BANKSRenewables
development with care

HAZLEHEAD BATTERY

Application for the construction of a battery energy storage facility and associated infrastructure

SUPPORTING STATEMENT AND DESIGN AND ACCESS STATEMENT

BANKS

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1. INTRODUCTION

1.1 This planning statement has been prepared on behalf of Banks Renewables Ltd to support a detailed planning application for an electricity storage facility on Hazlehead Wind Farm, Barnsley.

1.2 This document considers the land-use implications of the proposed development, compliance with national policy, compliance with the Development Plan, and other material considerations that should be taken into account during the decision-making process. It should be read in conjunction with the Environmental Noise Impact Assessment (Appendix 1), Ecological Walkover Report (Appendix 2), and the following drawings which have been submitted to support this planning application:

Drawing Number	Title	Scale
PA01	Site Location	1:2500
PA02	Site Layout	1:500
PA03	Battery Infrastructure – Indicative Plans and Elevations	1:100

BACKGROUND

1.3 The proposed development falls within the boundary of Hazlehead Wind Farm, which was granted planning permission 2006/1575 in June 2007. Hazlehead is comprised of three 100m turbines and associated infrastructure, with a total capacity of 6MW, and started exporting clean energy to the grid in late 2011.

1.4 A request for pre-application advice was made to Barnsley Council on 30 October 2019 and a formal response was received on 03 January 2019 (reference 2019/ENG/00845) which has been taken into consideration in the preparation of this planning application.

1.5 The following table contains planning history relevant to the Site:

Description	Date Granted	Reference
Erection of three turbine wind farm	20 June 2007	2006/1575
Amendment to 2006/1575 including alteration to existing internal access formation of new access track	02 March 2009	2009/0005
Erection of an electricity substation at Hazlehead Wind Farm	29 August 2012	2011/0859
Variation of condition 2 of 2011/0859 to allow date of removal to be extended to 14/12/37	07 June 2018	2018/0434

BANKS RENEWABLES

1.6 Banks Renewables are part of the Banks Group, a family run business based in County Durham which has been operational since 1976. It develops land for a variety of uses including property, surface mining, and renewable energy, and currently employs over 300 people. The Group has a portfolio of land interests across northern England which includes Hazlehead Wind Farm. The Banks Group is committed to a *development with care* approach which it has employed throughout the delivery of Hazlehead Wind Farm. This included extensive engagement with local community groups and establishment of a community fund.

2. PROPOSED DEVELOPMENT

SITE LOCATION AND CONTEXT

2.1 The proposed development is on the site of the currently operational Hazlehead Wind Farm, which lies just south of Crow Edge in the rural west of Barnsley. The precise location of the proposed development is shown in Drawing PA01. The area surrounding Hazlehead Wind Farm is predominantly countryside with some businesses and small areas of housing. There is a large manufacturer of clay pipes and associated products to the north of Hazlehead Wind Farm which is currently operational.

2.2 The battery facility will be located adjacent to the Wind Farm substation, which is towards the western boundary of the wind farm site, approximately 130m from Flint Lane (B6106) at its closest point. The nearest large settlement to the proposed development is Penistone, which is approximately 7km east of the development. The smaller settlement of Millhouse Green is approximately 4km to the east of the Site. The closest residential properties to the Site are approximately 400m to the south, on Brook Hill Lane, and 450m west at Riddle Pit Farm.

2.3 The land is generally flat, and is currently low-quality scrub and hardstanding associated with the substation.



Figure 1: Photograph Showing a Portion of the Site

2.4 Access to the Site from the main highways network will make use of the pre-existing access onto Hazlehead Wind Farm from Flint Lane (B6106), and the existing tracks associated with the Wind Farm. A small amount of new track is proposed from the existing track to the battery, as shown in Drawing PA02.

2.5 Hazlehead Wind Farm is currently owned by Banks Property (part of the Banks Group). There is a public right of way (PROW) on the eastern edge of the Wind Farm site, which runs between the A616 to the north and Bents Road (B6106) to the South. The PROW is approximately 750m east of the proposed development, and is physically

and visually separated from the Site by undulating landscape topography and Wind Farm infrastructure. Therefore it is considered that the proposed development will not have any impact on the PROW. There is no other third-party access to the Site or to Hazlehead Wind Farm.

2.6 The Site was selected for Battery Storage due to its proximity to existing infrastructure including electricity generation, grid connection, and suitable access roads, as well as land availability and general quality of land.

2.7 The Barnsley Local Plan, which was formally adopted in January 2019, identifies the Site as Green Belt.

2.8 The development Site is in a Coal Authority Reporting area, and while parts of the Hazlehead Wind Farm Site have previously been used for mining and waste disposal resulting in mineshafts and shallow working beneath the surface, the battery Site is not in an area of high risk.

2.9 The decommissioning of the proposed development and restoration of the Site will be undertaken in parallel with the Wind Farm and can be controlled by appropriate planning conditions agreed with the Council.

DESCRIPTION OF PROPOSED DEVELOPMENT

2.10 The proposed development is comprised of four main elements:

1) An up to 2MW Lithium-ion battery, which will be housed in a c.19 x 2.5m shipping container. The container will also house the battery conditioning equipment such as heating, ventilation and fire suppression;

2) An inverter or power management unit (PMU) which contains the DC to AC inverter;

3) A transformer connecting to;

4) Cable route and switchgear to the existing substation.

2.11 The PMU is shown on Drawing PA02 as being external infrastructure, which would be contained in glass-reinforced plastic (GRP) housing. However depending on the battery specification which is to be tendered, there is potential for the PMU to be housed in the steel shipping container alongside the battery cells. The final layout of the Site will be confirmed by submission of a final plan to the Council prior to commencement of development. The PMU being a separate element rather than containerised is the 'worse-case' scenario from a landscape and visual, and noise perspective and so this change will not impact on the appropriateness of the development.

2.12 The battery will utilise much of the existing infrastructure on the Hazlehead Site such as the substation and the HV connection, however it will be electrically differentiated with a separate meter and point of connection. The battery will connect to the 11kV cable which serves the Wind Farm, and has the capacity available in order to serve the import and export requirements of the battery.

2.13 The application boundary is approximately 815m^2, which includes the proposed development as well as the existing Wind Farm substation and associated infrastructure (please see Drawing PA02 for full details).

2.14 The proposed development is temporary with a lifespan the same as the existing substation. The substation was granted initial consent 2011/0859 in August 2012 and subsequently application 2018/0434 was submitted to vary condition 2 of 2011/0859 to extend the life of the substation. Condition 2 of 2018/0434 states:

The building approved under this planning permission shall be removed in its entirety and the land restored to its previous condition by 14th December 2037.

It is therefore proposed that the permission of the battery should be reflective of this timescale. Upon removal, the Site will be fully restored to its original condition.

3. NEED FOR THE DEVELOPMENT

3.1 Climate change is a global issue, and the UK government has set a target for the UK to be net-zero by 2050 (Climate Change Act 2008). Increasing energy produced by renewables is seen as an important step in achieving this target as unlike burning fossil fuels, renewable sources of energy do not produce any carbon emissions. Further, a document published by the Department for Business, Energy and Industrial Strategy (BEIS) in January 2018 outlines the government's plans to phase out unabated coal power stations by 2025. Because of this, the energy mix in the UK is changing to include more renewables integration and the energy system is undergoing fundamental changes to deliver more low-carbon and decentralised energy.

3.2 In September 2019 Barnsley Council declared a 'climate emergency', while setting an ambitious target of achieving net-zero emissions in the Borough by 2045. Cabinet Minutes Cab.18.9.2019/9 state that in Zero45 (the Council's programme for facilitating and enabling this transition) 'renewables' will be a key theme. The Council will *"aim to increase renewables in both domestic and non-domestic sectors and encourage innovation in adopting new technologies."*

3.3 However, power generated by renewable sources differs from fossil fuel generation. Wind energy, for example, is reliant on weather systems which cannot be accurately predicted in advance. This creates intermittency in supply, which means that there are times when the consumer wishes to use electricity when renewable generators cannot produce it. There can also be times of excessive generation where power is not in high demand which can results in generators having to reduce their output, and potential energy provision being wasted. Frequency of the grid is also affected when there is a discrepancy between supply and demand, and large deviations in system frequency can result in damage and loss of connection to the system. Further, additional 'back-up' capacity is required to protect against potential system failures such as blackouts and sudden losses of power stations.

3.4 In order to counter these problems, additional infrastructure in the form of energy storage is necessary. Batteries (or energy storage systems) can maintain grid frequency, add resilience to the grid, and provide reserve capacity to ensure demand is consistently met, enabling greater flexibility and providing grid-balancing services. As well as ensuring periods of high electrical demand can be met, batteries also provide solutions against over-supply, allowing the production of renewable energy to continue and stored for later use – negating the need for curtailment or 'turning down' renewable generation.

3.5 The Smart Systems and Flexibility Plan, published by BEIS and Ofgem in 2017, highlights how the UK energy system is changing to contain more low carbon generation, and that there need to be options for maintaining security of supply and balancing the grid. The report states that storage can "*open up many possibilities, helping to integrate low carbon generation, reduce the costs of operating the system, and help avoid or defer costly reinforcements to the network*."

3.6 There is a clear precedent for the instillation of battery storage at a national level. Further, co-locating battery storage with renewable generation makes efficient use of grid infrastructure and minimises transmission losses. In a consultation regarding energy storage in the planning system, BEIS write that: *"Co-location can improve operational efficiency and potentially increase the range of valuable services they can provide to the system. Composite projects involving storage and another form of*

generation can bring these benefits whilst also sharing grid connections and site costs."

3.7 At Hazlehead Wind Farm an existing grid connection with sufficient cable capacity exists, which saves cost in delivering the storage asset. Additionally, operational cost is shared with the wind farm in maintaining the system and the general site. The proximity of the proposed battery storage system to existing generating and grid infrastructure means there will be minimal transmission losses when compared with alternative battery sites and ensures that significant grid upgrades are not needed to connect. This improves efficiency and decreases cost in the grid network in both build and operation, and this cost saving is ultimately passed down to the consumer, as the lower costs associated with build out and operation will result an asset that costs less than others to perform grid services. A further benefit of co-locating the battery is its use of the suitable existing access to the wind farm site, resulting in minimal additional construction works thus lowering the overall impact of the proposed development.

4. DESIGN AND ACCESS

This design and access statement demonstrates how the layout, appearance and connectivity of the proposed development make it an appropriate addition to Hazlehead Wind Farm to facilitate the delivery of additional renewable energy in the Barnsley Borough.

LAYOUT AND SCALE

4.1 The layout of the proposed development is properly defined in Drawing PA02. The battery will be located approximately 10m to the south of the existing Wind Farm substation.

4.2 The battery will be housed in a steel shipping container which is has a c.19 x 2.5m footprint and will be up to 3m in height, depending on foundation design. Indicative plans and elevations of battery infrastructure are shown on Drawing PA03. Finalised elevations will be confirmed in writing with the Council prior to build-out.

4.3 The battery PMU may be externally contained in GRP housing, as shown on Drawing PA02, however there is potential for the tendered battery specification to include the PMU within the containerised element of the proposed development.

4.4 Approximately 26m of new cable route is proposed to connect the existing substation to the transformer, inverter and battery, which will be laid underground.

4.5 Approximately 45m of new track made from gravel is proposed to access the battery and associated elements. This will be connected to the existing tracks on the Hazlehead Wind Farm site. The track will have the capacity to serve the vehicles required to for the construction and maintenance of the battery storage instillation.

APPEARANCE

4.6 The shipping container will be a standard shipping container made from steel and painted in a colour agreed with the Council in order to reduce landscape and visual impacts of the proposed development. Submission of the final colour of the container can be secured through the use of planning conditions.

4.7 The proposed additional infrastructure will not be larger than the existing substation building, which has a 13.5 x 7m footprint and is 5m in height. Due to cable routing being placed underground, this will not affect the appearance of the land.

4.8 It is determined that additional landscaping to mitigate visual impact is not necessary in this instance. Due to the minimal adverse visual impacts of the proposed development and the distance from any public access, it is considered that the addition of landscaping would likely result in a greater impact on the openness of the Green Belt in this location. Further, the Site will be fully restored to original condition in the timescales agreed with the Council, likely at the same time as the Wind Farm.

CONNECTIVITY AND USAGE

4.9 Construction traffic will access the development from the motorway network and existing Wind Farm access. All of the surrounding roads are built to modern standards and are suitable for HGVs. A small portion of new access track is proposed to allow access and egress to the Site.

4.10 The proposed development will result in a slight increase in construction traffic due to the small amount of additional infrastructure being brought to Site. It is therefore considered that the proposed development will not significantly impact upon the existing highways network. It is unlikely that there will be an increased number of vehicle movements generated by the proposed development once operational, as the management and maintenance of the battery will take place alongside the weekly site visits to the wider Hazlehead Wind Farm Site.

4.11 The proposed development is not anticipated to have any impact on any public space. The PROW which lies to the east of the Site does not come in close proximity to the Site, and use of the footpath will not be required for access to the Site at any stage in its commissioning or operation.

5. POLICY CONSIDERATIONS

The below table contains an assessment of the proposed development against relevant national and local policies.

POLICY	STATEMENT
Climate Change Act 2008	The Climate Change Act (as amended) commits the UK government to achieving a 100% reduction in carbon emissions compared to the 1990 baseline by 2050. The transition to a low carbon economy requires low-carbon electricity generation. According to BEIS' *National Energy and Climate Plan*, in all projected energy scenarios which achieve the 2050 target, there is a marked increase in renewable and low carbon generation. Battery storage facilities such as Hazlehead Battery can provide key flexibility services which will ensure the grid remains safe and reliable while utilising greater amounts of renewable energy.
EU Renewable Energy Directive 2009	The UK government has a legally binding target of producing 15% of all energy from renewable sources by 2020. However according to the latest European Commission progress report, the currently implemented renewable energy policies and planned renewable energy policy initiatives in the UK are insufficient to reach this target domestically. Current renewable energy share predictions state that the UK is expected to produce just 12-14% of energy from renewable sources by 2020 (European Commission, 2019). It is therefore important that decision-makers continue to take a pragmatic and positive approach to the instillation of renewable energy technologies to ensure these targets are met.
Energy Act 2013	This Act legislates for Electricity Market Reform, the government policy to incentivise low-carbon and renewable energy, by facilitating their route to market. It aims to improve security of the grid and ensure low prices for consumers.
NATIONAL PLANNING POLICY FRAMEWORK	
Achieving Sustainable Development	Sustainable development is defined as development which meets the needs of the present without compromising the needs of future generations to meet their own needs. Battery storage allows for increased energy generation from renewable sources allowing consumers to meet their energy needs however it does not compromise the needs of future generations as the technology does not use finite resources or contribute to climate change. Sustainable development has three overarching objectives: economic, social and environmental, which are interdependent and should be pursued in mutually supportive ways. Hazlehead Battery will provide electricity storage capacity and important grid services in the transition to a low carbon economy. As well as environmental benefits, batteries provide economic and social benefits by helping to keep the price of energy to consumers stable, and allowing greater flexibility to grid operators in ensuring supply and demand is met and the Grid can operate safely and is protected from blackouts. It is therefore considered that the proposed development constitutes sustainable development.

Protecting Green Belt Land	Paragraphs 143-144 state that inappropriate development is by definition harmful to the Green Belt, and should not be approved except in very special circumstances. 'Very special circumstances' do not exist unless harm resulting from the proposal is clearly outweighed by other considerations. Paragraph 147 of the Framework states that while renewable energy development proposals located in the Green Belt must demonstrate very special circumstances to proceed, these very special circumstances can include wider environmental benefits associated with increased energy production from renewable sources. The energy storage scheme at Hazlehead will provide additional capacity to the grid, which can be used at times of increased demand and to balance system frequency. The five purposes of the Green Belt as defined by paragraph 134 of the Framework are: a) To check the unrestricted sprawl of large built-up areas; b) To prevent neighbouring towns merging into one another; c) To assist in safeguarding the countryside from encroachment; d) To preserve the setting and special character of historic towns; and e) To assist in urban regeneration, by encouraging the recycling of derelict and other urban land. The area of Green Belt at the location of the battery does not serve to check urban sprawl, nor is it preventing coalescence, as the proposed development is not located adjacent to the built-up area. Due to proximity of the existing substation building and associated infrastructure at Hazlehead Wind Farm, and the modest size of the battery, the proposed development will not result in a greater impact to the setting or character of the area than currently exists. Taking each of the five purposes of the Green Belt into account it is not considered that the proposed development will compromise the objectives of the five purposes particularly as the proposed development will be viewed together with the adjacent substation and associated infrastructure. Whilst it is acknowledged that the proposed development will result in a small increase in the amount of built form in the Green Belt, the very limited harm that would result must be weighed against the increased benefit from renewable infrastructure/capacity and contribution to climate change targets. Overall, it is considered that the proposed development amounts to exceptional circumstances in the Green Belt. Planning practice guidance advises on the role of Green Belt in the planning system. In particular, it discusses which factors should be taken into account when considering the potential impact of development on the openness of the Green Belt. The courts have identified a number of matters which may need to be taken into account including: • The spatial and visual aspect of the proposal; • The duration of development and its remediability – taking into account provisions to return land to its previous state; and • The degree of activity (such as traffic generation) likely to be generated.

	Because of this existing infrastructure and the modest scale of the proposed development, the visual impact of the development on the existing landscape will be minimal. The land at the Site of the battery will be fully remediated and restored in a timescale agreed with the Council. There will be minimal operational activity associated with the proposed development: it will result in a limited increase in traffic once built, construction will take place in a short space of time, and as found in Appendix 1 (Environmental Noise Impact Assessment), the proposed development will not result in a significant increase in noise levels at the location.
BARNSLEY LOCAL PLAN	
SD1 – Presumption in Favour of Sustainable Development	The development constitutes sustainable development as defined by the National Planning Policy Framework as the proposed development will secure economic, social and environmental benefits for the reasons outlined above.
GD1 – General Development	The proposed development will not have a significant adverse effect on the living conditions or residential amenity of residents as the Site is located a considerable distance from any residential areas, and the Environmental Noise Impact Assessment (Appendix 1) finds that predicted noise levels as a result of the proposed development will remain below the acceptable limits for day and night time levels. The proposed use of the Site is compatible will the neighbouring use of land (operational Wind Farm) and will not prejudice its future use. The proposed development will not impact potential future development of wider land area, and the land will be fully restored to original condition once the operation period of the battery ceases. The Ecological Walkover Report (Appendix 2) concludes that there will not be any significant adverse impacts on protected species or designated sites. Therefore the proposed development is in compliance with the relevant parts of Policy GD1.
T4 – New Development and Transport Safety	The Site is suitably served by the existing road network and will result in a small increase in highways traffic during the construction phase of the development, and no increase in traffic during operational phase. Transport users within and surrounding the Site will have safe, secure and convenient access to movement as required. The development will not create or add to problems of safety and efficiency on existing highways infrastructure.
D1 – High Quality Design and Place Making	The development is proposed to be built from good quality industrial style materials, which is in keeping with the general character of the adjacent built form and the built environment in the surrounding area. The Site is clearly marked as being unavailable for public access, providing a clear distinction between public and private space. Development will not impact on the public realm.
LC1 – Landscape Character	The broad landscape character of the Site as set out in the Landscape Character Assessment of Barnsley Borough 2002 is Upland Rolling Farmland. This landscape type is defined by undulating topography with geometric fields strongly defined by stone walls. The settlement pattern is of scattered hamlets and has a general sense of remoteness. The 2016 Landscape Character Assessment Review notes that the addition of 6 turbines in the area has had a significant impact on the landscape, however landscape character is considered to remain strong. The Site is currently low-quality scrub and hardstanding

	associated with pre-existing buildings at Hazlehead, and is therefore of low public visual amenity. The proposed development is adjacent to existing buildings which exceed the proposed development in height and so it is considered that there will be minor visual impacts as a result. The development will not affect any field boundaries or impact on the remoteness of the area. Further, the land will be fully restored to its original condition. Therefore character and distinctiveness of the Site will be retained.
BIO1 – Biodiversity and Geodiversity	The Ecological Walkover Survey (Appendix 2) considers the Site to be of low ecological value, and that the proposed development will not have any significant adverse impacts of statutory designated sites or protected habitats or species. The Site will be fully restored once the operational phase of the battery ceases which will return habitats to original condition.
GB1 – Protection of Green Belt	As discussed above, despite its allocation as Green Belt, the increase in renewables production and use associated with the development results in the 'very special circumstances' which allow for approval of the development in accordance with national policy. It has been demonstrated that the proposed development does not compromise the five purposes of the Green Belt, and the wider environmental benefits associated with the proposed development mean that the planning balance is considered to weigh in favour of the development in this location.
CC1 – Climate Change	The Council will seek to reduce causes of and adapt to the future impacts of climate change by promoting and supporting the delivery of renewable and low carbon energy. The proposed development will be part of Barnsley's renewable energy infrastructure, and will facilitate the use of renewable energy sources by allowing energy to be stored for use at a later time and providing important grid-balancing services.
CC2 – Sustainable Design and Construction	It is considered that this policy is not directly relevant to the proposed development, however the proposed development minimises resource and energy consumption by utilising a large degree of existing infrastructure on the Hazlehead Wind Farm Site.
CC3 – Flood Risk	The proposed development is in Flood Zone 1 meaning there is not an unacceptable risk from flooding at the Site, the proposed development will not give rise to flooding elsewhere, and due size of the Site no specific Flood Risk Assessment is required.
CC4 – Sustainable Urban Drainage	The Site is less than 1 hectare in size and in Flood Zone 1 meaning there is not an unacceptable risk from flooding at the Site. The proposed development is not classified as a major development and is not expected to result in any impacts due to surface water.
RE1 – Low Carbon and Renewable Energy	The proposed energy storage system will contribute to the continued decarbonisation of the grid and will facilitate the generation of additional renewable energy. There will be no impact on the character and landscape appearance of the area (see LC1), and living conditions will not be affected by the proposed development. As discussed in the Ecological Walkover Report (Appendix 2) there will be no material harm to biodiversity, with the report finding no anticipated significant adverse impacts on designated sites or protected species. It is considered that the proposed development will not have any material harm on water quality or geodiversity. No heritage assets are on or adjacent to the Site, and the Site is not a key view from or to a scenic landmark or feature. Highways safety will not be harmed. The proposed development will not result in any material harm on any other

	infrastructure. Therefore the proposed development is in compliance with Policy RE1.
CL1 – Contaminated and Unstable Land	The development Site is in a Coal Authority Reporting area however the development will not require substantial earth works and will not have an impact on ground conditions. In general, any excavations will be minimal and are unlikely to impact on the geology of the area.
Poll1 – Pollution Control and Protection	It is considered that the proposed development is not likely to result in any direct or indirect increases to air, surface water and groundwater, noise, smell, dust, vibration, light, or any other pollution which would unacceptably affect the natural and built environment. During the construction phase of the development best working practices will be followed, and a Construction Method Statement will be implemented which will ensure dust, vibration, and air pollution is minimised. Working hours will be limited so there will be no 'night-time' noise due to construction. A full Environmental Noise Impact Assessment has been submitted to support this application (please see Appendix 1) which finds that predicted noise levels from the proposed development when operational remain below the fixed guideline levels for both daytime and night-time assessment periods and there will be no adverse noise impact on the local area. Therefore the proposed development is in compliance with Policy Poll1.

6. ENVIRONMENTAL CONSIDERATIONS

The following chapter contains an appraisal of the likely environmental impacts of the proposed development.

FLOOD RISK AND DRAINAGE

6.1 As identified by the Flood Map for Planning[1], the development Site is in Flood Zone 1, meaning it is of a low probability of flooding from rivers or the sea. As the Site is smaller than 1 hectare and does not fall in an area with critical drainage problems, no Flood Risk Assessment is required.

6.2 The proposed additional track will be made from a permeable material to mitigate any increased risk of surface water flooding, and there will be no foul water or drainage required from the Site. As the construction of the battery requires minimal ground disturbance, there is not expected to be a significant impact on geology or underlying ground conditions of the Site and surrounding area.

AIR QUALITY AND DUST

6.3 While Barnsley Council recognise the need to manage and improve overall air quality in the borough, there are no specific air quality management areas at the development Site. Due to the distance to the nearest residential property and the lack of public access to the Site, it is considered unlikely that any residents or members of the public will be exposed to poor air quality as a result of the proposed development. Vehicles travelling to and from the Site will be low in number and are only required for a temporary period during the construction phase. There are no anticipated impacts on air quality once operational.

6.4 A Construction Method Statement can be secured through the use of planning conditions which will outline mitigation methods for any pollution or dust caused during the construction phase of the development. Construction will follow general good practice control measures with anticipated mitigation techniques including thorough maintenance of equipment and dampening of access roads and construction materials if required.

TRANSPORT AND ACCESS

6.5 The wider Hazlehead Wind Farm Site is located off Flint Late, which is a two-lane carriageway extending between Millhouse Green and Holmfirth, where it connects to the wider highways network. The road is well maintained, and is considered suitable for construction vehicles required. A minor amount of construction traffic is anticipated as a result of the proposed development which will be predominantly caused by HGV's. However the number of vehicles required for construction is small and are ultimately expected to have very little impact on the existing highways network. The construction period is expected to last 1-2 months which means that any impacts on the highway network will be temporary. Operational times and delivery hours can be secured with the Council through the use of planning conditions such as the submission of a Construction Method Statement.

[1] Accessed at < https://flood-map-for-planning.service.gov.uk/> on 06 February 2020

6.6 There will be no increase operational traffic as the maintenance of the battery facility will be carried out alongside the maintenance and managing of the wider Hazlehead Wind Farm Site.

6.7 The access to the wider Wind Farm Site is off an adopted highway Flint Lane (B6106) and is well maintained and suitable for construction vehicles. The access tracks within the windfarm were approved by permission 2006/1575 and are suitable for the HGV's required to transports goods to Site.

ECOLOGY

6.8 An Ecological Walkover Report has been completed to support this application and should be read in conjunction with this supporting statement (see Appendix 2). The survey consists of a desk-based study to identify any statutory designated sites and water bodies on near to the Site, and a site walkover survey which was carried out on 13 January 2020.

6.9 The desk-based study found that the Site is approximately 2.3km east of the South Pennine Moors Special Area of Conservation (SAC) and the Peak District Moors Special Protection Area (SPA). These sites are both underpinned by the Dark Peak Site of Special Scientific Importance (SSSI). The Peak District National Park is approximately 1.7km south of the Site, the Moorland Line lies 450m west of the Site. However none of the preceding designations are considered to be at risk from the proposed development due to its small size and lack of habitat connectivity.

6.10 The site walkover survey found that the Site is of low ecological vale. The existing building on Site (the Hazlehead Wind Farm substation) did not provide any opportunities for nesting birds, or for roosting bats. The site was not considered to be suitable to support badgers or the majority of reptile species. While the survey found some potential for grass snakes, it is anticipated that should reptiles be present, they would disperse into the surrounding habitat during construction activity and therefore reptiles are not considered to be a constraint on site.

6.11 The survey found that where the Site supported waterbodies, no permanent waterbodies were present which supported breeding amphibians. Previous surveys of the area undertaken for Hazlehead Wind Farm did not consider Great Crested Newts (GCNs) to be a constraint. In the event of the GNC being present in surrounding waterbodies, risk of them dispersing on site is considered to be minimal. A precautionary approach during construction including hand searches for GCNs and general good practices and working methods has been recommended.

6.12 Overall, the proposed development will not have any significant adverse impacts on any international or national statutory designated sites. The Site is of low ecological value and provides limited opportunities for bats and birds. A precautionary approach to construction will be taken to mitigate risk to GNCs in the unlikely event they occur.

NOISE

6.13 An Environmental Noise Impact Assessment (NIA) of the proposed development has been submitted to support this planning application (please see Appendix 1). The NIA identifies any noise sensitive receptors near the proposed development, identifies dominant sources of operational noise associated with the proposed development, calculates likely noise levels at the receptors to determine noise impacts of the proposed development, and indicates required mitigation measures.

6.14 The nearest identified Noise Sensitive Receptors (NSRs) to the Site are residential properties 400m south on Brook Hill Lane, and 450m west at Riddle Pit Farm respectively. Baseline noise monitoring was undertaken in 2012 as part of a noise compliance assessment of the operational Hazlehead Wind Farm. Noise data collection occurred in specific wind conditions and when turbines were not operating. A noise propagation model was applied, using the 2012 baseline noise levels and anticipated operational noise levels of the proposed development, to calculate noise immission levels at the NSRs.

6.15 The NIA found that predicted noise levels remain below fixed guideline levels at both NSRs for both daytime and night-time assessment periods. Tonality of the predicted noise is not anticipated to be an issue at the NSR's, and noise is predictable and constant, resulting in little intermittency. When considering the impact of predicted noise levels in the context in which the sound occurs, noise rating levels did not exceed background sound level at Brook Hill Lane in daytime and night-time, or at Riddle Pit Farm in daytime. At Riddle Pit Farm, night-time rating levels exceeded background noise levels slightly, but below the indication of an adverse impact. The NIA therefore concludes that the operational noise due to the proposed development is not anticipated to have an adverse noise impact on the local area.

6.16 Construction noise from the development will be caused by delivery vehicles and construction machinery. As the Site is not particularly sensitive with regards to residential or public amenity and the construction noise generated will be temporary, it is recommended that construction noise levels be managed through measures such as limiting construction hours and vehicles being fitted with noise dampening measures where necessary. A full Construction Method Statement will be submitted prior to commencement of build-out.

LANDSCAPE AND VISUAL

6.17 Landscape impacts are changes to the physical landscape which may give rise to changes in its character and how it's experienced. As identified by the Barnsley Borough Landscape Character Assessment the Site lies within the Upland Rolling Farmland typology, which is defined by undulating topography with geometric fields. The Site is considered to be not particularly sensitive with regards to these features, as it does not interrupt or have any impact on field boundaries or impact the topography. Considered in context with the wider Wind Farm and the surrounding area, the proposed development does not play an important role in establishing the landscape character of the area, and will not 'interrupt' any field patters or untouched landscape features.

6.18 The landscape character of the development Site is not considered to be particularly sensitive, as the development Site does not fall within or adjacent to an Area of Outstanding Natural Beauty, a National Park, or any other high landscape value designation. The industrial works to the north-east of the Site, which is classified as a 'Built-up Area' according to Defra Magic Mapping data, interrupts the landscape between Upper Whitely Edge and the Site. The Western Moors are approximately 450m south-west of the Site, but as the landscape is interrupted by the B6106 and there are trees to along the Hazlehead Wind Farm Site boundary, it is considered that the proposed development will not alter the landscape of the Western Moors.

6.19 Overall, the proposed development is unlikely to result in any unacceptable impact on the landscape character of the area: the development is small in scale, and the surrounding area has been somewhat urbanised due to the construction tracks,

turbines and other buildings associated with Hazlehead Wind Farm. The rolling hillside landscape is disrupted by the industrial area to the north of the Wind Farm and the highways surrounding it. Further, the Site will be fully restored to its original condition within a timescale agreed with the Council, resulting in no permanent landscape impacts.

6.20 Visual impacts of development proposals relate to specific changes in views as a result of changes to the landscape, and overall affects with respect to visual amenity. The visual impact of the proposed development is considered to be low. Looking north-east towards the Site from Flint Lane, the Site is screened by a dense row of trees. From Bents Road, which lies to the south-east of the Site, the topography of the hillside is gently sloping upwards away from the road which makes the Site invisible from the road. Further, the Site is not visible from the A616, the road to the north of the Site, due to the rolling hillside landscape. There is also an existing industrial area between the A616 and the Site.

6.21 A PROW runs between the A616 and Bents Road, approximately 750m east of the Site. However, the battery container will not be seen from this path due to variable landscape topography and a cluster of trees which lie south-east of the development Site. Otherwise the land within the Hazlehead Wind Farm boundary is privately owned by the Banks Group and is not available for public access. Further, the battery container will be painted in a neutral colour chosen to blend in with the existing landscape and development at the Site. The Site is partially visible from the entrance gate to Hazlehead Wind Farm, however the Site will have a high degree of screening from existing vegetation and the substation building, and the height of the proposed development is lower than that of the existing substation. It is therefore considered that the proposed development will not have an unacceptable visual impact for the general public.

6.22 It is recognised that the turbines and the substation building at Hazlehead have an impact on the landscape and visual amenity of the area. The proposed development will not exceed the height of the adjacent substation building and therefore will not have a greater impact visually than already exists. It is considered that there will be no unacceptable landscape and visual impacts from the proposed development, meaning there will be no discernible change to landscape or public visual amenity, and any impacts that do occur will be very localised and temporary as the Site will be fully restored after decommissioning.

CULTURAL HERITAGE

6.23 The proposed development does not fall within or adjacent to a conservation area or Site of archaeological interest. Further, there are no heritage assets including listed buildings and scheduled ancient monuments within or in proximity to the Site boundary. Therefore there are no anticipated impacts on heritage assets.

6.24 Parts of the development Site were previously disturbed by mineral extraction and disposal. The environmental statement which accompanied the Hazlehead Wind Farm application notes that the likelihood of important archaeology being present was low. As the construction works for the erection of the development will require minimal ground works, it is not anticipated that the proposed development will have any archaeological or cultural heritage effects.

7. CONCLUSIONS

7.1 The proposed battery storage facility at Hazlehead Wind Farm will provide important grid flexibility and balancing services during the transition to a low-carbon economy; batteries allow energy produced by renewable sources to be stored for use at a later time, leading to increased renewables generation and use. The proposed development will make efficient use of existing grid and wind farm infrastructure, which results in cost-saving which is ultimately passed down to consumers.

7.2 The Site is designated Green Belt according to the Barnsley Local Plan, however it has been demonstrated that the development will not compromise any of the five purposes of the Green Belt in this location, and due to the wider environmental benefits associated with renewable energy production that will be a result of the proposed development, the very special circumstances exist to justify Green Belt development in this location.

7.3 It has also been demonstrated that the development will not result in any significant harm to biodiversity (see Appendix 2 – Ecological Walkover Report), or to residential amenity due to noise (see Appendix 1 – Environmental Noise Impact Assessment). It is considered that key views, landscape features, cultural heritage, flood risk, and transport will not be significantly impacted by the proposed development. Overall, the proposed development is considered to be economically, socially, and environmentally sustainable, and in compliance with national and local policy, and the benefits as a result proposed development are considered to outweigh any potential harm.