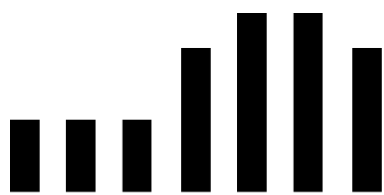




PROPOSED DEVELOPMENT OF A BATTERY ENERGY STORAGE SYSTEM, ASSOCIATED INFRASTRUCTURE AND ACCESS ON LAND OFF DIG GATE LANE, KINGSWAY BUSINESS PARK, MILNROW, ROCHDALE

PLANNING AND DESIGN AND ACCESS STATEMENT

Prepared for



BALANCEPOWER

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Well House Barns, Chester Road, Bretton, Chester, CH4 0DH

Camelia House, 76 Water Lane, Wilmslow, Cheshire, SK9 5BB

T: 0344 8700 007
enquiries@axis.co.uk
www.axis.co.uk

CONTENTS

1.0	INTRODUCTION AND SCHEME OVERVIEW.....	1
1.1	Introduction	1
1.2	Scheme Overview.....	1
1.3	Scope of the Planning Application.....	3
1.4	The Applicant.....	4
1.5	Community Consultation	5
2.0	THE SITE AND ITS CONTEXT.....	6
2.1	The Site and its Surroundings	6
2.2	Planning History.....	8
3.0	THE PROPOSED DEVELOPMENT.....	9
3.1	Introduction	9
3.2	Description of the Proposed Development	9
3.3	Access	10
3.4	Public Rights of Way and Dig Gate Lane	10
3.5	Earthworks.....	12
3.6	Drainage	12
3.7	Landscaping	12
3.8	Fire Safety	13
3.9	Battery Storage Facility (Construction and Operation)	15
3.10	Commencement Period	16
3.11	Parameter Plans (Height and Micro-Siting)	17
4.0	NEED, BENEFITS AND LOCATIONAL REQUIREMENTS	19
4.1	Introduction	19
4.2	Benefits of Battery Storage	20
4.3	National Energy Policy and Strategy Context.....	22
4.4	National Grid Strategy and Context.....	30
4.7	Locational Requirements	39
5.0	ENVIRONMENTAL MATTERS.....	42
5.1	Introduction	42
5.2	Ecology and Nature Conservation.....	42
5.3	Heritage	46
5.4	Flood Risk and Surface Water Drainage	52
5.5	Noise	54
5.6	Traffic and Transportation	55
5.7	Landscape and Visual.....	56
5.8	Land Contamination.....	57
6.0	PLANNING POLICY CONTEXT AND APPRAISAL	58



6.1	Introduction	58
6.2	Planning Policy Context Overview	58
6.3	Planning Appraisal	60
7.0	SUMMARY AND CONCLUSIONS.....	68

FIGURES

Figure 1	 Viewpoint 4 – Existing Photography
Figure 2	 Viewpoint 4 – Proposed Year 0 Photomontage
Figure 3	 Viewpoint 4 – Proposed Year 15 Photomontage

APPENDICES

Appendix 1-1	Pre-application Advice Request
Appendix 1-2	Pre-application Advice Response ¹
Appendix 1-3	 Statement of Community Involvement
Appendix 3-1	 Outline Fire Safety Management Plan
Appendix 3-2	Grid Connection Information
Appendix 5-1a.....	Ecological Assessment Report
Appendix 5-1b.....	Biodiversity Net Gain Assessment
Appendix 5-2	Heritage Impact Assessment
Appendix 5-3	Flood Risk Assessment and Drainage Strategy
Appendix 5-4	 Noise Impact Assessment
Appendix 5-5	Transport Statement
Appendix 5-6a	Landscape and Visual Appraisal Report
Appendix 5-6b	 Landscape and Visual Appraisal Figure 1
Appendix 5-6c	 Landscape and Visual Appraisal Figure 2
Appendix 5-6d	 Landscape and Visual Appraisal Figure 3.1 Viewpoint 1
Appendix 5-6e	 Landscape and Visual Appraisal Figure 3.2 Viewpoint 2
Appendix 5-6f	 Landscape and Visual Appraisal Figure 3.3 Viewpoint 3
Appendix 5-6g	 Landscape and Visual Appraisal Figure 3.4 Viewpoint 4
Appendix 5-7a.....	Stage 1 Contamination Report

¹ Please note that at the time of submitting this document the formal pre-application advice had not been provided. Should it be provided during the determination process it would form appendix 1-2.

Appendix 5-7b.....	Stage 1 Contamination Report Appendix (Part 1 of 5)
Appendix 5-7c.....	Stage 1 Contamination Report Appendix (Part 2 of 5)
Appendix 5-7d.....	Stage 1 Contamination Report Appendix (Part 3 of 5)
Appendix 5-7e.....	Stage 1 Contamination Report Appendix (Part 4 of 5)
Appendix 5-7f	Stage 1 Contamination Report Appendix (Part 5 of 5)

LIST OF PLANNING DRAWINGS

058-PL- OL164NR 001	PR564 Rochdale Location Plan Rev D
058-PL- OL164NR 002	PR564 Rochdale Aerial Plan Rev D
058-PL- OL164NR 003	PR564 Rochdale Existing Plan Topo Rev D
058-PL- OL164NR 003	PR564 Rochdale Existing Plan Rev D
058-PL- OL164NR 101	PR564 Rochdale Proposed Plan Rev D
058-PL-OL164NR-201	PR564 Rochdale Elevations AA-BB Rev D
058-PL-OL164NR-201	PR564 Rochdale Elevations CC-DD Rev D
058-PL-OL164NR-201	PR564 Rochdale Section Rev D
058-PL-OL164NR-201	PR564 Proposed Heights Parameter Plan Rev D
Battery Container	Plan and Elevation
Inverter Transformer	Plan and Elevation
Control Welfare Room	Plan and Elevation
DNO Room	Plan and Elevation
Private Substation	Plan and Elevation
Storage Room	Plan and Elevation
AUX Transformer	Plan and Elevation
Fence 2.4m	Plan and Elevation
Access Gate	Plan and Elevation
CCTV and Lighting	Plan and Elevation
Concrete Barrier	Plan and Elevation
3471-01-L-001 Rev B	Landscape Masterplan
3471-01-L-002 Rev A	Ecological Implementation

1.0 INTRODUCTION AND SCHEME OVERVIEW

1.1 Introduction

- 1.1.1 This Planning and Design and Access Statement (PDAS) has been prepared in support of a full planning application made by Balance Power Projects Limited (hereafter referred to as 'the Applicant') to construct and operate a temporary Battery Energy Storage System (hereafter referred to as 'BESS' or the 'Proposed Development') associated infrastructure, earthworks, landscaping and access on land off Dig Gate Lane, Kingsway Business Park, Milnrow, OL16 4NR (hereafter referred to as 'the Site').
- 1.1.2 The location and extent of the Site is illustrated on the 'Site Location Plan' and the 'Proposed Plan' which form part of the planning application drawing package. The Site lies wholly within the administrative area of Rochdale Metropolitan Borough Council (RMBC).
- 1.1.3 This document constitutes the PDAS, which has been prepared to accompany the planning application. Following on from this introduction, Section 2.0 provides a description of the Site, its surroundings and its planning history. Section 3.0 provides a detailed description of the BESS. Section 4.0 addresses the need for and benefits of the BESS; Section 5.0 considers a range of environmental matters and reports the assessment work carried out. Section 6.0 sets out the planning policy context and provides an associated appraisal. Finally, Section 7.0 provides a summary and draws a concise conclusion regarding the acceptability of the BESS in planning terms.

1.2 Scheme Overview

- 1.2.1 A detailed description of the BESS, including its construction and operation, is provided in Section 3.0 of this PDAS, whilst the 'Proposed Plan' illustrates the BESS, as summarised below:
- 28 No. prefabricated / modular storage container units including batteries supported by 7 No. inverters and transformers;



- Supporting infrastructure including a substation, auxiliary transformer, control room, Distribution Network Operator (DNO) ² room and storage buildings;
- All the above infrastructure would be set in gravel surfaced compounds secured by fencing and matching gates with closed-circuit television (CCTV) and lighting set on monopoles; and
- New gravel access tracks leading to a new junction off Dig Gate Lane.

1.2.2 The point of connection would be the Kingsway Primary Substation (33 / 11 kV) which is located off James Watt Drive within the middle of the Kingsway Business Park. The substation is circa 550 meters (m) (as the crow flies) to the north of the BESS. The connection would be installed below ground by an independent connection provider / statutory undertaker (under permitted development rights). Therefore planning permission is not being sought for this element of the project.

1.2.3 Permission is being sought on a temporary basis of 40 years ³. Following this timeframe, and the cessation of energy operations, the infrastructure would be removed, and the Site restored to its present condition.

1.2.4 The BESS would provide a flexible back-up power source to the Grid through critical active power services (responding rapidly to variations that result from local and national energy demand) and reactive power services (balancing voltages to maintain stability and efficiency of the transmission system). These services are vital especially as the Grid becomes more constrained by renewable energy schemes connecting into the system on route toward National Grid's (NG) ⁴ and Electricity North West's ⁵ aim of operating a zero-carbon electricity system by 2025 ⁶, in response the Government's net zero target by 2050 ⁷. It would also facilitate Electricity North West's ⁸ aim of making the Grid more efficient and flexible which enables support for low carbon technologies. Accordingly, the BESS would contribute towards ensuring that there is a reliable and constant supply of electricity across the Grid in a cleaner and more cost-effective manner than the existing situation. Full details regarding the

² A District Network Operator is a company licensed to distribute electricity in the UK.

³ At the point when the BSF first becomes operational / energisation (i.e. electricity connection becomes 'live')

⁴ The Grid Transmission Operator

⁵ The Grid Distribution Operator

⁶ <https://www.nationalgrideso.com/future-energy>

⁷ <https://www.legislation.gov.uk/ukdsi/2019/9780111187654>

⁸ Electricity North West are the Distribution Network Operator for the area. <https://www.enwl.co.uk/future-energy/facilitating-net-zero/>

operation and need for the BESS is contained within Sections 3.0 and 4.0 of this PDAS respectively.

1.3 Scope of the Planning Application

- 1.3.1 The Infrastructure Planning (Electricity Storage Facilities) Order 2020 ⁹ (the Order) came into force in December 2020. The Order amended the Planning Act 2008 ¹⁰ by removing electricity storage facilities ¹¹ from the category of ‘*generating stations*’; whose construction or extension requires development consent as a nationally significant infrastructure project. This means that developers of electricity storage projects above 50 megawatts (MW) in England can apply to the relevant Local Planning Authority (LPA) instead of having to apply to the Secretary of State for a Development Consent Order. Accordingly, planning permission is being sought from the LPA, which in this instance is RMBC.
- 1.3.2 Battery storage projects are not specifically defined in the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 ¹². However, the Government have accepted that they are a subset of energy generation ¹³ in the planning system. As such, from an Environmental Impact Assessment (EIA) perspective BESSs are generally defined under Schedule 2, Part 3 ‘Energy Industry’ Section (a) ‘*Industrial installations for the production of electricity, steam and hot water*’ to which the specified threshold is: “*the area of development exceeds 0.5 hectares.*” even though this relates to ‘*generation / production*’ rather than ‘*storage*’. Although the project exceeds the threshold, further assessment contained in this PDAS demonstrates that it would not result in significant environmental effects. In the Applicant’s experience projects of a similar scale in other parts of the Country were found not to require EIA. Furthermore, it has been noted that other similar BESS schemes within the same LPA area, have been found not to require EIA ¹⁴. As such, the application has been prepared on the basis that the requirement for EIA would be screened out during the determination of the planning application.

⁹ <https://www.legislation.gov.uk/ukdsi/2020/9780348209846/contents>

¹⁰ <https://www.legislation.gov.uk/ukpga/2008/29/contents>

¹¹ except for pumped hydroelectric storage facilities

¹² <https://www.legislation.gov.uk/uksi/2017/571/contents/made>

¹³ BEIS ‘Proposals regarding the planning system for electricity storage confirms the Government considered electricity storage facilities to be a form of electricity generating station for planning purposes. <https://www.gov.uk/government/consultations/the-planning-system-for-electricity-storage-follow-up-consultation>

¹⁴ RMBC Ref: 19/01147/FUL and 18/01106/FUL.

- 1.3.3 A formal Pre-application Advice Request was submitted to RMBC in April 2023 (**Appendix 1-1**). At the time of preparing this PDAS, the requested had been assigned reference: PREAPP/00029/23, and a meeting between the assigned case officer and Applicant took place in October 2023. Should the formal advice be issued during the determination of the application then it would form **Appendix 1-2**. On the basis that pre-application advice might not be provided, other similar schemes in the LPA area, and knowledge gained in promoting others schemes across the country have been reviewed to ensure that the scope of the application would be acceptable. This PDAS has been prepared on this basis and is considered to include all the necessary assessment work required to support the determination process.
- 1.3.4 The BESS compound would occupy an area of circa 0.28 hectare (ha) but the red line would occupy an area over one hectare. As such, it falls into the 'Major' development category as specified in the Development Management Procedure (England) Order 2015¹⁵. On this basis the statutory determination period is 13 weeks.

1.4 The Applicant

- 1.4.1 Balance Power Projects Limited has been helping the UK transition to a decarbonised grid since the company was founded. Specialising in solar, battery storage, and peaking technologies, Balance Power works nationally with landowners, communities, and local authorities to bring about a fundamental shift in how the UK produces and uses power, in line with national targets. Its tailored energy solutions help balance demand as the UK moves to a greener, more flexible energy system.
- 1.4.2 Balance Power have secured planning consent for 426 megawatts (MW) of generating capacity, with a further 1,766MW under development / in the planning system. The Applicant has recently obtained permission for BESS projects in Bromsgrove, Cornwall, Hampshire, West Devon, Wychavon and South Staffordshire; noting that three projects were in the Green Belt. Their website¹⁶ provides greater detail on a variety of topics and illustrates their project portfolio.

¹⁵ <https://www.legislation.gov.uk/uksi/2015/595/contents/made>

¹⁶ <https://www.balancepower.co.uk>

1.5 Community Consultation

- 1.5.1 Balance Power have sought to consult with the local community prior to the application being submitted. A Statement of Community Involvement (SCI) is contained in **Appendix 1-3** and outlines the Applicant's approach to consultation, for example a leaflet providing information on the project, contact details, the option to complete a feedback form and link to the project specific website: <https://www.rochdalebatterystorage.co.uk/> was posted to local residents. The SCI also identifies who else has been consulted and how points raised by consultees have been addressed in designing the project and preparing the planning application.

2.0 THE SITE AND ITS CONTEXT

2.1 The Site and its Surroundings

- 2.1.1 The Site is located circa 2.6 km southeast of Rochdale town centre and circa 1.2 km southwest of Milnrow. As illustrated by the Site Location Plan it is set within the Kingsway Business Park, next to the M62 Motorway. It is bound to the:
- North by Dig Gate Lane and land which benefits from planning permission for a gas peaking facility. Beyond this are large storage and distribution units associated with the wider Kingsway Business Park;
 - East and south by a timber fence, beyond which is the Dig Gate Lane overbridge and M62 Motorway (which is set in a cutting at this point); and
 - West by Broad Shaw Farmhouse and adjoining Barn (a Grade II Listed Building) which provides office accommodation, beyond which is a further large storage and distribution units associated with the wider Kingsway Business Park.
- 2.1.2 The site comprises a heavily grazed horse pasture field which also includes a small pond, field shelter and electrical substation (the latter is not included within the application site). Hedgerow planting runs along the Dig Gate Lane boundary with other boundaries marked by post and rail fencing. In general the topography of the area slopes up from the roundabout connecting John Milne Avenue and Dig Gate Lane (circa 165 m AOD) to a high point along the timber fence which demarcates the Site's boundary with the M62 Motorway (circa 176 m AOD).
- 2.1.3 Dig Gate Lane forms a spur off the roundabout with John Milne Avenue. It provides access to the Broad Shaw Farmhouse and thereafter narrows to become a kerbed tarmac single lane which widens at the existing field gate into the site (next to the substation) and then narrows as it travels over the motorway over bridge. The lane serves residential properties, which are located on the eastern side of the M62 (Dig Gate Farm and Dig Gate Barn). Dig Gate Lane is an adopted highway with freehold title owned by Homes and Communities Agency.
- 2.1.4 No Public Rights of Way are within the Site. However, several Public Rights of Way are in the vicinity of the Site. Routes 'MilFp322' and 'MilFp320' run around the north and west of the Site and 'MilFp336' runs over the over bridge that leads to 'MilFp320' and Dig Gate Farm.

- 2.1.5 The nearest residential receptors are Dig Gate Farm and separate Barn, the closest of which is circa 160 m to the southeast of the Site (beyond the M62). Chadwick Fold Farm is located circa 260 m to the southwest of the Site, off Broad Shaw Lane. Other residential properties are located off the B6194, the closest of which are circa 450 m to the west of the Site. The office accommodation within Broad Shaw Farmhouse, is also recognised as a sensitive receptor.
- 2.1.6 The Site is located on land at lowest risk of flooding (Flood Zone 1)¹⁷ and has a very low risk of surface water flooding. It is remote from ecological designations, the nearest international / national site being the Rochdale Canal Special Area of conservation / Site of Special Scientific Interest which is located circa 1.4 km to the northwest of the Site. There are no local nature reserves within 2 km, but the 'March near Turf Hill' a Site of Biological Importance (SBI) is located circa 625 m to the north of the Site.
- 2.1.7 In terms of heritage assets, the nearest Listed Building is Broad Shaw Farmhouse and adjoining Barn (a Grade II Listed Building¹⁸) which is located immediately next to the Site. The building's significance lies in its architectural detailing, which includes its chamfered mullion windows, quoins and hammer dressed stone with graduated stone slate roof. Chadwick Fold Farmhouse also forms a Grade II Listed Building. The Site is not located within a Conservation Area.
- 2.1.8 A review of the agricultural land classification strategic map illustrates the Site is located on Grade 4 (Poor) land and the predictive best and most versatile (BMV) agricultural land illustrates a low likelihood of BMV.
- 2.1.9 An existing diverted pumped water main is located along the western edge of the Site (between the Site and Broad Shaw Farmhouse). The BESS has been designed to ensure that it does not impact on the pipe or its associated wayleave. Furthermore, the sub-station located within the field to which the BESS is proposed would not be affected by the proposal.

¹⁷ <https://check-long-term-flood-risk.service.gov.uk/postcode>

¹⁸ <https://historicengland.org.uk/listing/the-list/list-entry/1068498>

- 2.1.10 The Coal Authority mapping confirms that the Site does not fall within the defined Development High Risk Area and is located instead within the defined Development Low Risk Area. The M62 is designated as an Air Quality Management Area (AQMA) due to exceedances of nitrogen dioxide. Part of the site (bordering the M62) is located within this AQMA.

2.2 Planning History

- 2.2.1 A review of the RMBC online planning register has not identified any relevant planning application(s) relating to the Site itself.
- 2.2.2 The land immediately between the Site and Dig Gate Lane benefits from planning permission (ref: 22/01360/FUL) for the construction of a gas-powered reserve plant (4.4 MW) with associated infrastructure, access, landscaping and perimeter fencing, following excavation of land. RMBC granted permission for the above development in May 2023. The approved site layout plan illustrates that earthworks will take place to create a development platform with a new access provided off Dig Gate Lane. The documentation illustrates that the project would take 6 – 7 months to construct and once complete the compound will be set within landscaping. At the time of preparing this PDAS, it appears that no formal applications to discharge planning conditions attached to the permission had been made.
- 2.2.3 The site falls outside of the boundary of Kingsway Business Park as defined within the most recent comprehensive permissions for development of the area (ref: 14/00542/OUT and ref: 16/01085/VRCON). However, it does lie within the boundary of the Kingsway Business Park designation, under saved Policy EC/7 of the Unitary Development Plan.

3.0 THE PROPOSED DEVELOPMENT

3.1 Introduction

- 3.1.1 This section describes the BESS, together with details regarding its construction and operation. When reading this section, reference should be made to planning application drawings, particularly the Proposed Plan.

3.2 Description of the Proposed Development

- 3.2.1 The BESS is proposed to be located within two compounds, each surfaced in gravel and including internal roadways. The reason for two separate compounds is the constraints imposed by the topography of the Site and proximity of the gas-powered reserve plant site. For the purposes of this section the compound located closest to Broad Shaw Farmhouse is referred to as the south compound, and the compound located closest to the Dig Gate Lane overbridge is referred to as the north compound.
- 3.2.2 Both compounds would be secured by 2.4 m high paladin fencing with matching double leaf gates. CCTV cameras would be set on free standing poles, circa 3.4 m high, located at various points within the compounds. To ensure the protection of the infrastructure, it is proposed to install a concrete barrier system along the southern compound's boundary with the M62. The barrier would be erected in parts circa 2.4 m long by circa 0.8 m high and circa 0.6 m wide. Other parts of the scheme are not protected by barriers due to the existing crash barriers on the M62 itself.
- 3.2.3 The south compound covers an area of circa 1,700 sqm and would include:
- 28 No. battery containers (circa 9.4 m long x 1.7 m wide and 2.5 m high) supported 7 No. inverter / Transformer container (circa 6.1 m long x 2.4 m wide and 3.0 m high).
 - A storage building (circa 12.3 m long x 3.9 m wide and 4.0 m high) would be set within the compound and would comprise a GRP construction with double leaf doors.

- 3.2.4 The northern compound covers an area of circa 1,100 sqm and would include:
- A second storage building (circa 12.3 m long x 3.9 m wide and 4.0 m high) would also be in the compound and would comprise a GRP construction with double leaf doors.
 - A control room / welfare building (17.1 m long x 4.1 m wide and 4.0 m high) of GRP construction with double leaf doors.
 - Distribution Network Operator (DNO) room (7.1 m long x 6.2 m wide and 4.0 m high) of GRP construction with double leaf doors.
 - Private substation (15.6 m long x 4.0 m wide and 4.0 m high) of GRP construction with double leaf doors and high-level ventilation louvres.
 - An auxiliary transformer set within a concrete surfaced compound (4.1 m long x 3.6 m wide) secured by palisade fencing and gates extending to a height of 3.5 m.

3.3 Access

- 3.3.1 Access to the BESS would be achieved from a new field gate off Dig Gate Lane, immediately to the south of the existing substation. A small extent of widen and the introduction of dropped kerbs would be required to provide a suitable access into the Site. As demonstrated in the TS (**Appendix 5-5**), the proposed junction benefits from suitable viability in both directions in accordance with the relevant standard.
- 3.3.2 The existing field gate to the north of the substation would remain and is proposed to enable access into the soft landscaping / pond relocation area.
- 3.3.3 Once past the gate, a new gravel track would be constructed along the southern edge of the site to enable access to either compound. The track would be formed by removing the existing top-soil, laying a geotextile membrane on which a hardcore surface would be laid to a width of circa 5 m. On this basis the improved access track would be entirely permeable.

3.4 Public Rights of Way and Dig Gate Lane

- 3.4.1 As identified previously, whilst there are no public rights of way on the Site, there are several public rights of way close by. The first (ref: MilFp322) is located between the Site and Broad Shaw Farmhouse. This bridleway routes between the roundabout of

John Milne Avenue / Dig Gate Lane and Chadwick Lane. The second (refs: MilFp320 / MilFp321) is a footpath / cycleway which routes between the roundabout of John Milne Avenue / Dig Gate Lane behind the Amazon distribution warehouse towards Sir Isaac Newton Way. The third footpath (ref: MilFp336) routes over the M62 overbridge and connects to a range of footpaths beyond the M62.

- 3.4.2 Users of the above routes travel along Dig Gate Lane. Whilst there would be no need to divert any of the public rights of way, its users must be protected from any vehicle movements associated with the BESS. As illustrated in the TS (**Appendix 5-5**) once operational the traffic generated will be very low, with the highest traffic impact anticipated during the construction period. To ensure the protection of users it is anticipated that a Construction Traffic Management Plan and a Construction Environmental Management Plan would be required. These documents could be controlled via suitably worded planning conditions and would include measures for the protection of the existing rights of way and the highway in the vicinity of the Site.
- 3.4.3 In addition, it is anticipated that a highway condition survey along the Dig Gate Lane application site frontage would also be controlled by a suitably worded planning condition. This could be like that specified in Condition 9, attached to the approved gas-powered reserve energy plant (ref: 22/01360/FUL) could be applied. For ease of reference it states: *“The hereby approved development shall not come in to use until a scheme for the resurfacing and/or repair to the road surface and public right of way which have deteriorated in the intervening period (between pre and post development), shall be submitted to and approved in writing by the Local Planning Authority. The approved scheme shall be fully implemented prior to first use of the development hereby approved.”* This would ensure that any potential damage during the construction process would be rectified by the Applicant.
- 3.4.4 All the above, proposed documents formed conditions which were attached to the previously approved gas-powered reserve energy plant (ref: 22/01360/FUL). It is assumed that similar controls could be attached to any potentially forthcoming decision.

3.5 Earthworks

- 3.5.1 Whilst the BESS is not proposed to extend across the entire field it will be necessary to undertake earthworks to create platforms upon which the infrastructure would be installed. The compounds would be created from a combination of benching into the site and utilising site won soils to create platforms of circa 175 m AOD.

3.6 Drainage

- 3.6.1 As the BESS would not be permanently manned (periodic site maintenance) there is no requirement for foul drainage. However, it would introduce new impermeable surfacing that could potentially increase surface water run-off from the Site, alongside areas of permeable gravel, such as within the compounds and access roadway.
- 3.6.2 As set out in sub-section 5.4 and **Appendix 5-3** of this PDAS, the BESS would not increase the risk of flooding either on the Site or within the surrounding area. Based on ground conditions it is proposed to introduce an underground attenuation feature that connects to the existing sewer located in the roundabout to the northwest of the site. The discharge rate would be controlled by a flow control device and further attenuation would be provided by the underground pipework. Whilst a solution can be achieved it is proposed that the detailed drainage design could be the subject of a suitably worded planning condition.

3.7 Landscaping

- 3.7.1 The Landscape and Visual Appraisal (LVA, **Appendix 5-6**) demonstrates that the Site is located adjacent to a large-scale business park, and the established M62 Motorway to the south, therefore the Proposed Development would give rise to a limited change and have no identified adverse effects upon landscape character. The landscape design includes a hedgerow running along the southern edge of the up to the point where the new access track is proposed. Areas surrounding the compounds would be planted with a mixture of trees and grass. The area to the north of the new access track, is proposed to be ecological mitigation area for the pond which is to be relocated because of the Proposed Development. As illustrated by drawing ref 1366-002, the existing hedge and grass verge would be retained and supplemented by a mixture of native tree, hedge, and scrub planting alongside marginal pond planting

and species rich grassland. In addition, there would be several specific habitat areas which would result in ecological benefits.

- 3.7.2 Whilst a detailed design has been submitted, should it be necessary a design could be the subject of a suitably worded planning condition. A photomontage has also been prepared to support the application; this demonstrates how the BESS will integrate into the sites setting and will be screened by vegetation over time.

3.8 Fire Safety

- 3.8.1 An outline Fire Safety Management Plan (**Appendix 3-1**) has been prepared to support the planning application. The document sets out the safety features that BESS schemes could incorporate alongside the steps taken to reduce any potential risk to life, property, and the environment.
- 3.8.2 During the determination of applications for other BESSs, the Applicant has noted that in some instances consultees are concerned with the potential risk of fire. Specifically, in the unlikely event a battery were to overheat and combust, it may be subject to discharging flammable and toxic gasses. It must be recognised that lithium-based batteries are a proven technology used extensively in mobile phones, laptops and tablets across the planet.
- 3.8.3 In terms of legislation, all Lithium-Ion batteries must be transported in accordance with UN 38.3 to which the UK is a signatory. Safe transportation ensures no damage to the batteries prior to use. The BESS will be constructed in accordance with the International Electrotechnical Commissions standards for Electrical Energy Storage Systems. Details of these standards are listed below.
- Allianz Risk Consulting (ARC), Tech Talk Volume 26 (2019). Battery Energy Storage Systems (BESS) using Li-ion batteries.
 - Institute of Engineering and Technology – Code of Practice for Electrical Energy Storage Systems (August 2017).
 - The Energy Institute: Battery Storage Guidance Note 1 - Battery Storage Planning (August 2019).
 - Safety requirements for grid-integrated EES systems — Electrochemical based systems. IEC 62933-5-2:20204 National Fire Protection Association (NFPA)

855, Standard for the Installation of Stationary Energy Storage Systems, 2020 edition⁵.

- UN 'Recommendations on the Transport of Dangerous Goods' – Section 38.3 covers Lithium-Ion Batteries.

3.8.4 There are numerous other schemes across the country which operate without incident, plus those either in construction or benefitting from planning permission, which clearly demonstrate that this matter can be suitably addressed through an automatic fire suppression system. Although there have been instances of fire at BESSs, occurrences are rare, and it should be noted that where fires have occurred, they have been safely extinguished due to the installation of such a system.

3.8.5 It should be recognised that, compared to batteries found in devices such as mobile phones, the battery units used in battery storage systems are climate-controlled to maintain a safe operating range. All the battery units also have built-in alarms and fire suppression systems that can extinguish the fire automatically if needed. The infrastructure blocks are also set part so that there is no potential for fire to spread.

3.8.6 There are several fire suppression systems that can be installed, these include:

- High-Pressure CO₂: CO₂ extinguishes a fire by removing the oxygen from the surrounding area whilst also removing the heat. The CO₂ is provided by a series of tanks linked to the fire alarm system, which are triggered in the event of a fire.
- Inert gaseous system: Inert gaseous fire suppression systems work by depleting oxygen in the area and extracting heat from the fire. In the event of a fire, the fire suppression units automatically release argon or nitrogen, and propellant inert gases which effectively extinguish fires. This is likely to be the preferred method of fire suppression as it utilises an environmentally friendly clean agent system, with zero ozone depletion and negligible global warming potential.
- Mist system: Water mist fire suppression systems come as pre-packaged units including a water tank and booster nitrogen cylinders. The fire is extinguished using the properties of the water to cool the fire below ignition. The custom water mist systems use a combination of water and nitrogen to extinguish the fire.

3.8.7 One of these fire suppression systems will be installed prior to the operation of the BESS and will be in-situ and maintained thereafter. The exact suppression system to be used at the BESS would be established closer to the point of construction and will

be dependent on appointed construction contractor preferences, specification of the batteries to be used and market availability at the point of construction. On this basis, RMBC, consultees and other local stakeholders should be reassured that the BESS will be safe for the entirety of its operation.

- 3.8.8 Through the pre-application dialogue process, the Applicant has sought to engage with the Greater Manchester Fire and Rescue Service. This process is ongoing but regardless it is understood that the service will be a consultee of the application.

3.9 Battery Storage Facility (Construction and Operation)

- 3.9.1 The full period of construction is anticipated to take up to 6-7 months, with 5.5 construction days per week. Construction hours are anticipated to be between 08:00 – 18:00 weekdays and 08:00 – 13:00 on Saturday. No construction activities would take place on a Sunday or Bank Holiday. It is requested that a degree of flexibility is applied should it be necessary to transport a piece of infrastructure to the Site (such as transformer) outside of this time. It is requested that this could be agreed through the exchange of letter.
- 3.9.2 Peak construction activity (in terms of HGV vehicle numbers) would occur during the enabling works phase, when daily traffic levels are estimated to be in the region of 5 vehicles per day (10 two-way movements). In addition to the anticipated maximum of 5 daily (10 two-way) HGV trips to the construction site, there would also be a small number of staff trips and deliveries / collections made by cars / LGVs. It is expected that these trips would average 10 per day (20 two-way movements). During the peak period for HGV movements (the enabling phase) there could therefore be up to 15 vehicle trips per day, equating to 30 two-way movements (15 in and 15 out). Such traffic levels are unlikely to give rise to any material issues on the local highway network. Moreover, such levels of HGV traffic would not be maintained over any lengthy period. As illustrated on the proposed site plan, it is proposed that temporary contractor vehicle parking would be introduced within the site to ensure that Dig Gate Lane remains clear of obstruction.
- 3.9.3 The BESS comprises basic construction techniques and materials, and is not anticipated to generate a significant number of daily construction vehicle movements. Therefore, the temporary construction phase is unlikely to result in a detrimental

impact on the local highway network. Further details on vehicle movements are provided in sub-section 5.6 of the PDAS and within the TS (**Appendix 5-5**).

- 3.9.4 The construction phase is anticipated to be controlled through a Construction Environmental Management Plan (CEMP) and Construction Traffic Management Plan (CTMP), via a suitably worded planning conditions to any forthcoming planning permission. This would ensure that there would be no potential for pollution and / or nuisance to the surrounding environment or residential properties.
- 3.9.5 During the operational phase, the BESS would be controlled remotely as it is fully automated. It would only be necessary for a maintenance engineer to visit the Site on an occasional basis (i.e. monthly routine maintenance visit). As such the operational phase of the project would not generate any significant traffic impacts.
- 3.9.6 Planning permission for the BESS is being sought on a temporary basis for 40 years (at point when the BESS first becomes operational, i.e. energised). Following this timeframe, and the cessation of energy operations, the infrastructure would be removed, and the Site restored to its present use and condition. It is anticipated that this would be controlled through a suitably worded planning condition.

3.10 Commencement Period

- 3.10.1 To enable the BESS to energise, a new super-grid transformer needs to be installed at the Rochdale Grid Supply Point (GSP) ¹⁹. At this stage NG have an estimated completion date of 2028. The issue of reinforcement works is not unique to the Rochdale grid network, numerous articles ²⁰ illustrate that developers looking to connect renewable energy projects to the Grid are facing potential delays, in some cases 15 years or more.
- 3.10.2 As identified in the pre-application request, the Applicant requested that the standard three-year time limit for commencement of development is extended (i.e. 5 years). A longer period would enable the Applicant appropriate time to complete development

¹⁹ *In terms of the Grid, electricity flows through the Rochdale GSP before being distributed to local substations, including the Kingsway Primary Substation.*

²⁰ <https://eandt.theiet.org/58115>

and deliver energisation, in line with the planned NG works. Further information regarding the reinforcement works has been provided through the enclosed email (**Appendix 3-2**).

- 3.10.3 Experience gained through the determination of other applications (such as the Applicant's recent permission in St Austell Cornwall) has illustrated that LPAs are able to accept this. Another developer has also recently obtained planning permission²¹ for the installation of a battery energy storage facility in Dorset. Condition 1 of the decision notice set out a 12-year implementation deadline, for the same reason that reinforcement works outside of the Applicant's control needed to come forward in the first instance. The Applicant would welcome further dialogue on this matter during the determination period.

3.11 Parameter Plans (Height and Micro-Siting)

- 3.11.1 Battery research and development is a sector which the Government continues to fund through the Faraday Battery Challenge²² and more recently the Industrial Strategy²³. As a result of the continuing rapid advancements in battery technology, and given that the Applicant have not committed to a technology provider, there may be a requirement to amend the layout and dimensions of the equipment within the compound in the future (especially noting the request for a 5-year implementation period, referred to previously). To facilitate this, it is requested that the precise equipment layout, scale and design of the equipment be conditioned to allow some flexibility.
- 3.11.2 To facilitate this a proposed height and micro sitting parameter plan has been submitted as part of the planning application drawing package. The heights parameter plan illustrates that the infrastructure (green shading) would be up to 4.5 m in height, and the micro-siting plan illustrates that the infrastructure could be located across the two compounds.

²¹ P/FUL/2022/06179 – Dorset Council

²² <https://www.ukri.org/what-we-do/browse-our-areas-of-investment-and-support/faraday-battery-challenge/>

²³ <https://www.gov.uk/government/topical-events/the-uks-industrial-strategy>

- 3.11.3 In terms of assessment this has followed the Rochdale Envelope principles where the worst-case parameters have been applied. For example, it is these maximum heights that have been assessed in the Landscape and Visual Appraisal to ensure that the worst-case scenario is considered. It should be noted that the noise assessment is based on an existing BESS technology. At this stage, as referred to above, it is not known who the supplier of the equipment will be, however, to provide a robust assessment based on noise data from an existing technology some of the dimensions of the existing technology / equipment on which the noise assessment is based may ultimately differ. However, this does not impact the robustness of the assessment, and ultimately it will be for the applicant to demonstrate that the equipment that is eventually installed on site meets the required noise limits at the closest sensitive receptors. Noting that that the submitted noise assessment illustrates that levels at receptors are well within the British Standard threshold where any impact could occur.
- 3.11.4 Based on the above, it is considered reasonable to couch any forthcoming planning permission in a way that permits a degree of flexibility within the parameters proposed. As an example, an approved BESS scheme in Dorset (ref: P/FUL/2022/06179) included the following condition: *“The development shall be carried out in accordance with the approved site layout plan, ref. ## or with an alternative layout which accords with the approved parameters plan, ref. ##. For the avoidance of doubt, there shall be no development outside of the development envelopes shown in green and blue in the parameters plan. Heights of all equipment shall be in accordance with those specified in the parameters plan, being up to 4m in the green area and up to 8m in the blue area. Reason: For the avoidance of doubt, in the interests of proper planning and to reasonably permit minor changes in responses to technological changes between the date of this permission and the implementation of the development.”*
- 3.11.5 Whilst the Applicant discussed this during the pre-application meeting, further dialogue on this matter during the determination of the planning application is invited.

4.0 NEED, BENEFITS AND LOCATIONAL REQUIREMENTS

4.1 Introduction

- 4.1.1 This section of the PDAS sets out the benefits of, and need for, BESSs in relation to national energy policy and strategy. It then sets out NG's suite of future energy need documents that seek to achieve the ambition of being able to operate a zero-carbon electricity system by 2025 ²⁴ and fully decarbonise by 2035 ²⁵. It also provides a reasoned justification as to why the BESS needs to be connected to a particular substation, and thereafter the Site's location to the substation.
- 4.1.2 From the outset it should be recognised that RMBC declared a climate emergency in July 2019 ²⁶. RMBC resolved to work towards ensuring that the borough is carbon neutral by 2050, in line with the Mayor and Government targets. RMBC have also published a Climate Change Strategy and Delivery Plan ²⁷ which includes several sustainable goals including promoting renewable energy generation alongside diversifying and ensuring flexibility in energy supply. The Greater Manchester Combined Authority also declared a climate emergency in July 2019 ²⁸. The City Region published a 5-year Environmental Plan for Greater Manchester ²⁹ which sets out a series of challenges including (amongst other) mitigating climate change (carbon neutral by 2038) and ensuring resilience and adaption to the impacts of climate change. The plan priorities increasing renewable energy generation as well as increasing the flexibility of supply.
- 4.1.3 The proposed BESS can provide grid stability for circa 75,910 houses ³⁰ and will reduce the carbon footprint by circa 1,895 tonnes per annum, which is equivalent to taking circa 700 cars off the road. In addition to these figures the following section sets out why the BESS is entirely consistent with the above commitments towards the achievement of becoming carbon neutral.

²⁴ <https://www.nationalgrideso.com/news/zero-carbon-operation-great-britains-electricity-system-2025>

²⁵ <https://www.gov.uk/government/news/plans-unveiled-to-decarbonise-uk-power-system-by-2035>

²⁶ <https://democracy.rochdale.gov.uk/mqAi.aspx?ID=30498>

²⁷ <https://cape.mysociety.org/media/data/plans/rochdale-metropolitan-borough-council-f936970.pdf>

²⁸ <https://www.greatermanchester-ca.gov.uk/news/combined-authority-declares-climate-emergency/>

²⁹ https://www.greatermanchester-ca.gov.uk/media/1975/5_year_plan_exec_summ_digital.pdf

³⁰ Further details on the calculations can be provided upon request.

4.2 Benefits of Battery Storage

- 4.2.1 BESSs provide a means of allowing electricity from the Grid ³¹ to be imported and stored at times of low demand / high generation, which can then be exported back into the Grid at times of higher demand / system stress. BESSs therefore can provide balancing services to NG (who are the Electricity System Operator (ESO)) and also Electricity North West (ENW) (who are the Distribution Network Operator (DNO)) through both frequency response and reactive power services.
- 4.2.2 System frequency is a continuously changing variable that is determined and controlled by the second-by-second (real time) balance between system demand and total generation. Licence obligations ³² requires that Grid frequency is balanced (within ± 1 % of nominal system frequency, which is 50 Hz). If demand is greater than generation, the frequency falls while if generation is greater than demand, the frequency rises. If the Grid is not maintained within the required frequency tolerance system stress can result in widespread power supply issues and damage to network infrastructure. Frequency is currently managed by paying generators to cease generation (curtailment) and / or Demand Side Response (DSR). Through DSR services, businesses and consumers turn up / down, or shift demand in real-time to help balance the Grid.
- 4.2.3 Between 2015 and 2019, curtailment costs rose in line with wind output from £90 to £145 million per year. This cost doubled in 2020 as NG who are the energy system operator (ESO) faced a bill of £282 million linked to reduced demand associated with the pandemic – around £10 per household. Put another way, curtailment costs added £4 to each MW hour of wind energy generated ³³. More recent news articles on this matter illustrate that the cost of wind curtailment hit a record high of £507 million in 2021 ³⁴, which translates to around £18 per household. More recently, the invasion of Ukraine and sharp rise in living costs means that households do not need further financial pressures. Clearly if curtailment costs can be reduced and more green energy can be harnessed there are significant sustainable benefits.

³¹ The grid refers to all levels of voltage (i.e. 400kv to 11kv etc.) transmission / distribution.

³² NETs System Security and Quality of Supply <https://www.nationalgrideso.com/rules-which-were-governed>

³³ <https://reports.electricinsights.co.uk/q4-2020/record-wind-output-and-curtailment/>

³⁴ <https://www.current-news.co.uk/news/cost-of-wind-curtailment-hits-record-high-of-507m-in-2021>

- 4.2.4 Battery storage is a key part of the energy strategy and provides the Grid with balancing services to help accommodate the increasing variable levels of supply ³⁵ and demand. By importing excess intermittent renewable energy (for example on windless nights when there is no solar power) from the Grid and storing it, in short batteries can capture energy that would otherwise be lost. A point recognised in a news article ³⁶ which questions how we are going to keep the lights on. Furthermore, during situations when primary power sources (e.g. traditional power stations) are interrupted, BESSs can bridge the gap in production, thus avoiding potential blackouts. It should be noted that the UK electricity network is wholly interconnected and issues in one geographic location can have far reaching implications on the Grid. Accordingly, BESSs offer additional capacity to deal with system stress and any variations in frequency at both a local and national level.
- 4.2.5 Unlike frequency, which is consistent, voltages experienced at points across the Grid vary and without management could exceed statutory limits. Maintaining voltage levels across the Grid is becoming increasingly challenging (due to the changing nature of generation, as set out in greater detail within this Section) and therefore BESSs (which can absorb or inject energy into the Grid to manage voltage) provide a secondary beneficial reactive power ³⁷ / balancing service to the NG ESO.
- 4.2.6 As recognised by NG ESO's System Operability Framework ³⁸ a faster response is more effective and so less response is needed. BESSs can respond more rapidly than other types of services, as they have no start-up delays. As such battery storage schemes balance the real-time requirements of the Grid more efficiently. It also means that less fossil fuel is used to generate electricity which clearly has major environmental benefits.
- 4.2.7 In summary, BESSs assist in the transition to renewable energy, helping to diversify the energy network, reducing the need for further generation plants that use fossil fuels / non-renewable sources and enabling flexibility in supply. It also assists the Grid towards the target of being net zero.

³⁵ <https://reports.electricinsights.co.uk/q1-2021/power-system-records-8/>

³⁶ <https://news.sky.com/story/climate-change-rising-gas-prices-helping-to-make-the-case-for-onshore-wind-and-solar-12579108>

³⁷ Reactive Power is used to manage voltage.

³⁸ <https://www.nationalgrideso.com/research-publications/system-operability-framework-sof>

4.3 National Energy Policy and Strategy Context

Climate Change Act 2008 (2050 Target Amendment) Order 2019

- 4.3.1 The Climate Change Act 2008 ³⁹ set a legally binding target for the United Kingdom (UK) to achieve an 80 % reduction in greenhouse gas emissions by 2050 (from the 1990 baseline). However, the Government have since decided that this legally binding target was not ambitious enough to mitigate the nation's activities on climate change. In 2019 the Government became the first major economy in the world to pass laws to end its contribution to global warming by 2050 (compared to the 1990 baseline).
- 4.3.2 In June 2019, the Government made the draft Climate Change Act 2008 (2050 Target Amendment) Order 2019, which sought to amend the Climate Change Act 2008 by introducing a target for at least a 100 % reduction of greenhouse gas emissions (compared to 1990 levels) in the UK by 2050. This is otherwise and hereafter known as the net zero target. The draft Order amended the 2050 greenhouse gas emissions reduction target in the Climate Change Act from at least 80 % to at least 100 %. It is therefore a legally binding commitment to end the UK's contribution to climate change. The Order ⁴⁰ came into force in late June 2019.

Ten Point Plan for a Green Industrial Revolution (November 2020)

- 4.3.3 The Ten Point Plan for a Green Industrial Revolution ⁴¹ was published in November 2020. Whilst the Plan seeks, amongst others, to advance offshore wind by quadrupling capacity (to 40 GW by 2030); it acknowledges (page 8) that: *"to integrate clean technologies like offshore wind, we must transform our energy system building more network infrastructure and utilising smart technologies like energy storage."* It also identifies that the Government will provide £100 million for energy storage and flexibility innovation challenges, as this is seen as essential technology in the move towards an increasingly renewables heavy system and the need to store energy.

³⁹ <https://www.legislation.gov.uk/ukpga/2008/27/contents>

⁴⁰ <https://www.legislation.gov.uk/ukdsi/2019/9780111187654>

⁴¹ <https://www.gov.uk/government/publications/the-ten-point-plan-for-a-green-industrial-revolution>

The Sixth Carbon Budget: The UK path to Net Zero (December 2020)

- 4.3.4 The Sixth Carbon Budget: The UK path to Net Zero ⁴² was published by the Climate Change Committee (CCC) in December 2020. Page 135 of the main report identifies that: *“A more flexible electricity system will help balance out the variability in renewable generation. Increasing flexibility comes from both demand and supply (e.g. use of electricity storage)...With an increasing share of variable renewables, storage can capture surplus energy when demand is low and provide backup generation when demand is particularly high...Batteries can provide within-day flexibility. The Balanced Pathway assumes 18 GW of battery storage capacity by 2035.”* Currently, there is circa 2.4 GW of operational battery storage ⁴³. As such, to achieve the CCC’s balanced pathway it will be necessary to develop additional battery storage to assist in the deployment of variable renewable energy schemes.

Energy White Paper – Powering our Net Zero Future (December 2020)

- 4.3.5 In December 2020, the Department for Business Energy and Industrial Strategy (BEIS) ⁴⁴ published the Energy White Paper ‘Powering our Net Zero Future’ ⁴⁵. This Paper addresses the transformation of our energy system and how the UK will clean up its energy system and reach net zero emissions by 2050. It reiterates the aim to quadruple offshore wind capacity and the target of 40 GW (by 2030). It also recognises that supporting infrastructure on land (such a storage facilities) are vital to maximise the potential to harness this energy across UK shores for use in homes and industry.
- 4.3.6 The Paper sets out that: *“By 2050, we expect low-carbon options, such as clean hydrogen and long-duration storage, to satisfy the need for peaking capacity and ensure security of supply at low cost, likely eliminating the reliance on generation from unabated gas.”* (Chapter 2). It is clear from this that the Government sees storage as the way forward to balance and to ensure energy security.

⁴² <https://www.theccc.org.uk/publication/sixth-carbon-budget/>

⁴³ <https://www.solarpowerportal.co.uk/blogs/record-800mwh-of-utility-scale-storage-added-in-2022-according-to-solar-med#:~:text=There%20is%20now%202.4GW,energy%20storage%20in%20the%20UK.>

⁴⁴ Now the Department for Energy Security and Net Zero.

⁴⁵ <https://www.gov.uk/government/publications/energy-white-paper-powering-our-net-zero-future/energy-white-paper-powering-our-net-zero-future-accessible-html-version>

Net Zero Strategy: Build Back Greener (October 2021)

- 4.3.7 The Government published the ‘Net-Zero Strategy: Build Back Greener’⁴⁶ in October 2021. The Strategy sets out policies and proposals for decarbonising all sectors of the economy to meet the net-zero target and keep us on track for future carbon budgets. Chapter 3 ‘Reducing Emissions across the Economy’ identifies under sub-section 3i. ‘Power’ that to deliver the key policy of a fully decarbonised power system by 2035 our key commitments are (amongst others) to: *“deliver the actions in our recent Smart Systems and Flexibility Plan and Energy Digitalisation Strategy to maximise system flexibility.”* (page 94).
- 4.3.8 In 2021, the Department for BEIS⁴⁷ and the Office of Gas and Electricity Markets (Ofgem) published the:
- Transitioning to a net zero energy system Smart Systems and Flexibility Plan⁴⁸, which sets out:
 - *“a vision, analysis and work programme for delivering a smart and flexible electricity system that will underpin our energy security and the transition to net zero. This system will need significant levels of flexibility and utilisation of smart technologies so that it can be almost entirely run-on low carbon energy sources.”*
 - *“The net zero economy will be underpinned by cheap clean electricity, made in Britain. A clean, reliable power system is the foundation of a productive net zero economy as we electrify other sectors – so we will fully decarbonise our power system by 2035, subject to security of supply. Our power system will consist of abundant, cheap British renewables, cutting edge new nuclear power stations, and be underpinned by flexibility including storage, gas with CCS, hydrogen and ensure reliable power is always there at the flick of a switch. The transformation of the power sector will bring high skill, high wage job opportunities right across the UK.”*
 - Key policies include: *“Deployment of new flexibility measures including storage to help smooth out future price spikes”* and *“The deployment of*

⁴⁶ <https://www.gov.uk/government/publications/net-zero-strategy>

⁴⁷ Now the Department for Energy Security and Net Zero

⁴⁸ <https://www.gov.uk/government/publications/transitioning-to-a-net-zero-energy-system-smart-systems-and-flexibility-plan-2021>

smart technologies and flexibility will underpin our energy security and the transition to net zero. Flexibility from technologies such as energy storage, smart and bidirectional charging of electric vehicles, flexible heating systems, and interconnection could save up to £10 billion per year by 2050 by reducing the amount of generation and network needed to decarbonise."

- Digitalising our Energy System for Net Zero Strategy and Action Plan ⁴⁹ which sets out the need to digitalise the energy system, and the benefits of doing so for decarbonisation, consumers, and the economy.
- 4.3.9 The Strategy set out actions that seek to remove barriers to smart technologies (such as storage which includes batteries as illustrated within the case studies); enable smart homes and businesses; and improve access to energy markets for new technologies and business models. The actions are designed to support clean growth, reduce the cost of the energy system and keep energy bills low for consumers.

British Energy Security Strategy (April 2022)

- 4.3.10 The British Energy Security Strategy ⁵⁰ was published in April 2022 in response to rising global energy prices, provoked by surging demand post-pandemic and the invasion of Ukraine. The Strategy seeks to wean Britain off fossil fuels and boost sources of homegrown energy which will in turn offer a greater energy security in the long-term.
- 4.3.11 The Strategy increases the previously stated 40 GW target (from the White Paper and Ten Point Plan) to 50 GW by 2030. It also identifies that the Government expects a five-fold increase in solar deployment. On the basis there is currently 14 GW of solar capacity this equates to 70 GW by 2035. The increased renewable capacity targets reinforce the previously stated need to build more network infrastructure and utilise smart technologies (including energy storage).

⁴⁹https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1004011/energy-digitalisation-strategy.pdf

⁵⁰<https://www.gov.uk/government/publications/british-energy-security-strategy/british-energy-security-strategy>

- 4.3.12 Under the sub-heading of ‘Networks, Storage and Flexibility’ the Strategy sets out that: *“accelerating our domestic supply of clean and affordable electricity also requires accelerating the connecting network of infrastructure to support it. Within this decade, our modern system will prioritise two key features: anticipating need because planning ahead minimises cost and public disruption; and hyper-flexibility in matching supply and demand so that minimal energy is wasted. This more efficient, locally-responsive system could bring down costs by up to £10 billion a year by 2050.”* (page 24).
- 4.3.13 The Strategy sets out that the Government will ensure a more flexible, efficient system for both generators and users by (amongst others): *“Encouraging all forms of flexibility with sufficient large-scale, long-duration electricity storage to balance the overall system by developing appropriate policy to enable investment”* and *“Smartening up the system with more flexible pricing, through Time of Use tariffs and battery storage through Electric Vehicles.”* (pages 24 and 25).

Powering Up Plan (2023)

- 4.3.14 In March 2023, the government announced the ‘Powering Up Plan’⁵¹. This sets out ambitious plans to scale up affordable, clean, homegrown power to boost the Country’s energy security, independence and reduce household bills whilst also maintaining a world-leading position in achieving net zero. During the announcement, the Energy Security Secretary stated: *“Access to cheap, abundant and reliable energy provides the foundation stone of a thriving economy with our homes and businesses relying on it to deliver our future prosperity.”* Furthermore, the Chancellor of the Exchequer added that: *“Transforming our energy system is no longer just about tackling climate change, it is also a matter of national security. To protect ourselves from future price spikes, we need to accelerate the move to cleaner, cheaper, home-grown energy.”*

⁵¹<https://www.gov.uk/government/news/shapps-sets-out-plans-to-drive-multi-billion-pound-investment-in-energy-revolution>

Energy Act 2023

- 4.3.15 The Energy Act 2023 came into force in October 2023 ⁵². The Act amends the Electricity Act 1989 to include reference to a person who generates electricity from stored energy and defines ‘stored energy’ as energy that was converted from electricity and is stored for the purpose of its future reconversion into electricity. More generally the Act seeks to assist in the transition to net zero and secure a resilient supply of energy in an affordable way for households and businesses.
- 4.3.16 Although published prior to royal assent, the ‘Energy Security Bill Factsheet: Defining Electricity Storage’ ⁵³ (September 2023) identifies that: *“Flexibility from technologies such as electricity storage could save up to £10 billion per year by 2050 by reducing the amount of generation and network needed to decarbonise and create 24,000 jobs.”*

National Policy Statement for Energy (EN-1) (July 2011)

- 4.3.17 In July 2011, the Department of Energy and Climate Change (DECC) ⁵⁴ published the overarching National Policy Statement (NPS) for Energy EN-1 ⁵⁵. NPS EN-1 sets out national policy for energy infrastructure and states that: *“[it] is likely to be a material consideration in decision making on applications that fall under the Town and Country Planning Act 1990 (as amended).”* (paragraph 1.2.1).
- 4.3.18 In terms of energy security, NPS EN-1 states that: *“It is critical that the UK continues to have secure and reliable supplies of energy as we make the transition to a low carbon economy...”* (paragraph 2.2.20). In addition, the NPS recognises that a flexible approach to energy generation is required in order to provide backup supply for renewable energy sources, by stating: *“the more renewable generating capacity we have the more generation capacity we will require overall, to provide back-up at times when the availability of intermittent renewable sources is low.”* (paragraph 3.3.11).

⁵² https://www.legislation.gov.uk/ukpga/2023/52/pdfs/ukpga_20230052_en.pdf

⁵³ <https://www.gov.uk/government/publications/energy-security-bill-factsheets/energy-security-bill-factsheet-defining-electricity-storage>

⁵⁴ Now part of the Department for Energy Security and Net Zero.

⁵⁵ <https://www.gov.uk/government/publications/national-policy-statements-for-energy-infrastructure>

- 4.3.19 The NPS identifies that the overall capacity of the grid will require additional resources to meet future demands. This is reinforced by paragraph 3.3.12, which states: *“...we need more total electricity capacity than we have now, with a larger proportion being built only or mainly to perform back-up functions.”*
- 4.3.20 It is clear from a review of NPS EN-1 that the Government expect new balancing services to come forward through the planning system to ensure energy security and to support low carbon electricity generation. As such the Proposed Development is considered consistent with the aims of NPS EN-1.

Revised Draft National Policy Statements for Energy Infrastructure (2021-2023)

- 4.3.21 The draft NPS EN-1 was first published in September 2021 with the Government’s response to consultation provided in March 2023. Due to a technical error further consultation took place up to June 2023, with a further response awaited. The draft NPS sets out the government latest national policy for energy infrastructure and states that: *“There are several different types of electricity infrastructure that are needed to deliver our energy objectives. Additional generating plants, electricity storage, interconnectors and electricity networks all have a role, but none of them will enable us to meet these objectives in isolation.”* (paragraph 3.3.15).
- 4.3.22 Paragraph 3.3.17 states that: *“storage and interconnection can provide flexibility, meaning that less of the output of a plant is wasted as it can either be stored or exported when there is excess production. They can also supply electricity when domestic demand is higher than generation, supporting security of supply.”* (emphasis added).
- 4.3.23 Paragraph 3.3.18 states: *“this means that the total amount of generating plant capacity required to meet peak demand is reduced, bringing significant system savings alongside demand side response (up to £12bn per year by 2050). Storage can also reduce the need for new network infrastructure. However, neither of these technologies, as with demand side response, are sufficient to meet the anticipated increase in total demand, and so cannot fully replace the need for new generating capacity”.* (emphasis added).

- 4.3.24 Paragraphs 3.3.24 and 3.3.25 states that: *“Storage has a key role to play in achieving net zero and providing flexibility to the energy system, so that high volumes of low carbon power, heat and transport can be integrated. There is currently around 4GW of electricity storage operational in GB, around 3GW of which is pumped hydro storage and around 1GW is battery storage. Storage is needed to reduce the costs of the electricity system and increase reliability by storing surplus electricity in times of low demand to provide electricity when demand is higher. Storage can provide various services, locally and at the national level. These include maximising the usable output from intermittent low carbon generation (e.g. solar and wind), reducing the total amount of generation capacity needed on the system; providing a range of balancing services to the NETSO and Distribution Network Operators (DNOs) to help operate the system; and reducing constraints on the networks, helping to defer or avoid the need for costly network upgrades as demand increases.”* (emphasis added).

UK Battery Strategy (November 2023)

- 4.3.25 The UK Battery Strategy⁵⁶ was published by the Department for Business and Trade in November 2023, in partnership with the UK Battery Strategy Taskforce. The strategy sets out the Government’s vision for the UK to achieve a globally competitive battery supply chain by 2030, that supports economic prosperity and the transition to net zero. It sets out that a successful battery industry will be an important source of jobs and economic growth over the next decade.
- 4.3.26 The executive summary confirms that: *“Batteries are essential products in modern, industrialised economies...Primary uses include personal and commercial transportation and grid-scale battery energy storage systems (BESS), which allow us to use electricity more flexibly and decarbonise the energy system in a cost-effective way.”*
- 4.3.27 The strategy is based around a ‘design-build-sustain approach’ which amongst others includes: “...Continuing to support energy intensive industries and speed up

⁵⁶ <https://www.gov.uk/government/publications/uk-battery-strategy>

energy grid connections; and ensuring planning and permitting reform actions will benefit the emerging battery sector...”

4.3.28 It is clear from the fifteen specified priorities that the Government will provide financial support / investment and promote batteries in order to build on the UK’s world class innovation and comparative advantage in this sector. Page 25 of the strategy identifies that the Government has supported the development of BESS through innovation competitions, while page 28 confirms that: *“In September, UK Investment Bank (UKIB) published a strategy update ⁵⁷ setting out its offer for short duration BESS, which includes a mezzanine loan product that aims to increase the pool of banks willing to lend to these projects. UKIB also aims to support the development of markets for long duration storage, including by taking greater risk than private investors, to help ensure first-of-a-kind projects are delivered.”*

4.3.29 It is clear from the latest Government publication, that batteries are being promoted and significant investment / incentives are being provided to continue to keep the UK at the forefront of battery technology and innovation. The proposed BESS clearly aligns with this strategy.

4.4 National Grid Strategy and Context

4.4.1 The NG ESO is required to ensure electricity is transported to all corners of Great Britain and meet supply / demand second by second (e.g. ‘balancing’ the Grid). In addition, properties like voltage and frequency must be carefully regulated to ensure they stay within statutory limits.

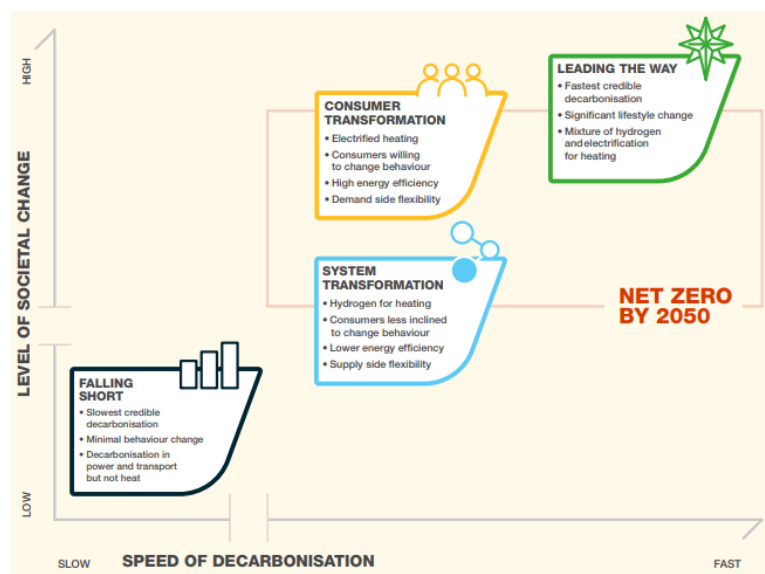
4.4.2 The NG ESO publishes a suite of documents on the future of energy needs in the UK. Those considered to be of most relevance to the BESS considered in turn below.

⁵⁷ <https://www.ukib.org.uk/sites/default/files/2023-09/UKIB-Strategy-Update-Private-Sector-Investments.pdf>

Future Energy Scenarios (FES)

- 4.4.3 The latest publication of the UK-wide Future Energy Scenarios (FES) was published in July 2023 ⁵⁸. The document sets out in the foreword that: *“The FES sets out credible ways that the UK can achieve Net Zero by 2050, as well as the UK Government’s commitment to a decarbonised electricity system by 2035...Our 2023 Future Energy Scenarios highlight one key overall theme – we must act now to achieve a clean, secure and fir energy system for all. If we don’t, a once in a lifetime opportunity will pass us by.”*
- 4.4.4 The FES outlines four different credible pathways, based around two drivers: the speed of decarbonisation and the level of decentralisation, for the future energy between now and 2050. Each considers how much energy might needed and where it would come from.
- 4.4.5 The four scenarios are: (1) Leading the Way; (2) Consumer Transformation; (3) System Transformation; and (4) Falling Short. The latter was the ‘Steady Progression’ scenario in previous versions of the FES, but was renamed to reinforce how this scenario does not meet the Net Zero target by 2050. They are illustrated in Figure 4.1 below.

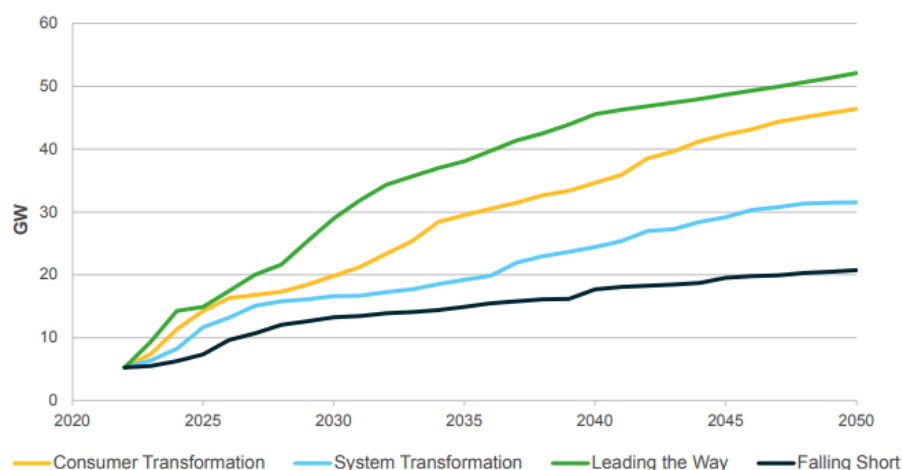
Figure 4.1: Future Energy Scenarios: Scenario Matrix



⁵⁸ <https://www.nationalgrideso.com/future-energy/future-energy-scenarios>

- 4.4.6 All four scenarios have net zero at their core and explore different pathways to achieving this. The one of the headline messages is that reaching net zero carbon emissions by 2050 is achievable. However, this requires immediate action across all key technologies and policy areas, and full engagement across society and end consumers. The ‘Consumer Transformation’ and ‘System Transformation’ scenarios both hit the target of zero emissions in 2050, and ‘Leading the Way’ achieves the target slightly earlier in 2046. ‘Falling Short’ would not achieve net zero.
- 4.4.7 It sets out several key messages including Key Message 3 ‘Markets and Flexibility’ (page 10) which identifies that:
- *“improved market signals and new distributed flexibility solutions are key to managing a secure, net zero energy system at lowest cost to the consumer.”*
 - *“47 GW of electricity storage is operating by 2050 in Consumer Transition, with 18 GW connected at distribution level.”*
 - *“The growth of distributed flexibility (such as storage) ... is a key enabler of net zero. A market-wide strategy, including government targets, policy support and market reform is required to facilitate the significant growth in distributed flexibility.”*
- 4.4.8 The key statistics set on page 13 of the FES illustrates that electricity annual demand increases from 286 TWh in 2023 to between 570 and 726 TWh (depending upon scenario) in 2050. In terms of total storage capacity this increases from 29 GWh in 2022 to between 62 and 166 GWh (depending upon scenario) in 2050. Storage capacity will need to increase two-fold to get close to reaching the net zero target. Under all scenarios considered in the FES increased electricity storage is predicted, as illustrated by Figure ES.E:26 from page 146, reproduced in Figure 4.2 below.

Figure 4.2: Figure ES.26 Electricity Storage Capacity



4.4.9 Page 146 of the FES specifically relates to electricity storage capacity and identifies that: *“Electricity storage is needed to reinforce security of supply and efficiently manage supply and demand. Installed capacity and volume need to increase significantly to support the decarbonisation of our electricity system as we transform to net zero.”* This is continued on page 196 which states: *“Overall, the policy, regulatory and market environment for storage will need change to bring forward the levels of energy storage we expect to need on the system. This could involve changes to how storage is treated by electricity codes, removal of planning permission barriers and market change to allow greater revenue stacking of different services to improve the business case for storage projects.”*

4.4.10 A further important aspect of electricity storage is that: *“At times of high renewable generation and low demand, oversupply also needs to be carefully managed with the need for additional energy to be consumed (either by increasing demand or using energy storage) to prevent the need to curtail generation...”* (page 117). Page 180 identifies that: *“Electricity storage at both transmission and distribution level is an efficient way to manage supply and demand by reducing the amount of generation and network investment needed to decarbonise...”* Both quotes demonstrate how NG ESO believe that storage plays an important role in managing the security of supply and demand.

- 4.4.11 NG NSO also published the Regional FES Explainer ⁵⁹ in April 2022. The document explains the ambition to start modelling at a regional level, where relevant, so that the GB-wide forecast becomes the summation of regional results. It illustrates the direction NG ESO wish to take in respect of breaking GB down into regions and understanding how different parts of GB will decarbonise at different rates and in different ways. As set out on page 7: *“Understanding this down to a local authority level will be an important step so we can reflect each local authority’s unique journey towards net zero.”* Clearly there is more work to be done on this, but it provides a clear direction of travel in local to national, rather than top down.

System Operability Framework (SOF)

- 4.4.12 The System Operability Framework (SOF) ⁶⁰ takes a holistic view of the changing energy landscape to assess the future operational requirements of the electricity network. It combines insight from the FES with a programme of technical assessments to identify medium / long-term requirements for operability.
- 4.4.13 The latest version of the Operability Strategy Report ⁶¹ (OSR) was published in January 2024. The Report outlines the future challenges and actions in maintaining an operable electricity system. It sets out what needs to be done to reach NG’s zero carbon 2025 ambition and highlights how stakeholders can engage to assist in the achievement of these challenges. It explains the challenges NG ESO face in operating a rapidly changing electricity system and describes what is needed to meet these challenges in the key areas of thermal, voltage, stability, restoration, frequency, within-day flexibility and adequacy.
- 4.4.14 The executive summary states that: *“This year’s report highlights the excellent work being delivered across the ESO and in collaboration with industry, ensuring we’ll be ready to operate the transmission system with 100% zero carbon for short periods in 2025. Achieving this ambition requires two key deliverables. Firstly, the market must provide a zero-carbon generation mix. Secondly, we must ensure we have the technical capability to operate a zero-carbon generation mix ... A new Flexibility*

⁵⁹ <https://www.nationalgrideso.com/future-energy/future-energy-scenarios/regionalisation-fes>

⁶⁰ <https://www.nationalgrideso.com/research-publications/system-operability-framework-sof>

⁶¹ <https://www.nationalgrideso.com/document/299926/download>

Strategy is being developed to manage variability in supply and demand and we need to ensure there will be sufficient non-weather dependent technology to meet electricity demand.” To deliver the zero-carbon aspirations a key component of future operating systems will include battery storage.

- 4.4.15 The report identifies that through the existing battery storage pathfinder procurement process ESO will ensure they are ready for the increased penetration of this technology in future years. It also identified that: *“Currently, only small volumes of zero carbon within-day flexibility are available on the network. However, between now and 2025, we expect battery storage volumes to continue to grow significantly, with up to 12GW of capacity by 2025, making it the largest source of within-day flexibility during this period.”* (page 44).
- 4.4.16 The report is clear that flexibility is required to achieve the zero-carbon ambitions and one of the largest sources of this will be battery storage. Clearly, the Proposed Development accords with and is supported by this Operability Strategy Report.

Electricity Ten Year Statement (ETYS)

- 4.4.17 The Electricity Ten Year Statement (ETYS) ⁶² was published in late August 2023. It forms part of a suite of publications (FES, ETYS and Network Options Assessment (NOA)) and provides NG ESO's view of future transmission requirements and the capacity of Great Britain's national electricity transmission system over the next ten years.
- 4.4.18 The Foreword confirms the ambition to: *“...Our analysis this year continues to highlight that over the next 10-20 years, we see increased requirements across some key network boundaries... as we strive towards Net Zero, the requirements of the system will continue to grow.”* (page 3).
- 4.4.19 The ETYS sets out a series of key messages (pages 5 to 8), including:
- *“Our analysis this year continues to show growing system needs driven primarily by low carbon and renewable generation. This will drive requirements for new*

⁶² <https://www.nationalgrideso.com/research-publications/etys>

network capability as we continue to move towards the 2035 government target of 100% zero carbon electricity system and beyond.”

- *“We will need to address emerging high and low voltage issues on the GB Electricity Transmission System over the next decade.”*
- *“Timely and coordinated network reinforcements will significantly help reduce network constraints.”*

4.4.20 The ETYS2023 does not include the power flow diagrams illustrated within a series of figures contained within Appendix C of the ETYS2022. However, it is considered that the figures (extracts provided in Figures 4.3 and 4.4 below) are still relevant as they show a snapshot of present (2022/23) and future (2030/31) power flows along the transmission network for the FES ‘Leading the Way’ Scenario. The power flow (in MW) is set out in the rectangular box and the direction of flow is illustrated by the arrows. The figures clearly show the significant increase in flows from Northern England into the Midlands.

Figure 4.3: ETYS App C: Extract from Fig C1 2022/23

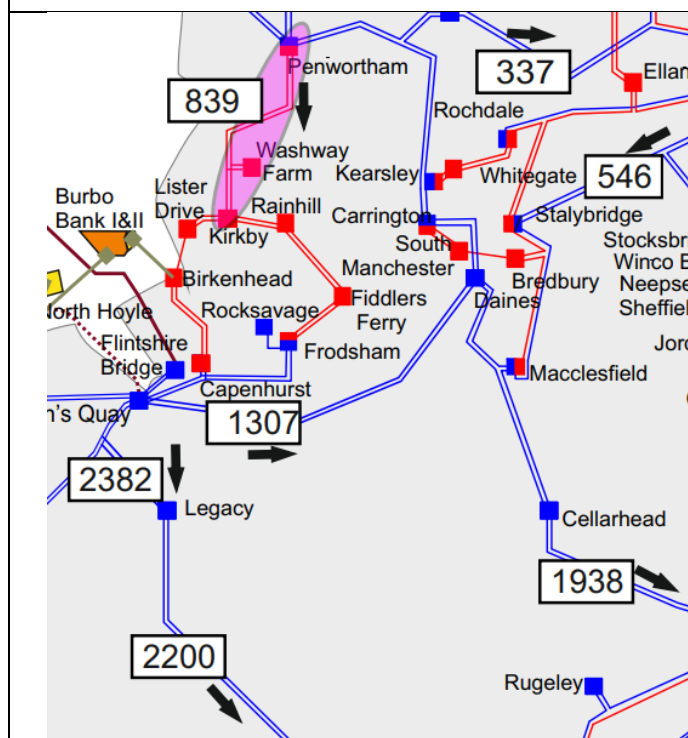
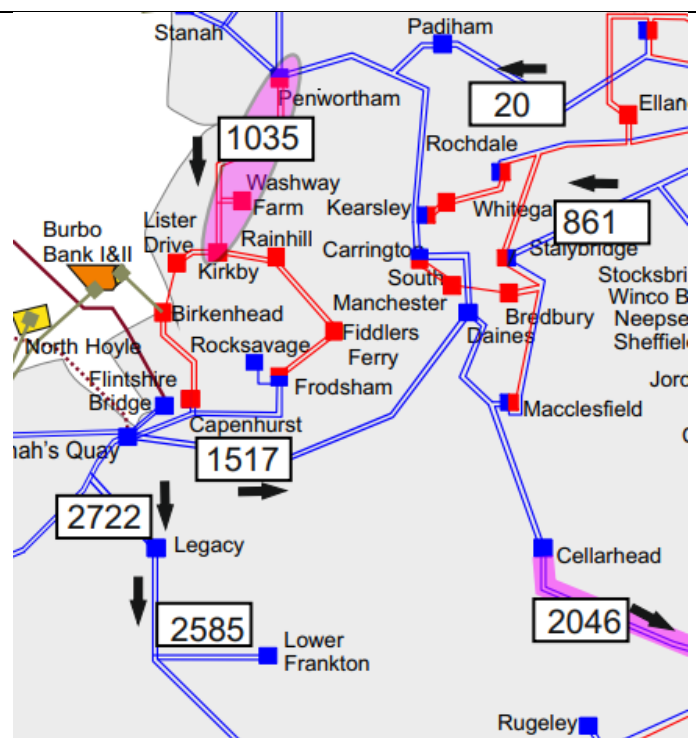


Figure 4.4: ETYS App C: Extract from Fig C5 2030/31



4.4.21 Regardless of region, all FES scenarios demonstrate gross demand increasing to 2050, which is reflected by the low-carbon and renewables (supported by interconnectors and storage) taking over and surpassing fossil fuel generation. It is

clear from the regional data that as low-carbon and renewable generation is connected into the NETS, due to its intermittent nature, the system will need to be prepared to manage large swings in power flows. This includes new reinforcements to facilitate power flows through northern regions to supply southern demand.

Bridging the Gap to Net Zero

4.4.22 Bridging the Gap to Net Zero ⁶³ was published in March 2022. The Report includes three key messages, one of which is that: *“Flexibility needs broad and largescale investment to start now.”* Furthermore that NG ESO’s milestones for investment show that everyone needs to start building the necessary infrastructure for 2035 in the next few years. Page 23 of the report references ‘The Carbon Trust: Flexibility in Great Britain’ ⁶⁴, the key findings of which are:

- *“Embedding greater flexibility across the entire energy system will reduce the cost of achieving net zero for all consumers while assuring energy security.*
- *Investing in flexibility is a no-regrets decision as it has the potential to deliver material net savings of up to £16.7bn per annum across all scenarios analysed in 2050.*
- *A more flexible system will accelerate the benefits of decarbonisation supported by decentralisation and digitalisation.”*

4.4.23 It is clear from the Report which is supported by the independent findings of the Carbon Trust that there is an urgent need for a more flexible system which will assist in reducing costs.

4.5 Distribution Network Operator

4.5.1 Electricity North West (ENW) are the Distribution Network Operator for the Northwest of England. They published their latest fifth Distribution Future Electricity Scenarios ⁶⁵ (DFES) in December 2022. The document sets out ENWs understanding of the way they expect the use of the electricity network to change in the region up to 2050.

⁶³ <https://www.nationalgrideso.com/document/247071/download>

⁶⁴ <https://www.carbontrust.com/resources/flexibility-in-great-britain>

⁶⁵ <https://www.enwl.co.uk/globalassets/get-connected/network-information/dfes/current/distribution-future-electricity-scenarios-2022.pdf>

Page 4 provides a summary of the FES scenarios and identifies that in all scenarios grid scale battery storage increases. Page 25 of the document identifies that: *“In last year’s DFES we highlighted that we expect electricity generation to be the first sector to fully decarbonise by the mid-2030s. To meet this target, new zero carbon renewable sources will need to be installed across Great Britain. Given the intermittent (stochastic) nature of renewable generation, there will be increased requirements for batteries to store renewable energy until it is needed on the network, i.e. at times when renewable generation levels are low.”*

- 4.5.2 Alongside the NG ESO it is clear that ENW identify that the capacity of battery storage will need to increase to enable flexibility in the Grid towards the aspiration of net zero.

4.6 Summary of Need

- 4.6.1 It can be seen from the above review that the national policy message on energy security is strong and unambiguous. The increased deployment of renewable energy (50 GW of off-shore wind by 2030 and 70 GW of solar by 2035) reinforces the need to ensure security of supply through the development of a diverse system that supports increasing peak demands and the move to electric vehicles. The Government’s position is clear that BESS fall within the renewable energy and associated infrastructure definition, even though the technology does not in itself produce renewable energy.
- 4.6.2 BESSs are a key component of the future energy mix under all scenarios considered in the FES. Existing storage provision will need to increase significantly by 2030 to be on track to achieve net zero and support the deployment of wind and solar as set out in the FES and national policy. The ETYS also demonstrates the significant increase in power flows through the NETS which will need to be supported by storage to maintain voltage, stability and frequency.
- 4.6.3 Decarbonisation, decentralisation and digitalisation are creating significant changes across the Grid. As identified by the OSR, NG ESO consider that the next big challenge is around managing system imbalance during normal operation. As technology is becoming more decentralised (closure of large Power Stations etc.) the

significant distributed and local generation will need to be supported by energy storage.

- 4.6.4 Battery storage is a key part of this energy strategy and provides the Grid with reactive power / balancing services to help accommodate the increasing level of renewable energy generation. As recognised by NG ESO's SOF a: *"Faster response is more effective and so less response is needed if speed can be increased."* BESS can respond more rapidly than other types of balancing services, as they have no start-up delays. As such BESS can balance the real-time requirements more efficiently. It should be noted that the UK electricity network is wholly interconnected and issues in one geographic location can have far reaching implications on the network. Accordingly, BESSs offer additional capacity to deal with system stress and any variations in Grid frequency and voltage at both a local and national level.
- 4.6.5 Finally, battery storage clearly assists towards mitigating against climate change (i.e. assisting RMBC and the Greater Manchester Authority with their climate emergency declaration) and as illustrated by the Carbon Trust embedded flexibility assists with energy security and reducing costs to households.

4.7 Locational Requirements

- 4.7.1 The following subsection sets out the reasoned justification as to why the BESS is proposed to be connected into the Kingsway Primary Substation. It thereafter explains why the application site has been chosen.

Point of Connection / Grid Connection

- 4.7.2 There is a statutory obligation to balance and maintain voltage within specific limits. The previous subsection of this PDAS clearly identifies that as technology is becoming more decentralised the significant number of distribution and local generation projects connecting into the Grid will need to be supported by energy storage. Battery storage is a key part of this strategy as it provides the Grid with reactive power / balancing services to help accommodate the increasing level of renewable energy generation.

- 4.7.3 Electricity is distributed to the DNO area by a series of interconnected Grid Supply Point (GSP) substations managed by the NG ESO. Thereafter electricity flows onto the distribution level network at lower voltages managed by the DNO (typically 132 kV and below).
- 4.7.4 In terms of the local grid network, the Rochdale GSP Substation transfers electricity from NG's 275 kV network into the DNO's 132 kV network. There are 3 No. Bulk Supply Point (BSP) substations (Belfield, Rochdale Central and Castleton) step down the 132 to 33 kV which is then distributed to 12 No. primary substations. Together these substations form part of the Rochdale GSP group.
- 4.7.5 Based on the preference for higher voltages⁶⁶, the Applicant sought to connect to the Rochdale GSP substation. However, this process has concluded that there is no connection opportunity due to reinforcement works (as set out in **Appendix 3-1**).
- 4.7.6 The next preferential connection opportunity is the three BSP substations (Belfield, Rochdale Central and Castleton) which step the voltage down from 132 to 33 kV. This process has identified that:
- The Rochdale Central Substation is located behind a food superstore and surrounded by the River Roch. There is no land within the surrounding area which could potentially accommodate a BESS.
 - The Castleton Substation is surrounded by industrial uses and the only available land is being promoted by another battery storage company. Planning permission was granted in 2020 (ref: 19/01147/FUL) and subsequent applications have been made to discharge conditions. On this basis there is no land within the surrounding area which could potentially accommodate a BESS.
 - The Belfield Substation is surrounded by a mixture of industrial and residential uses. There is undeveloped land to the near of the substation, however this forms part of a greenspace corridor and is at risk of flooding due to the proximity of the River Roch and Stonney Brook. The site appears to be covered in a mixture of vegetation which is likely to harbour high ecological potential and is immediately adjacent to numerous residential properties. The combination of the above

⁶⁶ It is more preferential to connect into higher voltages due to greater transmission efficiency losses at the lower voltages.

factors means that there is no land within the surrounding area which could potentially accommodate a BESS.

4.7.7 On the basis that it was not possible to connect to any of the BSP substations, the primary substations were investigated. Except for the Kingsway substation (33 to 11 kV) all the other substations step down from 33 to 6.6 kV. The Kingsway substation is therefore preferred, due to its voltage levels, over the other primary substations and was investigated further. As identified previously a point of connection has been confirmed with ENW.

4.7.8 Having identified the Kingsway Primary substation as the point of connection, the Applicant investigated the potential to locate the BESS on the surrounding Kingsway Business Park. The Site has the benefit of not potentially impacting the availability for large storage and distribution operators to bring forward large schemes on the business park. In addition, from a planning policy perspective it is still located within the business park allocation and defined urban area. Finally, on the basis that the Applicant already had an interest in the land to which the planning application relates, the site was chosen.

5.0 ENVIRONMENTAL MATTERS

5.1 Introduction

- 5.1.1 This section considers environmental matters under the sub-headings of ecology and nature conservation, flood risk and surface water drainage, noise and traffic and transportation, landscape and visual, land contamination and heritage.

5.2 Ecology and Nature Conservation

- 5.2.1 An Ecological Assessment (**Appendix 5-1a**) has been prepared in support of the BESS. A desk study was undertaken to identify existing information on the presence of designated sites for nature conservation, protected and notable species and habitats proximate to the Site. This information was obtained from a site visit and from the local biological records centre. A summary of the assessment is provided below for ease of reference.
- 5.2.2 The majority of the site comprises poor semi-improved grassland which is of low intrinsic ecological value and its loss is not considered to be ecologically significant. The pond within the Site has become choked with vegetation and is likely to dry out completely on an annual basis. Without management it would be expected to succeed into ruderal and scrub vegetation in time. Although the pond is not considered to be a particularly good / high quality example of the habitat type it still represents a habitat which is relatively limited in the local area and provides some value to local fauna, and as such the loss of the pond would be considered likely to have an impact at the local level. On this basis, it is proposed to relocate the pond as discussed further in this subsection.
- 5.2.3 Habitat creation will include the proposed ecological mitigation area in the north of the Site, and grassland areas between the battery storage and other facilities. Habitats across the Site will include; pond, grassland, scrub, tree, and hedgerow planting. As illustrated on the illustrative landscape masterplan the proposed habitats would be planted using native species and managed to promote biodiversity.
- 5.2.4 The proposed habitat creation is considered likely to provide habitats with greater ecological value than the baseline habitats and which would be expected to have a minor beneficial impact at the local level. It is recommended that although not an invasive species as listed on

Schedule 9 of the Wildlife and Countryside Act 1981, the existing areas of Chinese bramble within the hedgerow base and along the embankment in the north of the Site are managed to either remove the plant completely or to reduce and limit its growth and spread.

5.2.5 The following bullet points provide consideration of those species thought likely to occur, and their implications for the proposal, where relevant.

- Bats: There are no habitats within the Site that would be considered suitable to support bat roosts. The habitats within the Site offer only limited opportunities to bats for foraging and commuting, with the hedgerow in the north of the Site and the small pond presenting the most potential. The M62 motorway to the south may deter bats from using the Site, and the areas of development to the north would be expected to limit connectivity for bats to access the Site.

Some minor losses of habitat would be expected as a result of the BESS, including small areas of hedgerow, and loss of the pond. The proposed habitat creation would provide compensation for the pond and provide additional hedgerow habitat along the southern Site boundary. Overall the Proposed Habitats would be of greater suitability to support foraging and commuting bats and losses of other habitats would be only minor and temporary and unlikely to adversely affect the overall favourable conservation status of the local bat population. No further surveys are considered necessary.

It is anticipated that the Proposed Development will include buildings and access infrastructure that may require external lighting. It is recommended that the lighting scheme follows good practice methods in accordance with Bat Conservation Trust guidelines.

- Badger: No records of badger were returned within the desk study, additionally no evidence of badger was recorded during the Site survey. As such, badgers are considered unlikely to be present at the Site. However, badgers are a mobile species and there is the potential that badgers could colonize the Site prior to development. It is recommended that a pre-commencement survey is undertaken to determine whether badgers are present or likely absent prior to commencement of Site clearance and construction and to inform any mitigation required at that time.
- Breeding Birds: The hedgerow in the north of the Site is considered suitable to support nesting birds. The grassland habitat is heavily disturbed by grazing and considered to be unsuitable for birds. The tall ruderal and pond habitats have

limited opportunity for breeding birds but may provide foraging opportunities for birds.

Only one record of protected/notable bird species was provided within the Site boundary, bullfinch, a species of principal importance. Bullfinches will use a variety of habitats from woodlands and hedgerows to gardens, parks, and orchards. The development of the Site is considered unlikely to impact upon this species as supporting habitats will be retained and additional suitable habitat will be created in the north-east of the Site. Additionally, the development of the Site is unlikely to impact significantly on other protected or notable species in the vicinity of the Site, with suitable habitats retained and created within the Site to support the range of species identified in the desk study.

The hedgerow in the north of the Site will be mostly retained, however a small section will be removed to allow for new access to be created. Given the small areas of habitat to be lost, these are considered unlikely to adversely affect the population status of any bird species using the site and no further surveys recommended.

Clearance of hedgerows should be undertaken outside of the breeding bird season (i.e. site clearance in the period September to February, inclusive). If Site clearance during this period is not possible, then a nesting bird check by a suitably experienced ecologist should be made of all areas requiring clearance no more than two days before works are scheduled. Clearance should then be conducted under a watching-brief undertaken by a suitably qualified ecologist. Should an active nest be found during clearance, works in this area must stop until the young have fledged or the nest is no longer active. A buffer around the affected area will be necessary to reduce disturbance effects that could cause a nest to be abandoned.

- Amphibians: Two waterbodies were considered in the assessment; one is located on-Site and the second is circa 115 m north-west of the Site. Both ponds were considered likely to be sub-optimal for great crested newts but have some potential to support other amphibians. Terrestrial habitat within the Site was noted to be heavily disturbed by grazing and generally lacked features suitable for terrestrial amphibians such as piles of debris / logs / vegetation and tussocks or dense grassland structure which can be used for refugia and foraging. The hedgerows and the small area of tall ruderal vegetation could provide some limited suitable terrestrial/commuting opportunities for these species, though connectivity to / from the Site is very limited and major barriers to dispersal are

present to the south, east and north of the Site, the west provides more opportunities, but this is still considered to be suboptimal. No records of great crested newts were returned within the desktop search, and eDNA surveys conducted in 2022 as part of a previous survey were reported to be negative.

Overall, due to the sub-optimal nature of the habitats present and previous negative eDNA results it is considered unlikely that great crested newts are present at the Site and no further survey is required and great crested newts are not considered to be a constraint to the development.

Common frog tadpoles were observed within the on-site pond. Although common frog has no statutory protection, it is recommended that works to infill / regrade the on-site pond take place during the winter when frogs are less likely to be present. As a new pond will be created in the northern area of the Site it would be expected that common frogs would colonise the pond soon after creation. As such, no significant adverse impact is expected on the common frog population.

- Other Mammals: The hedgerows and the tall ruderal vegetation provide some, albeit limited, suitable hibernation habitat for hedgehogs. The grassland provides some limited suitability for foraging hedgehogs. The tall ruderal vegetation and areas of the existing grassland will be lost to the BESS, a small section of one hedgerow will also be lost. However, the hedgerow in the north-east of the Site will be retained and the BESS will include a hedgerow along the southern boundary as well as the creation of an ecological mitigation area in the north-east of the Site which will provide an area of varied habitats with increased suitability for hedgehogs.

Overall, the proposed landscaping and habitat creation will likely provide more suitable habitats for hedgehogs than is currently present at the Site. It is considered unlikely that hedgehogs would be present at the Site, however it would be recommended that precautionary methods are employed when clearing the Site for development, including a staged cut / trim of taller vegetation to deter use by hedgehogs and allow them to migrate away from the development area (this may be carried out by the contractor and would not require ecological supervision).

- Invertebrates: The survey confirmed the presence of pond mud snail, which will be lost to the development. However, a new pond will be created within the ecological mitigation area in the north-eastern area of the Site. It is recommended that pond mud snails are translocated into the new pond once it has been constructed and prior to the infilling of the existing pond. The new pond

should be created as illustrated in on the planning application drawing, and should include areas that hold water all year around, as well as shallower areas at the margins and shallow scrapes adjacent to the pond which would periodically dry out providing a range of habitats. Vegetation present within the existing on-site pond may be translocated into the new pond, as well as planting of a range of emergent and marginal vegetation. The new pond should be constructed prior to infilling / regrading onsite pond. Pond mud snails should be captured through undertaking a number of pond net samples and collecting snails to be moved into the new pond. After sampling and collection, an excavator may scrape the existing pond (once drained) and mud collected within the bucket relocated into the margins of the new pond. Pond mud snails collected from net sampling should be translocated into the mud at the margins of the new pond.

5.2.6 A Biodiversity Net Gain Assessment has been submitted as part of this planning application (**Appendix 5-1b**). This document demonstrates that the BESS would result in a +34 % gain in habitats and a +16 % gain in hedgerows. Accordingly, the Proposed Development would provide over the 10 % threshold referenced in the Environment Act.

5.2.7 A plan has been prepared to support the ecological mitigation area that is proposed to be created in the northern extent of the Site. The document identifies a series of reasonable avoidance measures for a range of species, then set out the management aims and implementation plan for the area.

5.3 Heritage

5.3.1 A Heritage Impact Assessment been prepared (see **Appendix 5-2** for full details) with a summary of the findings set out below.

Direct Impacts

5.3.2 The assessment has established that there is a general paucity of evidence relating to settlement and activity within the Study Area (1km from the Site) prior to the post-medieval period. This probably reflects a combination of the more archaeologically visible nature of later remains, and the topographic and geological situation of the Site, which is likely to have contributed to a pattern of less intensive land use and



settlement from prehistory onwards. While direct and indirect documentary references suggest an increase in enclosure of the open moorland from the late medieval period, it appears that the population density remained low and associated with scattered farmsteads, and the area is likely to have constituted a somewhat peripheral portion of Rochdale parish.

- 5.3.3 The findings of a programme of desk-based research, archaeological survey and evaluation, and excavation in advance of the development of the Kingsway Business Park, indicate that the Site formed part of a post-medieval landscape shaped predominantly by agriculture and the regional textile industry. However, much of this relict landscape was destroyed or significantly disturbed during the construction of the Business Park. The Site has also been affected by the construction of the M62 along its eastern boundary.
- 5.3.4 It is suggested that the pond in the northern part of the Site may have originated as a disused extraction pit; although the date of any quarrying activity cannot be determined, the feature is depicted on the 1893 25 Inch OS map. While not present on the 1851 Six Inch OS map, it is not clear whether this reflects the feature's origin or the difference in map scales. The LiDAR data also indicates the probable survival of the remains of former field boundaries on the Site; these correspond to the boundaries present on the historical OS maps. The remains of ridge and furrow are also visible in the LiDAR data, although the Site visit confirmed that any earthwork remains are severely denuded. The northeast – southwest aligned parcel of ridge and furrow to the immediate east of Broad Shaw Farmhouse is interpreted as probably reflecting post-medieval ploughing, while further possible remains visible to the north of this on a northwest – southeast alignment may have an earlier (medieval) date (based on differences in morphology). There is judged to be a high potential for post-medieval agricultural remains to survive on the Site, although such remains would be unlikely to be of greater than negligible importance. There is considered to be a medium potential for medieval agricultural remains to survive on the Site, although they are likely to be heavily truncated and of negligible importance.
- 5.3.5 Given the very limited evidence for prehistoric, Romano-British, and medieval activity within the Study Area, as well as the likelihood of disturbance from modern landscaping on the Site, there is a low potential for archaeological remains from these

periods to survive within the Site (with the exception of medieval cultivation remains). Similarly, there is a low potential for modern archaeological remains to be present.

- 5.3.6 The Site has been under arable cultivation at some point(s) since the medieval period. Ploughing (including historical ploughing) is a significant threat to the survival of archaeological remains ⁶⁷, and it is likely that any earlier remains may have been truncated or disturbed by these regimes. The presence of modern drainage features or buried services cannot be discounted; if present, their installation is likely to have damaged or destroyed any archaeological features that may have survived. It is also likely that the Site has been affected by landscaping and groundworks associated with the surrounding developments (i.e. the motorway and Kingsway Business Park, including the realignment of Dig Gate Lane), although the full extent of this is unclear.

Mitigation of Direct Impacts

- 5.3.7 The NPPF ⁶⁸ states that an LPA should require developers to: “*record and advance understanding of the significance of any heritage assets to be lost (wholly or in part) in a manner proportionate to their importance and the impact.*” As such, it is advised that mitigation measures should consider the nature of the BESS. Given the low potential for archaeological remains to survive on the Site, and the lack of archaeological conditions attached to the adjacent consented development (ref: 22/01360/FUL), no further archaeological works are recommended to be undertaken. This approach should be agreed in advance of work commencing with officers at RMBC, through Greater Manchester Archaeological Advisory Service, their advisors on archaeological matters.

Setting Impacts

- 5.3.8 The NPPF, Planning Practice Guidance (PPG) and Historic England guidance on setting (2017) ⁶⁹ are clear that the setting of an asset can contribute to its significance.

⁶⁷ Noble et al. 2019

⁶⁸ Paragraph 205 of the September 2023 version of the NPPF, which was correct at the time of preparing the report.

⁶⁹ <https://historicengland.org.uk/images-books/publications/gpa3-setting-of-heritage-assets/heag180-gpa3-setting-heritage-assets/>

Details of all designated assets within the Study Area are contained within Appendix 2 of the assessment.

- 5.3.9 The potential impact of the BESS on the settings of the nine designated assets within the 1km Study Area was assessed. All of the assets are Grade II Listed post-medieval farmhouses and / or barns. Site visits were undertaken in September 2023. Several of the assets could not be directly accessed due to long private drives; where this was the case, vantage points on nearby public roads were identified that afforded sufficient views of the surrounding landscape to assess the relationship of the asset to the Site.

Broad Shaw Farmhouse and adjoining Barn

- 5.3.10 Broad Shaw Farmhouse and Barn, a Grade II Listed Building, is located c. 25m west of the Site. The NHLE describes the 17th- and 18th-century architecture of the farmhouse, including a datestone with the inscription 1651, and various subsequent modifications. Desk-based research undertaken in advance of development at Kingsway Business Park determined that Broad Shaw Farmhouse was bought by one James Ashworth in 1696, and in 1782 Francis Ashworth built a cotton carding mill alongside the farmhouse and two cottages; the carding mill was said to be the first purpose-built cotton factory in Rochdale and ‘no bigger than an outhouse’ but is no longer extant ⁷⁰. The farmhouse and barn had become derelict by the 1960s, but have since been renovated and, at the time of visiting, appeared to be used as an office/conference centre.
- 5.3.11 It is reasonable to assume, based on proximity, the post-enclosure field patterns set out on historical maps, and a lack of documentary references (such as tithe / enclosure apportionments) to the contrary, that land within the Site was associated with Broad Shaw Farmhouse, either via ownership or tenancy. The surrounding open agricultural land would have formed an important element of the original setting of the functioning farmhouse. In the wider landscape, the farmhouse’s setting within the broader pattern of dispersed farmsteads would have also contributed to understanding its economic and social importance, while at a localised level, the

⁷⁰ Wildon & Nevell 2004

spatial and functional interrelationship between the farm buildings, farmyard and access / communication route underpinned the function of the farmhouse at the core of the farmstead.

- 5.3.12 However, the site visit established that many aspects of these settings have been altered or lost and little of the building's historical context is currently legible. While the Site comprises the only remaining open pasture in the immediate vicinity of the farmhouse, construction of the M62 and the Business Park has resulted in changes to the character of this grassland through the removal of the post-medieval field pattern, the introduction of traffic noise and movement, the rerouting or removal of contemporary landscape features such as roads and property boundaries, and the curtailment of views. Renovation of the farmhouse and landscaping of its immediate surroundings has also limited the ability of observers to easily understand how the farmhouse and barn were approached and used (in terms of their function within the farmstead).
- 5.3.13 Given the substantial degree of modification to which the setting of Broad Shaw Farmhouse has already been subjected, its current setting is considered to make a relatively minor contribution to the cultural significance of the asset, which is primarily derived from its evidential value and architectural interest as an example of a building of this age and type. Indeed, the current setting contains various elements that are judged to detract from an observer's ability to understand and appreciate its historical value.
- 5.3.14 The change of use of the Site would represent a perceptible change in the setting of the adjacent Broad Shaw Farmhouse; however, this does not necessarily equate to harm in heritage terms and this change is not expected to result in a further loss of historical information or legibility, or to reduce the ability to appreciate or understand the cultural significance of the building. It is judged that the BESS would have no more than a neutral impact on the setting of the asset and cause no harm in terms of NPPF.

Brick-Built House at Chadwick Fold, Garside Farmhouse, Moorgate East Farmhouse, Burnedge Farmhouse and Knott Booth Farmhouse and Barn

- 5.3.15 These assets are in the southern part of the Study Area and represent elements of the postmedieval agricultural landscape and settlement pattern that previously also extended across the northern portion of the Study Area prior to the construction of the M62 and Kingsway Business Park. These farmhouses are situated further up the north-facing slope on which the Site is located, and therefore afford broad views towards the Site. The effect of the BESS on specific views from the majority of these assets could not be directly assessed due to a lack of public access (either to the rear of properties or along private driveways), so a 'worst case' approach has been employed to allow for this. Site visits did, however, indicate that views towards the Site are likely to be limited in all cases by the intervening distance, the orientation of the assets in relation to the Site, or the screening effect of extant features such as outbuildings and trees.
- 5.3.16 In the case of each of these assets, if the BESS were visible, it would form a minimal portion of the panoramic view across the wider settings of the assets and would be seen behind the motorway corridor and against a backdrop of the warehouses and modern infrastructure of the business park. Broad Shaw Farmhouse could not be identified in views from the southern side of the M62, although it is acknowledged that intervisibility may exist from areas not publicly accessible, in brighter weather conditions and in periods of less dense foliage. It is also noted that the BESS includes plans for planting around the structural elements, with a hedge along the eastern Site boundary.
- 5.3.17 As such, it is judged that the BESS would have, at most, a neutral effect on the settings of these Listed Buildings. In the event of any intervisibility, it is anticipated that any perceptible changes would be insufficient to diminish the significance of these assets (which lies primarily in their architectural value), or the appreciation of this significance; this would not constitute harm in NPPF terms. Where there is no intervisibility, there would be no impact on the assets' settings and no harm would occur.

Silver Hill Farmhouse, Tithe Barn and Dixon Green Farmhouse, adjoining Barn and No.5 Dixon Green

- 5.3.18 These assets lie in the northern part of the Study Area. There is no intervisibility between these assets and the Site, due to the intervening development of Kingsway Business Park. Given the nature of the Business Park development, the original agricultural settings of these buildings have already been lost and their significance lies in the evidential value of the buildings themselves. As such, it is considered that the BESS would have no impact on the settings of these assets and no harm would be caused in NPPF terms.

Mitigation of Setting Impacts

- 5.3.19 No adverse impacts on the settings of any designated heritage assets within 1km of the Site have been identified and thus no mitigation relating to settings impacts is considered necessary. It is noted that the current plans include a hedgerow along the eastern boundary of the Site, which would have the effect of screening the development and reducing any (already limited) views from the designated assets to the south of the M62.

5.4 Flood Risk and Surface Water Drainage

- 5.4.1 The Site lies within Flood Zone One (low risk of flooding) but covers an area greater than one hectare. As such, a Flood Risk Assessment and Drainage Strategy has been prepared (see **Appendix 5-3** for full details) with a summary of the findings set out below.
- 5.4.2 An assessment of the surface water run-off has been undertaken to determine the surface water options and attenuation requirements for the Site. The assessment considers the impact of the BESS compared to the current greenfield condition of the Site. Therefore, the surface water attenuation requirement for the developed site can be determined and reviewed against existing arrangements.
- 5.4.3 In line with national planning policy the effects of climate change have been incorporated into the proposal by including a +45% increase in rainfall intensity due to climate change for the 1 in 100-year event.



- 5.4.4 Possible receptors for on-site run-off have been assessed in line with the prioritisation set out in the Defra non-statutory technical standards for sustainable drainage systems (SuDS). There are four possible options (listed in order of preference) to discharge the surface water. These are to: (a) ground; (b) surface water body; (c) road drain or surface water sewer; (d) combined sewer.
- 5.4.5 In determining the future surface runoff from the site, the potential of using infiltration has been considered. An overview of the general ground conditions may be used to gauge if there is potential for their application. As detailed within the assessment, information from the National Soil Resources Institute details the Site area as being situated on soils which are unlikely to accommodate infiltration. Whilst the permeability and infiltration rate of the site would be confirmed prior to construction, the ground conditions suggest infiltration would not provide an option for discharge of surface water runoff from the Site.
- 5.4.6 Should infiltration be found to be unsuitable, the next option is discharge to a surface waterbody. The nearest watercourse is an unnamed ordinary watercourse located circa 55m to the west of the Site. Investigation of this watercourse has identified that it is within third party ownership and therefore it is not possible to discharge surface water run-off to this watercourse.
- 5.4.7 If discharge to watercourse is not possible then discharge to sewer may be possible. United Utilities have confirmed that they will consider a connection to the 900mm sewer within John Milne Avenue at a pass forward flow to be agreed by the Lead Local Flood Authority (note: United Utilities have requested the flow to be below 5l/s). The micro-drainage calculations for the 1 in 100-year event, with a 45% allowance for climate change and limited discharge rate (at 2l/s) is contained within the appendix to the assessment. It is proposed that underground attenuation and oversized drainage networks will be used to provide the required attenuation storage volume. This is also illustrated on an illustrative drainage design which is contained within the assessment.
- 5.4.8 In conclusion, the BESS would be operated with minimal risk from flooding, would not increase flood risk elsewhere and is compliant with the requirements of the NPPF.

The BESS will considerably reduce the flood risk posed to the Site and to off-Site locations due to the adoption of a SuDS Strategy. The BESS should not therefore be precluded on the grounds of flood risk or drainage.

5.5 Noise

- 5.5.1 A Noise Assessment has been carried out for the Site, a copy of which is contained in **Appendix 5-4**. A summary of this assessment has been provided below.
- 5.5.2 The assessment is based upon environmental noise measurements undertaken at the Site and a subsequent 3-dimensional noise modelling exercise. The assessment considers the potential noise generation from the plant associated with the BESS, with respect to existing sound levels in the area. The assessment methodology contained in British Standard 4142: 2014+A1:2019 Method for rating and assessing industrial and commercial sound has been used in conjunction with supplementary acoustic guidance.
- 5.5.3 The assessment identifies that the BESS would give rise to rating sound levels that do not exceed the measured background sound level in the area during the day and night, thus giving rise to a 'Low Impact'. Consequently, the assessment demonstrates that the BESS would give rise to noise impacts that would be within the range of no-observed-effect level and no-observed-adverse-effect level specified in planning practice guidance. For ease of reference, the definition of no-observed-adverse-effect level is reproduced below: *"Noise can be heard, but does not cause any change in behaviour, attitude or other physiological response. Can slightly affect the acoustic character of the area but not such that there is a change in the quality of life."*
- 5.5.4 On the basis that the BESS conforms to British Standard and National Planning Policy requirements, it is recommended that noise should not be a considered constraint to the approval of the BESS.

5.6 Traffic and Transportation

- 5.6.1 A Transport Statement (TS) has been prepared in support of the BESS, a copy of which is contained in **Appendix 5-5**. A summary of this assessment has been provided below.
- 5.6.2 Analysis of accident data indicates that within the most recently available 5-year period no accidents have been recorded along Dig Gate Lane, James Kearns Avenue, John Milne Avenue or the A6193 Sir Isaac Newton Way in the vicinity of the Site. Only three accidents during this period occurred at the A6193 / M62 Junction 21 westbound on- / off-slip road roundabout. Therefore, the existing accident record does not represent a cause for concern in the context of the BESS.
- 5.6.3 Access to the BESS during both the construction and operational phases would be from the A6193 Sir Isaac Newton Way, with vehicles accessing Dig Gate Lane via either James Kearns Avenue or John Milne Avenue. Access to the BESS would be via a new priority junction from Dig Gate Lane, which would connect to the north-eastern corner of the Site. There is sufficient space within the Site to allow construction vehicles to turn round to exit the site in forward gear.
- 5.6.4 During the construction phase it is expected that all traffic would travel to the site via the A6193 from Junction 21 of the M62, accessing the site from the A6193 using John Milne Avenue and Dig Gate Lane, and depart in the same direction. During the operational phase, the BESS would be operated remotely, and it would only be necessary for an operative to undertake a Site visit on a monthly basis. This would be undertaken using a small van, pickup or equivalent vehicle. However, since Dig Gate Lane is not a through road, and terminates at Dig Gate Farm to the east of the Site, all vehicles would turn right in and left out of the proposed access onto Dig Gate Lane.
- 5.6.5 The Transport Statement assesses the traffic generation of the construction phase only, which would take place over 6-7 months. Once operational, trips to the Site would be limited to the occasional LGV accessing the Site for maintenance purposes.
- 5.6.6 The anticipated trip generation associated with the construction of the BESS development has been estimated from first principles, based on experience of having

promoted other BESS schemes nationally and from information supplied by the Applicant.

5.6.7 The full period of construction is anticipated to take 30 weeks, with 5.5 construction days per week. Peak construction activity (in terms of vehicle numbers) would occur during the enabling phase, when daily traffic levels are estimated to be a maximum of 15 vehicles per day, including 5 HGV trips. This equates to 30 daily two-way movements, which will include a maximum of 10 two-way HGV movements per day. Such traffic levels are unlikely to give rise to any material issues on the local highway network. Moreover, such levels of HGV traffic would not be maintained over any lengthy period of time.

5.6.8 Having regard to the above, it is therefore concluded that there can be no highway or transport reasons to withhold planning permission for the scheme.

5.7 Landscape and Visual

5.7.1 A Landscape and Visual Appraisal has been prepared to support the planning application, a copy of which is contained in **Appendix 5-6a**, with the associated Figures 1-3 contained in **Appendix 5-6 b-g**. For ease of reference the summary and conclusions of the appraisal has been provided below.

5.7.2 In summary, during construction there would be short duration landscape and visual effects resulting from construction operations, notably the presence of plant during construction, however this would be viewed within the context of the surrounding business park. As such effects on landscape and visual during construction would not be significant.

5.7.3 The Site is located adjacent to a large-scale business park, and the established M62 Motorway to the south, therefore the BESS would give rise to a limited change and have no identified adverse effects upon landscape character.

5.7.4 The most notable residual visual effects would be slight adverse upon Viewpoint 1, 2 and 4, however it is a small change, and following establishment of the proposed hedgerow along the southern boundary would effectively screen views of the BESS from these viewpoints and likely reducing these effects to negligible once

established. Once the proposed hedgerow has established at 3m height, this would significantly reduce views of the BESS from receptors to the south and blend it into the existing vegetation along the M62.

5.8 Land Contamination

- 5.8.1 A Stage 1 Contamination Assessment (including coal Mining Risk Assessment) has been prepared to support the planning application, a copy of which is contained in **Appendix 5-7a**. Due to file sizes the appendices supporting the assessment are contained in five parts (**Appendix 5-7b-f**). For ease of reference the non-technical summary has been provided below.
- 5.8.2 The findings of this assessment have concluded that the risk from the presence of contamination on the Site is low without mitigation.
- 5.8.3 The Site has not had any significant potentially contaminative uses in the last 150 years. Based on the desk study carried out for the proposed future end use, it is anticipated that the Site would not pose a significant risk. Presently, there are two small structures located in the west of the Site. Whilst it is not anticipated that the development of these structures, or their current uses, would have resulted in significant contamination due care should be taken during the removal of any structures. The risk posed to all receptors at the Site and surrounding areas is generally considered to be low.
- 5.8.4 Ground investigation works are not deemed necessary to support the planning application due to the low risk to potential receptors. Intrusive investigations, such as trial pits and boreholes, may be required to obtain detailed geotechnical information at the Site to support construction. The risk from coal mining activities at the Site is low as the only coal seam previously worked at the Site is located at a depth of circa 170 m and therefore does not require any further consideration.

6.0 PLANNING POLICY CONTEXT AND APPRAISAL

6.1 Introduction

- 6.1.1 This section undertakes an appraisal of the BESS in the context of the statutory planning policy framework, and any relevant material considerations. It needs to be read in conjunction with Section 5.0, which sets out the need / site selection and Section 6.0 which reports a range of environmental / technical assessment work.

6.2 Planning Policy Context Overview

- 6.2.1 Section 38(6) of the Planning and Compulsory Purchase Act 2004 ⁷¹ requires that planning applications should be determined in accordance with the statutory Development Plan unless material considerations indicate otherwise. At the time of drafting, the adopted Development Plan, relevant to the BESS includes the Rochdale Core Strategy ⁷² (adopted in September 2016) and the remaining saved policies of the Unitary Development Plan ⁷³ (adopted in June 2006).
- 6.2.2 It is also necessary to appraise the BESS in the context of other material considerations. There is no strict definition of what constitutes a ‘material consideration’ in planning legislation, although case law indicates that any consideration, which relates to the use or development of land is capable of being a material consideration in the determination of a planning application. Such considerations can include the National Planning Policy Framework ⁷⁴, emerging planning policies (such as the emerging Allocations Plan), government policy and strategy and Supplementary Planning Documents.

The Statutory Development Plan

- 6.2.3 The Development Plan documents are supported by a policies map which illustrates that the Site is in the defined urban area and forms part of the Kingsway Business Park employment allocation.

⁷¹ <https://www.legislation.gov.uk/ukpga/2004/5/contents>

⁷² <https://www.rochdale.gov.uk/local-planning-policy/core-strategy-local-plan>

⁷³ <https://www.rochdale.gov.uk/downloads/download/311/rochdale-borough-unitary-development-plan>

⁷⁴ <https://www.gov.uk/government/publications/national-planning-policy-framework--2>

6.2.4 The Rochdale Core Strategy was adopted in 2016 and includes several strategic objectives (illustrated in bold below) alongside policies considered to be of relevance to the BESS listed below. The listed policies are appraised within Table 6.1.

- SD1 Delivering Sustainable Development;
- **SO1 Delivering a more Prosperous Economy;**
- E2 Increasing jobs and Prosperity;
- E3 Focusing on Economic growth Corridors and Areas;
- **SO3 Improving Design, Image and Quality of Place;**
- P1 Improving Image;
- P2 Protecting and enhancing Character, Landscape and Heritage;
- P3 Improving Design of new Development;
- **SO4 Promoting a Greener Environment;**
- G1 Tackling and adapting to Climate Change;
- G2 Energy and new Development;
- G3 Renewable and Low Carbon Energy Developments;
- G6 Enhancing Green Infrastructure;
- G7 Increasing the Value of Biodiversity and Geodiversity;
- G8 Managing Water Resources and Flood Risk;
- G9 Reducing the impact of Pollution, Contamination and Land Instability;
- **SO5 Improving Accessibility and delivering Sustainable Transport;**
- T2 Improving Accessibility; and
- DM1 General Development Requirements.

6.2.5 In addition to the Core Strategy, several saved policies within the Unitary Development Plan (UDP), are also considered to be of relevance to the BESS. These are listed below and appraised within Table 6.1.

- G/D/1 Defined Urban Area;
- EC/7 Kingsway Business Park;
- EM/7 Development and Flood Risk; and
- EM/8 Protection of Surface and Ground Water.

Material Considerations

- 6.2.6 Whilst there is no strict definition of what constitutes a ‘material consideration’ in planning legislation, the following documents form material considerations in respect of the BESS are the National Planning Policy Framework (NPPF, 2023) ⁷⁵ and National Planning Practice Guidance (PPG, 2014, as amended) ⁷⁶.

6.3 Planning Appraisal

- 6.3.1 Table 6.1 provides a summary of the overall planning context, as identified in the sub-sections above. It also includes an appraisal as to how the proposal conforms with that context, or otherwise. The tabular planning appraisal is structured in terms of listing the relevant ‘policy’ and then confirming whether the BESS either: complies with the overall objectives of the policy; conflicts with the overall objectives of the policy; or neither complies with nor conflicts with the policy (i.e. has no direct effect on the objectives of the policy). Commentary is also provided within the right-hand column. It should be noted that where a policy criterion is not relevant to the BESS this has been removed from the policy description.

⁷⁵ <https://www.gov.uk/government/publications/national-planning-policy-framework--2>

⁷⁶ <https://www.gov.uk/government/collections/planning-practice-guidance>

Table 6.1: Planning Policy Summary and Appraisal

Policy / Plan / Guidance		Complies	Conflicts	Neutral	Commentary
THE DEVELOPMENT PLAN					
Core Strategy					
SD1	'Delivering sustainable development' follows the presumption in favour of sustainable development contained within the NPPF.	✓			This planning policy appraisal clearly demonstrates that BESS constitutes sustainable development and in line with both this policy and the NPPF (please refer to the appraisal of the NPPF within this table) it should be approved without delay.
SP1 / SP2 / SP3/R	Rochdale borough's role in the City Region' identifies that the borough will contribute to the success of the Manchester City Region and the North West by playing its part in the delivery of sustainable development in amongst other things economic growth. The focus for investment and development are the defined economic growth areas.	✓			The BESS specifically supports the grid in providing electricity to both the City Region and also the North West. This in turn supports economic growth through the delivery of a secure energy system which aids sustainable development. The application site is located near the defined economic growth area and is within the strategic employment site (Kingsway Business Park). Commercial users are significant consumers of electricity, and the BESS would support the wider business park and beyond. It is therefore considered to accord with these overarching spatial strategy policies.
E2	'Increasing jobs and prosperity' establishes that the Council will seek to focus employment development on economic growth corridors / areas which offer high quality sites with good access, such as the Kingsway Corridor. It also seeks to create a more prosperous lower carbon economy.	✓			The application site accords with the delivery of most new employment development and jobs in the south of the borough, especially on economic growth corridors / areas which offer high quality sites with good access (such as the Kingsway Corridor / Business Park). The BESS would clearly support the creation of a more prosperous lower carbon economy for the reasons already clearly stated within Section 4.0 of this PDAS. On this basis the BESS accords within this employment policy.
E3	'Focusing on economic growth corridors and areas' builds upon Policy E2, and in reference to the Kingsway corridor promotes the co-ordinated development of Kingsway Business Park for B1, B2, B8 and other employment uses (Use Class B1 has since been revoked with the uses falling within Use Class B1 or E(g)). The policy also promotes the development of, and investment in infrastructure to support businesses.	✓			The application site clearly accords with the focus of employment development and economic growth within the defined corridors and areas. The policy also supports the development of, and investment in, infrastructure (such as the proposed BESS) to support businesses. On this basis the BESS clearly accords with this employment policy.

P1	'Improving image' requires high quality design in all new development. The policy identifies several criteria to ensure new development to improve the image of the borough.	✓			The BESS by its nature is designed to be functional. However, its design is of a high standard and would result in ecological enhancements which in turn would help to improve the 'green' environment of this under-used parcel of land. On this basis the BESS would accord with the requirements of this design policy.
P2	'Protecting and enhancing character, landscape and heritage' states that the Council will protect the Borough's heritage by conserving, enhancing and promoting key heritage assets, both statutory and non-statutory, including consideration of their wider settings.	✓			The application site is located next to the Broad Shaw Farmhouse and adjoining Barn (a Grade II Listed Building). As set out in the Heritage Impact Assessment (Appendix 5-2) the change of use of the Site would represent a perceptible change in the setting of the adjacent Broad Shaw Farmhouse; however, this does not necessarily equate to harm in heritage terms and this change is not expected to result in a further loss of historical information or legibility, or to reduce the ability to appreciate or understand the cultural significance of the building. It is judged that the BESS would have no more than a neutral impact on the setting of the asset and cause no harm in terms of NPPF. It was also concluded that there would be no harm to other heritage assets within the vicinity of the site. On this basis the BESS accords with this heritage policy.
P3	'Improving design of new development' confirms that the Council will require all new developments, including associated landscaping, regardless of location in the borough, to adhere to high standards of design. The policy also identifies a range of design principles should be adhered to wherever relevant.	✓			The BESS accords with the relevant design principles for the following reasons: • The scale, height and layout are not out of character against the large distribution warehouses and expanses of hardstanding within the Kingsway Business Park. The proposed landscaping would enhance the biodiversity of the currently heavily grazed field as demonstrated in the BNG Report which demonstrates a 34% habitat and 16% hedgerow enhancement. • The incorporation of fencing and gating around the compounds, alongside the installation of CCTV has been found to be suitable in designing out criminality in other BESS schemes the Applicant has promoted across the country. • The BESS is specifically designed to minimise the potential impact upon the environment and helps to adapt to the impacts of climate change through ensuring the drainage is designed to accommodate the anticipated increased intensity of rainfall events in the future. As identified in Section 4.0 of this PDAS, the BESS also supports the deployment of renewable energy scheme and the drive towards net zero set out by the Government, National Grid and Electricity North West.

G1	'Tackling and adapting to climate change' sets out a series of criteria designed to address climate change and ensure that growth does not increase CO ₂ emission. Those relevant criteria have been identified through the appraisal, but it is notable that the policy encourages and promotes renewable energy development and seeks to reduce CO ₂ emissions through the use of renewable and low carbon decentralised energy technologies and networks.	✓			The BESS accords with the relevant criteria specified in this policy for the following reasons: • The application site is in one of the areas specifically identified for growth and is well served by public transport, services and infrastructure. • The BESS supports the deployment of renewable energy schemes which are encouraged and promoted by this policy. It would also assist in reducing CO₂ emissions through its support for the above schemes, and limiting the need for other forms of balancing / reactive power schemes which require the use of natural (fossil fuel) resources to generate electricity. • The BESS incorporates landscaping which provides biodiversity and landscape benefits. As demonstrated by the Flood Risk Assessment the drainage design includes attenuation which accommodate the effects of climate change and limits run-off to greenfield rates.
G2	'Energy and new development', sets out that all development will be expected to adhere to the energy hierarchy of demand reduction, energy efficiency and low / zero carbon technologies and allowable solutions.	✓			The BESS includes a range of infrastructure and small buildings which are not heated. Most design aspects identified in the policy are not relevant to the proposal, however landscaping has been incorporated into the scheme to enhance the biodiversity value of the site. As identified in the appraisal of Policy G1 above, the BESS supports the deployment of renewable energy schemes. It is considered that the BESS accords with this design / energy policy.
G3	'Renewable and low carbon energy developments' confirms that the Council will promote renewable, low and zero carbon energy generating developments, including wind power, biomass, Combined Heat and Power, hydro and heat pumps to help meet CO ₂ reduction targets and contribute towards energy security for Greater Manchester and the North West. The policy also identifies that any proposal and associated infrastructure must avoid and mitigate harm to the health and safety of the public including through a range of specified criteria.	✓			As set out in Section 4.0 of this PDAS the BESS specifically supports the deployment of renewable, low and zero carbon schemes which are promoted by the Council. The BESS also assists in energy security by providing balancing / reactive power services to the grid, which ensures a constant supply of electricity to users. This PDAS (specifically Section 5.0) demonstrates that the BESS would not result in harm to the environment or the amenity / safety of the public. As such, the BESS clearly accords with this energy policy.
G6	'Enhancing green infrastructure' identifies that Council will protect, improve and create green infrastructure to help deliver strategic sustainable development priorities and meet local needs in the urban area by incorporating	✓			The application site has been designed to enable green infrastructure through the ecological mitigation area and wider landscaping scheme to be fully incorporated into the proposed development. As demonstrated in the Flood Risk Assessment (Appendix 5-6) the application of sustainable urban

	green infrastructure into new development, sustainable urban drainage amongst other aspects.				drainage has been considered and as far as possible incorporated into the drainage design. On this basis the BESS accords with this policy.
G7	Increasing the value of biodiversity and geodiversity' seeks to protect and enhance the borough's wildlife habitats and species and key natural resources and features. Policy G7 states that no development should result in a net loss of biodiversity or geodiversity interest in the borough and overall development in the borough should result in a net gain.	✓			An ecological assessment (Appendix 5-1a) of the site has been carried out and a summary is reported in Section 5.0 of this PDAS. The assessment demonstrates that protected species and its habitat will be mitigated to ensure that there is no adverse impact on the species concerned. Furthermore the BNG Report (Appendix 5-1b) demonstrates that there would be biodiversity enhancements in both habitats (+34%) and hedgerows (16%). On this basis the BESS accords with this biodiversity policy.
G8	'Managing water resources and flood risk' requires that new development does not lead to any form of increased flooding or impeded natural water and flood risk management.	✓			As demonstrated in the Flood Risk Assessment (Appendix 5-6) and summary in Section 5.0 of this PDAS the application the application site is located in flood zone one (lowest risk of flooding) and a drainage system has been proposed to ensure that the BESS would not increase the risk of flooding through appropriate attenuation and limiting run-off rates. On this basis the BESS accords with this flood risk policy.
G9	'Reducing the impact of pollution, contamination and land instability' establishes that the Council will reduce all forms of pollution, and require that development do not result in impacts that lead to an unacceptable increase in air, water, noise, light or other pollution. The policy also acknowledges that the Council will focus on measures to reduce air pollution in Air Quality Management Areas (AQMA). The policy also states that the Council will ensure that any risks arising from contaminated land or land instability are identified, and that any appropriate actions to address these risks are taken, prior to development taking place.	✓			As demonstrated by the assessments reported in Section 5.0 there would be no significant impacts on water or noise. The site is located immediately adjacent to the M62 which is declared an AQMA due to the exceedance of nitrogen dioxide. The boundary of the AQMA extends into the site, however the BESS does not include any point source emissions and therefore would not result in any potential impact on the AQMA. In terms of light, the Kingsway Business Park and the M62 include significant lighting which results in the area (site) already being well lit. Regardless, the proposed lighting would be well designed and installed to ensure that it does not material spill beyond the site at times when it may potentially be required. A Stage 1 Contaminated Land Assessment (Appendix 5-7) has been prepared to support the planning application. The report concludes that the site has not had significant potentially contaminative uses and therefore the risk posed to all receptors is low. Furthermore, the risk from coal mining activities is also considered to be low on the basis that the only coal seam previously worked in at a depth of circa 170m. Based on the above, the BESS accords with this overarching pollution control policy.

T2	'Improving accessibility' seeks to improve accessibility and locate development to minimise the need to travel by car. It also establishes that in all circumstances, the safety, accessibility and amenity of those who live or have business in the area will have priority, while providing reliable journey times for those travelling through'.				The Transport Statement (Appendix 5-5) demonstrates that the BESS would not result in an unacceptable impact on the highway network or cause a highway safety issue. For example, a concrete crash barrier is proposed to be constructed along part of the site's boundary with the M62 to ensure that suitable protection is afforded to the BESS. The nature of the BESS means that once operational the site would be visited periodically by an engineer who would need to carry spare parts and tools. This means that travelling on public transport is not feasible in this instance. It is considered that the BESS accords with this transport accessibility policy.
DM1	'General development' requirements seek to ensure that new development is compatible with surrounding land uses, both in terms of its impact upon those uses and the impact of the surrounding land uses upon the amenities of future residents / users, also requiring that development does not have impacts that lead to an unacceptable increase in air, water, noise, light or other pollution. It also identifies that proposals should not adversely affect the amenity of residents or users through visual intrusion, overbearing impact, overshadowing or loss of privacy.	✓			Many of the matters identified in this overarching have already been considered through the appraisal of Policies G9, P1-3 and G6-9. For the same reasons as already stated the BESS accords with this general development policy.
Unitary Development Plan (most relevant Saved Policies)					
G/D/1	'Defined Urban Area' sets the boundary between urban and rural areas within the borough.	✓			The application site is in the defined urban area, which as identified in the appraisal of the Core Strategy (above) is the focus for development. The BESS therefore accords with this policy.
EC/7	'Kingsway Business Park' establishes that the site should be utilised for general and light industry, offices, distribution and storage, research and development, and associated and complementary uses.	✓			The BESS accords with this policy as it is akin to the employment uses that are identified as being suitable on this allocation and is also considered to be a complementary use. The latter on the basis it supports the distribution of electricity and ensures security of supply which is fundamental for employment uses, such as those in the wider Kingsway Business Park to operate. On this basis the BESS accords with this policy.
EM/7	'Development and Flood Risk' confirms that development should be directed to areas at lowest risk of flooding and that that proposal should not increase the risk of flooding.	✓			The BESS accords with this policy for the same reasons as stated through the appraisal of Policy G8 of the Core Strategy.

EM/8	'Protection of Surface and Ground Water' sets out that development likely to pose an unacceptable risk to surface and / or ground water will not be permitted.	✓			The drainage design includes measures to ensure that any potential pollution does not result in pollution to surface and / or ground water. It is anticipated that the detailed design of the drainage system would be controlled through a suitably worded planning condition. As such, the BESS accords with this policy.
MATERIAL CONSIDERATIONS					
NATIONAL PLANNING POLICY FRAMEWORK					
Paras 7 & 8	Sets out that the purpose of the planning system is to contribute to the achievement of sustainable development, including amongst others the provision of supporting infrastructure in a sustainable manner. There are three dimensions to sustainable development: economic, social and environmental.	✓			In respect of the BESS, the three objectives of sustainable development would be delivered as follows: • Economic objective – the BESS would provide essential infrastructure necessary for assisting NG ESO in managing the Grid (reactive power and balancing services). This will ensure a stable and secure energy supply which is vital to economic growth. As such it is considered that the BESS will help deliver the economic objective of sustainable development. • Social objective – as set out in Section 5.0 of this PDAS, the BESS would help to address flexible energy needs of the NG. This will help to ensure stable and secure renewable energy supplies for existing communities and future generations as the UK moves to a low carbon economy, including the shift to the wider use of electric vehicles. The BESS would support renewable energy generation which reduced the need for fossil fuels, thus improving air quality and associated health. • Environmental objective – as set out in Section 5.0 of this PDAS the BESS provides a balancing and reactive power services, to support the decarbonisation of the electricity system. In addition, the Site itself is of limited ecological value comprising grassland, and would not result in any significant adverse environmental impacts. In fact, the landscape and ecological enhancement would also help to protect and enhance the natural environment As demonstrated by the BNG calculation there would be a +34 % for habitats and +16 % for hedgerows net-gain improvement.
Para 11	Identifies that there is a presumption in favour of sustainable development. This includes aligning growth and infrastructure and mitigating climate change. Development proposals that accord with an up-to-date development plan should be approved without delay.	✓			The preceding planning policy assessment has demonstrated that the BESS accords with relevant Development Plan policy. It clearly provides infrastructure which aligns with growth and helps to mitigate climate change. As such, the application should be approved without delay.

Section 6	Sets out the government's commitment to building a strong and competitive economy.	✓			As demonstrated through this table and Section 5.0 of this PDAS the BESS would result a series of beneficial economic effects.
Section 11	Sets out that the effective use of land in meeting need for specific uses should be promoted, whilst protecting and improving the environment and living conditions.	✓			Section 5.0 demonstrates that the BESS has been carefully located and forms the most effective use of land that meets the specific requirements to balance the Grid through a connection to the substation. This appraisal also demonstrates that the environment and living conditions will be protected and enhanced.
Section 14 Para 157	Identifies that the planning system should support the transition to a low carbon future in a changing climate ... and support renewable and low carbon energy and associated infrastructure.	✓			The BESS forms 'associated infrastructure' specifically designed to support renewable and low carbon energy generation. The NPPF supports the transition to a low carbon future and therefore the BESS is supported.
Section 14 Para 163	Confirms that when determining planning applications for renewable and low carbon development, local planning authorities should not require applicants to demonstrate the overall need for such a development, and recognise that even small-scale projects provide a valuable contribution to cutting greenhouse gas emissions.	✓			The BESS supports renewable and low carbon development and the associated contribution to climate change. The NPPF is clear in that this type of development should be supported.
Sections 15 + 16	Conserving and enhancing the natural and historic environment.	✓			These matters have already been addressed in this table. The BESS has clearly been found to enhance the natural environment.

7.0 SUMMARY AND CONCLUSIONS

- 7.1.1 This Planning, Design and Access Statement has been prepared by AXIS, on behalf of Balance Power Projects Limited to construct and operate a temporary BESS, associated infrastructure, landscaping and access on land off Dig Gate Lane, Kingsway Business Park, Milnrow.
- 7.1.2 The BESS would support the decarbonisation of the energy industry in the UK. The changing nature of the UK's energy requirements is clearly defined in Government energy policy and is supported by the anticipated requirements of the NG. These considerations clearly identify an essential requirement for additional electricity storage capacity to meet demand and support the transition to a low carbon, resilient energy network. The BESS would make an important contribution towards meeting these requirements.
- 7.1.3 As identified in the preceding sections, the BESS would not give rise to any material detrimental impacts in respect of noise, landscape and visual, traffic, heritage, ecology, flood risk, pollution or amenity.
- 7.1.4 An assessment of the BESS against relevant planning policy and guidance has demonstrated that it meets the tests of Section 38(6) of the Planning and Compulsory Purchase Act, as it accords with the policies of the statutory Development Plan. In addition, an assessment of relevant material considerations has not revealed any justification for determining the application other than in accordance with the statutory Development Plan, rather it reinforces the logic for doing so.
- 7.1.5 In conclusion, and based on the findings of this Planning and Design and Access Statement, granting of planning permission can be justified and the BESS supported.

Figures and Appendices

