Planning, Design and Access Statement

Machaire Battery Energy Storage System

Applicant	Renewable Energy Systems Limited
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Internal Ref	05511-8624777

Contents

1 Introduction

1.1 The Application

Renewable Energy Systems Limited (RES) ("the Applicant") has prepared this Planning Statement, including a Design and Access Statement, in support of a full planning application to Causeway Coast and Glens Borough Council for an Energy Storage System (ESS) ("the Proposed Development") on lands south of Magheraboy Road, Rasharkin, approximately 450m north-west of Rasharkin Substation ("the Site").

This statement outlines the context of the application site and surrounding area, and the need for the proposed development, including an assessment of how it accords with relevant national, regional and local planning policies as well as material considerations. It is supported by a number of drawings, technical documents and survey reports, a schedule of which has been included in Appendix A.

1.2 The Applicant

1.2.1 RES Group Experience

RES is the world's largest independent renewable energy company with 40 years' experience developing, constructing and operating renewable energy assets. RES has delivered more than 23GW of renewable energy projects across the globe and supports an operational asset portfolio of over 12GW worldwide for a large client base all under long term contracts.

The Group's head office in Kings Langley, near London, is complemented by other offices across the UK including Glasgow, Gateshead, Truro, Cardiff and Larne. Internationally, RES has overseas subsidiary offices in France, Scandinavia, Australia, New Zealand, Canada, Turkey, Germany, and across the USA. The RES Group employs 4,000 staff. RES is a privately-owned company that grew out of the Sir Robert McAlpine group, a family-owned firm with over 130 years of experience in the construction and engineering sector. RES has strong in-house engineering and technical capability and operates in five main technology areas: on/offshore wind, solar, storage, green hydrogen, and transmission & distribution.

1.2.2 RES Battery Energy Storage Systems Experience

Globally, RES is an industry leader in the delivery and operation of energy storage projects with 412MW of projects operational or in construction, and over 155MW of these in the UK and Ireland. RES has been named number 4 globally in energy storage integration by Navigant Research in 2019. RES has multiple professionals dedicated to energy storage and many others supporting across technologies, including in-house capability across all the following functions:

- Energy storage engineering and design
- Control systems (our RESolve platform)
- Procurement
- Construction/delivery
- Asset management and operations

RES's first battery storage system in the UK was in 2016 and consisted of the 330kW Copley Wood Project. This was designed, constructed and operated by RES for Western Power Distribution (now National Grid

Energy Distribution) and was integrated into the existing solar farm infrastructure. In 2018, RES successfully handed over the Broxburn Battery Storage facility (20MW), the Port of Tyne Battery Storage facility (35MW) and Tynemouth Battery Storage facility (25MW) which RES designed and constructed using Samsung batteries and SMA inverters with associated civil and electrical works. RES has been retained as both the Asset Manager and O&M service provider for the projects which has been successfully delivering frequency response services to National Grid since 2018.

More recently, between 2020-2024, RES has successfully developed, consented and secured investment for over 400MW of energy storage projects across the UK and Ireland. In recent years, RES also successfully completed the development, construction and connection of a combined 75MW in ROI with Gorey Battery Energy Storage, Avonbeg BESS and Gorman Energy Storage Station. Following construction of the RES-developed 100MW Lakeside project in Yorkshire, RES have also recently taken on full asset management services for the project which is s now the largest transmission-connected BESS project in the UK.

2 The Proposal

2.1 Site Description

The site, measuring approximately 6ha, is located in a field currently used for grazing livestock. Located in the townland of Magheraboy, approximately 0.7km north of Rasharkin, Co. Antrim, the system would be developed on lands south of Magheraboy Road, Antrim and approximately 450m north-east of Rasharkin Substation where the system is expected to connect.

The site abuts the Magheraboy Road where it remains relatively flat towards the site, where the surrounding landform is undulating. This makes it easily accessible from the Magheraboy Road using a new proposed access directly onto the Magheraboy Road. In the immediate area there is a mix of development, with the predominant land use being agricultural, with a scattering of dwellings and a large solar farm. A location plan can be found in drawing 05511-RES-MAP-DR-XX-001 - SITE LOCATION PLAN.

2.2 Development Description

The proposed development comprises of the installation of an energy storage system, including battery enclosures, power conversion units, transformers, substation buildings, grid connection infrastructure, vehicular access and associated works.

The proposed system utilises proven lithium-ion battery technology which RES has deployed at multiple projects at locations including England, Scotland, Ireland, the USA and Canada.

2.2.1 Amount, Scale and Appearance

Battery Enclosures

Approximately 112 battery storage enclosures would be installed to provide a maximum capacity of approximately up to 100MW. The battery enclosures will be one of two types depending on the final choice of supplier, maximum dimensions of which are outlined in drawing 05511-RES-BAT-DR-PT-001. The first type are simply modified ISO-style shipping containers set on concrete foundations, with typical dimensions of 6.1m long, 2.4m wide and 2.9m high. Heating Ventilation & Air Conditioning (HVAC) units are located at each end of each container. The enclosures are generally finished in a shade of white or grey.

The second type are modular battery enclosures, also set on concrete foundations, which are ‘packed’ together to form similar dimensions to that of the enclosure mentioned above. These modular battery storage enclosures typically have a white or grey finish.

Power Conversation Systems and Transformers

Approximately 28 Power Conversion Systems (PCS) and 14 Transformers would be required with typical combine dimensions of 10.3m long, 6m wide and 2.5m high (see drawing 05511-RES-PCS-DR-PT-001 - POWER CONVERSION SYSTEM & TRANSFORMER). They would also be set on concrete block foundations and would be finished in a shade of white or grey.

DNO Substation Building

A DNO substation building would be required on site and would measure a maximum of 10.5m long, 6m wide and 5.4m high (see drawing 05511-RES-SUB-DR-PT-006 - DNO SUBSTATION BUILDING). The units would be set on a concrete foundation and finished in a shade of grey or green or a block build structure.

BESS Control Building

A BESS control building would be required on site and would measure a maximum of 10.5m long, 6m wide and 5.4m high (see drawing 05511-RES-SUB-DR-PT-005 – BESS CONTROL BUILDING). The units would be set on a concrete foundation and finished in a shade of grey or green or a block build structure. The BESS control building would be located adjacent to the DNO substation building.

Auxiliary Transformer

An auxiliary transformer with typical dimensions of 2.5m long, 2.3m wide and 2.7m high would be installed adjacent to the energy storage enclosures (see 05511-RES-SUB-DR-PT-001 - AUXILIARY TRANSFORMER). This would be set on a concrete foundation and would be finished in a shade of grey.

Other Electrical Equipment

A harmonic filter with typical dimensions of 6.3m long, 3.3m wide and 2.7m high would be installed on site within the security/acoustic fencing (see drawing 05511-RES-SUB-DR-PT-002 - HARMONIC FILTER). A pre insertion resistor with typical dimensions of 3.3m long, 2.7m wide and 2.7m high would be installed on site within the security/acoustic fencing (see drawing 05511-RES-SUB-DR-PT-003 - PRE INSERTION RESISTOR). A capacitor bank with typical dimensions of 6.4m long, 2.8m wide and 2.6m high would be installed on site within the security/acoustic fencing (see drawing 05511-RES-SUB-DR-PT-004 - CAPACITOR BANK). All three of these would be set on concrete foundations and finished in a shade of grey.

Spares Container

Two additional ISO-style shipping containers will be located adjacent to the battery enclosures with typical dimensions of 12.2m long, 2.4m wide and 2.9m high. It would be finished in a shade of white, grey or green (see drawing 05511-RES-BLD-DR-PT-001 - SPARES STORAGE CONTAINER).

Security

Stands for CCTV cameras will be installed on site. The CCTV cameras are mounted on galvanised steel posts (or similar) measuring up to approximately 4m high and set in concrete foundations. The cameras may have pan, tilt and zoom functions. They will be located adjacent to the security fencing around the edge of the energy storage compound (see drawing 05511-RES-LAY-DR-PE-001).

Security fencing will be installed around all four edges of the energy storage compound. Following acoustic analysis of the proposed system, this fencing will be closed board wooden acoustic fencing up to 4m in height (see drawing 05511-RES-SEC-DR-PT-002).

Proposed lighting for the development is for the purpose of safe access around site during hours of darkness

only. Lighting will comprise manually switched or PIR (with photocell) operated lights, mounted on buildings / equipment and lighting columns, which will only be activated when personnel are on site. Usage of the lighting is therefore anticipated to be minimal, since normal site attendance would be during daylight hours.

Grid Connection

Cabling will connect all equipment within the energy storage compound to the on-site customer substation building. An additional run of underground cable(s) is then expected to connect the system to the existing Rasharkin electrical substation approximately 500m to the south-east of site. This latter run of cable does not form part of this planning application and will be detailed following grid application.

Drainage

A Sustainable Drainage System (SUDS) will be utilised to manage on-site surface water run-off. The proposed water attenuation ponds, located to the northeast of the energy storage compound, and associated drainage is shown on the infrastructure layout drawing (see drawing 05511-RES-LAY-DR-PT-001 - INFRASTRUCTURE LAYOUT). Further details are provided in Section 5 of this document and in the supporting Flood Risk and Drainage Assessment.

2.2.2 Layout

The proposed layout of the site is shown in the Infrastructure Layout Plan (05511-RES-LAY-DR-PT-001 - INFRASTRUCTURE LAYOUT). The layout has been guided by a number of factors, but primarily by the operational and safety requirements of an energy storage system combined with site constraints.

The battery storage enclosures and associated PCS and transformer units have been sited in close parallel rows to reduce the amount of cabling required between each unit and to condense the area required for the overall development. Space between the equipment on site and surrounding fence has been left in order to provide sufficient space for a crane during construction and in case of repair and augmentation.

2.2.3 Access

It is proposed that all equipment and construction material deliveries shall take the following route to site:

- Vehicles will follow A26;
- Vehicles will continue A26 onto Crankill Road;
- Vehicles will leave the Crankill Road onto the Station Road;
- Vehicles will continue on Duneany Road via Dunminning Road;
- Vehicles will leave Duneany Road onto the Finvoy Road and then Magheraboy Road;
- Vehicles will approach proposed site entrance from Magheraboy Road.

Site would be accessed through a newly constructed access directly onto the Magheraboy Road. An unbound granular access track would then be constructed following the eastern boundary of site before splitting in two.

One track would then immediately connect to the northeast of the energy storage compound, while the other would run along the northwest boundary and connect near the northeast corner of the energy storage compound (See drawing 05511-RES-LAY-DR-PT-001 - INFRASTRUCTURE LAYOUT).

2.2.4 Landscaping

A landscaping plan has been submitted as part of the application (see "Illustrative Landscape mitigation plan - Machaire Energy Storage System") which takes account of any identified areas of sensitivity by providing additional planting where required and maintenance notes for the proposed planting.

The landscaping proposals include the following:

- Existing field boundary vegetation, such as hedgerows and hedgerows trees, would be retained and protected as per BS 5837:2012. These boundaries will be enhanced through additional planting and improved management to maximise their landscape (screening) and biodiversity benefits;
- The south-western boundary would include hedgerow planting along its length with a number of trees in the corner, limiting the public interest from Finvoy Road.
- The southern half of the eastern boundary will be supplemented with additional landscaping inclusive of both trees and hedging, to aid in screening this part of the site.
- Remaining grassland areas will be subject to a programme of enhancement through seeding with appropriate grassland mixes, also contributing to the biodiversity of the area.

2.3 Site Selection Process

Energy storage projects require certain conditions in order to be feasible. The requirements are listed here as well as a short explanation of how they shaped the selection and design of this site.

2.3.1 Viable grid connection

An energy storage system needs to be able to both import and export energy to the grid network. Due to the issues facing the grid network (discussed in Section 2.4 below), the availability of sites where the required amount of import and export capacity is available is diminishing.

The existing electrical substation at Rasharkin has a viable amount of both import and export capacity available which RES hope to secure through a grid application following planning consent. Identifying a substation which can provide a viable grid connection was the first step to selecting this site.

2.3.2 Proximity to substation

Energy storage systems need to be located as close as possible to the substation from which its grid connection is provided in order to limit electrical losses and ensure greater efficiency of the system. The distance between potential energy storage sites and the nearest suitable grid connection is often a major barrier to the deployment of renewable and low carbon energy due to the high costs involved and the electrical losses which occur. The longer the distance, the higher the cost and losses and the larger the environmental impacts, rendering many projects unviable.

Identifying suitable land as close as possible to the existing Rasharkin electrical substation was therefore the second step in selecting this particular site. This is a key factor in the choice of location for the proposed development.

2.3.3 Availability of land

An energy storage system of this capacity requires an area of land of at least approximately 5 acres to accommodate the batteries and supporting electrical infrastructure. Land of this size, as close to the substation as possible, which is free from other development, constraints and obtainable from a third-party landowner is required. Additional space for drainage, landscaping and access is also required.

Land around the Rasharkin substation was therefore assessed with regard to its size and availability. The selected site provides ample space for a storage development of this size and is free from any other forms of current or future development. Alternative site locations surrounding the Rasharkin substation were deemed unsuitable due to identified constraints including but not limited to: drainage issues, constrained space, noise impact, access issues and topography issues.

2.3.4 Environmental and policy constraints

Energy storage systems, where possible, should avoid being sited on land which are designated for landscape, heritage, ecological or other environmental reasons, or on land where development is restricted by local planning policy.

This particular site has been chosen as it is not located within any statutory designated areas for landscape, heritage or ecology. Nevertheless, care has been taken to ensure that the system is designed sensitively to ensure that any effects upon the area are reduced as far as practicable through designing a significant landscaping scheme to reduce any potential ecological, heritage and visual impact of the proposal.

2.3.5 Other considerations

When a site with all the previous factors considered has been identified, several other environmental and technical constraints must be assessed. These include, but are not limited to:

- Proximity to existing overhead lines and underground utilities
- Ground conditions
- Distance to nearest residential properties
- The existence of any protected species
- The flood risk status of the site
- Ease of access

An alternative location around the Rasharkin substation was considered however was later ruled out due to several constraints, such as existence of existing solar farm and overhead electricity cables, flood risks, topography concerns and access issues.

This specific site has therefore undergone rigorous assessment to ensure that it is suitable to accommodate the development of an energy storage system. Given the unique locational advantage of site being located near the required existing electrical infrastructure and lack of constraints, the site is considered particularly suitable for this type of development. Alternative sites surrounding the connection point at Rasharkin substation were considered but later excluded due to a lack of suitable land, environmental designations and physical site constraints. It is our view that the proposed site is therefore the best possible location for the proposed development.

2.4 Need for the Development

2.4.1 Overview

Energy storage systems (ESS) have been identified as an effective method for storing energy in moments of oversupply and releasing energy back into the grid during times of high demand. As well as this, energy storage systems are used to maintain grid frequency within normal operating limits. In Northern Ireland, the existing Battery Energy Storage Systems (BESS) such as Castlereagh Storage Unit, Kells Battery Storage and Kilroot Battery already enhance the grid significantly. However, more battery installations are required as part of grid modernisation efforts.

2.4.2 Advantages

Unlike conventional power stations, which can only supply power, energy storage systems can both supply and store power for use when it is needed, effectively doubling their resource value to the grid. Batteries can provide power in less than one second and can be rapidly deployed, unlike large, centralised power stations, which take years to plan, develop, and construct.

2.4.3 Emissions Reduction

Conventional power stations often serve as peaking plants or provide grid support services. These functions can be replaced by energy storage projects, significantly reducing carbon dioxide emissions. Energy storage systems the integration of additional renewable energy generation, which might not have been possible otherwise. Thus, energy storage enhances the ability to harness renewable energy resources, making them a larger part of the energy mix. Although there is significant potential to deploy more renewable assets in Northern Ireland, grid capacity constraints exist. Energy storage is crucial for unlocking renewable capacity and improving the environmental sustainability of electricity production.

2.4.4 Economic Benefits

Experience across the EU shows that battery storage can provide grid system services at a lower cost than traditional power stations. Energy storage reduces the cost of essential grid services and physical infrastructure, leading to cost savings for energy users and a more competitive and resilient economy. The existing transmission network is designed to transfer power from large power stations, and the overhead line network has developed accordingly. Locating a BESS near Rasharkin substation reduces the need for new overhead lines, which are often unpopular and expensive. This represents a significant financial saving and avoids the environmental impacts associated with new overhead lines.

2.4.5 Security of Supply

Energy Storage Systems reduce reliance on large, centralised power stations, enhancing resilience to severe local events that could impact a large power generator station. BESS facilities support the development of more indigenous renewable energy assets, reducing dependence on imported fossil fuels and positively impacting security of supply.

Energy Storage Systems will play a crucial role in providing a secure and sustainable electricity system in Northern Ireland now and in the future. These systems must be developed at strategic locations within the existing infrastructure.

Energy storage is an essential new element in the electricity network. It will be a key part of ongoing grid modernisation, accommodating intermittent renewable energy sources and the need for a more efficient network. The proposed site is strategically placed to give benefit to the existing electricity network, making it both necessary and optimal.

3 Screening & Pre-Application Consultation

Prior to the submission of this application, conversations with Causeway Coast and Glens Borough Council were undertaken, via a Pre-Application Discussion application which was submitted on 29th February 2024. During this process, a number of key points, relevant policies and potential issues were discussed which informed the progression of the development. It must be noted that a Section 26 application does not apply to BESS development; this type of development does not meet a threshold of development prescribed for the purpose of section 26(1) of the Planning Act (Northern Ireland) 2011.

However, as this application does fall under that classified as a major development there is a requirement for any pre-application consultation. As the site falls under Category 9 of The Planning (Development Management) Regulations (Northern Ireland) 2015 and exceeds 1 hectare in size it is classified as a major development. A full Pre-Application Community Consultation Report accompanies this application.

A review of The Planning (Environmental Impact Assessment) Regulations (Northern Ireland) 2017 regulations was undertaken and accompanies this application. An initial EIA screening was carried out and concluded that this type of development does not fall within any development defined under Schedule 1 or 2 in The Planning (Environmental Impact Assessment) Regulations (Northern Ireland) 2017. As such an EIA or environmental statement is not required as this time.

4 Planning Policy Appraisal

4.1 Introduction

The reports/documents which accompany this application were all prepared with the relevant planning policies in mind. This section of the planning statement summarises the relevant policies and how they relate to this development.

4.2 Policies

4.2.1 Planning Act Northern Ireland 2011

Section 45(1) of the Planning Act (NI) 2011 requires in dealing with an application, to have regard to the local development Plan (LDP), so far as material to the application, and to any other material considerations. Section 6(4) requires that the determination of proposals must be in accordance with the LDP unless material considerations indicate otherwise.

4.2.2 Northern Area Plan (NAP) 2016

For this proposed Energy Storage System, the current Plan comprises the Northern Area Plan 2016, adopted in 22nd September 2022, however this is now outdated and a new Local Development Plan is being prepared.

4.2.3 Causeway Coast and Glens Local Development Plan

The Causeway Coast and Glens Local Development Plan is currently being prepared to replace the Northern Area Plan 2016. At the time of writing, the Council had hoped to have had the draft plan strategy adopted but this is not the case. Consequently, whilst the draft Plan would be a material consideration, it would hold little determining weight. During this transitional period, Planning Policy Statements identified in the Strategic Planning Policy Statements (SPPS) document apply.

4.2.4 Regional Development Strategy (RDS) 2035

The Regional Development Strategy (2035) for Northern Ireland serves as a strategic planning framework to facilitate and guide both public and private sectors, and is integral to decisions on individual planning applications. The RDS states the following:

> *"Transport, agriculture and energy supply are the main contributors to greenhouse gas emissions…… Climate change is widely accepted as a major environmental threat with increases to annual rainfall and average temperatures potentially impacting on species and habitats."*

The RDS outlines two types of Strategic Guidance;

- **Regional Guidance (RG)** - This applies to everywhere in the region and is presented under the 3 sustainable development themes of Economy, Society and Environment.
- **Spatial Framework Guidance (SFG)** - This is additional to the region-wide guidance and is tailored to each of the 5 elements of the Spatial Framework.

The Regional Guidance sections are broken down into 12 subheadings which are all captured under the headings Economy, Society and Environment. Three of these twelve RGs seem particularly relevant to this proposal:

RG5 - Deliver a sustainable and secure energy supply.

"Northern Ireland needs a robust and sustainable energy infrastructure. This should deliver reliable and secure sources of energy to communities and businesses across the region. New generation or distribution infrastructure must be carefully planned and assessed to avoid adverse environmental effects..... Decision makers will have to balance impacts against the benefits from a secure renewable energy stream, and the potential for cleaner air and energy for industry and transportation."

RG5 also outlines 5 key points, 4 of which are relevant to this proposal and outlined below:

- "Increase the contribution that renewable energy can make to the overall energy mix - There will need to be a significant increase in all types of renewable electricity installations and renewable heat installations, including a wide range of renewable resources for electricity generation both onshore and offshore to meet the Regions needs."
- "Strengthen the grid - With an increasing number of renewable electricity installations as well as increasing numbers of renewable heat installations we will need to strengthen the grid. It will be necessary to integrate heat and electricity infrastructure (e.g. district heating networks and new electricity grid) alongside new road infrastructure development at the planning stage. If electric transport becomes more widespread, there will need to be a reliable recharging network. It also means increasing electricity interconnection capacity to strengthen the linkages between transmission and distribution networks"
- "Work with neighbours - This will ensure a secure energy supply from competitive regional electricity and gas markets in the EU's Internal Market"
- "Develop "Smart Grid" Initiatives - This will improve the responsiveness of the electricity grid to facilitate new forms of renewable generation, to improve reliability, productivity, and energy efficiency and empower customers to make a more informed choice in relation to their energy usage."

The proposed battery energy storage development would help in all of these key points. By storing energy at times of oversupply and dispatching energy to the grid in times of high demand, it can help facilitate an increase in energy contribution from renewable sources on the grid. The battery storage system would allow for better management of the grid and generally add to the network's robustness and strength during times of high constraint. Battery systems can help with the various challenges faced in managing power flows, allowing efficient operation of the power system through frequency response services, energy arbitrage and other essential services to manage power system operations. Overall, the proposal would serve to improve the electrical network in Northern Ireland and make for more efficient, stable and smart use of energy generation.

RG9 - Reduce our carbon footprint and facilitate mitigation and adaptation to climate change whilst improving air quality.

"Climate change is increasingly seen as one of the most serious problems facing the world. Air pollution from particulate matter is currently estimated to reduce the life expectancy of every person in the UK by an average of 7-8 months…….it is important that Northern Ireland plays its part by reducing air pollution and greenhouse gas emissions and preparing for the impacts of climate change. These include the effects on species and habitats and on health as a result of warmer temperatures, storms, floods and coastal erosion."

"Consideration needs to be given on how to reduce energy consumption and the move to more sustainable methods of energy production. The use of fossil fuels and greenhouse gas emissions can be reduced by recycling waste and recovering energy from it"

RG9 outlines several mitigation aims, several of which are relevant to this development:

- Increase the use of renewable energies.
- Utilise local production of heat and/or electricity from low or zero carbon energy sources.
- Develop strong linkages between policies for managing air pollution and climate change.
- Protect Air Quality Management Areas.

The proposed development would help to achieve all of these mitigation aims. The battery system would allow for more efficient use of renewable energy sources on the system and in turn help to reduce pollution, carbon footprint and the impacts of climate change.

RG9 also outlines adaption aims, one of which is particularly relevant to this development:

- Protect and extend the ecosystems and habitats that can reduce or buffer the effects of climate change.

RG11 - Conserve, protect and, where possible, enhance our built heritage and our natural environment.

The technical assessments outlined in section 5 of this statement summarise how the proposed development will have a minimal impact to the heritage of the area and will have a net benefit to biodiversity.

4.2.5 Strategic Planning Policy Statements (SPPS)

The Strategic Planning Policy Statements are material to all individual planning applications and decisions throughout Northern Ireland. It has set out transitional arrangements in the event of conflicting policy, which must be resolved in favour of the SPPS. The SPPS seeks to "facilitate the development of infrastructure" such as this Battery Energy Storage System in an efficient and effective manner provided the environmental impacts are kept to a minimum. It is noted that the proposed development does not conflict with the SPPS. The SPPS requires that social, environmental and economic benefits are taken into consideration for all development proposals.

Paragraph 2.1 of the SPPS outlines the overarching planning objective as follows:

"The planning system should positively and proactively facilitate development that contributes to a more socially and economically and environmentally sustainable Northern Ireland"

Paragraph 3.7 of the SPPS goes on to state the following in reference to the strategic infrastructure developments detailed by RDS:

> *"Furthering sustainable development also means ensuring the planning system plays its part in supporting the Executive and wider government policy and strategies in efforts to address any existing or potential barriers to sustainable development. This includes strategies, proposals and future investment programmes for key transportation water and sewerage, telecommunications and energy infrastructure"*

Paragraph 3.8 of the SPPS outlines a guiding principle for planning authorities in determining applications as follows:

> *"Sustainable development should be permitted, having regard to the development plan and all other material considerations, unless the proposed development would cause demonstrable harm to interests of acknowledged importance."*

In terms of Climate change, the SPPS states that a proactive approach is required to tackle this, where possible mitigation and adaptation must be considered. The SPPS indicates the importance of the Planning System and the part it plays in aiding the Executive and wider government policy and strategies to try and further sustainable development.

It is clear that the proposed development aligns with the aims and objectives outlined in the SPPS, wherein there are no conflicts with policies.

4.2.6 Planning Policy Statement 2 – Natural Heritage

Planning Policy Statement 2 sets out the planning policies in relation to the conservation, protection and enhancement of our natural heritage. Natural Heritage is defined as *"the diversity of our habitats, species, landscapes and earth science features"*. There are a number of policies listed within PPS 2 aimed at the conservation of sensitive habitats and species. The site is not located within an European and a Ramsar site nor is the site located within an Area of Outstanding Beauty therefore NH 1 and NH 6 would not apply to this proposal.

An Ecological Impact Assessment (EcIA) has been completed and is summarised in Section 5.2 of this report. The EcIA concludes that the site is hydrologically linked to a number of designated sites however isdownstream of such sites. Given the separation distance between the proposal and such sites, the project is unlikely to have a significant impact on such sites; mitigation measures during construction can be put in place to aid this.

In terms of priority habitats, there was little to no evidence of such within the site. However, the implementation of the mitigation and enhancement measures as set out will ensure a Significant Positive Effect for biodiversity at a site level with a net gain in habitats of wildlife value in a rural environment.

The EcIA recommends a handful of sensible mitigation measures to ensure that this remains the case throughout construction and operation. The proposal therefore complies with Policy NH 2 and NH 5. The site is also not located within or adjacent to any National or Local sites of Nature Conservation Importance and will therefore have a no impact upon these areas, conforming with Polices NH 3 and NH 4.

The findings of assessments have shown the proposal to be in full compliance with the remaining relevant policies contained within PPS 2 with reasonable mitigation measures proposed where needed.

4.2.7 Planning Policy Statement 3 – Access, Movement and Parking

Planning Policy Statement 3 sets out the Department's planning policies for vehicular and pedestrian access, transport assessment, the protection of transport routes and parking. The proposal does not require provision of new car parking or cycle provision, and will not be accessible to the public, therefore the majority of policies within PPS 3 do not apply here.

The proposed access to the site will create a new entrance onto the Magheraboy Road. Visibility splays of 90m can be secured from both directions with no major enabling works and, during construction, measures will be in place to ensure that mud and debris is not spread onto the adjacent public highway. These measures, and more, are documented in the supporting Transport Statement, in compliance with Policy AMP 6, which demonstrates that use of this site entrance will not prejudice road safety, in line with Policy AMP 2. There is no proposed access onto a protected route therefore no conflict with AMP 3.

4.2.8 Planning Policy Statement 6 – Planning, Archaeology and the Built Heritage

Planning Policy Statement 3 sets out the Department's planning policies for the preservation of archaeological remains of the local and regional level. An assessment of the archaeological assets was completed, wherein the assessment provided the significance of the historic environment, as such it is concluded that there is no conflict with both BH1 and BH2 of PPS 6.

I note that within the archaeological and cultural heritage assessment revealed that there was one anomaly, wherein a geophysical survey was completed. It concluded that this anomaly is likely to be natural, as such, no conflict with BH3. Furthermore, it is considered that this proposed development is in compliance with PPS 6.

4.2.9 Planning Policy Statement 15 – Planning and Flood Risk

Planning Policy Statement 15 provides policies relating to flooding and drainage issues, seeking to minimise flood risk to people, property and environment. As per policy a flood risk and drainage assessment has been completed as part of this application and is summarised in Section 5.5 of this document. It is noted that the proposed development is located outside of the 1% AEP +CC fluvial floodplain, with relevant mitigation measures it concluded no conflict with FLD 1. In terms of FLD 2, an adequate maintenance strip from the watercourse has already been provided as such the development is in compliance with this part of the policy.

The proposed development drainage design has been completed to ensure that the site drained and flood resilient, and follows the requirements of DFI in relation to flood protection standards on the site and elsewhere. Ensuring that runoff shall be limited to the greenfield equivalent rate and shall not affect flooding elsewhere. Consent to discharge to the undesignated watercourse adjacent to the site has already been received from DFI Rivers. This development is therefore in line FLD 3 requirements.

With regard to FLD 4, The proposed culvert for access is a permissible exception to FLD4. The report has concluded that the proposal to cause no adverse effect to flooding elsewhere and complies with DFI Rivers standards in relation to capacity and freeboard.

The assessment concludes that the site is at low risk of flooding and includes the details of a proposed SUDs scheme which will ensure that the proposal will not exacerbate the flood risk of the site itself, or areas beyond the site, in compliance with Policy FLD 1, 2 3 and 4. FLD 5 do not apply to this proposal. The

supporting assessment demonstrates that there is no conflict with any policies contained within Planning Policy Statement 15.

4.2.10 Planning Policy Statement 18 – Renewable Energy

PPS 18 sets out the policies for development that generate energy from renewable sources, demonstrating the need for renewable energy projects and how important they are whilst ensuring there must be a balance against their benefits and the potential environmental harm of such projects. Policy RE1 is relevant to all renewable energy projects. Policy RE1 – Renewable Energy Development states that development that generates energy from renewable resources will be permitted provided the proposal, and any associated buildings and infrastructure, will not result in an unacceptable adverse impact on:

- public safety, human health, or residential amenity;
- visual amenity and landscape character;
- biodiversity, nature conservation or built heritage interests;
- local natural resources, such as air quality or water quality; and
- public access to the countryside.

It is noted that whilst this proposal does not generate electricity, the aim of this proposal is to stabilise the grid to facilitate the integration of more renewable technologies on to the grid, in turn helping Northern Ireland to meet its energy targets. The proposed development has been designed to ensure that there is minimal to no impact to public safety, human health and residential amenity. A full Acoustic Impact Assessment has been submitted to demonstrate that the proposal is unlikely to result in 'nuisance' to neighbouring amenity. A full Landscape and Visual Assessment has also been submitted which concludes that the proposal will have no significant impact on landscape character or visual amenity, with any potential impacts being limited and highly localised. An Ecological Impact Assessment (EcIA) accompanies this planning application which summarises that the proposal will not cause any unacceptable impact to flora or fauna and outlines ecological mitigation measures and biodiversity enhancement measures. The report concluded that the development would have an overall net benefit to biodiversity which conforms with the requirements within Policy RE1. Given the nature of the development, it is unlikely to result in an adverse impact on any local natural resources. Finally, there is no conflict with public access to the countryside.

It should also be highlighted that policy RE1 also states that *"Proposals will be expected to be located at, or as close as possible to, the source of the resource needed for that particular technology…"*. This proposal has therefore been located as close as possible to the existing Rasharkin electrical substation, which is the point at which the proposal will connect to the grid network, with the substation also being the source of resource needed. Overall the proposal is in compliance with PPS 18, specifically policy RE1.

4.2.11 Planning Policy Statement 21 – Sustainable Development in the Countryside

Within Planning Policy Statement 21, CTY 1 'Development in the Countryside' applies. CTY 1 sets out a range of development types that are acceptable within the countryside, that contribute to the aims of sustainable development. The policy goes on to say that there are a *"range of other types of non-residential development that maybe acceptable in the countryside, e.g. certain utilities or communications development. Proposals for such development will continue to be considered in accordance with the existing published planning policies"*. In this case the most relevant policies are PPS 18 and the Planning Strategy for Rural Northern Ireland 1993, both of which have been discussed above.

However, all development within the countryside may be able to comply under CTY 13 and 14. CTY 13 states that *"Planning permission will be granted for a building in the countryside where it can be visually integrated into the surrounding landscape and it is of an appropriate design."* CTY 14 states that *"Planning permission will be granted for a building in the countryside where it does not cause a detrimental change to, or further erode the rural character of an area".*

With regards to CTY 13 and 14, the site has been chosen to ensure that it will not appear as a prominent feature in the landscape, given the undulating landform around the site which acts as a backdrop for the proposed development. A full Landscape and Visual Assessment has been submitted in support of this application and concludes that the proposed development will not have a significant impact on landscape character or visual amenity, demonstrating compliance with these policies. To support compliance with CTY 1, 13 and 14, additional planting and landscaping has been proposed in the supporting Landscape mitigation plan, to ensure that the proposed development is well screened from surrounding visual receptors, integrates well into the surrounding area and does not harm the rural character of the area.

4.2.12 Planning Strategy for Rural Northern Ireland 1993

A number of policies within the Planning Strategy for Rural Northern Ireland 1993 have been subsequently replaced with more modern and up-to-date policies. The only remaining relevant policy within this document is Policy PSU8: New Infrastructure. The policy states *"the need for new infrastructure including extensions to existing facilities will be balanced against the objective to conserve the environment and protect amenity".*

PSU8 outlines a list of criteria that is to be considered for all new infrastructure;

- Need for the system
- Impact on the environment
- Impact on existing communities
- Impact on natural and man-made heritage
- Existence of alternative or routes
- Provision to mitigate adverse impacts.

The need for this proposal has already been established in earlier sections of this document; the proposal is crucial for stabilising and strengthening the existing electricity network. The proposed battery storage system has been carefully situated to provide the required support services to the existing Rasharkin substation and existing grid infrastructure in the area.

Relevant assessments have been completed and provided within section 5 of this report, in relation to visual, ecological, heritage, transport, noise and flood risk. The site has been carefully chosen to ensure that there is minimal to no adverse impacts on the wider environment with appropriate mitigation measures added where necessary to alleviate any potential harm.

The site has been chosen to have minimal impact on neighbouring amenity; the closest receptor is 180m away from any proposed equipment. The Acoustic Impact Assessment demonstrates that during both the daytime and night-time, the predicted impact is low at all houses. Therefore, no adverse impacts are predicted to occur at any time of day.

An assessment of the proposed development's potential impacts on cultural heritage and archaeology has been completed and accompanies this application. The assessment has not identified anything that would preclude development within the site, in principle, in relation to cultural heritage or archaeology.

A summary of the site section process can be found in section 2.3 of this statement and a summary of all technical assessments can be found in section 5. The proposal has been found, in all cases, to comply with Planning Strategy for Rural Northern Ireland 1993.

4.3 Material Considerations

4.3.1 Energy futures documents from SONI 2030

The reportpredicts a scenario where 625MW of energy storage is required on the network by the year 2030. Systems such as this proposal help in reaching these quantities of energy storage on the system. The first key message outlined in SONI's "Shaping Our Electricity Future Roadmap Version 1.1" states;

"As electricity can be generated and transmitted without carbon emissions, it will play a crucial role in our response to climate change. The Ireland and Northern Ireland governments have asked EirGrid and SONI to develop a Roadmap to capture their elements of that challenge".

Key message 3 of the Roadmap highlights the urgency needed in improving the grid. It reads;

> *"The scale of the challenge is without precedent. Whilst EirGrid and SONI have an important role to play, the entire electricity ecosystem also needs to deliver."*

Following this statement the report outlines a non-exhaustive list of deliverables, one of which reads the following:

> *"Delivery of enabling solutions such as sources of system flexibility, demand side management, long duration storage, low carbon technologies amongst others".*

Key message 10 of the report also gives mention to the need for energy storage on the network:

> *"The Roadmap recognises the strategic deployment of energy storage technologies in constrained regions of the network."*

This proposal provides an opportunity to support innovative technology, contribute towards renewable energy targets, ensure a secure electricity supply to its population and play its part in reducing electricity costs for consumers.

4.3.2 Socio-Economic Benefit

Whilst the wider socio-economic benefit of renewable and low carbon developments such as this are widely accepted and acknowledged by the policies discussed above, the development also has the potential to generate a range of economic opportunities for local businesses through the construction activities required for the development as well as throughout the supply chain and during decommissioning.

Locally sourced materials and services will be preferred where possible, however this is subject to competitive tendering and is often constrained by the specialist nature of the equipment. However, there remains several benefits and opportunities for the local area including:

- Increased local spending in the area during construction and decommissioning. This includes, but is not limited to, increased spending on local accommodation, building material stores, food outlets and fuel stations.
- The use of local services for activities such as:
    - Pre-construction site investigation
    - Haulage and delivery
    - Landscaping and maintenance
    - Fencing
    - Tool servicing
    - Stone, concrete and other quarry products
    - Security
    - Cleaning services

Employment opportunities created down the supply chain by those providing these services to the development during construction and decommissioning.

4.4 Summary of Planning Policy Appraisal

As evidenced in this section and the supporting documents, the proposed development will comply with the relevant legislation and planning. Importantly, it draws support from the Regional Development Strategy given its objectives relating to promoting low carbon and sustainable development. The proposed development will not create any significant or unacceptable adverse effects on biodiversity, transport, flood risk, landscape, amenity and other sensitive environmental assets; it represents the best use of the site given its unique locational advantage in close proximity to the Rasharkin Electrical Substation which has been identified as a suitable connection point. It has been developed with location, design and operational requirements in mind and has been coordinated with other infrastructure in the local area. Consequently, the proposed development's compliance with the development plan has been demonstrated.

5 Technical Assessments

A number of supporting technical assessments have been carried out to support this full planning application. They have been submitted alongside this document, however, a summary of each of these is provided here.

5.1 Landscape and Visual

A Landscape and Visual Assessment (LVIA) has been completed by RPS Ltd. in order to consider the site and its surrounding context in both landscape and visual terms, to assess the potential effects of the proposed energy storage system upon landscape features, landscape character and visual amenity. This assessment was completed via a desk study analysis of the site and its policy context, as well as site visits to gain an appreciation of the landscape and visual context of the site. Alongside the LVIA, a detailed Landscape Mitigation Plan along with a series of photomontages has been completed and included within the assessment.

Overview

The site comprises of two fields used for agricultural grazing land, ca. 5.9hectares (ha), with the access to the site proposed from its north-eastern edge, off Magheraboy Road. The site lies within the administrative area of Causeway Coast and Glens Borough Council.

An assessment of both the Northern Ireland Regional Landscape Character Assessment and the Northern Ireland Landscape Character Assessment 2000 indicates that the site sits wholly within Lower Bann Valley – RLCA 15 and LCA 52 respectively. In the wider context of the site, the proposed site is located to the west of a long ridge of land known as Long Mountain. Long Mountain stands isolated from the Antrim Plateau in a north-south alignment overlooking lowland floodplains to the east and west, namely River Main and River Bann. Rasharkin is located west of Long Mountain on slightly elevated drumlins above the lowlands. Overhead lines do cross the landscapes within the study area. Throughout the wider area, scattered residential development is prominent in the landscape.

Proposed development and landscape strategy

It has been considered that there are to be no significant landscape or visual effects predicted as a result of the proposed development, a number of soft landscape interventions have been included within the overall proposal to aid the integration of the development into the surrounding landscape context.

The aim of the landscaping is to retain and protect existing field boundary vegetation and landscape features to therefore aid integration of the Proposed Development and associated infrastructure physically and visually into the surrounding landscape. In addition, aim to provide suitable screening to reduce visual elements of the proposed development, particularly in views from close residential receptors.

Landscape mitigation proposals include:

- Retention of existing hedgerows, trees, shelterbelt planting and roadside vegetation on peripheral and internal boundaries in accordance with BS5837:2012 Trees in relation to design, demolition, and construction; and

- Selection of locally appropriate deciduous trees and hedge species will be made to ensure successful plant establishment and to maintain and increase biodiversity whilst providing visual screening of the proposed development year-round; and
- Landscape planting and habitat enhancement in respect of landscape and ecological mitigation.

As well as providing the intended filtering and screening of views towards the proposed development, all of the proposed planting has been designed to fit with the local landscape character and vegetation patterns.

Landscape Character Effects

The proposed development would result in the conversion of a parcel of agricultural land to a BESS and associated ancillary infrastructure. The changes to the physical landscape resources are limited to the site and limited to the landform and land use. The impacts on landform will not be of a sufficient scale to alter the overall profile of the localised area, nor would the change in land use form a notable disturbance to the wider pattern of agricultural use.

Mitigation inherent in the proposed development will reduce the influence of this over a relatively short timescale. It's important to note that the proposed development is not limited to the adverse impacts of the built elements of the BESS and its infrastructure, but also include positive elements in respect of the contribution to landscape character in the form of hedgerow, tree belts, scrub planting and wildflower grasslands.

The assessment of impacts on landscape character has determined that the significance of effect on both the RLCA 15 – Lower Bann Valley and LCA (52) Lower Bann Valley will be Minor, localised temporary adverse and not significant during the construction phase. Once operational, it has been categorised for both to be Minor localised, medium-term, reversible effects assessed as not significant, prior to the successful establishment of planting are predicted to be experienced during the initial operational phase. Predicted effects reduce to negligible to minor, localised, long-term and reversible following successful establishment of planting proposed as part of the development and have been assessed as not significant.

The proposed development is to have no impact on any AONBs, Special Protected Area, Special Area of Conservation, Historic Parks and Gardens, The Ulster Way or Way Marked Trails.

Overall, this level of impact and effect in terms of the landscape character, particularly given the limited context and containment of the site, is not considered to be significant overall.

Visual Effects

Overall, views of the site, and likely direct views of the proposed development, are restricted to a relatively limited area, including the site itself and from locations in the immediate context of the site. There are some views from the wider landscape context but the site and proposed development will not form prominent components in these long distance views.

A series of 5 representative viewpoints have been selected to illustrate the existing visual context of the Proposed Development and as an aid to the visual impact assessment. All of the viewpoints have been located on publicly accessible roads, footways and verges within the study area. It is noted that all 5 viewpoints during the construction phase were either deemed to have a negligible to minor or just a minor impact that is localised and temporary. In terms of operational phase, again all viewpoints were considered to have a

negligible to minor impact in the short term. However, once the successful establishment of planting the significance of visual effect is considered to reduce to negligible, long term, reversible, assessed as not significant.

The assessment of the existing environment and the impact of the Proposed Development on visual receptors has established that there will be no protected views or scenic views significantly affected by the Proposed Development. Nor is any important views from visitor amenity areas or tourist sites significantly affected by the Proposed Development due intervening topography, vegetation, and distance of potential views.

As part of the of visual effects assessment associated with the Proposed Development, an assessment of the predicted visual impacts on residential properties that occur within 500 m of the Proposed Development has also been undertaken. It is concluded that dwellings beyond 500m of the proposed development will have reduced impact due to intervening hedgerows, trees and topography. This will decrease the visibility of the Proposed Development and it is absorbed into the landscape and no significant visual effects are predicted for properties beyond 500m.

There are some residential properties in the area surrounding the proposed development site that have been identified as having the potential to experience views of the Proposed Development. It has been concluded that these will have a limited visibility and as such the predicted visual effect would be deemed as minor and not significant.

Consequently, visual effects are not considered to be significant overall.

Overall, it is considered that the proposed development incorporates a robust landscape mitigation strategy that is included as an inherent part of the scheme. This will avoid or minimise potential adverse effects. Consequently, landscape and visual effects arising from the proposed development, even where these are higher in the short term, remain limited and highly localised overall.

5.2 Ecology

An Ecological Impact Assessment (EcIA) and Shadow Habitats Regulation Assessment (sHRA) has been completed by RPS Ltd. The EcIA consists of a desk study of the site and surrounding area as well as an Ecological Appraisal walkover of the site extent to map existing habitats and identify signs of any protected or notable species. The screening assessment examines the likely effects of the project, either alone or in combination with other projects or plans, upon European sites and considers whether it can be objectively concluded that the effects will not be significant.

Designations

The site is not located within any statutory or non-statutory designated sites, however it is hydrologically linked to Bann Estuary SAC, Magilligan SAC and Skerries and Causeway SAC. Given the distance between the site and such designations it is concluded that the proposed project will not give rise to significant effects on the qualifying features of any European site; and will not give rise to significant in-combination effects with the other plans or projects.

Habitats

Almost the entirety of the site is classified as improved grassland used for sheep grazing covering and was assessed as having an ecological value at the site level only.

Protected Species

The EcIA found that the site had little evidence of, and little value for several protected species including amphibians, invertebrates, badgers and Irish hare. Trees within the study area were subject to a GLTA to identify Potential Roosting Features (PRFs) and determine the potential suitability of trees to provide roosting habitat for bats. A single dead ash tree was classified as "Further Assessment Required" (FAR). However a suitable buffer was proposed and the development has been designed to keep clear of this buffer.

The NBN Atlas NI (NBN Atlas Partnership 2021) identified no historical records of birds, badgers, otters within 1 km of the site, as such both badgers and otters were removed from this assessment. It was noted that the site has potential to provide habitat for an assemblage of common and widespread breeding bird species associated with scrub and hedgerow / treeline habitats bordering the site. Again, there is a sufficient buffer from any trees and the developed area to ensure that no impacts occur.

Biodiversity Enhancement

Further to the EcIA, RES are committed to good ecological practices and enhancing biodiversity within and around developments. The EcIA and Landscape Masterplan outline the ways in which the proposal incorporates habitat creation and enhancement measures, such as:

- Native meadow seed mix used on remaining grassland areas.
- Creation of a pond or similar semi-natural wetland feature with native fringing vegetation.
- Managing grassland areas as meadows, by mowing only once per growing season and removing cuttings
- Existing hedgerows to be retained and maintained.
- Introduction of bird boxes, artificial bat roosts.

With the implementation of these, the potential of the site to support local wildlife will increase and the proposed development is likely to lead to a significant positive effect on biodiveristy.

5.3 Heritage

An assessment of the proposed development's potential impacts on cultural heritage and archaeology has been completed by John Cronin. The assessment considers potential impacts on designated historic assets within the surrounds of the Site, via a change in setting. The Assessment provides information with regards to the significance of the historic environment to fulfil the requirement given in Section 6 of the Government's Strategic Planning Policy Statement.

Within 500m of the proposed site, 2 enclosures (one to the north and the other to the south of the site) and 7 Industrial Heritage sites (all located to the north of the site) were identified within the study area, however no assets were identified within the site. The assessment concluded that none of the assets listed are likely to have any predicted impact as a result of the proposed development.

In addition, the subject site is bounded to the south by the historic townland boundary of Magheraboy and Moneyleck. The boundary has been in existence since at least 1840 and are therefore noteworthy due to its antiquity. It is expected that this boundary will be retained during the proposed development.

It was noted that after a review of recent aerial photography, that a possible circular cropmark was identified within the site. The cropmark has a diameter of c.75m which would be unusually large for an enclosure, however, given the uncertainty, it was recommended that a geophysical survey be carried out prior to any development at this site.

Prior to submission, the geophysical survey was completed by Archaeological Management Services (AMS). Initial views from the survey were there were a number of potential features, however most of these were field drains only. The anomaly that John Cronin's report identified on aerial photography is present, but its a very weak contrast. As such it was concluded that this is likely to be natural. As per developments of this kind, test trenching can be secured via a condition, if felt necessary.

In summary, the assessment has not identified anything that would preclude development within the site, in principle, in relation to cultural heritage or archaeology.

5.4 Noise

An assessment in accordance with BS 4142: 2014 has been undertaken and submitted in support of this application (see “Assessment of Acoustic Impact for the Proposed Machaire Battery Energy Storage System”) in order to determine the acoustic impact of the proposed development.

Causeway Coast and Glens Borough Council do not have any specific planning guidance in relation to operational sound from new sound generating development. However, the Environmental Health Department were contacted to present and agree the extent of the acoustic assessment, as used in the assessment. This included reference to the BS4142 assessment methodology as being appropriate for use, the scope out of any assessment of cumulative operational sound impacts with other development in the area and the agreement of suitable measurement locations at or near to properties neighbouring the proposed development.

The predominant sources of sound to be introduced as part of the Proposed Development are the inverters/power conversion system (PCS) units, attached transformers, battery storage containers and substation transformer(s). The site has been designed on an iterative basis with a view to minimising, as far as practicably possible, the projected operational sound levels with due regard to the relative sensitivity of neighbouring premises and all other site constraints.

Predicted rating levels at 6 nearby properties are detailed within the assessment. The assessment indicates that the predicted sound impact from the Proposed Development at the nearest neighbouring properties is negligible-to-low for daytime periods and low-to-minor during night-time periods. Furthermore, the generalised levels to minimise health effects, as set out within WHO guidance, would not be exceeded unless existing levels are already at or above the suggested thresholds.

Overall, based on the modelling assumptions and assessment results, the level of sound emitted by the Proposed Development can be considered negligible-to-minor according to criteria derived with reference to BS4142, low in the context of WHO guideline values and well below the NANR45 internal low frequency noise criteria. All levels identified in the report can be appropriately conditioned within any planning approval,

The assessment concluded that the acoustic impact of the proposed Machaire Battery Energy Storage System has been undertaken in accordance with BS 4142. During both the daytime and night-time, the predicted impact is low at all houses. Therefore, no adverse impacts are predicted to occur at any time of day.

5.5 Flood Risk and Surface Water Management

A Flood Risk and Drainage Assessment has been submitted alongside this application (see "Flood Risk and Drainage Assessment - Machaire BESS"). The assessment uses best practice and conforms with the requirements of the relevant regulatory authorities.

An assessment has included a detailed flood model that has better informed the assessment of the flood risk at the proposed site. It concludes that the proposed development has been sited outside of the fluvial flood event, as such, the proposal has been able to demonstrate that it will not cause an adverse effect of fluvial flood risk elsewhere. The proposed development is resilient to the effect of culvert blockage and that no other significant flood mechanism exists at the site. Management of run-off from the site is able to be provided via an adequate drainage system.

An assessment of the drainage options has also been undertaken, in accordance with the SuDS manual surface water drainage hierarchy, the surface water from the site will drain via infiltration. The design ensures that the drainage network/site layout can ensure that containment and control of the 1 in 100-year return period storm within the site to ensure no offsite effect elsewhere. It also allows for a 20% allowance for climate change rainfall event. The drainage strategy relies upon connection to the existing undesignated watercourse bounding the site, wherein DFI Rivers have already consented to this discharge.

The assessment concluded that the site is at low risk of flooding and will not exacerbate the flood risk of the surrounding area and that it is able to comply with the relevant policies and procedures.

5.6 Transport

A full Transport Statement has been submitted in support of this planning application. The document gives details of the anticipated traffic movements associated with the construction of the proposal as well as during construction phase and operational phase. It also assesses the suitability of the strategic road network to accommodate the development and provides the proposed transport route to the site.

• It is proposed that all equipment and construction material deliveries shall take the following route to site:

- Vehicles will follow A26;
- Vehicles will continue A26 onto Crankill Road;
- Vehicles will leave the Crankill Road onto the Station Road;
- Vehicles will continue on Duneany Road via Dunminning Road;
- Vehicles will leave Duneany Road onto the Finvoy Road and then Magheraboy Road;
- Vehicles will approach proposed site entrance from Magheraboy Road.

Throughout the construction phase there will be a combination of HGVs (for the component and material deliveries) and cars/vans (for construction staff), on site. HGV movements are expected to be most intense throughout the first few weeks of construction whilst car/van movements are expected to be constant throughout. An estimated number of deliveries and movements for the main infrastructure can be found in the full transport statement. Various managements tactics and mitigation measures are outlined in the

transport statement such as: traffic management, time restrictions, mud and pollution prevention measures, emergency and local services considerations.

6 Pre-application Community Consultation (PACC)

The Pre-Application Community Consultation (PACC) Report which is submitted with this application, outlines how RES has engaged with the local community to inform them on the Proposed Development.

The report explains how and when the community was consulted before the planning application was submitted to Causeway Coast and Glens Borough Council and how this consultation has shaped the Proposed Development.

The PACC Report summarises those activities undertaken, details how comments received from the community were considered and sets out if any consequent changes or mitigating measures have been included in the proposal.

The consultation activities described within this Report demonstrates how PACC has been undertaken in accordance with requirements in respect of same, set out in the Planning Act (NI) 2011, Regulation 5 of the Planning (Development Management) Regulation (NI) 2015 and other relevant guidance including Development Management Practice Notice 10 – Pre-Application Community Consultation.

In summary, a range of engagement and communication activity was undertaken as part of the pre-application community consultation - reaching both local stakeholders as well as audiences in the wider area. This activity included:

- Letters to elected representatives;
- Advertisement for the public exhibition in the local press;
- Newsletter informing local residents and elected representatives about the public exhibition;
- Public exhibition; and
- Project website information.

This form of pre-application community consultation is in accordance with The Planning (Development Management) Regulations (Northern Ireland) 2015.

RES engaged early with the local community to encourage a constructive consultation process and has undertaken all necessary statutory pre-application consultation. All feedback received during the pre-application consultation period, through all consultation activities, has been considered by the Applicant throughout the design iteration and pre-planning stages of the Proposed Development. A summary of feedback, issues and concerns raised, together with the Applicant's response to each can be found in the report.

7 Conclusions

This planning statement outlines the need for the proposed BESS development giving reference to relevant policy. The proposed development has a unique locational advantage being positioned near to the required electrical infrastructure at Rasharkin Substation, where there is available capacity to connect to the grid network. Every effort has been made to ensure that any impacts upon the surrounding area are kept to an acceptable level and the supporting technical assessments conclude that:

- Whilst some minor landscape impacts may be possible at nearby sensitive receptors, the total extent of the landscape and visual effects would be localised and limited in nature. The proposed landscaping and planting will significantly help to reduce any impacts and ensure they remain at an acceptable level.
- No observed adverse effect on health or quality of life would be expected due to noise from the proposed development.
- There will be no significant adverse effects on any statutory or non-statutory designated environmental sites as a result of the proposed development. With the implementation of the proposed mitigation measures, it is considered that there will also be no significant adverse effects upon protected or notable species. The proposed habitat creation and enhancement measures mean that the proposed development will lead to a positive effect on biodiversity.
- There will be no significant adverse effects on any designated or non-designated cultural heritage assets as a result of the proposed development. The potential for significant buried archaeological remains within the study site is also low. This has been confirmed by the geophysical survey completed.
- The development will not be at unacceptable risk of flooding, nor increase flood risk on or surrounding the site. A suitable SUDS has been proposed and will be implemented following further site assessment to manage surface water.
- No severe or otherwise unacceptable impacts on the safety or operation of the local highway network would be observed.
- The development aligns with the policy objectives outline in Regional Development Strategy (RDS) 2035 the Strategic Planning Policy Statement.
- The proposed BESS aligns with SONI's Shaping Our Electricity Future Roadmap Version 1 and will contribute to the necessary electrical grid improvements.

There is an urgent need for energy storage systems, such as this proposal, in order to facilitate the increased penetration of renewable and low carbon generation by providing critical flexibility services to smooth out the peaks and troughs of generation and demand, therefore ensuring continuity, security and decarbonisation of Northern Ireland's energy supply.

This application therefore must be viewed in the context of a national climate. It is considered that the significant benefits from this proposed storage development outweigh any limited local impacts which have

been satisfactorily mitigated by way of a carefully considered siting and design approach. It is therefore requested that Causeway Coast and Glens Borough Council grant planning consent for this crucial development without delay.

A.1 Schedule of Drawings, Reports and Documents

Drawing Number	Drawing Title
05511-RES-BAT-DR-PT-001	BATTERY STORAGE ENCLOSURE
05511-RES-BLD-DR-PT-001	SPARES STORAGE CONTAINER
05511-RES-LAY-DR-PT-001	INFRASTRUCTURE LAYOUT
05511-RES-MAP-DR-XX-001	SITE LOCATION PLAN
05511-RES-PCS-DR-PT-001	POWER CONVERSION SYSTEM & TRANSFORMER
05511-RES-SEC-DR-PT-001	TYPICAL SECURITY FENCE DETAILS
05511-RES-SEC-DR-PT-002	TYPICAL ACOUSTIC FENCE DETAIL
05511-RES-SEC-DR-PT-003	TYPICAL LIGHTING & CCTV COLUMN
05511-RES-SUB-DR-PT-001	AUXILIARY TRANSFORMER
05511-RES-SUB-DR-PT-002	HARMONIC FILTER
05511-RES-SUB-DR-PT-003	PRE INSERTION RESISTOR
05511-RES-SUB-DR-PT-004	CAPACITOR BANK
05511-RES-SUB-DR-PT-005	BESS CONTROL BUILDING
05511-RES-SUB-DR-PT-006	DNO SUBSTATION BUILDING
05511-RES-SUB-DR-PT-007	LV FEEDER PILLAR & AGGREGATION PANEL DETAILS

A.2 Schedule of Technical Reports and Documents

Report / Document	Author
Landscape and Visual Impact Assessment	RPS Ltd
Landscape Masterplan	RPS Ltd
Ecological Impact Assessment	RPS Ltd
Shadow Habitats Regulation Assessment	RPS Ltd
Heritage Statement	John Cronin
Acoustic Impact Assessment	RES Ltd
Fire Risk Statement	RES Ltd
Flood Risk and Drainage Assessment	McCloys Consulting
Transport Statement	RPS Ltd
Outline Construction Environmental Management Plan	RES Ltd
Pre-application Community Consultation (PACC) Report	RES Ltd