures to increase local employment benefits*

- 21.8.2 The generation of local employment may not directly benefit the local workforce within the Direct Aol without specific intentional efforts to keep benefits as local as possible. The promotion of local employment and supply chain provision will create more equitable opportunities for the most deprived areas in the Direct Aol. This can be achieved through a **Local Employment Plan (LEP)**.
- 21.8.3 The objective of the LEP is to guide the recruitment approach and procurement process to maximise local employment. Considering the skill needs of the Proposed Development, the LEP would propose upskilling training for the local workforce to attain the skills needed for solar / wind farm construction, maintenance and operation, as needed, with specific training programmes. The LEP will also help with the demobilisation of workforce in both the construction and decommissioning stages so that workers can transition to finding new employment more easily with the obtained transferable skills.
- 21.8.4 The LEP should include an analysis of local capacity skill gap and training requirements. It should review the potential collaboration for skill development programmes with local colleges and universities, consider apprenticeships as transitional retraining of local workers in the area, and clarify the measures to make sure that supply chain procurement of services and products is localised and upskilled based on Convatec's needs.
- 21.8.5 The LEP would address the priorities of the Well-being of Future Generations Act (2015) focusing on the increased economic activity with learning and training opportunities, and more equitable distribution of economic wealth. The LEP would also address the Future Wales 2040 concerns regarding tackling socio-economic inequalities. Specifically, the CCB LDP identified below average Gross Value Added (GVA), low level of skills and disproportionate variation in unemployment rates and pay in Rhymney. As a recipient of redevelopment support, Rhymney has a focus to develop technical skills, upskilling and providing links between local business and education facilities. This will be specifically important for the area of Twyn Carno 1, located in the Direct Aol, and the Tredegar Central and West 2 areas located within the Indirect Aol, as these areas present deep-rooted levels of deprivation in Caerphilly.



21.8.6 In addition, a **Community Development Plan (CPD)** or, developing a **Social Value Strategy** for the AoI would enhance the retainment of local benefits. A community fund could be targeted at key areas identified through stakeholder engagement with Convatec and local communities. For instance, preserving Welsh culture and language by supporting the local Welsh schools in Rhymney in alignment with their specific needs, increasing accessibility to education services, upskilling the economically active population through the LEP, and/or proposing energy saving strategies and renewable energy micro-projects for local schools.

*Measures to increase alternative mobility options*

21.8.7 Whilst disruptions to PRoWs are prevented to the extent possible in the Proposed Development design, the potential restriction throughout operation will require additional measures to maintain access and provide diverse mobility options for the users of local PRoWs. These measures are not typically included in the **Traffic Management Plan (TMP)** but can be added as an extension to PRoWs and the help of the **Stakeholder Engagement Plan (SEP)**, further detailed below).

21.8.8 The TMP should prioritise access to PRoWs whenever possible, in agreement with the landowner and as long as safe and secure passage is feasible. In addition, alternative routes can be decided through stakeholder engagement to identify different mobility options for users of local PRoWs. Within the construction and decommissioning period, there should be a member of the team diverting users of PRoW to these alternate routes and making sure that users of local PRoWS are not exposed to community H&S risks (see Chapter 22 on Health). Diversions of PRoWs will also be advertised to be public in advance of construction starting.

21.8.9 In addition, the consultee response from Planning and Environment Decisions Wales (PEDW) has provided the following suggested mitigation measures regarding PRoWs:

- The site access and any public rights of way crossed by vehicles shall be maintained in a good state of repair and always kept clean and free of mud and other debris;
- Provision shall be made for the installation and maintenance of a drainage system to ensure that no slurry or water from the permitted area flows onto the public rights of way. Prior to the commencement of development, the definitive line of the public right of way shall be marked out on site;



- No fencing shall be erected on or within 1 metre of the public right of way as shown on plan ref; and
- No excavation or tipping of surface material or temporary storage of soils or other materials shall take place closer than 2 metres to the public right of way as shown on plan ref.

21.8.10 The Construction Environmental Management Plan (CEMP) is designed to ensure the safety of local road and PRow users. However, the identification of alternative routes for emergency services, and healthcare facilities is also important in the management of traffic. Disruptions to routes should have redirected alternatives to make sure access to these facilities is maintained.

*Measures to make energy security more equitable*

21.8.11 Based on the Proposed Development energy production, it is expected that Convatec's energy security will be attained and excess electricity could be used by other local industrial businesses or community groups and associations. Convatec expects that a community fund of approximately £75,000 per year would be available to support the community development in Rhymney. In order to make this benefit be more equitable, a **Community Development Plan (CDP)** should be developed.

21.8.12 The CDP will be informed by stakeholder engagement activities (see more details below). Discussions should be held with the local authorities and community on how the potential excess electricity generated from the Proposed Development could support local development, in line with Convatec's priorities. The priorities could follow themes related to health, education, energy, among others.

21.8.13 As an example, the CDP can align to the areas of development mentioned in the CCB LDP, where education is key and one of its aims is to reduce the number of schools in poor conditions, which include the following three proposals:

- New build school to replace the existing Upper Rhymney Primary School;
- Relocation of Brynawel Primary School pupils to Upper Rhymney Primary and Idris Davies Schools; and
- Refurbishment of a school site to relocate Ysgol y Lawnt.

21.8.14 Based on stakeholder engagement records, these local proposals have wide acceptance and support to create a new school building with shares facilities to

accommodate the Ysgol y Lawnt and the Upper Rhymney Primary School along other areas for wider community use.

*Measures to accompany and ease the change in sense of place*

- 21.8.15 Users of local PRowS and local residents in the Direct AoI will experience a change in the sense of place throughout the operation of the Proposed Development. The change in profile from a grazing area to a renewable energy industry site will have an effect on people's place-based attachment. In order to manage expectations towards this change, provide updated and clear information, and integrate comments from public participation, a **Stakeholder Engagement Plan (SEP)** should be developed.
- 21.8.16 The SEP will continue the work developed by the Grasshopper consultancy group, who commenced with early, voluntary stakeholder engagement within the Direct and Indirect AoI. The SEP can guide future engagement, disclosure activities and provide participatory means to create an inclusive approach to identifying and addressing stakeholder feedback, questions and potential concerns.
- 21.8.17 Based on Grasshopper's experience in the area, the SEP should include communication strategies through local newsletters in the AoI, use adverts in local press prior to consultation (e.g., Rhymney Valley Express), frame future engagement with communities and businesses in the AoI, propose collaboration with local organisations to undertake exhibitions of relevance for the communities, and develop physical and digital disclosure information.
- 21.8.18 The SEP should focus primarily on residents within the Direct AoI, including the local farmhouses north of the Site, as well as users of local PRowS, who will experience the change in sense of place in the upper part of Rhymney. For example, while landscape and visual mitigation measures are proposed for local sensitive areas such as the cemetery in the east, the SEP can help announce in advance any changes and provide support for residents to help mitigate the change in sense of place. The SEP can collect feedback and proposals by residents to continue mitigating this impact.
- 21.8.19 The SEP could include a Grievance Mechanism, consisting of a continuous means to receive, register, address and reply to feedback from local stakeholders.

***Vulnerable Groups***

- 21.8.20 Vulnerable groups include marginalized and particularly deprived individuals lacking resources to adapt to change, including people with disabilities and long-term health

conditions, people with mobility restrictions, minority groups, elderly adults, children and single-parent households.

21.8.21 Vulnerable groups may be disproportionately impacted by adverse effects, may be limited to benefit from the opportunities derived from the Proposed Development. The following measures should be considered for vulnerable groups:

- Identifying vulnerable individuals and groups within stakeholder engagement activities and implementation of the SEP, making sure that their priorities of development are taken into consideration in other plans such as the CDP and LEP;
- Providing specific up-skilling and training to vulnerable groups, in a culturally appropriate way, in the language of their choosing, with tailored accessibility alternatives, to enhance the benefits from employment opportunities; and
- Considering vulnerable groups as a priority when developing the proposed CDP.

## 21.9 POST-MITIGATION ASSESSMENT

21.9.1 Considering the mitigation and enhancement measure described above, the magnitude of certain impacts may be changed in terms of the duration, spatial extent and / or intensity. The measures aim to reduce adverse magnitude and increase beneficial magnitude of specific impacts. Only the following significant adverse impacts and non-significant beneficial impacts are evaluated post-mitigation:

*Generation of local employment and increase in contribution to local economy*

21.9.2 Through construction and decommissioning stages, once the LEP and SEP have been implemented, it is expected that there will be an increase in beneficial magnitude of the impact from low to medium, which will result in a **moderate significance**. With enhancement measures, this beneficial impact is **significant**.

*Restricted mobility options for PRoWs*

21.9.3 Limited access through PRoW can be reduced throughout operation, through the TMP and SEP previously mentioned. With the implementation of these plans, it is expected that the impact magnitude will decrease, resulting in an impact of **minor significance**. With mitigation measures, this adverse impact is **not significant**.

*Increase in energy security*

21.9.4 Throughout the operation stage, once the SEP and CDP have been implemented, it is expected that there will be an increase in the beneficial magnitude of the impact,

which will result in a **moderate significance**. With enhancement measures, this beneficial impact is **significant**.

*Change in sense of place*

21.9.5 Once the SEP is implemented, it is expected to reduce the impact magnitude from medium to low, on both local residents within the Direct AoI and users of PRow, in regard to their change in sense of place. This will result in a **minor significance**, suggesting with mitigation measures, this impact is **not significant**.

***Summary of Impacts***

21.9.6 A summary of the impacts of the Proposed Development on socio-economic receptors, including the pre-mitigation and post-mitigation assessment, can be seen in **Table 21.6**.

**Table 21.6: A summary of the impacts of the Proposed Development on socio-economic receptors**

Impact	Project Phase	Receptors	Pre-mitigation assessment								Post-mitigation assessment		
			Receptor sensitivity	Type	Duration	Reversibility	Spatial Extent	Intensity	Impact Magnitude	Impact Significance	Measures applied	Residual magnitude	Residual Significance
Generation of local employment and increase in contribution to local economy	Construction	Local Workforce within the Direct Aol	Medium	Beneficial	Short term	Reversible	Local	Medium	Low	Minor	LEP, SEP	Medium	Moderate
	Construction	Local Workforce within the Indirect Aol	Low	Beneficial	Short term	Reversible	Regional	Low	Low	Minor		Low	Minor
	Construction	Businesses within the Aol	Low	Beneficial	Short term	Reversible	Regional	Low	Low	Minor		Low	Minor
	Operation	Local Workforce within the Direct Aol	Medium	Beneficial	Long term	Reversible	Local	Medium	Low	Minor		Low	Minor
	Operation	Local Workforce within the Indirect Aol	Low	Beneficial	Long term	Reversible	Regional	Low	Low	Minor		Low	Minor
	Operation	Businesses within the Aol	Low	Beneficial	Long term	Reversible	Regional	Low	Negligible	Negligible		Negligible	Negligible
	Decommissioning	Local Workforce within the Direct Aol	Medium	Beneficial	Short term	Reversible	Local	Medium	Low	Minor	LEP, SEP	Medium	Moderate
	Decommissioning	Local Workforce within the Indirect Aol	Low	Beneficial	Short term	Reversible	Regional	Low	Low	Minor		Low	Minor
	Decommissioning	Businesses within the Aol	Low	Beneficial	Short term	Reversible	Regional	Low	Low	Minor		Low	Minor
Restricted mobility options for	Construction	Users of local PRoW	Medium	Adverse	Short term	Reversible	Local	Medium	Low	Minor		Low	Minor

Public Right of Way	Operation	Users of local PRoW	Medium	Adverse	Long term	Reversible	Local	Low	Low	Moderate	TMP, SEP	Low	Minor
	Decommissioning	Users of local PRoW	Medium	Adverse	Short term	Reversible	Local	Medium	Low	Minor		Low	Minor
Displacement of economic activity	Construction	Landowner	Low	Adverse	Short term	Reversible	Local	Low	Low	Minor		Low	Minor
	Decommissioning	Landowner	Low	Adverse	Short term	Reversible	Local	Low	Low	Minor		Low	Minor
Increased commuting times	Construction	Road users within the Aol	Medium	Adverse	Short term	Reversible	Regional	Low	Low	Minor		Low	Minor
	Decommissioning	Road users within the Aol	Medium	Adverse	Short term	Reversible	Regional	Low	Low	Minor		Low	Minor
Increase in energy security	Operation	Businesses within the Aol	Low	Beneficial	Long term	Reversible	Local	Low	Medium	Minor		Medium	Minor
	Operation	Local residents with the Direct Aol	Medium	Beneficial	Long term	Reversible	Local	Medium	Medium	Moderate	SEP, CDP	Medium	Moderate
Change in sense of place	Operation	Users of local PRoW	Medium	Adverse	Long term	Reversible	Local	Medium	Medium	Moderate	SEP	Low	Minor
	Operation	Local residents with the Direct Aol	Medium	Adverse	Long term	Reversible	Local	Medium	Medium	Moderate	SEP	Low	Minor

## 21.10 CUMULATIVE IMPACTS

- 21.10.1 The impacts listed above may be exacerbated by the number of wind and solar farms in the area. Cumulative impacts could have temporal, spatial and synergic effects due to workers from different projects placing a greater strain on existing services, aggregated traffic and accumulated changes to place-based attachment in the area.
- 21.10.2 There are several existing wind turbines within the area, the nearest being three 100m tip high wind turbines at Pen Bryn Oer 1.6km to the east, a single 77m tip high turbine at Pengarnddu Industrial Estate 2.1km to the north-west, and a single 74m tip high wind turbine at Tafarnaubach Industrial Estate, Tredegar 2.4km to the north-east. There is one existing solar farm within the area, approximately 2.4km to the south-west. See Chapter 2 EIA Process and Chapter 24 Cumulative Effects for more information on operational wind and solar farms in the area, as well as scoping, consented and in planning developments.

## 21.11 SUMMARY

- 21.11.1 This chapter presented the expected social impacts from the Proposed Development on the surrounding area, both beneficial and adverse.
- 21.11.2 In order to assess the impacts, this chapter described the relevant socio-economic data as the baseline conditions within two Areas of Influence (AoI): Direct and Indirect. Based on the socio-economic baseline, a list of “social receptors” (i.e., people) was identified.
- 21.11.3 Baseline data showed that Rhymney and the surrounding areas of the Caerphilly County Borough are comprised of some of the most deprived areas of Wales, with limited access to services and mobility alternatives.
- 21.11.4 Expected impacts from pathway activities included: the generation of local employment and increase in contribution to local economy, restricted mobility options for Public Right of Way (PRoWs), displacement of economic activity, increased commuting times, increase in energy security, and change in sense of place.
- 21.11.5 This assessment used a two-staged impact assessment methodology, with a pre-mitigation assessment considering the implementation of expected industry standard practices and a post-mitigation assessment with additional mitigation and enhancement measures, resulting in a residual impact. Impact significance is based on

the correlation between receptor sensitivity and impact magnitude, with specific criteria for socio-economic aspects.

- 21.11.6 The assessment identified three minor beneficial impacts which, following enhancement measures, resulted in **three moderate beneficial impacts** (significant). Similarly, three moderate adverse impacts were identified in the pre-mitigation assessment. Following the implementation of mitigation measures, they resulted in three minor adverse impacts (not significant).
- 21.11.7 Suggested mitigation and enhancement measures, include developing a Local Employment Plan (LEP) to retain development benefits as local as possible, a Community Development Plan (CDP) to guide the expected community fund based on community priorities, a Stakeholder Engagement Plan (SEP) to build and maintain inclusive means of participation and feedback collection, as well as specific additions to the Traffic Management Plan (TMP) concerning the provision of alternative routes in case PRowS are affected.



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