Appendix 14.1

Climate related Legislation and Policy

1.1 Legislation

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

The Climate Change Act 2008 establishes the framework for the United Kingdom (UK) to set and deliver GHG emission reduction targets; mainly through the establishment of the Committee on Climate Change (CCC) which ensures targets are evidence based and progress is independently assessed. An amendment to The Act in 2019 commits the UK government to reduce GHG emissions to a minimum of 100% below 1990 baseline levels by 2050 – Net Zero.

The Act requires the Government to regularly report on emission target progress, assess the risks and opportunities to the UK associated with climate change, and develop preparation and adaptive plans for these. The UK Climate Change Risk Assessment is produced every five years. The third UK Climate Change Risk Assessment (CCRA3) was published in January 2022 and this series of reports, alongside other documents, are used in the Climate Change Environmental Statement (ES) chapter to assess potential vulnerabilities and adaptive potential of the Proposed Development regarding climate change impacts. The risks identified by the CCC in the Independent Assessment of UK Climate Risk published in June 2021 have also been considered in the assessment.

Town and Country Planning EIA Regulations (2017)

On 16th May 2017, the European Commission's Environmental Impact Assessment Directive (2014/52/EU) was incorporated into English law under the Town and Country Planning (Environmental Impact Assessment) Regulations 2017. This legislation requires the consideration of climate change within an EIA. The key text in relation to climate change is as follows:

Schedule 3: Regulation 5(4)

1(f): "The characteristics of development must be considered with particular regard to the risk of major accidents and/or disasters relevant to the development concerned, including those caused by climate change, in accordance with scientific knowledge."

Schedule 4: Regulation 18(3)

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

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

Building Regulations

Future Building Standard (Part L and Part F)

The Future Buildings Standard (FBS) sets out improvements to Part L (conservation of fuel and power) and Part F (ventilation) of The Building Regulations. The FBS were adopted into legislation in December 2021, with changes effective from June 2022.

Part L of The Building Regulations sets fabric energy efficiency standards, energy efficiency requirements and CO_2e emissions limits for dwellings and non-residential buildings. Approved Document L 'Volume 1: Dwellings' and 'Volume 2: Buildings other than dwellings' (2021 editions) provide details on the assessment criteria and methodologies used to test whether buildings are compliant. Aside from any local planning policy requirements it must be demonstrated that a building is compliant with the building regulations to be approved by building control. These regulations are the government's key mechanism for reducing CO_2e emissions in buildings.

Calculations are undertaken using a prescribed methodology - the Standard Assessment Procedure (SAP). A Target Emissions Rate (TER) is calculated, which represents the minimum standard for a building of that size. A Dwelling Emissions Rate (DER) is then calculated which is an estimation of likely emissions for the development in question. The DER must not exceed the TER for a building to be compliant. In addition to the TER, fabric energy efficiency standards define the thermal performance limits of building elements such as walls, doors and roof.

Whilst these assessments are typically undertaken post planning when specification and information regarding mechanical and electrical systems have been produced, the regulations are significant to this assessment because it legally binds new buildings to be constructed to a minimum standard, which can be utilised as a baseline.

The FBS 2021 interim uplift requires a 27% emissions reduction for new non-residential buildings, achieved using a combination of fabric efficiency and low carbon / renewable energy technologies. These specifications rise to an 75-80% emissions reduction required for

all building types from 2025 onwards. This legislation also introduces a new requirement within Building Regulations to measure a dwelling's 'primary energy use' consumption as well as the projected energy demand.

Phasing timescales for the Proposed Development will need to consider these changes to Building Regulations Part L and Part F, as any transitional arrangements for implementation will apply only to individual buildings on Site, rather than at a Site-wide level as has been the case previously.

Overheating (Part O)

Building Regulations Part O became effective in June 2022 and sets minimum mitigation standards for reducing overheating risk in new buildings, as well as providing guidance for higher risk locations in the UK. The primary aim is to limit excess solar gain in new and existing homes and remove excess heat during the summer months. The regulations also address causes of overheating due to uninsulated heating pipes, cylinders, or a lack of heating controls.

Compliance can be achieved using either the Simplified Method or the Dynamic Thermal Modelling Method. All the standards for limiting solar gains should be followed, and all practicable passive means of limiting unwanted solar gains and removing excess heat should be adopted first before installing mechanical cooling.

Electric Vehicle Charging Infrastructure (Part S)

In the Road to Zero strategy published in 2018, the UK Government announced that it wants every new home to have a smart charging point for electric vehicles (EV), where appropriate, to help future proof homes for the transition to low emissions transport. The government consulted on plans to introduce an EV smart charging requirement in the English Building Regulations (a new Part S) and also to transpose the requirements of the European Union (EU) Energy Performance of Buildings Directive (EPBD)3.

In June 2022, the new Building Regulations Part S for EV charging infrastructure came into effect and requires, as relevant to this non-residential project:

"Policy position: New Non-Residential Buildings

i. *Every new non-residential building and every non-residential building undergoing a major renovation with more than 10 car parking spaces will be required to have one charge-point, and cable routes for an electric vehicle charge-point for one in five spaces."*

Proposed New Embodied Carbon Regulation (Part z)

An industry-proposed amendment to UK Building Regulations which was proposed in April 2022 and is currently under consultation by the Government. The concept is to mandate the assessment of whole life carbon and setting limits on embodied carbon emissions for all major building projects.

Proposed Document Z is aligned with the Royal Institution of Chartered Surveyors (RICS) Professional Statement 'Whole life carbon assessment for the built environment', and guidance and recommendations made by the Royal Institute of British Architects (RIBA), the Institution of Structural Engineers (IStructE), the Chartered Institution of Building Services Engineers (CIBSE), the UK Green Building Council (UKGBC) and the London Energy Transformation Initiative (LETI).

If adopted, it would rapidly accelerate the voluntary action occurring across the industry, leading to green investment and green jobs creation across construction.

1.2 Policy

National Policy

The National Planning Policy Framework (as amended) (NPPF, December 2023)

The NPPF sets out the national planning policies for England. It provides a framework that ensures sustainable development can be achieved. Implementing policies of the NPPF within the design of the development ensure the economic, social and environmental objectives are delivered.

The policies within the NPPF relevant to climate change can be found in chapter 14 'Meeting the challenge of climate change, flooding and coastal change'. Those most specific to the assessment are detailed below:

Paragraph 157: *"The planning system should support the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change. It should help to: shape places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience; encourage the reuse of existing resources, including the conversion of existing buildings; and support renewable and low carbon energy and associated infrastructure."*

Paragraph 158: *"Plans should take a proactive approach to mitigating and adapting to climate change, taking into account the long-term implications for flood risk, coastal change, water supply, biodiversity and landscapes, and the risk of overheating from rising temperatures.*

Policies should support appropriate measures to ensure the future resilience of communities and infrastructure to climate change impacts, such as providing space for physical protection measures, or making provision for the possible future relocation of vulnerable development and infrastructure."

Paragraph 159: *"New development should be planned for in ways that: a) avoid increased vulnerability to the range of impacts arising from climate change. When new development is brought forward in areas which are vulnerable, care should be taken to ensure that risks can be managed through suitable adaptation measures, including through the planning of green infrastructure; and b) can help to reduce greenhouse gas emissions, such as through its location, orientation and design. Any local requirements for the sustainability of buildings should reflect the Government's policy for national technical standards."*

Paragraph 160: *"To help increase the use and supply of renewable and low carbon energy and heat, plans should: a) provide a positive strategy for energy from these sources, that maximises the potential for suitable development, while ensuring that adverse impacts are addressed satisfactorily (including cumulative landscape and visual impacts); b) consider identifying suitable areas for renewable and low carbon energy sources, and supporting infrastructure, where this would help secure their development; and c) identify opportunities for development to draw its energy supply from decentralised, renewable or low carbon energy supply systems and for co-locating potential heat customers and suppliers."*

Paragraph 162: *"In determining planning applications, local planning authorities should expect new development to: a) comply with any development plan policies on local requirements for decentralised energy supply unless it can be demonstrated by the applicant, having regard to the type of development involved and its design, that this is not feasible or viable; and b) take account of landform, layout, building orientation, massing and landscaping to minimise energy consumption."*

Paragraph 166: *"All plans should apply a sequential, risk-based approach to the location of development – taking into account the current and future impacts of climate change – so as to avoid, where possible, flood risk to people and property. They should do this, and manage any residual risk, by: a) applying the sequential test and then, if necessary, the exception test as set out below; b) safeguarding land from development that is required, or likely to be required, for current or future flood management; c) using opportunities provided by new development to reduce the causes and impacts of flooding (where appropriate through the use of natural flood management techniques); and d) where climate change is expected to increase flood risk so that some existing development may not be sustainable in the long-term,*

seeking opportunities to relocate development, including housing, to more sustainable locations."

Net Zero Strategy: Build Back Greener (2021)

The Net Zero Strategy (NZS) sets out the UK Government's long-term plan for a transition to Net Zero emissions by 2050 that will take place over the next three decades, with plans for reducing emissions from each sector of the UK economy. The NZS states that:

"By 2035 the UK will be powered entirely by clean electricity, subject to security of supply".

Many of the policies in the strategy will be phased in over the next decade or longer. The NZS includes key policies in the following areas:

- Power;
- Fuel supply and Hydrogen;
- Industry;
- Heat and Buildings;
- Transport;
- Natural resources, waste, and fluorinated gases;
- Greenhouse gas removals; and
- Supporting the transition with cross-cutting action.

Heat and Buildings Strategy (2021)

The Heat and Buildings Strategy (HBS) sets out the immediate actions and long-term signals required to reduce emissions from buildings to near zero (between 0 and 2 Mt CO_2e) by 2050.

The primary focus of the HBS is on reducing emissions from heating as this is the predominant source of emissions from buildings. However, the HBS recognises the current and potential future demand of cooling. This will be considered further as the Government continue to develop the UK's approach to long-term choices for low-carbon heating.

UK Electric Vehicle and Battery Production Potential (2022)

In terms of the context for the proposed development, the UK Government is committed to achieving 'net zero' by 2050, as set out in the Climate Change Act (as amended in 2019). Across the European Union, road traffic is estimated to be responsible for 24% of the total carbon dioxide (CO_2) emissions and hence there is a need to decarbonise transport and move away from internal combustion engines towards hybrid and electric vehicles.

The UK Government is requiring that by 2030 80% of all new cars and 70% of new vans sold should be set to be zero emission increasing to 100% by 2035. Given that the sale of new

petrol and diesel cars will end by 2035 there is going to be a huge demand for electric vehicles. The Faraday Institution's report *"UK Electric Vehicle and Battery Production Potential to 2040"* (June 2022) predicts that by 2030 around 100 GWh of supply will be needed in the UK to satisfy the depend for batteries for electric vehicles and that by 2040, it is predicted that demand will rise to nearly 200 GWh.

In this context and as mentioned above, it is reasonable to assume that if the development is not provided here it will be provided elsewhere to help meet this demand. Further details of the demand and need for the development are discussed in the Green Belt: Very Special Circumstances Report which accompanies this planning application for AESC Plant 3.

Local Policy

The Sunderland Core Strategy & Development Plan 2015-2033 (Adopted 2020)

The Core Strategy and Development Plan 2015-2033 (Adopted January 2020) sets out the spatial vision and overreaching policies for the Sunderland City up to 2033.

Spatial vision 2033

"By 2033, Sunderland will be place that:

….is resilient to climate change, has maximised the opportunities for renewable energy, embraced sustainable design principles and has reduced the impacts of flooding on homes and businesses;…."

Strategic priority 9

"To adapt to and minimise the impact of climate change by reducing carbon emissions, maximising the use of low carbon energy solutions and seeking to reduce the risk/impact of flooding."

The relevant policies to the Strategic Priority 9 and spatial vision are summarised below:

Policy BH 1 Design Quality

"To achieve high quality design and positive improvement, development should…:

2. maximise opportunities to create sustainable, mixed-use developments which support the function and vitality of the area in which they are located….;

7. create visually attractive and legible environments through provision of distinctive high quality architecture, detailing and building materials…;

9. maximise the opportunities for buildings and spaces to gain benefit from sunlight and passive solar energy;

10. from 1 April 2021, meet national spaces standards as a minimum (for residential).

Large-scale developments should be supported by detailed Masterplans or development frameworks, and where appropriate, design codes."

Policy BH2 Sustainable Design and Construction

"Sustainable design and construction should be integral to development. Where possible, major development (as defined in the 2019 Framework) should:

1. maximise energy efficiency and integrate the use of renewable and low carbon energy….;

3. conserve water resources and minimise vulnerability to flooding;

4. provide details of the type of materials to be used at the appropriate stage of development;

5. provide flexibility and adaptability, where appropriate, allowing future modifications of use or layout, facilitating future refurbishment and retrofitting;

6. include opportunities to incorporate measures which enhance the biodiversity value of development, such as green roofs;

7. include a sustainability statement setting out how the development incorporates sustainable resource management and high environmental standards…."

Policy NE1 Green and Blue Infrastructure

1. "To maintain and improve the Green Infrastructure Network through enhancing, creating and managing multifunctional greenspaces and bluespaces that are well connected to each other and the wider countryside, development should….

i. incorporate existing and/or new green infrastructure features within their design and to improve accessibility to the surroundi9ng area…;

iv. apply climate change mitigation and adaptation measures, including flood risk and watercourse management…"

k. protect, enhance and restore watercourses, ponds, lakes and water dependent habitats.

2. Development that would sever or significantly reduce green infrastructure will not normally be permitted unless the need for and benefits of the development demonstrably outweigh any adverse impacts and suitable mitigation and/or compensation is provided."

Policy WWE1 Decentralised, renewable and low carbon energy

1. "The development of decentralised, renewable and low carbon energy will be supported subject to satisfactory resolution of all site specific constraints as follows:

i. decentralised, renewable and low carbon energy development should be located and designed to avoid unacceptable significant adverse impacts on landscape, wildlife, heritage assets and amenity;

ii. appropriate steps should be taken to mitigate any unacceptable significant adverse impacts….interference with … air traffic operations, radar and air navigational installations through careful consideration of location, scale, design and other measures; and

iii. any adverse cumulative impacts of proposal….."

Policy WWE2 Flood Risk and costal management

1. "To reduce flood risk and ensure appropriate coastal management, development…:

iii. will be required to include or contribute to flood mitigation, compensation and/or protection measures, where necessary to manage flood risk associated with or caused by the development……;

vi. which would adversely affect the quantity of surface or groundwater flow or ability to abstract water must demonstrate that no significant adverse impact would occur, or mitigation can be put in place to minimise this impact; and

vii. of additional river flood defences must demonstrate that the proposal represents the most sustainable response to a particular threat."

Policy WWE3 Water Management

"Development must consider the effect on flood risk, on-site and off-site, commensurate with the scale and impact. Development must:

4. incorporate a Sustainable Drainage System (SuDS) to manage surface water drainage. Where SuDS are provided, arrangements must be put in place for their whole life management and maintenance…..;

7. incorporate allowance for climate change in accordance with the latest Environment Agency Guidance….

8. make developer contributions, where needed, to ensure that the drainage infrastructure can cope with the capacity needed to support proposed new development;

9. demonstrate control of the quality of surface water run-off during construction and for the lifetime of the development. For all developments the management of water should be an intrinsic part of the overall development; and

10. not have a detrimental impact on the city's water resources, including the Magnesian Limestone aquifer and its ground source protection zones. Development along the River Wear and coast should take account of the Northumbria River Basin Management Plan, to deliver continuing improvements in water quality."

WWE4 Water quality

"The quantity and quality of surface and groundwater bodies and quality of bathing water shall be protected and where possible enhanced in accordance with the Northumbria River Basin Management Plan….

3. Development that incorporates infiltration based SuDS will be required to incorporate appropriate water pollution control measures…."

The IAMP Area Action Plan (AAP) 2017-2032 (Adopted 2017)

The IAMP Area Action Plan (AAP) was formally adopted by both South Tyneside and Sunderland City Councils in 2017 and establishes the development plan against which planning applications within the IAMP area are assessed.

AAP Objective 2 is to *"Adapt to and mitigate the impacts of climate change in Sunderland and South Tyneside."* This is supported by:

- Policy D1 (Masterplan design);
- Policy D2 (Public realm); and
- Policy IN2 (Flood risk and drainage).

Development Management Supplementary Planning Document (SPD)

The Development Management (DM) Supplementary Planning Document (SPD) sets out additional planning guidance which applies to a range of planning applications. Its purpose is to assist both applicants and decision makers when preparing and determining planning applications.

Sunderland City Council Low Carbon Framework (2020)

The Sunderland Low Carbon Framework was prepared by Sunderland's 2030 Shadow Board and published in December 2020. It sets out the direction of change for Sunderland and focuses attention on seven strategic priorities to reduce carbon and achieve carbon neutrality. The Framework is supplemented by individual Action Plans developed and

delivered by partners across the city. The city council's Sunderland Low Carbon Action Plan includes the council's ambition to be carbon neutral by 2030.

Sunderland City Council Low Carbon Action Plan (2020)

The Low Carbon Framework establishes a target for the City as a whole to be carbon neutral by 2040. This target has been set based on the understanding that Sunderland would need to reduce its annual carbon emissions by 14.4% per annum to achieve this.