



Development of a battery energy storage system
on land to the south of Bridge Road North,
Wrexham,
Wrexham Industrial Estate,
LL13 9PS

PLANNING STATEMENT

January 2022

Prepared by Corbia Management Limited on behalf of
Hero Future Energies (UK) Limited

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SUMMARY

The UK has been a lead on the international stage regarding the need to reduce carbon and greenhouse gas emissions. The UK has been actively pursuing ambitious targets to reduce these emissions. The Climate Change Act 2008 introduced binding targets that require the UK to reduce their carbon emissions to a Net Zero level by 2050 and a target of a “zero carbon electricity network” by 2035.

A key policy in meeting these targets is to reduce the reliance upon large, centralised fossil fuel electricity generation plants. Hence the UK is withdrawing and decommissioning the coal fired power generation plants that have been a primary source of electricity generation for many decades. These plants are being replaced by renewable energy generation whether by wind, small scale hydro or solar. These new sources of electricity generation are dependent upon weather patterns. These weather patterns control the electricity that can be produced from these renewable energy sources. The generation can be significantly intermittent. The rate of change in generation can be considerable and occur rapidly.

Whilst reducing the proportion of electricity derived from coal-fired generation plants the UK is also withdrawing several of their older nuclear power stations, that have reached the end of their life and require replacement. This has reduced the generation capacity of the UK and the margin between supply and demand capacity to some of the lowest on record. The electricity suppliers are therefore heavily constrained and have little flexibility to manage the variable nature of the generation supply and demand, because, whilst the margin between generation supply and demand is reducing the modern consumer is placing ever-increasing growth on the demand for electricity.

To balance the needs of electricity supply and demand and ensure energy security, whilst encouraging the ever-increasing deployment of renewable energy generation requires a new form of electricity supply management that can be embedded within the local distribution system, close to the point of consumption.

Due to the voltage of the network these embedded generators are connected to, they are often small scale and connected to the local 11KV network and due to their technology and scale they provide a fast, efficient response to any request to start supplying electricity. They bring the flexibility required to maintain a secure supply of electricity. These projects are often referred to as fast response, flexible electricity storage systems.

The rapid advance in quality and production of industrial batteries has enabled the growth in the deployment of battery energy storage systems (BESS). The modern BESS project uses robust proven technology capable of meeting the flexible operational demands of multiple discharges and recharges. They provide fast response times, near immediate rapid ‘ramp-up’ to full power and efficient export generation. These BESS are efficient, clean operating with zero emissions and can be designed to be housed within metal containers or small building units, they occupy a very small footprint and require minimal additional infrastructure. The performance and reliability of these units makes an ideal choice for providing the flexibility to balance the grid network and maintain power supplies.

This application seeks planning permission to provide a small-scale BESS electricity battery storage system of approximately 10MW to support the supply of electricity within the local distribution network. The batteries will also run during any period when there is a shortfall in forecast generation levels. The facility would also be available to support the National Grid and or SPEN during emergency conditions on the electricity network. The proposed plant will operate under contracts awarded by the National Grid and or the Distribution Company SPEN to meet their energy needs as part of their Statutory License conditions. These contracts are available to ensure that the transmission and distribution networks are operated within their license conditions, without such developments there is an increased risk to loss of electricity supplies.

The application site is for development of approximately 0.27Ha of underutilised previously developed industrial land off Bridge Lane North, with an overall site area of 0.7Ha and approximately 0.43Ha set aside for ecology and bio-diversity enhancements as per the Construction and Operational Environmental Management schematic. The site is near two substations operated by SPEN a critical factor in ensuring the viability of the project.

The batteries will be housed within ten containerised units/structures. Low velocity cooling fans are mounted on the battery container. Along with the electrical infrastructure the facility will be enclosed by a 2.4-metre-high, olive green painted security fence.

As there is no demand for the plant to be operated as a base load plant, the BESS will stand idle until a demand requirement. On demand the BESS will initiate their start-up and with near immediacy reach peak electricity export. The plant can be turned down and respond to multiple start-up/shut-down cycles, thereby providing the flexibility required to provide the services for balancing the grid network

With experience of running these facilities the batteries would typically run for an average of ~5000 to 6000 hours a year but be available 24/7. Typically, at the periods of high electricity demand, most commonly during the evening hours, rarely at night and weekends. The most common peak demand periods occur between 16.30 and 21.00. However, the plant will be available for generation at any time of day or night and any day of the week. Charging of the batteries will occur through most night time periods.

When operating the electricity is injected to the local distribution system. This plant will supply the 11,000-volt network that serves Wrexham and the local surrounding communities.

This Planning Statement assesses the application against the policies of Planning Policy Wales (Ed 11), Future Wales - The National Plan 2040 and Wrexham Unitary Development Plan. Most particularly Policies:

- E4: Employment development within settlements
- EC12: Development and flood risk
- EC8 Biodiversity conservation
- GDP1 Development objectives
- T8 Parking, and
- Technical Advice Notes 15 and 12.

It provides a summary of the specialist assessments undertaken to support this application. The applicant has provided environmental, ecology and technical assessments in support of this application and a separate Design and Access Statement.

The conclusions of our assessments and studies confirms the site is suitable for a small-BESS facility to support the UK, Wales, and local policies for tackling Climate Change and achieving the Net Zero Policies.

- The site benefits from proximity to suitable infrastructure for connection to the 11,000-volt electricity network operated by SPEN
- The land is in an industrial estate designated for B1, B2 and B8 uses.
- The site is safeguarded for employment and uses B1, B2 and B8.
- The area of the proposed development is within a Flood Zone C area, but part of the wider site is adjacent to a Flood Zone C2 – this is not a material matter and is justified by the applicant within the associated submissions and on the basis of the essential need for these developments. The applicant advises that a similar development for a Gas Peaking Plant was approved with Conditions by Decision Notice P2020/0425 dated 29th July 2021.

The applicant concludes that there are no material considerations identified that should be weighed against this application and that with the proposed design layout the applicant has developed a design such that it will not result in any significant adverse impacts regarding the ecology, environment and human amenity.

The proposed development and the design adopted for the scheme will not detract from the future opportunities for development of the adjoining sites. By its very nature the development is an industrial use.

The development is for a small operational BESS which National Grid, SPEN and the UK and Wales Government have identified as a strategically important and necessary for their national energy strategy for the reasons discussed above. The development is designed to provide utility infrastructure to maintain the security of supply of electricity for the local community. These communities will receive the direct benefit of the batteries by maintaining and providing a secure supply of electricity now, and in the years ahead.

The development will provide and secure long-term employment and be a source of much needed inward investment to the local community, enhancing the sustainability of the local businesses, whilst enabling the deployment of increased renewable energy capacity, benefitting the reduction in green-house gas emissions.

The development also meets the wider policy considerations in respect of; landscape and visual impacts, residential amenity, impacts on the natural environment, ecology, flood risk and highway safety. In addition, the development is acceptable in relation to other material considerations, including the UK government's Overarching National Policy Statement for Energy (EN-1), TAN 15 and along with PPW (Ed.11) and Future Wales – The National Plan 2040. The applicant contends that this application draws strong support from these policies and that they provide strong material considerations which should be afforded significant weight in the determination of this application.

In conclusion this application is acceptable in planning terms and meets the UK and Wales Government's objectives to ensure that the UK continues to support the transition to a low carbon economy whilst ensuring a safe, secure and reliable supply of electricity, whilst also delivering projects to address the "Climate Emergency" declared by Wrexham Council.

1.1 INTRODUCTION

HFE (UK) Limited has appointed Corbia Management Limited to prepare this Planning Statement and has submitted the planning application for the development of an ~10 MW short-term operational battery electricity storage system on previously developed land south of Bridge Road North in the vicinity of two substations operated by SPEN., near Post Code LL13 9PS. See Figure 1. The nearest National Grid reference (NGR) is approximately 338100 Easting and 349550 Northing.



Figure 1 Location of proposed development

- 1.1.2 This Planning Statement supports a planning application and considers:
- A description of the development.
 - The need for the development.
 - The benefits of the proposed development.
 - Review the proposed development in the context of relevant planning policies.
 - Discuss the planning balance, the potential impacts and the assessments undertaken to mitigate their impact if required.

The general site layout and plan is shown on drawing Layout-001

1.2 REPORT STRUCTURE

This document assesses the application proposal and considers it in the context of the development plan and national planning guidance and policy.

The application is accompanied by the following plans and drawings:

- Red Line Boundary Drawing
- Site Layout Plan [drawing ref. Layout-001]
- DNO Building [drawing ref. SP4149718]
- Client Building [drawing ref. CBP-UK05-002]
- Gate and Fencing [drawing ref. CBP-UK05-003]
- BESS and PCS Technical data
- Transformer [drawing ref. CBP-UK05-005]
- Amenity Cabin [drawing ref. CBP-UK05-006]; and,
- CCTV [drawing ref. CBP-UK05-007]
- Environmental Management Schematic [drawing ref. CBP-UK05-008]

This Statement should be read in conjunction with the other documents that have been submitted and prepared with the planning application including:

- Completed Application Form and Certificates.
- Cover Letter to Wrexham Council, prepared by Greenvale.
- Design and Access Statement, prepared by Greenvale.
- Reliance upon the Preliminary Ecological Assessment, and reports prepared by Delta Symonds and Ensafe for the previous approved application for a gas peaking plant reference P/2020/0425.
- Reliance upon Noise Impact Assessment prepared for the previous approved application for a gas peaking plant reference P/2020/0425.
- Reliance upon Flood Consequences Assessment prepared by Delta Symonds for the previous approved application for a gas peaking plant reference P/2020/0425.

This document is structured as follows:

- Section 2.0 provides background information regarding the applicant.
- Section 3.0 provides a description of the application site and its surroundings.
- Section 4.0 describes the national need for this type of development.

- Section 5.0 describes the planning policy context.
- Section 6.0 summarises the report and draws overall conclusions.

2.1 THE APPLICANT

- 2.1.1 The applicant, HFE (UK) Limited, HFE is the UK trading company of Hero Future Energies Global Limited (HFEGL) an international independent power provider specialising in Clean Technology and Renewable Energy project development and operation.
- 2.1.2 HFEGL is part of Hero Group which is a family-owned business valued at some 8 billion USD, with shareholders including Masdar and International Finance Company, IFC.
- 2.1.3 HFE UK was registered in the UK at the end of 2021 following a period of 2 years during which the company has established a development pipeline in battery storage energy system projects throughout the UK, ranging from 1MW to 40MW.
- 2.1.4 HFEGL is a global developer and operator of clean technology plants with currently 1.5 GWe of projects operating in India, Asia and Europe.
- 2.1.5 HFE UK Limited is increasing their operational projects in the UK by their development of BESS and solar PV projects. These projects are specifically developed to deliver the UK's net zero agenda, whilst assisting the distribution network operators to main a stable network system and avoid power cuts or system failures. The services provided by HFE enable the electricity network to remain secure and operate within their licensed conditions. Without these systems and with the ever-increasing deployment of renewable energy our national and regional network operations would be unable to maintain secure supply services and balance generation supply against demand.
- 2.1.6 The applicant has secured an option for lease on the land to take forward the proposed development with a desire to have the development operational by end of this calendar year.
- 2.1.7 HFE are working with the landowner to develop several similar facilities throughout the Wales, these developments will secure investment and employment.
- 2.1.8 In the Wales, HFE has worked with Scottish Power Energy Networks to develop their own GiS database identifying potential development sites. The proposed

development was one of sites HFE identified as having the availability of a suitable electricity grid connection. Once the gas peaking project was approved under planning application P/2020/0425 HFE raised their interest to acquire the site under Lease and progress the new application for the development of the BESS facility.

- 2.1.9 HFE provide risk managed power generation in the UK power sector. It is a full-service energy provider, offering services to private, corporate organisations as well as governmental and non-governmental authorities.
- 2.1.10 HFE operate in two main sectors: solar PV for the commercial and industrial sector and battery energy storage systems. Our interest in BESS facilities relates to the provision of small-scale plants that are strategically distributed at key points around the National Grid [NG] and distribution system operated by the DNO's to provide top up generation capacity during times of peak demand. The Company installs BESS systems up to a maximum of 50 MW dependent on available grid capacity. BESS projects developed by HFE are similar to the previously approved application and are most suitable where the proposed BESS plant is near the location of the electricity substation(s).
- 2.1.11 The BESS facility stores electricity generated at times of low demand by the existing generation capacity serving the UK and exports the stored electricity to the National Grid (NG) and distribution system during times of peak demand.
- 2.1.12 Energy storage is an emerging sector, but one which has great potential to assist NG and SPEN to balance the UK's power network in terms of generation, demand and frequency. The Applicant aims to become one of the biggest participants in the growing energy storage sector by being a prime mover in this market and securing land, storage assets and frequency response service contracts with NG.
- 2.1.13 The provision of both these systems is essential across the grid as the UK becomes more reliant on sustainable renewable power sources such as wind and solar energy. Generation from these sources does not match demand patterns and thus there can be times when generation is low, but demand is high. Similarly, there are times when there is surplus generating capacity available, and energy produced that exceeds demand but cannot be stored.
- 2.1.14 The UK has adopted policies that have been reducing its reliance on generating electricity from fossil fuel coal fired power stations whilst also withdrawing several the older nuclear electricity generators.

- 2.1.15 These reductions in centralised generating plants have created a challenge to enable to the grid operators to integrate the new renewable energy projects that have been replacing these redundant nuclear and fossil fuel plants.
- 2.1.16 The intermittency and variability of the renewable generators and the base load characteristics of nuclear generating plants are incompatible unless flexibility can be found to enable the balancing between electricity supply and demand.
- 2.1.17 The UK Government's Clean Growth Plan published 12 October 2017 established within government policy the importance of a diversified electricity generation and distribution systems

"We want a diverse electricity system that supplies our homes and businesses with secure, affordable and clean power. That means developing low carbon sources of electricity that are both cheap and clean, taking into account wider system impacts for all sources of generation. It also means upgrading our electricity system, so it is smarter (using data to provide greater control), more flexible (providing energy when it is needed) and takes advantage of rapidly developing technologies such as energy storage."

- 2.1.18 The above policy established the 'market' for fast responsive embedded generation and HFE is responding by establishing an experienced team of developers, operators and engineers to meet the demands of the Clean Growth Strategy.

2.2 THE APPLICATION

- 2.2.1 The submission is a full planning application for consent to construct and operate a small electricity battery energy storage system, BESS; including the installation of all ancillary plant. The facility will provide rapid backup energy generation and will be able to generate approximately 10 MW of electricity.
- 2.2.2 The technical and environmental reports have been prepared to accompany this application. Each assessment has considered the key parameters relevant to the operation of the plant. The assessments have taken a precautionary approach regarding the environmental effects that may occur and made recommendations that can enhance the increase the diversity of the local ecology. The applicant relies upon the previously submitted technical and specialist reports on Ecology, Noise and Flood Consequence Assessment.

- 2.2.3 The Planning Statement provides an assessment of the proposed development regarding development planning policy and considers other material considerations.
- 2.2.4 The applicant has also provided a Design and Access Statement which should be reviewed in conjunction with the Planning Statement.
- 2.2.5 The Planning Statement also considers UK policy towards the importance of lowering carbon emissions, reducing use of fossil fuels in generation of energy, securing reliable energy supplies and the benefits that will arise from the construction and operation of the development.
- 2.2.6 The Planning Statement also discuss the relevance of this application to meeting the needs and objectives of Future Wales – The National Plan up to 2040.

3.1 THE SITE

- 3.1.1 The application site is shown by the red-line boundary drawing and Site location Plan, Layout-001.
- 3.1.2 The site is located within the administrative boundary of Wrexham Council and situated on previously developed land. The National Grid Reference of the site is approximately 338100 Easting and 349550 Northing.
- 3.1.3 The entire application site occupies approximately <0.7Ha shown on drawing Layout-001. But only ~0.27 Ha of the site is operational development the rest being set aside for environmental management as shown on drawing CBP-UK05-008.
- 3.1.4 The proposed development is for a BESS facility to provide fast response flexible electricity supply to the distribution system when required.
- 3.1.5 The proposed development will generate approximately 10 MW, the generation voltage 'stepped-up' by the transformers to 11,000 V for connection to the distribution network operated by SPEN.
- 3.1.6 The connection points for the electricity are near substations operated by SPEN and this has been a key aspect of the site selection process during the Sequential Test undertaken to establish the most appropriate development site.
- 3.1.7 The key parameters for conclusion of a successful Sequential Test is:
- Availability of connection to the distribution network system
 - Close proximity to the connection point to avoid extensive cabling works
 - Preferably previously developed land
 - Land that is available from the landowner for development
 - Within or immediately adjoining an industrial development area.

- A site which will have a negligible impact upon the natural environment or human amenity values

3.1.8 The proposed development is compatible with the LDP designation for safeguarded uses of the site.

3.1.9 There are no rights of public access through the proposed the site and only authorised access will be permitted.

3.1.10 The accompanying reports to this application do not indicate that there will be any significant adverse impact as a result of this development to the natural or built environment.

3.2 BALANCE OF PLANT

Lighting

3.2.1 The site is designed to operate un-manned, controlled remotely through centralised control room. The condition of the plant is monitored, and most required maintenance is a planned event. The attendance under an emergency situation is extremely rare. Lighting for the site is therefore PIR activated, low level security lighting.

3.2.2 Should night-time or low light level working be required then this will be provided through 'task-lighting'

3.2.3 Other artificial lighting will be avoided to mitigate the impact of such lighting on any local wildlife.

Security

3.2.4 Access to the site will be controlled and only by authorised personnel, access will be monitored through the CCTV.

3.2.5 The access is via the surrounding road network.

3.2.6 The proposed development is fenced using 2.4-metre-high palisade fencing, with an additional security gate, as shown.

3.2.7 Access through the security gate is through a 'suited' key only issued to authorised personnel.

3.2.8 The access to the site is monitored remotely 24/7 by remotely controlled CCTV.

Operations

- 3.2.9 The plant is designed to run on demand, the plant will start up automatically on receipt of this signal and run until it receives a stop signal.
- 3.2.10 The plant can also be started by the operator, outside of any demand. But the plant will for long periods most probably be idle. The nature of the operational performance for the plant is its flexibility regarding its mode of operation.
- 3.2.11 On start-up the plant will 'ramp-up' to full load with immediacy.
- 3.2.12 The plant can accommodate a number of start-ups and ramp-down cycles
- 3.2.13 To meet the needs of National Grid the plant is expected to run for between 1 and 4 hours per day, to be available for peak electricity demand periods. The plant will probably run most evenings between 16.30 and 20.00 during the evening period.
- 3.2.14 The plant will rarely operate at night, other than for charging the batteries
- 3.2.15 Flexibility in terms of 'run-time' is essential for the proposed development to be successful, and therefore any Planning Condition limiting operational hours would make the scheme unviable.
- 3.2.16 Site operational personnel are not expected to visit the site more than once per week
- 3.2.17 The site for operational purposes will be accessed using a small van or car.
- 3.2.18 The site will be managed and operated in compliance with the applicant's Design, Construction and Health, Safety and the Environmental Management Systems.

Employment

- 3.2.19 The plant is operated remotely but will create employment estimated to be up to 2 local full-time-equivalent employees. The development will also underpin local employment through the establishment of a local supply chain for a number of the required operational services.
- 3.2.20 Further opportunities for local employment will be created through 3rd party contracts, engaging with local companies providing the necessary services.
- 3.2.21 Operational staff are employed in regional control centres and employment opportunities are created and proportional to the number of operational sites developed in any region.

- 3.2.22 HFE have a small but growing regional presence in the Wales and this is expected to grow during 2020-21 as more generation projects are completed. Generally, the Wales is seen as a priority growth area for the business development to maintain security of electricity supplies.
- 3.2.23 There is also employment created within the region through the inward investment adding to the local economy, sustaining existing business through reliable cost-effective energy supplies.
- 3.2.24 The development is also directly supporting the security of efficient, cheaper electricity that further assist the local economy and businesses. Secure electricity supply is necessary to meet the modern living requirements and to operate and grow any business efficiently.
- 3.2.25 During the construction period it is expected that a peak of 10 site personnel will be employed onsite, several of these contractors will be from local companies based in the surrounding area.

Construction

- 3.2.26 It is expected that the construction period will last for period of up to 6 months but with the peak of the construction activity completed in more like 8 to 10 weeks. This shorter period will be associated with the peak time for deliveries.
- 3.2.27 The construction periods will be restricted to 08:00 to 19:00 Monday to Friday and 08:00 to 17:00 Saturday. No work will be performed on Sundays and Bank Holidays. Any required rock breaking will be limited to the hours of Monday to Friday 08.00 to 18.00.
- 3.2.28 Deliveries will be restricted to avoid the peak traffic periods.
- 3.2.29 Temporary traffic warning signs will be deployed through the construction period which will ensure that the safety of the public highway is not compromised. No street parking will be permitted, and all construction traffic will enter the site s they leave the public road.
- 3.2.30 The applicant will restrict the number of HGV vehicles to the site to a maximum of 5 per day, all HGV access will be coordinated to avoid the peak traffic periods of 08.00 to 09.00am and 17.00 to 18.00pm. No vehicles will be allowed to park using the public highway and ALL transport to the site will enter the private access road and if necessary be 'stacked' awaiting off-loading or attendance.

Cables and underground works

- 3.2.31 The site will be connected to Scottish Power Energy Networks substations.
- 3.2.32 Connections to the distribution systems are undertaken by the relevant licensed Statutory Undertakers under the terms of their license and therefore do not form part of this planning application. It is normal for these works to be undertaken under their permitted development rights.
- 3.2.33 For above surface installations, other cabling and pipework will be supported by pipe supports, ladder racks or cable tray. Above surface installations will be designed to avoid any trip hazards.

3.3 PLANNING HISTORY

- 3.3.1 With reference to the past planning history, the proposed site benefitted from the approved Planning Application P2020/0425 which approved the development of a gas peaking plant, subject to conditions in 2021.
- 3.3.2 There are no other Planning history records of note, but it is noted that the land was previously used for the UK's war effort during World War 2, producing ordnance.

3.4 ACCESS

- 3.4.1 The site benefits from excellent access from the public highway capable of taking HGV vehicles. The entrance to the site will be via a CCTV monitored security gate. The site will be surrounded with a 2.4-metre-high palisade security fence, as shown on drawing CBP-UK05-003.
- 3.4.2 There are no Public Rights of Way that will be affected by this development.
- 3.4.3 On street/on road parking will be restricted during the construction works
- 3.4.4 All equipment deliveries are suitable for delivery using standard HGV transport.

3.5 CULTURAL HERITAGE.

- 3.5.1 The site is currently land available for development within the Wrexham Industrial Estate. The applicant has secured a Lease for the land.
- 3.5.2 The proposed development will strengthen the viability of the electricity supplies and assist the operational requirements of SPEN in maintaining electricity supplies for the area. The site use will add economic activity to the area, whilst creating direct and indirect employment.

- 3.5.3 The potential for any significant adverse impact with regard to archaeology and the cultural heritage is negligible.

3.6 SENSITIVE RESIDENTIAL RECEPTORS NEAR THE PROPOSED SITE

- 3.6.1 The nearest sensitive receptors are some 350 metres west of the site on Coed Aben Road. The specialist reports submitted with this application indicate that these receptors will not be significantly affected by the development.
- 3.6.2 The site is not located within any designated area. But in accordance with the recommendation of the ecologist the applicant has adopted a precautionary approach and measures of mitigation to provide compensation for any losses of habitat and proposes enhancement measures.
- 3.6.3 The development is not considered to affect the openness of character of the area, or adversely affect any of the surrounding areas when viewed from within or viewing towards the site.
- 3.6.4 Users of the Bridge Road North will be unlikely to notice during peak travel times any short- term increase in traffic during the construction period. The construction traffic is typically at its peak for a short period of 8 weeks and deliveries to the site can be coordinated by the applicant to ensure that they are delivered to site outside of peak traffic periods of 08.00 to 09.00am and 17.00 to 18.00pm.
- 3.6.5 During the operational phase it is probable that visits to the site will not exceed, on average one visit per week.
- 3.6.6 A review of other statutory and non-statutory designated sites within the locality has been undertaken. This demonstrates that there are no designated or non-statutory sites regarding nature conservation, landscape and other designations adjoining the site of the proposed development that would suffer any significant adverse impact from the development.

3.7 ECOLOGY

- 3.7.1 The applicant relies upon the previous 'Preliminary Ecological Appraisal' for the proposed site. Submitted under application P/2020/0425. The applicant will implement the recommendations of the Ecology Report.

- 3.7.2 The appraisal makes recommendations that will enhance and diversity of the local wildlife and recommends some precautionary measures. The applicant has also prepared their Construction Operational Environmental Management Plan (COEMP). With these recommendations implemented the development will have no significant adverse impact upon wildlife.
- 3.7.3 The applicant will implement the recommendations of the Ecology Report and the CEOMP.
- 3.7.4 The enhancements proposed will be provided to encourage the increase in biodiversity. These measures will include additional bat and bird boxes, insect boxes and hibernacula and improvement through the provision of areas managed for the potential presence of Great Crested Newts. With implementation of the recommendations made the development will have a negligible adverse impact upon the ecology within the site. The extent of the enhanced habitat will be approximately 0.5 Ha.
- 3.7.5 The applicant will engage the services of an ECoW prior to the works commencing as recommended in the reports.

3.8 NOISE AND AIR QUALITY

- 3.8.1 The previous applicant has completed a Noise Assessment and the conclusions of this Assessment are discussed within this Planning Statement. As a result of the nature of the BESS system the equipment is significantly quieter than that of a gas peaking plant and hence the benefits of the BESS facility is that resulting noise impact will be significantly reduced than that compared to the approved gas peaking plant.
- 3.8.2 The applicant relies upon the conclusions of this Noise Impact Assessment finding that as the proposed development will emit less noise during its operation the conclusions drawn in the reports remain valid for the BESS development.

3.9 VISUAL IMPACTS

- 3.9.1 The location of the proposed facility, the existing landform and topography provide appropriate screening to the closest receptors. The applicant has maintained a design for the layout which minimises the required footprint contributing to a layout that aids mitigation of any adverse visual impact.

- 3.9.2 There will be a negligible impact upon views from and to neighbouring land. Much of the existing hedging and boundary cover will be retained, which will also provide an important wildlife corridor.

FLOOD RISK

- 3.9.3 The applicant relies upon the previously submitted Flood Consequences Assessment and Drainage Strategy and subsequent reports and clarifications.
- 3.9.4 The site is identified as being within a Flood Zone C. However, the development adjoins land within Flood Zone C1 and C2. The applicant has submitted the previous Flood Consequence assessment and justification provided for this application. The applicant relies upon these submissions to justify that the proposed development of the BESS facility is compliant with local planning policy and TAN 15. The site is not connected to any foul drainage system.

PLANNING ALLOCATIONS AND DESIGNATIONS

- 3.9.5 This application is being submitted to Wrexham Council. This Planning Statement considers the benefits of this development against the Wrexham Local Development Plan.
- 3.9.6 A full assessment of the proposal against relevant national and local planning policy is provided within this Planning Statement. This confirms that the proposal is consistent with relevant planning policy.
- 3.9.7 The Proposed Development constitutes 'embedded energy' which means the proposed facility will feed its power into the Local Distribution Network Operator (DNO) network close to the point of use, rather than into the National Grid. This has the distinct benefit of greatly improving the carbon efficiency of the facility by avoiding transmission losses which may otherwise occur over long distances associated with the current centralised network.
- 3.9.8 The first stage of the site selection process therefore, was to identify those areas which have a commercially viable and available grid connection.
- 3.9.9 Once the area was identified, the applicant carried out a review of land to identify an available and suitable site for the proposed generation facility. In line with national planning policy, brownfield sites were reviewed in the first instance. Given the industrial nature of the Proposed Development, existing industrial estate setting and the unused

nature of the industrial land this site was considered the most suitable locations. Sites also need to be an acceptable distance from nearby residential and commercial properties in order to preserve amenity.

- 3.9.10 Potential sites were also reviewed with regard to their physical constraints such as flood risk, topography, ecological constraints and landscape and visual impact considerations.
- 3.9.11 On conclusion the applicant entered discussions with the previous applicant and landowner to acquire the site and commence the application to secure permission to build the proposed BESS project.
- 3.9.12 Impacts on ecology, air pollution, noise pollution, visual intrusion and land contamination have all been considered and no significant adverse impact has results from the development.
- 3.9.13 The site is bounded by land within the Flood Zone C2 and C1 and hence the applicant has undertaken a FCA and Drainage Strategy. These reports show that the development will not have any detrimental impact upon flooding and not cause any additional flood risk.

SITE SUITABILITY

- 3.9.14 The Proposed Development follows an extensive site selection process undertaken by the Applicant. This review of potential sites for development has identified as suitable for the proposed development for several reasons:
 - a. Reference to the site planning history indicates that the site is previously developed land
 - b. The development is in near vicinity to the local infrastructure of the distribution electricity network making its selection ideal in terms of the completed Sequential Test
 - c. The development does not restrict the use of the land within the adjoining land.
 - d. The development benefits from excellent transport links
 - e. The development will support the surrounding business community and areas by improving the energy security and supply

- f. The development has no significant adverse impact on any sensitive residential or adjoining receptors
- g. The development utilises previously developed land with an industrial heritage.
- h. The development will create/maintain employment and support the local economy through supply-chain employment and maintaining secure electricity supply making and underpinning the sustainability of local businesses. Longer term employment will also be provided throughout the operational phase of the development.

4.1 INTRODUCTION

- 4.1.1 The solid-state nature of the BESS and the Balance of Plant result in a low noise development. The moving parts are minimal. In this respect the provision of ventilation fans within the BESS and Inverter containers results in the only noise emitting source. It is therefore considered that in relation to this development:

“Noise can be heard but does not cause any change in behaviour or attitude. Can slightly affect the acoustic character of the area but not such that there is a perceived change in the quality of life.”

- 4.1.2 This application seeks consent for the installation of a small 10 MW containerised batteries, and inverters, transformers and associated electrical equipment. All of the proposed equipment installed as part of this application generates very low noise emissions, other than the small HVAC unit installed adjacent to the containerised battery storage and inverter units.
- 4.1.3 The HVAC units will be specified to emit a noise rating no greater than 65db at 10 metres, which will be housed within acoustic attenuated containers.
- 4.1.4 The operation of these HVAC units will be frequent to maintain a constant temperature within the storage unit below 25 degrees centigrade, however for the purposes of this chapter it is considered that they will be in operation 24/7.

4.2 NATIONAL PLANNING GUIDANCE

- 4.2.1 Noise needs to be considered when new developments may create additional noise and when new developments would be sensitive to the prevailing acoustic environment. When preparing local or neighbourhood plans, or taking decisions about new development, there may also be opportunities to consider improvements to the acoustic environment.

Local planning authorities' plan-making and decision making should take account of the acoustic environment and in doing so consider:

- ▶ Whether or not a significant adverse effect is occurring or likely to occur;
- ▶ Whether or not an adverse effect is occurring or likely to occur; and
- ▶ Whether or not a good standard of amenity can be achieved.

4.2.2 This would include identifying whether the overall effect of the noise exposure (including the impact during the construction phase wherever applicable) is, or would be, above or below the significant observed adverse effect level and the lowest observed adverse effect level for the given situation.

4.2.3 The Observed Effect Levels are as follows:

- ▶ Significant observed adverse effect level: This is the level of noise exposure above which significant adverse effects on health and quality of life occur.
- ▶ Lowest observed adverse effect level: this is the level of noise exposure above which adverse effects on health and quality of life can be detected.
- ▶ No observed effect level: this is the level of noise exposure below which no effect at all on health or quality of life can be detected.

4.2.4 Table 1 summarises the noise exposure hierarchy, based on the likely average response.

Table 1 – Noise Exposure Hierarchy

Perception	Examples of Outcomes	Increasing Effect Level	Action
Not Noticeable	No Effect	No Observed Effect	No specific measures required
Noticeable and not intrusive	Noise can be heard but does not cause any change in behaviour or attitude. Can slightly affect the acoustic character of the area but not such that there is a perceived change in the quality of life.	No Observed Adverse Effect	No specific measures required
		Lowest Observed Adverse Effect Level	
Noticeable and intrusive	Noise can be heard and causes small changes in behaviour and/or attitude, e.g. turning up volume of television; speaking more loudly; where there is no alternative ventilation, having to close windows for some of the time because of the noise. Potential for some reported sleep	Observed Adverse Effect	Mitigate and reduce to a minimum

	disturbance. Affects the acoustic character of the area such that there is a perceived change in the quality of life.		
		Significant Observed Adverse Effect Level	
Noticeable and disruptive	The noise causes a material change in behaviour and/or attitude, e.g. avoiding certain activities during periods of intrusion; where there is no alternative ventilation, having to keep windows closed most of the time because of the noise. Potential for sleep disturbance resulting in difficulty in getting to sleep, premature awakening and difficulty in getting back to sleep. Quality of life diminished due to change in acoustic character of the area.	Significant Observed Effect	Avoid
Noticeable and very disruptive	Extensive and regular changes in behaviour and/or an inability to mitigate effect of noise leading to psychological stress or physiological effects, e.g. regular sleep deprivation/awakening; loss of appetite, significant, medically definable harm, e.g. auditory and non-auditory	Unacceptable Adverse Effect	Prevent

4.2.5 The subjective nature of noise means that there is not a simple relationship between noise levels and the impact on those affected. This will depend on how various factors combine in any particular situation. These factors include:

- ▶ The source and absolute level of the noise together with the time of day it occurs. Some types and level of noise will cause a greater adverse effect at night than if they occurred during the day - this is because people tend to be more sensitive to noise at night as they are trying to sleep. The adverse effect can also be greater simply because there is less background noise at night;
- ▶ For non-continuous sources of noise, the number of noise events, and the frequency and pattern of occurrence of the noise;
- ▶ The spectral content of the noise and the general character of the noise. The local topology and topography should also be taken into account along with the existing and, where appropriate, the planned character of the area.

The more specific factors to consider when relevant:

- ▶ where applicable, the cumulative impacts of more than one source should be taken into account along with the extent to which the source of noise is intermittent and of limited duration;

- ▶ Consideration should also be given to whether adverse internal effects can be completely removed by closing windows and, in the case of new residential development, if the proposed mitigation relies on windows being kept closed most of the time. In both cases a suitable alternative means of ventilation is likely to be necessary. Further information on ventilation can be found in the Building Regulations.
- ▶ If external amenity spaces are an intrinsic part of the overall design, the acoustic environment of those spaces should be considered so that they can be enjoyed as intended.

4.3 THE SITE LOCATION

- 4.3.1 The proposed containerised battery storage unit is located within an already industrial area and bounded on the northern and western boundaries by main arterial roads of the industrial estate. In this environment it is considered appropriate that the proposed development that any addition to background noise from the proposed development will be negligible and less than the noise emissions considered under the application P/2020/0425.
- 4.3.2 The sensitive receptors are some 350 metres to the west of the proposed site with significant intervening or adjacent sources of background noise.
- 4.3.3 The natural and built environment between the proposed site and the sensitive receptors will contribute, significantly, to the reduction in noise levels from the use of the low velocity ventilation units, at the sensitive receptors to a negligible level, compared with the existing background noise emissions.
- 4.3.4 The impact of the HVAC units is not likely to introduce any adverse significant noise impact to the surrounding environment.

4.4 CONCLUSION

- 4.4.1 The proposed addition of a 10 MW containerised battery storage unit, with cooling HVAC equipment, and associated electrical equipment; inverters, transformers, DNO Building and other ancillary equipment will not create any additional significantly adverse impact upon noise levels at the sensitive receptors. The conclusion is therefore drawn that the proposed development and use of the HVAC units for the containerised battery energy storage project with a rated noise emission of 65db at 10 metres will not be a significant additional noise source. In comparison the approved development of a gas peaking plant.

4.4.2 Hence the No Observed Adverse Effect Level (NOAEL), perceived as ‘noticeable and not intrusive’, would be achieved for all receptors in the vicinity in respect to the proposed development of the containerised battery storage unit, confirming that;

*“Noise can be heard but does not cause any change in behaviour or attitude.
Can slightly affect the acoustic character of the area but not such that there is
a perceived change in the quality of life.”*

5.1 THE NEED

- 5.1.1 At a national level, National Grid manage the supply and demand of electricity to maintain the next work frequency and voltage tolerances. The frequency the grid operates is 50Hz, but if it drops below 49.5Hz or rises above 50.5Hz due to real-time demand, it could lead to a blackout event and outages.
- 5.1.2 Under the terms of the Distribution Network Operator License requires the local distribution networks to maintain the 11000-volt distribution system within +6% and -9% of 11000 volts and the proposed development aids the management of the system to stay within these requirements.
- 5.1.3 As currently electricity cannot be stored in useful quantities, National Grid requires balancing services to counter unexpected frequency change. Where it is economical to do so, National Grid will procure part of this requirement ahead of time.
- 5.1.4 Standby facilities, including the emerging BESS with their capability for rapid response, are now being procured under Contract to enable National Grid and the distribution companies to maintain the terms of their licenses and to enable them to manage periods of rapid or unexpected variation with supply or demand:
- a) when energy demand outstrips supply, and
 - b) to balance the real-time changes in supply and demand.
- 5.1.5 At this grid-scale, standby power BESS facilities are perfect, clean technology solution for providing the electricity network with power and energy at short notice to help match supply with demand. Without these facilities there is a significantly greater likelihood of black out events and power cuts as has been witnessed in recent years.
- 5.1.6 The development will also be used to regulate voltage to ensure that the 11000-volt distribution system is maintained within its licensed parameters.
- 5.1.7 The National Infrastructure Commission in February 2016 prepared their report to encourage the investment in 'smart power' stating;

"There is significant evidence that operational flexibility will be a key driver for the efficient integration of low-carbon technologies. Flexibility can be provided by different

sources. One such source is flexible generation; plants that have low minimum stable generation levels, high ramping rates and increased capability for ancillary service provision.”

- 5.1.8 The Governments Clean Growth Plan published 12 October 2017 embeds in government policy the importance of a diversified electricity system;

“We want a diverse electricity system that supplies our homes and businesses with secure, affordable and clean power. That means developing low carbon sources of electricity that are both cheap and clean, taking into account wider system impacts for all sources of generation. It also means upgrading our electricity system so it is smarter (using data to provide greater control), more flexible (providing energy when it is needed) and takes advantage of rapidly developing technologies such as energy storage.”

- 5.1.9 The former Department of Energy and Climate Change (DECC) Policy Paper titled “2010 to 2015 government policy: UK energy security” sets out the Government’s strategy for Electricity Market Reform. (<https://www.gov.uk/government/policies/maintaining-uk-energy-security-2/>). It states that the reformed energy market will deliver:

- i. low carbon energy;
- ii. reliable energy supplies; and
- iii. reduced and minimise costs to consumers

- 5.1.10 The need is therefore well established both to provide security of supply and to help maintain the progress being made by the UK in meeting its 2050 carbon emissions reduction targets and changing to the low-carbon economy.

5.2 PLANNING FRAMEWORK

- 5.2.1 The application will be determined by Wrexham Council (the local planning authority) as it falls below the threshold for energy generation projects established within the Planning Act 2008 which states:

“The construction or extension of a generating station is within section 14(1) (a) only if the generating station is or (when constructed or extended) is expected to be within subsection (2) or (3).

A generating station is within subsection (2) if —

- *It is in England or Wales,*
- *It is not an offshore generating station, and*
Its capacity is more than 50 megawatts.”

5.2.2 The relevant planning policy framework consists of:

- National Planning Statements
- National Planning Wales, Planning Policy Wales and the Technical Advice Notes
- The Wrexham Unitary Development Plan and any Supplementary Planning Guidance

5.4 PLANNING POLICY

5.4.1 National Policy Statements

National Policy Statements (NPSs) provide the primary policy framework for determination of applications for energy generation infrastructure in excess of 50MW and apply in both England and Wales. Whilst the proposal under consideration here is for energy generation less than 50 MW and will be determined under the provisions of the Town and Country Planning Acts (TCPA), it is noted that paragraph 1.2.1 of the overarching NPS EN-1 states the NPS is likely to be a material consideration in decision making on applications under the Town & Country Planning Act 1990. Hence this is a relevant and material matter regarding this application and the Overarching Statement within EN-1 should be applied.

The Overarching Statement (EN-1) defines the considerations on matters relating to all energy related proposals. It covers matters to be considered in the determination of the applications referring e.g. air quality; biodiversity; the historic environment; landscape and visual; land use; noise; socio-economic impacts; traffic and transport; and water quality and resources, and also:

- the need for nationally significant energy projects;
- the Government’s commitment to reducing greenhouse gas emissions,
- the road map to secure low carbon future, and
- delivering the Government’s ambitious action on climate change; and
- identifying the assessment considerations when determining and making decisions on applications for planning consent.

EN-1 identifies the critical need for secure and reliable supplies of electricity as the transition to a low carbon economy is delivered, and to manage the risks and to secure energy supplies we need sufficient electricity capacity to meet demand at all times.

Section 3 of EN-1 describes how energy underpins our way of life, in some aspects, in an ever-increasing way. It states that the UK needs all forms of energy infrastructure covered by the NPS to achieve energy security at the same time as reducing greenhouse gas emissions. Section 3.1.4 adds that the substantial weight should be given to the contribution energy projects would make towards satisfying this need when considering applications for development consent under the Planning Act 2008.

Paragraph 3.2.3 and Paragraph 3.3.15 advise that the Government considers the need for energy infrastructure to be urgent. It is noted in Paragraph 3.6.1 that as the UK moves to a low carbon economy some of the new generating capacity needed is likely to come from new fossil fuel generating capacity to maintain security of supply, and to provide flexible back-up for intermittent renewable energy from wind.

In assessing planning applications, the NPS(s) stress, that as a result of the need of these applications, the decision maker should start from a presumption in favour of granting consent to applications (Paragraph 4.1.2, EN-1). Paragraph 4.1.3 continues, stating that in considering any proposed development and in particular when applying the planning balance of the adverse impacts against the benefits, decision takers should take into account:

- 'its potential benefits including its contribution to meeting the need for energy infrastructure, job creation and any long-term or wider benefits; and
- its potential adverse impacts, including any long-term and cumulative adverse impacts, as well as any measures to avoid, reduce or compensate for any adverse impacts.'

Section 5 of NPS EN-1 considers the cross technology impacts that can be applied; listing air quality and emissions, biodiversity and geological conservation, civil and military aviation and defence interests, coastal change, flood risk, historic environment, landscape and visual effects, land use (including open space and green belt), noise and vibration, socio-economics, traffic and transport, waste management, and water quality and resources. Importantly Paragraph 5.9.16 states that the decision maker should consider whether any adverse impact is temporary and reversed in a reasonable timescale.

A Written Ministerial Statement regarding 'Security of Supply and the Capacity Market' was issued by the Secretary of State on 1 March 2016. The statement set out the Government's reforms to ensure that there would be a secure energy supply in coming years.

The then Secretary of State described a legacy of underinvestment in the power sector, combined with an increased rate of power station closures particularly ageing coal plant. In addition, the marked increase in intermittent renewable capacity has resulted in lower demand for coal stations. These stations could no longer compete due to higher commodity prices, combined with this lower demand and have subsequently closed.

The Secretary of State stated;

“to address this we need to start building new capacity now, especially gas, to guarantee our energy security in the 2020’s.”

As a result, a review of the Capacity Market was carried out. The review concluded that

“the volume of capacity procured needs to rise and the clearing price needs to increase as a result in order to provide the appropriate incentives for the market to bring forward new gas capacity.”

The conclusions to the review brought forward the Capacity Market auctions by one year and increased the target capacity volume by an additional 1GW (1000MW), whilst considering further increases to account for more extreme cold winter scenarios. These actions serve to show the importance of the application at Bridge Road North

In conclusion there is no doubt and clear evidence this application should receive the support of the Planning Authority

5.4.1 Planning Policy Wales (Edition 11)

Planning Policy Wales (PPW) sets out the land use planning policies of the Welsh Government (Edition 11). It constitutes a material consideration for planning applications and its central aim is to promote and provide a framework for sustainable development within Wales. The planning system provides for a presumption in favour of sustainable development to ensure that social, economic and environmental issues are balanced and integrated, at the same time, through plan-making and decision-taking

PPW has introduced policies to consider the Well-Being and Future Generations Act. The wellbeing of our future generations can be served in no greater way than providing and developing projects that endeavour to meet and provide a solution of reducing our carbon emissions and tackle the issues of climate change. It is clear from all analysis that this application should meet with approval as a result of:

It is instrumental in the UK reducing its carbon emissions

It is instrumental in enabling the Wales Government to meet their carbon reduction targets

It provides locally embedded energy security

It will supply local direct employment and secure local employment through the supply chain necessary to support the operation of the facility

It provides inward investment to the local area and secures development within a safeguarded employment area that can lead to further development within the proposed development area.

The Well-Being of Future Generations is supported through the development of low carbon generation and by reducing the reliance upon fossil fuel generation as a primary fuel for generation of electricity. The well-being can only be secured by continuing to invest in projects that tackle the issues of man-made climate change.

PPW recognises that adequate and efficient infrastructure, including services such as electricity are crucial for the economic, social and environmental sustainability of all parts of Wales.

PPW lends strong support to initiatives that support low carbon and decentralised energy networks. PPW directs local authorities to recognise the responsibility of all communities to contribute to energy generation from renewable or low carbon sources.

PPW further states that local authorities should facilitate the delivery of new and more sustainable forms of energy provision at all scales, further outlining the potential for development of renewable and low carbon energy development within the urban/industrial sites.

The Welsh Government is committed to:

Optimisation of renewable energy generation

Optimisation of low carbon generation; and

To recognise the benefits of renewable energy as part of the overall commitment to reduce the impact of greenhouse gases and ability to increase energy security.

The Welsh Government is also committed to secure an appropriate mix of energy provision within Wales, which;

Maximises the benefits to the economy and community; whilst

Minimising the potential environmental and social impacts

Developers should select sites and seek to avoid where possible adverse impacts through their careful consideration of scale, location, design and other measures.

The Planning Act (2008) sets out the threshold for Nationally Significant Infrastructure Projects (NSIP), including energy generation. The proposed development for this site does not qualify as an NSIP because it is not offshore wind and it is below 50MW. Hence this application is one that will be determined by the local planning authority.

The key statements of the PPW which are relevant to the proposed development site include the following:

- Local planning authorities should take a strategic approach to flood risk and consider the catchment as a whole. PPW requires them to ensure that new development is not exposed unnecessarily to flooding, additional guidance is found in TAN 15: Development and Flood Risk
- The planning system should guide development to lessen the risk from natural or human-made hazards, including risk from land instability and land contamination.
- PPW states that it is for the developer to ensure that the land is suitable for the development proposed, as a planning authority does not have a duty of care to landowners.

Where there is a risk of significant contamination issues, the local planning authority will require evidence that a detailed investigation and risk assessment has been undertaken and provided within the application.

PPW advises that where acceptable remedial measures can overcome such contamination, planning permission may be granted subject to conditions specifying the necessary measures.

The Technical Advice Notes (TANs) provided further guidance to the policies of the PPW. Together they set out the Welsh Government's national policies and principles to achieve good planning and sustainable development.

Additional TANs of relevance to this application include:

TAN 5 (Nature Conservation and Planning)

TAN 8 (Planning for Renewable Energy)

TAN 11 (Noise)

Tan 15 Flooding

TAN 12 (Design)

TAN 18 (Transport)

TAN 23 (Economic Development)

Additional planning considerations for National Need.

- 5.5 There is a national need to attain and maintain future energy security and given the past years of underinvestment and the policies announcing the transition to a low carbon economy in June 2014 the then government updated its policy on Maintaining UK Energy Security. The Electricity Market Reform Act (EMR) first published as a White paper in July 2011 is designed to deliver on the policies of low carbon energy and reliable supplies that the UK requires whilst minimising the costs to consumers.
- 5.6 EMR is designed to deliver on the needs of the UK in terms of reliable supply whilst minimising consumer costs. The UK electricity sector will be transformed to one in which low carbon sources of electricity can compete with conventional, fossil fuel generation – thereby ensuring that we deliver on the policy of acquiring a cleaner, more sustainable energy mix.

EMR is designed to:

- Decarbonise electricity generation
 - Keep the lights on, ensuring security of supplies, and
 - Minimise the costs to the end consumer.
- 5.7 EMR sets out two mechanisms to provide incentives for the investment required to deliver on the required infrastructure:
- Contracts for Difference (CFD) which provides long-term price stabilisation for low carbon generation plants, allowing investment to come forward with a lower cost of capital
 - The Capacity Market (CM) which provides a retainer payment to reliable forms of generation for both supply and demand, in return for the capacity being available when required by the system
- 5.8 CM is designed to enhance the security of supply by ensuring that there is sufficient reliable capacity in place to meet the system demand at any one time. It enables all capacity

providers a steady predictable revenue stream against which their investments can be based

- 5.9 In return for these capacity payments the facilities must deliver energy when needed or face penalties. The cost to consumers is minimised as a result of the competitive auction award process.
- 5.10 The proposed development at Bridge Road North will fulfil this capacity demand by contributing to the needs of the local and national network.
- 5.11 With this supportive national policy, the role of BESS facilities is identified as a necessary development to meet the required security of energy supplies.
- 5.12 Energy Wales: A Low Carbon Transition (March 2014) stated that gas will be a key transitional fuel because the greenhouse gas emissions from gas are significantly less than coal – subject to the method of extraction. Gas is flexible, responsive and a reliable source of energy which can play a key role in the transition to a low carbon energy system.

Wrexham Unitary Development Plan

- 5.13 The Wrexham Unitary Development Plan (UDP) was originally adopted for the period 1996 to 2011 and has now time expired. The replacement Wrexham Local Development Plan (LDP2) is yet to be formally adopted by the Council and therefore the UDP remains the development plan to determine this application. Proposed Development has been considered against policies contained within the Wrexham Unitary Development Plan
- 5.14 At the local level. There are no specific policies relating to BESS electricity supply, though Policy PS12 (Renewable Energy) states that there will be a presumption in favour of renewable energy schemes provided that the wider environmental benefits are not outweighed by detrimental impacts on landscape, public safety and the local environment. The proposed BESS facility is not technically renewable energy, though its ability to meet energy shortfalls and instantly support renewable sources ensures its function as a sustainable initiative to align with Policy PS12. This has been confirmed by numerous Decisions of the Secretary of State and the Welsh Ministers through Appeal Decisions.
- 5.15 Therefore, in summary the material consideration for this application will include the PPW and TANs which set out the national policies and differing matters of planning along with the overarching UK National Policies and the Policies of the UDP.
- 5.16 Policies within the Unitary Plan which are relevant to this application are:

- PS1 Strategic Policy relating to the location of development

- PS2 Strategic policy relating to environmental quality
- PS12 Renewable Energy
- GDP1 General Development Principles
- EC4 Trees, woodland and hedgerows
- EC12 Development and Flood Risk
- T8 Parking

5.17 Additional policies that are relevant are Supplementary Planning Guidance:

- LPG16 Parking standards
- LPG 29 Employment Development and Nature Conservation.

MATERIAL CONSIDERATIONS

5.18 PPW established the land use planning policies for the Welsh Government. It constitutes a material consideration for planning applications with a central theme throughout the document for sustainable development within Wales. The planning system will provide a presumption in favour to ensure sustainable development within Wales. The presumption in favour and the support of sustainable development ensures that social, economic and environmental issues are balanced and integrated through both plan-making and decision-taking.

5.19 The guidance within PPW supplements that within the TANs. Together they set out the Welsh Government's national policies and principles for different planning matters and sustainable development.

5.20 PPW recognises that adequate and efficient infrastructure, including services such as electricity, are 'crucial for the economic, social, and environmental sustainability of all parts of Wales.'

5.21 PPW lends general support for initiatives to support low carbon and decentralised energy networks. In determining planning applications, the PPW directs local authorities to recognise the responsibility on all communities to contribute to energy generation from renewable or low carbon sources. It also states that local authorities should facilitate the delivery of new and more sustainable forms of energy provision at all scales, which should recognise the need to integrate renewable generation with storage and other flexibility services, in order to minimise the need for new generation and grid system reinforcement. [§5.7.2].

5.22 Furthermore, the planning system should secure an appropriate mix of energy provision, which maximises benefits to our economy and communities whilst minimising potential environmental and social impacts. PPW [§5.7.6]

5.23 Developers should also seek the potential for the development of renewable and low carbon energy development within urban/industrial brownfield sites.

5.24 PPW states [§5.7.6]

The planning system should:

- integrate development with the provision of additional electricity grid network infrastructure;
- optimise energy storage;
- facilitate the integration of sustainable building design principles in new development;
- optimise the location of new developments to allow for efficient use of resources;
- maximise renewable and low carbon energy generation;
- maximise the use of local energy sources, such as heat networks;
- minimise the carbon impact of other energy generation; and
- move away from the extraction of energy minerals, the burning of which is carbon intensive.

5.25 PPW [§5.7.3] states that the planning system should facilitate delivery of both this and Welsh, UK and European targets on renewable energy. Planning policy at all levels should facilitate delivery of the ambition set out in Future Wales – The national plan up to 2040.

5.26 The Welsh Government is committed to using the planning system to:

- Optimise renewable energy generation;
- Optimise low carbon energy generation; and
- Recognise that the benefits of renewable energy are part of the overall commitment to tackle climate change by reducing greenhouse gas emissions as well as increasing energy security.

5.27 PPW [§5.9.1) Local authorities should facilitate all forms of renewable and low carbon energy development and should seek cross-department co-operation to achieve this. In doing so, planning authorities should seek to ensure their area's full potential for renewable and low carbon energy generation is maximised and renewable energy targets are achieved.

5.28 Other key statements of the PPW which are relevant to the proposed development site include the following:

- Planning authorities and developers should consider the energy needs of site allocation development proposals. In collaboration with grid operators, they should assess if the necessary infrastructure is in place to meet future demand. The local balance of the energy network will be a crucial consideration.....

5.29 The planning system should guide development to lessen the risk from natural or human-made hazards, including risk from land instability and land contamination. It is for the developer to ensure that the land is suitable for the development proposed, as a planning authority does not have a duty of care to landowners .

5.30 The local need for a particular scheme is not a material consideration, as energy generation is of national significance and there is a recognised need to optimise renewable and low carbon energy generation. [§5.9.15].

5.31 Further PPW is seen to be supportive of these developments, and confirms that planning should, inter alia:

- Proactively support sustainable economic development to deliver the homes, business and industrial units, infrastructure and thriving local places that Wales needs;
- Facilitate the delivery of new and more sustainable forms of energy provision at all scales;
- Aim to secure an appropriate mix of energy provision for Wales, which maximises benefits to our economy and communities, whilst minimising potential environmental and social impacts;
- Support the transition to a low carbon future in a changing climate and encourage the reuse of existing resources;
- Identify opportunities where development can draw its energy supply from decentralised, renewable or low carbon energy supply systems; and,
- Encourage the effective use of land by reusing land that has been previously developed, particularly within urban/industrial sites.

Wrexham Unitary Development Plan

5.32 Policy GDP1 provides policy on the general requirements of development. Considerations relevant to this application are:

- Ensure that the built development in its scale, design and layout, and in its use of materials and landscaping, accords with the character of the site and makes a positive contribution to the appearance of the nearby locality.
 - The proposed development will complement the industrial character and nature of the surrounding area, and subsequently accords with TAN 12 relating to design. Retention of important landscape features as part of the ecological mitigation area are shown on the Site Plan. The Design and Access section (5.0) further outlines the appropriateness of the design to the surrounding area.
- Ensure the safety and amenity of the public and safeguard the environment from the adverse effects of pollution... and associated noise, odour or vibration arising from development.
 - The Noise Impact Assessment (outlined in detail below) identifies that the proposed development will not have an adverse impact on the amenity of nearby sensitive receptors. The Dispersion Modelling Assessment identifies that impacts upon sensitive receptors in respect of air quality were deemed not significant.
- Safeguard sites and areas of nature conservation and wildlife interest, and to provide new habitats where there is an unavoidable loss of existing habitats and areas of wildlife interest.
 - As identified in the ecology assessment, the proposed development will result in the loss of widespread and common habitat and will have minimal impact on protected species. Mitigation is provided onsite to offset habitat losses as a result of the proposed development. Where possible existing habitats within the application site have been retained

5.33 Wrexham Industrial Estate is subject to its own Local Planning Guidance Note; LPG 29. This note advises developers on the key ecological issues that need to be addressed on the industrial estate. It emphasises the following:

- The need for an ecological assessment.
 - An ecological assessment has been submitted as part of this planning application.
- The protection of habitats that are found in preference to mitigation or off-site compensation.

- The ecological assessment identified that the habitats found on site were not high value. Areas with a higher potential value are retained and proposals prepared to enhance these habitats, where possible, as part of the development proposals. Additional on-site mitigation has been proposed to off-set the loss of habitats to be removed and corridors established to enable migration of species to other areas of ecological value surrounding the proposed development.
- Measures of protection will be provided surrounding the site to avoid migration of species to areas of the proposed development.

5.34 The proposed development accords with Policy GDP1 and LPG29.

5.35 The proposals fall within the objectives regarding economic development set out in the PPW and TAN 23. The PPW outlines the Welsh Government's commitment to securing economic growth in order to create jobs and prosperity, and to meet the challenges of global competition and of a low carbon future. The proposed facility assists in meeting these challenges by ensuring a security of energy supply whilst supporting the transition towards a low carbon economy.

5.36 The plant would also play a critical role in supporting wider economic growth by providing a flexible form of electricity generation which will supply existing businesses and infrastructure in the area at times when there are changes in the demand for energy. It is therefore compliant with PPW and TAN 23, which is clear that local planning authorities should plan to meet the development needs of business and support an economy fit for the 21st century.

5.37 Whilst it cannot be guaranteed that the energy supplied from at the facility will be of direct benefit to the surrounding employment area, the plant will become operational during times where energy demand exceeds supply and will support the local electricity network. If such flexible power facilities were not available, energy shortages and electricity cuts are more likely to be experienced, which would affect business operations in the immediate area.

5.38 It is also important to ascertain whether the proposed development will significantly impact the potential of the site as an area of traditional employment. It is envisaged that construction of the site will generate employment for 3 new employees. Maintenance of the facility will also create additional long-term employment capacity and will support employment for highly skilled engineers during its operational lifespan. These jobs will be sourced locally where possible.

5.39 The site is currently undeveloped and the proposed development provides an opportunity to effectively utilise this area of land within the wider industrial estate, whilst also providing essential supporting infrastructure needed to support the National Grid, and subsequently accords with Policy PS1, GDP1 and PS12.

5.40 Biodiversity and Landscape

5.41 An Ecological Assessment and Reports have also been prepared by Ensafé and Delta Symonds to support this application. An Extended Preliminary Ecological Assessment Report was undertaken on the application site in July 2020. The assessment identified that the Wrexham Industrial Estate is an importance site at the European level for protected species including great crested newts and as such is the subject of specific policy requirement as part of LPG 29.

5.42 The assessment concluded that despite the application site having suitable habitats for protected species, given the poor connectivity as the application site is completely enclosed by roads and the industrial area, it is unlikely to support these species.

5.43 The assessment came to the following conclusions and recommendations regarding habitats and protected species, which have informed the development proposals:

- Approximately 33% of the habitats on the application site should be retained.
- Tree and shrub removal works has been completed prior to the breeding bird season (March – September inclusive). The remaining trees and areas beyond the fence line boundary of the proposed development should be managed to provide for habitats suitable for the target species.
- These enhancements should be managed through the development of a Construction Environmental Management Plan (CEOMP)
- Precautionary working methodologies should be undertaken in respect of reptiles.
- Removal of invasive species prior to the commencement of works.

5.44 The additional enhancement measures will be implemented by the applicant as part of the development. The recommendations include:

- The site currently contains a variety of differing habitats but lacks in its overall quality for provision of habitats for a number of species.
- The development will provide and maintain key corridors to allow the ecological enhancement areas to be linked
- The areas will be provided with hibernacula for provision of over wintering hibernation areas and

- The management plan will ensure that the site retains its ecological value long-term with a focus on reptiles/amphibians, along with breeding birds.

5.45 The above measures are not barriers to the development and the above mitigation measures have been incorporated as a central theme to the development plans. These measures ensure that the development meets the tests of Policies PS2, EC4 and LPG 29.

Suitability of the Proposed Development Site

5.46 In light of the above context, the Proposed Development Site at Bridge Road North is considered highly suitable for the proposed generation facility. It is industrial land, which is adjacent to an existing industrial use and is a considerable distance from surrounding residential properties. It is therefore considered that this Proposed Development accords with Wrexham Local Development Plan.

Other Material Considerations

5.47 Sustainable Development, in line with the requirements of the PPW and Policies within the Wrexham Local Development Plan the Proposed Development on this site can be considered sustainable development. The Proposed Development seeks to support sustainable development by contributing to the three core strands.

5.48 Planning should play an economic role by ensuring that sufficient land of the right type is available in the right places and at the right time to support growth and innovation. The proximity of available grid and gas connections make the application site an extremely economically efficient location for the proposed plant. Being able to make economically viable connections for flexible generation facilities is essential to ensuring the costs of energy for households across the UK is kept at an acceptable level.

5.49 The Proposed Development Site is in a well enclosed location, within an existing industrial estate and a suitable distance from the nearest sensitive receptors. It will therefore have minimal impact on the amenity of the local community. It has been demonstrated through technical surveys that the Proposed Development will not give rise to harm from a noise or air quality point of view.

5.50 The applicant has submitted with this application the Construction Transport Management Plan which details the transport requirements for the development in both the construction and operational phases. The CTMP shows the applicant has considered the design of the facility to optimise the sustainable nature of the transport, ensuring provision for multi-occupancy transport and local transport providers for site personnel. These measures will all contribute to the reduction in need of single occupancy car journeys. In addition, the development is designed to ensure that there is no on-street parking. All construction deliveries will be received, unloaded, and dispatched within the development

boundary. Operational vehicular access is minimal, and any visitors will be able to park within the secure site boundary. The proposal therefor meets the test of policy T8 and LPG 16.

5.51 Policy PS12 is in regard to renewable energy. The nature of most renewable energy is that the generation source is intermittent and variable. There is therefore a need, as described within this Planning Statement for a n alternative means of ‘low-carbon’ generation that can be used as a tool by National Grid to maintain electricity supplies in periods where renewable energy is or has fallen to lower than required levels. This generation needs to be reliable, available on demand, fast in terms of response time and ideally embedded at point of use to avoid transmission losses. This development enables the continuing development of renewable energy and the national drive to a Net Zero Policy by 2050 and is therefore a crucial part of enabling the ambitions of Policy PS12 being achieved.

5.52 Policy EC12 defines development policy within defined flood plains. The proposed site of the facility is outside of the adjoining flood zones. But in recognition of the adjoining flood zones the applicant has prepared their FCA and Drainage Strategy. The proposed development does not adversely impact upon or present an unacceptable flooding risk and many of the benefits of the development result in a lowering of flood risk through long-term management of the otherwise vacant unused land which is at risk of creating greater flooding risk than the development proposed.

5.53 The proposed location is in close proximity to grid and gas connections will also ensure any infrastructure works to connect the plan to the network will be extremely limited, and any disruption to the local community will be therefore be minimal.

5.54 The Proposed Development Site represents an environmentally sustainable site for the Proposed Development. The scheme has been designed to minimise the loss of the any of the surrounding woodland and provide benefits through enhancement of the land and provision of areas set aside for ecological benefits. Given that the Proposed Development would connect into the local distribution network via underground cables and will result in improved carbon efficiency of the plant by avoiding transmission losses over long distances.

Biodiversity and Trees

5.55 The Preliminary Ecological Assessment Report concluded the development would not impact upon designated biodiversity sites or species. There was no evidence of invasive species found on or near the site. Based on the current layout the development would result much of the existing boundary treatments being retained, including existing shrubs and trees. Mitigation will be undertaken within the land immediately adjacent and south of the proposed site. The environmental set-aside area will be managed to provide and

enhanced area of ecological management. Grassland planting will further enhance biodiversity around the southern area of the site. It is therefore concluded that there would be no conflict with the Wrexham Local Development Plan.

Heritage

5.56 There are no heritage features or archaeological records on the Proposed Development Site and there would be limited impact on any heritage features. It is therefore concluded that there would be no conflict with any heritage assets.

Design/ Visual Impact

5.57 The Proposed Development Site is located within an existing industrial area. The Proposed Development is of a utilitarian design focussing on functional efficiency and minimising the overall development footprint. The design and layout of the site is not out of character with buildings and infrastructure elsewhere within the industrial estate. It is therefore concluded that there would be no conflict with the policies of the Wrexham Local Development Plan.

Amenity

5.58 The noise and air quality impact assessment shows that the noise and emissions egressing from the Proposed Development would not exceed acceptable background noise levels or air quality at the nearest sensitive receptors. It is therefore concluded that there would be no conflict with the Wrexham Local Development Plan.

Other relevant material considerations:

- Environmental Impact Assessment (2017)
- Written Ministerial Statements
- Appeal Decisions
- Local Planning Policy

5.7 WRITTEN MINISTERIAL STATEMENT

A Written Ministerial Statement regarding 'Security of Supply and the Capacity Market' was issued by the Secretary of State on 1 March 2016. The statement set out the Government's reforms to ensure that there would be a secure energy supply in coming years.

5.7.1 The Secretary of State described a legacy of underinvestment in the power sector, combined with an increased rate of power station closures particularly ageing coal plants. In addition, the marked increase in variable renewable capacity has resulted in lower demand for coal stations. These stations could no longer compete due to higher commodity prices, combined with this lower demand and have subsequently closed.

5.7.2 The Secretary of State stated; '

“to address this we need to start building new capacity now, especially gas, to guarantee our energy security in the 2020’s.” As a result a review of the Capacity Market was carried out. The review concluded that ‘the volume of capacity procured needs to rise and the clearing price needs to increase as a result in order to provide the appropriate incentives for the market to bring forward new ... capacity.’

The conclusions to the Review brought forward the Capacity Market auctions by one year and increased the target capacity volume by an additional 1GW (1000MW), whilst considering further increases to account for more extreme cold winter scenarios. These actions serve to show the importance of the application at Slack Lane, Bolton.

- 5.7.3 In July 2020 the Minister for Energy and Clean Growth stated:
‘Flexible technologies like battery storage will form part of the UK’s smarter electricity grid, supporting the integration of more low-carbon power, heat and transport technologies which it is estimated could save the UK energy system up to £40 billion by 2050’
- 5.7.4 The Committee on Climate Change’s report *‘Net Zero, The UK’s contribution to stopping global warming’* (May 2019) details that electricity systems need to match electricity supply to demand in real-time. It notes that as more weather-dependent sources of electricity supply come online, matching supply to demand can become more challenging. The report states further that given important roles for electrification in both transport and heat, electricity demand will rise in most areas. Solutions that enhance system flexibility (e.g. smart charging of vehicles and hybrid heat pumps), will be important in ensuring that demand peaks are manageable and enabling maximum use of renewable generation. As such, many networks will need to be upgraded in a timely manner and future-proofed to limit costs and enable rapid uptake of electric vehicles and heat pumps.
- 5.7.5 The electricity fed into the grid must always equal the amount consumed if surges and/or black-outs are to be avoided. At present, we rely on large scale and remote conventional power plants to kick-in and compensate for mis-matches in local supply and demand but this is an inflexible and inefficient response. 46% of our energy comes from fossil fuel combustion and 6% of the electricity produced is lost in cross-country transmission and distribution. A more sustainable and efficient response would balance the network at the local level; decentralised battery storage allows this to happen.
- 5.7.6 The vagaries of renewable energy mean they generate electricity only part of the time and any mismatch between supply and demand means that generation is lost. Small modular storage facilities of the type proposed are easy to flex up and down, they balance-out the intermittency of solar and wind and allow their full contribution to be realised in the transition to a future low-

carbon economy. Recognising the need for mobilisation, the Government's Infrastructure Planning (Electricity Storage Facilities) Order 2020, relaxed planning legislation to encourage large scale (installed capacity in excess of 50MW) battery storage development. The efficient, sustainable and resilient smart-grid of the future will need to integrate renewables from many operators exploiting many different and emerging technologies from many sites; decentralised battery storage allows this to happen.

- 5.7.7 In conclusion there is no doubt and clear evidence this application should receive the support of the planning authority. Planning law requires that applications for planning permission be determined in accordance with the development plan, unless material considerations indicate otherwise. The NPPF is a material consideration in planning decisions.

5.8 ENVIRONMENTAL IMPACT ASSESSMENT

- 5.8.1 The proposed development does not fall within Schedule 1; therefore, an EIA is not a mandatory requirement. The Town and Country Planning (Environmental Impact Assessment Regulations 2017 set out in Schedule 1 those developments for which an Environmental Impact Assessment (EIA) is mandatory and, in Schedule 2, those where an EIA may be required.
- 5.8.2 Within Schedule 2, the EIA regulations set out projects which may require an EIA. Column two sets out screening thresholds, and for developments that fall above this threshold, the LPA must consider whether the development is likely to have significant environmental impacts.
- 5.8.3 Within Schedule 2 the proposed development does not fall specifically within one category. However, Paragraph 3 (Energy Industry) and Paragraph 10 (Infrastructure Projects) are the most appropriate to this development. Within Paragraph 3 of the most appropriate columns (a-e), the lowest threshold for requiring an EIA is if the development area exceeds 0.5 hectares, the area of new building or structures exceeds 500sqm, or a new building/deposit is within 100m of any controlled waterway. The latter threshold relates to the storage of material, which is not applicable to this development. Within Paragraph 10 the most appropriate columns (a-b) have a threshold of 5 hectares (increased from 0.5 hectares within the 2015 EIA amendment).
- 5.8.4 The application area of 0.3Ha is below the indicative threshold when an EIA may be required, the submitted supporting assessments of air quality, noise and ecology do not give rise to significant effects and the site does not lie within a defined sensitive area

therefore it is considered the proposed development does not constitute EIA development.

- 5.8.5 As such it is not considered necessary for an Environmental Statement to be submitted with this planning application.

CHAPTER SIX: FINAL STATEMENT

- 6.1.1 This Planning Statement supports the application by HFE (UK) Limited for the works required to develop and operate a BESS facility of approximately 10 MW capacity.
- 6.1.2 This Planning Statement confirms that the proposed development is consistent with existing planning policy at a national, regional and local level.
- 6.1.3 The Planning Statement concludes that the subject site is considered suitable for the development proposed. All relevant planning policy and other material considerations have been considered and it is concluded the proposed development in the identified location is appropriate and suitable.
- 6.1.4 The applicant's site and application should receive strong support from the planning authority and considers that there are no material significant adverse impacts identified as a result of this development.

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