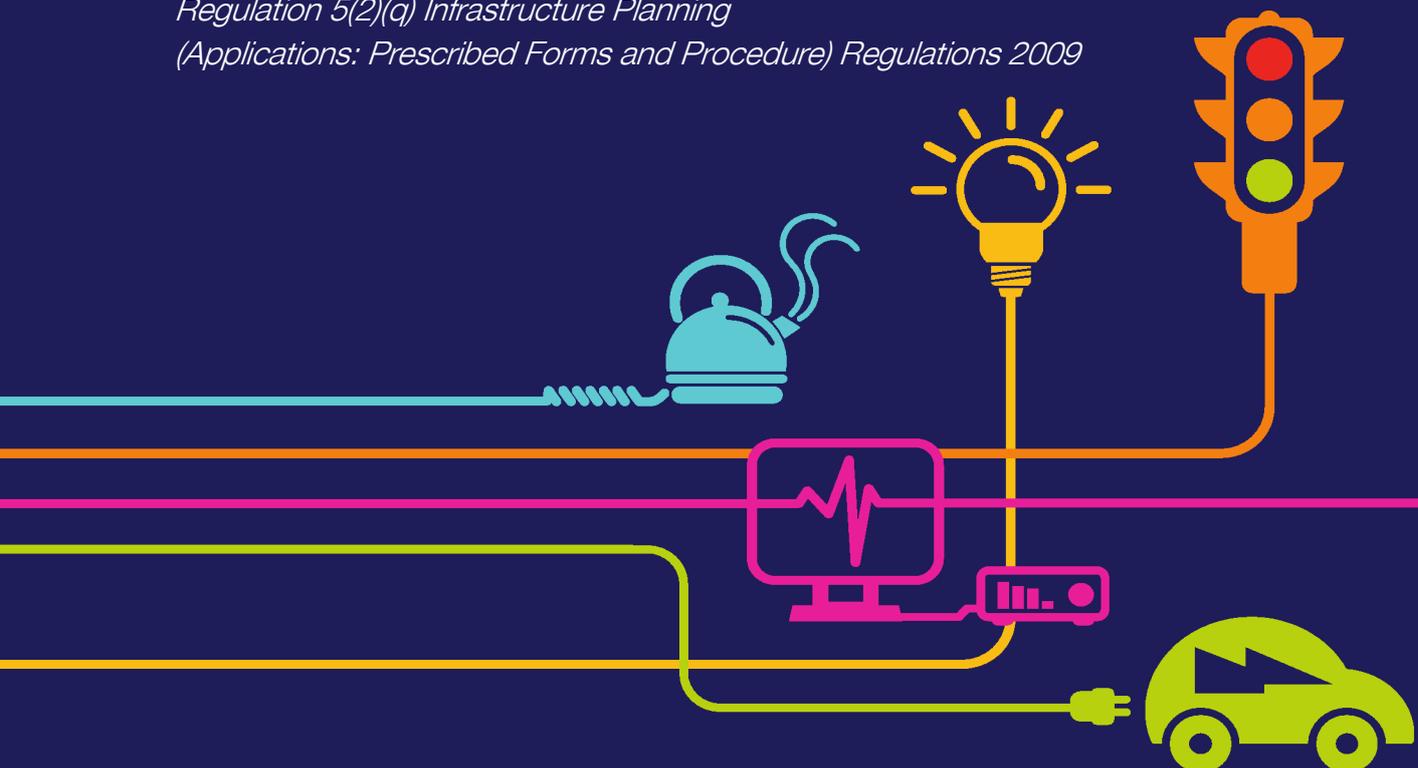


Well-being Report

National Grid (North Wales Connection Project)

*Regulation 5(2)(a) Infrastructure Planning
(Applications: Prescribed Forms and Procedure) Regulations 2009*



national**grid**

North Wales Connection Project

Volume 5

Document 5.27 Well-being Report

National Grid
National Grid House
Warwick Technology Park
Gallows Hill
Warwick
CV34 6DA

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| Author | Heidi Curran | | |
| Approved by | Emily King | | |
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1 Introduction

1.1 INTRODUCTION

1.1.1 This Well-being Report (WBR) has been produced for National Grid to accompany the Development Consent Order (DCO) application for a proposed North Wales Grid Connection from the Wylfa Newydd Power Station on Anglesey to Pentir, Gwynedd (the Proposed Development).

1.1.2 The Proposed Development includes the following principal components:

- Modifications to the existing substation at Wylfa;
- Sections of new 400 kV overhead line (OHL) between Wylfa substation and Braint Tunnel Head House (THH) and Cable Sealing End Compound (CSEC) on Anglesey including modifications to parts of the existing 400 kV OHL between Wylfa and Pentir;
- Braint THH and CSEC on Anglesey;
- Tunnel between Braint and Tŷ Fodol THHs;
- Tŷ Fodol THH and CESC in Gwynedd;
- New section of 400 kV OHL between Tŷ Fodol THH and CSEC and Pentir Substation;
- Extension to the existing substation at Pentir; and
- Temporary construction compounds, access tracks, construction working areas and third party works that are required to construct the infrastructure listed above.

1.1.3 Further details of the Proposed Development can be found in Environmental Statement (ES) Chapter 3 Description of the Proposed Development (**Document 5.3**).

1.1.4 This document is supported by the following appendices:

- Appendix 27.1 Notes of the Scoping Meeting (**Document 5.27.2.1**);

- Appendix 27.2 Wales Health Impact Assessment Support Unit (WHIASU) Report of the Participatory Workshop (**Document 5.27.2.2**); and
 - Appendix 27.3 List of Participatory Workshop Invitees (**Document 5.27.2.3**).
- 1.1.5 The Well-being of Future Generations (Wales) Act 2015 (hereafter referred to as 'WFGA 2015') (Ref 27.1) places a statutory duty on a number of specified public bodies and public sector boards to ensure that well-being becomes a core focus for all.
- 1.1.6 As a private company, National Grid does not have a statutory duty to undertake such an assessment; however, following discussions with Isle of Anglesey County Council (IACC) and the WHIASU, National Grid has voluntarily agreed to provide information regarding the interaction between the Proposed Development and the goals set out in the act.
- 1.1.7 The factors that contribute to well-being are inherently taken into account by National Grid's statutory requirements and adopted processes and guidelines for developing and designing projects, for example the Holford Rules (Ref 27.3). Well-being is considered within the ES (Volume 5); and in other documents prepared for the Proposed Development, such as the Welsh Language Impact Assessment (WLIA) (**Document 5.26**) and the Electric and Magnetic Fields (EMF) Report (**Document 5.25**).
- 1.1.8 A participatory workshop on Well-being and the Proposed Project¹ was held in October 2016. The findings of the workshop are provided in Section 2 of this report.
- 1.1.9 The WBR does not present any primary assessment; rather, it presents the findings and conclusions from the ES and other DCO documents in relation to well-being (See Section 4 of this report). In this context, the different aspects of well-being are defined by using the potential effects identified by stakeholders at the workshop and the Welsh well-being goals. An overall summary of the potential effect of the Proposed Development against the well-being goals is also provided.

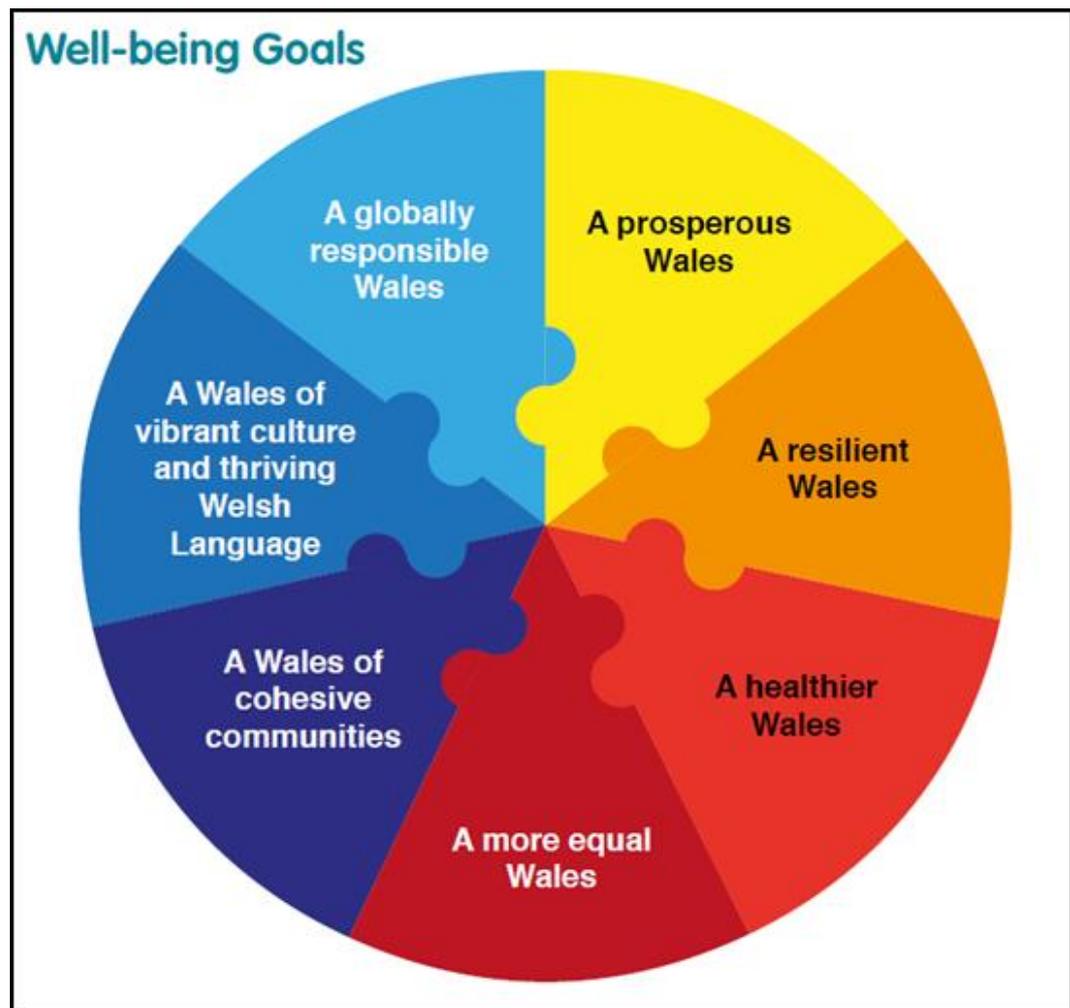
¹ The North Wales Connection Project was referred to as the Proposed Project at the Stage Three Consultation.

1.2 WELL-BEING LEGISLATION AND POLICY

Well-being of Future Generations Act 2015

Well-being is not explicitly defined in the WFGA 2015; instead it sets out seven 'well-being goals' (the goals) and places a duty on public bodies to take specific steps to maximise their contribution to these goals. The goals are described in Part 4, Table 1 of the Act and are illustrated below in Image 27.1.

Image 27.1 Well-being Goals, WFGA 2015



Well-being Act Objectives

1.2.1 The twelve well-being objectives are set out in the Welsh Government's 'Wellbeing Statement 2017' (Ref 27.15), as follows:

1. Support people and businesses to drive prosperity;
2. Tackle regional inequality and promote fair work;

3. Drive sustainable growth and combat climate change;
4. Deliver quality health and care services fit for the future;
5. Promote good health and well-being for everyone;
6. Build healthier communities and better environments;
7. Support young people to make the most of their potential;
8. Build ambition and encourage learning for life;
9. Equip everyone with the right skills for a changing world;
10. Build resilient communities, culture, and language;
11. Deliver modern and connected infrastructure; and
12. Promote and protect Wales' place in the world.

Duty on Public Bodies

- 1.2.2 As set out above, WFGA 2015 places a statutory duty on a number of specified public bodies and public sector boards to ensure that well-being becomes a core focus for all.
- 1.2.3 Statutory guidance on how the WFGA 2015 will be implemented is provided in Shared Purpose: Shared Future: Statutory Guidance - SPSF1: Core Guidance (Ref 27.16). It identifies 'five ways of working' in relation to sustainable development, as follows:
 - Looking to the long term so that we do not compromise the ability of future generations to meet their own needs;
 - Taking an integrated approach so that public bodies look at all the well-being goals in deciding on their well-being objectives;
 - Involving a diversity of the population in the decisions that affect them;
 - Working with others in a collaborative way to find shared sustainable solutions; and
 - Understanding the root causes of issues to prevent them from occurring.
- 1.2.4 Paragraph 8 of SPSF2: Individual Role (Ref 27.17), the Statutory Guidance for Public Bodies, states:

“Only when a public body can demonstrate it has taken into account the sustainable development principle in the setting, taking steps and meeting of its well-being objectives will it be compliant with the Act.”

Public Services Boards

- 1.2.5 In addition to setting out requirements for existing public bodies under the WFGA 2015, the Act has established a Public Services Board for every local authority area in Wales to ensure that public bodies work together to create a better future for the people of Wales. As part of this, the Public Services Boards must assess the well-being of their areas and create a Well-being Plan with the aim of improving communities.

Draft Well-being Plan

- 1.2.6 In May 2017, the Public Services Boards of Gwynedd and Isle of Anglesey published two assessments of local well-being (Ref 27.13 and Ref 27.14, respectively). The Gwynedd and Anglesey Public Services Boards went on to form a joint board to deliver their objectives.

- 1.2.7 Having considered the main messages of these assessments and the views of local people, the joint Board published a Draft Well-being Plan (Ref 27.2), which aims to achieve the following objectives:

- Communities which thrive and are prosperous in the long term; and
- Residents who are healthy and independent with a good quality of life.

Isle of Anglesey and Gwynedd

- 1.2.8 The IACC and Gwynedd Council are designated public bodies and therefore must comply with the Act and its requirements. To assist with its compliance with the Act, IACC initiated contact with National Grid regarding the Proposed Development and well-being and proposed that an assessment be conducted to ascertain the potential short-term and long-term well-being impacts associated with the Proposed Development. As has already been indicated, National Grid does not have a statutory duty to undertake such an assessment under the WFGA 2015, but following discussions with IACC and other key stakeholders, voluntarily agreed to consider well-being as part of its application for a DCO for the Proposed Development.

EIA Regulations and Health

- 1.2.9 Consideration was given to whether or not National Grid was required to undertake an assessment of effects on health under the Infrastructure Planning (Environmental Impact Assessment) Regulations. This question has arisen as a result of new EIA regulations coming into force in May 2017

(Ref 27.18) which require effects on health to be assessed and described within an Environmental Statement.

- 1.2.10 This new requirement does not apply to the Proposed Development, as it falls under the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (Ref 27.19). This is because a Screening Request was submitted prior to 16 May 2017 when the new Regulations came into effect and the transitional arrangements confirm that in such cases the new Regulations do not apply. The 2009 regulations specify in Schedule 4 that the EIA must consider effects on populations (which is provided in ES Chapter 17 Socio Economics (**Document 5.17**)); there is no requirement to describe effects on health.

1.3 IACC SCREENING AND SCOPING FOR WELL-BEING

- 1.3.1 As is set out above, statutory guidance on how to achieve the well-being goals has been produced for public bodies; it sets out how those bodies should build the goals into their organisations, both in terms of their own effects and how their work influences others. As there is no guidance for third parties such as developers in this regard, National Grid has worked with IACC and the WHIASU to develop a bespoke approach.
- 1.3.2 The IACC environmental protection operations manager undertook a screening assessment in relation to the Proposed Development in August 2015. Following this, discussions took place between IACC and National Grid on the requirement, or otherwise, for further assessment. In particular, National Grid met with IACC to discuss the need for further assessment work in March 2016. At this meeting, it was agreed that a further meeting would take place involving WHIASU during which the approach to any further work could be discussed further. IACC would also invite Gwynedd Council to this meeting.
- 1.3.3 A meeting between National Grid, IACC and WHIASU took place in June 2016; Gwynedd Council were invited, however did not attend. At this meeting, the broad scope of the assessment work was discussed. It was agreed that National Grid were not required to undertake a Health Impact Assessment (HIA) but that further assessment work would be undertaken on a voluntary basis. This work would include a participatory Well-being Workshop that could be facilitated by WHIASU, who explained its proposed approach to the workshop (a 'Rapid Health and Well-being Assessment') and the preparation of a report as a factual record of the workshop.
- 1.3.4 In July 2016, a scoping meeting was held to discuss the scope of the well-being work. This was attended by representatives from the following organisations who informed the process:

- IACC;
 - WHIASU, Public Health Wales;
 - National Grid; and
 - Arup (Representing IACC and Gwynedd Council).
- 1.3.5 The notes of the meeting are included as Appendix 27.1 (**Document 5.27.2.1**).
- 1.3.6 The agreed approach to National Grid’s well-being work combined the well-being goals for Wales as set out in the Act with WHIASU’s Practical Guide to Health Impact Assessment (‘the guide’).
- 1.3.7 In relation to the workshop, the following items were agreed:
- The workshop would take place in October 2016, soon after the Stage 3 Consultation commencement date of 5 October 2016 so that the findings could form part of the wider consultation exercise and may help to inform and influence the proposals.
 - The workshop would be based upon a well-being assessment tool which would systematically assess the proposal against the wider determinants of health.
 - The workshop would include representatives of stakeholders, including vulnerable groups, identified from guidance.
 - The workshop would be independently facilitated by WHIASU.
 - Following the workshop, WHIASU would issue a report as a record of the potential well-being impacts identified during the workshop, which would be used by National Grid to aid completion of the WBR. Other roles and responsibilities in relation to the workshop were identified for each of the attendees.
- 1.3.8 The report of the workshop is provided in Appendix 27.2 (**Document 5.27.2.2**) and a summary of the workshop findings is provided in section 2.

2 Participatory Workshop

2.1 INTRODUCTION

- 2.1.1 The participatory workshop was held at Carreg Bran Hotel, Llanfairpwll, Anglesey on 5 October 2016. The workshop took place at the beginning of the Stage 3 Consultation period for the Proposed Project².
- 2.1.2 The report of the workshop was produced by WHIASU in February 2017 and is appended (Appendix 27.2 (**Document 5.27.2.2**)). Summary extracts from the report are presented below.
- 2.1.3 The outputs of the workshop have been used to inform the findings presented in section 4 of this report. Specifically, the issues identified in the workshop have been matched to assessments in the ES, and to other documents produced in respect of the Proposed Project, and the findings from these documents are presented in section 4.

2.2 PARTICIPATORY HEALTH AND WELL-BEING WORKSHOP

- 2.2.1 The workshop provided a forum for stakeholder discussions using a recognised and systematic process, facilitated by WHIASU. The aim of the workshop was primarily to gather professional and community stakeholder knowledge and views about the potential effects of the Proposed Project and for National Grid to answer questions on the Proposed Project.
- 2.2.2 As the workshop was held during the Stage 3 Consultation, detailed environmental assessment was still being carried out. As such, potential effects were identified based on the WHIASU's Well-being Assessment Tool, the attendees' understanding of the national policy context, the local circumstances and their experience gained from working and living in the area, and previous stages of non-statutory consultation. Information from the Stage 3 Consultation was available as a resource and members of the National Grid project team were available to provide additional information about construction practice, operation and maintenance of the Proposed Project.
- 2.2.3 The workshop invitees and participants included a wide range of representatives, identified so as to cover the full range of well-being goals

² Proposed Project is used instead of Proposed Development in this section as this was how the Proposed Development was referenced during Stage 3 consultation.

from the Act (39 attendees in total). The list of invitees was agreed via the workshop scoping exercise. A number of key stakeholders from both Anglesey and Gwynedd participated in the discussion. A full list of attendees is provided in Appendix 27.3 (**Document 5.27.2.3**).

- 2.2.4 A summary of the workshop, extracted from the WHIASU report, is provided below.

Workshop Report Summary

- 2.2.5 There were two breakout groups at the workshop: one conducted in Welsh and one in English.

Vulnerable Groups

- 2.2.6 In producing their report, WHIASU undertook a thematic analysis of the participants' comments from the workshop and several key (vulnerable) population groups (referred to in the Act as '*vulnerable or otherwise disadvantaged persons*' and by the WHIASU Guide as vulnerable groups), major themes and potential effects were identified.

- 2.2.7 Stakeholders suggested that, whilst the Proposed Project had the potential to affect a wide range of communities, groups and individuals in the general population, both on Anglesey and in Gwynedd and further afield, there were a number of more vulnerable groups that could be specifically affected locally. Vulnerable groups and the potential effects were identified using the WHIASU Guidance. The following vulnerable groups and initial thoughts on potential effects were identified in the workshop (direct quotes from the WHIASU Report of the workshop – see Appendix 27.1 (**Document 5.27.1**)):

- 'Geographical groups: the population of Anglesey is dispersed. There are some main settlements, whilst many of the residents are in small hamlets or isolated rural locations.
- Communities First area of Llangefni: the proposed pylon route passing adjacent and nearby to this community (Ref 27.4).
- Older people: Anglesey has a significant older population some of whom may be living alone in small rural isolated hamlets (which can be related to social isolation). Therefore, there is potential for a disproportionate impact on the older population, caused by uncertainty around the disruption during construction e.g. the road network, or by a lack of caring support staff who may be drawn to higher paying employment provided by the National Grid project or the Wylfa Newydd development.

- Farmers/landowners: this in relation to the criteria of using the less populated geographic areas of Anglesey to situate the development. Tenants could also be affected.
- Carers: this was discussed in the context of competing pressures to employ low wage earners against the potential opportunities for higher wages within the planned developments such as the proposed project and the Wylfa Newydd.
- Unemployed/low income households: The context for this could be the pressure on low cost accommodation from a cumulative increase in workforce(s) coming to the Island due to both Wylfa Newydd and the National Grid project. It was considered that there is potential for accommodation costs to rise and therefore decrease the availability of affordable accommodation for particular groups of residents.
- Tourism operators: There could be an impact on alternative accommodation for incoming workers. It was felt that the Island economy relies heavily on the tourism industry and there is the potential that visitors may prefer to stay in accommodation based on the mainland due to pressures on tourist accommodation on the Island. This would be more noticeable during the construction phase and could lead to future decreased income for a range of operators.
- Children: more at risk from traffic related incidents. Additionally, the construction period is a long time relative to the life span of a child – 3 years in a child’s development is significant and relative when compared to an adult’s life span.
- Sex workers: This was discussed in relation to human trafficking. There will be a dramatic transition for the islands demographics from an older population to one which contains a higher proportion of young men (cumulative between Wylfa Newydd and the National Grid project). National Grid will have less construction workers (between 200-400 at peak construction periods) compared to the potential of approximately 11,000 for Wylfa Newydd.’

2.2.8 In addition to the above groups, the following groups of interest were identified:

- ‘Population of UK: in terms of overall benefit due to increased/secure energy capacity.
- Island Population: general concern was raised regarding the effect on the Island population from the increase in incoming young people

(potentially predominantly young men due to the nature of the Proposed Development). This was raised in relation to the potential increased drinking at weekends.

- Construction workers: away from home and family for long periods.’

Potential Well-being Impacts

2.2.9 The report then goes on to describe how, after agreement on the above groups, the participants then worked systematically through WHIASU wider social determinants³ of health. The resultant ‘well-being determinants’ were then linked to well-being goals from the Act and used to discuss the Proposed Project for potential well-being impacts.

2.2.10 The key messages and priority areas identified in the workshop are detailed below (direct quotes from the report):

- *‘The impact of the connection and the implications for the landscape of Anglesey and its communities both in the short term and the long term future could be significant. The impact of the construction and operation of the connection development itself may be significantly smaller than the proposed Wylfa Newydd Nuclear Power Station development but when considered cumulatively with Wylfa Newydd’s construction phase it could have a huge cumulative impact – positive and unintended and/or detrimental. It is important to consider Wylfa Newydd when discussing the National Grid development and the participants called for closer working and co-ordination with Horizon Nuclear Power (the development company for Wylfa Newydd) to ensure that impacts are minimised – particularly during the construction phases.*
- *There is potential for an increased pressure on the provision of services, infrastructure and facilities in Anglesey. Participants stated that the potential impacts are likely to potentially fall mainly on health and social services, housing and tourism sectors. There is also potential for impacts on a number of communities across the Island and implications for the Welsh language and Welsh culture was a major concern. There could be an impact on transport routes, connections and travel both on Anglesey and regionally across north Wales.*
- *The issue of Electro Magnetic Fields was raised and the perception of risks of these and other potential associated well-being impacts needs to be addressed.*

³ Determinants: factors which could result in adverse or beneficial effects on well-being.

- *Need to engage with young people on the island and gain their perspectives – as this could affect them both in the short and the longer term.*
- *It was noted by some of the participants that the information available was not detailed enough. This was raised in respect of the workforce profile and the need for additional planning for the impacts on housing, transport and health services was called for – particularly when considered cumulatively with Wylfa Newydd.'*

Suggested Mitigation Measures

2.2.11 Mitigation measures were suggested by participants in the Well-being Workshop; these have been considered in section 4 of this report and are detailed below (direct quotes from workshop report).

- *'There is a need for transparency throughout the decision making process and the implementation of the decision. There should be advance warnings on specific actions with clear and timely information. There needs to be ongoing community focused discussions once construction starts within individual settlements using local community venues to have conversations about when and what actions will occur, how and where.*
- *Several participants wished to explicitly state that undersea or underground routeing is their preferred option. They wish to understand how their perspectives have been considered within the decision-making process and how they have contributed to the conclusions drawn as part of the overall evidence.*
- *There could be many unforeseen consequences from the options proposed and these could have major implications for the Island and its language and culture. It needs to be recognised that there are complex links with other developments, services and the associated effects on them i.e. from the Wylfa Newydd development. There is a need for more joint working, planning and collaboration between National Grid and Horizon Nuclear Power to address any negative consequences and mitigate for these. This is particularly true in respect of overlapping construction phases.*
- *In respect of workforce issues - National Grid was asked to look further into the potential to influence and include certain points around workers within code of conduct in contracts including facilitating local job/apprentice opportunities.*

- *National Grid was asked to collate evidence in relation to its workforce profile. This will provide some insight into the potential demographics and behaviour in respect of subcontractors going home at weekends (or not). This can inform any planning considerations in terms of accommodation and the use of local services such as health etc.*
- *In relation to transport impact, National Grid will continue to meet with Local Authority Highways Officers. An assessment of transport routes within given geographic boundaries is to be undertaken as requested by the Welsh Government. However, it was suggested that the boundary scope needs to be broadened and consider the impacts across the whole A55 corridor and the North Wales region. It should consider any planned improvements scheduled during the construction phase. The Traffic Management Plan needs to also consider the potentially large impact from standing traffic due to congestion at the tunnel/bridge site.*
- *A noise assessment is currently in development which will inform further mitigation considerations around the reduction of noise. There is also a need to highlight and promote further the concern/customer phone-in service.*
- *There is a need for ongoing and considered promotion of tourism opportunities on the island both during and post construction.*
- *There are huge opportunities to promote the rich cultural heritage that exists on the island – not just the natural environment but Welsh language and also any discovered or more accessible ancient monuments and artefacts near the connection route.*
- *There is a need to strengthen the relationship between National Grid and services such as the Citizens' Advice Bureau. They could provide a valuable conduit between developers and residents. However, some additional funding may be needed to ensure the security of the service.'*

3 Well-being Context

3.1 POPULATION OVERVIEW

- 3.1.1 Anglesey has one of the smallest resident populations of all counties in North Wales, and both Anglesey and Gwynedd have a low population density of 1.0 and 0.5 people per hectare respectively, compared with 1.5 persons per hectare for Wales as a whole. Almost half of the Lower Layer Super Output Areas (LSOA) in Anglesey and Gwynedd have a population of one or fewer people per hectare. Only four LSOAs have relatively high densities of more than 10 people per hectare, three of which are within Gwynedd.
- 3.1.2 According to the 2011 Census, the population of Anglesey was 69,751, whilst the population of Gwynedd was 121,874 and the population of Wales was 3,063,456 (Ref 27.5).
- 3.1.3 The main population concentrations on Anglesey are in the towns of Holyhead (13,600), Llangefni (5,100) and Amlwch (3,700), along with settlements near to the two bridges that cross the Menai Strait, connecting the Isle of Anglesey to Gwynedd and the mainland. In the north of Gwynedd, Bangor has a population of 18,800.
- 3.1.4 The population of Anglesey and Gwynedd grew by 4.4% and 4.3% respectively between the 2001 and 2011 Census, compared with an average growth of 5.5% across Wales. The proportion of male and female residents in 2011 was very similar to national, regional and local authority averages.
- 3.1.5 In 2011, the median age of Anglesey's population (45) was higher than Gwynedd's population (42) and Wales (41) as a whole. The proportion of Anglesey's residents that are over 65 years of age (22.4%) is less than that of Gwynedd's (27.7%), but greater than in Wales as a whole (18.3%).
- 3.1.6 Table 27.1 shows an overview of the population by gender across the Isle of Anglesey and Gwynedd, compared to the Welsh average.

| Table 27.1 Population by Gender in Anglesey, Gwynedd and Wales, 2011 | | | |
|--|-----------|-------------|---------------------------|
| Area | Males (%) | Females (%) | Total population (number) |
| Isle of Anglesey | 49.1 | 50.9 | 69,751 |
| Gwynedd | 49.2 | 50.8 | 121,874 |

Table 27.1 Population by Gender in Anglesey, Gwynedd and Wales, 2011

| Area | Males (%) | Females (%) | Total population (number) |
|-------|-----------|-------------|---------------------------|
| Wales | 49.1 | 50.9 | 3,063,456 |

3.1.7 The 2011 Census data show that the percentage of the population on Anglesey who classed themselves as 'white' had fallen from 99.3% in 2001 to 98.2% in 2011 (Ref 27.5). This is compared with 96.5% for Gwynedd in 2011 (Table 27.2).

Table 27.2 Ethnicity in Anglesey, Gwynedd and Wales, 2011

| Area | White (%) | Asian or Asian British (%) | Mixed (%) | Black or Black British (%) | Other Ethnic Group (%) |
|----------|-----------|----------------------------|-----------|----------------------------|------------------------|
| Anglesey | 98.2 | 0.7 | 0.7 | 0.1 | 0.3 |
| Gwynedd | 96.5 | 1.8 | 0.8 | 0.2 | 0.7 |
| Wales | 95.6 | 2.3 | 1.0 | 0.6 | 0.5 |

3.2 GENERAL HEALTH

3.2.1 The 2011 Census included a question asking people to describe their general health as 'Very Good Health', 'Good Health', 'Fair Health', 'Bad Health' or 'Very Bad Health'. Self-assessed health draws together an individual's perception of all aspects of their health and well-being and is a useful indicator of general well-being and health-related quality of life. As shown in Table 27.3, the proportion of the population in Anglesey and Gwynedd reporting themselves to be in 'Very Good Health' is higher than the national average and the proportion reporting themselves as in 'Bad Health' or 'Very Bad Health' is less than the national average.

Table 27.3 General Health (%), 2011

| Indicator | Isle of Anglesey (%) | Gwynedd (%) | Wales (%) |
|------------------|----------------------|-------------|-----------|
| Very good health | 48.0 | 50.4 | 46.6 |
| Good health | 30.6 | 30.7 | 31.1 |
| Fair health | 15.1 | 13.6 | 14.6 |
| Bad health | 4.9 | 4.1 | 5.8 |

| Table 27.3 General Health (%), 2011 | | | |
|--|-----------------------------|--------------------|------------------|
| Indicator | Isle of Anglesey (%) | Gwynedd (%) | Wales (%) |
| Very bad health | 1.4 | 1.2 | 1.8 |

3.2.2 As shown in Table 27.4, in the 2011 Census, 11.4% of residents on Anglesey and 9.7% of residents in Gwynedd had reported having severely limiting long-term illnesses or disabilities. A further 11.7% of people on Anglesey and 10.8% of residents in Gwynedd had reported having less severe long-term illnesses or disabilities.

| Table 27.4 Limiting Long-term Illness (%), 2011 | | | |
|--|-----------------------------|--------------------|------------------|
| Indicator | Isle of Anglesey (%) | Gwynedd (%) | Wales (%) |
| Day-to-day activities limited a lot | 11.4 | 9.7 | 11.9 |
| Day-to-day activities limited a little | 11.7 | 10.8 | 10.8 |
| Day-to-day activities not limited | 76.9 | 79.5 | 77.3 |

3.3 PERSONAL WELL-BEING INDICATORS

3.3.1 The Office for National Statistics (ONS) undertakes annual surveys into personal well-being, based on data from the Annual Population Survey, which includes responses from around 165,000 people. This provides a large representative sample of adults aged 16 and over living in residential households in the UK.

3.3.2 The four questions asked are:

- Overall, how satisfied are you with your life nowadays?
- Overall, to what extent do you feel the things you do in your life are worthwhile?
- Overall, how happy did you feel yesterday?
- Overall, how anxious did you feel yesterday?

3.3.3 People are asked to give their answers on a scale of 0 to 10, where 0 is 'not at all' and 10 is 'completely'. These questions allow people to make an

assessment of their life overall, as well as providing an indication of their day-to-day emotions. Although 'yesterday' may not be a typical day for an individual, the large sample means that these differences 'average out' and provide a reliable assessment of the self-reported anxiety and happiness of the adult population in the UK over the year.

- 3.3.4 It is important to remember that the findings presented are based on survey estimates and are subject to a degree of uncertainty. They should therefore be interpreted as providing a good estimate, rather than an exact measure of personal well-being in the UK.
- 3.3.5 Table 27.5 and Table 27.6 present the personal well-being indicators for Anglesey and Gwynedd for the years 2011 to 2016, along with the UK average for the 2015-16 survey (Ref 27.6). Anglesey scores above the UK average for all indicators; Gwynedd is largely in line with the UK average.

Table 27.5 Personal well-being indicators – Isle of Anglesey, 2011 to 2016

| Indicator | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | UK average 2015-16 | Difference |
|-------------------|---------|---------|---------|---------|---------|--------------------|------------|
| Life satisfaction | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.7 | +0.1 |
| Worthwhile | 8.1 | 8.0 | 8.0 | 7.9 | 8.0 | 7.8 | +0.2 |
| Happiness | 7.6 | 7.6 | 7.6 | 7.6 | 7.7 | 7.5 | +0.2 |
| Anxiety | 2.8 | 2.9 | 2.8 | 2.8 | 2.6 | 2.9 | -0.3 |

Table 27.6 Personal well-being indicators – Gwynedd, 2011 to 2016

| Indicator | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | UK average 2015-16 | Difference |
|-------------------|---------|---------|---------|---------|---------|--------------------|------------|
| Life satisfaction | 7.6 | 7.6 | 7.6 | 7.6 | 7.7 | 7.7 | - |
| Worthwhile | 7.8 | 7.9 | 7.9 | 7.8 | 7.9 | 7.8 | +0.1 |
| Happiness | 7.4 | 7.6 | 7.3 | 7.6 | 7.5 | 7.5 | - |
| Anxiety | 2.9 | 2.8 | 3.1 | 3.0 | 2.9 | 2.9 | - |

3.4 CARERS

3.4.1 Table 27.7 below shows the percentage of the population providing unpaid care in Anglesey, Gwynedd and Wales as of 2011 (Ref 27.5).

| Table 27.7 Percentage of the population providing unpaid care in Anglesey, Gwynedd and Wales | | | | |
|--|-----------------------------|--|---|---|
| Area | Provides no unpaid care (%) | Provides 1 to 19 hours' unpaid care a week (%) | Provides 20 to 49 hours' unpaid care a week (%) | Provides 50 or more hours' unpaid care a week (%) |
| Isle of Anglesey | 88.5 | 6.7 | 1.7 | 3.1 |
| Gwynedd | 89.8 | 6.0 | 1.4 | 2.9 |
| Wales | 87.9 | 6.9 | 1.8 | 3.4 |

3.5 EMPLOYMENT RATE

3.5.1 The employment rate is defined as the percentage of the resident working age population that is in employment.

3.5.2 Anglesey's employment rate was below that of the Wales average in 2008; however, from 2009 it exceeded the Wales average. From that year, it continued in a general upward trend and remained above the Wales average up to and including figures for 2017 (Ref 27.7).

3.5.3 Since 2008 the employment rate in Gwynedd has been consistently higher than the average for Wales except in 2014 and 2015. In 2017, the employment rate in Gwynedd was lower than for Anglesey (75.4%) at 74.9%.

3.5.4 The employment rate for Wales fell from its 2008 levels of 68.7% to 66.5% in 2010, and then steadily rose to 72.4% in 2017 (Table 27.8).

| Table 27.8 Employment – Anglesey, Gwynedd and Wales, 2008 to 2017 | | | | | | |
|---|------------------|------|---------|------|-----------|------|
| Date | Isle of Anglesey | | Gwynedd | | Wales | |
| | Number | % | Number | % | Number | % |
| Jan 2008-Dec 2008 | 28,700 | 66.7 | 51,100 | 69.0 | 1,316,300 | 68.7 |
| Jan 2009-Dec 2009 | 28,800 | 67.9 | 50,600 | 67.8 | 1,282,900 | 66.7 |
| Jan 2010-Dec 2010 | 29,600 | 69.8 | 51,800 | 69.5 | 1,280,500 | 66.5 |

| Table 27.8 Employment – Anglesey, Gwynedd and Wales, 2008 to 2017 | | | | | | |
|--|------------------|------|---------|------|-----------|------|
| Date | Isle of Anglesey | | Gwynedd | | Wales | |
| | Number | % | Number | % | Number | % |
| Jan 2011-Dec 2011 | 29,700 | 70.3 | 50,100 | 67.3 | 1,287,400 | 66.8 |
| Jan 2012-Dec 2012 | 30,000 | 72.8 | 52,200 | 70.0 | 1,291,900 | 67.3 |
| Jan 2013-Dec 2013 | 28,800 | 70.1 | 52,000 | 70.5 | 1,318,300 | 68.9 |
| Jan 2014-Dec 2014 | 29,300 | 72.2 | 51,200 | 69.4 | 1,326,800 | 69.5 |
| Jan 2015-Dec 2015 | 29,900 | 73.9 | 51,100 | 69.2 | 1,339,300 | 70.3 |
| Jan 2016-Dec 2016 | 28,500 | 70.7 | 53,700 | 73.1 | 1,354,700 | 71.2 |
| Jan 2017-Dec 2017 | 30,100 | 75.4 | 55,000 | 74.9 | 1,373,900 | 72.4 |

3.6 GROSS DISPOSABLE HOUSEHOLD INCOME

- 3.6.1 Gross Disposable Household Income (GDHI) is a measure of the amount of money individuals have available for spending or saving. It is considered to provide a reliable indicator of living standards across different areas as it is based on where people live rather than where they work. GDHI is sourced from regional accounts, which are produced by the ONS (Ref 27.8).
- 3.6.2 Table 27. shows the GHDI per head for Anglesey, Gwynedd and Wales. Anglesey’s GDHI per head was above the Wales average in 2008 and has remained above the Wales average each year since, rising each year.
- 3.6.3 Gwynedd’s GDHI also rose over the same period; notwithstanding this, it was consistently below that of Anglesey and the Wales average during the years 2008 to 2015.

| Table 27.9 Gross disposable household income per head (£), 2008-2015 | | | |
|---|----------------------|-------------|-----------|
| Year | Isle of Anglesey (£) | Gwynedd (£) | Wales (£) |
| 2008 | 14,501 | 13,678 | 14,286 |
| 2009 | 14,974 | 14,118 | 14,416 |
| 2010 | 15,379 | 14,415 | 14,819 |
| 2011 | 15,610 | 14,444 | 14,991 |
| 2012 | 16,077 | 14,800 | 15,447 |
| 2013 | 16,243 | 14,824 | 15,457 |

| Table 27.9 Gross disposable household income per head (£), 2008-2015 | | | |
|---|----------------------|-------------|-----------|
| Year | Isle of Anglesey (£) | Gwynedd (£) | Wales (£) |
| 2014 | 16,528 | 15,252 | 15,815 |
| 2015 | 17,306 | 15,594 | 16,341 |

3.7 WELSH INDEX OF MULTIPLE DEPRIVATION

3.7.1 The Welsh Index of Multiple Deprivation (WIMD) is a nationally-recognised measure of deprivation (Ref 27.9). The WIMD 2014 provides a numerical measure of deprivation for each LSOA in Wales. It utilises indicators, combined into eight 'domains': income, employment, health, education, access to services, community safety, physical environment and housing.

3.7.2 There are 1,909 LSOAs in Wales, and each has been ranked according to the level of deprivation. As part of this ranking process, 'deciles' have been identified, with Decile 1 being the top 10% most deprived LSOAs, and Decile 10 being the 10% least deprived LSOAs. The following observations are made:

- Two LSOAs in the administrative areas of Anglesey and Gwynedd are in Decile 1; both are in Bangor (Gwynedd 001D and 002D).
- One LSOA is in Decile 2 and includes areas surrounding the north-east of Llangefni (Isle of Anglesey 005B).
- Two LSOAs are in Decile 10; both are in Llanfair PG (Anglesey 008A and 008C).

3.7.3 The WIMD for Gwynedd and Anglesey is presented in Figure 17.1 (**Document 5.17.1.1**) of ES Chapter 17 Socio Economics (**Document 5.17**).

3.8 COMMUNITIES FIRST AREA OF LLANGEFNI

3.8.1 Communities First is a community-focused programme to tackle poverty. Môn Communities First is the overarching organisation responsible for delivering the Welsh Government's Communities First programme on Anglesey. It delivers a range of projects and initiatives in Holyhead and the Tudur ward in Llangefni. Services offered include:

- employment support;
- accredited training courses;

- awareness courses (e.g. Working at Heights, Safe use of Ladders, Asbestos Awareness);
- vocational training;
- money guidance; and
- youth drop-in services.

3.9 WELSH LANGUAGE

- 3.9.1 Anglesey and Gwynedd continue to be areas of Wales with a strong Welsh language presence. The 2011 Census showed that Gwynedd had the highest proportion of the population who were multi-skilled in terms of Welsh language (able to speak, read and write in Welsh) at 56.0%, the highest in Wales. Anglesey had the second highest proportion at 45.6%, while the overall Welsh average was 14.6%.
- 3.9.2 Not all speakers of Welsh are multi-skilled: a higher proportion of the population can speak Welsh, but not read or write it. In Gwynedd, 64.0% of the population can speak Welsh and in Anglesey the proportion is 57.2%. This compares to Wales as a whole, in which 19% of the population can speak Welsh.
- 3.9.3 A detailed baseline assessment of the Welsh Language in Anglesey and Gwynedd is provided in the WLIA (**Document 5.26**).

4 Well-being Findings

4.1 INTRODUCTION

- 4.1.1 The tables below briefly set out the findings of the relevant chapters of the ES and other relevant DCO documents against each well-being goal and associated well-being determinant, as identified in the participatory workshop.
- 4.1.2 These findings relate to residual effects which means that they take into account mitigation measures that have been identified to avoid or reduce effects. These measures include mitigation by design and standard control and management measures (as set out in the Construction Environmental Management Plan (**Document 7.4**)) that are relevant to well-being.
- 4.1.3 The three stages of consultation and the engagement to support the WBR have been central to understanding what local authorities and communities value in the region. Feedback from the consultations and engagement has been considered in subsequent stages of the routeing process.

4.2 DESIGN: THE APPROACH TO ROUTEING

- 4.2.1 National Grid has published '*Our Approach to the Design and Routeing of New Electricity Transmission Lines*' (Ref 27.12). This document sets out how National Grid will deliver new infrastructure projects and the process for making and validating decisions based on detailed environmental assessment and feedback from the public and stakeholders.
- 4.2.2 This approach has been applied to all stages of the development of the Proposed Development to date, from strategic options, outline routeing and detailed routeing, and has continued through to the application for consent.
- 4.2.3 At each stage, options have been appraised taking into account National Grid's statutory duties to people, the environment, and social and economic factors.
- 4.2.4 Of critical importance to routeing new electricity infrastructure are the Holford Rules (Ref 27.3):
- 'Rule 1: Avoid altogether, if possible, the major areas of highest amenity value, by so planning the general route of the line in the first place, even if the total mileage is somewhat increased in consequence.'

- Rule 2: Avoid smaller areas of high amenity value, or scientific interests by deviation; provided that this can be done without using too many angle towers, ie the more massive structures which are used when lines change direction.
- Rule 3: Other things being equal, choose the most direct line, with no sharp changes of direction and thus with fewer angle towers.
- Rule 4: Choose tree and hill backgrounds in preference to sky backgrounds wherever possible; and when the line has to cross a ridge, secure this opaque background as long as possible and cross obliquely when a dip in the ridge provides an opportunity. Where it does not, cross directly, preferably between belts of trees.
- Rule 5: Prefer moderately open valleys with woods where the apparent height of towers will be reduced, and views of the line will be broken by trees.
- Rule 6: In country which is flat and sparsely planted, keep the high voltage lines as far as possible independent of smaller lines, converging routes, distribution poles and other masts, wires and cables, so as to avoid a concentration or 'wirescape'.
- Rule 7: Approach urban areas through industrial zones, where they exist; and when pleasant residential and recreational land intervenes between the approach line and the substation, go carefully into the comparative costs of the undergrounding, for lines other than those of the highest voltage.'

4.2.5 The implementation of the approach to routeing is described in the following DCO documents:

- Preferred Route Option Selection report (**Document 9.4**)
- Draft Route Alignment report (**Document 9.5**); and
- Design Report (**Document 7.17**).

4.2.6 In addition to the approach outlined above, and specific to the Proposed Development, National Grid has considered the importance of the Welsh language.

4.3 CONTROL AND MANAGEMENT MEASURES

4.3.1 The control and management measures of relevance to the WBR are summarised in Table 27.10 (see the Construction Environmental Management Plan (CEMP), **Document 7.4**)

| Table 27.10 General CEMP Measures relevant to the WBR | | | |
|---|---|---------------------------------|---|
| Code | Description | Well-being goal(s) | Connection to Well-being |
| GP11 | Sets out core working hours, as well as hours for activities such as piling works, blasting and tunnelling works. | A healthier Wales | Reduce disruption to residential properties |
| GP21-GP27 | Sets out communication measures, including a 24-hour free telephone and project website, which would be available throughout construction. | A Wales of cohesive communities | Provides a form of communication for community engagement and public information. |
| GP31 | The contractor will be a member of the Considerate Constructors Scheme and will adhere to a Code of Conduct. The Code of Conduct will include sections on respecting the environment, respecting communities and respecting Welsh language and culture. | A Wales of cohesive communities | Mitigation of in-migration effects on Welsh language (see Document 5.26). |
| GP83-GP84 | Fencing and other means of enclosure e.g. all temporary | A Wales of cohesive communities | Reduction in crime and the perception of increased crime. |

| Table 27.10 General CEMP Measures relevant to the WBR | | | |
|--|---|--|---|
| Code | Description | Well-being goal(s) | Connection to Well-being |
| | work areas will be delineated by demarcation fencing | | Maintaining safety of local communities. |
| GP85-GP87 | Sets out lighting and visual intrusion measures e.g. directional lighting. | A Wales of cohesive communities | Reducing the potential effects of lighting on residential properties. |
| GP88-GP810 | Security e.g. use of high perimeter fencing for site security and public safety and placed so that Public Rights of Way are maintained | A Wales of cohesive communities A healthier Wales | Reduction in the perception of increased crime and ensuring access to recreational receptors (Public Rights of Way (PRoW)) is maintained. Maintaining safety of local communities. |
| AE11-AE41 | Air Quality measures e.g. dust - a variety of measures to manage dust-generating activities to reduce dust effects, including locating away from sensitive receptors where appropriate. | A healthier Wales | Reducing the potential effects of air quality on sensitive receptors. |
| NV11-NV31 | Noise control measures e.g. loading/unloading areas will be located away from residential properties and shielded from properties where possible. | A healthier Wales | Reducing the potential effects of noise on sensitive receptors. |

| Table 27.10 General CEMP Measures relevant to the WBR | | | |
|---|---|---------------------------------|---|
| Code | Description | Well-being goal(s) | Connection to Well-being |
| GP25-GP27 | The detailed complaints procedure will be followed e.g. who to contact in the event that the complainant is not satisfied with the outcome. | A Wales of cohesive communities | Provides a form of communication for the local communities to engage. |

4.4 WELL-BEING TABLES⁴

4.4.1 The following tables identify the findings relevant to each of the well-being goals. The findings draw on the following documents:

- ES Chapter 17 – Socio Economics (**Document 5.17**), which considers potential amenity effects on communities, businesses, recreation and tourism. The amenity assessment draws on the findings of the following assessments:
 - ES Chapter 8 – Visual Assessment (**Document 5.8**);
 - ES Chapter 13 – Traffic and Transport (**Document 5.13**);
 - ES Chapter 14 – Air Quality and Emissions (**Document 5.14**);
 - ES Chapter 15 – Construction Noise and Vibration (**Document 5.15**); and
 - ES Chapter 16 – Operational Noise (**Document 5.16**).
- Other ES chapters, including:
 - ES Chapter 7 – Landscape Assessment (**Document 5.7**);
 - ES Chapter 9 – Ecology and Nature Conservation (**Document 5.9**); and

⁴ These tables have been constructed from the workshop notes where the potential effects identified under each well-being goal are those identified in the notes for that goal.

- ES Chapter 10 – Historic Environment (**Document 5.10**).
 - The Welsh Language Impact Assessment (**Document 5.26**);
 - Tourism and business research (Appendix 17.3 Visitor Survey Results (**Document 5.17.2.3**) and Appendix 17.4 Business Survey Results (**Document 5.17.2.4**));
 - The EMF Report (**Document 5.25**);
 - The Consultation Report (**Document 6.1**);
 - The CEMP (**Document 7.4**);
 - The CTMP (**Document 7.5**);
 - The Project Need Case (**Document 7.1**); and
 - National Grid 'Our Code of Ethical Business Conduct 2017' (Ref 27.10).
- 4.4.2 In addition to the above, National Grid has identified a series of enhancement opportunities, as set out in the Enhancement Strategy (Document 7.13). These enhancement opportunities are not required to address adverse effects and are not mitigation measures. These opportunities are not included in the tables below, however it is anticipated that there will be associated beneficial effects.
- 4.4.3 It should be noted that not all aspects of each of the well-being goals were raised during the workshop.

Table 27.11 A Prosperous Wales



| Well-being goal description | Well-being determinant | Vulnerable groups | Issues identified in the workshop | Documents relevant to workshop issues | Relevant findings |
|--|------------------------|--|--|---|---|
| An innovative, productive and low carbon society which develops a skilled and well-educated population in an economy which generates wealth and provides employment. | Employment and skills | <ul style="list-style-type: none"> Unemployed / low income household Communities First Llangefni Carers | <ul style="list-style-type: none"> Potential increase in use of specific services. Potential increase in the use of local suppliers. Potential effects on ability of local employers to fill lower paid work. | <ul style="list-style-type: none"> Project Need Case (Document 7.1) ES Chapter 17, Socio Economics (Document 5.17) Section 9.10 Employment WLIA (Document 5.26) | <ul style="list-style-type: none"> The Proposed Development will play a vital role in unlocking an estimated £12 billion investment in North Wales as part of the Anglesey Energy Island Programme (Ref 27.11), bringing high-skilled employment and supply chain opportunities to the region. The total number of direct and indirect jobs expected to be filled from the local resident workforce is 28. Considering that total employment in Anglesey and Gwynedd is in the region of 85,000, this Proposed Development would attract 0.033% of total employment. It is concluded that employment generated by the Proposed Development on its own would have an overall positive effect on the local employment market, though the number of additional jobs would be relatively low, and overall effect is therefore assessed as not significant. |
| | Local economy | <ul style="list-style-type: none"> Unemployed / low income households Tourism operators | <ul style="list-style-type: none"> Potential impact on tourism as a result of visual amenity effects. Potential effects on the Welsh language. Cumulative effects with the Wylfa Newydd Power Station. | | <ul style="list-style-type: none"> The effect on economic growth is considered to be negligible and not significant. No significant effects are anticipated for any of the tourism parameters considered in the assessment (amenity effects, tourist attractions, accommodation demand, labour availability, visitor numbers and accommodation expenditure). A neutral effect is anticipated for the Welsh Language. No significant cumulative effect with Wylfa Newydd Power Station is anticipated. |

Summary: The assessments have identified no significant effects, related to issues raised at the workshop that are of relevance to this goal.

Table 27.12 A resilient Wales



| Well-being goal description | Well-being determinants | Vulnerable groups | Issues identified in the workshop | Documents relevant to workshop issues | Relevant findings |
|---|---|-------------------|--|--|--|
| <p>Maintains and enhances the natural environment and supporting social, economic and ecological resilience</p> | <ul style="list-style-type: none"> • Neighbourhood design • Housing • Medical services • Road hazards • Shops • Green space | <p>All</p> | <ul style="list-style-type: none"> • Potential for existing services placed under increased pressure. • Potential effects from construction of Menai tunnel: increased traffic, waste removal, general disruption to local community. • Potential economic benefits from increased spending locally. • Potential effects on the Private Rented Sector (PRS). • Potential long-term effect on landscape, services and population groups. | <ul style="list-style-type: none"> • ES Chapter 17, Socio Economics (Document 5.17) section 9.2 and section 9.8. • ES Chapter 13 Traffic and Transport (Document 5.13) • ES Chapter 7 Landscape Assessment (Document 5.7). | <ul style="list-style-type: none"> • Given the number and profile of construction workers expected to be present on site, and the duration of peak workforce numbers (section 9.8 of Document 5.17), workers are not expected to permanently relocate to the local area and therefore no effects on demand for public services such as doctors and schools, are anticipated as a result of the Proposed Development. • No significant amenity effects on communities or community facilities, are anticipated either in the short or long term. • Potential short-term significant severance effects on the Pont Ronwy Link (Anglesey) as a result of construction traffic depending on the direction chosen for tunnelling. There are no community facilities affected by these effects. • No significant effects on the local economy from increased local spend, either in the short or long term. • No significant effects on the PRS, either in the short or long term. • There would be a significant landscape effect (moderate adverse) on one Special Landscape Area (SLA) (Southern Anglesey Estate lands) during operation. • There would be significant landscape effects (moderate adverse) on three Landscape Character Areas (LCAs) during operation: Dulas Bay Hinterland (Anglesey LCA 8); East Central Anglesey (Anglesey LCA 12); and Caernarfon Coast & Plateau (Gwynedd LCA 4). |

Summary: There would be no significant adverse effects for the majority of issues identified by the workshop; a small minority of LCAs and one SLA would be significantly adversely affected in the long term. It is considered that these effects would not significantly affect the achievement of this well-being goal.

Table 27.13 A healthier Wales 

| Well-being goal description | Well-being determinants | Vulnerable groups | Issues identified in the workshop | Documents relevant to workshop issues | Relevant findings |
|---|---|-------------------|--|--|--|
| Physical and mental well-being is maximised | Physical and mental health and well-being | All | <ul style="list-style-type: none"> Potential increased pressure on local health services and facilities | <ul style="list-style-type: none"> ES Chapter 17 Socio Economics (Document 5.17) section 9.2 Amenity Effects – Community Settlements | <ul style="list-style-type: none"> Given the number and profile of construction workers expected to be present on site, and the duration of peak workforce numbers (section 9.8 of Document 5.17), workers are not expected to permanently relocate to the local area and therefore no effects on demand for public services or local community facilities are anticipated. |
| | | | <ul style="list-style-type: none"> Potential benefits from increased use of local pubs and restaurants | <ul style="list-style-type: none"> ES Chapter 17 Socio Economics (Document 5.17) section 9.11 (Wider Effects – Expenditure and Supply Chain) | <ul style="list-style-type: none"> The additional supply chain benefits and expenditure amount to an estimated £63 million over the construction period. Given that the combined Gross Value Added (GVA) for Anglesey and Gwynedd is in the region of £3 billion per annum, this represents a 1.9% increase in GVA in any single year during construction. The effect on economic growth is assessed as not significant. |
| | | | <ul style="list-style-type: none"> Potential issues with increased consumption of alcohol and risk-taking behaviour | <ul style="list-style-type: none"> CEMP (Document 7.4) National Grid 'Our Code of Ethical Business Conduct 2017' | <p>The CEMP outlines General Principles that the contractor must follow and ensure their staff do also, including:</p> <ul style="list-style-type: none"> GP31: the contractor will be a member of the Considerate Constructors Scheme and will adhere to a Code of Conduct. The Code of Conduct will include sections on respecting the environment, respecting communities and respecting Welsh Language and Welsh Culture. In addition, National Grid has a strict drug and alcohol policy and requires all contractors to be tested on a regular and random basis, as detailed in the Code of Ethical Business Conduct 2017. |
| | | | <ul style="list-style-type: none"> Potential for stress and health issues associated with | | <ul style="list-style-type: none"> Involving communities in the early stages of the Proposed Development, giving people an opportunity |

| Table 27.13 A healthier Wales  | | | | | |
|---|-------------------------|-------------------|--|---|--|
| Well-being goal description | Well-being determinants | Vulnerable groups | Issues identified in the workshop | Documents relevant to workshop issues | Relevant findings |
| | | | <p>increased noise, dust, waste, air pollution and an increase in traffic during the construction phase.</p> <ul style="list-style-type: none"> • Specific concerns relating to 24/7 construction working. • Concerns related to EMFs. | <ul style="list-style-type: none"> • ES Chapter 5 EIA Consultation (Document 5.5) • ES Chapter 8 Visual Assessment (Document 5.8) • ES Chapter 13 Traffic and Transport (Document 5.13) • ES Chapter 14 Air Quality and Emissions (Document 5.14) • EMF Report (Document 5.25) • ES Chapter 15 Construction Noise and Vibration (Document 5.15) • ES Chapter 16 Operational Noise (Document 5.16) • ES Chapter 17 Socio Economics (Document 5.17) | <p>to influence design. Addressing concerns in an open and honest way.</p> <ul style="list-style-type: none"> • No significant amenity effects on PRoWs or other recreational receptors are anticipated during construction or operation. • No significant effects are predicted for air quality during construction. • Out of almost 5,000 properties assessed, only one property is predicted to experience a major adverse construction noise effect; however, this would be from piling and would therefore be very short-term. Twenty-five properties are predicted to experience a potentially significant adverse noise effect during construction, mostly as a result of pylon construction and dismantling works or construction traffic; as a result, it would be very short-term/intermittent and therefore the effects are considered to be minor adverse and not significant at all but one property, which would experience medium-term significant effects (longer than six months) as a result of construction activity. This means that there would be moderate adverse significant effects on two properties. • No properties are predicted to experience significant adverse noise effects during dry or wet conditions as a result of the operation of the OHL. In addition, no significant effects are predicted from the operation of the Tunnel Head Houses or Pentir Substation during normal operation conditions. • The Proposed Development will comply with the current public exposure guidelines and the policy on phasing as detailed in NPS EN-5. If these requirements are met NPS EN-5 states that “<i>EMF effects are minimal.</i>” |

| Table 27.13 A healthier Wales  | | | | | |
|---|-------------------------|-------------------|-----------------------------------|---------------------------------------|---|
| Well-being goal description | Well-being determinants | Vulnerable groups | Issues identified in the workshop | Documents relevant to workshop issues | Relevant findings |
| | | | | | <ul style="list-style-type: none"> Of the 50 community areas identified in the ES Chapter 17 Socio-Economics (Document 5.17) Socio Economics, none would experience significant amenity effects. During construction, 13 would experience minor amenity effects, as a result of combined visual, noise and traffic effects. The remainder would experience no or negligible amenity effects. During operation, 10 would experience minor amenity effects as a result of combined visual and noise effects; the majority (40) would experience no or negligible amenity effects. |
| <p>Summary There would be no significant adverse effects on local services; there may be some beneficial effects to local restaurants and pubs but this is not expected to be significant. There would be no increase in anti-social behaviour. No significant effect is anticipated for the amenity of any of the 50 communities assessed; although there would be significant noise effects at two out of the 5,000 properties assessed, during construction, this is not significant at a community scale. There would be no significant effects from EMFs.</p> | | | | | |

Table 27.14 A More Equal Wales 

| Well-being goal description | Well-being determinants | Vulnerable groups | Issues identified in the workshop | Documents relevant to workshop issues | Relevant findings |
|--|---|--|---|---|---|
| Fulfil potential no matter background or circumstances | <ul style="list-style-type: none"> • Citizen power and influence • Social support and social networks • Divisions in community • Social isolation | <ul style="list-style-type: none"> • Geographical areas • Older people • Farmers/landowners • Carers • Unemployed/low income households | <ul style="list-style-type: none"> • Potential detrimental community impact. • Disruption to those living and working on the island during construction. • Reduced citizen power: conflict between the Proposed Development and responses to the consultations. • Change to demographic profile. • Impact on Welsh language and culture as a result of temporary inward migration of non-Welsh-speaking workers. | <ul style="list-style-type: none"> • ES Chapter 17, Socio Economics (Document 5.17) section 9.2 Amenity Assessment • ES Chapter 13 Traffic and Transport (Document 5.13) • Consultation Report (Document 6.1) • Welsh Language Impact Assessment (WLIA) (Document 5.26) | <ul style="list-style-type: none"> • The socio-economic assessment includes a community amenity assessment, which draws on the findings of other relevant ES topic assessments. Of the 50 community areas identified (see Figure 17.6 in the socio-economic assessment (Document 5.17.1.6)), none would experience significant effects. No significant effects are predicted for community facilities. • As reported in ES Chapter 13, Traffic and Transport (Document 5.13), there are potential significant severance effects on the Pont Rhonwy Link (Anglesey). There are no community facilities affected by these effects. • Consultation Report (Document 6.1) provides detailed information on the consultation and engagement processes and activities during the evolution of the design of the Proposed Development. This includes a section in which National Grid summarises consultation responses received and how they have been taken into account. • The WLIA (Document 5.26) concludes a neutral effect on Welsh Language. |
| | Affordable housing | <ul style="list-style-type: none"> • Unemployed / low income households | <ul style="list-style-type: none"> • Potential lack of affordable accommodation as a result of construction workers taking up spare capacity. | <ul style="list-style-type: none"> • ES Chapter 17 Socio Economics (Document 5.17), sections 9.8.20 to 9.8.24 PRS. | <ul style="list-style-type: none"> • The Proposed Development would not give rise to significant effects on tourism accommodation demand or on the PRS (Document 5.17). • Cumulative effects assessment of the Proposed Development with the proposed Wylfa Newydd Power Station predicts no significant effects on tourism accommodation and on the PRS. |

Summary: There would be no significant effect to the amenity of communities potentially affected; no significant effects on tourism accommodation demand and a neutral effect on the Welsh language. A significant adverse effect would occur to local traffic as a result of the closure of the Pont Rhonwy link, but this would not affect access to community facilities.

Table 27.15 A Wales of cohesive communities



| Well-being goal description | Well-being determinants | Vulnerable groups | Issues identified in the workshop | Documents relevant to workshop issues | Relevant findings |
|---|---|--|---|---|--|
| Attractive, viable, safe and well-connected | <ul style="list-style-type: none"> • Community identity • Safety • Transport • Waste • Noise • Air and water quality • Green space • Odour • Attractiveness of an area | <ul style="list-style-type: none"> • Geographical areas • Older people • Children | <ul style="list-style-type: none"> • Potential benefits from a community fund. • Potential conflict between workers and communities, specifically an increased possibility of hate crime. • Potential effects on the Welsh language. | <ul style="list-style-type: none"> • ES Chapter 2 Alternatives and Proposed Development History (Document 5.2) • ES Chapter 17 (Document 5.17) • WLIA (Document 5.26) • CEMP (Document 7.4) Section 2: General Principles | <ul style="list-style-type: none"> • Developing the route and design of the Proposed Development to have as little impact as possible on communities in the area. • Of the 50 community areas identified in the ES Chapter 17 Socio Economics (Document 5.17), none would experience significant amenity effects. During construction, 13 would experience minor amenity effects, as a result of combined visual, noise and traffic effects. The remainder would experience no or negligible amenity effects. During operation, 10 would experience minor amenity effects as a result of combined visual and noise effects; the majority (40) would experience no or negligible amenity effects. • The WLIA (Document 5.26) concludes a neutral effect on Welsh Language. • The CEMP presents the approach and application of environmental control and management measures. It includes information about the security measures that will be implemented at construction sites, site offices and compounds. |

Summary: There would be no significant effects on the amenity of communities; there would be a neutral effect on the Welsh language. Control and Management Measures will be implemented across all construction sites to ensure a good relationship with neighbours.

Table 27.16 A Wales of vibrant and thriving Welsh language



| Well-being goal description | Well-being determinants | Vulnerable groups | Issues identified in the workshop | Documents relevant to workshop issues | Relevant findings |
|--|--|---|---|--|---|
| Promotes and protects culture, heritage, language and encourages participation | <ul style="list-style-type: none"> • Welsh language • Public amenities • Information technology • Cultural and spiritual ethos | <ul style="list-style-type: none"> • All | <ul style="list-style-type: none"> • Potential to provide an opportunity to improve access to and interpretation of ancient sites on Anglesey. • Potential adverse effects on Welsh language from in-migration of non-Welsh-speaking workers. | <ul style="list-style-type: none"> • ES Chapter 10 Historic Environment (Document 5.10) • WLIA (Document 5.26) | <ul style="list-style-type: none"> • No significant effects are predicted as a result of direct disturbance of historic assets. In terms of effects as a result of changes to setting, one is predicted to experience moderate adverse effects during construction and five predicted to have moderate effects during operation of the Proposed Development. • A Welsh Language Impact Assessment (WLIA) has been carried out. The WLIA concludes a neutral effect on the Welsh Language. |

Summary: Although significant effects have been identified for the setting of historic assets, these would not impact on any of the issues identified in the workshop. A neutral effect is anticipated for the Welsh language.

Table 27.17 A globally responsible Wales 

| Well-being goal description | Well-being determinants | Vulnerable groups | Issues identified in the workshop | Documents relevant to workshop issues | Relevant findings |
|-----------------------------------|---|---|--|---|--|
| Contribution to Global well-being | <ul style="list-style-type: none"> • Government policies • International policies • Gross Domestic Product • Economic development • Biological diversity • Climate change | <ul style="list-style-type: none"> • All | <ul style="list-style-type: none"> • Potential benefit from increased energy security. • Positive reinforcement of IACC concept of Anglesey as an 'Energy Island'. | <ul style="list-style-type: none"> • Project Need Case (Document 7.1) | <ul style="list-style-type: none"> • National Grid has signed connection agreements which will require new transmission infrastructure to connect new low-carbon electricity generation in North Wales. |

Summary: The Proposed Development would contribute positively to the issues raised at the workshop by reinforcing the transmission network to enable the connection of new low-carbon electricity generation.

4.5 RESPONSE TO WORKSHOP SUGGESTED MEASURES

4.5.1 The table below provides a response to the measures suggested by the workshop participants following the review of the Proposed Project in the context of the well-being goals.

| Table 27.18 Workshop Suggested Measures and Responses | | |
|--|---|--|
| Workshop Suggestions | Response | Relevant Documents |
| Transparency throughout the decision-making process and the implementation of the decision | National Grid has maintained a transparent approach through the evolution of the Proposed Development. This will continue after submission of the application. | Three stages of consultation and supporting documents, as reported in the Consultation Report (Document 6.1), Volume 5 and Volume 7. |
| There should be advance warnings on specific actions with clear and timely information | The construction of the Proposed Development will be carried out in accordance with the principles and measures set out in the CEMP. Advance warnings of specific actions will be carried out, as set out in the CEMP and other management plans. | Construction management plans, for example the CEMP (Document 7.4), and Noise and Vibration Management Plan (Document 7.9). All construction management plans are included in Volume 7 of the DCO application. |
| Ongoing community focused discussions once construction starts within individual settlements using local community venues for conversations about when and what actions will occur, how and where. | A set of measures is described in the CEMP to govern community engagement and public information. | CEMP Section 2.3 (Document 7.4) |

| Table 27.18 Workshop Suggested Measures and Responses | | |
|--|--|---|
| Workshop Suggestions | Response | Relevant Documents |
| Undersea or underground routeing | The reasons for the choice of connection are outlined in the Strategic Options Report. | Strategic Options Report (Document 7.2) |
| It needs to be recognised that there are complex links with other developments, services and the associated effects on them i.e. from the Wylfa Newydd Power Station. | All ES topics have considered the potential cumulative effects with the Wylfa Newydd Power Station and the findings of these assessments can be found within each topic chapter cumulative effects sections. | All ES topic chapters (Documents 5.7 to 5.18) and ES Chapter 20 Inter-Project Effects (Document 5.20) |
| There is a need for more joint working, planning and collaboration between National Grid and HNP to address any negative consequences and mitigate for these. This is particularly true in respect of overlapping construction phases. | National Grid has and continues to work closely with Horizon Nuclear Power. | N/A (ongoing liaison) |
| National Grid was asked to look further into the potential to influence and include certain points around workers within code of conduct in contracts including facilitating local job/apprentice opportunities. | Any main contractor appointed will be a member of the Considerate Constructors Scheme and will adhere to a Code of Conduct (GP31). The Code of Conduct will include sections on respecting the environment, respecting communities and | CEMP Section 2.4 (Document 7.4) |

| Table 27.18 Workshop Suggested Measures and Responses | | |
|--|---|---|
| Workshop Suggestions | Response | Relevant Documents |
| | respecting Welsh language and Welsh culture. The contractor will need to have a code of conduct in place for all construction workers. | |
| National Grid was asked to collate evidence in relation to its workforce profile. This will provide some insight into the potential demographics and behaviour in respect of subcontractors going home at weekends (or not). This can inform any planning considerations in terms of accommodation and the use of local services such as health etc. | The socio-economic assessment within the ES includes a workforce profile and an assessment of effects on employment. | ES Chapter 17 Socio Economics (Document 5.17). |
| An assessment of transport routes within given geographic boundaries is to be undertaken as requested by the Welsh Government. However, it was suggested that the boundary scope needs to be broadened and consider the impacts across the whole A55 corridor and the North Wales region. It should consider any planned improvements scheduled during the construction phase. | Chapter 13 of the ES includes an assessment of transport routes for use during the construction of the Proposed Development. The scope of the assessment was discussed and agreed with the relevant Highway Authorities however it was agreed that this did not need to include the whole of the A55 corridor and | ES Chapter 13 Traffic and Transport (Document 5.13). |

| Table 27.18 Workshop Suggested Measures and Responses | | |
|---|---|---|
| Workshop Suggestions | Response | Relevant Documents |
| | the North Wales region. | |
| The Traffic Management Plan needs to also consider the potentially large impact from standing traffic due to congestion at the bridge site. | The ES and the CTMP include measures to reduce effects on local highway links; as a result, no significant effects relating to driver delay are predicted for any of the highway links. | ES Chapter 13 Traffic and Transport (Document 5.13) CTMP (Document 7.5) |
| A noise assessment is currently in development which will inform further mitigation considerations around the reduction of noise. | The ES chapters for noise include noise assessments for the construction and operation of the Proposed Development. The ES also includes mitigation for construction noise. | ES Chapter 15 Construction Noise and Vibration (Document 5.15); and Chapter 16 Operational Noise (Document 5.16). |
| There is also a need to highlight and promote further the concern/customer phone-in service. | There is a specific measure (GP26) which sets out how complaints will be dealt with. | CEMP section 2.3 (Document 7.4) |
| There is a need for ongoing and considered promotion of tourism opportunities on the island both during and post construction. | As no significant effects are predicted for tourist attractions within the study area, no mitigation measures are required. | ES Chapter 17 Socio Economics (Document 5.17) section 9.4 Amenity effects – Tourist Attractions and Recreational Resources |
| There are huge opportunities to promote the rich cultural heritage that exists on the island – not just the natural | No significant effects are predicted for tourist attractions or the Welsh language; | ES Chapter 17 Socio Economics (Document 5.17), section 9.4 Amenity Effects – |

| Table 27.18 Workshop Suggested Measures and Responses | | |
|--|--|--|
| Workshop Suggestions | Response | Relevant Documents |
| environment but Welsh language and also any discovered or more accessible ancient monuments and artefacts near the connection route. | no mitigation measures are required. (though note paragraph 4.5.2 below this table) | Tourist Attractions and Recreational Resources WLIA (Document 5.26) |
| There is a need to strengthen the relationship between National Grid and services such as the Citizen's Advice Bureau. They could provide a valuable conduit between developers and residents. However, some additional funding may be needed to ensure the security of the service. | Section 2.3 of the CEMP sets out the Community Engagement and Public Information principles for the contractor to adhere to (GP21 to GP27). In addition to this, the CEMP includes policies relating to specific issues, for example AE31 sets out how complaints relating to dust will be managed. | CEMP (Document 7.4) |

4.5.2 In addition to the responses set out in the above table, there may also be opportunities to address some of the workshop suggestions through the Enhancement Strategy (**Document 7.13**).

5 Summary

- 5.1.1 This WBR has considered the potential effects of the Proposed Development having regard to each of the well-being goals. The following adverse effects have been identified: significant noise effects at two properties during construction; significant landscape effects at a small minority of Landscape Character Areas and one Special Landscape Area; and potential significant severance effects on the Pont Rhonwy Link (Anglesey). Overall, however, given the scale of the Proposed Development and the numbers of properties, highway links and landscape areas assessed, it is considered that there would be no significant adverse effects in respect of issues identified in the workshop related to the well-being goals.
- 5.1.2 There is one beneficial effect: the reinforcement of the transmission network and enabling the connection of new generation, low-carbon and potentially renewable energy in the future. This beneficial effect is considered to be significant.

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