

PLANNING, DESIGN AND ACCESS STATEMENT

PLANNING APPLICATION 20250730

LAND ADJACENT TO THAMES WAY, NORTHFLEET

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Executive Summary

The Proposed Development will comprise of:

"Construction of a battery energy storage system, comprising battery containers, transformers, high voltage electrical substation and ancillary infrastructure including underground cabling, fencing, CCTV, internal access tracks and water storage tanks for a temporary period of 40 years".

As identified in national policy and the Government's strategy, the Government has concluded that there is a critical national priority for the provision of national significant low carbon infrastructure, and that there is an urgent need to bring forward proposals for low carbon energy development in order to meet targets for decarbonisation and net zero, and to provide resilience, security and affordability of electricity supplies.

The Proposed Development will deliver these policy aims, providing a significant amount of low carbon electricity over its 40-year lifetime. It will therefore be a critical part of the national portfolio of renewable and low carbon energy generation and storage that is required to decarbonise energy supply quickly within the UK.

This Planning, Design and Access Statement (PDAS) provides an assessment of the Proposed Development against national and local policies which are likely to be important and relevant to the decision-making on the Proposed Development. It also sets out compliance with relevant policies.

Through design, the Proposed Development seeks to avoid and mitigate impacts on the environment and sensitive receptors, whilst ensuring that it will make a significant contribution to the UK's urgent requirement for low carbon energy generation and associated infrastructure.

In terms of the overall planning balance, the clear and substantial benefits of the Proposed Development clearly outweigh any potential adverse effects, which would be short-term, temporary and reversible at the end of the Proposed Development's lifetime.

This PDAS demonstrates that given the urgent need for low carbon energy and the substantial benefits of the Proposed Development, there is a clear and compelling case for planning permission to be granted.

1 Introduction

1.1 Background

This Planning, Design and Access Statement (PDAS) has been prepared in support of a planning application to Gravesham Borough Council for the:

"Construction of a battery energy storage system, comprising battery containers, transformers, high voltage electrical substation and ancillary infrastructure including underground cabling, fencing, CCTV, internal access tracks, water storage tanks for a temporary period of 40 years"

The Proposed Development comprises of a battery energy storage system (BESS), a high voltage substation (HVSS) and associated electrical and ancillary infrastructure. The Proposed Development will connect to the grid at Northfleet.

This Planning, Design and Access Statement (PDAS) sets out the planning policy context relating to the benefits and acceptability of the principle of the Proposed Development and how environmental issues relating to the Proposed Development are addressed.

1.2 Structure of this Document

The PDAS is structured as follows:

Section 2 – The Application Site and Surroundings;
Section 3 – The Proposed Development;
Section 4 – Planning Policy Context;
Section 5 – Planning Assessment; and
Section 6 – Summary and Conclusions.

2 Project Background

2.1 The Application Site and Surroundings

2.1.1 Site Location

The Site is shown on the submitted Site Location Plan. The total site area within the red line boundary is 0.93ha.

The Site is vacant and comprising of extensive areas of dense bramble, mixed scrub and self-seeded trees.

To the north west of the Site is Ebbsfleet International Railway Station; to the east is the A226 Thames Way and Blue Lake; to the west is an open area of land and roads; further east parking for the International Railway Station and to the south the Waste Water Treatment Works (WWTW) and Springhead Industrial Park.

The WWTW is adjacent to the Site. The WWTW includes a 30 metre telecommunications tower. Infrastructure for the WWTW, namely underground pipelines, traverse part of the Site. At the detailed design stage consultation will be undertaken with Southern Water to determine the exact location of the pipelines and how they will be accommodated in the layout.

There are no listed buildings within the Site. There is a Scheduled Monument described as a Neolithic Site (List Entry 1004206) to the west of the site. The closest listed building is The Old Rectory House Grade II* at 1.5 km to the south east of the Site. The Site is not in a Conservation Area.

There are no public rights of way within the Site. There is a public footpath to the north of the site - footpath NU14. To the south beyond the WWTW is the restricted byway, NU20. There are limited views of the Site from the public footpath and Thames Way.

The Environment Agency Map for Planning indicates that the Site is located within Flood Zones 1, 2 and 3. The mapping also shows that where the Site lies within Flood Zone 3, it falls within the area protected by the River Thames tidal flood defences.

2.1.2 Site Context

The Development Plan for Gravesham currently consists of:

Gravesham Local Plan Core Strategy and Local Plan Policies Map (2014)
Gravesham Local Plan First Review (1994) – saved Policies
Kent County Council Minerals and Waste Local Plan 2024-30 (adopted March 2025)

The Local Plan does not identify the Site as being subject to any site specific planning allocations or designations.

The Site is not located within or adjacent to any international, national or local nature conservation, landscape or environmental designations.

The Site is not within any designated Landscape Character area as defined in the Gravesham Landscape Character Assessment (2009). The landscape is though dominated by significant visual detractors in the form of roads, railways and pylons.

The Site is not within Ebbsfleet Central East which is currently the subject of a planning application.

2.1.3 Planning History

There is no specific planning history related to the Site.

The Site was formerly associated with a quarry to the north, which is now Blue Lake. This is shown in a 1949 aerial photograph. The Site is to the west of the WWTW.



A review of the Gravesham's planning portal suggests that there are no substantial planning applications within the surrounding locality that have the potential to conflict with the Proposed Development. Whilst Ebbsfleet Development Corporation has been granted outline planning consent for a mixed use development within the Garden City known as Ebbsfleet Central East, the proposed residential development is not in close proximity to the Site.

3 The Proposed Development

3.1 Proposed Development

The planning application is for the following:

"Construction of a battery energy storage system, comprising battery containers, transformers, high voltage electrical substation and ancillary infrastructure including underground cabling, fencing, CCTV, internal access tracks, water storage tanks for a temporary period of 40 years"

The core components include:

Transformers: to increase the voltage of the electricity so it can be exported to the national grid.

Switchgear: to manage the flow of electricity and direct it to where needed.

BESS: stores electricity at times when demand for electricity is low, with it then being exported to the national grid when demand is high.

On-site cables: to connect the BESS to the on-site substation.

On-site substations: to export electricity from the BESS to the Northfleet substation. The on-site substation, includes a control building with welfare facilities.

Grid connection cables: provide the connection between the on-site substation and the Northfleet East substation which will export the electricity generated by the BESS to the national grid.

Fencing: comprising security fencing to enclose the site with pole mounted internal facing CCTV and an acoustic and visual barrier to mitigate noise and visual impact.

Site accesses: to be used during construction and for routine maintenance when the Proposed Development is operational.

3.2 Grid Connection

Speedgreen (Thames Way) Ltd, the Applicant, will be submitting an application for a generation licence under section 6(1)(a) of the Electricity Act 1989 ("the 1989 Act"). As the holder of a licence under section 6 of the 1989 Act, the Applicant will be an electricity undertaker for the purposes of Class B of Part 15 of the General Permitted Development Order 2015 (as amended (GDPO)).

The Proposed Development will connect to the UK Power Networks (UKPN) Northfleet East substation situated 1km to the south east (as the crow flies). The connection will be via underground cabling with the cable laid in the highway. The cable route is approximately 1.5 km in length.

3.3 Access

The details of the proposed access and construction routing are provided within the Transport Statement and Construction Traffic Management Plan (CTMP).

The Proposed Development will be accessed via the A226 to the east of the Site from an existing access and a proposed new vehicular access. Both accesses connect to the A226 and are suitable to accommodate all vehicles accessing the Site including any abnormal loads.

The A226 itself connects to the wider highway network via the A2260 to the A2 and M25.

The primary access from the A226 will utilise the slip road that leads to the WWTW. Given the nature of the operation of the Proposed Development it will not interfere with or disrupt access to the WWTW. The second access is a new access to the A226. This proposed second access traverses unregistered land which was identified by Kent County Council (KCC) for a highways proposal to dual the A226. Dualling of the A226 is no longer going ahead. The land is likely to be in the ownership of KCC therefore enquiries have been submitted to KCC to determine whether or not this is the case.

There is no requirement to utilise the public right of way for access to the Site.

3.4 Proposed Construction Route

It is proposed that construction traffic access the site from the A2 and then via the A2260, the A2260 Ebbsfleet Gateway and the A226 Thames Way. This is considered an appropriate route for construction vehicles as this route is capable of satisfactorily accommodating all construction vehicle movements, including abnormal load vehicles which are required for the delivery of the HV substation transformer.

Aside from the abnormal load deliveries of the substation transformer, the largest vehicles which are required for deliveries are maximum 16.6m articulated vehicles.

3.5 Operational Site and Maintenance Access

The nature of the Proposed Development means that there is no requirement for permanent staff to be located on Site and therefore minimal transport movements are expected in the operational phase.

The Proposed Development requires little maintenance, with activity limited to equipment maintenance visits approximately once or twice a month. These visits would typically be made by light van or 4x4 type vehicles. The Site will be remotely monitored 24/7 via CCTV proposed at various intervals within the perimeter fence.

3.6 Design

3.6.1 Design Iteration

The location, design and layout of the Proposed Development has been developed taking into account a range of technical and environmental factors.

3.6.2 Use and Character

The Site is currently undeveloped and vacant. It comprises of extensive areas of dense bramble, mixed scrub and self-seeded trees.

As identified in Section 2 Site Context, the Site is not within any designated Landscape Character area as defined in the Gravesham Landscape Character Assessment (2009). The landscape is though dominated by significant visual detractors in the form of roads, railways and pylons.

The Proposed Development will utilise the Site for energy storage and ancillary infrastructure.

The Proposed Development is temporary and reversible. Following the end of the 40-year operational lifetime of the Proposed Development it will be removed. This process will largely be a reversal of the installation method.

3.6.3 Scale, Appearance and Layout

The Site extends to approximately 0.93ha.

The BESS containers will be laid out in rows with a separation distance of 6 metres between them. The BESS containers will be 2.9m in height. The Proposed Development includes a HVSS which is located adjacent to the BESS. The HVSS contains various elements including transformers and electrical busbars of approximately 7m and 11.65m in height respectively.

Technological advancements in battery energy storage are taking place at a fast pace both in terms of the capacity of the battery cells, battery types and lifespan. In order to take advantage of the latest technologies in battery design, the detailed design of the Proposed Development will be undertaken subsequent to achieving planning consent and when the technical specifications for procurement of the BESS and ancillary electrical infrastructure are finalised. In addition, the detailed design may need to make provision for third party assets located below ground. For example, underground assets associated with the adjacent WWTW.

3.7 Construction Methodology

The following provides a summary of the overall construction approach. It is expected that a Construction Environment Management Plan (CEMP), will be a pre commencement condition of any planning consent.

The Construction Phase is expected to take up to 18 months.

All of the equipment is prefabricated prior to delivery to the Site.

Construction and operational phase vehicles will access and egress the Site via the A2, A2260 and A226. Parking will be provided within a suitably sized compound for construction contractors. Further detail regarding construction access and routing is detailed within the submitted CTMP.

The number of vehicles travelling to and from the Site will vary throughout the construction phase. These vehicle movements are for the delivery of components, materials and staff to and from the Site. Proposed working hours for construction activities and deliveries are 0800-1800 Monday to Friday and 0800-1300 on Saturdays. No construction or deliveries will take place on Sundays or Bank Holidays.

3.8 Decommissioning

The Proposed Development will cease operation after a period of 40 years. At the point of decommissioning, an appropriate Decommissioning Environmental Management Plan (DEMP) will be prepared and submitted to Gravesham BC for consideration and agreement.

The Proposed Development, including the ground fixings, is fully reversible and all structures can be removed from the Site and the Site fully returned to its previous use. Decommissioning activities are expected to be similar to construction, with vehicle movements anticipated to be the same as per the construction period.

At this stage it is considered premature to submit a DEMP for works that would not commence for another 40 years. The Applicant therefore expects a planning condition would be attached to any grant of planning permission requiring the submission and approval of the DEMP in advance of decommissioning, as per the industry standard for this type of development. The DEMP would include details pertaining to the recycling of equipment and full reinstatement of the land.

4 Site Selection

4.1 Overview

The UK electricity network faces exceptional challenges to meet the government's target of reducing carbon emissions. This will largely be achieved through decommissioning carbon intensive energy plants and increasing low carbon electricity generation such as wind, solar and energy storage as set out in energy and climate change policy¹.

This section of the PDAS outlines the site selection process that the Applicant has undertaken for the Proposed Development.

National and local planning policy applicable to the Proposed Development is set out in Section 4 Planning Policy Context. Whilst there is no statutory or defined legal or policy requirement to include an assessment of alternative sites², this section of the report sets out the justification for the choice of site, which serves as a positive material consideration in the planning balance.

The key criteria which determined the selection of the Site for the Proposed Development was the availability of a grid connection, land availability and environmental considerations.

4.2 Grid Capacity

Securing a grid connection to a substation with suitable capacity is one of the biggest challenges facing the UK as it strives to develop low carbon electricity generation. This is recognised by the UK Government hence the establishment of the National Energy Systems Operator (NESO) in 2024. One of NESO's objectives is to align the development of low carbon electricity generation with strategic energy plans such as the Government's Clean Power 2030 Action Plan (CP30 Plan). This means that projects that are most ready and needed to achieve the strategic goals in the CP30 Plan will be prioritised and connected to the grid in an efficient and timely manner.

Firstly, the identification of a point of connection (PoC) which has the capacity for importing and exporting low carbon electricity generation is a fundamental pre requisite for all new low carbon electricity generation projects and is the starting point for such projects. This operational requirement places a locational restriction on site selection that limits the number of appropriate sites for larger scale renewable energy projects. Secondly, there must be a grid offer in place from the system operator in order to connect at the identified PoC. The Proposed Development has a grid offer from UKPN to connect to the Northfleet East Substation. Northfleet Substation is a strategically important substation, located approximately 1km (as the crow flies) from the Site. Northfleet East's strategic importance includes its role as central grid infrastructure for the Ebbsfleet Garden City regeneration which will provide a significant number of new homes, jobs and schools.

The importance of a grid connection is also acknowledged in NPS EN-3 paragraphs 2.10.22 – 25. Grid capacity is a significant hurdle to overcome for low carbon energy projects in the UK and globally, even if sufficient projects are consented. It is therefore very important to emphasise that limited opportunities currently exist for grid connections nationally.

4.3 Local Impact

As a major substation, Northfleet substation has a strategic role in connecting new renewable energy projects to the grid. Currently Northfleet substation has approximately 930MW of solar

¹ NPS EN-1 and EN-3 (designated in January 2024) and Powering Up Britain, March 2023, Energy White Paper: Powering our net zero future December 2023, 'Net Zero Strategy: Build Back Greener' October 2021 and the British Energy Security Strategy (April 2022).

² *Bramley Solar Farm Residents Group v SSLUHC & Others* §§175-176 [2023] EWHC 2842 (Admin).

energy generation and 300MW of wind energy generation due to connect between 2025 and 2038. This presents a significant challenge to the ESO whose task is to maintain the balance between supply and demand — even as the inputs swing unpredictably due to the intermittency of solar and wind. Energy storage such as the BESS in this location will therefore have an important role in enabling effective management of the national grid as the UK transitions to low carbon energy supply.

4.4 Ebbsfleet Garden City

The existing Northfleet East Substation has been reconfigured to enable two new 132,000 volt points of connection to the new Ebbsfleet Grid site. This work involved the installation of two new transformers, a new switch house and switchboard and was essential in order to supply electricity to Ebbsfleet Garden City. The Proposed Development will also make a significant contribution to the Garden City's energy needs.

4.5 Land Availability

A review of the brownfield registers for Gravesham BC found no land parcels of a sufficient area for the Proposed Development. It was therefore necessary to search for other available undeveloped land parcels for the Proposed Development.

The Site is commercially available to the Applicant and is ready for development. It is not subject to any other proposed uses or allocations that might be considered incompatible or inappropriate.

4.6 Environmental Considerations

A high-level review of planning and environmental constraints was conducted to establish the suitability of the Site for the Proposed Development. The Site is not located within or adjacent to any international, national or local nature conservation or environmental designations. There are no statutory heritage assets on or within the immediate vicinity of the Site.

There are few existing or proposed sensitive residential receptors near the Site which would be impacted by the Proposed Development from a visual, noise or transport perspective. The Site benefits from an existing access to the public highway.

The Proposed Development is not sensitive to odours from the WWTW as the Site will not be manned on a permanent basis. As such a precautionary buffer zone for odours from the WWTW is not required.

4.7 EIA Screening

An EIA Screening Request was submitted to Gravesham BC under the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 as amended on 10 October 2024 for the Proposed Development.

The Screening Opinion decision was issued on 16 May 2025. Gravesham BC determined that the Proposed Development did not constitute EIA development by virtue of its nature, size or location.

5 Planning Policy Context

5.1 National Planning Policy Framework

The National Planning Policy Framework (NPPF), revised in December 2024, outlines the planning policies of the UK Government for England. It serves as guidance for the development of local planning policy documents and is a material consideration in determining planning applications under the Town and Country Planning Act 1990 (TCPA 1990).

The 2024 NPPF aims to achieve sustainable development and retains and strengthens the wording of the 2023 NPPF in respect of meeting the challenge of climate change. At paragraph 161 the NPPF states that the planning system should support the transition to net zero by 2050, help to shape places in ways that contribute to radical reductions in greenhouse gas emissions and should support renewable and low carbon energy and associated infrastructure.

National Planning Policy Guidance (NPPG) supports the NPPF and provides guidance on the implementation of NPPF policies. The NPPG includes a range of topics including climate change and renewable and low carbon energy guidance which includes guidance on battery energy storage.

5.2 Clean Power 2030: Advice on Achieving Clean Power for Great Britain by 2030

On 5 November 2024 the National Energy System Operator ('NESO') published its advice on achieving clean power by 2030 to the Secretary of State (SoS) for Energy Security and Net Zero in response to their request for advice in August 2024.

The advice has three overarching 'key messages':

- “1. Clean power is a huge challenge but is achievable for Great Britain by 2030.
2. Clean power will require doing things differently. It will only be achieved with bold action and sustained momentum, across every area and every step of the way between now and 2030.
3. Achieving clean power by 2030 will put Great Britain in a strong position.”

Chapter 2 of the advice sets out the core elements of a clean power system to be delivered by 2030. It identifies the need for a significant growth in renewable energy generation.

5.3 Clean Power 2030 Action Plan: A New Era of Clean Electricity

The Government's Action Plan 3 was subsequently published on 13 December 2024 and sets out the Government's pathway to achieving a clean power system by 2030. The Foreword by the SoS for Energy Security and Net Zero states:

“We will usher in a new era of clean electricity for our country, with our plan to deliver the most ambitious reforms to our energy system in generations... This plan sets out how the government will work with the clean power sector, including industry, trade unions, investors, policy makers and others to achieve our clean power goal. 2030 is just six years away, and we are under no illusions about the scale of the task ahead, but mission-driven government is about acting with urgency and determination to rise to the challenges we face...As the Prime Minister has made clear, clean power is an urgent priority for our country. The clean power

sprint is the national security, economic security, and climate justice fight of our time - and this plan gives us the tools we need to win this fight for the British people.”

The Action Plan explains that Clean Power means that by 2030, Great Britain will generate enough clean power to meet our total annual electricity demand, backed up by unabated gas supply to be used only when essential. The objective is that clean sources produce at least 95% of Great Britain’s generation. The Action Plan explains that successful delivery will require rapid deployment of new clean energy capacity across the whole of the UK. It states:

“We have high ambition. That means 43-50 GW of offshore wind, 27-29 GW of onshore wind, and 45-47 GW of solar power, significantly reducing our fossil-fuel dependency. These will be complemented by flexible capacity, including 23-27 GW of battery capacity, 4-6 GW of long-duration energy storage, and development of flexibility technologies including gas carbon capture utilisation & storage, hydrogen, and substantial opportunity for consumer-led flexibility.”

5.4 National Policy Statements

The Overarching National Policy Statement (‘NPS’) for Energy (EN-1) (CD L.4) and the NPS for Renewable Energy Infrastructure (EN-3) were designated in January 2024 and set out the Government’s latest position and direction of policy travel in respect of renewable energy schemes of this nature, for which there is a ‘critical national priority’ (CNP). These policy documents are material considerations in the determination of this application.

5.5 Overarching National Policy Statement for Energy (NPS EN-1)

NPS EN-1 outlines the overall national energy policy for the implementation of significant energy infrastructure projects. Paragraph 1.2.1 states that NPS EN-1, combined with any technology specific energy NPS, provides the primary policy for decisions on nationally significant energy infrastructure.

NPS EN-1 reflects the government's commitment to reducing carbon emissions, ensuring energy security and promoting affordability. Recognising the heavy reliance on fossil fuels for households and transportation, NPS EN-1 emphasises the need to decrease dependency on high-carbon fossil fuels and transition to a low-carbon energy mix.

Part 2 of the NPS EN-1 outlines the policy framework established by Central Government for major energy infrastructure. This framework encompasses various objectives, including meeting legally binding targets for reducing greenhouse gas emissions, transitioning to a net zero carbon economy, as set out in the Net Zero Strategy (October 2021), decarbonising the power sector, ensuring energy security, reforming the electricity market, and meeting the goals of sustainable development. Part 3 of NPS EN-1 emphasises the importance of considering the need for energy developments when evaluating applications. Paragraph 3.1.1 states that the Government believes that achieving its energy objectives is dependent on the presence of significant amounts of large-scale energy infrastructure. However, it acknowledges in Paragraph 3.1.2 that developing such infrastructure may result in significant residual adverse impacts. Nevertheless, the policy stresses the urgency of the need for such infrastructure.

NPS EN-1 recognises that meeting energy objectives necessitates the development of large-scale renewable energy infrastructure. Paragraph 3.2.1 outlines that this type of development is required to “ensure our supply of energy always remains secure, reliable, affordable, and consistent with net zero emissions in 2050”.

Paragraph 3.3.14 of NPS EN-1 sets out the role of the government in facilitating the private sector in renewable energy development. It states that the government will *'work to ensure that there are market frameworks which promote effective competition and deliver an affordable, secure and reliable energy system'*. In terms of the proposed BESS, paragraph 3.3.4 of NPS EN-1 acknowledges the need for different types of electricity infrastructure, including energy storage, which are needed to deliver our energy objectives.

Paragraph 3.3.20 sets out the expectation that a secure, reliable, affordable, net zero consistent system in 2050 is likely to be composed primarily of wind and solar. As well as additional generating plants, new energy storage and interconnectors are required to provide increased flexibility.

Paragraph 3.3.57 states that based on the Net Zero Strategy and the government's commitment to a 78% reduction in GHG emissions by 2035, all of our electricity needs to come from low carbon sources by 2035, while meeting a 40-60% increase in demand. Paragraph 3.3.58 therefore recognises that *"there is an urgent need for new (and particularly low carbon) electricity to be brought forward as soon as possible"*.

NPS EN-1 makes clear that in the context of the risks posed by climate change, the delivery of renewable energy schemes is now of such critical national priority that there is, in essence, an automatic (rebuttable) presumption that they will overcome most of the strict policy tests elsewhere in the NPSs relating to certain types of environmental impacts as set out in Section 4.2

Paragraph 4.2.4 states that the Government concludes that there is a critical national priority (CNP) for the provision of nationally significant low carbon infrastructure. As set out in paragraph 4.2.5, this includes solar generation amongst other forms of onshore and offshore generation that does not involve fossil fuel combustion.

Paragraph 4.2.16 states that: As a result, the Secretary of State will take as the starting point for decision-making that such infrastructure is to be treated as if it has met any tests which are set out within the NPSs, or any other planning policy, which requires a clear outweighing of harm, exceptionality or very special circumstances.

Paragraph 4.2.17 states that this means that the Secretary of State will take as a starting point that CNP Infrastructure will meet a number of non-exhaustive tests including

- where development within a Green Belt requires very special circumstances to justify development
- where development within or outside a Site of Special Scientific Interest (SSSI) requires the benefits (including need) of the development in the location proposed to clearly outweigh both the likely impact on features of the site that make it a SSSI, and any broader impacts on the national network of SSSIs.
- where development in nationally designated landscapes requires exceptional circumstances to be demonstrated; and
- where substantial harm to or loss of significance to heritage assets should be exceptional or wholly exceptional.

NPS EN-1 highlights the importance of energy projects harmonising with their surroundings and acknowledges that large-scale energy projects may have landscape and visual impacts. Paragraph 5.10.5 acknowledges that *'virtually all nationally significant infrastructure projects will have adverse effects on the landscape, but there may also be beneficial landscape character impacts arising from mitigation'*. Paragraph 5.10.6 sets out the expectation for

projects to be *‘designed carefully, taking account of potential impacts on the landscape’*. Whilst locally designated landscapes should be paid attention, Paragraph 5.10.12 states that *‘locally valued landscapes should not be used in themselves to refuse consent, as this may unduly restrict acceptable development’*. At Paragraph 5.10.36, NPS EN-1 advises that it is relevant to consider whether any adverse impact on the landscape is temporary and capable of being reversed.

Part 5 provides guidance on assessing the general impacts of energy developments, stating that impacts and mitigation measures should be considered when they are relevant and significant to the decision-making process. These impacts cover areas such as biodiversity and geological conservation, pollution control, flood risk, historic environment, landscape and visual aspects, land use, noise and vibration, traffic and transport.

5.6 National Policy Statement for Renewable Energy Infrastructure (NPS EN-3)

NPS EN-3 (January 2024) provides national planning policy in respect of renewable energy infrastructure.

Paragraph 1.1.1. states that there is *“an urgent need for new electricity generating capacity to meet our energy objectives”*.

Paragraph 1.1.2 summarises the central role that renewables play in meeting our energy objectives, *‘Electricity generation from renewable sources is an essential element of the transition to net zero and meeting our statutory targets for the sixth carbon budget (CB6). Our analysis suggests that demand for electricity is likely to increase significantly over the coming years and could more than double by 2050.*

This could require a fourfold increase in low carbon electricity generation, with most of this likely to come from renewables’. NPS EN-3 provides assessment and technology-specific information on renewable energy technologies including energy storage.

Paragraph 1.1.3 sets out the Government’s commitment that *“by 2035, all our electricity will come from low carbon sources, subject to security of supply, whilst meeting a 40-60% increase in demand”*.

Paragraphs 2.10.28 to 2.10.35 provide policy on site selection with regards to agricultural land. 2.10.29 states *‘where the proposed use of any agricultural land has been shown to be necessary, poorer quality land should be preferred to higher quality land avoiding the use of “Best and Most Versatile” agricultural land where possible’*.

5.7 Other Policy and Legislation

The following documents provide clear support and emphasise the critical importance for renewable energy generation and are highlighted here for context.

5.7.1 Climate Change Act 2008

The Climate Change Act 2008 set up a framework for the UK to achieve long term objectives of reducing greenhouse gas (GHG) emissions and to ensure steps are taken to adapt to climate change. The Act committed the UK to cut GHG emissions (against the 1990 baseline) by 80% by 2050.

5.7.2 Climate Change Act 2008 (2050 Target Amendment) Order 2019

The Climate Change Act 2008 was amended by the Climate Change Act 2008 (2050 Target Amendment) Order 2019, which set a new target to cut GHG emissions by 100% (against the 1990 baseline) and achieve net zero by 2050. This target is legally binding and the UK Government must meet it as a matter of law.

5.7.3 National Infrastructure Strategy – Fairer, Faster and Greener (2020)

The National Infrastructure Strategy (NIS) sets out the Government's plans to deliver on its ambition to *"deliver an infrastructure revolution: a radical improvement in the quality of the UK's infrastructure to help level up the country... and put the UK on the path to net zero emissions by 2050."*

The NIS recognises the significant changes required to UK infrastructure in order to meet the UK's commitment to achieving net zero emissions by 2050. The NIS identifies that to deliver net zero, the share of generation from renewables needs to dramatically increase, and notes that greater generation capacity will need to come from renewables. The NIS aims to provide investors with clarity over the Government's plans so they can look at the UK with confidence and help deliver the upgrades and projects needed across the country.

5.7.4 Net Zero: Opportunities for the Power Sector (2020)

The National Infrastructure Commission (NIC) published 'Net Zero: Opportunities for the Power Sector' to set out the infrastructure required to meet the 2050 net-zero target, as set out in the 2019 amendment to the Climate Act 2008. The NIC recommends the energy generation mix is up to 90% renewables to meet the 2050 target.

5.7.5 Net Zero Strategy: Build Back Greener (2021)

The Net Zero Strategy, published by the Government in October 2021, builds on commitments made in the Energy White Paper (2020) and sets out policies and proposals which ensure the UK is in accordance with upcoming carbon budgets and Nationally Determined Contributions ('NDC'). NDCs provide a mechanism for countries to voluntarily impose national emission limits under the Paris Agreement.

The strategy seeks to realise a decarbonised economy by 2050. Key policies in the Strategy related to renewable power generation include:

"By 2035 the UK will be powered entirely by clean electricity, subject to security of supply; [...] 40 GW of offshore wind by 2030, with more onshore, solar and other renewables – with a new approach to onshore and offshore electricity networks to incorporate new low carbon generation and demand in the most efficient manner that takes account of the needs of local communities [...]"

5.7.6 British Energy Security Strategy (2022)

The British Energy Security Strategy sets out how the UK intends to secure clean and affordable energy for the 'long-term'.

5.7.7 Energy Act (2023)

The Energy Act sets out new legislation to help ensure energy is affordable for households and businesses and to make the UK more energy independent in the long-term. The Act also establishes the need to accelerate the growth of low carbon technologies.

5.8 Local Planning Policy Framework

Section 38(6) of the Planning and Compulsory Purchase Act 2004 required that applications for planning permission must be determined in accordance with the development plan, unless material considerations indicate otherwise. The National Planning Policy Framework (NPPF) is a key material consideration in the determination of planning applications and also sets out the framework of policies with which development plans must be in accordance.

For the purposes of Section 38(6), the Development Plan for Gravesham currently consists of:

5.8.1 Gravesham Local Plan Core Strategy and Local Plan Policies Map (adopted September 2014)

Policy CS01 establishes that the Council will take a positive approach that reflects the presumption in favour of sustainable development contained within the NPPF.

Policy CS02 establishes a hierarchy for the scale and distribution of development within Gravesham.

Policy CS11 states that new developments should mitigate their impact on the highway and public transport networks as required.

Policy CS12 establishes the Council's desire to retain a multifunctional linked network of Green Infrastructure. The policy states that there will be no net loss of biodiversity across the Borough. As such, opportunities to enhance, restore, re-create, and maintain habitats will be sought.

Policy CS18 states that development will be directed sequentially to those areas least at risk of flooding. Furthermore, proposals in areas at risk of flooding should be accompanied by a Flood risk Assessment and a Flood Risk Management Plan (if required).

Policy CS18 states that the Council will seek to reduce the overall carbon footprint of the Borough. In particular, the Council will support stand-alone, decentralized renewable or low-carbon energy development where it accords with policies in the Plan.

Policy CS19 envisions that new development will be visually attractive, fit for purpose and locally distinctive. Development will conserve and enhance the character of the built, historic, and natural environment.

5.8.2 Saved Policies in the Gravesham Local Plan First Review (1994)

Policy P3 states that the Council expects development to make provision for vehicle parking, in accordance with the Kent County Council Vehicle Parking Standards.

5.9 Planning Assessment

5.9.1 Overview

The Proposed Development has been informed by technical assessments.

This section assesses the Proposed Development against the following issues, providing a summary, where applicable of the supporting technical reports that have been submitted with the application:

- The Principle of Development;
- Transport and Construction Traffic;
- Flood Risk;
- Ecology and Biodiversity Net Gain; and
- Amenity.

5.9.2 The Principle of the Proposed Development

BESS is a key element of the UK's strategy for electricity generation, in particular net zero. The Proposed Development aligns with Government policy in the NPPF and NPS EN-1 and EN-3, as well as specific objectives for energy generation and supply in the Energy White Paper, Powering up Britain, the National Infrastructure Strategy, the British Energy Security Strategy, and the Government's 10-point Action Plan for a Green Revolution.

At the local level, Gravesham Local Plan Policy CS18 of the Core Strategy clearly establishes policy support for the implementation of zero/low-carbon energy generation, consequently providing the principle of development for the Proposed Development.

Specifically, Policy CS18 states:

"The Council will seek to reduce the overall carbon footprint of the Borough. In particular, the Council will: support stand-alone decentralised, renewable or low carbon energy development where it is compatible with national policies for protecting the Green Belt and where it accords with policies in this plan, in particular those relating to Development and Design Principles, Transport, Green Infrastructure and Heritage and the Historic Environment."

The Proposed Development involves the generation of zero/low-carbon energy and therefore gains significant policy support from Policy CS18.

5.9.3 Construction Traffic Management Plan

Policy CS11 of the Local Plan states that "new developments should mitigate their impact on the highway and public transport networks as required. Transport assessment work is required to be undertaken in accordance with national and local policy guidance, and to identify detailed highway and public transport network requirements and management arising from the development."

A Construction Environmental Management Plan (CTMP) considers the surrounding highway network and sets out the proposed routing and site access arrangements during construction and operation of the Proposed Development.

As set out in the CTMP, it is expected that there will be an average of around 26 two-way vehicle movements (light and heavy goods vehicles (HGVs)) per day based on an 18 month construction build programme. The use of HGVs to bring equipment onto the Site during the construction period will be strictly managed to ensure that vehicle movement is controlled and kept to a minimum. Working hours at the Site are proposed to be between 0800-1800 Monday to Friday and 0800-1300 on Saturdays. No construction or deliveries will take place on Sundays or Bank Holidays.

The substation transformer associated with the construction of the substation will be delivered as abnormal loads. As set out in the CTMP, the assessment of the route for abnormal loads concluded that subject to detail design, there are no obvious road restrictions or pinch points requiring reinforcement works along the construction route.

Should Kent County Council (KCC), the highway authority, require a highway condition assessment prior to commencement of the construction phase of the development this will be undertaken to identify any existing defects along the construction traffic route this can be secured via a planning condition. Should further deterioration occur because of the construction phase, appropriate remediation measures will be agreed with KCC.

Once the Proposed Development is constructed and in operation, traffic is very low.

The CTMP concludes that the level of traffic during the temporary construction phase will not result in a material impact on the safety or operation of the local highway network. There are therefore no highway capacity or safety reasons why planning permission should not be granted, therefore meeting the requirements of the NPPF and policy CS11 of the Gravesham Local Plan.

5.9.4 Flood Risk and Surface Water Drainage

Policy CS18 of the Local Plan states that “with the exception of the previously developed sites along the Thames Riverside (see Policies CS03, CS04 and CS05) and those other regeneration sites which have already been evaluated in accordance with the sequential and exception tests at the application stage, development will be directed sequentially to those areas at least risk of flooding. Proposals in areas at risk of flooding must be accompanied by a Flood Risk Assessment (in accordance with national policy and Environment Agency standing guidance as appropriate).”

An FRA has been prepared in accordance with the planning policy and associated guidance. The FRA assesses the risk from historical, fluvial, surface water, groundwater, sewer and reservoir flooding and the risk of flooding elsewhere from the Proposed Development.

The site is situated within Flood Zones 1, 2 and 3 when using the Environment Agency Flood Map for Planning (Rivers and Sea). The EA Risk of Flooding from Surface Water Map suggests that the site is located within an area at “Very Low” to “Low” chance of flooding from surface water for the present day and “Very Low” to “Medium” chance between 2040 and 2060.

The site is located partially within Flood Zone 1 (Low Probability), which means it is defined as land having a less than 1 in 1,000 annual probability of river and sea flooding, Flood Zone 2 (Medium Probability), which means it is defined as land having between a 1 in 100 and 1 in 1,000 annual probability of river and sea flooding and Flood Zone3 (High Probability), which means it is defined as land having at least a 1:100 annual probability of fluvial flooding.

Based on the 2008 TE2100 in-channel levels, the 0.5% (1 in 200 year) and 0.1% (1 in 1000 year) annual probability of exceedance tidal events were modelled for all breach locations downriver of the Thames Barrier. These were modelled for the current year epoch, as well as 2115 epoch which include allowances for climate change.

The site is shown to be entirely outside of the 1:200 year and 1:1000 year modelled breach extents for 2005.

The site is shown to be partially within the 1:200 year and 1:1000 year modelled breach extents for 2115. The north eastern boundary of the site is shown to be affected by the 1:200 year modelled breach extent for 2115, whilst all of the proposed infrastructure is situated outside of the extent, remaining flood free.

During the 1:1000 year modelled breach extent for 2115, the site's north eastern section is shown to be affected. The circuit breaker within the grid compound and emergency water tank are shown to be within the flood extent.

In line with ETR 138 guidelines, it is recommended that all essential electrical infrastructure affected by tidal flooding be raised 300mm above flood level. Therefore, it is recommended that at the detailed design stage consideration is given to raising the height of the circuit breaker and termination. It is also recommended that any proposed fencing for the site is of palisade design or similar, allowing water to flow through, unobstructed.

The EA Risk of Flooding from Surface Water Map suggests that the site is located within an area at "Very Low" to "Low" chance of flooding from surface water for the present day and "Very Low" to "Medium" chance between 2040 and 2060.

The FRA demonstrates that the Proposed Development will not increase flood risk elsewhere. and concludes that the Proposed Development is compliant with the NPPF and policy CS18 of the Gravesham Local Plan subject to mitigation measures being implemented at the detailed design stage.

5.9.5 Ecology and Biodiversity Net Gain

Policy CS12 of the Local Plan states that "there will be no net loss of biodiversity in the Borough, and opportunities to enhance, restore, re-create and maintain habitats will be sought."

The Site is located southwest of Thamesway (A226), Northfleet c. 1.2km south of the River Thames. There are no statutory or non-statutory designations applicable to the site. However, the Site is listed as Open Mosaic Habitat on Previously Developed Land priority habitat (Natural England, Draft). The nearest European designated site is Thames Estuary & Marshes RAMSAR/SPA c. 5km east. Statutory designated sites nearby include Swanscombe Peninsula SSSI c. 200m west, Swanscombe Skull Site NNR c. 1.8km west, Darenth Wood SSSI c.3.6km southeast, West Thurrock Lagoon and Marshes c. 3.8km northwest. Nearby priority habitats include Open Mosaic on Previously Developed Land, Deciduous Woodland and Ancient semi-natural Woodland.

Habitats within the Site include a mixture of successional habitats including dense scrub, other neutral grassland and young trees. There is a history of disturbance including soil stripping and movement. A native hedge forms the southwestern boundary of the Site.

The site has undergone significant successional changes, transitioning towards extensive areas of dense bramble and mixed scrub and early successional woodland. The current habitat represents secondary succession comprising self-seeded trees and the formation of scrub confirming a habitat shift from early-successional species to a more structured and competitive vegetation community. This succession from open, disturbed land towards more closed-canopy habitats is consistent with the ecological principles of land regeneration.

The Site is estimated to be valued at 5.90 habitats baseline unit, 0.08 baseline hedge units and 0 baseline watercourse units.

To enable construction of the Proposed Development the Site will be cleared. The estimated biodiversity units required to offset the Proposed Development will be 6.49 habitat units and 0.088 hedge units. It is expected that biodiversity net gain can be achieved in compliance with

the NPPF and Gravesham Local Plan on land under the applicant's control adjacent to the Site.

A Preliminary Ecological Appraisal was undertaken in July 2025. The appraisal recommended follow up surveys for reptiles, amphibians and hazel dormouse. Ecological management measures are also recommended with respect to bats, badgers, hedgehogs and invertebrates. Further detail on enhancement and mitigation will be set out on completion of the ecological species surveys.

5.10 Amenities

5.10.1 Noise

Policy CS19 of the Local Plan states that “new development will be located, designed and constructed to avoid adverse impacts from pollution, including noise.”

A noise impact assessment has been produced in accordance with BS 4142 methodology. The assessment considered four receptor locations, NSR1 to NSR4, surrounding the site. The acoustic environment at the receptor locations comprised of road, rail and air traffic noise, WWTW noise, commercial noise, bird song, footfall and conversation.

Ambient and background sound monitoring was undertaken at three locations, P1, P2 and P3 at times between 30th June and 3rd July 2025. The presentative night-time background sound levels, used in the assessment, were LA90,15min 51dB at NSR1 and NSR4, LA90,15min 42dB at NSR2 and LA90,15min 43dB at NSR3

The specific sound levels at NSR1 to NSR4 were determined by noise model for two different scenarios, no fence/fence installed. The assessment indicates a low impact at all receptor locations with or without the proposed acoustic fence installed.

At all the receptors the specific sound level is significantly below the lowest and average night-time ambient sound levels measured at P1, P2 and P3. For residential receptors, NSR2 and NSR3, it is unlikely that the BESS noise emission would disturb sleep. No mitigation measures are therefore required for the Proposed Development. As such, the proposed development is compliant with Policy CS19 of the Local Plan.

Ebbsfleet Development Corporation (EDC) has raised the issue of noise in connection with its proposals for Ebbsfleet Central East, a mixed use development comprising of significant residential and commercial development. The nearest land parcel within the Ebsfleet development plan is 250 metres from the BESS. This parcel is shown in the plan as "any permitted use".

Using the noise model constructed for the noise impact assessment the calculated sound level at the receptor location, without the 4m high site boundary barrier, is 29dB(A). The area surrounding the Proposed Development is noisy with road traffic dominating the acoustic environment. Ambient sound levels adjacent to Thames Way have been measured as between 56 to 66dB(A). The statistical background was 51dB(A).so a difference of -22dB. In terms of BS 4142 methodology this indicates a low impact at the receptor location and therefore no impact upon any of the development types indicated in the Ebbsfleet Central East plan.

5.10.2 Safety

Fire safety and BESS is an important consideration for local fire authorities and there is current and emerging guidance on the design and operation of BESS facilities from a health and safety perspective including fire risk.

The site design guidance for the BESS aligns with current UK NFCC guidance and best practice including legislation and guidance developed for BESS developers and operators in the USA (the most advanced country in the world with respect to the potential health and safety and environmental impacts of BESS).

The key principles that have informed the design of the BESS are:

Customer and DNO Substations	• Located close to the site access
Spacing of BESS containers	• 6 metres • Minimum 3 metre between closest BESS container and site access and egress
Venting	• Positioning of BESS containers away from access and egress points, pedestrians. access tracks/roads
Clearance to fence	• Minimum 3 metres
Distance from the closest building	• Minimum 30 metres.
Distance from PROW	• Minimum distance of 3 metres
Vegetation	• Minimum distance 10 metres
Water Supply	• Minimum distance 10m metres and near to site access point
Pollution and spills	• Firefighting water runoff to be contained within the site
HV Substation	• To be in a separate fenced off area to the BESS compound
CCTV range	• Main gates and perimeter fence
Entrance and exit to the site	• Double gated at least 4 metres wide • 2 separate access points
Access and parking	• Meet fire rescue service access requirements

- Designed for the maximum axle loads and dimensional requirements for all deliveries and traffic
 - Parking spaces to be shown on the site layout drawing
- Internal access on site
- 4 metre minimum width for internal access roads
 - Access to all areas of the site must be unimpeded
 - Allowances to be made for the laying and movement of water hoses

It should be noted that BESS technology is advancing at a fast pace due to improvements in battery technology including increased energy density, longer lifespans and new chemistries. These improvements allow for longer discharge duration enabling more reliable and cost-effective systems. For example, most operational BESS in the UK today run for 1-2 hours in line with the market requirement for fast-response frequency services. These BESS react quickly to signals from the market and are only required to respond for short periods of time. Now longer duration BESS are becoming the norm with the market gravitating towards BESS that can run for anywhere between 4 - 6 hours. The Proposed Development has been designed as a 2 or 4 hour system.

The Outline Battery Safety Management Plan (OBSMP) sets out the key principles for safety management such that the BESS can be operated with an acceptable level of residual risk. The OBSMP demonstrates the alignment of the Proposed Development with relevant current guidance for BESS installations. However, because the technology selected at procurement may have different environment, health and safety impacts to the assumptions made in the BESS design review, it is proposed that a suitably worded planning condition requiring a Detailed Battery Safety Management Plan to be submitted prior to the operation of the BESS would be appropriate should planning permission be granted.

6 Conclusions

The PDAS supports a planning application submitted by Speedgreen (Thames Way) Ltd, the Applicant, for the following development:

“Construction of a battery energy storage system, comprising battery containers, transformers, high voltage electrical substation and ancillary infrastructure including underground cabling, fencing, CCTV, internal access tracks and water storage tanks for a temporary period of 40 years”.

This PDAS has demonstrated that the Proposed Development is in accordance with the NPPF and the planning policies of Gravesham BC. For the purposes of the determination of this application made under the TCPA 1990 (as amended), national policy statements for energy (NPSs) clearly set out the Government’s latest position and direction of policy travel in respect

of low carbon energy schemes. Namely, that in the context of the risks posed by climate change, the delivery of low carbon energy schemes is of such critical national priority that there is a presumption that they will overcome the policy tests in the NPSs relating to environmental impacts.

The Proposed Development will support the urgent need for low carbon energy and national net zero targets. Therefore very substantial weight should be accorded to the Proposed Development due to the contribution it would make towards the UK's energy and climate change policy and its legally binding target of Net Zero by 205.

National policy and the Government's energy strategy also recognises that there is an urgent and critical need to bring forward BESS developments to meet these targets for decarbonisation and net zero. The Proposed Development will support these policy aims by providing a significant amount of low carbon electricity over its lifetime; and providing resilience, security and affordability of electricity supply. It will therefore be a critical pathway to decarbonisation of energy supply.

Furthermore, in the context of a national shortage of suitable points of connection, the Applicant benefits from an accepted grid offer in respect of a nearby viable grid connection, which is afforded significant weight.

In terms of the overall planning balance, the clear and substantial benefits of the Proposed Development outweigh any adverse effects, which would be short-term, temporary and reversible at the end of the Proposed Development's lifetime. Accordingly, this proposal represents sustainable development, and as such this planning application should be approved without delay.
