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ENERGY AND CLIMATE CHANGE
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AESC UK

AESC PLANT 3 DEVELOPMENT

Planning Application and Environmental Impact Assessment

Appendix 3.4 Sustainability Statement

February 2024

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AESC UK

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Planning Application and Environmental Impact Assessment

Appendix 3.4 Sustainability Statement

February 2024

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ACRONYMS

AAP	Area Action Plan
AESC	Automotive Energy Supply Corporation
ALARP	As Low As Reasonably Practical
ALC	Agricultural Land Classification
ASHP	Air Source Heat Pump
BAT	Best Available Technique
BNG	Biodiversity Net Gain
CCUS	Carbon Capture, Usage and Storage
CEMP	Construction Environmental Management Plan
CO_2	Carbon Dioxide
CoP	Coefficient of Performance
DCO	Development Consent Order
DMP	Dust Management Plan
ELMA	Ecological and Landscape Mitigation Area
ES	Environmental Statement
ESCO	Energy Supply Company
FBS	Future Building Standard (Government's proposed update to Building regulations in England – Full FBS scheduled for 2025, Interim FBS to be adopted as Part L 2021)
FRA	Floor Risk Assessment
GSHP	Ground Source Heat Pump
HIA	Health Impact Assessment
IAMP	International Advanced Manufacturing Park
LOPA	Layer of Protection Analysis
MVHR	Mechanical Ventilation with Heat Recovery
NSDS	National Sustainable Development Strategies
RE100	Global corporate initiative of businesses committed to 100% renewable electricity
SCC	Sunderland City Council
SuDS	Sustainable Urban Drainage System
STC	South Tyneside Council
SWMP	Site Waste Management Plan
SWMS	Surface Water Management Strategy
TPO	Tree Preservation Order
WA	Wardell Armstrong
WLC	Whole Lifecycle Carbon
WWHR	Waste Water Heat Recovery

1 INTRODUCTION

1.1.1 AESC UK (the 'Applicant') is seeking planning permission for the development of a commercial battery manufacturing plant in Sunderland within the International Advanced Manufacturing Park (IAMP), for AESC Plant 3 adjacent to the AESC Plant 2 site. This development location, as shown in Figure 2.1 below, is hereafter referred to as the '*Site*'. The development itself is referred to as the '*Proposed Development*'.

1.1.2 The Applicant has instructed Wardell Armstrong LLP (WA) to provide a Sustainability Statement outlining how the Proposed Development will meet its various sustainability objectives in-line with relevant national and local policy requirements.

1.1.3 This Sustainability Statement, submitted in support of the planning application, describes the approach the Project Team has taken to sustainability during the design process and considers the extent to which the Proposed Development accord with the principles of sustainable development. It has been prepared by WA following review of National Policy and local objectives. Sustainability requires a holistic approach that encompasses many different aspects of development and, as a result, it is necessary to consider a very broad range of policy requirements.

1.1.4 The Applicant actively promotes responsible construction and development and is committed to ensuring the development embodies a conservation approach.

1.1.5 This Sustainability Statement relies on data provided by third parties and WA accepts no responsibility for inaccuracies carried forward from third party information.

2 THE SITE & ITS SURROUNDINGS

2.1.1 The Site is approximately centred at National Grid Reference NZ 32850 58950 and is located at Washington, Sunderland, SR5 3FH. The Site lies within the boundary of the land covered by the IAMP Area Action Plan (AAP). The IAMP AAP area straddles the administrative areas of both Sunderland City Council (SCC) and South Tyneside Council (STC), with the Site lying entirely within Sunderland. Across IAMP, 150ha of land is allocated for automotive and advanced manufacturing uses and 110ha of land is designated as an ecological and landscape mitigation area (known as the 'ELMA'). Part of the Site is located on the land allocated for automotive and advanced manufacturing uses, whilst the majority of the Site lies within the ELMA.

2.1.2 The Proposed Development will occupy an area of land towards the northern boundary of the IAMP area, west of the AESC Plant 2 (which was under construction at the time of preparing this statement).

Figure 2.1: Site Location

(© Google Image 2023, Landsat, Copernicus)

2.1.3 The Site currently comprises predominantly grassland and lies to the north of the A1290, west of Sunderland and northeast of Washington. Pylons have recently been diverted across the western and northern part of the application site and this work is due to be completed in late 2023. The area of land covered by the Site boundary is approximately 42.39 ha. Vehicular access is provided from the A1290 via International Drive.

2.1.4 To the south of the Site, the Nissan motor manufacturing plant occupies the land beyond the A1290 and sets the industrial tone of the landscape. To the west of the IAMP area lies the northern extent of Washington and the neighbourhood known as Concord, while to the east lies the suburbs of Sunderland and the neighbourhood known as Town End Farm. North of the Site lies land with planning permission for the IAMP ELMA and the IAMP Northern Employment Area[1], beyond which lies arable fields continue to the A184 and beyond, eventually giving way to Monkton and Hebburn after about 2.5 km.

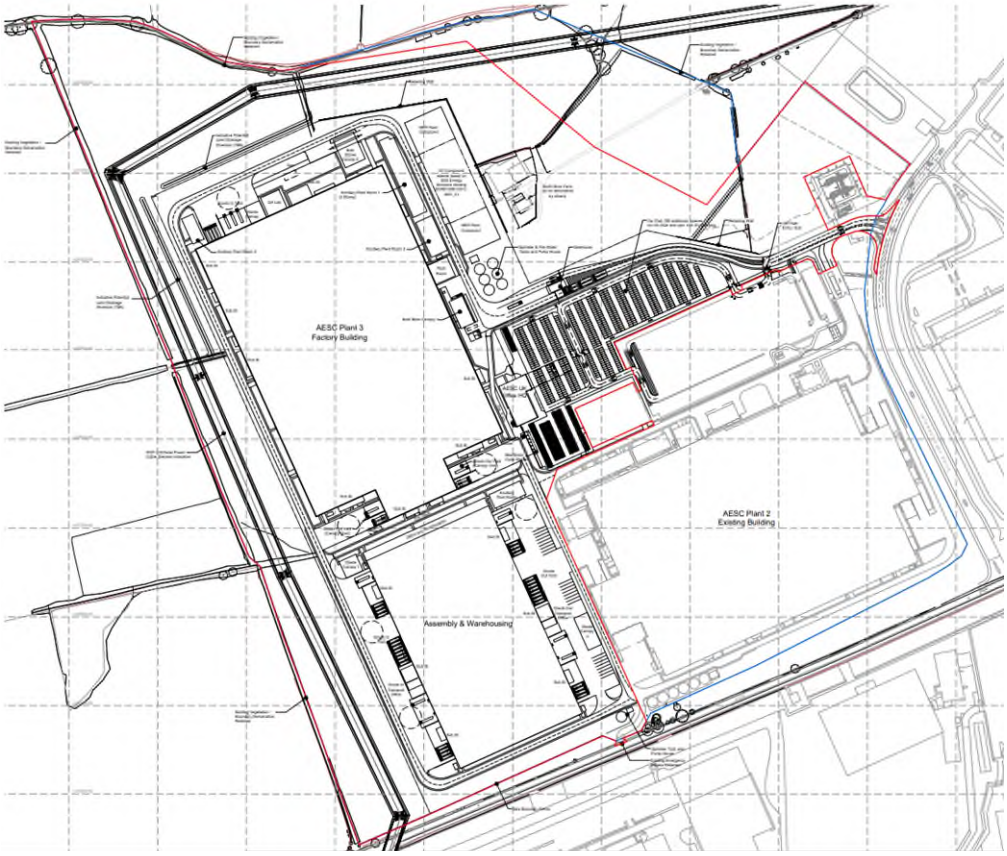

Figure 2.2: Proposed Site Plan

(Produced by RPS Group)

[1] Sunderland planning application reference 21/02807/HE4 and South Tyneside application reference ST/1722/FUL

3 THE PROPOSED DEVELOPMENT

3.1.1 The Proposed Development consists of a single, three-storey industrial factory unit known as AESC Plant 3 (Class B2 General Industrial) that will house a capacity electrode and battery manufacturing factory with maximum capacity of 12GWh per annum (see Figure 3.1).

3.1.2 To the south of AESC Plant 3, lies the Assembly and Warehousing Building, which incorporates some office space and a substation/plant room area. Supporting infrastructure include small offices, plant rooms, waste storage areas and substations. Figure 3.2 shows this in further detail.

3.1.3 The proposed facility will manufacture lithium-ion battery pouch cells and modules for electric vehicles (and other applications) via four production areas comprising of: electrode manufacture; cell production; formation and testing; and module assembly.

3.1.4 In addition, the Proposed Development includes a 3-storey office block to provide a head quarter building for AESC UK, as well as car parking facilities for 780 vehicles north of the site with up to 10% possessing 7kW electric vehicle charging bays, along with associated facilities and infrastructure including a gatehouse, access roads, an electrical substation, plant rooms and waste storage areas.

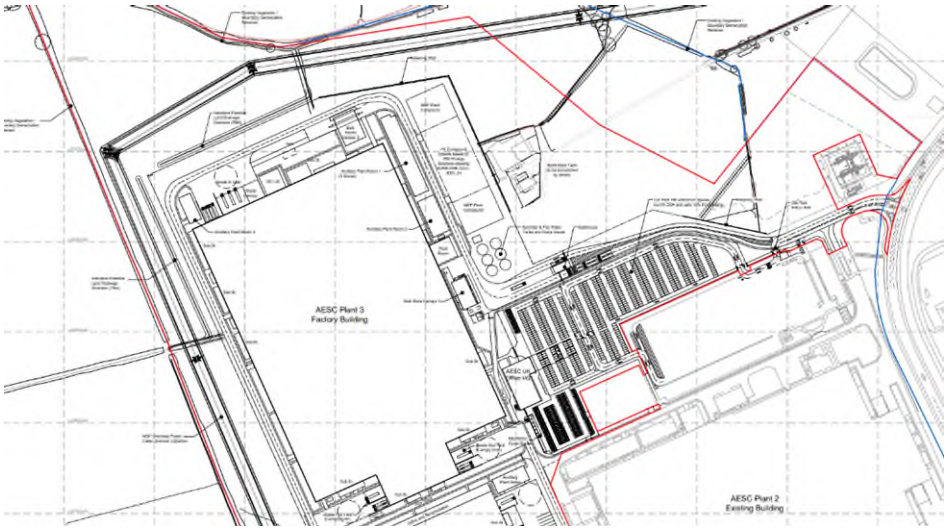

Figure 3.1: Proposed Site Layout for Northern Half Including AESC Plant 3

(Produced by RPS Group)

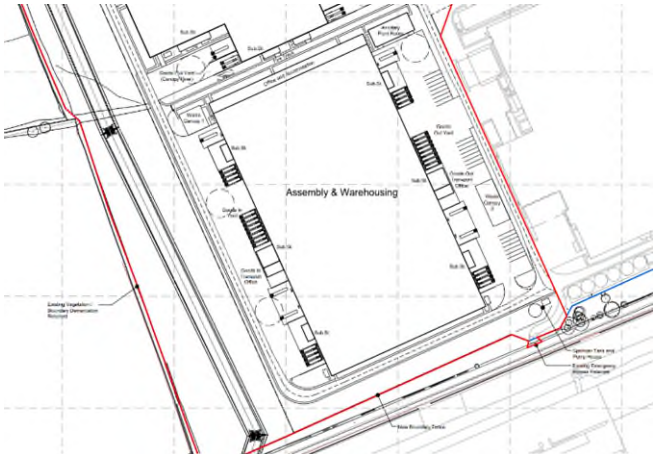

Figure 3.2: Proposed Site Layout for Assembly and Warehousing Building

(Produced by RPS Group)

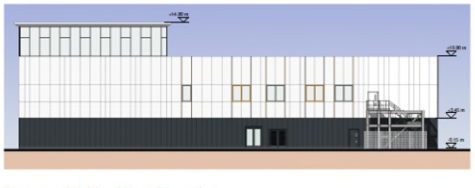

Figure 3.3: Proposed Office Building Design

(Produced by RPS Group)

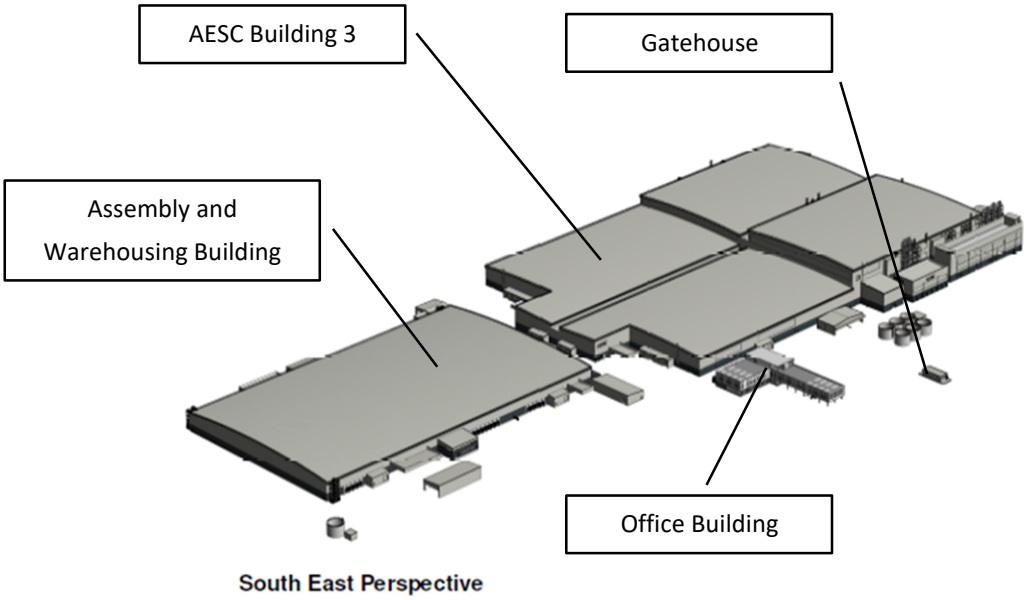

Figure 3.4: 3D Representation of the Proposed Development

(Produced by RPS Group)

4 LEGISLATIVE CONTEXT

4.1.1 The concept of National Sustainable Development Strategies (NSDS) was proposed in 1992 in Agenda 21, the Rio Declaration on Environment and Development. Paragraph 7 of Chapter 8 calls on countries to adopt strategies for sustainable development.

4.1.2 In May 1999, the Government published a sustainable development strategy entitled '*A Better Quality of Life – A Strategy for Sustainable Development in the UK'* that sets out the key issues, aims and priorities. Many definitions of sustainable development exist, although the common objective for all is the integration of economic, social and environmental issues to ensure a better quality of life for people today without compromising the needs for future generations.

4.1.3 During the 2002 World Summit on Sustainable Development in Johannesburg, Member States were urged to elaborate national strategies and begin implementation by 2005. Following this, the UK Government launched *'Securing the Future'*[2] with 250 commitments in four main priority action areas surrounding sustainable consumption and production, climate change and energy, natural resource protection and sustainable communities.

4.1.4 The 2005 strategy also proposes a new code for sustainable buildings that establishes voluntary standards on key issues such as energy, waste, water and materials.

4.1.5 The UN Department of Social and Economic Affairs held an expert meeting in 2007 on '*Integrating Climate Change into NSDS*' with the concept that sustainable development was the most effective framework to tackle climate change.

4.1.6 '*The Future We Want*'[3] was the outcome document of the UN Conference on Sustainable Development held in Rio de Janeiro in 2012. This details the role of planning and decision making at all levels in enabling effective integration and implementation of the three dimensions of sustainable development. There is also the recognition of need for improved energy efficiency and increased use of renewable energy technologies to aid sustainable development and address climate change.

4.1.7 The New York UN meeting in 2015, marking the seventieth anniversary, resulted in 17 new sustainable development goals to form the 2030 Agenda[4]. These are promoted

[2] HM Government, 2005. Securing the future – delivering UK sustainable development strategy. https://sustainabledevelopment.un.org/content/documents/1408uk.pdf.
[3] United Nations General Assembly, 2012. The future we want. Document A/RES/66/288*. Available online.
[4] UN Sustainable Development Goals Knowledge Platform https://sustainabledevelopment.un.org/sdgs.

as universal goals, involving developed and developing countries alike, that are integrated, indivisible and balance the three dimensions of sustainable development. Of note is the goal surrounding sustainable urban development which states:

"*We will reduce the negative impacts of urban activities and of chemicals which are hazardous for human health and the environment, including through the environmentally sound management and safe use of chemicals, the reduction and recycling of waste and more efficient use of water and energy. And we will work to minimize the impact of cities on the global climate system*."

4.1.8 The Department for International Development issued the UK's approach to delivering the Agenda 2030 Global Goals for Sustainable Development in March 2017[5]. The document provides an on overview and examples of how the Government is contributing towards the delivery of each goal, both around the world and at home.

4.1.9 In 2018, the UK also launched '*A Green Future'*[6]*,* which is the Government's 25-year Environment Plan. This details policies and actions across six key areas, including:

- Using and manging land sustainably.
- Recovering nature and enhancing the beauty of landscapes.
- Connecting people with the environment to improve health and wellbeing.
- Increasing resource efficiency and reducing pollution and waste.
- Securing clean, productive and biologically diverse seas and oceans.
- Protecting and improving the global environment.

4.1.10 In 2019, the UK produced its first Voluntary National Review[7] to assess its progress on the 17 sustainable development goals of Agenda 2030. This was presented to the UN High Level Political Forum on 16 July 2019.

4.1.11 In May 2019, the UK Parliament declared a Climate Emergency following a motion raised by the Labour Party leader. Although this did not compel the UK Government to take action, it demonstrated the will of the Common's on the issue.

[5] Department for International Development, 2017. Agenda 2030 The UK Government's approach to delivering the Global Goals for Sustainable Development - at home and around the world.
[6] HM Government, 2018. A Green Future: Our 25 Year Plan to Improve the Environment.
[7] UK Voluntary Review: https://www.gov.uk/government/topical-events/uk-voluntary-national-review-of-progress towards-the-sustainable-development-goals.

4.1.12 Sunderland City Council (SCC) declared a Climate Emergency in March of the same year[8], recognising it was "important to join other councils in giving the issue suitable attention and clearly setting out how we will meet our targets on cutting emissions", in light of the "*recent weather and changes in ecosystems [that] show that we are already seeing changes as a result of climate change*".

4.1.13 In November 2020, the Prime Minister published a policy paper entitled '*The ten point plan for a green industrial revolution*'[9]. This policy document was a statement of intent by the prime minister aimed at establishing his Government's climate credentials. The paper addressed a variety of low carbon initiatives from offshore wind and nuclear power to sustainable transport, electric vehicles and protecting our natural environment. The paper presents 'target milestones' to aid in delivering these objectives but, although they set out a clear direction of travel, these are not binding requirements.

4.1.14 In December 2020, the Government published an Energy White Paper entitled, 'Powering our Net Zero Future'[10]. The White Paper claims to "*build on the Prime Minister's Ten Point Plan to set the energy-related measures the Plan announced in a long-term strategic vision for our energy system, consistent with net zero emissions by 2050.*"

4.1.15 Whilst strengthening the case for action across the areas identified by the Government, the Energy White Paper is, in itself, still a policy paper, which acts as a guide to the complex and multi-layered issue of how to reduce our emissions while still going about our 'normal' life. The implementation of supporting regulation and legal obligation will be needed to drive this forward. However, as it stands the document sets out measures that the Government perceives as important steps for improving the sustainability and resilience of the Country, with some specific suggestions for UK business. The white paper pledges to, amongst other things, to "*create a sustainable future for UK manufacturing industry through improved energy efficiency and the adoption of clean energy technologies*", and to "*ensure that the transformation of our industrial sectors supports jobs, higher skills and new business opportunities across the country.*"

[8] https://www.climateemergency.uk/blog/sunderland/ (Accessed 20/04/2021).
[9] Johnson, B & Sharma, A, 'The ten point plan for a green industrial revolution', 18/11/2020 https://www.gov.uk/government/publications/the-ten-point-plan-for-a-green-industrial-revolution (Accessed 20/04/2021).
[10] BEIS, 'Energy White Paper: Powering our net zero future', published 14/12/2020, updated 18/12/2020, https://www.gov.uk/government/publications/energy-white-paper-powering-our-net-zero-future (Accessed 20/04/2021).

4.1.16 It goes on to say that "*Improved efficiency in the energy performance of buildings and industrial processes will lay the groundwork for the transformation of industrial energy. But we cannot rely on energy efficiency alone to reduce emissions in line with our 2050 goal. Manufacturing industry will need to capture their carbon for onward storage and switch from using fossil fuels to low-carbon alternatives*."

4.1.17 In March 2021, the Government published its *'Industrial Decarbonisation Strategy'*[11]. Amongst other things, this document set out an indicative roadmap to 'net zero UK industry'. It expects the first industrial carbon capture projects to come on line in 2023/24, with overall industrial emissions reducing by two thirds from 2018 levels by 2035. As part of the transition, the Government is advocating 'low-regret' key technologies i.e. technologies "*such as hydrogen and CCUS [Carbon Capture, Usage and Storage], which is robust to future uncertainties such as industrial demand, technical challenges and fuel prices."*

[11]GOV.UK, Industrial Decarbonisation Strategy, Published March 2021
https://www.gov.uk/government/publications/industrial-decarbonisation-strategy (Accessed 05/10/2023)

5 PLANNING POLICY

5.1 Introduction

5.1.1 A list of the key legislation, regulations and policy is provided, below. A comprehensive documentation of all relevant national, regional and local planning policy associated with the *Sustainability Statement* is provided in Appendix 1 and should be consulted in conjunction with the main report.

5.2 National Legislation, Regulations & Policy

- Climate Change Act 2008.
- Town & Country Planning (Environmental Impact Assessment) Regulations 2017.
- Building Regulations: Part L Conservation of Fuel and Power 2013 incorporating 2021 amendments and Part S Infrastructure for Charging Electric Vehicles.
- National Planning Policy Framework (2023).

5.3 Local Policy

- SCC Core Strategy and Development Plan 2015-2033.
- IAMP AAP 2017-2032.
- Draft Development Management Supplementary Planning Document (SCC, December 2020).
- Sunderland City Council and South Tyneside Council IAMP Interim Position Statement (January 2022).
- Sunderland Healthy City Plan 2020-2030.

6 SUSTAINABILITY STATEMENT APPROACH

6.1.1 Following a review of the relevant national, regional and local sustainability objectives outlined in Appendix 1, the following sustainability topics have been identified, against which the Proposed Development have been evaluated:

- Waste & Recycling (includes Construction & Demolition).
- Flood Risk.
- Development Ratings.
- Materials.
- Energy.
- Water.
- Pollution.
- Biodiversity.
- Secure Design.
- Contaminated Land.
- Travel.
- Adapting to Climate Change.

7 WASTE & RECYCLING

7.1 Policy Context

- Sunderland Core Strategy & Development Plan Policy:
  - BH2 Sustainable Design & Construction; and
  - WWE6 Waste Management.

7.2 Developer Compliance

7.2.1 Waste, if not managed safely, can result in pollution of the environment. The least sustainable waste solution is disposal to landfill. The reuse and recycling of materials and waste will be encouraged. The Applicant will follow the waste management hierarchy adopted in the South Tyne & Wear Waste Management Partnership Joint Municipal Waste Management Strategy 2021-2025 [12] (see Figure 7.1) and incorporate facilities to minimise waste (refer to ES Chapter 9 Waste for further details of the waste strategy for the Proposed Development).

7.2.2 There is sufficient capacity for waste arisings from construction and operation through local landfill sites or suitable offsite locations for reuse, treatment and recycling. The combined waste tonnages of the Proposed Development are <1% of total waste arisings annually of the Tyne & Wear subregion and, therefore, are not expected to significantly impact landfill void capacity. Hence, waste generation at the Proposed Development is determined to be a **Minor Adverse effect and not significant** (in EIA Terms).

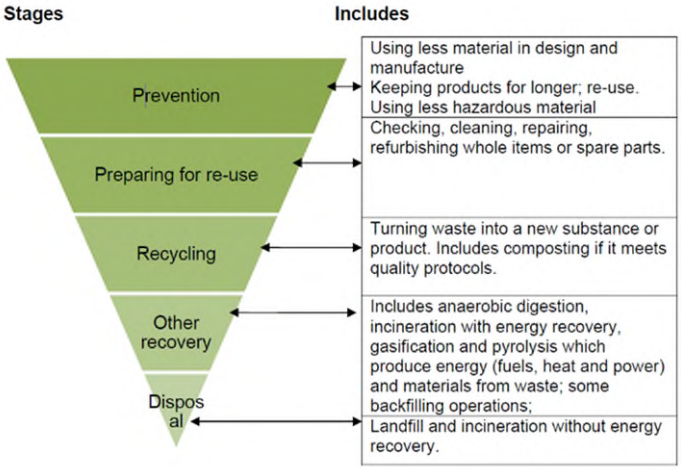

Figure 7.1: Waste Disposal Hierarchy

[12] South Tyne & Wear Waste Management Partnership Joint Municipal Waste Management Strategy 2021-2025 https://www.southtyneside.gov.uk/media/610/Joint-waste-management-strategy/pdf/3349-JH-Joint_Municipal_Waste_Management_Strategy_202125.pdf?m=637713574846230000 (Accessed 24/08/2023).

Table 7.1: Waste & Recycling Initiatives		
Initiative	**Description**	**Commentary**
WR1	Site Waste Management Plan (SWMP)	A SWMP will be prepared by the Principal Contractor. The purpose is to ensure the efficient management of building materials, legal disposal of waste and the maximisation of material recycling, reuse and recovery. The plan spans across pre-construction activities through to post construction review.
WR2	Provision of training	All members of the workforce will be made aware of the waste strategy and will receive relevant training. Training will ensure proper waste management handling procedures are implemented.
WR3	Waste management during design phase	The Proposed Development will be designed to utilise prefabricated construction panels where feasible. There will be a commitment to ensure that precise material requirements are specified to avoid unnecessary waste. Sustainable procurement practices will be implemented by seeking to minimise packaging.
WR4	Waste management during the construction phase	The Proposed Development will operate under a 'segregation at source' policy. This will involve separating waste streams at generation, facilitating high recycling and recovery rates. Waste generated at Site will be collected by a suitable waste collection contractor and sent to an appropriate processing / disposal facility, depending on the waste stream. As far as is practicable, waste streams such as packaging and containers will be returned to suppliers for reuse. Good practice measures will be implemented to ensure site waste management is effective. These include a system of recording and monitoring waste generation and recycling and training of proper waste management handling procedures. Cut and fill management will be employed to minimise waste removal offsite using both inert demolition materials and soil.
WR5	Waste disposal during the construction and operational phase	Recycling and re-use of materials will involve waste to be monitored, sorted and stored in as many segregated waste streams as appropriate. Adequate storage space for recyclable, compostable materials and other waste will be provided in Waste storage areas distributed within AESC Plant 3 and Assembly and Warehousing Building. The layout of the Proposed Development will take into consideration the need for recycling collection.

8 FLOOD RISK

8.1 Policy Context

- IAMP AAP 2017-2032 Policy IN2: Flood Risk and Drainage.
- SCC Core Strategy & Development Plan Policy 2015-2033: BH2 Sustainable Design & Construction; NE1 Green & Blue Infrastructure, WWE2 Flood risk and coastal management; WWE3 Water Management.

8.2 Developer Compliance

8.2.1 Extreme weather patterns, likely attributable to climate change, can lead to a multitude of additional pressures. One such pressure is on flood defences due to an increased flood risk. During extreme winter storms, flooding issues can cause significant problems especially in places where the topography of the land renders them susceptible. Development of the Flood Risk Assessment (FRA) & Drainage Strategy was carried out by Systra and initiatives suggested in Table 8.1 are consistent with their findings.

8.2.2 The Proposed Development lies directly south of the Usworth Burn which flows eastwards and northwards towards its confluence with the River Don before reaching Hylton Bridge.

8.2.3 The majority of the Proposed Development (AESC Plant 3 and the associated warehouse) sit within flood zone 1, the area of lowest flood risk. The eastern end of the access road partially sits within flood zone 2.

Table 8.1: Flood Risk Initiatives

Initiatives	Description	Commentary
FR1	Flood Prevention through FRA	**Fluvial Flooding:** The Proposed Development is located almost wholly in Flood Zone 1 and as such the residual risk of fluvial flooding to the scheme is negligible. **Surface Water Flooding:** There is a substantial area at high risk of surface flooding on the low ground north and east of North Moor Farm but away from the Proposed Development. A corridor of low-risk surface flooding follows the proposed access route towards International Drive. A temporary drainage scheme in place during the construction of AESC Plant 2 to the east of the Proposed Development will need to be altered to accommodate run off volumes from both developments. A new surface drainage system will be introduced to capture and manage run-off. There is no significant source of surface flow originating from outside

Table 8.1: Flood Risk Initiatives		
Initiatives	**Description**	**Commentary**
		of the development. Besides this, the Site is at no significant risk of surface flooding. **Drainage Flooding:** The only formal property drainage within the proposed development extent is that associated with the North Moor Farm complex. There is no associated risk of flooding to the wider development site as the quantity of water involved from that drainage would be minimal in comparison to the site size. Any such overflow would drain following the natural terrain topography into one or other of the local land drains or field ditches and would pose little or no risk to the proposed development site. **Groundwater Flooding:** The flood risk from groundwater can be considered low and there is no material risk of flooding.
FR2	Sustainable Drainage	A surface water management strategy has been developed, where SuDS (Sustainable Urban Drainage Systems) have been incorporated within the Proposed Development; this includes attenuation of run-off to greenfield run-off rate using underground storage.
FR3	Sediment run-off containment	Water quality of the runoff from roofs and paved areas will be managed by provision of proprietary equipment – vortex separators and oil interceptor/ silt trap units. The choice of these units and their placement within the surface drainage networks is based upon the pollution hazard and water quality management indices methodology set out in Chapter 26 of the CiRIA SuDS Manual. Delivery bays, where materials are loaded or unloaded and the risk of spillage is highest, will be roofed over so that they are shielded from direct rainfall and the amount of water reaching the trafficked surface is limited to that dripping from vehicles in wet weather or carried in on vehicle wheels. This water will be contained separate from the main drainage systems and taken off-site for treatment and disposal. The contractor will protect new surface drainage elements during the construction phase from silt carried in runoff from areas still under construction or in use as accesses to such areas, so that the new water quality management components and attenuation features are not overwhelmed during the construction phase and can function properly to meet their intended purpose. The pollution-control aspect of the new surface drainage is particularly sensitive to the effectiveness and frequency of maintenance, removing collected material (silt, light liquids) from the vortex separators and oil interceptors. The facility operator will need to maintain the systems accordingly during the operational phase of the project.

Table 8.1: Flood Risk Initiatives		
Initiatives	**Description**	**Commentary**
FR4	Porous / Permeable Paving or Tarmac	The use of permeable paving for a source-control element on the parking has been considered but is deemed unnecessary in addition to the implementation of Initiative FR3. The traffic level around the site and residual risk of pollution from materials deliveries is considered to make road-side source-control SuDS features such as filter strips or swales to be too vulnerable to damage to be practicably reliable.
FR5	Underground Attenuation Tanks	The attenuation storage required to hold the excess run-off in each system pending storage will be provided via cellular storage tanks located beneath the car-parking area. The dense layout used for the scheme does not leave sufficient space to use basins or similar surface features. The flow control for each of the sub-systems is derived through pumped outfalls. To give security of operation, the pump sets operate in duty/standby mode. Back-up generators are provided to give security of power supply in the event of a power outage. Connection points for mobile pumps will be provided. An extra allowance of storage of 125m3 per system is to be provided to cater for complete pump failure.
FR6	Water Conservation	The Applicant will consider opportunities for water saving measures such as grey water recovery, low flow taps, dual flush and vacuum toilets to reduce water consumption of the Site. Although the majority of roof-space within the Proposed Development will be given over to Solar PV, a green roof is proposed on the office building and rainwater harvesting could be used for irrigation.

9 DEVELOPMENT RATINGS

9.1 Developer Compliance

9.1.1 The Applicant is committed to providing commercial space of high-quality design. Design stage SBEM assessments will be carried out prior to construction that will inform an appropriate energy strategy and the development will be built to standards exceeding those in the current Building Regulations Part L 2021. The Building Regulations Part L 2021 require a carbon emissions reduction for new commercial developments of 27% relative to the Part L 2013 base level.

9.1.2 The Applicant is seeking to achieve a BREEAM "Very Good" Rating, subject to the final design criteria and tendering process.

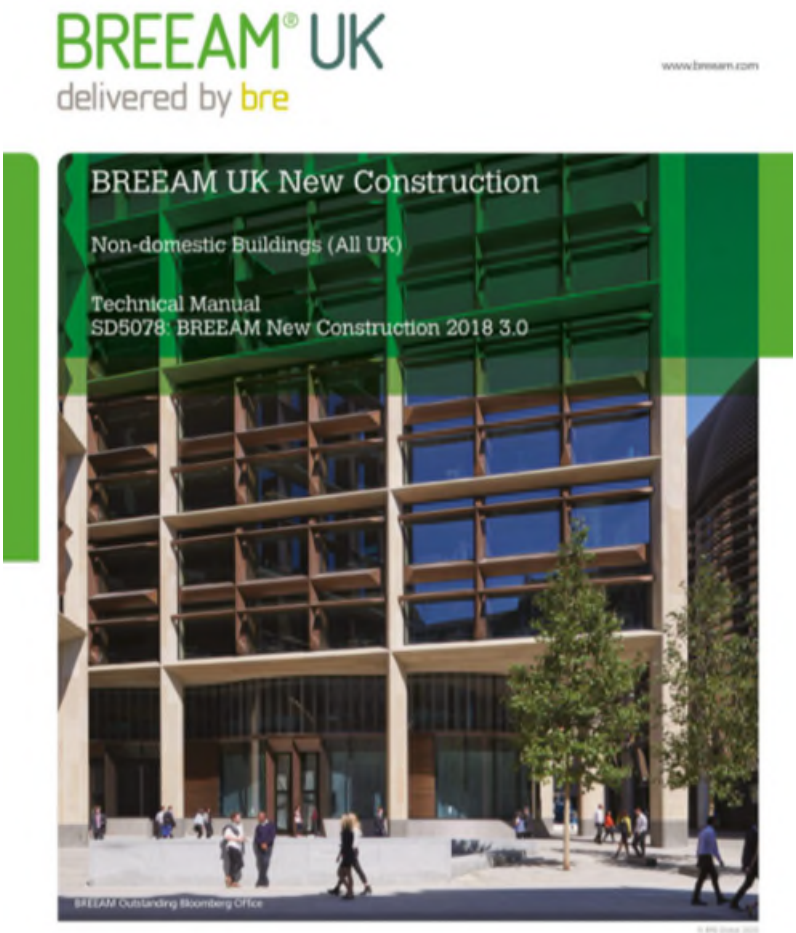

Figure 9.1: BREEAM technical manual for new constructions

(*https://bregroup.com/products/breeam/breeam-technical-standards/breeam-new-construction/*)

10 MATERIALS

10.1 Policy Context

- IAMP AAP 2017-2032; Policy D2 Public Realm.
- SCC Core Strategy and Development Plan 2015-2033:
  - Policy BH2 Sustainable design and construction; and
  - Policy HS4 Health and safety executive areas and hazardous substances.

10.2 Developer Compliance

10.2.1 Materials can have an impact on the environment in a range of different ways and at different times during their life cycles. The UK construction industry uses more than 400 million tonnes of material every year, making it the UKs largest consumer of natural resources.

10.2.2 The Applicant, through the tendering process for construction partners, is exploring opportunities to use recycled materials, reusing site-won construction materials, and sourcing locally to reduce transport miles. The scale of development proposed means that here will be a considerable requirement for materials to be brought onsite throughout the construction phase but, by exploring the embodied energy and carbon in these materials from the design stage and refining both the sources and quantities of materials used as the development progresses, the Applicant will seek to minimise the impact of the materials on the local environment. Further detail about the materials expected to be included in the development and the embodied energy and carbon this entails is provided in the Climate Change Chapter of the ES, as well as in the Energy Statement which is provided as an Appendix to this ES.

Table 10.1: Construction Material Initiatives

Initiative	Description	Commentary
CM1	Procurement of Materials	The procurement of materials for the Proposed Development will prioritise renewable or sustainable sources with low energy impact.
CM2	Reduce waste streams	The Principal Contractor will be required to consider the options for utilising any waste materials produced during the construction onsite in-line with the waste hierarchy (see Section 7). Specifically, this will include consideration of landscaping and secondary aggregate use for road surface sub-base. The Proposed Development will operate a 'segregation at source' policy which involves separation waste steams at generation facilitating high recycling and recovery rates.

Table 10.1: Construction Material Initiatives		
Initiative	**Description**	**Commentary**
CM3	Avoid the use of toxic materials where possible	The Proposed Development will avoid the use of toxic glues, solvents treatments and coatings where possible. The Principal Contractor will be required to actively avoid insulating and other materials containing substances which contribute to ozone depletion, or which have the potential to leach harmful chemicals into the local environment.
CM4	Maximise the use of locally sourced materials	Locally sourced materials will be used wherever possible. This will minimise transport emissions as well as other potential environmental impacts as well as providing investment into the local economy.
CM5	Minimise the use of insulation materials known to contribute to ozone depletion	The use of high-efficiency, environmentally friendly insulation will be prioritised for the development.
CM6	Transporting Materials	Opportunities to reduce the carbon footprint associated with the transportation of construction material will be considered wherever appropriate. Where local materials are unavailable or unsuitable for use in the Proposed Development, consideration will be given to the relative merits of alternative sources. This will include, amongst other aspects, whether materials arriving predominately by port or rail offer reduced transport emissions compared to alternative modes of transport such as road, especially for haulage of bulk construction materials.
CM7	Safety of using materials	A Proposed Development should use Best Available Techniques (BAT) and As Low as Reasonably Practical (ALARP) principle to ensure the safety of the site. A pre-construction and pre-operation safety report will have to be submitted prior to each stage and maintained throughout the lifetime of the plant. As part of the preparation of the reports the following is currently planned: • Review of design decisions and justification. • Review of design standards for processing equipment. • MAHAZID. • Preparation of a MAPP document. • Environmental Risk Tolerability Assessment (CDOIF Assessment). In addition to the above task, a selection of following (not extensive) list may be used to understand the risks and how to mitigate them: • DSEAR Review. • HAZIDs and HAZOPs. • Layer of Protection Analysis (LOPA). • Major Hazard Consequence Modelling. • QRA and analysis.

11 ENERGY & CARBON EMISSIONS

11.1 Policy Context

- SCC Core Strategy & Development Plan 2015-2033: WWE1 Decentralised, renewable and low carbon energy; and BH2 Sustainable design and construction.
- Sunderland Low Carbon Framework (2020): Strategic Priority 3 Create an energy efficient built environment; Strategic Priority 4: Develop renewable energy generation and storage; Strategic Priority 5: Low carbon and active transport.

11.2 Developer Compliance

11.2.1 The Applicant aims to minimise the consumption of energy and use of fossil fuels. As well as being a primary source of carbon dioxide (CO_2) emissions, fossil fuels (such as oil, coal and gas) are finite resources and the electricity they produce should be used as sparingly and efficiently as possible. Appropriate building design can minimise heat loss and maximise solar gain, natural lighting and passive ventilation to reduce energy requirements, whilst electrical appliances and fittings are becoming increasingly energy efficient.

11.2.2 The Proposed Development will comply with the Building Regulations Part L 2021 and will surpass the carbon emissions reduction of 27% for commercial developments relative to the Part L 2013 base level. The Proposed Development has been designed to include a high level of fabric efficiency and to use energy efficient technologies where possible to minimise energy use and carbon emissions. The installation of roof-mounted solar PV panels on the roof of the AESC Plant 3 and the Assembly and Warehousing building will help achieve the required emissions reduction in line with the Building Regulations.

11.2.3 Given the large roof area available, the proposed deployment of solar PV panels will provide a substantial contribution towards meeting the emission reduction obligations in respect of Building Regulations. Although the timescale for construction of the Proposed Development means that for Development Control sign-off, it will likely need to comply with Part L 2021, the aspiration is for the development to reach the emission reductions expected to be required under Part L 2025, which will not likely come into force until June 2026. For commercial developments, this would mean a carbon emission reduction of 75-80% relative to previous standard, Part L 2013. For this reason, the Proposed Development is aiming to substantially exceed minimum requirements in relation to carbon emission reductions.

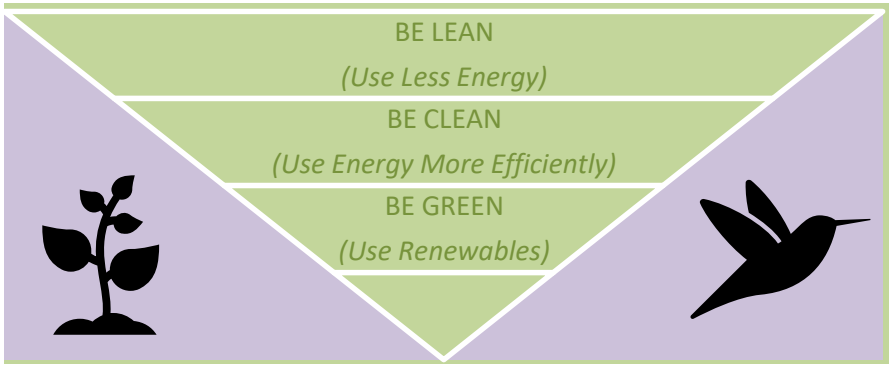

Figure 11.1: Energy Hierarchy

11.2.4 The Whole Lifecycle Carbon (WLC) emissions associated with the Proposed Development covering the three project life stages have been calculated (see ES Chapter 15 Climate Change): Construction (A1-A5), Operational (B1-B6) and End of Life (C1-C4). Two scenarios are presented to demonstrate the potential carbon emission reduction which can be achieved: Scenario A – with gas boilers and Scenario B – all electric hating (heat pumps). A comparison of the related carbon emissions at each project life stage is shown in Table 11.1, below.

Table 11.1: Absolute Scenarios – Whole Lifecycle Carbon (WLC) based on Cradle-to-Grave	
Scenario A – With Gas Boilers	
Project Stage & Lifecycle Modules	***Whole Lifecycle Carbon Emissions (tCO_2e)***
Construction [A1-A5]	139,299
Operational [B1-B6]	3,921,249
End of Life [C1-C4]	15,535
TOTAL	**4,076,082**
Scenario B – All-Electric Heating	
Project Stage & Lifecycle Modules	***Whole Lifecycle Carbon Emissions (tCO_2e)***
Construction [A1-A5]	139,299
Operational – All Gas [B1-B6]	1,142,578
End of Life [C1-C4]	15,535
TOTAL	**1,297,412**

11.2.5 The following initiatives demonstrate the approach that is being taken to reduce energy use and minimise carbon emissions.

Table 11.2: Carbon Emissions & Energy Initiatives		
Initiative	**Description**	**Commentary**
CEE1	Energy efficiency during construction	Given the scale of the development, the construction process will inevitably require a considerable amount of materials to build and will use a significant amount of energy to complete the necessary works. The construction process itself will be managed by the Principal Contractor appointed by The Applicant. The Principal Contractor (and Sub-Contractors) will be required to operate by best practice guidance and to minimise waste wherever possible. This will include minimising excessive or wasteful use of energy in the form of electricity, heat and transport fuel.
CEE2	Mitigation measures	The embedded mitigation proposed includes a rooftop solar PV installation covering AESC Plant 3 and the Assembly and Plant Warehouse building, while Heat Pumps are under consideration for the office spaces. Enhanced fabric efficiency will be incorporated for each building and waste water heat recovery (WWHR) will be considered to help deliver the at least the target 27% emission reduction for regulated emissions. These additional measures have not been assessed in detail due to the lack of SBEM assessment.
CEE3	Energy efficiency from building design	The buildings, and in particular the office building, has been designed to ensure a balance between the competing needs to maximise solar gain during the winter and limit it during the summer to avoid overheating. This has been achieved through passive solar design, intelligent use of glazing, and potential use of a WWHR system.
CEE4	Energy efficiency from building fabric	A high quality of fabric efficiency will be achieved through the use of energy efficient materials and in all cases the Building Regulations will be achieved or exceeded. The Development will be built to comply with, as a minimum, Building Regulations Part L 2021, which is expected to result in emission reductions of 27% relative to Part L 2013. In reality, the aspiration is for the Proposed Development to considerably exceed this target.
CEE5	Energy efficiency from building services	High energy efficiency lighting (LED luminaries) will be installed throughout the development. Exterior lighting will be combined with either photoelectric switches or movement sensors depending on location, which provide energy savings at a low capital cost. A full adaptive lighting management system for exterior lighting can control exterior lighting using wireless, mains-borne signalling, or a separate control cable network to control individual luminaires. This can incorporate specific manual controls for individual luminaires coupled with automated responses to real-world situations (e.g. external light levels). Water pipes will be lagged to minimise thermal losses and to protect the pipes during periods of frost.

Table 11.2: Carbon Emissions & Energy Initiatives		
Initiative	**Description**	**Commentary**
CEE6	Energy Use	The nature of the industrial processes being undertaken within the site mean that there will be an unavoidably high energy demand. Notwithstanding this, the Applicant will take every opportunity to reduce energy use through system optimisation and energy efficiency gains. Both solar PV will be incorporated into the Proposed Development and heat pumps are also likely to be included. At this stage it has not been fully determined whether air source heat pumps (ASHP) or ground source heat pumps (GSHP) would be the preferred option. Currently, the rooftops of AESC Plant 3 and the Assembly and Warehousing Building have been indicatively shown to be an area for future solar PV. AESC Plant 3 has a maximum area of 69,900m^2 and the Assembly and Warehousing Building has a maximum area of 35,500m^2. Smaller arrays will also be added to the office building roof. Using the maximum areas above, an estimated 34,799 panels, rated at 300Wp, would result in a total installed capacity of 10.44 MWp. This installed capacity of solar PV is expected to generate approximately 8,352 MWh over the course of a year. Despite the large number of solar panels, the total generation will only cover a small amount of the total demand (approximately 15% of regulated electricity use, based on the estimated energy demand figures). There is unlikely to be any surplus electricity and hence there will be no requirement to export to the electricity grid. At this stage heat pumps are the preferred candidates to provide heating for the office space within the building. Although plans have not been finalised, high level estimates across office buildings. The separate office block is spread across three floors, with a combined floor area of 3,907 m^2. A further 1,929 m^2 of office space is included in the Assembly and Warehouse Building. The predicted heat demand for the space heating and hot water is 261 MWh/yr. If this heat demand was to be supplied by gas boilers with 90% efficiency, it would require 289MWh/yr of gas to be burnt. However, an ASHP with a coefficient of performance (CoP) of 3 would only require an electrical load of 87MWh/yr to provide the same amount of heat. Additionally, as the electricity grid decarbonises (or if the Solar PV generation is used to supply the heat pumps, so the emissions associated with this heating would tend to zero. Smart meters will be installed to increase awareness of energy use and hence help to reduce energy demand from the Proposed Development.
CEE7	Energy Performance	The Applicant will undertake SBEM energy assessments once final specifications for the internal design are available. 'As built' energy assessments will be undertaken upon completion of construction. This will be required for compliance with Building Regulations to assess the energy performance of the building.

12 WATER

12.1 Policy Context

- SCC Core Strategy and Development Plan (2015 -2033) policy: BH2 Sustainable design and construction; NE1 Green and Blue Infrastructure; and WWE4 Water Quality.

12.2 Developer Compliance

12.2.1 In addition to added pressures on flood defences, extreme weather events linked to climate change can affect water supply provision. During prolonged dry spells water can become an increasingly scarce resource, especially as demand continues to grow with an increasing population. To satisfy the increase in demand, new sources of water and associated infrastructure may be required. However, the construction and operation of this infrastructure (reservoirs and treatment works) is expensive, energy intensive and damaging to the environment. Therefore, measures to help reduce water consumption should be undertaken where possible. To ensure the water resource and the water quality of the site is not affected by the Proposed Development, the following initiatives have been proposed to mitigate any environmental impacts.

Table 12.1: Water Initiatives

Initiatives	Description	Commentary
W1	Water Management	A Construction Environmental Management Plan (CEMP) (or equivalent) will be produced that will incorporate key principles of the good practice, legislation, regulations, and guidance to minimise the effect of the proposed development on the water resources.
W2	Water management and conservation during the construction phase	Key principles considered in the construction phase include a construction design with minimal disruption to the natural flow regime; planning considerations of the protection of watercourses, groundwater, and attenuation features, including the supervision of sub-contractors and liaison with SCC and the Environment Agency area staff. Installation of attenuation features at the outset to allow establishment before any surface connections from the Proposed Development. Drains and potholes are regularly inspected, cleared, infilled and/or repaired. Refuelling will be undertaken in a designated refuelling area and the use of biodegradable oils and lubricants will be considered where possible. These resources will be available to contractors at all times of operation. Cement/concrete mixes will be calculated to ensure that sufficient quantities are supplied without the need to dispose of excess and cement: sand mix ratio will be monitored for consistency and suitability.

Table 12.1: Water Initiatives		
Initiatives	**Description**	**Commentary**
W3	Water management considered during both the construction and operation phase	Secure storage of all fuel, oils, and other polluting substances within suitably bunded containers and placed upon impermeable surfaces. The use of integral drip trays (of 110% of the capacity of the fuel tank) for any static machinery/ plant, where practicable. All plant, vehicles and machinery will also be regularly inspected for leaks;
W4	Water management and conservation during the operation phase	All workings using chemicals will take place on impermeable surfaces with appropriate bunding and separates to inhibit escape to the environment. All spilt/used fuels, oils and chemical will be disposed of in accordance with the relevant legislation. The Proposed Development would have a site services team who, as part of their role, would ensure all drainage systems are fully maintained and managed in accordance with best practice/guidance.
W5	Water Conservation	The Applicant will consider opportunities for water saving measures such as grey water recovery, low flow taps, dual flush and vacuum toilets at the detailed planning stage to reduce water consumption of the site.

13 POLLUTION

13.1 Policy Context

- IAMP AAP 2017-2032; Policy EN4: Amenity.

13.2 Developer Compliance

13.2.1 Pollution can occur in many forms during both the construction and operation phases. During construction the primary forms of pollution would be noise and dust, once completed the Proposed Development could lead to increased emission of pollutants to the atmosphere (e.g. from increased vehicle use once the buildings are occupied).

13.2.2 Chemical pollution can have significant adverse health effects on humans, animals, plants and ecosystems. It can also reduce the amenity value of the environment and damage buildings. As well as affecting plants and animals, other forms of pollution such as light and noise can cause general nuisance to neighbours. The reduction of pollution is, therefore, critical to sustainable development.

Table 13.1: Pollution Control Initiatives

Initiative	Description	Commentary
PC1	Pollution management during the construction phase	During the construction phase, a best practice Dust Management Plan (DMP), as found within the CEMP, will be implemented. Examples of the dust controls existing in the DMP include; • Regular grading and maintenance of haul roads, if used within the Site. • Speed restrictions on vehicles within the Site. • Minimising of stockpiling heights, thereby reducing wind whipping and lofting. • Laden lorries to be covered before leaving the site. • Provision of training to the site personnel on dust mitigation; all dust complaints and associated actions will be recorded along with a detailed written log of received information and complaints, and actions taken to resolve the situation. • Water bowsers will also be provided to spray haul roads and stockpiles with water to suppress dust emissions, as necessary. • Waste that cannot be re-used or recycled, or which is hazardous, will be sent for appropriate disposal. This might include a small amount of waste oil, cooking oil, animal wastes among other untreatable wastes.
PC2	Dust pollution mitigation of the Construction phase	This will be part of the CEMP.
PC3	Minimising noise pollution during the construction phase	Best working practice can be set out in the CEMP with the following measures put in place to minimise noise emissions: • Implement set working hours during the week and at weekends, and adherence to any time limits imposed on noisy works by the local

Table 13.1: Pollution Control Initiatives		
Initiative	**Description**	**Commentary**
		authority. • Should earthworks and/or construction activities need to be carried out during night-time hours, the local authority could include a planning condition that requests advance notice and details of any night working to be provided. • All machinery should be regularly maintained to control noise emissions, with particular emphasis on lubrication of bearings and the integrity of silencers. • Site staff should be aware that they are working adjacent to a sensitive area and avoid all unnecessary activities due to misuse of tools and equipment, unnecessary shouting and radios. • Ensure engines are turned-off when possible.
PC4	Minimising noise pollution during the operational phase	The following indicative measures have been proposed for potential adoption: • Evaluation of each unit to be undertaken at detailed design stage and mitigation measures proposed accordingly (if required). • External plant (e.g. fans, stacks and heating and ventilation units) can be specified to reduce noise levels. Where necessary, silencers may be applied to plant to attenuate tonal components. • White noise reversing alarms for movements within yards may be specified (if required).
PC5	Minimising light pollution	Construction activities should occur only during the set working hours outlined in the CEMP. Any lighting required during this phase, for example in early evenings during winter, will therefore be limited to these times, except where specific activities need to take place during the night for example concrete pours.
PC6	Pollution management during operation	During the operational phase, guidelines to ensure the safe storage and disposal of potential pollutants and contaminants will be followed. Measures could include but would not be limited to: • Waste storage facilities being made available in all primary locations in which waste is generated. Waste will be collected from these units regularly and stored in centrally located storage units, as well as in covered waste storage areas. • Recycling of batteries. • Safe disposal of any medicines and / or medical waste generated. • Safe storage and disposal of detergents and cleaning solutions. • Ensure radon provisions are in place where appropriate. • Provision of emission-free at point of use heating systems (such as heat pumps or similar).
PC7	Minimising transport pollution	Pollution from transport emissions will be reduced by a programme of actions which could include: • Electric Vehicle charging facilities – 71x7 kW within car park. • Support local walking and cycling initiatives. • Bike / e-bike hire schemes and Cycle to work scheme for employees.

Table 13.1: Pollution Control Initiatives		
Initiative	**Description**	**Commentary**
		• Implementation of a Green Travel Plan.
PC9	Minimising water pollution	The preparation of pollution incident response plans, identifying the type and location of onsite resources (spill kits, absorbent materials, oil booms etc.) available for the control of accidental releases of pollution and other environmental incidents. These resources will be available to contractors at all times of operation.
PC10	Hazardous waste	Hazardous waste will be separately stored in appropriate containment and disposed of to a licensed facility.

14 BIODIVERSITY

14.1 Policy Context

- SCC Core Strategy & Development Plan 2015-2033: Policy NE2 Biodiversity and geodiversity; Policy NE3 Woodlands/hedgerows and trees; Policy NE4 Greenspace; and; Policy BH2 Sustainable design and construction.
- IAMP AAP 2017-2032; Policy EN2: Ecology; Policy EN3: Green Infrastructure.
- Environment Act 2021

14.2 Developer Compliance

14.2.1 It is assumed that the proposals will result in the loss of most of the existing habitats within the site. To gain planning permission, the Proposed Development will need to restore and enhance biodiversity in line with the Environment Act 2021, which was introduced following the development of IAMP ONE and AESC Plant 2 developments. A biodiversity net gain (BNG) must be achieved, relative to the pre-development value. The environmental targets contained within the Act will be set by regulations, which will specify the date by which it is to be achieved.

14.2.2 Policy NE2 Biodiversity and geodiversity of the SCC Core Strategy & Development Plan 2015-2033 (2020) states that, where appropriate, development must demonstrate how it will:

i) provide net gains in biodiversity; and

ii) avoid (through locating on an alternative site with less harmful impacts) or minimise adverse impacts on biodiversity and geodiversity in accordance with the mitigation hierarchy

14.2.3 The Biodiversity Offsetting Report (see Appendices 12.13) has quantified the net loss of biodiversity for three existing aspects of the Proposed Development: area-based habitats, hedgerows and watercourses. A BNG loss has been recorded for each metric with habitats, hedgerows and watercourses, reducing by 38.99%, 46.16% and 47.07% respectively.

14.2.4 In order to achieve a net gain in biodiversity for each metric:

- For habitat, a further 66.52 habitat units would then be required to meet a net gain onsite, which could include: creating another 7.5 ha of other neutral grassland in ‘good’ condition generates 69.33 habitat units, 7.5 ha of mixed scrub in ‘good’

condition also generates 69.33 habitat units or 15.5 ha of other broadleaved woodland in 'good' condition generates 65.43 habitat units.

- To achieve a net gain in hedgerow units, +24.66 units of medium distinctiveness hedgerows are required. This is best met by creating approximately 2.5km of species-rich native hedgerow with trees (over 5 native species required) in 'good' condition.
- To achieve a net gain in watercourse units, the encroachment on the existing ditches could be remediated to achieve a 'good' condition, generating 1.22 units. Alternatively, 0.1km of wet ditch in 'good' condition, with no encroachment, could generate 0.56 watercourse units.

14.2.5 Given that the assessment identifies a reduction in site biodiversity following development, an external offset will be required. The delivery of external offset is under review and will be confirmed by Sunderland City Council. A Landscape and Biodiversity Management Plan will be required in order to confirm the habitat creation, management and monitoring requirements.

Table 14.1: Biodiversity Initiatives

Initiatives	Description	Commentary
B1	Ecological and Landscape Mitigation Area (ELMA)	In response to the initial habitat loss with the site development, 46.93 hectares of the 110 ha ELMA was implemented as part of the 2018 IAMP ONE consent and includes a wide range of habitat enhancements, whilst the majority of the remaining ELMA was approved under the Early Infrastructure and Northern Employment Area applications.
B2	Ecological Enhancement (Habitat)	Several ecological enhancement features have been considered as on-plot measures to develop the sites ecology and biodiversity. These include a species-rich neutral grassland along the perimeter of the site with standard (rural trees), an area of wet woodland and hedgerow planting between new buildings. In addition, retained habitats such as sections of hedgerow and associated ditches shall be enhanced.
B3	Measures to mitigate disruption to birds	• Construction activities that could result in the disturbance of nesting habitats will not be undertaken during the bird nesting period (i.e. March to August, inclusive) unless a check survey by a suitably qualified and experienced ornithologist has confirmed that active nests are absent. • An area of compensatory land is required to be enhanced to accommodate the populations of farmland birds that will be displaced by the loss of supporting habitats, based on the requirements of skylark, as this is the species for which potentially the largest land area is required. This is based on the most recent survey information, which

		identified 11 pairs of skylark to be lost from the AESC Plant 2 and AESC Plant 3 sites. It is assumed for the purposes of the calculation that an area of winter sown cereal field habitat will be purchased and made available to management prescriptions to enhance the area for farmland birds in general and that this land will be maintained as such in perpetuity. • Other measures designed to enhance farmland habitats for birds will be included within a Habitat Management Plan. Such measures will include the laying of hedgerows on a ten yearly cycle to ensure that hedgerows are allowed to attain full height and maximise shelter opportunities and berry / nut production. • A wide grassland buffer strip adjacent to the hedgerows will also be provided, lightly managed to encourage the development of a rough, tussocky grassland sward for the benefit of foraging barn owl. • Arable fields will be at least 2 ha in size and some will include areas of lightly grazed (by cattle) damp pasture with 'wader scrapes' to ensure that habitat is available for breeding curlew and lapwing. • Winter stubbles will be retained and (ideally) the habitats will be farmed without widespread pesticide application. • There will also be areas seeded with a wild bird cover / seed mix to ensure that winter food resources are maintained. • A monitoring protocol will be initiated to consider any changes to management requirements in the light of adverse results. • A farmland habitat compensation area in the order of 50 - 70 ha will be required in order to offset the harm from the loss of habitats within the AESC Plant 2 and AESC Plant 3 developments. This includes measures for skylark and other species, including grey partridge, northern lapwing, linnet, starling, tree sparrow Passer montanus, whitethroat Curruca communis, yellowhammer and barn owl. • An area of 3.4 ha will be retained within a single large parcel in the north-west corner of the application site that will be managed as tall, species-rich grassland and will (in its own right) be suitable breeding habitat for skylark. • The compensatory package to be delivered for farmland breeding birds will largely ensure that the wintering assemblage is also provided for in terms of habitat quality and availability, although a number of shallow pools that retain winter all-year will be required so that habitat for migrating wading birds is provided.
B4	Mitigation measures for effects on barn owl	As the Site is considered a nesting and active roosting site for barn owl, the following proposed mitigation measures could be adopted to mitigate the overall impact on biodiversity of the site. These measures include: • No building demolition shall occur if there is any doubt as to whether barn owls are nesting. • As part of the AESC Plant 2 development, three barn owl boxes have been erected nearby on a mature tree along the western boundary of the AESC Plant 3 development, and two within Hylton Bridge Farm

		(stables). A further three tree mounted boxes have been erected near the former Elliscope Farm and a wildlife tower. • All boxes shall be checked annually to ensure they are intact and functioning. • A programme of monitoring shall be undertaken every three years for a 20-year period. • To compensate for the reduction in foraging opportunities onsite, particularly associated with the ELMA, neural grassland buffers/strips will be included along the hedgerows and managed as tussocky / rough grassland with expected high populations of small mammals.
B5	Measures to mitigate disruption to bats	The following mitigation measures have been proposed to reduce the impact that the development will have on bats. These measures include: • In the event that a bat roost is located within a single willow tree which could not be fully inspected for health and safety reasons, a mitigation licence from Natural England shall be obtained prior to any affecting works. As part of the licence, a range of compensation and enhancement measures will be provided. • All trees with features suitable for roosting bats will be climbed within 24hrs of felling to consider whether any bats have begun roosting after the earlier surveys but in advance of the works taking place. • Any cavity features which cannot be exhaustively searched will be subject to a soft felling protocol, the detailed methodology to be provided in a Method Statement and to include the presence of an ECoW during felling works. • Retention of a wide buffer (at least 20m) around the peripheral western and northern boundaries (Usworth Burn) shall maintain a corridor of foraging opportunities for bats. • No night time working shall occur to avoid illumination of hedgerow boundaries. In the event that lighting is required, a sensitive lighting scheme shall be incorporated to make sure that the hedgerow boundaries are not illuminated during construction.
B6	Mitigation measures for impacts on hedgehogs and brown hare	An enhanced hedgerow network, both onsite and within the mitigation areas, will benefit hedgehog, with wide grassy margin also of benefit to brown hare: • During the construction phase, there is potential for harm by incidental killing / injury and entrapment in deep excavations. This can be overcome by avoiding the winter period (i.e. November to February, inclusive) for the clearance of such sensitive habitats as woodland, scrub and hedgerow, and by ensuring all deep excavations are either fenced-off or have a shallow batter on one edge so that animals can climb free. • Regarding compensatory provisions, these will include significant areas of neutral grassland, managed by a late summer hay cut and areas of arable land supporting spring sown cereals.

B7	Mitigation measures for impacts on otter and water vole	• The retention of a wide buffer zone (at least 10m) along the Usworth Burn shall provide a safe movement corridor for otter and water vole. • In order to mitigate indirect impacts to otter and water vole as a result of water run-off into the Usworth Burn, pollution prevention should be incorporated into the CEMP for the site.
B8	Biological Construction Environment Management Plan (BCEMP)	A BCEMP will be provided for the Proposed Development. This document shall include Method Statements in relation to a range of elements, including site clearance, pre-construction badger (and other species) check surveys, noise and light effects, protected species and invasive species. An Ecological Clerk of Works (ECoW) would be appointed to oversee the implementation of the BCEMP. The BCEMP will detail a series of measures to avoid significant indirect effects on non-statutory designated sites within the wider IAMP site north of the proposed development.

15 SECURE DESIGN

15.1 Developer Compliance

15.1.1 Part of creating a sustainable development is ensuring that the environment is safe and secure for all users of that space so they can operate in comfort and confidence. Community safety and crime prevention should be considered within the development design. The design of the Proposed Development means that the Site will generally not be accessible to the public.

15.1.2 Part of the secure site design will be the inclusion of a fence around the perimeter of the operational site. This will be a combination of a 2.4m high Paladin fence (as shown in Figure 15.1, below, and RPS Group Drawing 204-P03 Proposed Site Layout, included as part of this ES). The majority of the site will be enclosed by security fencing to prevent public access to any of the facilities. Outside this area, the remainder of the site will be enclosed by either hedgerows or a 1.2m timber post and wire mesh fence and will remain as private land.

Figure 15.1: Paladin Fence

Table 15.1: Secure Design Initiatives		
Initiatives	**Description**	**Commentary**
SD1	Site Layout and Design	Since the site will operate 24/7 and shift patterns will mean that workers will have access to the site at all times, lighting across the Site is designed to provide an even spread of illumination, avoiding any darker areas.
SD2	Communal Spaces	Although there will not be designated recreational space within the Site, the Site is accessible to public rights of way within the wider area and informal paths will be delivered as part of the continued creation of the

Table 15.1: Secure Design Initiatives		
Initiatives	**Description**	**Commentary**
		ELMA that is to be brought forward as part of the Early Infrastructure and Northern Employment Area planning permissions[13]. These can be used by staff to take strolls and get fresh air during their breaks. Additionally, due to the shift patterns and the constant presence of workers on and around the Site, together with the 2.4m high security fencing, there is likely to be a strong deterrent to criminals from entering due to increased public surveillance.
SD3	Boundaries and access	There is an area of green space included around most of the perimeter of the site which, subject to ecological mitigation recommendations, will provide a buffer to people trying to enter the Proposed Development. As discussed above, 2.4m high security fences will be introduced around the boundary as well which will provide both a visible and physical deterrent to unwelcome visitors, separating the Proposed Development from ecological and landscape mitigation area beyond.
SD4	Accreditation	The Applicant will investigate accreditation under the Secured by Design Scheme.

[13] Sunderland planning application reference 21/02807/HE4 and South Tyneside planning application reference ST/1722/FUL

16 CONTAMINATED LAND

16.1 Policy Context

- SCC City Council Core Strategy & Development Plan 2015-2033: Policy HS3 Contaminated land.

16.2 Developer Compliance

16.2.1 Provisional agricultural land classification (ALC) indicates that the agricultural land within the Site is ALC Grade 3 (Good to Moderate). The 2023 verification survey determined 23.93ha (56.5%) of land to be ALC subgrade 3a (good), 17.31ha (40.8%) is subgrade 3b while the remaining 1.15ha (2.7%) is non-agricultural.

16.2.2 The majority of the Site is currently greenfield, but the following potential contamination risks may be relevant to the construction phase and should be given due consideration:

- Contamination associated with heavy metals and hydrocarbons.
- Contamination associated with asbestos.
- Contamination associated with hazardous gas / vapours.

Table 16.1: Contaminated Land Initiatives

Initiative	Description	Commentary
CL1	Water	During construction, the Principal Contractor and its agents will ensure that chemicals and construction materials are stored safely, within appropriately bunded storage facilities where necessary.
CL2	Dust	Dust will be controlled during the construction phase. Should dust become airborne the site will be damped down to reduce the effects of dust and prevent it becoming a nuisance or health issue.
CL3	Soil	The Principal Contractor will adopt a precautionary approach to soil contamination to ensure potentially harmful chemicals and materials are recycled / reused where possible, stored and managed securely while on site and ultimately disposed of safely at appropriately licensed facilities.

17 TRAVEL

17.1 Policy Context

- IAMP AAP 2017-2032; Policy T2: Walking, Cycling and Horse Riding; Policy T3: Public Transport; Policy T4: Parking.
- SCC Core Strategy & Development Plan 2015-2033: Strategic Policy SP7 Healthy and safe communities; Strategic Policy SP10 Connectivity and transport network; Policy ST2 Local road network; Policy ST3 Development and transport.
- Sunderland Low Carbon Framework; Strategic Priority 3; Low and Active Carbon Transport.
- Sunderland Healthy City Plan 2020-2030

17.2 Developer Compliance

17.2.1 The Applicant will seek opportunities to encourage sustainable travel and reduce transport emissions. The Proposed Development will be required to install electric vehicle charging infrastructure in line with Building Regulation Part S. The Applicant will ensure the required amount of electric vehicle charging points will be installed at the Site and provision for future additional infrastructure will be considered.

17.2.2 For Site accessibility, the travel initiatives listed in Table 17.1, below, consider the provision for low carbon transport within the proposed development following the implementation of Sunderland's Low Carbon Framework.

17.2.3 Proposals will include the provision of cycling facilities, as well as substantial electric vehicle provision.

Table 17.1: Travel Initiatives

Initiative	Description	Commentary
T1	Encourage pedestrians	As part of the access strategy for the development, several new pedestrian links will be provided to ensure pedestrian and cycle connectivity
T2	Encourage cyclists	The Proposed Development will be connected to cycle paths and pedestrian links to encourage the use of bicycles. The proposed development will include appropriate cycling facilities, such as parking, showers and storage.
T3	Encourage car share and car clubs	The Applicant will encourage staff to car share. The scheme should consider the introduction of a car club facility for the IAMP site.
T4	Encourage bus use	The Applicant will ensure up to date bus timetables are available within the Proposed Development, as well as information on any local bus transport deals that may be available, to help encourage their use.

Table 17.1: Travel Initiatives		
Initiative	**Description**	**Commentary**
		The Proposed Development will offer a clear and safe walking route to the existing bus stops. The feasibility of a demand response bus services for workers at IAMP is to be investigated.
T6	Encourage electric vehicles	The Proposed Development will encourage electric car use by making provision for car and bicycle electric charging points within parking areas across the site. It is proposed to include 71 7kW EV charging points in the carpark north of the Site.
T7	Construction traffic	A CEMP will be produced which will outline how construction traffic will be managed to limit disruption in the area. This will include daily routes of construction workers, control methods for management of dust, mud, vehicle emissions and waste, and parking for construction vehicles.

18 ADAPTING TO CLIMATE CHANGE

18.1 Policy Context

- SCC Core Strategy & Development Plan 2015-2033: Policy WWE1 Decentralised, renewable and low carbon energy.
- IAMP AAP 2017-2032: Policy T3 Public Transport; Policy IN2 Flood Risk and Drainage
- Sunderland Low Carbon Framework: Strategic Priority 3 Create an energy efficient built environment; Strategic Priority 4: Develop renewable energy generation and storage; Strategic Priority 5: Low carbon and active transport.

18.2 Developer Compliance

18.2.1 Climate change has the potential to affect a wide variety of receptors through a multitude of different effects. These include, inter alia, flooding, drought and exposure to more extreme weather patterns.

Table 18.1: Adapting to Climate Change Initiatives

Initiative	Description	Commentary
ACC1	Adaption to heat waves	The passive design of the buildings already seeks to maximise solar gain during the winter and minimise it during the summer. The non-domestic areas are likely to be fitted with a reversible heat pump system, capable of providing cooling as well as heating to make the most efficient use of low carbon technology to provide climate control. The design of the building seeks to minimise the risk of overheating and minimise any potential demand for other measures. The Proposed Development will help to combat the urban heat island effect by including green infrastructure and, where possible, avoiding the use of dark materials which absorb heat.
ACC2	Adaption to extreme cold	Unlike much of the existing UK building stock, new development built in-line with current *Building Regulations* benefits from a good level of insulation, which offers much greater resilience to extremes of temperature.
ACC3	Adaption to flooding	The Proposed Development lies within flood risk zone 1 'Low Probability' therefore the annual probability of flooding at the site is less than 1 in 1,000 years - so potential flooding would be highly localised. The drainage plans put in place should be suitable to discharge expected levels of rainfall, but climate change could result in abnormally high levels of rainfall deluge. In line with Environment Agency guidelines, allowance for a 34% increased volume of surface water runoff due to climate change effects, will be incorporated into the design of the drainage system.
ACC4	Adaption to water scarcity	Water scarcity could be a problem if climate change results in more frequent hotter and drier periods. There is potential for existing local water supplies to be placed under considerable strain in prolonged periods of drought. Water management measures such as flow control devices will be installed to limit

Table 18.1: Adapting to Climate Change Initiatives		
Initiative	**Description**	**Commentary**
		water consumption.
ACC5	Adaption to sea level rise	Sea level rise is not expected to have a direct impact at this Site, but the completed development may need to take account of the possible effects of sea level rise on supply chains and import / export operations.
ACC6	Adaption to extreme weather patterns and storms	Conformance to current building regulations should provide suitable confidence in the structural integrity of the buildings, which will be designed to survive any expected instances of severe weather including high winds and snow loading. On completion of the build, the Applicant will undertake snagging checks and make clear the warranty period. Any structural defects identified will be remedied by the Applicant to ensure building integrity is preserved.
ACC7	Adaption to reducing availability of fossil fuels	Consideration should be given to the provision of transport services to the Proposed Development once it has been constructed. Workers should be encouraged to use alternative methods of transport to commute to work including using public transport, where possible, and car sharing agreements.
ACC8	Climate resilient landscaping measures	Key aspects suggested for consideration when designing climate resilient landscaping are: • Species selection: drought-tolerant species (e.g. enzymic resilience to warmer temperatures). • Sensitivity to watering (e.g. induced root hypoxia and rot from oversaturation). • Growth inhibition (e.g. pollution tolerance). • Wind tolerance (e.g. strong, deep root structures). • Year-round ecosystem services (e.g. forage and shelter capability during difficult seasons to continually support ecology and human needs). • Avoiding fragmentation of green spaces, landscapes and ecological habitats where possible. • Control use and spread of invasive / alien species that may impede native species ability to adapt or be in competition for resources during times of decreased availability (e.g. as a response of extreme weather).

19 SUMMARY

19.1.1 This *Sustainability Statement* has been prepared to demonstrate the approach that has been taken to sustainability during the design process, and considers the extent to which the Proposed Development meet with the principles of sustainable development. Consideration has been given to where the Proposed Development accords with the national and local planning policy and local planning objectives including those outlined in the *Sunderland City Council Core Strategy & Development Plan* (January 2020) and the *International Advanced Manufacturing Park Area Action Plan 2017-2032 Adopted Nov-2017*. Following this evaluation, strategies and initiatives to help address any remaining discrepancies have been proposed. It is suggested that once the initiatives been adopted, the Proposed Development will meet the national and local planning policy and sustainability criteria set out by both the Local Authority and the Applicant, themselves.

Appendix 1 Planning Policy

APPENDIX 1: PLANNING POLICY

International Advanced Manufacturing Park Area Action Plan (IAMP AAP) 2017-2032[14]

(Adopted Nov-2017)

Policy D1: Masterplan Design

A. Proposals for the IAMP must demonstrate how they reflect the following key design principles:
   i. maximise the interface with Nissan and ensure effective movement between the existing site and the IAMP AAP area;
   ii. development plots using an 'open grid' to create a variety of plot sizes;
   iii. a hierarchical street network connected to existing roads and key transport corridors featuring a central boulevard and primary routes to prioritise access from the A19 and integrate the Northern Employment Area with service networks to encourage efficient movement;
   iv. drainage infrastructure to be accommodated within the street network with SuDS placed to enable effective water quality management;
   v. orientation of buildings along the boulevard and primary routes to follow a common building line fronting on to the road, with buildings along the River Don corridor facing towards the river and landscaping uses where possible;
   vi. have special regard to preserving and enhancing the significance, including any contribution made by their setting, of heritage assets within and in proximity to the site, including Scots House (Grade II*) on the south side of the A184, Hylton Grove Bridge (Grade II) on Follingsby Lane and views from elevated locations such as Boldon Downhill and the Penshaw Monument;
   vii. where feasible, orientation of buildings to make use of solar gain, with due consideration for overheating risks, and to optimise opportunity for solar panel use on buildings; and
   viii. have regard to the presence of the North East Land, Sea and Air Museums (as designated on the Policies Map) as a visitor attraction.

B. Proposals must be accompanied by a Design Code for approval by the Councils.

Policy D2: Public Realm

A public realm strategy for the IAMP is required to accompany development proposals, based on the following key principles:

   i. marking key gateways into the site;
   ii. a comprehensive, wayfinding strategy for cyclists and pedestrians;
   iii. use of street furniture and landmarks to reinforce the identity of the IAMP, including within the Hub;
   iv. consistent use of road and pavement materials to reinforce a clear street hierarchy;
   v. provision of green and blue infrastructure at street level; and
   vi. use of low-level lighting within and closer to sensitive ecological areas.

[14] International Advanced Manufacturing Park Area Action Plan 2017-2032 (Adopted Nov 2017) https://www.sunderland.gov.uk/media/19834/International-Advanced-Manufacturing-Park-Area-Action-Plan-2017-2032-Adopted-Nov-2017/pdf/International_Advanced_Manufacturing_Park_IAMP_Area_Action_Plan_2017-2032_-_Nov_2017.pdf?m=636477263205830000 (Accessed: 13/04/2021).

Policy T1: Highway Infrastructure

A public realm strategy for the IAMP is required to accompany development proposals, based on the following key principles:

A. The comprehensive development of the IAMP requires the following highway improvements to be delivered:
   i. upgrading of the A1290 to increase capacity;
   ii. a new vehicular bridge over the A19 to connect the IAMP with the local road network to the east;
   iii. a new bridge over the River Don to allow access to the Northern Employment Area; and
   iv. new distributor roads within the IAMP to accommodate the movement of all users.

B. Development proposals must be accompanied by a Transport Assessment to:
   i. assess which specific highways improvements are necessary to ensure the acceptability of the proposals in planning terms and to ensure comprehensive development of the IAMP; and
   ii. demonstrate how, within the area shown on the Policies Map as "*A19 and Local Road Improvements*", the development will provide suitable and safe connection to, and integration with, Highways England's proposed improvements to the Downhill Lane and Testos junctions on the A19.

C. Development proposals must:
   i. be supported by the submission of a Travel Plan designed to ensure that the development is acceptable in transport sustainability and accessibility terms; and
   ii. be implemented in accordance with the Travel Plan as approved.

D. Consent shall not be granted for development that:
   i. adversely affects the safe and efficient operation of the local or strategic highway networks; or
   ii. compromises the delivery of the highway improvements set out in criterion A; or
   iii. prejudices the comprehensive development and delivery of the IAMP as a whole.

Policy T2: Walking, Cycling and Horse Riding

A. To promote walking and cycling, development must:
   i. ensure that any junction/highway measures and any new roads are designed to safely integrate potential pedestrian and cycle movements. New routes should seek to ensure that they reflect pedestrian/cycle desire lines and are of a high quality;
   ii. ensure that roads and spaces are designed to consider the needs of all types of users so that conflict between road users and vulnerable users is minimised;
   iii. include appropriate cycling facilities, such as parking, showers and storage, as part of new developments;
   iv. include opportunities for new cycle routes and signage; and
   v. provide for improved connections along Follingsby Lane, which will be restricted to use for local access.

B. Safe access to the open space within the IAMP will be ensured for horse riding through the provision of bridleways linked to the wider bridleway network.

C. Where new routes abut agricultural land, appropriate measures to deter public access to agricultural land must be incorporated.

Policy T3: Public Transport

To promote sustainable transport, development must include:

i. provision of enhanced bus services between the IAMP and:
   a. surrounding residential areas;
   b. Heworth and Sunderland multi-modal transport interchanges; and
   c. Hebburn, Jarrow, South Shields and Washington centres;
ii. bus priority measures on the key routes entering the IAMP;
iii. adequate provision for buses on the proposed new bridges over the A19 and over the River Don;
iv. new bus stops and improved waiting facilities within the IAMP AAP area; and
v. new traffic signal installations incorporating facilities to enable priority for buses.

Policy T4: Parking

A. Development must ensure that appropriate provision for car parking is provided in accordance with the Councils' standards. Development proposals must:
   i. incorporate a car parking management plan;
   ii. make provision for disabled badge parking spaces;
   iii. ensure that 25% of the total car parking provision is for the use of car-sharing only;
   iv. make provision for off-street parking through a combination of incurtilage provision and communal parking areas. On-street parking may be permitted in certain locations;
   v. ensure that sufficient provision is made for lorry parking to take account of highway safety and avoidance of congestion on the road network; and
   vi. make provision for car and bicycle electric charging points within parking areas across the site.
B. The scheme should consider the introduction of a car club facility for the IAMP site.

Policy IN1: Infrastructure Provision

In demonstrating comprehensive development under policies S1 and Del2, development proposals must show how the following infrastructure will be delivered:

i. a new electricity sub-station may be required as part of the comprehensive development of the IAMP to ensure there is sufficient energy to meet the demands of businesses locating at the IAMP.
ii. new water, gas and electric utility services must be made available to the IAMP development site from the existing utilities infrastructure in the local vicinity to enable occupiers to apply for, and obtain, utility connections to their premises. This may require connections to be made with utilities infrastructure outside of the AAP boundary.
iii. new telecommunications and broadband services networks must be provided to allow occupiers to apply for, and obtain, telecommunication connections to their premises as required.
iv. the provision of low carbon and renewable energy systems should be explored.

Policy IN2: Flood Risk and Drainage

A. A new bridge will be required over the River Don, the design of which must demonstrate that there will be no net loss in floodplain storage capacity nor an increase in maximum flood levels within adjoining properties as a consequence of the proposed works.
B. Opportunities offered by new development to reduce the causes and impacts of flooding will be

encouraged. To address drainage and flood risk, development proposals must therefore be accompanied by:

i. a detailed Flood Risk Assessment (FRA) and Water Framework Directive Assessment.
ii. a surface water drainage strategy which complies with national design standards and local policy. The scheme promoter will be required to provide SuDS capable of ensuring that run-off from the site (post-development) does not exceed corresponding greenfield rates, minimises pollution, provides multifunctional benefits to wildlife, landscape and water quality and is effectively managed with clear ownership in place.
iii. evidence that sufficient capacity, both on and off-site, in the foul sewer network to support development exists. Where there is insufficient capacity, plans for the sewer upgrades must be delivered prior to the occupation of development within the IAMP.

Policy EN1: Landscape

A. To minimise the impact on landscape character and visual amenity, seek landscape enhancements, as well as to integrate buildings into the surrounding landscape setting, development proposals must:
   i. minimise the visibility of the development from the A19 and maintain an appropriate landscape buffer;
   ii. use design and landscaping measures to reduce the impact of development along public rights of way;
   iii. incorporate a landscape buffer around the development edges to integrate the development with the surrounding countryside and provide defensible boundaries for the Green Belt; and
   iv. consider the incorporation of green and brown roofs and green walls into the design of the development.
B. Development proposals must include a landscape and visual impact assessment which demonstrates an understanding of the likely significant effects of the proposed development. The assessment will influence the design of the proposals to ensure potential adverse effects are prevented or minimised.
C. The designated Ecological and Landscape Mitigation Area, as shown on the Policies Map, will provide the focus for necessary landscape impact mitigation, in addition to landscaping within the allocated employment areas.

Policy EN2: Ecology

A. To protect and enhance biodiversity, development must:
   i. avoid, minimise and mitigate or compensate any adverse impacts on biodiversity and provide net gains where possible;
   ii. maintain and enhance the River Don as a functional wildlife corridor, through improvements to its water quality and geomorphology, and through the implementation of an ecological buffer along the River Don corridor and around Local Wildlife Sites (with the exception of the new bridge crossing);
   iii. design swales and Sustainable Drainage Systems (SuDS) to take account of additional wildlife benefits;
   iv. restrict or minimise public access to areas of ecological sensitivity;
   v. create ecological links between retained and new habitat areas within and beyond the IAMP AAP

area; and

vi. secure through requirements in a DCO or planning conditions and/or planning obligations, provision for the maintenance and monitoring of appropriate mitigation and or compensation measures.

B. To support proposed development an Ecological Impact Assessment must be included as part of the Environmental Impact Assessment. This is required to ensure potential impacts are prevented or mitigated and/or compensated where mitigation is not feasible. Ecological mitigation measures must be designed in conjunction with landscape and drainage specialists (where applicable), to maximise the ecological value of landscape planting and drainage features. Proposals must include an appropriate long-term Management and Maintenance Plan that will ensure long-term ecological value is maintained.

C. The designated Ecological and Landscape Mitigation Area, as shown on the Policies Map, will provide the focus for necessary ecological mitigation and compensation measures.

Policy EN3: Green Infrastructure

A. To provide green and open spaces for recreational use, development must:

i. incorporate a minimum 50m wide buffer from the riverbanks on both sides along the River Don (to maintain a total minimum 100m wide corridor), linking with the wider Green Infrastructure corridor to the east and west beyond the Plan boundary, and allow recreational access within this buffer where there is low risk of harm to ecological receptors;

ii. retain and enhance existing mature trees, woodland and hedgerows around the edges of the development, along the River Don, and east of Elliscope Farm;

iii. create green linkages along main roads through the provision of tree-lined streets and landscaped areas for public rights of way; and

iv. incorporate informal open spaces within the IAMP AAP boundary to provide recreational and wildlife benefits and green links between habitats.

Policy EN4: Amenity

A. Proposals should not adversely impact the amenity of neighbouring occupiers and residents. Development must:

i. take account of the amenity of surrounding uses during the construction phase and business operations;

ii. seek to minimise disturbances caused by noise, odours or visual intrusion; and

iii. seek to minimise the impact of noise and air pollution in line with national guidelines.

B. Where suitable mitigation measures are identified, they will be secured by planning obligations, requirements in a DCO or planning conditions.

C. A Construction Environmental Management Plan covering matters including noise, traffic and dust during the construction phase will be required.

Policy Del1: Phasing and Implementation

A. A Phasing Strategy must be submitted with any application for proposed development.

B. The Phasing Strategy must demonstrate how the comprehensive and integrated infrastructure, services

and facilities that will make the scheme acceptable in planning terms will be delivered.

C. A Mitigation Strategy and a Management Strategy must be submitted with any application and each should address the following key topics: Landscape and Open Space; Ecology; Drainage; and Sustainable Transport.
D. The Phasing Strategy must demonstrate how the strategic infrastructure required for the IAMP, as identified in the Infrastructure Delivery Plan, will be delivered.
E. The approved Phasing Strategy, Mitigation Strategy and Management Strategy must be secured by DCO requirement or planning obligations.

Sunderland City Council and South Tyneside Council IAMP Interim Position Statement (Jan 2022)[15]

The Government is introducing a range of planning reforms since the adoption of IAMP AAP, which include modernising the planning system, supporting economic growth and addressing the challenges of climate change. A summary of some of the recent changes is provided below.

Net Zero

In 2019 the UK became the first major economy in the world to legislate to a binding target of reaching net zero emissions by 2050. In October 2021, the Government issued the 'Net Zero Strategy: Build Back Greener' which sets out policies and proposals for decarbonising all sectors of the UK economy to meet the net zero target by 2050.

Environment Act 2021

It includes a mandatory requirement for biodiversity net gain. This is to become a condition of all planning permissions in England. The net gain of the development would have to exceed the pre-development value by at least 10%. There will be a two-year transition period. The environmental targets contained within the Act will be set by regulations, which will specify the date by which it is to be achieved.

The Act requires that 'biodiversity net gain plans' are approved by the Local Planning Authority and that biodiversity gains are secured for a period of at least 30 years.

National Planning Policy Framework (last updated December 2023)

1. **Making efficient use of land –** the 2023 NPPF encourages multiple benefits from land, including taking opportunities to achieve net environmental gains such as developments that would enable new habitat creation or improve public access to the countryside. It also recognises that some undeveloped land can perform many functions, including for wildlife, recreation and flood risk mitigation.
2. **Design** – the 2023 NPPF seeks the creation of high quality, beautiful and sustainable buildings and places. It introduces the need for design guides and design codes.
3. **Trees** – the 2023 NPPF recognises that trees make an important contribution to the character and quality of urban environments and can also help mitigate and adapt to climate change. The 2023 NPPF advises that new streets should be tree-lined and opportunities should be taken to incorporate trees

[15] IAMP Interim Position Statement https://www.sunderland.gov.uk/media/24779/IAMP-Interim-Position-Statement/pdf/IAMP_Interim_Position_Statement.pdf?m=637777508907070000 (Accessed 22/08/2023).

elsewhere in developments.

4. **Flood management** – the 2023 NPPF advises that major developments should incorporate sustainable drainage systems unless there is clear evidence that this would be inappropriate. The systems, where possible, should provide multifunctional benefits.
5. **Green Belt** – in relation to the exceptional circumstances to amend Green Belt boundaries, the 2023 NPPF now refers to these being 'fully evidenced and justified'. The 2023 NPPF states that where a need for changes to the Green Belt boundaries has been established through strategic policies, detailed amendments to those boundaries may be made through non-strategic policies, including neighbourhood plans. Confirmation is provided that material changes of use of land may not be inappropriate in the Green Belt.

Sunderland City Council Core Strategy and Development Plan 2015-2033[16]
(Jan 2020)

The following SCC policies from the Core Strategy and Development Plan have been identified as relating to sustainability:

Strategic Policy SP1 Development strategy

1. To support sustainable economic growth and meet people's needs, the council, working with local communities, its partners and key stakeholders will:
    i. deliver at least 13,410 net new homes and create sustainable mixed communities which are supported by adequate infrastructure;
    ii. create at least 7,200 new jobs, particularly in key growth sectors;
    iii. develop at least 95ha of employment land;
    iv. deliver at least 45,400m² new comparison retail development; and
    v. ensure that sufficient physical, social and environment infrastructure is delivered to meet identified needs.
2. The spatial strategy seeks to deliver this growth and sustainable patterns of development by:
    i. supporting the sustainability of existing communities through the growth and regeneration of Sunderland's sub areas including: the Urban Core (Policy SP2); Washington (Policy SP3); North Sunderland (Policy SP4); South Sunderland (Policy SP5); and the Coalfield (Policy SP6);
    ii. delivering the majority of development in the Existing Urban Area;
    iii. emphasising the need to develop in sustainable locations in close proximity to transport hubs;
    iv. encouraging higher density development around and in close proximity to transport hubs;
    v. delivering the right homes in the right locations through the allocation of homes in the A&D Plan, the allocation of South Sunderland Growth Area and The Vaux and amending the Green Belt boundary to allocate Housing Growth Areas;
    vi. protecting Sunderland's character and environmental assets including Settlement Breaks, greenspaces, Open Countryside and Green Belt; and

[16] Sunderland City Council Core Strategy and Development Plan 2015-2033 https://www.sunderland.gov.uk/media/22171/Core-Strategy-and-Development-Plan-2015-2033/pdf/CSDP_2015-2033.pdf?m=637159725864470000 (Accessed 22/08/2023).

vii. minimising and mitigating the likely effects of climate change.

Strategic Policy SP7 Healthy and safe communities

The council will seek to improve health and wellbeing in Sunderland by:

1. working with the NHS to improve health outcomes, particularly in areas with the poorest health and reduce health inequalities generally;
2. protecting existing health facilities and/or supporting the provision of new or improved facilities (Policy VC5);
3. promoting and facilitating active and healthy lifestyles;
4. supporting the integration of health facilities and services with other community uses (education, sport, cultural and leisure) through multi-purpose buildings;
5. managing the location/number of and access to unhealthy eating outlets (Policy VC4);
6. ensuring that new developments:-
    i. are age friendly, inclusive, safe, attractive and easily accessible on foot or by bicycle;
    ii. have a strong sense of place which encourages social interaction;
    iii. are designed to promote active travel and other physical activities through the arrangement of buildings, location of uses and access to open space;
    iv. promote improvements and enhance accessibility to the city's natural, built and historic environments;
    v. do not have unacceptable adverse impacts upon amenity which cannot be adequately mitigated (Policies HS1 and HS2);
    vi. appropriately address any contaminated land to an acceptable level (Policy HS3); and
    vii. submit a Health Impact Assessment (HIA) as part of any application for large-scale development. Where significant adverse health impacts are identified, development should be resisted unless appropriate mitigation can be provided.

Policy HS1 Quality of life and amenity

1. Development must demonstrate that it does not result in unacceptable adverse impacts which cannot be addressed through appropriate mitigation, arising from the following sources:
    i. air quality;
    ii. noise;
    iii. dust;
    iv. vibration;
    v. odour;
    vi. emissions;
    vii. land contamination and instability;
    viii. illumination;
    ix. run-off to protected waters;
    x. traffic;
2. development must ensure that the cumulative impact would not result in unacceptable adverse impacts on the local community; and
3. development will not normally be supported where the existing neighbouring uses would unacceptably

impact on the amenity of future occupants of the proposed development.

Policy HS3 Contaminated land

When development is considered to be on contaminated land, development should:

1. ensure all works, including investigation of the nature of any contamination, can be undertaken without the escape of contaminants which could cause unacceptable risk to health or to the environment;
2. identify any existing contaminated land and the level of risk that contaminants pose in relation to the proposed end use and future site users are adequately quantified and addressed;
3. ensure appropriate mitigation measures are identified and implemented which are suitable for the proposed use and that there is no unacceptable risk of pollution within the site or in the surrounding area; and
4. demonstrate that the developed site will be suitable for the proposed use without risk from contaminants to people, buildings, services or the environment including the apparatus of statutory undertakers.

Policy HS4 Health and safety executive areas and hazardous substances

1. Development within the specified distances from sites identified as 'notifiable installations', must take account of any risks involved and the need for appropriate separation between hazardous installations and incompatible uses.
2. The development of new notifiable installations must be located in appropriate areas and take account of any risks involved and the need for appropriate separation between hazardous installations and incompatible uses.
3. Development involving the introduction, storage or use of hazardous substances which would create potential risk and could not be acceptably mitigated against, will not be permitted.

Policy BH1 Design quality

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

1. create places which have a clear function, character and identity based upon a robust understanding of local context, constraints and distinctiveness;
2. maximise opportunities to create sustainable, mixed-use developments which support the function and vitality of the area in which they are located;
3. be of a scale, massing, layout, appearance and setting which respects and enhances the positive qualities of nearby properties and the locality;
4. retain acceptable levels of privacy and ensure a good standard of amenity for all existing and future occupiers of land and buildings;
5. promote natural surveillance and active frontages, including the provision of appropriate lighting, to assist in designing out crime;
6. clearly distinguish between public and private spaces, including appropriate use of hard and soft boundary treatments which reflect the character of the area;
7. create visually attractive and legible environments through provision of distinctive high quality architecture, detailing, building materials;
8. provide landscaping as an integral part of the development including retaining landscape features and reflecting surrounding landscape character and where appropriate and viable, the enhancement and

upgrading of public realm and existing green infrastructure;

9. maximise the opportunities for buildings and spaces to gain benefit from sunlight and passive solar energy;
10. avoid, where possible, disruption to established views of important buildings, structures and landscape features;
11. in the case of tall buildings, form a positive relationship with the skyline and topography of the site and the surrounding area;
12. create safe, convenient and visually attractive areas for servicing and parking which does not dominate the development and its surroundings;
13. encourage durability and adaptability throughout the lifetime of the development to accommodate a range of uses; and
14. 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 2021 Framework) should:

1. maximise energy efficiency and integrate the use of renewable and low carbon energy;
2. reduce waste and promote recycling during construction and in operation;
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 modification 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; and
8. maintain an appropriate buffer between sensitive development and existing waste water treatment works to ensure amenity and operational continuity, in accordance with Government Code of Practice guidance.

Policy BH3 Public realm

Existing and proposed areas of public realm will:

1. create attractive, safe, legible, functional and accessible public spaces;
2. be constructed of quality, sustainable and durable materials which enhance the surrounding context; and
3. where appropriate, incorporate public art in development.

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 surrounding area;
ii. address corridor gaps and areas of corridor weakness where feasible;
iii. support the management of existing wildlife corridors, including reconnecting vulnerable and priority habitats (see policy NE2);
iv. apply climate change mitigation and adaptation measures, including flood risk and watercourse management;
v. link walking and cycling routes to and through the corridors, where appropriate;
vi. include and/or enhance formal and natural greenspace and bluespace provision;
vii. protect and enhance landscape character;
viii. have regard to the requirements of the Green Infrastructure Delivery Plan and make contributions proportionate to their scale towards the establishment, enhancement and on-going management; and
ix. 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 NE2 Biodiversity and geodiversity

1. Where appropriate, development must demonstrate how it will:
   i. provide net gains in biodiversity; and
   ii. avoid (through locating on an alternative site with less harmful impacts) or minimise adverse impacts on biodiversity and geodiversity in accordance with the mitigation hierarchy.
2. Development that would have an impact on the integrity of European designated sites that cannot be avoided or adequately mitigated will not be permitted other than in exceptional circumstances. These circumstances will only apply where there are:
   i. no suitable alternatives;
   ii. imperative reasons of overriding public interest;
   iii. necessary compensatory provision can be secured to ensure that the overall coherence of the Natura 2000 network of European sites is protected; and
   iv. development will only be permitted where the council is satisfied that any necessary mitigation is included such that, in combination with other development, there will be no significant effects on the integrity of European Nature Conservation Sites.
3. Development that would adversely affect a Site of Special Scientific Interest, either directly or indirectly, will be required to demonstrate that the reasons for the development, including the lack of an alternative solution, clearly outweigh the nature conservation value of the site and the national policy to safeguard the national network of such sites.
4. Development that would adversely affect a Local Wildlife Site or Local Geological Site, either directly or indirectly, will demonstrate that: i. there are no reasonable alternatives; and ii. the case for development clearly outweighs the need to safeguard the intrinsic value of the site.
5. Development that would adversely affect the ecological, recreational and/or educational value of a Local Nature Reserve that will demonstrate:

i. that there are no reasonable alternatives; and
ii. the case for development clearly outweighs the need to safeguard the ecological, recreational and/or educational value of the site.

6. Development that would have a significant adverse impact on the value and integrity of a wildlife corridor will only be permitted where suitable replacement land or other mitigation is provided to retain the value and integrity of the corridor.

Policy NE3 Woodlands/hedgerows and trees

To conserve significant trees, woodlands and hedgerows, development should:

1. follow the principles below to guide the design of development where effects to ancient woodland, veteran/aged trees and their immediate surroundings have been identified:
    i. avoid harm;
    ii. provide unequivocal evidence of need and benefits of proposed development;
    iii. provide biodiversity net gain;
    iv. establish likelihood and type of any impacts;
    v. implement appropriate and adequate mitigation and compensation;
    vi. provide adequate buffers; and
    vii. provide adequate evidence to support proposals;
2. retain, protect and improve woodland, trees subject to Tree Preservation Orders (TPOs), trees within conservation areas, and 'important' hedgerows as defined by the Hedgerows Regulations 1997;
3. give consideration to trees and hedgerows both on individual merit as well as their contribution to amenity and interaction as part of a group within the broader landscape setting; and
4. ensure that where trees, woodlands and hedgerows are impacted negatively by proposed development, justification, mitigation, compensation and maintenance measures are provided in a detailed management plan.

Policy NE4 Greenspace

The council will protect, conserve and enhance the quality, community value, function and accessibility of greenspace and wider green infrastructure, especially in areas of deficiency identified in the council's Greenspace Audit and Report by:

1. designating greenspaces in the A&D Plan;
2. requiring development to contribute towards the provision of new and/or enhanced greenspace where there is an evidenced requirement;
3. requiring all major residential development to provide:
    i. a minimum of 0.9ha per 1000 bedspaces of useable greenspace on site; unless
    ii. a financial contribution for the maintenance/upgrading to neighbouring existing greenspace is considered to be more appropriate;
4. refusing development on greenspaces which would have an adverse effect on its amenity, recreational or nature conservation value unless it can be demonstrated that:
    i. the proposal is accompanied by an assessment that clearly demonstrates that the provision is surplus to requirements; or
    ii. a replacement facility which is at least equivalent in terms of usefulness, attractiveness, quality and

accessibility, and where of an appropriate quantity, to existing and future users is provided by the developer on another site agreed with the council prior to development commencing; or

iii. replacement on another site is neither practicable or possible an agreed contribution is made by the developer to the council for new provision or the improvement of existing greenspace or outdoor sport and recreation facilities and its maintenance within an appropriate distance from the site or within the site.

The impact of development on greenspace provision will need to be considered on a case-by-case basis in terms of its potential impact on Natura 2000 (N2K) sites.

Policy NE6 Green Belt

1. The Green Belt (as designated on the Policies Map) in Sunderland will serve the following purposes:
   i. check the unrestricted sprawl of the built up areas of the city;
   ii. assist in safeguarding the city's countryside from further encroachment; iii. assist in the regeneration of the urban area of the city;
   iii. preserve the setting and special character of Springwell Village and Newbottle Village; and
   iv. prevent the merging of Sunderland with Tyneside, Washington, Houghton-le-Spring and Seaham, and the merging of Shiney Row with Washington, Chester-le-Street and Bournmoor.
2. In assessing development proposals, development that is inappropriate in the Green Belt will not be approved except in very special circumstances.
3. Development in the Green Belt will be permitted where the proposals are consistent with the exception list in national policy subject to all other criteria being acceptable.
4. Proposals in the Green Belt for increased opportunities for access to the Open Countryside and which provide opportunities for beneficial use such as outdoor sport and recreation, appropriate to the Green Belt, will be encouraged where it will not harm the objectives of the Green Belt and recognise the important role of the Green Belt as a biodiversity resource.

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, such as noise nuisance, flood risk, shadow flicker, interference with telecommunications, 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 proposals.
2. Development that can provide combined heat and power must demonstrate that due consideration has been given to the provision of any heat produced as an energy source to any suitable adjacent potential heat customers.

Policy WWE2 Flood risk and coastal management

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

i. should follow the sequential approach to determining the suitability of land for development, directing new development to areas at the lowest risk of flooding and where necessary applying the exception test, as outlined in national planning policy;
ii. will be required to demonstrate, where necessary, through an appropriate Flood Risk Assessment (FRA) that development will not increase flood risk on site or elsewhere, and if possible reduce the risk of flooding;
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;
iv. should comply with the Water Framework Directive by contributing to the Northumbria River Basin Management Plan;
v. will maintain linear coastal flood defences north from Hendon Sea Wall to Seaburn, and managed coastal retreat on the Heritage Coast and north of Seaburn;
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:

1. be accompanied by a Flood Risk Assessment (where appropriate), to demonstrate that the development, including the access, will be safe, without increasing or exacerbating flood risk elsewhere and where possible will reduce flood risk overall;
2. demonstrate that they pass the Sequential Test and if necessary the Exceptions Test in Flood Zones 2 and 3;
3. discharge at greenfield run-off rates for the 1 in 1 and 1 in 100 flood events plus the relevant climate change allowance for greenfield and brownfield sites in accordance with the latest Local Flood Risk Management Strategy;
4. incorporate a SuDS to manage surface water drainage. Where SuDS are provided, arrangements must be put in place for their whole life management and maintenance;
5. separate, minimise and control surface water run-off by discharging in the following order:
    i. to an infiltration or soak away system;
    ii. to a watercourse (open or closed); iii. to a surface water sewer. However, if sites are within 250m of a tidal estuary or the sea, surface water can be discharged directly);
6. ensure adequate protection where sites may be susceptible to over land flood flows (as shown in the Strategic Flood Risk Assessment) or lie within a Surface Water Risk Area (as shown on the Environment Agency flood maps);
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.

Policy 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.

1. Water quality assessments will be required for:
    i. any physical modifications to a watercourse; and
    ii. any development which could indirectly, adversely affect water bodies.
2. Development that discharges water into a watercourse will be required to incorporate appropriate water pollution control measures.
3. Development that incorporates infiltration based SuDS will be required to incorporate appropriate water pollution control measures.
4. Development adjacent to, over or in, a main river or ordinary watercourse should consider opportunities to improve the river environment and water quality by:
    i. naturalising watercourse channels;
    ii. improving the biodiversity and ecological connectivity of watercourses;
    iii. safeguarding and enlarging river buffers with appropriate habitat; and
    iv. mitigating diffuse agricultural and urban pollution.

Policy WWE5 Disposal of foul water

1. Development should utilise the following drainage hierarchy: i. connection to a public sewer; ii. package sewage treatment plant (which can be offered to the Sewerage Undertaker for adoption); then iii. septic tank.
2. Development involving the use of non-main methods of drainage in areas where public sewerage exists or the use of Cess Pits will not be permitted.
3. Development of new or extensions/ improvements to existing waste water, sludge or sewage treatment works, will normally be supported unless the adverse impact of the development significantly outweighs the need for greater capacity.
4. Where the development involves the disposal of trade effluent a foul Water Management Plan/drainage assessment will be required to demonstrate how the disposal of foul water is undertaken following the disposal hierarchy. This should include a trade effluent consent if connected to the sewerage system. Trade effluent is any liquid produced in the course of any trade or industry including car washes.

Policy WWE6 Waste management

Development that encourages and supports the minimisation of waste production, and the re-use and recovery of waste materials including, for example, re-cycling, composting and Energy from Waste will normally be supported. Proposals for waste management facilities to deal with waste arisings will be encouraged based upon the following principles:

1. managing waste through the waste hierarchy in sequential order. Sites for the disposal of waste will only be permitted where it meets a need which cannot be met by treatment higher in the waste hierarchy
2. promoting the opportunities for on-site management of waste where it arises and encouraging co-location of waste developments that can use each other's waste materials;
3. ensuring that sufficient capacity is located within the city to accommodate forecast waste arisings of all types during the plan period, reducing the reliance on other authority areas;
4. supporting delivery of the South Tyne and Wear Joint Municipal Waste Management Strategy;
5. facilitating the development of recycling facilities across the city including civic amenity sites and small recycling 'bring' banks to ensure there is sufficient capacity and access for the deposit of municipal waste for re-use, recycling and disposal;
6. facilitating the development of a network of small scale local waste management facilities in accessible locations, and effective methods of waste management such as suitable facilities to separate or store different types of waste, including materials that are required to be separated for kerbside collection schemes;
7. ensuring new waste developments are located and designed to avoid unacceptable adverse impacts on landscape, wildlife, heritage assets and amenity;
8. working collaboratively with neighbouring local authorities with responsibilities for waste and other local authorities where waste import/export relationships exist. This will ensure a co-operative cross boundary approach to waste management is established and maintained; and
9. addressing to an acceptable standard the potential cumulative impacts of any waste development and the way it relates to existing developments.

Policy WWE7 Waste facilities

Development for new built waste facilities should be focused on previously developed employment land (excluding land within Primary Employment Sites) and will be required to meet the following criteria:

1. demonstrate the need for the facility, if there is a clear conflict with other policies of the Development Plan;
2. all waste processes and operations must be contained, processed and managed within buildings unless there are acceptable operational reasons why these processes cannot be contained within buildings;
3. proposals must accord with all other policies in relation to the protection of the environment and public amenity or demonstrate that other material considerations outweigh any policy conflict;
4. consideration will be given to the potential impacts of waste management proposals from:
    i. harmful materials entering the public highway;
    ii. generation of odours, litter, light, dusts, flies, rodents, birds and other infestation;
    iii. noise, excessive traffic and vibration;
    iv. risk of serious fires through combustion of accumulated wastes;
    v. harm to water quality and resources and flood risk management;
    vi. land instability;
    vii. land use conflict;
    viii. where necessary, mitigation measures should be identified to ameliorate any negative impacts to an acceptable level.

Strategic Policy SP10 Connectivity and transport network

To improve connectivity and enhance the city's transport network, the council, working with its partners and utilising developer contributions will seek to:

1. deliver the following new highways schemes and initiatives:
    i. Sunderland Strategic Transport Corridor (remaining phases);
    ii. Ryhope to Doxford Park Link Road;
    iii. Central Route section of Coalfield Regeneration Route;
    iv. Improvements to the mainline and key junctions on the A19, including providing access to the IAMP;
2. improve the following transport routes and bus corridors to encourage walking and cycling and to reduce congestion:
    i. A183 Chester Road;
    ii. A690 Durham Road;
    iii. A1231 Sunderland Highway (west of the A19);
    iv. A1018 Newcastle Road;
    v. B1522 Ryhope Road;
    vi. Washington Road/North Hylton Road (east of A19);
    vii. A182 Houghton/Hetton Road.
3. improve the operating conditions for buses, in particular through securing improvements to the major bus corridors identified above; and exploring park and ride opportunities;
4. support improvements to the Metro and rail network including new stations and routes where deliverable;
5. safeguard the following disused railway alignments for future use:
    i. Leamside line; and
    ii. South Hylton to Penshaw;
6. 6. improve and extend the cycle network.

Policy ST2 Local road network

1. The Local Road Network will be protected for safe and efficient movement in accordance with the following road hierarchy:
    i. Distributor Roads;
    ii. Category 1 Roads;
    iii. Category 2A Roads;
    iv. Category 3 Roads.
2. To ensure that development has no unacceptable adverse impact on the Local Road Network, proposals must ensure that:
    i. where a new vehicular access is accepted in principle, the number of access points will be kept to a minimum and new access points will be designed and constructed in accordance with the current highway design standards;
    ii. they have safe and adequate means of access, egress and internal circulation/turning arrangements for all modes of transport relevant to the proposal;
    iii. where an existing access is to be used, substandard accesses will be improved and/or upgraded in

accordance with the current standards for the category of road;

iv. they are assessed and determined against current standards for the category of road having regard to the capacity, safety and geometry of the highway network;

v. they have safe and convenient access for sustainable transport modes relevant to its location; and

vi. they will not create a severe impact on the safe operation of the highway network; resulting in potential risk to all highway users with specific consideration given to vulnerable road users.

Policy ST3 Development and transport

Development should:

1. provide safe and convenient access for all road users, in a way which would not:
   i. compromise the free flow of traffic on the public highway, pedestrians or any other transport mode, including public transport and cycling; or
   ii. exacerbate traffic congestion on the existing highway network or increase the risk of accidents or endanger the safety of road users including pedestrians, cyclists and other vulnerable road users;
2. incorporate pedestrian and cycle routes within and through the site, linking to the wider sustainable transport network;
3. submit an appropriate Transport Assessment/Transport Statement and a Travel Plan. This must demonstrate that appropriate mitigation measures can be delivered to ensure that there is no detrimental impact to the existing highway;
4. include a level of vehicle parking and cycle storage for residential and non-residential development, in accordance with the council's parking standards;
5. provide an appropriate level of electric vehicle parking and charging infrastructure for commercial and non-residential development to suit site specific requirements, and make provision for the installation of home charging apparatus on major residential schemes;
6. safeguard the existing network of Definitive Public Rights of Way. If this cannot be accommodated, then a diversion and/or alternative route shall be provided.

Sunderland Low Carbon Framework[17]

This Framework has been prepared by the 2030 Shadow Board, made up of partner organisations across Sunderland working together to achieve our collective vision and objectives. It is a high-level strategy that demonstrates the city's commitment to reducing its carbon impact.

Strategic Priority 3: Create an energy efficient built environment

Objective - Improve energy efficiency of existing homes and buildings and work towards zero carbon for new homes and buildings.

Opportunities - improving the energy performance of homes and saving heating costs will help to eliminate fuel poverty;

1. improving energy efficiency of commercial premises will reduce running costs for businesses and make commercial buildings easier to lease;

[17] Sunderland Low Carbon Framework https://www.sunderland.gov.uk/media/22959/Sunderland-Low-Carbon-Framework/pdf/Sunderland_Low_Carbon_Framework1.pdf?m=637461416504170000 (Accessed 21/06/2021).

2. introducing cleaner and greener energy for housing will improve air quality and provide purity of supply and cost

Strategic Priority 4: Develop renewable energy generation and storage

Objective - Develop renewable energy generation and storage, and renewable/district heating schemes

Opportunities - improving the energy performance of homes and saving heating costs will help to eliminate fuel poverty;

1. introducing cleaner and greener energy for housing and industry will improve air quality;
2. developing varied local sources of energy will help to ensure that the city has power certainty/security.

Strategic Priority 5: Low carbon and active transport

Objective - Develop low carbon and active transport modes such as walking, cycling, rail, Metro, electric and innovative technologies for buses and private vehicles, and help make public transport a more attractive choice.

Opportunities - More public transport options for local residents and increased accessibility;

1. Safer and more attractive conditions for walking and cycling;
2. Improved air quality and environment;
3. Healthier and more active lifestyles supported;
4. Contributing to Sunderland being a better and more attractive place to live, work and invest in.

Sunderland Healthy City Plan 2020-2030[18] (Adopted March 2021)

This plan outlines Sunderland's vision for everyone in Sunderland to have healthy, happy lives, with no one left behind. This focuses on 3 stages: Starting Well, Living Well and Ageing Well; with the aim of creating a 'Vibrant Smart City', 'Healthy Smart City' and 'Dynamic Smart City' which will have:

1. Cleaner and more attractive city and neighbourhoods;
2. A lower carbon city with greater digital connectivity for all;
3. A stronger city centre with more businesses, housing and cultural opportunities;
4. More and better housing;
5. A city with great transport and travel links.

Key outcome measures will include:

1. Households maximising their income and having improved financial wellbeing;
2. Improved community wealth, including increasing connections and participation within communities and drawing on existing assets All communities feeling safe and being able to access and benefit from cleaner and more attractive city and neighbourhoods;
3. More and better housing, to meet the current and future needs of all residents;
4. More people walking and cycling as a means of travel;
5. Better walking and cycling routes linking communities;

[18] Sunderland Healthy City Plan https://www.sunderland.gov.uk/media/23331/Sunderland-Healthy-City-Plan-2020-2030/pdf/M0103076_HEALTHY_CITY_PLAN_2021.pdf?m=637584173389400000 (Accessed 22/08/2023)

6. Better transport links;
7. Key housing sites delivered.

A Health and Wellbeing Board and Performance Framework has been established to fulfil the plan and monitor progress over the 10 year period.

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