Planning, Design and Access Statement

Killymallaght Battery Energy Storage System

Applicant	Renewable Energy Systems Limited
Date	September 2024
Internal Ref	05195-7908133

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 Derry & Strabane District Council for an Energy Storage System (ESS) ("the Proposed Development") on lands north-west of Trench Rd, Londonderry, approximately 500m north-west of Killymallaght 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 2020-2023, 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.

2 The Proposal

2.1 Site Description

The site, measuring approximately 3.88ha, is located in a field currently used for grazing livestock. Located in the townland of Disertowen, approximately 2.5km southeast of Newbuildings, Co. Derry/Londonderry, the system would be developed on lands north-west of Trench Rd, Londonderry and approximately 500m north-west of Killymallaght Substation where the system is expected to connect.

The site abuts the Trench Road where it rises slightly towards the north-west before levelling off near the centre of the field. This makes it easily accessible from the Trench Road using the existing field entrance which would require minimal improvement. This entrance is regularly used for agricultural purposes at present. A telecommunications mast sits on land immediately to the north-west of site. Excluding this and Trench Road, all other adjacent lands are currently used for agriculture. A location plan can be found in drawing 05195-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 64 battery storage enclosures would be installed to provide a maximum of approximately 50MW of capacity. The battery enclosures will be one of two types depending on the final choice of supplier, maximum dimensions of which are outlined in drawing 04874-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 16 Power Conversion Systems (PCS) and 8 Transformers would be required with typical combine dimensions of 10.3m long, 6m wide and 2.5m high (see drawing 05195-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 05195-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 05195-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 05195-RES-SUB-DR-PT-001 - AUXILIARY TRANSFORMER). This would be set on a concrete foundation and would be finished in a shade of grey or green.

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 05195-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 05195-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 05195-RES-SUB-DR-PT-004 - CAPACITOR BANK). All three of these would be set on concrete foundations and finished in a shade of grey or green.

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 05195-RES-BLD-DR-PT-001 - SPARES STORAGE CONTAINER).

Security

Security fencing will be installed around all four edges of the energy storage compound. This fencing will be one of three types of fencing: Closed board acoustic fencing (see drawing 05195-RES-SEC-DR-PT-002 - TYPICAL ACOUSTIC FENCE DETAIL), palisade fencing (see drawing 05195-RES-SEC-DR-PT-001 - TYPICAL SECURITY FENCE DETAILS) or weld mesh fencing (see drawing 05195-RES-SEC-DR-PT-001 - TYPICAL SECURITY FENCE DETAILS). The acoustic fencing is expected to be utilised, however if alternative acoustic mitigation measures are identified during detailed design, the other options may be utilised. The acoustic fencing would have a max hight of 3.0m. Palisade fencing and weld mesh fencing would have a max height of 2.5m.

Typical lighting and CCTV column 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 fencing around the edge of the energy storage compound (see drawing 05195-RES-SEC-DR-PT-003 - TYPICAL LIGHTING & CCTV COLUMN).

The only lighting within the proposed development would be PIR 'infrared' lighting associated with the CCTV system, which would not be visible to the naked eye, together with PIR operated external lights mounted above doorways. The proposed development does not incorporate any visible, permanent artificial lighting.

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 Killymallaght 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 05195-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 (05195-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 also been left in order to provide sufficient space for a crane during construction and in case of repair and augmentation.

The attenuation basins have been located such that they utilise the existing topography of the land to assist with drainage of the site.

2.2.3 Access

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

- Vehicles will follow A6;
- Vehicles will leave A6 onto Belt Rd;
- Vehicles will continue on Trench Rd;
- Vehicles will approach proposed site entrance from Trench Rd.

Site would be accessed through an existing field entrance just off the Trench Road which would require minor upgrades. An unbound granular access track would then be constructed following the northeast 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 05195-RES-LAY-DR-PT-001 - INFRASTRUCTURE LAYOUT).

It should be noted that at the time of the Proposal of Application Notice (PAN) submission, two potential access points to the site were being considered (both of which utilised existing entrances off Trench Road). Following more detailed investigation, the more northerly entrance of the two was decided to be more suitable as it provides better road visibility and would require less improvements, therefore reducing development impact.

It is also noted that the existing entrance crosses intermediate pressure gas pipelines which run alongside Trench Road and are owned by SGN Natural Gas in their role as a Licensed Gas Transporter (GT). RES have opened discussions with SGN to ensure all appropriate safety measures are implemented. It is not unusual for construction vehicles to cross gas pipelines such as these, however, before any works begin in this location, detailed consultation will take place. Safe digging practices, in accordance with HSE publication HSG47 "Avoiding Danger from Underground Services" will be used to verify and establish the actual position of mains, pipes, services and other apparatus on site before any mechanical plant is used.

2.2.4 Landscaping

A landscaping plan has been submitted as part of the application (see "Illustrative Landscape Masterplan - Killymallaght 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. An arboricultural investigation assessed 12 individual trees and 4 hedgerows of trees, the quality, value and locations of which are outlined in the submitted Arboricultural Impact Assessment (see "Killymallaght BESS - Arboricultural Impact Assessment"). All trees and hedgerows identified were deemed low quality (Category C) and were limited to the site boundaries and dividing hedgerow. During construction, these would be retained and protected in accordance with BS 5837:2012.

The landscaping proposals include the following:

- Existing field boundary vegetation, such as hedgerows and hedgerows trees, would be retained and 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, reinstating the hedgerow which has been removed previously (consequently reinforcing the field pattern and contributing to the green infrastructure network);
- the proposed access track has been routed around the western side of the BESS area, freeing up space to the east of BESS area to accommodate earthworks and planting for screening;
- the south-western edge of the site includes a substantial area of tree planting to create a shelter belt of trees and woodland which both contribute to the pattern of vegetation in the local landscape whilst also providing screening;
- earthworks proposals include the formation of a practical development platform which is lowered slightly into the contours of the site, resulting cut and fill can accommodate the creating of a screening bund to the south-east, east and north-east of the BESS area to provide screening. Detailing of the earth mounding can, in due course, include a steeper inner face, so that the outer face can be graded into existing contours in a more naturalistic manner;

- proposed scrub planting across the earth mounding will add further to screening whilst also contributing to biodiversity enhancements; and
- remaining grassland areas will be subject to a programme of enhancement through seeding with appropriate grassland mixes, also contributing to BNG.

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 Killymallaght 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. The longer the distance, the higher the cost and the larger the environmental impacts, rendering many projects unviable.

Identifying suitable land as close as possible to the existing Killymallght 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 Killymallaght 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 Killymallaght substation were deemed unsuitable due to identified constraints including but not limited to: drainage issues, unconstrained 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 to the northeast of Killymallght substation was considered but later ruled out due to several constraints, such as existence of 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 systems. Given the unique locational advantage of site being located near the required existing electrical infrastructure and lack of aforementioned constraints, the site is considered particularly suitable for this type of development. Alternative sites surrounding the connection point at Killymallaght 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 modernization 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 Killymallaght 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 were held with Derry and Strabane District Council, during which a number of key points and relevant policies were discussed which informed the progression of the development. Following this, the Department for Infrastructure (DFI) was contacted on the 12th Jan 2024 with a request for a determination under section 26 of the Planning Act (Northern Ireland) 2011 for development.

On Mon 22nd Jan 2024, a "Combined application for Section 26 determination & pre application EIA determination" was submitted to Derry Strabane Planning (LA11/2024/0056/DETEIA). On the 23rd of Jan 2024, DFI replied concluding that there is no requirement to consult the Department under S26 and therefore any planning application should be made to the local planning authority, in this case, Derry and Strabane District Council.

On the 19th March 24, Derry and Strabane District Council made contact to request an extension period of 4 weeks to the EIA determination as consultation responses from Environmental Health were required to inform the determination. The Council requested that RES agree to the extension of the determination period until 26 April 2024. RES replied to the council on the 25th March 2024 accepting the extension period.

RES received a further response from Derry and Strabane District Council on 14th August 2024, which stated that a conclusion to the EIA determination could not be reached until further information was received. The further information requested was significant and it was felt that only a full planning application would fulfil the requirements. Based on similar proposals in Northern Ireland, it has therefore been assumed that an EIA is not required for this application. Further to this, an EIA Screening statement document accompanies this application outlining reasoning why an EIA would not apply here. However, following receipt of the full application, should the Council feel an EIA is required, the application will be revised.

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 summaries 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 Derry Area Plan (DAP) 2011

For this proposed Energy Storage System, the current Plan comprises the Derry Area Plan 2011, adopted in May 2000, however this is now outdated. Whilst the area plan is outdated, it remains the most relevant plan holding some determining weight until the Council adopt their new Local Development Plan.

The first point stated under 1.30 "objectives of the plan" states - "(i) promoting the sustainable development of the Derry City Council Area by making provision for economic development while protecting its natural assets and man-made heritage for the enjoyment of future generations". The proposed development aligns with this objective.

4.2.3 Derry City and Strabane District Local Development Plan

The Derry City and Strabane District Local Development Plan is currently being prepared to replace the Derry Area Plan 2011; at the time of writing, the Planning Appeals Commission (PAC) has completed its Independent Examination and issued its report to the Department for Infrastructure. It is expected that this will be adopted in early 2025. 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 achieving 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 proposal site contains no priority habitat and, due to the intensively farmed nature of the site, has very little potential for rare flora or protected species. The proposal will therefore have a negligible impact upon any species protected by law, habitats or Features of Natural Heritage Importance. 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.

A Biodiversity Impact Assessment has also been completed and concludes that, with the proposed mitigation measures and landscape enhancement proposals, the potential of the site to support local wildlife will

increase such that the proposed development is likely to lead to a significant positive effect on ecology and biodiversity in the local area. 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 utilise an existing field entrance just off the Trench Road which would require minor upgrades. Visibility splays of 215m 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 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 FLD 3, a full Flood Risk and Drainage Assessment has been submitted in support of this application and is summarised in Section 5.5 of this document. 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 and 3. FLD 4 and 5 do not apply to this site. The supporting assessment demonstrates that there is no conflict with any policies contained within Planning Policy Statement 15.

4.2.9 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 show 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 Killymallaght 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.

4.2.10 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 to complement the existing landscape in the supporting Landscape Masterplan. This in turn will ensure that the proposed development is well screened from surrounding visual receptors and integrates well into the surrounding area, not harming the rural character of the area.

4.2.11 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 Killymallaght 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 200m 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 report also predicts 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 Killymallaght 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 Pegasus 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 Masterplan has been completed and included within the assessment.

Overview

The site comprises a single field of agricultural grazing land, ca. 3.88 hectares (ha), with the access to the site proposed from its south-eastern edge, off Trench Road. The site lies within the administrative area of Derry City and Strabane District Council (DCS DC)

The site is not located in an area included in a statutory landscape designation at the national or local level.

The site is located toward the top of a localised rolling hill. Beyond the site, the crest of the localised hill extends south-west into the adjacent field and topography generally falls to the north-west (toward the Foyle Valley) and south-east (into the Burngibbagh valley). The site is used for agriculture, currently forming an area of rough grassland/grazing, within a wider landscape context predominantly farmland (mainly pastoral but with occasional arable enclosures scattered across the area). Farmsteads are notable, but also scattered through the local landscape context.

In respect of landscape character, published guidance is available at a regional and local level, the former placing the site in an area of transitional landscape character between the Foyle Valley and the North Sperrin Hills and valleys; at the more local level the site sits more centrally within an extensive area defined as LCA 31, 'Burngibbagh and Drumahoe'.

Proposed development and landscape strategy

Landscape mitigation proposals include:

- Earthworks to create a practical development platform - partly sunken into the landform - and to create acoustic and visual screening bunds to the north and east/south-east of adjacent to the eastern and western boundaries of the site; and
- Attenuation basins in the northern parts of the site; 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 small and single 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 hill, not 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 the 'LCA 31 'Burngibbagh and Drumahoe' will be 'negligible adverse' at Year 1, reducing to 'neutral' in the longer term at Year 15. Considering the site in its local landscape context, the significance of effect on the 'LCA 31 'Burngibbagh and Drumahoe' will be 'moderate adverse' at Year 1, reducing to 'minor adverse' in the longer term at Year 15.

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.

Overall, the proposed development would result in only limited effects on local visual amenity, with notable effects limited to locations on or adjacent to the site, including from Trench Road and from Curryfree to the east. However, mitigation inherent in the proposed development will be successful in reducing impacts and effects over time.

In longer distance views towards the site from the wider surrounding area, the proposed development is either not prominent, is consistent with the existing character, or is unlikely to be visible in the view.

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) has been completed by RammSanderson Ecology 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.

Designations

The site is not located within any statutory or non-statutory designated sites, with the closest Local Wildlife Site (LWS) being located approximately 2km north (Kittybane Quarry LWS).

Habitats

Almost the entirety of the site is classified as modified grassland and was assessed as being in poor condition and of low distinctiveness; it is heavily grazed and disturbed by vehicle tracking and therefore offers little floral diversity or suitability for fauna shelter or foraging. Three hedgerows forming the southern, western and northern boundaries of the application site were assessed as being in moderate condition and of low distinctiveness.

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. All trees within the application site were also subjected to a Ground Level Tree Assessment (GLTA) for bats. No Potential Roost Features (PRFs) were found and they have therefore been noted as having no suitability for roosting bats.

Moderate levels of bird activity were recorded on the site although these were all common and widespread species only. Due to the high levels of disturbance from sheep-grazing and vehicle tracking across the modified grassland field it is not considered to be suitable for ground nesting bird species. Whilst the hedgerows surrounding the site may provide some potential for nesting birds, it is not intended to remove hedgerow and any localised pruning required to facilitate construction working areas will be completed outside of the nesting bird season or checked within 24hours of the works commencing.

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:

- Creation of new tree belt to provided supplement visual screening along the south western boundary of the compound, is to be comprised of native tree species.
- Landscaping bund for visual screening will also be planted with native scrubs.
- Native species hedgerow proposed to be planted along the site parallel with trench road (reinstating hedgerow suspected to have been lost following past highway improvements).
- Areas of wildflower meadows to be created throughout the site enhancing habitat.
- Existing hedgerows to be retained and maintained.

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 ecology. Whilst there is currently no legislation in Northern Ireland making Biodiversity Net Gain a mandatory requirement, the metric can be used in a Biodiversity Impact Assessment (BIA) to evidence ecological improvement. This Scheme would deliver a 38.71% net gain of habitat units and 56.42% gain in hedgerow units. This exceeds standards in other parts of the UK and is considered to be a significant increase in value of the site overall.

5.3 Heritage

An assessment of the proposed development's potential impacts on cultural heritage and archaeology has been completed by Pegasus Group. 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.

The archaeological baseline found no known historic assets within the Site boundaries however there were a small number of known heritage assets identified within a 1km study area. These comprised six HER assets, five Post-medieval features and one natural feature, with no designated heritage assets found within the study area.

The baseline identified a low potential for the Site to contain unknown archaeological resources due to the lack of known heritage assets within the Site boundaries, and the lack of known heritage assets within the Site's vicinity.

Setting was not a material consideration for any of the assets encountered in the study area, therefor the impacts of the Site on known assets is considered no change with the potential for unknown heritage assets to be low.

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 Killymallaght Battery Energy Storage System") in order to determine the acoustic impact of the proposed development.

The main sources of sound within the Proposed Development are the 16 Power Conversion System (PCS) units. There are also 8 MV transformers located between every two inverters. There are 64 BESS units which also generate sound. The equipment is assessed as being operational at all times.

Predicted rating levels at 16 nearby properties are detailed within the assessment. A level of conservatism has been built into the assessment to compensate for the potential impact of uncertainty. Overall, based on the acoustic modelling assumptions and assessment results presented, the sound emitted by the Proposed Development can be considered not significant in terms of technical advice provided by the Northern Irish Government.

The assessment concluded that the acoustic impact of the proposed Killymallaght Battery Energy Storage System has been undertaken in accordance with BS 4142:2014+A1:2019. 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 - Killymallaght BESS"). The assessment uses best practice and conforms with the requirements of the relevant regulatory authorities.

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 infiltration basins are sized to contain the 1 in 100 (plus a 20% allowance for climate change) rainfall event. Infiltration testing will be undertaken on site prior to detailed design. Should the ground investigation prove that infiltration rates of the soil are not suitable for infiltration, the current design has allowed for sufficient size of basins that can attenuate surface water and discharge it, with the maximum discharge flow to be limited to pre-development runoff rates. The drainage strategy proposed will provide sufficient water quality treatment as demonstrated using the Simple Index Approach. The assessment concluded that the site is at low risk of flooding and will not exacerbate the flood risk of the surrounding area.

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 (*In the event of any road closures on the proposed delivery route, all vehicles will follow the designated diversion route*):

- Vehicles will follow A6;
- Vehicles will leave A6 onto Belt Rd;
- Vehicles will continue on Trench Rd;
- Vehicles will approach proposed site entrance from Trench Rd.

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 Derry City and Strabane District Council (hereinafter referred to as DCS 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 Killymallaght 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.
- 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 Derry & Strabane district Council grant planning consent for this crucial development without delay.

A.1 Schedule of Drawings

Drawing Number	Drawing Title
05195-RES-BAT-DR-PT-001	BATTERY STORAGE ENCLOSURE
05195-RES-BLD-DR-PT-001	SPARES STORAGE CONTAINER
05195-RES-LAY-DR-PT-001	INFRASTRUCTURE LAYOUT
05195-RES-MAP-DR-XX-001	SITE LOCATION PLAN
05195-RES-PCS-DR-PT-001	POWER CONVERSION SYSTEM & TRANSFORMER
05195-RES-SEC-DR-PT-001	TYPICAL SECURITY FENCE DETAILS
05195-RES-SEC-DR-PT-002	TYPICAL ACOUSTIC FENCE DETAIL
05195-RES-SEC-DR-PT-003	TYPICAL LIGHTING & CCTV COLUMN
05195-RES-SUB-DR-PT-001	AUXILIARY TRANSFORMER
05195-RES-SUB-DR-PT-002	HARMONIC FILTER
05195-RES-SUB-DR-PT-003	PRE INSERTION RESISTOR
05195-RES-SUB-DR-PT-004	CAPACITOR BANK
05195-RES-SUB-DR-PT-005	BESS CONTROL BUILDING
05195-RES-SUB-DR-PT-006	DNO SUBSTATION BUILDING
05195-RES-SUB-DR-PT-007	LV FEEDER PILLAR & AGGREGATION PANEL DETAILS

A.2 Schedule of Technical Reports and Documents

Report / Document	Author
Arboricultural Impact Assessment	Ramm Sanderson
Landscape and Visual Impact Assessment	Pegasus Ltd
Landscape Masterplan	Pegasus Ltd
Ecological Impact Assessment	Ramm Sanderson
Biodiversity Net Gain Assessment	Ramm Sanderson
Heritage Statement	Pegasus Ltd
Acoustic Impact Assessment	RES Ltd
Fire Risk Statement	RES Ltd
Flood Risk and Drainage Assessment	RES Ltd
Transport Statement	RES Ltd
Outline Construction Environmental Management Plan	RES Ltd
Pre-application Community Consultation (PACC) Report	RES Ltd
EIA Screening statement	RES Ltd