Appendix D.1

Climate Change Policy and Guidance

Climate Change Policy Context

To satisfy the requirements of the Environmental Impact Assessment (EIA) Directive, a Greenhouse Gas (GHG) Emissions Assessment and Climate Change Risk Assessment has been undertaken for the Proposed Development. This Appendix sets out the guidance and standards that have been used to inform the scope, methodology, identification of likely significant effects and potential mitigation measures.

GHG Emissions Assessment

International Agreements

Paris Agreement 2015

The 2015 Paris Agreement (UN, 2015) declared a long-term temperature target to strengthen the global response to the threat of climate change. This target is to keep a global temperature rise this *century "well below 2 degrees Celsius above pre-industrial levels and to limit the temperature increase even further to 1.5 degrees Celsius"* (the '1.5 Degrees Target').

In 2015 the UK Government signed the Paris Agreement, and in 2016, ratified it. Ratifying the Paris Agreement formally bound the UK to the "*well below 2 degrees*" target (in 2018 reduced further to the 1.5 Degrees Target) and requires the UK Government to translate that commitment into legislative requirements. Through national legislation, the responsibility to realise the 1.5 Degrees Target disseminates from the UK Government to Local Planning Authorities (LPAs) and, ultimately, developers.

UN Climate Change Conferences (COP)

The COP summits bring parties together to accelerate action towards the goals of the Paris Agreement and the UN Framework Convention on Climate Change (UNFCCC).

COP29 (2024) took place in Baku, Azerbaijan where developed nations committed to a new climate finance goal of $300 billion annually by 2035 to help developing countries cope with climate change impacts and accelerate the energy transition. Additionally, rules for international carbon markets were established. The UK Prime Minister announced the country's updated Nationally Determined Contributions (NDCs) for 2025, which are commitments made by countries to reduce their greenhouse gas emissions and adapt to the impacts of climate change. aiming to build momentum towards achieving net zero emissions.

COP28 was held in Dubai, UAE in November 2023. COP28 was the first year in which all nations agreed there was a need to transition away from the use of fossil fuels in energy systems.

COP27 was held in Sharm el Sheikh, Egypt in November 2022. Four key themes were identified which were mitigation, adaptation, finance and collaboration. One of the key outcomes was agreement to compensate nations for loss and damage from climate change through establishing a fund.

The COP26 summit brought parties together to accelerate action towards the goals of the Paris Agreement and the UN Framework Convention on Climate Change. COP26 increased ambition and action from countries to keep the hope of limiting the rise in global temperature to 1.5°C. Glasgow focused on driving action across the globe on mitigation, adaptation, finance and collaboration. The UK, along with other Nations, adopted the Glasgow Climate Pact (UNFCCC, 2021) at the COP26 UN climate conference in November 2021. The Pact increases the climate ambition and action from the Paris Agreement in 2015, and sets out new rules to reduce greenhouse gas emissions including phasing down coal and creation of a global carbon market.

Legislation

Climate Change Act 2008 and 2050 Target Amendment Order 2019

The Climate Change Act (CCA) 2008 (UK Government, 2019) established the context for government action on climate change, providing a legally binding framework for the UK to reduce GHG emissions and develop the UK's ability to adapt to climate change.

In 2019, the CCA 2008 was amended to include a revision of the previous aim of 80% reduction of GHG emissions compared to 1990 levels by 2050. The CCA 2008 now mandates a net zero target by 2050:

"*the net UK carbon account for the year 2050 is at least 100% lower than the 1990 baseline*."

To reach net zero carbon emissions, the UK government has set legally binding carbon budgets, capping the amount of GHG emitted in the UK over a 5-year period.

Environment (Wales) Act 2016

The Environment (Wales) Act (2016) places a legal obligation on Welsh Ministers to ensure that net carbon emissions in 2050 are at least 80% lower than baseline levels observed in 1990 or 1995. This act requires interim emission targets to be set for 2020, 2030 and 2040 to assist in evaluating progress made towards meeting the long-term 2050 target. This also involves a carbon budget to be set every 5 years. In March 2021, the Climate Change (Wales) Regulation (2021) introduced an updated aim of achieving net zero emissions by 2050, in line with the UK commitments outlined in CCA 2008.

The net Welsh emissions operate identically to that of the UK, except that recorded GHG emissions are from sources in Wales only; including international aviation and shipping which are attributable to Wales (Welsh Government, 2021).

UK Carbon Budget Orders 2009, 2011, 2016 and 2021

The Carbon Budget Orders (CBOs) are made in accordance with the duty to set carbon budgets as required by the CCA 2008. The CBOs provide the legal requirement to meet the carbon budgets set out in **Table 8.1**.

Table 8.1: UK Carbon Budgets

Carbon Budget	Carbon Budget Level	Reduction Below 1990 Level
3rd carbon budget (2018- 2022)	2,544 $MtCO_2e$	37% by 2020
4th carbon budget (2023- 2027)	1,950 $MtCO_2e$	51% by 2025
5th carbon budget (2028- 2032)	1,725 $MtCO_2e$	57% by 2030
6th carbon budget (2033-2037)	965 $MtCO_2e$	78% by 2035
7th carbon budget (2038-2042)	535 $MtCO_2e$	87% by 2040

Carbon Budget Orders (Wales) 2016, 2021 and 2026

Targets and carbon budgets were established by Senedd Cymru in March 2021, as required by CCA 2008 and the Environment (Wales) Act 2016. These are set out in **Table 8.2** below:

Table 8.2: Carbon Budgets (Wales)

Budget/Target	**Amount**
Carbon Budget 1 (2016-2020)	Average 23% reduction
Carbon Budget 1 International offset limit *	10%
Carbon Budget 2 (2021-2025)	Average 37% reduction
Carbon budget 2 offset limit	0%
Carbon budget 3 (2026-2030)	Average 58% reduction
2030 target	63% reduction
2040 target	89% reduction
2050 target	At least 100% reduction (net zero)

*** International Offset Limit –** this acts as a restriction on how much of a country's emission reduction target can be met through offsetting to other international sources rather than via direct reductions.

The Carbon Budget Delivery Plan

The Carbon Budget Delivery Plan (CBDP) was published in March 2023 and sets out the UK Government's detailed proposals to enable the delivery of Carbon Budgets 4, 5 and 6 (i.e. to the end of 2037) in accordance with the UK's 2050 net zero carbon commitment under the Climate Change Act 2008. It details how different sectors will contribute to the overall reduction targets and that the necessary actions are taken to stay within the set limits This approach helps to balance economic growth with the need to reduce emissions.

The CBDP was the subject of a successful legal challenge in R(Friends of the Earth) v Secretary of State for Energy Security and Net Zero [2024] EWHC 995 (Admin) as a consequence of which the Secretary of State will be required to publish a revised plan within 12 months. In the absence of any such revised publication, reference is made to the content of the CBDP as it was published below. It is considered that the nature of the legal challenge does not affect the ability to produce this ES Chapter.

The Planning and Energy Act (England and Wales) 2008

The Planning and Energy Act (2008) enables local planning authorities to set requirements for energy use and energy efficiency in their development plans (IEA, 2019). This includes imposing reasonable requirements for a proportion of energy used in development to be low carbon energy and from sources in the locality of the development. In response, the Welsh Government issued a 'Planning for Climate Change' consultation paper. This document identifies possible changes in national planning policy including the requirement for future development to incorporate alternative forms of energy generation, including renewables.

Energy Act 2023

The Energy Act (2023) is used to help increase the resilience and reliability of energy systems across the UK, support the delivery of the UK's climate change commitments of reaching net zero by 2050, and help reform the UK's energy system. Three key pillars of this act include: reforming the UK's energy system so it is fit for the future, maintaining the safety of the energy sector, and increasing the security and resilience of the UK's energy system.

EIA Regulations (Wales) 2017

Schedule 4 of the 2017 EIA Regulations (Wales, 2017) requires an Environmental Statement to include:

"*4. A description of the factors specified in regulation 4(2) likely to be significantly affected by the development, climate (for example greenhouse gas emissions, impacts relevant to adaptation)*

5. A description of the likely significant effects of the development on the environment resulting from, inter alia:

(f) the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change;"

National Policy and Welsh Government Strategies

Net Zero Wales (October 2021)

In 2021, the Welsh Government published Net Zero Wales which explains policies and proposals in respect of energy generation. The following goals were set:

- 1 GW additional renewable energy capacity installed by 2025
- No new build unabated fossil fuel generation in Wales form 2021. All current unabated gas generation removed from the system by 2035.

Policy 22 of Net Zero Wales seeks to increase the delivery of renewable energy developments through the planning systems. A positive policy framework for the consenting and development of large-scale renewable energy projects and associated infrastructure.

All goals from Net Zero Wales are legally binding and must be achieved.

National Infrastructure Strategy – Fairer, Faster and Greener (November 2020)

The National Infrastructure Strategy explains the UK Government's plans to deliver "an infrastructure revolution" on the pathway to net zero by 2050. To do so the strategy explains:

"To achieve net zero by 2050, the power system will need to be virtually carbon free and significantly larger to cope with the additional demand from electrification in transport, heating and some industrial processes. This expanded system required increase investments in network infrastructure, sources of flexibility, such as interconnection, demand response and storage, together with enough low carbon generation capacity to provide the vast majority of the UK's electricity needs."

The Strategy further explains that a significant increase of solar is needed to achieve net zero. The Government proposes to continue supporting renewables through the Contracts for Difference subsidy mechanisms, which includes solar technologies.

Review of Wales' Energy Targets (January 2023)

In January 2023, the Welsh Government announced a proposal to alter renewable energy targets. A consultation was thus launched on 24th January 2023 to 18th April 2023, seeking views on revising the current targets listed below:

- Wales to generate electricity equal to 70% of its consumption from renewable sources by 2030
- 1GW of renewable energy capacity in Wales to be locally owned by 2030
- An expectation for all new energy developments in Wales to have at least an element of local ownership from 2020

A summary of consultation information was then produced, which will be used to finalise the new renewable energy target for Wales. The Welsh Government collected feedback on local ownership, pace of energy consumption after 2035, heat pumps and employment in the energy sector. This feedback will be used to progress any new targets and will be reported on in the Energy Generation in Wales annual reports.

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

The Well-being of Future Generations (Wales) Act 2015 states that all public bodies in Wales have a duty to secure sustainable development to achieve the 7 well-being goals. All planning applications in Wales need to demonstrate how they align to the following well-being goals:

- A Prosperous Wales
- A Resilient Wales
- A More Equal Wales
- A Healthier Wales
- A Wales of Cohesive Communities
- A Wales of Vibrant Culture and Thriving Welsh Language
- A Globally Responsive Wales

Key matters highlighted in the guidance for public bodies to focus attention are decarbonisation, including the use of clean energy, and sustainable consumption and production.

Renewable Energy Deep Dive: Recommendations (March 2024)

The Renewable Energy Deep Dive is a periodic biannual review regarding renewable energy delivery at present. The most recent update within March 2024 sets the renewable energy vision for Wales, which is to accelerate actions in reducing energy demand and maximising local ownership of renewable energy. In regard to the national energy plan, the recommendations include identifying gaps to adequate match energy generation and energy demand.

Future Wales National Plan 2040 (2021)

Future Wales is the Welsh Government's National Development Framework and is the highest tier of the Proposed Development Plan in Wales. Future Wales provides spatial direction for development in Wales and the policy framework for SDPs and LDPs at the regional and local level. These plans are required to conform to Future Wales and planning decisions at every level must be taken in accordance with the Development Plan.

Future Wales states:

"Wales is abundant in opportunities to generate renewable energy, and the Welsh Government is committed to maximizing this potential. Generating renewable energy is a key part of our commitment to decarbonization and tackling climate emergency…

Wales can become a world leader in renewable energy technologies. Our wind and tidal resources, our potential for solar generation, our support for both large and community scaled projects and our commitment to ensuring the planning system provides a strong lead for renewable energy development, mean we are well placed to support the renewable sector, attract new investment and reduce carbon emissions."

Key to this framework are Policies 17 and 18, which set out criteria for renewable and low-carbon energy projects.

Planning Policy Wales 2024 and the Net Zero Strategic Plan 2022

The Welsh Government published Planning Policy Wales Edition 12 (PPW) in February 2024. PPW provides the key principles for the planning system in Wales, in terms of what development plans and decisions must achieve and how development should deliver the best possible outcomes. It is not part of the Development Plan however, and according to Future Wales is a material consideration in the planning process.

Its key principles are:

- Growing our economy in a sustainable manner;
- Making best use of resources;
- Facilitating accessible and healthy environments;
- Creating and sustaining communities; and
- Maximising environmental protection and limiting environmental impact.

PPW seeks to reduce fossil fuel usage in energy generation but recognises the need for an appropriate mix of energy provision, which maximises benefits to the economy and communities whilst minimising potential environmental and social impacts. To facilitate the original PPW, the Net Zero Strategic Plan (2022) was published which outlines the Welsh Government's priority decarbonisation initiatives.

Prosperity for All: A Low Carbon Wales 2019

Prosperity for All: A Low Carbon Wales was published in March 2019 is the Welsh Government's first statutory decarbonisation plan. It sets out the Welsh Government's approach to cut emissions and increase efficiency in a way that maximises wider benefits for Wales, ensuring a fairer and healthier society. It sets out a hundred policies and proposals that directly reduce emissions and support the growth of the low carbon economy. The plan also recognises that energy storage and flexibility services will need to be provided to integrate with new renewable energy development of large-scale renewable energy projects and associated infrastructure.

Welsh Government Climate Emergency

In April 2019, the Welsh Government declared a climate emergency and in June 2019 accepted the CCC's recommendation for a new emissions target but set a more ambitious target of net zero emissions no later than 2050.

North Wales Energy Strategy 2021

This regional strategy addresses key priorities set by the North Wales Economic Ambition Board and is supported by the Welsh Government. It aims to deliver maximum benefits to communities from the process of transitioning to a net zero economy. This includes harnessing local carbon resources to diversify the energy mix, to improve energy efficiency, accelerate the decarbonisation of North Wales' building stock and to achieve a shift to lower carbon transport. These priorities align with the aim to significantly reduce greenhouse emissions, and the Welsh Government's goal of being net zero by 2050.

Local Planning Policy

The Site is within the administrative authorities of Denbighshire County Council (DCC) and Conwy County Borough Council (CCBC).

Denbighshire Local Development Plan

DCC currently assesses planning proposals against their Local Development Plan (LDP) 2006 to 2021, adopted in June 2013. The LDP highlights how the council expects development to be completed by the year 2021. At the time of writing, we are aware that the Council is in the process of preparing its Replacement LDP. The Denbighshire replacement LDP 2018 – 2033 is being progressed with the Preferred Strategy having been approved by the Council on 9th May 2023. The Council is working towards the next formal consultation stage for the LDP which will be the Deposit Plan. The Deposit LDP will contain detailed policies and land allocations. This replacement plan is proposed to be implemented in September 2025.

A number of LDP polices are particularly relevant to the Proposed Development, including:

- Policy VOE10 – Renewable energy technologies;
- Policy PSE15 – Safeguarding development and good standard design;
- Policy RD1 – Sustainable development and good standard design;
- Policy RD5 – The Welsh language and social and cultural fabrics of communities;
- Policy PSE5 – Rural economy;
- Policy VOE1 – Key Areas of importance;
- Policy VOE2 – Area of Outstanding Natural Beauty;
- Policy VOE5 – Conservation of natural resource; and
- Policy VOE6 – Water Management.

Conwy Local Development Plan

CCBC currently assesses planning proposals against their LDP 2007 to 2022, adopted in October 2013. The LDP is relevant for the 'Plan Area' that considers land in Conwy outside of Snowdonia National Park. A Replacement LDP is also being prepared for CCBC.

The LDP is framed around a series of priorities which state that:

'The Council is seeking to ensure that all new development contributes towards sustainable principles and reduce or minimises carbon emissions, and is resilient to future implications of climate change…' and that the *'Efficient use of natural resources, particularly the burning of fossil fuels, is one of the main means of reducing greenhouse gas emissions…;* As part of CCBC's Natural Environment Strategic Statement, it states that:

'As well as protecting the local environment, new development must also seek to limit the impact of the global environment by minimising resource use, increasing energy efficiency and reducing carbon emissions'

As part of CCBC's Renewable Energy and Sustainability in New Development Strategic Statement, the council will require that:

'New development is designed to minimise the need to travel…thereby reducing carbon emissions'

Local Area Energy Plans

Conwy and Denbighshire adopted their respective Local Area Energy Plans (LAEPs) in March 2022 and August 2024. These plans were created as part of a wider national goal of facilitating the net zero transition. Ambition North Wales worked with local authorities in the area (including Denbighshire and Conwy) to help create a comprehensive strategy for decarbonising local energy systems. The goal of these plans is to align with Wales's broader Net Zero goals for development as well as to help with job creation and a reduction in carbon emissions from the built environment, transport, industry and commerce.

Climate Emergency

Denbighshire County Council (DCC)

In July 2019, DCC declared a Climate Change and Ecological Emergency. Following this, DCC prepared a Climate and Nature Strategy 2021-22 to 2029-30 which outlines tasks the council will complete to become Net Carbon Zero and Ecologically positive by 2030. The most recent version of this strategy is the 'Year 3 Updated Version'. The council is aware of the need for funding models for renewable power projects. DCC is committed to reducing emissions, whilst increasing absorption of carbon through land-use change and encourage changes in consumer habits.

Conwy County Borough Council (CCBC)

In May 2019, CCBC unanimously declared a Climate Emergency. The council made the commitment to provide a lively, viable and sustainable home for future generations. To deliver carbon targets, CCBC established the Climate Challenge Programme. This programme consists of 8 projects that work to decarbonise the borough's contributions to GHG emissions by targeting emissions from the council's estate and the counties power generation.

Standards and Guidance

The following standards and guidance documents have been used to inform the carbon scope, methodology, identify likely significant effects and potential mitigation measures.

Environmental Impact Assessment Guide to: Assessing Greenhouse Gas Emission and Significance

The ISEP guidance defines significance of GHG emissions:

"The crux of significance is not whether a project emits GHG emissions, nor even the magnitude of GHG emissions alone, but whether it contributes to reducing GHG emissions relative to a comparable baseline consistent with a trajectory towards net zero by 2050.

Often a project will cause a change in GHG emissions compared to the baseline which should be assessed. When setting this impact into context to determine significance, it is important to consider the net zero trajectory in line with the Paris Agreement's 1.5°C pathway".

World Business Council for Sustainable Development (WBCSD) and World Resources Institute (WRI) Greenhouse Gas Protocol guidance

The Greenhouse Gas Protocol (WBCSD and WRI, 2004) identifies emissions sources as falling under three "scopes", which are defined to enable GHG accounting and reporting. These scopes are defined below:

- **Scope 1: Direct GHG emissions**: direct GHG emissions occur from sources that are owned or controlled by the company, for example, emissions from combustion in owned or controlled boilers, furnaces, vehicles, etc.; emissions from chemical production in owned or controlled process

equipment. GHG emissions not covered by the Kyoto Protocol, e.g. CFCs, NOx, etc. shall not be included in scope 1 but may be reported separately.

- **Scope 2: Electricity indirect GHG emissions**: Scope 2 accounts for GHG emissions from the generation of purchased electricity consumed by the company. Purchased electricity is defined as electricity that is purchased or otherwise brought into the organizational boundary of the company. Scope 2 emissions physically occur at the facility where electricity is generated.

- **Scope 3: Other indirect GHG emissions**: Scope 3 is an optional reporting category that allows for the treatment of all other indirect emissions. Scope 3 emissions are a consequence of the activities of the company, but occur from sources not owned or controlled by the company. Some examples of scope 3 activities are extraction and production of purchased materials; transportation of purchased fuels; and use of sold products and services.

Publicly Available Standard 2080: Carbon Management in Infrastructure

PAS 2080 (BSI, 2023) sets out a carbon management process for the delivery of infrastructure. PAS 2080 defines the life cycle stages of an infrastructure project and the primary sources of GHG emissions. The PAS 2080 life cycle stages have been used in this GHG emissions assessment, as shown in **Figure 8.1** below.

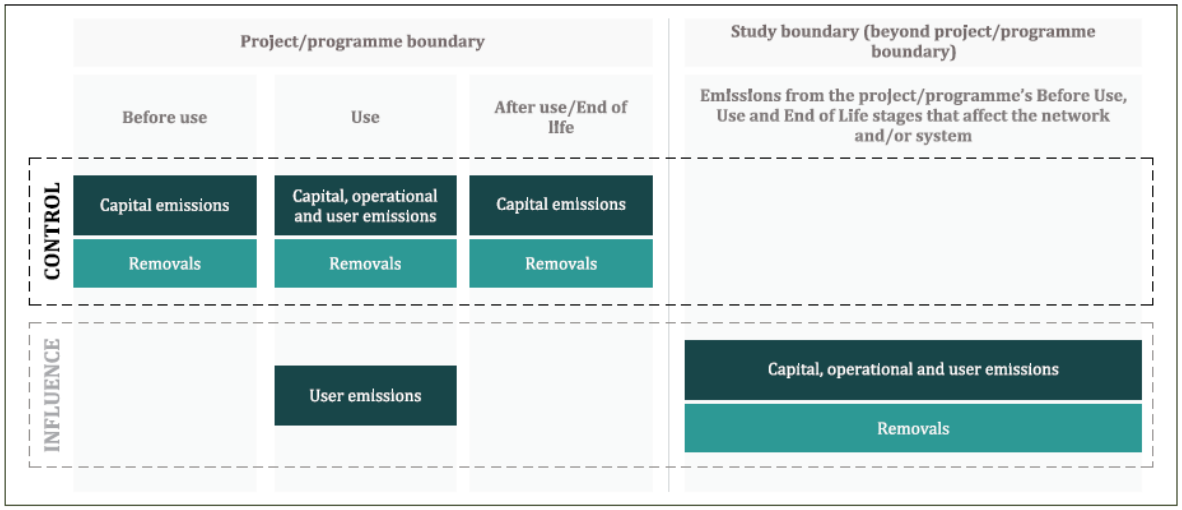

Figure 8.1: PAS 2080 whole life carbon framework for decision-making. Copy of PAS 2080 Figure 4.

Climate Change Risk Assessment

Legislation

Climate Change Act (2008) (2050 Target Amendment) Order 2019

The CCA 2008 (UK Government, 2019) established the context for government action on climate change and requires the Government to compile a Climate Change Risk Assessment every 5 years and develop a National Adaptation Programme to address risks and opportunities from climate change.

Under this act, the Welsh Ministers must report on the Welsh Government's objectives, actions and future priorities regarding the impacts of climate change.

National Adaptation Programme

The third national adaptation programme was published by the Department for Environment, Food and Rural Affairs in July 2023 (Defra, 2023) and presents the actions the government will take to adapt to the impacts of climate change from 2023 to 2028. As the government's strategy to address the key risk and opportunities associated with climate adaptation, the following topics are identified: terrestrial and freshwater habitats, soil health, natural carbon stores, food supply, and human health.

Climate Change Risk Assessment 2022

The CCA 2008 also requires Government to prepare a five-yearly assessment of the risks for the UK of the current and predicted impacts of climate change. The UK Climate Risk Independent Assessment (CCRA3) (Defra, 2022), published in 2022, sets out the six priority risk areas requiring further action in the UK. These areas are:

- Risks to the viability and diversity of terrestrial and freshwater habitats and species from multiple hazards;
- Risks to soil health from increased flooding and drought;
- Risks to natural carbon stores and sequestration from multiple hazards leading to increased emissions;
- Risks to crops, livestock and commercial trees from multiple hazards;
- Risks to supply of food, goods and vital services due to climate-related collapse of supply chains and distribution networks;
- Risks to people and the economy from climate-related failure of the power system;
- Risks to human health, wellbeing and productivity from increased exposure to heat in homes and other buildings; and
- Multiple risks to the UK from climate change impacts overseas

EIA Regulations (Wales) 2017

Schedule 4 of the 2017 EIA Regulations (Wales, 2017) requires an Environmental Statement to include:

"4. A description of the factors specified in regulation 4(2) likely to be significantly affected by the development, climate (for example greenhouse gas emissions, impacts relevant to adaptation)

5. A description of the likely significant effects of the development on the environment resulting from, inter alia:

(f) the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change;".

Wellbeing of Future Generations (Wales) Act 2015

The Wellbeing of Future Generations (Wales) Act (2015) places a statutory duty on public bodies in Wales to secure sustainable development, based on seven well-being goals. Mitigating against climate change itself is integral to meeting the wellbeing goals which recognise that the case for action on climate change is clear and fundamental to future prosperity and the future resilience of communities. As such, the framework provides a mechanism for public bodies to set targets and report progress against a range of indicators. The principles involves create a Prosperous, Resilient, Equal and Healthy Wales that promotes cohesive communities, a vibrant culture and a Wales that is responsive to the world.

National Policy and UK Government Strategies

Future Wales National Plan 2040 (2021)

Future Wales recognises the challenges climate change poses and recognises the significant impacts on the wellbeing of both current and future generations. The Welsh Government recognises the country's role in leading the uptake of renewable energy technology and provides proportionate support to public bodies and developers. The general aim for climate resilience is to generate 70% of consumed electricity by renewable means by 2030 in order to combat the climate emergency.

Policy 17 (Renewable and Low Carbon Energy and Associated Infrastructure) provides in principle support for renewable energy development at all scales. The policy states:

"…in determining planning applications for renewable and low carbon energy development, decision-makers must give significant weight to the need to meet Wales' international commitments and our target to generate 70% of consumed electricity by Renewable means by 2030 in order to combat the climate emergency."

Policy 18 (Renewable and Low Carbon Energy Developments of National Significance) sets out the criteria against which renewable energy projects will be assessed. It is considered that the Proposed Development will be compliant with all the relevant Policy 18 criteria.

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

The Well-being of Future Generations (Wales) Act 2015 states that all public bodies in Wales have a duty to secure sustainable development to achieve the 7 well-being goals. All planning applications in Wales need to demonstrate how they align to the following well-being goals:

- A Prosperous Wales
- A Resilient Wales
- A More Equal Wales
- A Healthier Wales
- A Wales of Cohesive Communities
- A Wales of Vibrant Culture and Thriving Welsh Language
- A Globally Responsive Wales

Key matters highlighted in the guidance for public bodies to focus attention are decarbonisation, including the use of clean energy, and sustainable consumption and production.

Climate Adaptation Strategy for Wales 2024

Updated in October 2024, this strategy is informed by CCRA3 and is the subsequent step taken by the Welsh government to the 'Prosperity for All: A Climate Conscious Wales' framework; a 5 year-plan for meeting the first carbon budget (2016-2020). Through a multi-disciplinary approach, the new strategy considers climate risks and adaptation in relation to community requirement and environmental impact. It also considers policy options that might address sector-specific risks and works to introduce contingency planning in relation to power outages, in the context of the increasing risks posed by climate change. The strategy itself has a focus on including Welsh stakeholders in key planning scenarios and the widespread consideration of climate change adaptation measures.

Local Planning Policy

Denbighshire County Council (DCC)

As part of DCC's vision, the LDP states that *'Denbighshire will be making a significant contribution to managing climate change though the promotion of renewable energy technologies and innovative design, the requirement for high levels of sustainable construction and development and through directing new development away from areas of flood risk'* as well as outlining that, in terms of climate change *'responses are required to address its potential impacts both in Denbighshire and on a wider scale'*. A key theme in the councils aim to build more sustainable communities is concerned with '*regeneration, tackling depravation and adapting to climate change.'*

Policy VOE 10: Renewable Energy technologies states that:

'…Renewable energy has a large part to play in reducing the impacts of climate change and addressing the depletion of fossil fuels…'

Conwy County Borough Council (CCBC)

Supporting text for the council's Natural Environment Strategic Statement states that there is: '*a need to ensure that development does not make wildlife and habitats more susceptible to loss through climate change and that they can adapt to future climate changes…'*

Policy NTE/6 – Energy Efficiency and Renewable Technologies in New Development sets out that the council will:

'Promote renewable energy sources within development proposals which support energy generation from biomass…solar and wind sources…' it also outlines that it will *'Ensure that all new developments incorporate the principles of sustainable design such as: appropriate layout, massing, orientation, use of materials, rain water harvesting, energy efficiency, sustainable drainage…'*

Supporting text for the council's Renewable Energy and Sustainability in New Development sets out the importance of climate change mitigation: *'climate change will have major implications on the UK's environment and could result in more extreme weather events, including hotter and drier summers, flooding and rising sea levels leading to coastal realignment…severe consequences on Plan Area, which is subject to large areas at risk of flooding'*

Standards and Guidance

The following standards and guidance documents have been used to inform the climate change resilience and adaptation scope, methodology, identify likely significant effects and potential mitigation measures.

Environmental Impact Assessment Guide to: Climate Change Resilience and Adaptation

The ISEP guidance (ISEP, 2020) sets out the factors that the assessment should establish the baseline conditions. ISEP guidance states:

"*The current baseline is defined by historic climate conditions and the prevailing conditions at the time of the assessment.* ***…*** *The practitioner needs to consider a range of factors including:*

- *Extremes in short-term weather events that produce sudden shocks that can have substantial effects on some baseline receptors, such as: heat waves; extreme flooding and freezing conditions; gales and hurricane force windstorms; storm surges along coastlines.*

- *Extremes in longer-term climatic variability including: variations in precipitation over one or more seasons resulting in drought or extremely wet conditions; variations in average temperature which might affect receptors reliant on temperature to, for example, time when breeding cycles*

commence or end (which may be affected by availability of specific food sources); potential changes in prevailing wind directions as the weather system over central Europe changes.

- *Changes in average climate norms resulting in: sea level rise; increases in freezing/thawing; changes in seasonal rainfall patterns*."

This guidance has also been used to select the appropriate assessment scenario for defining the future baseline. ISEP guidance states:

"The recommended approach is to use a high emissions scenario, in the UK this would be RCP 8.5"

UKCP18 Guidance: How to use the UKCP18 Land Projections

The UKCP18 Guidance (Met Office, 2018) has been used to determine the correct application of the land projections data and to reference the uncertainty and limitations associated with its use.

"*We recommend that you place any analysis using the global, regional and derived projections in the broader uncertainty context of the probabilistic projections, where the information is available*."