Foel Fach Wind Farm Limited.

Foel Fach Wind Farm - Environmental Statement Volume II

Main Written Statement – Chapter 13

Project Reference: 664094

This chapter is summarised within the Non-Technical Summary of this Environmental Statement

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13 CLIMATE

13.1 Introduction

13.1.1 This chapter presents an assessment of likely significant effects arising from the construction, operation, and decommissioning of the Proposed Development upon the atmosphere and climate change.

13.1.2 This chapter is supported by Environmental Statement **(ES) Volume III**, **Appendix 13.1: Carbon Balance Assessment**.

13.1.3 The impacts of climate change are widely recognised as being one of the greatest global economic, environmental, and social challenges facing the world today. A major cause of climate change is a rise in the concentration and volume of greenhouse gases in the atmosphere, a significant contributor to which, is the use of fossil fuels to generate electricity. No form of electricity generation is completely carbon free; for onshore wind farms, and battery energy storage systems (BESS) there will be emissions resulting from the manufacture of components (embodied emissions), as well as emissions from both construction and decommissioning activities including transportation of people and goods. However, the purpose of the Proposed Development is to generate electricity from a renewable source of energy, avoiding the need for electrical generation from the combustion of fossil fuels. Consequently, the electricity that will be produced by the Proposed Development will result in a saving in emissions of greenhouse gas (GHG) emissions with associated environmental benefit.

13.1.4 Wind turbines and BESS provide an important mechanism for the reduction of carbon dioxide (CO_2), and other greenhouse gas (GHG) emissions into the atmosphere by reducing the consumption of fossil fuel generated electricity. However, as noted above, during their manufacture, construction and decommissioning, such infrastructure can result in GHG emissions themselves, particularly in such instances as where natural carbon stores, such as peat, are present and potentially impacted by the Proposed Development.

13.1.5 For this reason, this chapter provides an estimation of:

- the GHG emissions associated with the manufacture, construction, and decommissioning of the Proposed Development; and
- the contribution which the Proposed Development would make towards the reduction of emissions, which would otherwise be produced by fossil fuel power generation.

13.1.6 Taken together, these two elements indicate the whole-life "*carbon balance*" of the Proposed Development, together with an understanding of the "*emissions payback*" period. Once emissions resulting from the manufacture, construction and decommissioning of the Proposed Development have been "paid back" (offset) by the Proposed Development, all subsequent wind-generated electricity would displace a similar amount of conventionally generated electricity, thereby contributing to an overall GHG reduction.

13.1.7 Although often colloquially termed "*carbon balance*," the assessment includes all GHGs, not just carbon dioxide. The results are presented in tonnes of carbon dioxide equivalent (tCO_2e), where equivalence means having the same warming effect as CO_2 over 100 years.

13.2 Consultation and Scope

Scoping Direction

13.2.1 The scope of this assessment has been established through an ongoing scoping process. This has involved the production of an EIA Scoping Report (provided in **ES Volume III, Appendix 1.1: EIA Scoping Report**), which was submitted to PEDW on 22 July 2024. Further information on the scoping process can be found in ES **Volume II, Chapter 4: Approach to the EIA**.

13.2.2 The Scoping Direction, a copy of which is included in **ES Volume III, Appendix 1.2: EIS Scoping Direction and Addendum**, was received on 5 December 2024, with an addendum received on 18 December 2024. **Table 13.1** summarises the key Scoping Direction comments related to this assessment and sets out how these have been addressed by the Applicant.

Table 13.1 Summary of Scoping Direction Comments Relevant to this Climate Assessment

ID no.	Issue	Comment raised	Applicant response
ID. 33	*Data sources – flood risk*	Flood risk should be informed using the Flood Map for Planning (FMfP).	This matter pertains to the flood consequence assessment (FCA) which can be found in **ES Volume III, Appendix 7.1: Flood Consequences Assessment.**
ID. 34	*Mitigation*	The significance of peatlands in "*addressing the nature and climate change emergencies in Wales*" should be highlighted.	This matter pertains to the significance of peatlands, which will be covered in **ES Volume II, Chapter 7: Land, Soils and Water**.

Additional Consultation

13.2.3 EIA scoping consultation response from PEDW in September 2024, raised the comment, that the assessment should 'Estimate the release of carbon dioxide from the damage to peat for the construction of the wind farm'. This climate chapter directly addresses the release of carbon emissions from peat in the carbon balance assessment. For additional information concerning peat refer to **ES Volume II, Chapter 7: Land, Soils and Water**.

Scope of the Assessment

13.2.4 The technical scope of this assessment has been established through an ongoing scoping process. As a result of this process, the technical scope of the assessment reported in this chapter comprises a Lifecycle Assessment (LCA) of the GHG emissions from the construction, operation, and decommissioning of the Proposed Development, including embodied emissions.

13.2.5 The following matters are considered unlikely to result in likely significant effects, and therefore have been scoped out of the assessment, as agreed through the EIA scoping process:

- Climate change risk. UK Climate Projections 2018 projections (Met Office, 2024) suggest that climate change will lead to hotter drier summers, warmer wetter winters, increased likelihood of extreme weather events (e.g., heat waves, high rainfall events) and sea-level rise. Due to the embedded resilience of wind turbines to high heat and wind speeds, and the distance of the Site from coastline; these factors are not expected to significantly impact on the construction, operation, or decommissioning of the Proposed Development. Flooding is not expected to have any significant impact on the project, due both to the embedded resilience of wind turbines and the lack of recorded historical flooding within the Site boundary.

13.3 Methodology

13.3.1 This assessment has been undertaken in accordance with the following legislation, and with regard to the following planning policy and guidance. It should be noted that this chapter does not assess the compliance of the Proposed Development against relevant planning policy. Such an assessment is presented in the **Planning Statement**.

Legislation

- The Paris Agreement (UN, 2015)
- The Climate Change Act 2008 (amended 2019) (UK gov., 2019)
- Environment (Wales) Act 2016 (UK gov., 2016)
- Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017 (UK gov. , 2017)

National Planning Policy

- Future Wales – The National Plan 2040 (Welsh Government, 2020)
- Planning Policy Wales (Welsh Government Llywodraeth Cymru, 2024)

Local Planning Policy

- Gwynedd Council Local Development Plan - Anglesey and Gwynedd Joint Local Development Plan 2011 – 2026 (Gwynedd and Isle of Anglesey Councils, 2017)
- Gwynedd Council Carbon Management Plan (Manley, 2015)
- Gwynedd Council Climate and Nature Emergency Plan (Gwynedd Council, 2022)

Guidance

- Good Practice During Wind Farm Construction (SNA, 2024)
- Institute of Environmental Management and Assessment (IEMA) Environmental Impact Assessment Guide to: Assessing Greenhouse Gas Emissions and Evaluating their Significance (the 'IEMA Guide') (IEMA , 2022)
- PAS2080:2023 Carbon Management in Infrastructure (British Standards Institution, 2023)
- Royal Institute of Chartered Surveys (RICS) Whole life carbon assessment for the built environment (Royal Institution of Chartered Surveyors (RICS), 2023)

Baseline Characterisation

Extent of the Study Area

13.3.2 The sensitive receptor for GHG emissions is the global atmosphere, which is considered highly sensitive to GHG fluctuations. By proxy, the sensitive receptor can also be extended to the UK's commitments under the UK Climate Change Act 2008 (amended 2019), which aligned with the goals of the Paris Agreement, to avoid dangerous climate change by limiting global warming to well below 2 °C and pursuing efforts to limit it to 1.5 °C.

Desk Study

13.3.3 The assessment has been based on the methodology stated below (paragraph **13.3.5** to **13.3.16**, with data inputs provided by the relevant disciplines as referenced in **ES Volume III**, **Appendix 13.1: Carbon Balance Assessment** , and the outputs of the calculations also displayed within that same appendix. As this assessment relies on a specific methodological approach and internally derived data rather than external datasets or literature, confirmation of additional datasets is not applicable.

Field Study(s)

13.3.4 All baseline surveys and data collection were carried out by the respective discipline teams, primarily the teams responsible for collecting data relating to peat disturbance and the felling of forestry. The data sources for the inputs for the carbon calculator will be shown in **Appendix 13.1**.

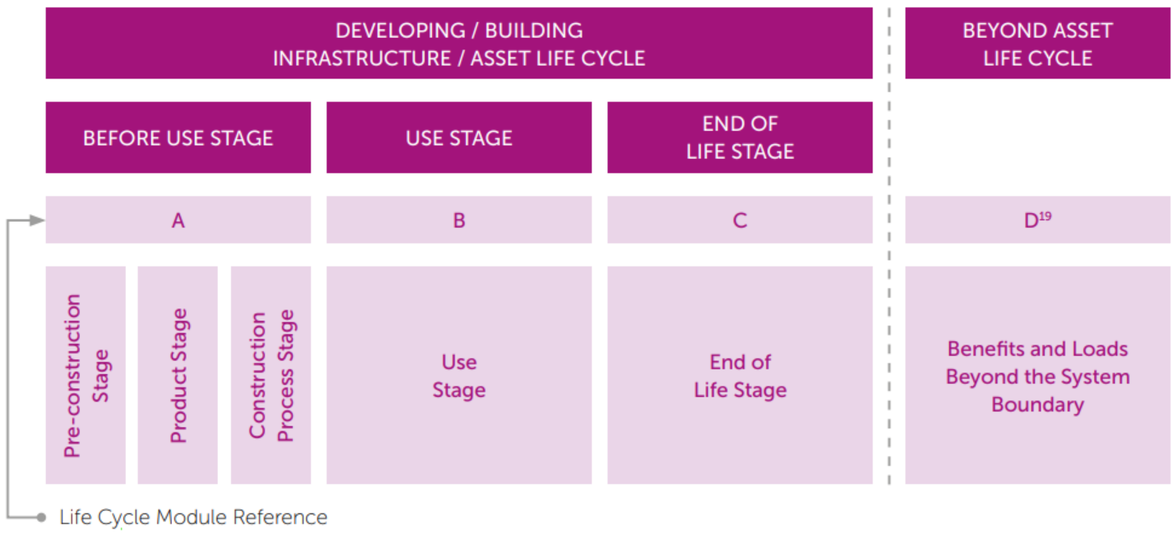
Assessment Methodology

13.3.5 Whilst the Proposed Development is expected to deliver GHG savings over its lifetime, it could also cause GHG emissions through:

- Disturbance of peatland; and
- Lifecycle emissions from turbines, BESS, and other infrastructure.

13.3.6 Emissions have been calculated using a lifecycle assessment of the Proposed Development, in line with the guidance established in the IEMA Guide (IEMA , 2022). **Figure 13.1** presents the simplified presentation of the modular approach that can be used for boundary definition and the gathering and reporting of information associated with the assessment.

Figure 13.1 IEMA's Modular Approach of Lifecycle Stages and Modules for EIA GHG Emissions Assessment (IEMA , 2022)



13.3.7 The GHG assessment of the Proposed Development has been undertaken using version 2.14.1 of the Scottish Government's Carbon Assessment Tool, which is the standard way of assessing GHG emissions and savings from onshore windfarm developments. The latest online version of the Scottish Government Carbon Calculator Tool (V1.8.1) was unavailable during the course of this assessment, owing to maintenance and a server upgrade. Version 2.14.1 of the Calculator was provided (as an Excel spreadsheet calculator) by the Scottish Government's Energy

Consents Unit as a suitable alternative. Despite the numbering convention, Version 2.14.1 is an older version of the tool, as the version numbering reset once the tool was moved online. As there is no Welsh equivalent of the tool, while the tool is distributed by the Scottish Government, the tool is an industry recognised approach to determine the carbon emissions associated with wind farm developments. The EIA Scoping Report (**Appendix 13.1**) identified that this assessment would be undertaken using this tool and no comments about the suitability of this approach have been raised by consultees through the EIA scoping process.

13.3.8 A detailed explanation of the Scottish Government's Carbon Assessment Tool methodology is found within **Appendix 13.1**. In brief, the calculator uses project-specific data from the construction of the Proposed Development (**ES Volume II, Chapter 2: Description of the Proposed Development**) and the receiving environment (**ES Volume II, Chapter 5 to Chapter 13**), particularly with regards to peat disturbance. This allows GHG emissions and avoidance to be quantified across the project lifecycle phases (construction, operation, and decommissioning/site restoration). Specific information concerning the embodied emissions of materials, which would account for turbine manufacture and delivery, is assumed directly through the Carbon Assessment Tool.

13.3.9 Calculations are provided for minimum, maximum and expected scenarios, whereby the minimum scenario assumes the lowest energy output and the lowest carbon losses from the Proposed Development, and the maximum assumes highest energy output and highest carbon losses.

13.3.10 The Scottish Government's Carbon Assessment Tool includes embodied emissions from turbines and their foundations, but not for BESS. As such, a supplementary lifecycle analysis of BESS has been conducted and integrated within the calculator outputs.

13.3.11 Overall, LCA studies on BESS have found that the manufacturing stage has the greatest impact in terms of embodied GHG emissions. Lithium-ion batteries are the most common choice of battery technology, with several examples of Lithium-ion BESS supporting wind and solar farms in the UK. A study undertaken by (Dahllöf, 2017) indicates that the cradle to grave emissions of a lithium-ion battery is in the region of 150-200 kg CO2e/kWh. Although this assessment was undertaken for batteries for light-duty vehicles, (Lait and Walker , 2022) suggest that there is a near-linear scale of GHG emissions when battery size increases.

13.3.12 The expected scenario reported in this Chapter is based upon 10 turbines with an anticipated installed capacity of 70.0 MW and conservative capacity factor of 25% provided by DESNZ (DUKES, 2025). A BESS with 18.8 MWh energy storage capacity is proposed as part of the Proposed Development.

13.3.13 The GHG emissions and savings are combined to establish the overall (net) GHG effect of the Proposed Development, as well as its carbon payback period.

13.3.14 Results from this assessment are reported in accordance with IEMA's Guidance to Assessing GHG Significance (IEMA , 2022).

Assessment Criteria

13.3.15 Given the international urgency of climate change, the sensitivity of the receptor (i.e. global atmosphere) to fluctuations in GHG emissions is considered 'Very High'. The magnitude of the impact is linked to the volume of GHG emissions emitted or avoided. However, in accordance with the IEMA Guide (IEMA , 2022), it is not considered necessary to determine the sensitivity of the receptor or the magnitude of the impact in order to assess the significance of the effects of GHG emissions. Therefore, no further reference to receptor sensitivity or impact magnitude has been made in this ES chapter and the level of the effect, and whether or not it is significant, has been determined through consideration of the quantity, and timing, of GHG emissions and the likelihood of avoiding severe climate change. **Table 13.2** presents the significance criteria used for the assessment.

13.3.16 Aligned with the IEMA Guide (IEMA , 2022), any project that causes GHG to be avoided, or removed from the atmosphere, has a beneficial effect that is always significant. In such a scenario, the project substantially exceeds the national net zero requirements and is thus aligned with the goal of the Paris Agreement to limit temperature rise to well below 2 °C, aiming for 1.5 °C.

Table 13.2 IEMA's Guidance to Assessing GHG Significance (2022) Framework for Assessment of Significant Effects

Significance	Level	Criteria
Significant	Major adverse	Project adopts a business-as-usual approach, not compatible with the national Net Zero trajectory, or aligned with the goals of the Paris Agreement (i.e., a science-based 1.5 °C trajectory). GHG impacts are not mitigated or reduced in line with local or national policy for projects of this type.
	Moderate adverse	Project's GHG impacts are partially mitigated, and may partially meet up-to-date policy; however emissions are still not compatible with the national Net Zero trajectory, or aligned with the goals of the Paris Agreement.
Not significant	Minor adverse	Project may have residual emissions, but the project is compatible with the goals of the Paris Agreement, complying with up-to-date policy and good practice.
	Negligible	Project has minimal residual emissions and goes substantially beyond the goals of the Paris Agreement, complying with up-to-date policy and best practice.
Significant	Beneficial	Project causes GHG emissions to be avoided or removed from the atmosphere, substantially exceeding the goals of the Paris Agreement with a positive climate impact.

13.4 Baseline Conditions

Existing Baseline

13.4.1 Baseline environmental conditions in relation to potential climate change impacts from the Proposed Development include existing carbon stored in the Site (such as peat and forestry) that could be impacted by the Proposed Development resulting in CO_2 and other GHG emissions, such as Methane (CH_4) Nitrogen Oxide (NO_x) and Sulfur Dioxide (SO_2).

Peat and Forestry

13.4.2 The Site area compromises of semi-improved acid grassland, acid flush, marshy grassland, with areas of wet heath acid flush and fen. Areas of peat soil are restricted to pockets of boggy ground, with a higher concentration in the north-eastern part of the Site.

13.4.3 Small, wooded areas are present within the Site. For further information on the peatland habitat within the Site, refer to **ES Volume II, Chapter 7: Land, Soils and Water.**

Sensitive Receptors

13.4.4 The sensitive receptor for GHG emissions is the global atmosphere, which is considered highly sensitive to GHG fluctuations in line with IEMA (IEMA , 2022).

Future Baseline in the Absence of the Proposed Development

13.4.5 No change is expected for the future baseline when compared to the current baseline. It is unlikely that under a future 'business-as-usual' scenario there would be any significant changes to the amount of GHG emissions from the Site, either positive or negative.

13.5 Mitigation Embedded into the Design

13.5.1 This assessment has been based on the principle that measures have been 'embedded' into the design of the Proposed Development to remove potential significant effects as far as practicable, for example by the considered placement of infrastructure. **ES Volume II**, **Chapter 2: Description of the Proposed Development**, identifies the design mitigation that has been embedded into the design of the Proposed Development. The embedded mitigation relevant to this assessment is detailed in **Table 13.3.**

Table 13.3 Embedded Mitigation

Embedded mitigation measure relevant to climate	Function
Turbines and other infrastructure have been sited in areas that cause minimal peat disturbance. (Further details provided in **ES Volume II, Chapter 7: Land, Soils and Water**).	This reduces any associated GHG emissions from land use change.
Turbines and other infrastructure have been sited in areas to optimize renewable energy generation as far as practicable within the range of environmental and technical constraints that influence the design.	This maximises the renewable energy output, reflected in total anticipated GHG Savings.

13.6 Assessment of Likely Effects (without Additional Mitigation)

13.6.1 The results of the carbon balance assessment carried out for the Proposed Development are presented below for each project phase. The project-specific input and output data is contained within **Appendix 13.1** alongside the detailed methodology of the calculator.

Construction and Decommissioning

13.6.2 **Table 13.4** presents the results of the GHG balance assessment for the manufacture, construction, and decommissioning phases of the Proposed Development. Due to the characteristics of the Site, the impact of the Proposed Development on peat results in a net savings of emissions, resulting in a negative value for 'Losses from soil organic matter'. Total projected emissions are 41,393 tCO_2e.

Table 13.4 Predicted GHG Emissions from Wind Farm Manufacture, Construction, and Decommissioning

Source of GHG Emissions/Savings	GHG Emissions (tCO_2e)	% of Total Emissions
Losses due to turbine manufacture, construction and decommissioning	65,723	159%
Losses due to back-up power generation	0	0%
Losses due to reduced carbon fixing potential	1,747	4%
Losses from soil organic matter	-29,843	-72%
Losses due to Dissolved Oxygen Content and Portable Oxygen Content	5	0%

Source of GHG Emissions/Savings	GHG Emissions (tCO_2e)	% of Total Emissions
Losses due to forestry felling	0	0%
Losses due to BESS manufacture, construction and decommissioning	3,760	9%
Total	41,393	100%

13.6.3 Any post-decommissioning site restoration and enhancement work, such as blocking drainage ditches to promote re-wetting, would be aligned with the outline Habitat Management Plan (**ES Volume III, Appendix 5.4: Outline Habitat Management Plan**). Such activities can incur GHG savings by promoting growth of peat or other natural carbon stores. Other management options may occur during the Habitat Management Planning stage.

13.6.4 **Table 13.5** shows the total CO_2 gains due to site improvement during post-decommissioning (tCO_2e).

Table 13.5 Total CO_2 savings due to Improvement of the Site (tCO_2e)

Improvement	GHG Emissions (tCO_2e)	% of total
Change in emissions due to improvement of degraded bogs	-107	100%
Change in emissions due to improvement of felled forestry	0	0%
Change in emissions due to restoration of peat from borrow pits	0	0%
Change in emissions due to removal of drainage from foundations and hardstanding	0	0%
Total change in emissions due to improvements	-107	100%

13.6.5 Taking into account the predicted GHG emissions from wind turbine manufacture, construction and decommissioning alongside those savings from the improvement of the Site, the total net GHG emissions from the Proposed Development are expected to be 41,285 tCO_2e (**Table 13.6**).

Table 13.6 Total net GHG emissions from the Proposed Development

	GHG emissions (tCO_2e)	GHG Savings (tCO_2e)
Predicted GHG emissions from wind turbine manufacture, construction, and decommissioning	41,393	0

	GHG emissions (tCO_2e)	GHG Savings (tCO_2e)
Total CO_2 gains/savings due to improvement of the Site	0	- 107
Total net GHG emissions from wind farm manufacture, construction, decommissioning and improvement of site	41,285	

Operation

13.6.6 The operational phase of the Proposed Development (40 years) has the greatest potential for GHG savings. At this stage, GHG emissions from construction activities would have ceased and operation of the turbines would generate zero-carbon electricity for the remainder of their lifespan.

13.6.7 Due to the inherent variability of electricity generated from renewable energy sources, it is recognised that conventional generation facilities may be required to stabilise supply. Nayak *et al.* (2008) refers to ‘backup power generation’ and identifies that the balancing capacity required is estimated as 5% of the rated capacity of the wind farm. However, the inclusion of BESS within the Proposed Development removes the need for backup power generation, allowing the input value for the Proposed Development to be 0%.

13.6.8 **Table 13.7** presents projected annual emissions savings as measured against the fossil fuel-mix (electricity that is sourced through the combustion of fossil fuels alone) and grid-mix (electricity from the National Grid; this could include be sourced from fossil fuels, renewable energy, nuclear, etc) of electricity.

Table 13.7 Annual Emissions Savings Against Fossil Fuel Electricity Generation Mix

GHG savings*	GHG savings (tCO_2e)		
	Expected value	Minimum value	Maximum value
Grid mix electricity generation			
GHG savings per year	32,640	28,560	35,904
Lifetime GHG savings*	1,264,305	1,094,954	1,394,867
Fossil fuel mix electricity generation			
GHG savings per year	66,856	58,499	73,542
Lifetime GHG savings*	2,632,967	2,292,533	2,900,395
Operational GHG savings based over a lifetime of 40 years, and taking into account those emissions caused by the Proposed Development			

Emissions Payback Period

13.6.9 The emissions payback time can be calculated by dividing the total expected emissions caused by the Proposed Development for the manufacture, construction and decommissioning phases (41,393 tCO2e**: Table 13.6**) by expected annual savings from operation (**Table 13.7**). This gives a predicted emissions payback of 1.3 years against a grid-mix, and 0.6 years against a fossil-fuel mix electricity generation.

Table 13.8 Carbon Payback Period of the Proposed Development for a Range of Capacity Factors

	Carbon payback time (years)		
	Expected value	Minimum value	Maximum value
Grid mix electricity generation	1.3	1.1	1.7
Fossil fuel mix electricity generation	0.6	0.6	0.8

13.7 Additional Mitigation Measures

13.7.1 It has been assumed that all activities during construction, operation and decommissioning would be conducted in accordance with good practice guidance.

13.7.2 Relevant guidance includes:

- Good Practice During Wind Farm Construction, NatureScot et al. (2019); and
- Life Extension and Decommissioning of Onshore Windfarms, SEPA (2016).

13.7.3 Further, it is assumed that mitigation outlined in in the other technical chapters of the ES (**Chapters 5 to 13**) would be implemented to reduce environmental impacts, including GHG emissions, and improve effectiveness of restoration works.

13.7.4 As no adverse effects in relation to climate are predicted, no additional mitigation measures are proposed.

13.8 Assessment of Residual Effects (with Additional Mitigation)

Net GHG Effect

13.8.1 Given the Proposed Development's projected operational life of 40 years, its total GHG savings are expected to be 2,632,967 tCO_2e against a fossil fuel mix of electricity, inclusive of construction, operation, and decommissioning, and 1,264,305 tCO_2e against a grid mix of electricity. This is assessed as **significant** and **beneficial effect**, which is long-term, direct, and permanent.

13.9 Opportunities for Environmental Enhancement

13.9.1 The Proposed Development is expected to have a net beneficial impact on the climate, in that it will reduce GHG emissions associated with electricity consumption on a national scale. Opportunities exist to further increase the environmental benefit of the Proposed Development by ensuring that emissions associated with the construction and decommissioning process are kept to a minimum. This can be ensured by the adoption of various mitigation measures as detailed in **ES Volume II, Chapter 4: Approach to the EIA** and **ES Volume II, Chapter 15: Summary of Effects**.

13.10 Difficulties and Uncertainties

13.10.1 The accuracy of a GHG assessment depends on the quality of the data provided. Primary data should always be used where available. Where it is not possible to collect this data, in view of the fact that this assessment represents a forecast of emissions and some information may not yet be known, secondary data (such as estimates, extrapolations, benchmarks and proxy data such as distance travelled) will be used. Assessments based largely on secondary data should only be viewed as an estimate of GHG emissions impact, and actual emissions may vary. Where secondary data has been used, it has been clearly set out**, Appendix 13.1**.

13.10.2 The presence of BESS necessitated manual modification to the outputs of the Scottish Government Carbon Assessment Tool to account for the associated embodied emissions. These have been clearly marked within **Appendix 13.1**.

13.10.3 The inputs to the Scottish Government Carbon Assessment Tool were obtained from the relevant topic specialists. Any uncertainties concerning the data used within the calculations (**Appendix 13.1**), will have been expanded upon in their respective chapter.

13.11 Cumulative Effects

13.11.1 GHG emissions are inherently cumulative, as all emissions have the same per-unit impact on the same ultimate receptor. The impact is climate change, or global warming, caused by the radiative forcing effects of GHGs in the atmosphere, and the affected receptor is the global climate and all the ecosystems and biomes that depend on it.

13.11.2 The Proposed Development will achieve emissions savings by reducing the consumption of fossil fuel generated mains electricity. These savings will outweigh the necessary GHG emissions resulting from manufacturing, constructing, and decommissioning of the Development. Once emissions from these sources are offset by the Development, then each subsequent unit of wind generated electricity would displace a unit of conventionally generated electricity, thereby contributing to the overall reduction in emissions into the atmosphere.

13.11.3 In accordance with the IEMA Guide (IEMA , 2022), "All global cumulative GHG sources are relevant to the effect on climate change, and this should be taken into account in defining the receptor (the atmospheric concentration of GHGs) as being of 'high' sensitivity to further emissions. Effects of GHG emissions from specific cumulative projects therefore in general should not be individually assessed, as there is no basis for selecting any particular (or more than one) cumulative project that has GHG emissions for assessment over any other." Therefore, a detailed cumulative assessment has not been undertaken. However, generally the cumulative effect of multiple wind farms and renewable energy developments in the nearby area, and in Wales as a whole, would have an overall beneficial cumulative effect on the climate and Wales's ability to reach its Net Zero targets.

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