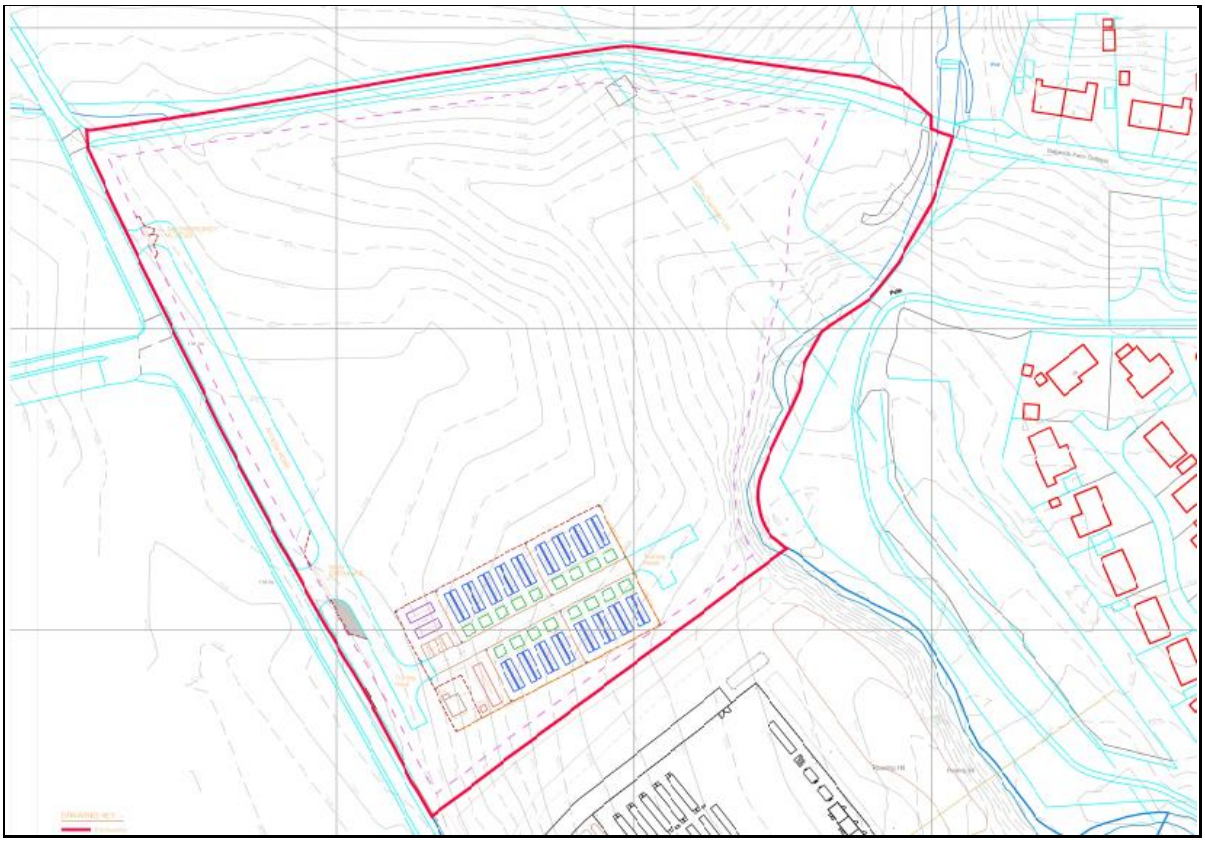
SUPPORTING STATEMENT

IN RESPECT OF THE PROPOSED APPLICATION FOR CONSENT UNDER SECTION 36 OF THE ELECTRICITY ACT 1989 TO CONSTRUCT AND OPERATE THE PROPOSED ROARING HILL BATTERY ENERGY STORAGE SYSTEM ON LAND NORTH-EAST OF LESLIE, FIFE.



EXECUTIVE SUMMARY

The proposed Development is to construct and operate, a 60MW Battery Energy Storage System (BESS), with associated substation, access points, internal road infrastructures, control rooms and storage. The development is proposed for a period of 50 years. At the end of the 50-year period the development will be decommissioned, and the land restored or an extension to the consent of the site will be requested. The Development site is located to the north east of Leslie, Fife. Co-ordinates 325366, 702442 (NO25360244) and extends to approximately 8.2 acres (3.3 Hectares) of Grade 3.2 agricultural land.

The BESS Development will import, store and export electricity from The Grid on demand, providing sub-second response times to ensure rapid reactive power services to enable frequency stabilisation. It also reduces the risk of power outages as well as benefiting homes by stabilising supply and aiding industrial and commercial establishments in balancing energy resource and security, but it also plays a critical part in assisting the National Grid in balancing power.

This service is an important component of balancing the supply and demand on the infrastructure that serves the population and is vital to a sustainable and viable network across Scotland as a whole.

As an enabling technology the BESS will store and provide the equivalent of 240,000 kWh of electricity per day, save 24,797 metric tonnes of CO2 per annum and provide electricity to 25,029 homes per annum.

The Proposed Development includes the following:
64 x Battery & Invertor Units
1 x Switchgear & Control Room
32 x Transformers
1 x Auxiliary Transformer
1 x Substation
Car Parking
Security Fencing
Metering
CCTV
Roadway

The purpose of this supporting statement (and accompanying plans, studies, and reports) is to clearly demonstrate that this is a development of significant importance in the storage and distribution of electricity and to achieving Scotland and the UK's goal of achieving Net Zero. As we strive to meet critical targets to achieve a carbon neutral economy, as we experience the ever-increasing effects of climate change, the need to be able to produce, balance and control flows of power is crucial.
The proposed infrastructure aligns seamlessly with the growing demand for renewable energy and electrification across Scotland. It is engineered to enhance efficiency and reliability while addressing the pressing need for scalable solutions to support the transition to sustainable transport and energy systems.

Balancing electricity locally and optimising its use is important to reduce reliance on imported power and fossil fuels, while also allowing control over the energy produced. It is necessary to develop facilities where grid infrastructure and capacity are available. This development will help decrease dependence on external energy sources and strengthen Scotland's energy security.

In summary the development:

- is sensitively sited with a design and layout that positively integrates with its local framework;
- is not visually intrusive, whilst protects the visual amenity of any residents and users of roads, Core Paths and other important recreational routes.
- No designated sites were identified within the redline boundary of the site.
- There are no overriding impediments to the development being granted planning permission on the grounds of ecological, noise, visual, landscape, access or construction traffic.
- There are no significant risks of surface water, groundwater or infrastructure flooding.

1. INTRODUCTION

1.1 The Applicant

The Applicants are proposing to develop a 60MW Battery Energy Storage System (BESS) and all accompanying infrastructure. As an enabling technology the BESS will store and provide the equivalent of 240,000 kWh of electricity per day, save 24,797 metric tonnes of CO2 per annum and provide electricity to 25,029 homes per annum. BESS is also a replacement for gas fired power generation in providing a rapid response to satisfy peak demand. In performing these roles, the development has the ability to reduce carbon dioxide emissions whilst also providing electricity storage equivalent to the demand of homes.

1.2 The Development

This application is prepared and submitted to The Scottish Ministers for consent under section 36 of the Electricity Act 1989 to construct and operate a Battery Energy Storage Systems (60MW) and all associated infrastructures inclusive of two new access and exit points. The Applicant has also asked that Scottish Ministers give a direction under section 57(2) of the Town and Country Planning (Scotland) Act 1997 that planning permission for the development be deemed to be granted and for a period of no less than 50 years.

The development will support the flexible operation of the National Grid and decarbonisation of the electricity supply e.g., by balancing the supply and demand of energy.

The BESS Development will import, store and export electricity from The Grid on demand, providing a balancing service.

The site lies within the Lomond Hills Regional Park with Holl Meadows, SSSI siting in the region of 720 metres to the north west. The Lomond Hills Local Landscape Area runs from the A911 to the south and edge of Leslie and Glenrothes, north to the A912, Falkland and Strathmiglo. The Lothrie Burn lies to the east with a small section within the eastern boundary of the site. No development will be undertaken in or by the Lothrie Burn or its banks. The Dean Plantation and woods separate the development from the residential area that lies approximately 100 metres to the east. No trees or existing vegetation will be removed from the development site. There are core paths within the vicinity of the development. At no point will any core path or right of way be stopped or impeded during the construction or operation of the development.

Once construction is complete, there will be very limited traffic into and out of the BESS site and will have no long-term impact to traffic movements in the area. The BESS will be gated with security fencing and have Infra-red security cameras placed strategically around the perimeter.

The Phase 1 Habitat Classification Survey in February 2025 identified 19 habitat types within the Ecological Study Area (ESA), assessed for their potential to support protected species. With precautionary and industry standard measures, no impact on protected species is expected.

The SEPA Flood Map shows that a small area along the eastern boundary of the Application Site is located in an area with High Risk of fluvial flooding. The majority of the Application Site is located within an area of Little or No Risk of fluvial flooding. All the infrastructure is to be located within an area defined as having Little or No Risk of fluvial flooding. The proposed type of development is classed as 'Essential Infrastructure' and therefore development in an area classed as having a little or no risk of fluvial/coastal flooding is deemed to have 'no constraints'.

The Proposed Development is predicted to have only Low at all receptors within the study area during the day time and night time periods when the effects of the mitigation are taken into account. In addition to this, with mitigation in place, the levels at each receptor are below the Night Noise Guideline value of 40dB set out in the WHO Night-time Guidelines. This is the level recommended for the primary prevention of subclinical adverse health effects related to night noise in the population.

The CTMP sets out a variety of specific mitigation measures that will be implemented during construction that will minimise the impact of the construction traffic on the environment and local communities.

The magnitude of visual effects on local residents, path and road users with views of the Proposed Development within approximately 1km to 5km are considered to be Negligible due to views being mostly screened intervening landform, vegetation and built structures.

It is anticipated that the development site will be in operation for up to 50 years. When it ceases to be operational, all elements can be removed, and the site re-instated.
The development will help balance the National Grid as electricity generation shifts to intermittent renewable sources like wind and solar. It offers sustainable support with minimal environmental impact, providing essential balancing and backup. The project minimizes potential noise or visual disturbances to residents, visitors, and businesses.

The highest levels of environmental protection and development design will be ensured to protect residential, landscape and visual amenity.

1.3 Need for Development

Developments of this nature are, when properly sited, planned and screened, an essential component to obtaining net zero and furthering energy security. The Development aligns with The Climate Change Plan and significantly contributes to achieving the Scottish Ministers' climate targets of reducing greenhouse gas emissions by 2030 and reaching Net Zero by 2045.

By achieving net zero we can begin to fight Climate Change.

In October 2021, the UK Government launched Its Net Zero Strategy: Build Back Greener which includes the target for decarbonising the electricity grid by 2035. To deliver the strategy, overall electricity demand is expected to Increase 40-60% by 2035, all met from low carbon sources. In order to optimise

and balance the existing renewable generation levels and be able to cope with the increase there is an urgent and real need to be able to store and balance electricity across the network as a whole.

This development is situated where essential grid infrastructure can support the development and the development can support the grid network.

The benefits of battery storage developments are many:

There is an increasingly urgent requirement to assist the National Grid with balancing issues throughout the electricity transmission network. These have become more onerous with the increasing shift to fluctuating renewable power generation as well as managing surges and dips in consumption. Smooth grid operation relies on the provision of rapid reactive power services either by generation or dedicated facilities to enable frequency stabilisation. Battery technology provides sub-second response times, so offer a reliable solution to a number of the Grid's balancing issues.

Balancing demand and supply in real time can be complex as the number of intermittent generators increases (renewables such as wind and solar). The need for cyclical and reactive "peaking" generation has historically been met by generation sources (typically gas powered with associated CO2 emissions) able to stop and start to some degree on demand. Due to advancements in technology, battery storage is now a viable and reliable instrument to provide a faster service supplementing the generation required to meet peak daily demand. The BESS has the capacity to hold the power and release it onto the grid as and when it is required allowing for a predicted and manageable flow of electricity.

It is important to note that the BESS does not emit Carbon Dioxide. The BESS component does not generate electricity but as well as storing electricity it also draws electricity (charging) when levels on the Network are above that of demand. When levels of electricity on the grid are below that of demand the electricity stored in the batteries can be fed back (discharged) onto the network so that there is no loss of power to end users.

There is an urgent need by The National Grid for BESS facilities to come online to ensure the fluctuations within the grid supply are combatted by a reactive source which will enable the smooth operation of The Grid.

By using BESS 'smartly' a virtual uninterruptible power supply can be provided to the local network giving a reliable and sustainable flow to any required facility such as residences, factories, hospitals, local authority buildings, commercial industries.

There is an ever-increasing reliance on renewable forms of energy generation, such as wind and solar, to supply the UK's energy demands. Renewable energy sources are highly variable due to their weather and or sunshine dependency. As a result of this intermittent nature of renewables and the continuous requirement for National Grid (NG) to balance grid frequency (within ±1% of nominal system frequency, which is 50.00Hz) supporting energy balancing solutions need to be incorporated into the UK's energy strategy.

System frequency is a continuously changing variable that is determined and controlled by the second-by-second (real time) balance between system demand and total generation. If demand is greater than generation, the frequency falls while if generation is greater than demand, the frequency rises. If the transmission system is not maintained within the required frequency tolerance system stress can result in widespread power supply outages and damage to network infrastructure.

BESS is a key part of this energy strategy and provides NG with balancing services to help accommodate the increasing level of renewable energy generation.

1.3.1 Electricity Market Reform

EMR brought about in the Energy Act 2013, was a major change to the UK's energy policy to make sure that the UK can generate enough electricity for everyone in the future through cleaner sources of generation. Coal powered facilities and aged nuclear facilities are being brought to end of life and a rise in renewable energy technologies bring online a power source that can be unpredictable in levels of generation.
The UK is increasing its electricity generation from renewable, low carbon sources to address climate change. With proper investment and advancements, electricity can stay affordable for households and businesses. Over the next decade, an estimated £100 billion investment in infrastructure is needed to meet rising demand and prevent blackouts.

The Development aims to generate clean electricity and ensure supply, especially during peak demand. The UK's grid has relied on large centralised power plants like coal and nuclear. However, coal plants are reducing capacity and closing, while nuclear plants are nearing the end of their lifespan. To meet energy demands and long-term net zero targets, renewable sources like solar and wind are necessary. These technologies are unpredictable, making energy flow management challenging. Combining these technologies can create a more predictable and manageable energy network.

Through the Energy Act 2013 the Capacity Market (CM) mechanism was introduced to ensure security of electricity supply at the least cost to the consumer. This Development will be able to participate in the Capacity Market and a number of balancing mechanisms for the National Grid.

1.3.2 The Capacity Market

To deliver a supply of secure, sustainable, and affordable electricity, the UK needs not only investment in new generation projects and innovative technologies but to get the best out of existing assets on the network. The Capacity Market (recently revised to encourage BESS investment) aims to deal with both these issues by bringing forward new investment while maximising current generation capabilities.

The Capacity Market aims to balance the difference between demand and supply and to bring forward investment in new generation projects and innovative technologies, in parallel to maximising the utilisation of the existing generation capacity. The Capacity Market operates alongside the electricity market, which is where most participants will continue to earn most of their revenues. The Capacity

Market revenues are decided by auctions. To qualify for the auctions planning permissions need to be secured in advance of sites being entered into the auctions.

1.3.3 Balancing the Network

National Grid has a constant supply of 'extra power' available for use when the power required by customers is not equal to the power generated and a reserve supply. The Balancing Mechanism is used to ensure that the network is in balance and reserve power is then used when the network comes under 'stress'.

When unforeseen demand is put on the network, such as when a large power station suddenly comes offline, then the National Grid control room need an alternative source of power. This is achieved from rapid responding facilities such as that proposed by the Development which can supply or absorb energy from the grid as instructed.

1.3.4 Enhanced frequency Response

Enhanced Frequency Response (EFR) is defined by National Grid as being: "a dynamic service where the active power changes proportionately in response to changes in system frequency. This service was aimed at improving the management of the system frequency pre-fault to maintain system frequency closer to 50Hz. EFR is borne out of the National Grid procurement exercise, which allows tenders to be submitted to deliver balancing services. On recognising the benefits of BESS, one procurement round solely awarded services to BESS as opposed to technologies that deliver power via diesel, gas or hydro-electrical generation.

1.4 Benefits of the Development

1.4.1 Clean, Efficient and Flexible Energy Source

The BESS site will provide a very flexible and rapid release of electricity to the grid without any emissions of Carbon Dioxide to the air or detrimental impact to the environment.

By importing excess energy, renewable or otherwise, from the grid and storing it, the development can capture energy that will otherwise be lost / unutilised. Batteries offer opportunities to support the intermittent nature of renewables by storing the excess energy they produce and importing it back into the grid when demand requires.

During situations when primary power sources (e.g. traditional power stations) are interrupted, battery storage can bridge the gap in production, thus avoiding potential blackouts.

It should be noted that the UK electricity network is wholly interconnected and issues in one geographic location can have far reaching implications on the network. Accordingly, battery storage facilities offer

additional capacity to deal with system stress and any variations in grid frequency at both a local and national level.

As recognised by National Grid's System Operability Framework (SOF): "Faster response is more effective and so less response is needed if speed can be increased." Battery storage facilities can respond more rapidly than other types of balancing services, as they have no start-up delays. As such BESS can balance the real-time requirements of the national grid more efficiently.

1.4.2 Embedded Distributed Power

The Development has been specifically sited to ensure a viable and sustainable connection. The infrastructure can support the development without unacceptable impact and detriment to the environment.

The Development constitutes Embedded Distributed Power (EDP) as it supplies power to the local distribution network at or near the point of use. By doing so it results in lower transmission losses which occur when power is transmitted over long distances; national level transmission losses can amount to up to 14% dependant on the region.

Local small-scale embedded distribution is less susceptible to widespread power failure as it reduces reliance on large scale more central generation. When such larger scale generation fails the impact is inevitably far larger.

However, local networks have many constraints, and with an ageing infrastructure requiring continual upgrade and maintenance, it can be difficult to identify suitable connection points with necessary capacity and 'fault headroom' for embedded distributed power.

The Applicant, after in-depth consultation with the grid operators, was able to assess the local distribution networks and identify this site. Here the network can accept embedded distributed power and offers a great support to the surrounding areas.

1.4.3 Economic/ Employment Benefits

Potential social and economic effects can be divided into:

- Direct effects: for example, employment opportunities during construction and decommissioning of the Development.
- Indirect effects: such as employment opportunities created down the supply chain by those companies' providing services to the Development during construction and decommissioning; and
- Induced effects: for instance, employment created by the additional spend of wages into the local economy.

The Development will result in contract opportunities for local and regional contractors' both for construction activities themselves and throughout the supply chain. These ideally will be sourced locally where possible, subject to professional competency and competitive tendering. The investment in the Development has the potential to generate a range of economic opportunities for local businesses, most notably employment opportunities and local spending.

Direct opportunities for local businesses and contractors may include:

- Earth Excavation and ground works
- Cabling procurement and installation;
- Fencing;
- Quarry Products;
- Ready Mixed Concrete;
- Civil Engineering;
- Surveying;
- Plant;
- Haulage;
- Landscape and Renovation;
- Mechanical, Electrical and Supervisory Services;
- Security;
- Accommodation.
- Maintenance.

It is envisaged that there may be the potential for approximately 10 jobs generated in the local area through the construction period alone.

1.5 Site Selection & History

BESS sites are primarily chosen for their access to the local electricity distribution network. This must be capable of accepting the export and import of electricity at an acceptable cost. This can then provide valuable support to local customers in times of stress on the local, and wider, electricity network. Other factors include proximity to residential properties, sites of sensitivity or designated areas, ecological impact, archaeological or heritage impact. Noise impact as well as flood risk and visual impacts are also factors. Further considerations are whether the site has safe access, whether there is sufficient road network and infrastructures to support the development.

The Application Site was selected due to the availability of land where a sustainable and viable grid connection could be established with suitable infrastructure. Additional advantages of this location include minimal visual and landscape impact owing to an existing framework of hedgerows and trees, as well as a similar built environment adjacent to the development site. It was crucial for both the Applicant and the landowner that the battery development considered all potential impacts on the community and road users. Careful site selection ensured there would be no noise impact or loss of residential amenity. It was determined that the chosen site is the most appropriate location, enabling the development to integrate within the current setting, close to the point of connection, without significant impact.

1.6 Design Evolution

The final design has been achieved following several key layout alterations, considering specific onsite constraints. Principally this has involved:

Refinements to design were undertaken throughout the pre-application surveys and discussions as site specific details dictated consideration of.

- Residential amenity;
- Ecological habitats & biodiversity;
- Buried services and any requisite buffer zones;
- Neighbouring use;
- Existing access suitability and installation of two new access/exit points;
- Surface water/flooding restrictions;
- Existing infrastructure.

The development has undergone several alterations, including access changes, in order to reflect results from surveys and any feedback from local residents and business through the consultation process. This, it is felt, has contributed to a development with minimal impact, in a sustainable environment that can meet all standards and legislation and provide a vitally important component in providing a source of storing and supplying essential energy.

1.7 The Planning Application Submission

The following plans and drawings are submitted with the planning application:

- Site Location Plan; and Site Layout,
- In addition, the following elevation drawings are also submitted:
- Technical Data Sheet for candidate containerised BESS;
- Typical DNO Switchroom;
- IR Security Camera,
- Security Fencing,
- Invertors & Transformers,
- Store room,
- The following information is appended to this Supporting Statement:
- Landscape & Visual Impact Assessment,
- Landscape Management Plan,
- Flood Risk/Drainage Impact Assessments,
- Ecological Study,
- Biodiversity Report
- Construction and Transport Management Plan,

- Site Specific Noise Report,
- Cultural and Heritage Impact Assessment,
- Fire Safety Report,

2. THE DEVELOPMENT

2.1 Technology

The battery manufacturing industry is continuously evolving, and designs continue to improve technically and economically. The final selection of technology will be chosen prior to installation, through competitive tendering, but it will fit within the maximum dimensions assessed in this planning application.

2.2 Landscape Planting

The Application Site comprises a single irregular shaped field of agricultural land, currently under cultivation to the south. It is enclosed by a mix of mature hedgerows, trees, post-andwire fencing, which contribute to the rural character of the area.

Expansive fields extend to the north and west from the Application Site. To the east lies a residential area comprising the neighbourhoods of The Limekilns and Greenwell Park. To the south, the site is bordered by an adjacent BESS development (Planning Ref: 21/01438/FULL). Patches of woodland are located to the northeast and southeast, providing a degree of natural screening and ecological value. A Landscape Management Plan as well as a Biodiversity Enhancement Plan have been developed in order to ensure the least impact to the existing framework as well as allowing an increase in biodiversity to enrichen the area.

2.3 Access

Access to the development will be obtained via two newly constructed entrances. The most northern access will act as an emergency access/exit point. These new entrance point have been assessed and traffic counts undertaken in order to ensure safe sightlines and safe movements for all traffic.

During the operational phase of the BESS Development traffic will be restricted to occasional maintenance visits. Further information of anticipated vehicle numbers is provided in the full access and transport statement submitted.

Construction traffic associated with the development will primarily be comprised of HGVs delivering materials and installation components associated with the BESS and LGVs (Light Goods Vehicles, e.g., cars/small vans) associated with construction workers.

Construction and operational traffic will not have a significant adverse impact on the safe operation of the highway network or cause unacceptable environmental effects. The economic opportunities for local and regional contractors during construction activities and opportunities throughout the supply chain will provide some employment/economic benefits.

Maintenance will be overseen by suitably qualified contractors who will visit the Development as required but typically less than twice per month. Online monitoring of performance and identification of issues will be provided on a 24-hour basis.

2.4 Drainage and Surface Water

The BESS facility has undergone a Flood Risk and Drainage Impact Assessment and in compliance with the requirements of the NPF4, and subject to the adoption of the proposed mitigation, the development can proceed without being subject to significant flood risk.

Moreover, the development will not increase flood risk to the wider area as a result of the suitable management of surface water runoff discharging from the site.

2.5 Development – Construction, Operation and Decommissioning

2.5.1 Construction

The construction process will consist of the following principal activities:

- Assess access tracks construction as required including site preparation;
- Delivery of BESS components and associated support systems;
- Construct DNO substation building;
- Cable routing, laying and connection;
- Testing and commissioning; and,
- Site restoration and Landscaping.

Most of these operations will be carried out concurrently, although predominantly in the order identified, in order to minimise the overall length of the construction programme. Site restoration will be programmed and carried out to allow restoration of disturbed areas as early as possible and in a progressive manner.

It is envisaged that there may be the potential for approximately 10 jobs in the local area through the construction period alone.

Emergency procedures regarding fire precautions during and after the construction phase will be written and will be detailed in a Fire Risk Assessment. Fire points will be set up at various locations around the site. These will consist of appropriate fire extinguishers and an air horn or fire bell with which to raise the alarm. A fire muster point will be located immediately outside the main entrance. A fire action plan for the project will be displayed on a site noticeboard, detailing the locations of fire points, fire routes, first aid provisions and the emergency muster point as well as the site address for emergency services. This fire action plan will be regularly updated by the Site Manager to reflect current conditions on site. The procedure to be followed in the event of an emergency will be made known to all persons as part of the site induction training.

As a multimillion-pound investment it is essential that insurance and protection is in place for the development. The site also has an integrated 3 stage fire prevention and suppression system built into the design to ensure this risk is managed out.

Typical system comprises:

- Early warning of any battery cells failing with gas detectors (in each enclosure) where this is far more sensitive than past systems monitoring heat building up alone. This triggers automatic power disconnection and alarm to monitoring station.
- Inert gas discharge if heat detected requiring no remote activation (also triggers automatic disconnect) with alarm to monitoring station. This inert gas displaces all oxygen in the battery area and stops any fire developing.
- External access to internal water mist deluge system (requiring low water volumes) that can be supported by fire services – like high rise flats. Primarily to address heat build-up, alleviating potential damage to adjacent enclosures.

2.5.2 Operation

Maintenance will be overseen by suitably qualified contractors who will visit the Development as required but typically less than twice per month. Online monitoring of performance and identification of issues will be provided on a 24-hour basis.

2.5.3 Decommissioning

Decommissioning will take account of the environmental legislation and technology available at the time of decommissioning. Notice will be given to the Council in advance of commencement of the decommissioning works, with all necessary licenses or permits being acquired. Decommissioning will be timed to minimise its environmental impact.

The Applicant will develop a decommissioning plan, and the works will be undertaken in accordance with a statement of operations, covering safety and environmental issues during decommissioning. This will be submitted for approval at least 6 months prior to full decommissioning of the site.

3. SITE & SURROUNDINGS

3.1 Description of Application Site

The Application Site occupies an area of approximately 3.95 hectares and is situated at an elevation ranging between 108 and 119 metres Above Ordnance Datum (AOD). The site is centred at National Grid Reference (NGR) E 340115, N 737359 and lies approximately c.0.15km west of Glenrothes, c.0.35km metres northeast of Leslie, and c.0.4km north of the A911. The Proposed Development is situated just outside Leslie, on the western edge of Glenrothes, within a transitional landscape between rural farmland and the urban fringe. The site itself is bordered to the north by The Limekilns Core Path and open arable fields, with residential properties located approximately 20 metres to the

east. To the south lies an active substation and associated infrastructure, while to the west, Balsillie Avenue provides access to adjacent agricultural land and a nearby quarry. The surrounding area features a mix of land uses, including energy infrastructure, farmland, and suburban housing, typical of the edge-of settlement context.

3.2 Land Use Surrounding Application Site

The Application Site is in an agricultural field, primary used in animal feed stock production. The surrounding landscape is a mixture of urban and agricultural. Expansive fields extend to the north and west and to the east lies a residential area comprising the neighbourhoods of The Limekilns and Greenwell Park. To the south, the site is bordered by an adjacent BESS development (Planning Ref: 21/01438/FULL). Patches of woodland are located to the northeast and southeast. A small watercourse, Lothrie Burn, flows to the east of the site, near Greenwell Park. A quarry is located approximately 650 metres to the west. To the south lies the village of Leslie, while to the east is the town of Glenrothes. These settlements collectively host a range of land uses including residential, hospitality, commercial and industrial. The wider setting therefore exhibits a predominantly urban character, transitioning from rural edges to more developed zones.

There is an increasing need and dependency on renewable energy sources, such as wind and solar, to fulfil the United Kingdom's energy requirements. To meet these demands, large-scale developments must be undertaken to secure and protect future energy supplies. This development will enhance power security and provide essential support to the grid infrastructure. It should be regarded as a crucial proposal for providing and maintaining energy, reducing carbon emissions, and combating climate change.

4. LOCAL & DEVELOPMENT POLICY AND NATIONAL SUPPORT

4.1 Introduction

On 1 May 2019 an Environmental and Climate Change Emergency was declared following the finding of the Intergovernmental Panel on Climate Change. In order to avoid more than 1.5°C rise in global warming, global emissions will need to fall by around 45% from 2010 levels by 2030, reaching net zero by around 2050.

In June 2019 the UK became the first major economy in the world to pass laws to end its contribution to global warming by 2050.

On 27 August 2020, the Scottish Government’s Chief Planner issued a letter in relation to electricity storage and the consenting regime. In this letter the Chief Planner stated that the Scottish Government considers that a battery installation (BESS) generates electricity and is therefore to be treated as a generating station.

In October 2021 the UK Governments 'Net Zero Strategy' was launched and commits the UK to be powered entirely by clean electricity by 2035, subject to security of supply. To meet this target, a key component is the deployment of new flexibility measures including energy storage to help smooth out power supply and future price spikes.

4.2 Local Policies

FIFEplan – Fife's Local Development Plan (LDP), adopted September 2017

TAYplan

Supplementary Guidance: Low Carbon Fife, adopted January 2019.

It is acknowledged that Fife Council will support and encourage proposals to include energy storage as part of low carbon energy proposals, provided they meet with policy requirements.

The key FIFEplan policy relevant to the proposed development is:

Policy 11: Low Carbon Fife.

Low Carbon Fife is the primary policy for determining the proposed development.

The policy provides the following statement with regard to Low Carbon Energy Schemes:

"Development of low carbon energy schemes such as wind turbines, district heating, solar arrays, or energy from waste will be supported provided the proposals do not result in unacceptable significant adverse effects or impacts which cannot be satisfactorily mitigated, giving due regard to relevant environmental, community and cumulative impact considerations. The assessment of proposals for renewable energy developments will be based on the principles set out in the current Scottish Planning Policy… Assessments will include the following considerations:

- Landscape and visual impacts, including landscape character;

- All cumulative impacts including cumulative landscape and visual impact, recognising that in some areas the cumulative impact of existing and consented development may limit the capacity for further development;

- Impacts on communities and individual dwellings (including visual impact, residential amenity, noise and shadow flicker);

- Impacts on aviation and defence interests, public access, the historic environment, tourism and recreation, telecommunications and broadcasting installations, forestry and woodland, adjacent trunk roads and road traffic, hazardous installations (including pipelines) and carbon rich soils (using the carbon calculator);

- Effects on natural heritage (including birds) and hydrology, the water environment and flood risk;

- Opportunities for energy storage;

- Net economic impact including location and community socio-economics benefit such as employment and supply chain opportunities;

- The scale of contribution to renewable energy generation targets and the effect on greenhouse emissions;

- The need for conditions relating to decommissioning of developments, including ancillary infrastructure, and site restoration; and

- The need for a robust planning obligation to ensure that operators achieve site restoration.

Supplementary Guidance

Policy 11 supports low carbon energy schemes as long as they do not result in unacceptable significant adverse environmental, community or cumulative impacts which cannot be satisfactorily mitigated against. SG provides detailed guidance on how the impacts of low carbon energy schemes will be assessed by Fife Council including consideration of a range of environmental and amenity factors alongside consideration of opportunities for energy storage, net economic impact and contribution towards renewable energy and emissions targets.

Policy 7: Development in the Countryside;

The Council seeks to protect the countryside from inappropriate development in Policy 7:

Policy provides support for development which requires a countryside location, and which is located and designed to protect the overall landscape and environmental quality of the area. The LDP notes that "There will be circumstances where countryside locations are the most appropriate – or only feasible – places to locate energy or minerals development. In these cases, this policy will be applied in assessing and managing the impact of proposals that can be otherwise be supported by the Development Plan".

Policy 10: Amenity;

Development will only be supported if it does not have a significant detrimental impact on the amenity of existing or proposed land uses. Development is required to demonstrate that they will not lead to significant detrimental impact on amenity in relation to a number of factors including noise, light and odour pollution, traffic movements, construction impacts and visual impact of the surrounding area. Where potential issues are identified appropriate mitigation should be proposed. Renewable energy proposals are considered as a land use type which will require an assessment of amenity impact. Policy 10 sets out the factors to be addressed when considering the impact of a proposals on amenity with those most relevant to solar being traffic movements, visual impact, glint and glare and construction impacts.

Supplementary Guidance:

As regards impact of Amenity on neighbouring properties and supporting Policy 10 of FIFEplan, the SG provides guidance on the assessment of impact on residential amenity and sets out what are and are not valid planning considerations in that regard.

Policy 13: Natural Environment and Access.

Natural Environment and Access provides that development proposals will only be supported where the protect or enhance natural heritage and access assets including designated sites (nationally and local), woodlands, biodiversity, protected and priority habitats and species, landscape character and views, core paths etc. Where adverse impacts are unavoidable proposals will only be supported where these impacts can be satisfactorily mitigated.

Natural heritage considerations as per Policy 13 is required:

Landscape and visual impacts;

Habitat impacts;

Species impacts.

Fife Council recognise the need to maintain and enhance their extensive environmental assets through green networks, biodiversity enhancements and ensuring new development protects existing assets.

Supplementary Guidance

The SG sets out guidance on the information that requires to be provided to support planning applications for low carbon energy proposals which include confirmation of maximum capacity, visualisations, assessment of impacts on natural and built heritage assets and decommissioning and after care details. For large proposals in sensitive areas Landscape and Visual Impact Assessment (LVIA) is required and detailed natural heritage surveys may be required. In terms of assessing impact on built heritage, proposals must be designed to minimise impacts, both direct and indirect, on the historic environment, including the landscape setting of historic settlements, important public views of settlements, prominent public views from these settlements to the surrounding countryside, and archaeological remains. Use of screening, and natural topography to minimise impact or visibility of proposals is encouraged.

The SG provides specific guidance on opportunities within low carbon proposals for energy storage and the overall benefits that they may provide towards meeting national energy objectives.

The SG states:

"Scottish Government have set out that if the energy sector is to maximise environmental, economic and social benefits then renewable energy generation needs to be linked to energy storage; in the draft Scottish Energy Strategy (Feb 2017) energy storage was identified as one of the key factors that would underpin the vision of a stable, managed energy transition to a largely decarbonised energy system".

The Proposed Development can draw significant support from the policies and objectives of the FiFeplan (Local development Plan) as well as Supplementary Guidance.

TAYplan Strategic Development Plan (2017)

The TAYplan Strategic Development Plan (TSDP) sets out the overall planning vision for the region over a twenty years period covering Fife Council, Perth and Kinross Council and Angus areas in addition to Dundee City Council. TSDP looks to identify key areas for growth and sets out an overarching spatial strategy for the region.

Policy 1 sets out a spatial strategy to deliver a sustainable pattern of development and directs that most development will be built in principal settlements. Local Development Plans identify appropriate land within the boundaries of principal settlements that is capable of delivering this sustainable pattern of development. Policy 1C considers development outside principal settlements such as the proposed development and balances supporting the needs of rural areas against potential outward growth of urban development which may engulf surrounding villages and towns.

The policy of most relevance to the Proposed Development is 'Policy 7 – Energy, Waste and Resources' which aims to deliver a low/zero carbon future and contribute to meeting Scottish Government energy targets.

Policy 7 of the TSPD look to ensure that new energy infrastructure is delivered in appropriate and sustainable locations, therefore they should be justified and illustrate that due consideration has been given to land take requirements and safety exclusion zones or buffer areas. That the potential effects of the development on residential amenity, habitats, landscape, noise, the water environment including drainage and waste disposal, biodiversity, heritage resources, tourism and recreational pursuits and carbon emissions, are all careful considered and reported. That the proximity of grid connections and distribution networks are appropriate to ensure viable and essential resources are protected in the locale and on a wider network area. That operational safety measures have been considered and that restoration measure have been considered for implementation after the lifetime of the development.

Justified consideration of all aspects of the development have been undertaken to ensure compliance.

Policy 9: Managing TAYplan's Assets states that land should be identified through Local Development Plans to ensure responsible management of TAYplan's environmental and historical assets. With regard to the Proposed Development, following the implementation of mitigation no significant adverse impacts are predicted to natural or historical assets.

The Proposed Development can draw significant support from the policies and objectives of the TSDP.

4.3 Planning Policy

National Planning Policy

The applicable National Planning Policies are:

- Scottish National Planning Framework 4 (NPF4); and
- Scottish Planning Policy 2014.

The NPF4 states that:

3. Strategic Renewable Electricity Generation and Transmission Infrastructure

This national development supports renewable electricity generation, repowering, and expansion of the electricity grid. A large and rapid increase in electricity generation from renewable sources will be essential for Scotland to meet its net zero emissions targets. Certain types of renewable electricity generation will also be required, which will include energy storage technology and capacity, to provide the vital services, including flexible response, that a zero-carbon network will require. Generation is for domestic consumption as well as for export to the UK and beyond, with new capacity helping to decarbonise heat, transport, and industrial energy demand. This has the potential to support jobs and business investment, with wider economic benefits.

Scotland 2045

The world is facing unprecedented challenges. The global climate emergency means that we need to reduce greenhouse gas emissions and adapt to the future impacts of climate change. We will need to respond to a growing nature crisis, and to work together to enable development that addresses the social and economic legacy of the coronavirus pandemic, the cost crisis and longstanding inequality.

National spatial strategy

Scotland's future places will be net zero, nature-positive places that are designed to reduce emissions and adapt to the impacts of climate change, whilst protecting, recovering and restoring our environment.

Meeting our climate ambition will require a rapid transformation across all sectors of our economy and society. This means ensuring the right development happens in the right place. Every decision on our future development must contribute to making Scotland a more sustainable place. We will encourage low and zero carbon design and energy efficiency, development that is accessible by sustainable travel, and expansion of renewable energy generation.

The Scottish Government expresses its planning policies through: The National Planning Frameworks, the Scottish Planning Policy (SPP), Planning Advice Notes (PAN).

4.3.1 National Planning Framework (NPF)

NPF4 is a long-term strategy for Scotland and is a spatial expression of the Government's Economic Strategy and plans for development and investment in infrastructure. This is now a statutory document and a material consideration in any planning application. It provides a national context for development plans and planning decisions as well as informing the on-going programmes of the Scottish Government, public agencies, and local authorities.

4.3.2 Scottish Planning Policy (SPP) 2014

Scottish Planning Policy (SPP) was published on 23rd June 2014. The changes relate to sustainable development and housing land supply. SPP sets out national planning policies which reflect Scottish Government Ministers' priorities for the operation of the planning system and for the development and use of land. SPP is relevant to understanding the national context, the standard duties under Schedule 9 to the 1989 Act and is a material consideration in the decision-making process.

Presumption in Favour of Sustainable Development

SPP "introduces a presumption in favour of sustainable development" and states that:

"the planning system should support economically, environmentally and socially sustainable places by enabling development that balances the cost and benefits of the proposal over the longer term.

The Proposed Development forms part of a strategically important category of national development which is recognised in NPF4. It is a national priority which will contribute to the Scottish Government's central purpose and national outcomes.

'Energy Policy Principles: To encourage, promote and facilitate all forms of renewable energy development onshore and offshore. This includes energy generation, storage, new and replacement transmission and distribution infrastructure and emerging low-carbon and zero emissions technologies including hydrogen and carbon capture utilisation and storage (CCUS).

Policy Outcomes: • Expansion of renewable, low-carbon and zero emissions technologies. Local Development Plans: LDPs should seek to realise their area's full potential for electricity and heat from renewable, low carbon and zero emission sources by identifying a range of opportunities for energy development.

Energy

Policy 11

A. Development proposals for all forms of renewable, low-carbon and zero emissions technologies will be supported.

These include:

i. wind farms including repowering, extending, expanding and extending the life of existing wind farms;

ii. enabling works, such as grid transmission and distribution infrastructure;

iii. energy storage, such as battery storage and pumped storage hydro;

iv. small scale renewable energy generation technology;

v. solar arrays;

vi. proposals associated with negative emissions technologies and carbon capture;

and

vii. proposals including co-location of these technologies.

B. Development proposals for wind farms in National Parks and National Scenic Areas will not be supported.

C. Development proposals will only be supported where they maximise net economic impact, including local and community socio-economic benefits such as employment, associated business and supply chain opportunities.

D. Development proposals that impact on international or national designations will be assessed in relation to Policy 4.

E. In addition, project design and mitigation will demonstrate how the following impacts are addressed:

i. impacts on communities and individual dwellings, including, residential amenity, visual impact, noise and shadow flicker;

ii. significant landscape and visual impacts, recognising that such impacts are to be expected for some forms of renewable energy. Where impacts are localised and/ or appropriate design mitigation has been applied, they will generally be considered to be acceptable;

iii. public access, including impact on long distance walking and cycling routes and scenic routes;

iv. impacts on aviation and defence interests including seismological recording;

v. impacts on telecommunications and broadcasting installations, particularly ensuring that transmission links are not compromised;

vi. impacts on road traffic and on adjacent trunk roads, including during construction;

vii. impacts on historic environment;

viii. effects on hydrology, the water environment and flood risk;

ix. biodiversity including impacts on birds; x. impacts on trees, woods and forests;

x. proposals for the decommissioning of developments, including ancillary infrastructure, and site restoration;

xi. the quality of site restoration plans including the measures in place to safeguard or guarantee availability of finances to effectively implement those plans; and

xii. cumulative impacts.

In considering these impacts, significant weight will be placed on the contribution of the proposal to renewable energy generation targets and on greenhouse gas emissions reduction targets. Grid capacity should not constrain renewable energy development. It is for developers to agree connections to the grid with the relevant network operator. In the case of proposals for grid infrastructure, consideration should be given to underground connections where possible.

f) Consents for development proposals may be time-limited. Areas identified for wind farms are, however, expected to be suitable for use in perpetuity.

SPP notes that the planning system should support the transformational change to a low carbon economy and support the development of a diverse range of electricity generation from renewable energy technologies – including the expansion of renewable energy generation capacity. The Proposed Development would contribute to this aim.

Scottish Planning Policy (SPP) June 2014 aligns itself with NPF4 and one of its policy principles states that "This SPP introduces a presumption in favour of development that contributes to sustainable development". At paragraph 28, SPP states that "the planning system should support economically, environmentally and socially sustainable places by enabling development that balances the costs and benefits of a proposal over the longer term. The aim is to achieve the right development in the right place; it is not to allow development at any cost." The SPP also identifies a number of considerations to be taken into account when determining energy infrastructure developments including net economic benefit, the contribution to renewable energy targets, cumulative impacts, visual impacts, residential amenity, and landscape and visual impacts (paragraph169).

SPP paragraph 154 states that the planning system should:

"Support the transformational change to a low carbon economy, consistent with national objections and targets including delivering 30% of overall energy demand from renewable sources by 2020, 11% of heat demand from renewable sources by 2020, and the equivalent of 100% of electricity demand from renewable sources by 2020."

The Development is in line with the principles set out in Paragraph 154, as it will contribute to energy generation, (as per the directive from The Scottish Governments Chief Planner) and it will make a direct contribution to the renewable energy targets and energy security for essential infrastructure.

It is therefore considered that, the principles of the development accords with National Policy.

4.3.3 National Planning Framework 4

NPF4 has a focus on green energy and provides a spatial planning response to the Global climate emergency. This is indicative of the growing national investment in renewable energy, which must filter through to local level and consent suitable and sustainable renewable energy developments.

NPF4 supports 'renewable energy developments, including the re-powering and extension of existing wind farms, new and replacement grid infrastructure, carbon capture and storage and hydrogen networks.'

Working in collaboration with grid operators allows for the upgrading and new infrastructure to enable connection of clean energy production where it is needed. The stabilisation of grid networks in not only towns and cities but in rural environments plays an essential role in stabilising supply to all and to allow the development of local networks. Development such as the proposed plays an essential part in this level of development. Without developments of varying scale, coupled with a mixed use of technologies that help support and improve network function, targets and goals will be missed.

'We want our places to support continued expansion of low-carbon and net zero energy technologies as a key contributor to net zero emissions by 2045.'

'Scotland's energy sector has a significant role to play in reducing carbon emissions and contributing to a green, fair and resilient economic recovery. A wide range of renewable technologies are capable of delivering these benefits, although it is likely that the onshore wind sector will play the greatest role in the coming years. The planning system should support all forms of renewable energy development and energy storage, together with new and replacement transmission and distribution infrastructure. It should also support new and emerging technology including hydrogen and carbon capture utilisation and storage (CCUS).'

'Policy 19: Green Energy'

'Development proposals for all forms of renewable energy and low-carbon fuels, together with enabling works such as transmission and distribution infrastructure, and energy storage such as battery storage, should be supported in principle.'

The infrastructure and capability of networks to provide reliable power and grid support to charging points requires the development of sustainable energy production and reliable transference and storage of power on an, as and when required basis. Rural areas, especially, suffer from poor infrastructure that requires repair or upgrading. Renewable energy developments, coupled with battery storage allow for the production of clean energy locally, a safe and secure supply and demand basis and for upgrading works to be completed. The proposed development allows for upgrading works and a balancing of power supply over the grid network of the area.

'We expect that NPF4 will confirm our view that the Global Climate Emergency should be a material consideration in considering applications for appropriately located renewable energy developments.'

'As a priority, our strategy will need to facilitate the roll-out of renewable electricity and renewable and zero emissions heat technologies. We will need to switch to low and zero carbon fuel sources, and support the delivery of associated infrastructure, such as grid networks and gas pipelines.'

'Introducing new policies that address a wider range of energy generation technologies for example for electrical and thermal storage, and hydrogen.'

Developments of the proposed scale allow for locally produced renewable energy to be used and stored at source or alternatively to be fed down the network to larger towns and cities as required. The nature of cities makes it more difficult for renewable, sustainable energy to be produced at source at scale and therefore a dependence on renewable energy out with large towns and cities is a necessity requiring many more decentralised generation facilities.

A flexible battery energy storage solution provides the opportunity to grow and establish a solid, reliable network, feeding to a local network whilst supporting a national grid and stabilising power provision to all. Establishing infrastructure and improving accessibility to it requires a clean, sustainable source, one to which this development can contribute on a substantive level.

'Strategic Renewable Electricity Generation and Transmission Infrastructure'

'This national development supports renewable electricity generation, repowering, and expansion of the electricity grid.'

'A large increase in electricity generation from renewable sources will be essential for Scotland to meet its net zero emissions targets. Certain types of renewable electricity generation will also be required, alongside developments and increases in storage technology and capacity, to provide the vital services, including flexible response, that a zero carbon network will require. Generation is for consumption domestically as well as for export to the UK and beyond, with new capacity helping to decarbonise heat, transport and industrial energy demand. This has the potential to support jobs and business investment, with wider economic benefits.'

'The electricity transmission grid will need substantial reinforcement including the addition of new infrastructure to connect and transmit the output from new on and offshore capacity to consumers in Scotland, the rest of the UK and beyond. Delivery of this national development will be informed by market, policy and regulatory developments and decisions.'

'Additional electricity generation from renewables and electricity transmission capacity of scale is fundamental to achieving a net zero economy and supports improved network resilience in rural and island areas.'

Localised production of renewable energy, with capacity for wider distribution, is an essential component in the provision of facilities and structure that can and will stabilise consumer supply. A development, such as that proposed, allows for the provision and stabilisation of supply to local residents and business and providing an infrastructure support to the electrical grid infrastructure. NPF3 was also very supportive of green energy development but NPF4 goes a step further to actively encouraging and promoting developments which can contribute and support infrastructure and aid Scotland's progression to Net Zero and meeting essential targets to combat climate change.

4.4 National Planning & Energy Policy

4.4.1 Town and Country Planning (Scotland) Act 1997

The principal planning statute in Scotland is the Town and Country Planning Act (Scotland) 1997 (the Planning Act) as amended by The Planning etc. (Scotland) Act 2006 and now the Planning (Scotland) Act 2019. Section 57(2) of the 1997 Act provides:

Section 25 of the Planning Act states that: “Where, in making any determination under the planning Acts, regard is to be had to the development plan, the determination shall be made in accordance with the plan unless material considerations indicate otherwise”.

4.4.2 Routemap for Renewable Energy in Scotland

Securing low carbon energy supplies is a key element in achieving the target of reducing emissions by 80% by 2050 with an interim milestone of 42% by 2020. In recognition of this the Scottish Government set targets which include producing 100% of the country's demand for electricity from renewable sources by 2020, first detailed within the 2020 Routemap for Renewable Energy in Scotland. Although now superseded, the Development therefore draws significant support as a contributor to these and successive targets.

4.5 Scottish Energy Strategy

The Scottish Energy Strategy 2017: The Future of Energy in Scotland sets out the Scottish Government’s vision for the future energy system in Scotland, to 2050. It articulates the priorities for an integrated system-wide approach that considers both the use and supply of energy for heat, power and transport. The Energy Strategy is designed to strengthen the development of local energy, protect and empower consumers, and support Scotland’s climate change ambitions while tackling poor energy provision.

The Scottish Government published ‘Scotland’s Energy Strategy Position Statement’ (2021 SES) in March 2021, which builds on the 2017 SES. The 2021 SES notes an objective to:

"Introduce a new framework of support for energy technology innovation, delivering a step change in emerging technologies funding to support the innovation and commercialisation of renewable energy generation, storage and supply.”

The document’s energy strategies of most relevance to the Proposed Development include system security and flexibility, and renewable and low carbon solutions. The Energy Strategy notes that “Scotland should have the capacity, the connections, the flexibility and resilience necessary to maintain secure and reliable supplies of energy to all of our homes and businesses as our energy transition takes place”. The Proposed Development will directly contribute towards this aim through supporting the generation of renewable electricity and enhancing the wider network, and therefore can draw significant support from the Scottish Energy Strategy.

4.6 National Developments

As part of the Low Carbon Place strategy the Scottish Government recognises the need for a range of infrastructure, including new developments and refurbishment or enhancement of existing facilities.

“these classes of development are needed to support the delivery of an enhanced high voltage electricity transmission grid which is vital in meeting national targets for electricity generation, statutory climate change targets, and security of energy supplies”.

The Proposed Development has a direct relationship with achieving this aim and as such can draw significant support from NPF4.

5. INTERNATIONAL, EUROPEAN & UK POLICY CONTEXT INTERNATIONAL

5.1 COP 21 Paris Agreement

On 12 December 2015, 196 Parties to the UN Framework Convention on Climate Change (UNFCCC) adopted the Paris Agreement13, a legally binding framework for an internationally coordinated effort to tackle climate change. The Paris Agreement's key aim is to strengthen the global response to climate change by keeping a global temperature rise this century below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius. The UK is legally bound through commitment to the Paris Agreement.

5.1.1 COP26 Goals

- Secure global net zero by mid-century and keep 1.5 degrees within reach
- Countries were asked to come forward with ambitious 2030 emissions reductions targets that align with reaching net zero by the middle of the century.
- To deliver on these stretching targets, countries will need to:
- Accelerate the phase-out of coal
- Curtail deforestation
- Speed up the switch to electric vehicles
- Encourage investment in renewables.
- Adapt to protect communities and natural habitats
- The climate is already changing and it will continue to change even as we reduce emissions, with devastating effects.
- At COP26 it was agreed that we need to work together to enable and encourage countries affected by climate change to:
- protect and restore ecosystems
- build defences, warning systems and resilient infrastructure and agriculture to avoid loss of homes, livelihoods and even lives.
- Mobilise finance
- To deliver on our first two goals, developed countries must make good on their promise to mobilise at least $100bn in climate finance per year.
- International financial institutions must play their part and we need work towards unleashing the trillions in private and public sector finance required to secure global net zero.
- We can only rise to the challenges of the climate crisis by working together.

At COP26 steps were made to finalise the Paris Rulebook (the detailed rules that make the Paris Agreement operational) accelerate action to tackle the climate crisis through collaboration between governments, businesses and civil society.

COP26 saw the resolution to meet the aforementioned goals and to work together to achieve these.

5.2 Committee on Climate Change Net Zero Report May 2019

In May 2019, the Committee on Climate Change published Net Zero – The UK's Contribution to Stopping Global Warming15. This report responds to a request from the Governments of the UK, Wales and, asking the Committee to reassess the UK's long-term emissions targets. The report recommends a new emissions target for the UK: net zero gases by 2050 and recommends a 2045 net-zero target. The Report highlights the falling cost of key renewable technologies, which are now generally comparable or lower in cost than power from fossil fuels, whilst bringing significant co-benefits such as reduced air pollution.

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

On 27 June 2019, the Climate Change Act 2008 was amended to introduce a target for at least a 100% reduction in greenhouse gas emissions (compared to 1990 levels) in the UK17 by 2050. This 'net zero' target is likely to affect and increase future Government renewable and low carbon energy targets and create a more positive policy environment for renewable energy.

This has seen an increase in the development in renewable energy generation which in turn requires an increase in balancing services, such as the Proposed Development.

Traditional power stations in the UK are reaching the end of their operational lifespan with extensions and new operational stations being limited or actively discouraged. It is anticipated that existing power stations of traditional methods will end by 2030. As more renewable energy sources, such as wind and solar, are generating electricity the balancing of these sources versus demand to consumer is a critical issue for grid stability. Battery storage allows energy to be stored during peak renewable generation periods and allows it to be released when demand outstrips generation with no CO2 emissions on site. This increase and reliance on renewable energy generation equates to a system of high grid frequency volatility. There is therefore a critical need to address our future energy demands and ensure that a system that is fit for purpose is developed.

A flexible approach to energy generation is required to provide backup supply for renewable energy sources. "the more renewable generating capacity we have the more generation capacity we will require overall, to provide back-up at times when the availability of intermittent renewable sources is low."

There is a need, by The Government, for new balancing services to come forward through the planning system to support low carbon electricity generation and to ensure energy security. The Proposed Development is considered consistent with these aims.

The Government seeks to ensure that, by 2030, the UK will have a flexible, smart and responsive electricity system, powered by a diverse and secure range of low-carbon sources of electricity with the majority being from a renewable source. To achieve this there is a need to decarbonise electricity generation and transform the UK into a low carbon economy. These actions will make great strides to meeting renewable energy targets. There is predicted to be an increased demand for electricity, likely

to be double by 2050, this is despite improvements in energy efficiency from domestic and non-domestic sources. A critical component in attaining the goals of The Government is the responsive support of a sustainable infrastructure build to meet the future demands of the population.

5.4 Progress in Reducing Emissions – 2021 Committee on Climate Change

Progress Report to Parliament

The 2021 Committee on Climate Change (CCC) Progress Report to Parliament was published in June 2021 and provides a review of Government efforts over the previous 12 months with regards to Climate Change. While UK emissions fell by 13% in 2020, much of this decline was likely a result of the Covid-19 pandemic and as such, lasting changes are far from certain. The CCC report recommends taking action to transition to a fully decarbonised electricity system. Furthermore, it sets a target to phase out gas-fired electricity generation in the UK by 2035, subject to ensuring security of supply.

There has been significant progress in the transition to renewables, with emissions from electricity having decreased by 65% from 2009 to 2019. However, the CCC report notes that generation shares from renewable resources will need to increase to support the transition to electric vehicles. The International Energy Agency has identified solar power as producing some of the cheapest electricity in history and forecasts that if there is a rapid built-out of renewables (particularly solar and wind), net zero emissions for the power sector can be achieved by 2035 in advanced economies.

5.5 The Sixth Carbon Budget: The UK's path to Net Zero

On 9 December 2020, The Sixth Carbon Budget (2022-2037) was released which updates intermediary targets for the UK's progress to net zero.

"Our recommended pathway requires a 78% reduction in UK territorial emissions between 1990 and 2035. In effect, it brings forward the UK's previous 80% target by nearly 15 years. There is no clearer indication of the increased ambition implied by the Net Zero target than this."

In establishing intermediary targets towards net zero, the context exists for Local Authorities to recognise the action that must be taken sooner rather than later.

"The implication of this path is clear: the utmost focus is required from government over the next ten years. If policy is not scaled up across every sector; if business is not encouraged to invest; if the people of the UK are not engaged in this challenge – the UK will not deliver Net Zero by 2050."

National Audit Office – Achieving Net Zero

Published on 2 December 2020, the National Audit Office report to the UK Government examined the main threats to achieving net zero effectively and efficiently. The report is forthright that most of the UK reductions in emissions has come from the switch away from coal in electricity generation. Whilst

reducing emissions further will require wider changes to the UK economy, further investment in renewable electricity generation will be required.

The Department for Business, Energy and Industrial Strategy projects that the UK will not meet its targets for emissions reduction unless action is taken to reduce the shortfall in achieving the targets set in the fourth and fifth carbon budgets.

"Achieving net zero is a colossal challenge and significantly more challenging than the Government's previous target to reduce emissions by 80% by 2050."

The report confirmed that BEIS will launch a net zero strategy.

Net Zero Strategy: Build Back Greener

The strategy, published on October 2021, prior to COP26, sets out policies and proposals for decarbonising all sectors of the UK economy to meet our net zero target by 2050.

'This Strategy set out the next steps to take to cut our emissions, seize green economic opportunities, and leverage further private investment into net zero. The policies and spending brought forward in the Net Zero Strategy meant that since the Ten Point Plan we have mobilised over £26 billion of government capital investment for the green industrial revolution. Along with regulations, this will support 190,000 jobs by 2025, and 440,000 jobs by 2030, and leverage up to £90 billion of private investment by 2030. This will put us on an ambitious path to meet our Sixth Carbon Budget and our Nationally Determined Contribution, cutting emissions by at least 68% by 2030 on 1990 levels, and reaching net zero by 2050.

We know economic growth and reducing emissions can go hand-in-hand. As we continue to build back better from the COVID-19 pandemic, we will fuel a Green Industrial Revolution, creating jobs and business growth opportunities, and establishing the UK as a global leader in the technologies to tackle climate change. We will deliver the commitments in the Prime Minister's Ten Point Plan and Build Back Better: our plan for growth and go further to build a resilient economy and level up the UK.'

Foreword from the then Secretary of State for Business, Energy and Industrial Strategy

'Key policies:

- By 2035 the UK will be powered entirely by clean electricity, subject to security of supply.
- Secure a final investment decision on a large-scale nuclear plant by the end of this Parliament, and launch a new £120 million Future Nuclear Enabling Fund, retaining options for future nuclear technologies, including Small Modular Reactors.
- 40GW of offshore wind by 2030, with more onshore, solar, and other renewables – with a new approach to onshore and offshore electricity networks to incorporate new low carbon generation and demand in the most efficient manner that takes account of the needs of local communities.

- Moving towards 1GW of floating offshore wind by 2030 to put us at the forefront of this new technology that can utilise our North and Celtic Seas – backed by £380 million overall funding for our world-leading offshore wind sector.
- Deployment of new flexibility measures including storage to help smooth out future price spikes'

5.6 HM Government Energy White Paper – Powering our Net Zero Future

On 14 December 2020, Alok Sharma MP, then Secretary of State for Business, Energy and Industrial Strategy announced the launch of the Energy White Paper. The White Paper set out the UK Governments strategy to put net zero into practice and for fighting climate change, following the Prime Ministers Ten Point Plan for a Green Industrial Revolution.

'Coronavirus has taken a heavy toll on our society and on our economy. But we will overcome COVID-19 and rebuild our economy, building back better and levelling up the country.

As we do so, we must address the inter-generational challenge of climate change. Unchecked, the impact of rising global temperatures represents an existential threat to the planet. So, building back better means building back greener.

The UK has set a world–leading net zero target, the first major economy to do so, but simply setting the target is not enough – we need to achieve it. Failing to act will result in natural catastrophes and changing weather patterns, as well as significant economic damage, supply chain disruption and displacement of populations.'

This white paper puts net zero and our effort to fight climate change at its core, following the Prime Minister's Ten Point Plan for a Green Industrial Revolution.

Alok Sharma MP, then Secretary of State for Business, Energy and Industrial Strategy

The White Paper sets out the measures that need to be put in place to achieve the carbon emission targets for the UK. These include a major shift in energy use from fossil fuels to clean electricity and hydrogen whilst retaining reliability, resilience and affordability.

CONCLUSION

Through extensive review, study and reporting it has clearly been shown that the BESS development is in full compliance with all International, National and Local policy. It is shown that the development by its nature, position and purpose does comply fully with FifePlan, Fife's Local development Plan, TAYPlan and all policies and supplementary guidance relating to the developmen and policies. The Application is fully supported by a suite of technical and environmental documents and mitigation strategies to demonstrate full policy compliance and to show that there will be no adverse impact because of the Development. The development has no emissions and has no diesel or gas powered generator on site that would have the potential to cause any form of pollution. There will be no air quality impacts.

The development is assessed to have no significant impact, with any minor effects fully mitigated. It will contribute to Net Zero targets and support sustainable infrastructure for the future. The location benefits from existing essential infrastructure and supports the grid network.

There are no unacceptable impacts on landscape, visual aesthetics, noise, residential amenities, ecology, local businesses, or infrastructure. Geological and hydrological environments will not be adversely affected.

In compliance with International, National, and Local policies without adverse impacts, it is requested that planning permission be granted for the BESS development, including cabling and landscaping.