East Claydon Greener Grid Park Planning, Design and Access Statement

Statkraft UK LTD 25 April 2025

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Introduction

- 1.1 This Planning Statement ('this Statement') has been prepared by Lichfields on behalf of Statkraft UK LTD ('Statkraft'). It accompanies a full application for planning permission to construct a Greener Grid Park comprising energy storage and grid balancing equipment and associated ancillary infrastructure including access and landscaping ('the proposal') at land north of East Claydon substation, off East Claydon Road ('the Site').
- 1.2 The Greener Grid Park represents an essential infrastructure project, delivering muchneeded energy security whilst enabling the transition towards a zero carbon economy. This will be delivered using two types of technology: a battery energy storage system (BESS) and synchronous compensators.
- In summary, the proposed Battery Energy Storage System (BESS) would store excess electricity generated off-site when intermittent renewable energy generation is high, but demand is low, and release it to the National Grid when renewable energy assets are not generating, via the new replacement East Claydon substation that is due to be completed in 2030, at times of high demand. This functionality will compensate for the variability of renewable energy supply, ensuring it can meet peak periods of demand. The proposal therefore increases the resilience of power supply whilst enabling a greater reliance upon renewable sources of energy. The proposed facility will also provide energy security during unplanned outages from other energy generators and provide frequency stabilisation services to prevent blackouts. The synchronous compensators are also important for grid stability, providing the same synchronous inertia as coal or gas power plants, without the associated CO2 emissions and high running costs.
- 1.4 It is proposed that the Greener Grid Park will operate for a 40-year period. Thereafter, the installation will be decommissioned and the land restored.
- 1.5 The applicant seeks permission that allows for development to commence within a five year period to align the Greener Grid Park construction with the new replacement East Claydon substation anticipated completion, which will be the grid point of connection (POC) for the Greener Grid Park.
- 1.6 The purpose of this Statement is to set the proposal in context and then appraise the proposal against prevailing planning policy and other material considerations.

Accompanying Documents

- 1.7 The scope of the application has been discussed and agreed during the pre-application process with Buckinghamshire Council.
- 1.8 This Statement should be read in conjunction with the following documents that accompany the application:
 - 1 Application Form, completed by Lichfields;
 - 2 CIL Additional Information From, completed by Lichfields;
 - 3 Statement of Community Involvement, prepared by Quatro;

- 4 Flood Risk and Drainage Strategy, prepared by Motion;
- 5 Phase 1 Geo-environmental Investigation, prepared by A-squared Studio;
- 6 Minerals Resource Assessment Report, prepared by A-squared Studio;
- 7 Agricultural Land Classification Report, prepared by Kernon Countryside Consultants Ltd;
- 8 Fire Safety Strategy, prepared by DNV;
- 9 Tree Survey, Method Statement and Impact Assessment, prepared by Keen Consultants; and
- 10 Ecology and Trees Checklist, completed by Keen Consultants and Applied Ecology.

1.9

A schedule of the planning drawings is included in Annex A of the application covering letter.

Environmental Impact Assessment

^{1.10} The detailed planning application comprises the completed application forms and relevant certificates, along with the Environmental Statement ('ES'), which provides a full account of the environmental effects associated with the application proposals.

1.11 The ES has been prepared in accordance with the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 and sets out findings of an EIA of the development. The EIA has been carried out because the development falls within Schedule 2 Part 3 (a) as industrial installations for the production of electricity, steam and hot water where the area of the development exceeds 0.5 hectares. For Schedule 2 developments, the EIA Regulations require that an EIA be undertaken where "the development is likely to have significant effects on the environment by virtue of factors such as its nature, size or location".

- 1.12An EIA Scoping Opinion Request was submitted to Buckinghamshire Council on 23rd
August 2024 under Regulation 15 of the Town and Country Planning (EIA) Regulations
2017 (as updated) Ref 1 ('the 2017 EIA Regulations'). The Council responded on 14th
November 2024 (Ref: 24/02556/SO) providing its Scoping Opinion. The ES accords with
the Council's Scoping Opinion.
- ^{1.13} The ES, coordinated by Lichfields, comprises the following chapters along with associated technical appendices and a Non-Technical Summary:
 - Chapter A: Introduction and Background, prepared by Lichfields;
 - Chapter B: Scope and Methodology, prepared by Lichfields;
 - Chapter C: Site and Scheme Description, prepared by Lichfields;
 - Chapter D: Landscape and Visual Impact Assessment, prepared by Urban Green;
 - Chapter E: Noise and Vibration, prepared by TNEI;
 - Chapter F: Ecology and Biodiversity, prepared by Applied Ecology;
 - Chapter G: Traffic and Transport, prepared by WSP;
 - Chapter H: Climate Change, prepared by Hilson Moran;

- Chapter I: Archaeology, prepared by Headland Archaeology;
- Chapter J: Cumulative Impact Assessment, prepared by Lichfields; and
- Chapter K: Mitigation and Monitoring, prepared by Lichfields.

Structure of Planning Statement

This Statement is structured as follows:

1.14

- **Section 2.0** explains the background to the application, including the important role that BESS provide in supporting the UK's sustainable energy network;
- Section 3.0 describes the application site, its context and planning history;
- Section 4.0 describes the proposed development including issues of design and access, considering matters of use, amount, layout, scale, appearance, landscaping and access;
- **Section 5.0** summaries the relevant planning policy and guidance, setting out the key planning issues that are required to be addressed;
- **Section 6.0** assesses the proposed development against planning policy and other material considerations; and,
- Section 7.0 provides a summary of this assessment and our conclusions.

2.0 Background

Low Carbon Energy and Grid Stability

- 2.1 The Country's electricity system is undergoing an ambitious and vital transformation to tackle climate change, with current national targets being to decarbonise the electricity system by 2030 and achieve net zero by 2050.
- 2.2 Coal power, once the mainstay of the power grid, has gone from generating almost a quarter of the country's electricity five years ago, to being entirely removed from the Country's energy mix. Since 2018, renewable generation has increased by 31%. The latest available data¹ indicates that renewable energy accounted for 51.4% of UK energy supply in 2024². This compares with 14.2% of supply from nuclear and 33.6% from other forms of supply³.
- 2.3 High usage of renewables is enabling the carbon intensity of electricity generation to continue to fall. However, despite generation from fossil fuels dropping to levels last seen in the 1950s, the UK still heavily relies on energy from fossil fuels which represented 31.5% of the energy mix in 2024⁴ (Figure 3.1).



Source: BEIS / Lichfields analysis

- 2.4 The energy industry has played, and needs to continuing playing, a key part in this transition, from developing renewable energy generation and storage technologies (such as the BESS proposed), to upgrading the existing transmission network to allow communities across the country to benefit from this clean energy.
- 2.5 National Energy System Operator's (NESO) 'Beyond 2030 A national blueprint for a decarbonised electricity system in Great Britain' report (March 2024) notes that the grid's current reliability can be traced back to the building of the 'supergrid' in the 1950s. This is described as representing a once in a generation expansion of the electricity grid, to transport electricity from a core set of large fossil fuel generators in the centre of the

¹ DESNZ: UK Energy Trends (March 2025)

² Comprising of biomass, wind (onshore and offshore), solar, hydro, wave/tidal and energy supplied from battery storage

³ Comprising of coal, gas, oil and other fuels

⁴ Energy Trends UK, October to December 2024, Statistical Release 27 March 2025, Department for Energy & Net Zero

country to homes and businesses across Britain. It notes that over the last 70 years this network has required only small upgrades, until now.

- 2.6 The NESO report explains that Britain's electricity needs are set to rise substantially (by up to nearly 65 per cent) by 2035, as our everyday lives become more digitally intertwined and we move towards more electrified heat and transport options. Coupled with this, it notes that the UK Government has set an ambition to have a fully decarbonised electricity system by 2035 (the updated Government target is 2030). It says, "*This means producing more electricity and transporting it in a smarter, cheaper, and greener way...The current electricity grid is reaching its capacity and is unable to transport much more electricity without reinforcing the network.*" (Executive Summary)
- 2.7 It goes on to say that "Investment in renewable energy generation has exceeded investment in transmission capacity over the past decade, resulting in bottlenecks on the electricity network. Currently, energy is being wasted as the grid cannot transport it to where it can be used. Because of these bottlenecks, as the system operator, we sometimes have to ask wind farms to switch off to prevent the grid becoming overloaded – wasting cheap, sustainable, homegrown wind power." (Executive Summary)
- 2.8 This issue is also explained in the National Infrastructure Commission's (NIC) recent publication '*Electricity distribution network: creating capacity for the future*' (February 2025). This notes that "*modern life is built on electricity*" and that up to £50 billion of investment in the distribution network could be needed to support additional demand and generation in the period between now and 2050, representing a doubling of current annual allowance for load related expenditure. It notes that "...the transition to net zero will make the energy system increasingly dependent on electricity, with demand for electricity expected to increase by around 50% by 2035 and to double by 2050." (Page 11, also Figure 2.2 below)



Source: 'Electricity distribution network: creating capacity for the future', NIC, February 2025

- 2.9 The NIC report notes that the consequences of failing to meet changing patterns of supply and demand have become clear at transmission level, with network connection dates being pushed out significantly. It explains that "*In 2023, energy bill payers paid £1.4 billion in constraint costs because the transmission network did not have the capacity to transmit all the energy generated by renewables.*" (Page 13) The report considers that flexibility is crucial for the country's energy system. To meet demand on the distribution network while minimising investment in network expansion, distribution network operators use flexibility – the ability to shift energy consumption, either in time or location. The report notes that some technologies, which are expected to be increasingly deployed, can also provide additional capacity to the network – such as battery storage.
- 2.10 NESO emphasises that a countrywide effort over the next decade is needed to upgrade the network in a coordinated manner to minimise impacts on communities and ensure the benefits of this evolving energy system can be seen across the breadth of Great Britain.
- 2.11 As part of this upgrade, NESO notes⁵ that, "One of the biggest problems Great Britain faces is the inability to easily store large volumes of electricity. Grid-scale storage is becoming increasingly important in managing peaks and troughs in the electricity system." (Page 24) It anticipates this will continue into the future as part of an integrated, clean energy mix (Figure 2.3).



Source: NGESO 'Beyond 2030 – A national blueprint for a decarbonised electricity system in Great Britain' March 2024

National Grid's Future Energy Scenarios (FES) ESO Pathways to Net Zero Report (July 2024) looks at the future investment required in energy infrastructure, the policy decisions and impacts of how we consume energy that need to be considered between now and 2050 to meet the net zero target and decarbonise the UK electricity supply system by 2030. It refers to decarbonising the energy system as "...*the challenge of our generation*..." and a "...*once in a lifetime opportunity*..." and calls for "...*decisive action within the next two*

⁵ National Energy System Operator's (NESO) 'Beyond 2030 – A national blueprint for a decarbonised electricity system in Great Britain' report (March 2024)

years to deliver the fundamental changes required to achieve a fair, affordable, sustainable and secure clean energy system by 2050..." emphasising "...it is time to go further and faster."

2.13 Battery storage is identified in the FES 2024 as becoming increasingly important as the country moves towards a net zero system and there is a greater need for flexibility in how energy is stored and transferred back to the grid, to support the increased roll-out of renewable sources of energy. This is considered key to achieving an effective and balanced grid. Without them, excess energy is wasted as any surplus cannot be stored on the system. The FES report identifies a need to increase battery storage from 4.7GW to 36GW in 2050 (Figure 2.4).



Figure 2.4 Scenarios for battery storage installed capcacity to 2050

Source: FES 2024

- 2.14 In its July 2024 Progress Report to Parliament⁶, the Climate Change Committee (CCC) reported that the UK is not on track to meet the 68% reduction in emissions compared to 1990 levels by 2030 its National Determined Contribution (NDC) to the Paris Agreement (the Paris Agreement being the international community's agreement to keep the increase in global average temperature to well below 2°C, and to pursue efforts to limit the temperature increase to 1.5°C).
- 2.15 Whilst the CCC notes that 2023 saw a significant fall in emissions, it says rapid progress is needed to reduce oil and gas use to build on the good progress to phase out coal-generated electricity. The CCC's assessment is that only a third of the emissions reductions required to achieve the 2030 target are currently covered by credible plans, with action needed across all sectors to ensure low carbon technologies become "the norm." It also notes that, "*British-based renewable energy is the cheapest and fastest way to reduce vulnerability to volatile global fossil fuel markets. The faster we get off fossil fuels, the more secure we become.*" (Executive Summary)

⁶ Progress in reducing emissions 2024 Report to Parliament - Climate Change Committee (theccc.org.uk)

- 2.16 Its assessment is that the previous Conservative Government's policies and plans were insufficient to achieve the UK's targets in the 2030s and "...*have hindered progress just when acceleration was needed*". The CCC Report notes that with the 2030 target only six years away, and the impacts of climate change intensifying, "...*rapid action is needed to get things back on track*..." (Page 12) It adds that "...*the new UK Government needs to set out a clear commitment to the Net Zero transition, backed with rapid policy action and a sharpeyed focus on removing barriers to deployment.*" (Page 14)
- 2.17 The Secretary of State for Energy Security and Net Zero (Edward Miliband) responded with a statement to Parliament on the same day the CCC report was published (18 July 2024), commenting that the Government intends to deliver on its manifesto pledge for a clean power system by 2030, saying, "I will respond formally to the committee in the autumn ... but I can tell the House today that we will hold fast to our 2030 clean power mission and our nationally determined contribution, because it is the right thing to do for our country." He added that, "The biggest threat to nature and food security and to our rural communities is not solar panels or onshore wind; it is the climate crisis, which threatens our best farmland, food production and the livelihoods of farmers. The Government will proceed not on the basis of myth and false information, but on evidence. Every time, the previous Government ducked, delayed and denied the difficult decisions needed for clean energy, that made us less secure, raised bills and undermined climate action. No more."
- 2.18 In the same address he went on to announce the launch of Great British Energy that will invest in home-grown clean energy to increase the country's energy independence, create jobs and tackle the climate crisis.
- 2.19 The Government's Clean Power 2030 Action Plan: 'A new era of clean electricity' (December 2024) is clear on the fundamental overhaul of the energy sector needed to achieve its 2030 targets, with the aim being to: "...build the grid that Britain needs, overturning decades of delay; install clean sources of power at a pace never previously achieved; identify the energy mix needed for the 2030 power system and reorder the connection queue to achieve it; develop a flexible system that can accommodate and store Britain's renewable resources; deliver these benefits to consumers, people, households, and businesses as swiftly as possible." (Foreword by Chris Stark, Head of Clean Power 2030) It highlights the need for a "mission focus" with industry and government working in partnership at pace to achieve "rapid deployment" of new clean energy capacity across the UK. The key targets are noted as: 43-50 GW of offshore wind, 27-29 GW of onshore wind, and 45-47 GW of solar power, complemented by flexible capacity including 23-27 GW of battery capacity (Figure 2.2)⁷.
- 2.20 The Action Plan refers to the opportunities offered by battery storage as "huge" due to their scalability and ability to be deployed relatively quickly.

⁷ Clean Power 2030 Action Plan: A new era of clean electricity, December 2024, UK Government



Figure 2.5 Current installed battery storage capacity compared to the DESNZ 'Clean Power Capacity Range' in 2030 (GW)

Source: Clean Power 2030 Action Plan: A new era of clean electricity, December 2024, UK Government

2.21 The Action Plan explains that "*Batteries can reduce the amount of generation and associated network that needs to be built to meet peak demand, helping Britain reach clean power in a cost-effective way and reducing delivery risk associated with other types of energy infrastructure.*" It notes that currently there is 4.5 GW of battery storage capacity in Great Britain⁸ the majority of which is grid-scale; the targeted increase up to 27 GW represents a five-fold increase within six years. The Action Plan identifies a number of hurdles to overcome to achieve this increase that include, inter alia, the planning system which it comments requires action to cut down on delays and "...*deliver the huge increase in grid-scale battery capacity.*" (Page 96)

Local Decentralised Energy Systems and BESS

As a consequence of the increasing national 'push' for sustainable energy systems, there has 2.22 been an increasing shift in the way electricity is being generated, moving away from a centralised energy system with large generators at the national grid level, to more decentralised energy systems, generating power at the local and regional level. This has a number of benefits, in particular it ensures transmission losses are reduced (the quantity of electricity going into the system and where it is used) and facilitates renewables being connected to the network. The objective of increasing the volume of renewables connected to the grid network has the 2.23 effect of an increasing reliance on intermittent renewables such as wind and solar energy provision. This can lead to intermittency supply issues if they do not produce sufficient and consistent levels of electricity. Therefore, a balanced system of electricity generation is required. Back-up energy facilities, such as BESS, are therefore crucial elements of the UK's energy 2.24 mix, as emphasised in the FES Report (2024) and Clean Power 2030 Action Plan (2024).

⁸ Modo Energy (2024), 'Indices & Benchmarks' (viewed in December 2024)

- 2.25 The key benefits of BESS include the following:
 - 1 Surplus power from the grid can be stored within batteries for consumption later when supply does not meet demand. Batteries have a fast response time and can be utilised when needed which means the system operates efficiently and therefore keeps costs down. The proposed development, therefore, provides an invaluable role in balancing the electricity network.
 - 2 Alongside managing the supply and demand on electricity, battery storage developments have a crucial role to play in providing stability to the transmission system, to ensure that the frequency remains balanced between system demand and generation. If the system is not maintained, this can lead to power supply issues. As batteries can store and release power very quickly, they are extremely useful for balancing frequency.
 - 3 As the energy transmission networks continue to move to a decentralised system, this requires upgrades to carry this power. Localised battery storage, which can manage the fluctuation in generation, means that there is less of a need for expensive system upgrades.
- 2.26 The proposed development therefore provides the dual benefit of helping the National Grid balance electricity supply and demand nationally, while also strengthening the distribution network locally.
- 2.27 Electricity in the UK historically generated in large coal-fired and gas-fired power stations has inherent network stabilising qualities as a by-product of synchronous generation. However, as these are phased out and we increase supply of power from inverter-based technologies such as wind and solar, there is a decline in the inherent stability of the system with greater fluctuation of power supply entering the grid, with inertia and short circuit levels falling. Inertia is the mass of the system used to control frequency, while short circuit level is the amount of current that flows on the system during a fault. As such, there is now a requirement for smaller-scale grid stability infrastructure, such as the proposed synchronous compensators, to bridge this gap and facilitate more renewable energy development on the grid.

The Applicant

- 2.28 Statkraft is Europe's largest generator of renewable energy, with origins going back almost 130 years. In the UK, Statkraft develop, own and operate wind, solar, green hydrogen, hydropower and Greener Grid Park projects.
- 2.29 Since 2006, Statkraft has invested over £1.4 billion in the UK's renewable energy infrastructure and are market leaders in delivering innovative projects that ensure the reliability of our future green electricity supply.
- 2.30 Statkraft Greener Grid Parks are helping to achieve a renewables-ready network. As renewable energy generation increases across Great Britain, new ways to maintain system stability are required. Greener Grid Parks are sites comprised of various grid stabilising equipment which, depending on the needs of the grid and technology choice, can import, store, and export electricity. A Greener Grid Park is not a wind or solar farm or a power

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station. They resemble buildings that you might associate with agricultural barns, storage units or shipping containers.

Pre-Application Engagement

Buckinghamshire Council Pre-application

The principle of the development and associated issues were discussed with Officers at Buckinghamshire Council at a virtual Teams meeting on 11th July 2024. This was followed by written pre-application advice on 9th August 2024 (Ref: 24/01836/COMM). The Officer feedback is summarised below. The points raised are addressed in the application and explained in the assessment section of this Statement (Section 6.0):

- Principle of the proposed development noted the site is not allocated for development and is a countryside site outside the Council defined settlement boundaries. The advise confirms that the principle of development is supported by Policy C3 and other material considerations that supports renewable energy developments, subject to the environmental and amenity criteria set out in the policy being addressed. The advice notes that whilst the BESS proposal itself is not a renewable energy project per se it would provide enhanced energy resilience for renewable energy in the national grid and has a key role in meeting the UK's target of bringing all greenhouse gas emissions to net zero by 2050. The advice also acknowledges that BESS facilities are often required to be close to National Grid substations to facilitate connections and enhance the grid's capability to manage energy flows efficiently, in this case using the future replacement East Claydon substation. The advice notes that the cumulative effects of the development with other developments in the area would need to be assessed in the application.
- 2 **Minerals safeguarding** noted that a portion of the site is located within a Minerals Safeguarding Area (MSA) for clay, silt, sand and gravel. Advised that the requirements of the Buckinghamshire Minerals and Waste Local Plan (BMLP, Policy 1 'Safeguarding Mineral Resources') will need to be addressed and the application be accompanied by a Minerals Assessment.
- 3 **Agricultural land** advised that an Agricultural Land Classification (ALC) report will be required to accord with Local Plan Policy NE7 ('Best and Most Versatile Agricultural Land') to identify the quality of the agricultural land, including any Best and Most Versatile (BMV) agricultural land, and the quantity of agricultural land and temporary period it will be required for the proposed BESS.
- 4 **Design** the advice acknowledged that the design and layout of the proposed BESS is directed by its operating needs and safety regulations. Officers require a convincing justification for the proposed layout, including the overall land take and quantum of development proposed. Full details of hard and soft landscaping, including details of boundary treatments, CCTV (including details of the pole mounts), and lighting is required for the application, as is the colour for the battery storage containers.
- 5 **Noise and amenity** requested that a noise assessment is included in the application that considers the noise effects on the nearest residential receptors and proposes appropriate mitigation if required. Consideration of cumulative noise impacts was also requested.

- 6 **Fire risk and management** the advice requires details of fire risk and a management plan, and for the proposed BESS scheme to adhere to the National Fire Chief Council's (NFCC) guidance.
- 7 **Heritage** advice noted the potential for a Roman Road crossing part of the site and an archaeological evaluation being required to assess the significance of the site and any impacts of the proposal.
- 8 **Flood risk and drainage** requested that a Flood Risk Assessment and Drainage Strategy to consider all sources of flooding including surface water and groundwater flood risk. Reference was made to the requirements of Local Plan Policy I4 ('Flooding') and the importance of early engagement with the Local Lead Flood Authority (LLFA), Environmental Agency (EA) and the Buckingham and River Ouzel Independent Drainage Board (IDB). Given the proximity of the site to existing watercourses, the advice requests that potential impacts on water quality are assessed.
- Landscape and trees noted that landscape and visual impacts will need to be 9 assessed and should consider receptors within a 5km radius, informed by fieldwork and relevant models or approaches such as Zones of Theoretical Visibility (ZTV). In assessing the landscape character, the advice states that the countryside character, the East Claydon national grid site industrial use, nearby Public Rights of Way (PRoW), recreational route of the North Buckinghamshire Way, rural character of the villages of East Claydon and Granborough and isolated scattered farmsteads should all be considered. The advice notes that utilising recessive colours across the battery storage containers and buildings would assist to mitigate the uniform character of their built form. The advice refers to Local Plan Policy NE2 ('River and Stream Corridors') and the need to retain or provide a 10m ecological buffer from the top of the nearby watercourse and the development, and include a long-term landscape and ecological management plan for this buffer. Further, it requires an Ecological Impact Assessment including Biodiversity Net Gain (BNG) report to accompany the planning application. As part of this, the advice requires the impact of lighting on wildlife to be assessed.
- 10 **Transport** the advice requested full details of the operational access junction, anticipated vehicle trips generated by the development during construction and operation as well as details of construction vehicle access, routing and the duration of the construction programme to be provided in a Construction Traffic Management Plan (CTMP). It noted that the cumulative impact with HS2 traffic should be assessed. The advice accepted that there would be minimal traffic associated with the operational of the BESS.

Public Consultation

The public has also been consulted on the proposals. This included:

- 1 A meeting with East Claydon Parish Council on 11th October 2024 to introduce the project team and gather feedback on the proposed strategy to engage the local community;
- 2 A consultation leaflet issued on 3rd March 2025 to 1,717 local addresses including in East Claydon, Verney Junction, Granborough and the western side of Winslow. Letters have also been sent to local stakeholders. Information was provided about the

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proposals, the project website and public exhibition, and the ways to contact Statkraft and provide comments;

- 3 Two newspaper adverts about the public consultation and exhibition event placed in the Bucks Herald on 12th and 19th March 2025, and an advertisement placed in the March edition of Claydon's Parish newsletter. A radio advertisement was also broadcast on Bucks Radio between 5th and 19th March 2025;
- 4 A public exhibition hosted by Statkraft and other members of the project team on Wednesday 19th March 2025 at the East and Botolph Claydon Village Hall. There were two sessions: a preview for invited stakeholders from 2pm to 3pm and then a general public session from 3pm to 8pm. The event was attended by 77 people. They were given the opportunity to submit feedback by completing a survey at the event, via the website or by emailing or phoning Statkraft directly; and
- 5 A dedicated project website has also been created and will continue to provide updates during the application process. This includes a digital version of the public exhibition boards and ways for people to get in contact to provide feedback.
- 2.33 Further details are provided in the accompanying Statement of Community Involvement.
- 2.34 As exemplified above, a range of consultation methods have been used to engage various groups and individuals about the proposal during the pre-application phase of the project. The process was designed to consult and empower political, technical and community stakeholders, as well as members of the local community, and ensure a wide audience was made aware of the proposal and were provided with the opportunity to provide feedback via a range of methods. The pre-application feedback from those consulted has been very useful and been considered in finalising the application information.
- 2.35 Statkraft recognises that the planning application will be subject to a period of statutory consultation on which further public and statutory consultation feedback will be received. Statkraft will monitor this process closely and work with the Council to address any points raised. Statkraft will also continue to keep the local community informed of the progress with the scheme.

3.0 Site and Context

The Site

- The application site ('the Site') comprises agricultural land and has a total area of approximately 45.3ha, including the cable connection route. It is located within the Aylesbury Vale area of Buckinghamshire, approximately 120m north-west of the National Grid East Claydon substation, and 650m north-east of East Claydon Village.
- 3.2 The Site is bound to the north by vegetation at the natural field boundary, and to the south by East Claydon Road. The south-western corner of the Site extends across East Claydon Road a short distance to accommodate the route of the proposed cable connection. The eastern Site boundary runs through agricultural fields adjacent to the Claydon Brook, before cutting in to run alongside the disused railway to meet East Claydon Road. The western Site boundary follows the path of the overhead electricity line, before cutting in and heading south towards East Claydon Road.
- 3.3 The Site is arable fields, separated by landscape planting, trees and hedgerows around their perimeters. There is denser vegetation including hedgerows and treelines along the route of the disused railway track, which runs north-south through the Site. The route of the overhead electricity line runs north-west to south-east through the Site, connecting to the National Grid East Claydon substation south of East Claydon Road. There is one pylon located within the Site boundary, situated along the edge of the disused railway access track.
- 3.4 The Site is relatively flat with linear ditches located along sections of existing field boundaries at the north, centre, and within the southern portion of the Site. It falls from a high point of approximately 95.1mAOD at the southeast corner of the Site, to a low point of approximately 85mAOD at the northeast corner.
- 3.5 Existing access to the Site is via East Claydon Road along the route of the disused railway which forms a track through the Site. From East Claydon Road there is access to the A413 via Winslow, linking to Aylesbury, Buckingham, and connections to the M40 and M1.



Figure 3.1 Viewpoints looking across the site (see below image captions for fuller descripton)

Internal Site Context Viewpoint 1 - View looking west towards Monkomb Farm, from within the Site, across the south west portion of the Site. The improved grassland of the south west field parcel is prominent in the foreground of this view. Views out of the Site include the rising land towards Monkomb Farm to the west of the Site. A line of electricity pylons, beyond the Site is visible centrally. The tree lined former railway line obscures views to the east.



Internal Site Context Viewpoint 3 - View looking east towards Winslow, from adjacent to the Site, across the north west portion of the Site. The improved grassland of the north west field parcel is prominent in the foreground of this view. Views out of the Site include the Monkomb Farm complex to the east of the Site. A line of electricity pylons, within and beyond the Site is visible centrally. The tree lined former railway line is also visible centrally. Source: Urban Green LVIA (April 2025)

- 3.6 The Site is not in, or in proximity to, the Green Belt, Chilterns Area of Outstanding Natural Beauty or any designated sensitive areas for nature conservation (e.g. Special Areas of Conservation, Special Protection Areas or Sites of Special Scientific Interest).
- 3.7 The Environment Agency (EA) Flood Map for Planning ^{Ref 4} identifies the Site within Flood Zone 1 (less than 0.1% annual probability of river or sea flooding).
- 3.8 Natural England's Provisional Agricultural Land Classification (ALC) map (Appendix 1) identifies part of the western area of the Site as Grade 3 ('Good to moderate' quality), forming the eastern edge of a larger area of Grade 3 land that extends further to the south and west. The remainder of the Site is identified as Grade 4 ('Poor quality'). The ALC report accompanying the application confirms that the land is Grade 3b ('moderate quality').
- 3.9 The eastern part of the Site falls within a Minerals Safeguarding Area (MSA) for Alluvium (clay, silt, sand, and gravel), as defined within the Buckinghamshire Minerals and Waste Local Plan (July 2019).
- 3.10 The Site is located within National Character Area: 108 Upper Thames Clay Vales. At the district level, the Site and the immediate surrounding area is located within LCA 5.6 Claydon Valley (LCT 5) as defined in the Aylesbury Vale Landscape Character Assessment (2008). LCT5 is described as having a strong agricultural character with very small blocks of woodland and variable tree cover in hedgerows. The pylons and overhead lines associated with the East Claydon substation are described as being visible and having a significant visual impact.

The Surroundings

- 3.11 Figure 3.2 below identifies the general location of the Site and features in its surroundings, as described in this section.
- 3.12 The Site forms a part of a wider swathe of lowland agricultural land between Winslow and East Claydon either side of Claydon Brook.
- 3.13 The nearest settlement is East Claydon, a village located approximately 700m to the southwest of the Site. Verney Junction, a small hamlet, is located approximately 700m to the northwest of the Site, and the town of Winslow is approximately 1.5km to the northeast. Immediately south of the Site, beyond East Claydon Road, is a single residential dwelling, located off Winslow Road and adjacent to the National Grid East Claydon substation.
- 3.14 Immediately north of the Site is further agricultural land, with Verney Road, a minor road, running approximately 500m to the north of the Site from Winslow to Verney Junction. The route of the East West Railway line runs 600m to the north of the Site. This rail line is designated for Phase 2 of Network Rail's East West Rail project, connecting Cambridge and Oxford.
- 3.15 An ordinary watercourse flows beyond the northern boundary of the site towards Claydon Brook to the east of the Site.
- 3.16 The surroundings are predominantly characterised by agricultural fields. There is a number of farms and small businesses surrounding the Site.



Figure 3.2 General Location of Site and Surroundings

Source: Google Earth, Lichfields' Annotations, Site Boundary Edged Red

- 3.17 Monkomb Farm, comprising agricultural and residential buildings, is located approximately 250m west of the Site boundary. Tuckey Farm, including agricultural buildings and a fishery (G.Neal Fisheries) to the north of the farm, is approximately 360m east of the Site, beyond Claydon Brook.
- 3.18 There is an area of woodland adjacent to the northern boundary of the Site, to the east of the disused railway line, which is designated as deciduous woodland under the Priority Habitat Inventory.
- There are no Public Rights of Way within the Site. Public footpaths 3A/1 and 3/1 connect East Claydon Road with the wider landscape to the south of the Site. Footpath 1/1, approximately 450m to the east of the Site, connects East Claydon Road with the wider footpath network to the northeast of the Site. Bridleway 2/1, located approximately 200m to the west of the Site at its closest point, connects East Claydon with Verney Road to the north.
- 3.20 The closest designated wildlife site is a non-statutory Biological Notification Site called "Grassland near Addington" located 475m due north. The closest statutory designated wildlife site is Sheephouse Wood Site of Special Scientific Interest (SSSI) located 4.5 km to the south-west. Finemere Wood SSSI occurs 4.6 km to the south-west; and Pilch Fields SSSI is located 4.8 km to the north. All three SSSIs have outer development impact risk zones (IRZs) that overlap the Site.
- 3.21 In terms of heritage, there are no listed buildings within the Site. The nearest designated heritage asset is the Grade II listed Tuckey Farmhouse approximately 420m east of the Site.

Within East Claydon Village there is a group of 11 listed buildings, including the Grade II* Church of St Mary. Further to the west (approximately 2km) and southwest (approximately 1.5km) lies Middle Claydon and Botolph Claydon Conservation Areas, respectively. Further northeast (2.5km away) is Winslow Conservation Area.

3.22 The Grade II Registered Park and Garden, Claydon Park, is located approximately 1.9km east of the Site. Southwest of Padbury, approximately 4.4km northwest of the Site, is a Scheduled Monument – Norbury: a slight univallate hillfort.

Planning History and Cumulative Development

- 3.23 The Council's online planning register shows that there have been no planning applications submitted at the site in recent years. A couple of previous applications were approved relating to the installation of power lines and ancillary development in 2016 and 2017 (Refs 16/03115/ACL and 16/04025/APP respectively).
- 3.24 The ES considers the cumulative effects of the proposed development with other proposed developments in the area. The complete list of potential schemes is set out below.

	Site Address	Location in relation to the Proposed Development	LPA Planning Reference	Description of Development	Current Status
1	Tuckey Solar Farm: Tuckey Farm, East Claydon Road, Winslow, Buckinghamshire	Located c.20m east of the Site	19/00983/APP and 21/04255/APP	Ground mounted solar farm (25MW), ancillary infrastructure and associated works including the diversion of PROW	Application approved 29/04/21 Construction anticipated 2025, due to be operational in 2026.
2	Rookery Farm BESS: Rookery Farm, Granborough Buckinghamshire MK18 3NJ	Located c. 750m southeast of the Site	23/03875/APP	Development of a 500MW BESS by Statera, connected to the National Grid	Refused 20/12/24. Appeal lodged.
3	Fox Covert Solar Farm: Land to the East of Fox Covert Great Horwood Buckinghamshire	Northeast of Addington, c.2.6km northeast of the Site	20/02582/APP	Construction of a 22MW solar farm	Not yet constructed. Approved 1/06/21
4	Wings Solar Farm: Wings Farm, Marston Road GranboroughMK18 3JX	Southwest of Granborough, c. 2.4km south of the Site	23/01939/SO	EIA Screening Opinion for a proposed 49.9MW solar farm with associated works	EIA screening opinion issued 11/08/23 (EIA not required). No planning application submitted.
5	Rosefield Solar Farm: Adison Road, North of Calvert, Buckinghamshire.	Parcel 3 borders the East Claydon Substation, located c. 400m south of the Site. Main site is c.1.8km southwest of the Site.	NSIP - Rosefield Solar Farm	Solar generating station with a gross output of over 50 MW.	Pre-application stage, due to be submitted 2026. Scoping report Nov 2023, SoS adopted its scoping opinion 21/12/23.

Table 3.1 Potential Cumulative Schemes for Assessment

6	East West Rail Line	The rail line will run 600m-725m north from the Site. Applicant's pre- application consultation shows proposed DCO limits running through the Site.	Will be progressed under the Development Consent Order (DCO) process	The Network Rail (East West Rail) (Bicester to Bedford Improvements) Order 2020	Pre-application consultation.
7	Old Brickyard Farm Great Horwood Road Winslow Buckinghamshire MK18 3LY	To the north of Winslow, approx. 2.2km northeast of the Site.	Outline: 19/03482/AOP	Erection of up to 120 dwellings with all matters reserved, public open space, landscaping and sustainable drainage system	Outline approved 31/08/2021. Construction not yet started. Reserved matters for up to 6 dwellings approved 29/04/24 (23/02064/ADP)
8	Land Off Great Horwood Road Winslow Buckinghamshire	To the north of Winslow, approx. 2.5km northeast of The Site.	22/02214/ADP Outline: 18/03422/AOP	Residential development of 198 dwellings. Original outline 215 dwellings.	Reserved matters application 24/00491/ADP and NMA 22/B2214/NON awaiting decision, validated 12/02/24.
9	Hogshaw Road BESS: Land To South Of Hogshaw Road Granborough Bucks	Located c. 2.2km southeast of the Site	24/03262/APP	99MW BESS with associated access, landscaping and ancillary works	Planning application validated 17/12/24. Determination targeted 18/03/25.

4.0 **Proposed Development**

4.1 This section of the report provides a statement describing the proposal, including issues of design and access with regard to matters of use, amount, layout, scale, appearance, landscaping and access.

Use

4.2 This application seeks full planning permission for:

"Construction of a Greener Grid Park comprising energy storage and grid balancing equipment and associated infrastructure including access, drainage, landscaping and other incidental works."

- 4.3 The BESS Facility will have a capacity of 500MW. It would store excess electricity generated off-site when intermittent renewable energy generation is high, but demand is low, and release it to the National Grid network when renewable energy assets are not generating, via the new replacement East Claydon substation, at times of high demand. In doing so, it will provide a reserve power supply to the local electricity grid and in a wider context will enable further renewable energy generation to deploy onto the grid. It would operate for short periods of time to meet local power demand, and there will typically be long periods between operating times when the BESS is not in use. It would also act as a fall-back energy source at times when sources of renewable energy and the grid are reduced or do not generate sufficient electricity to meet demand.
- 4.4 The BESS battery units will connect to an inverter/transformer skid. The inverters convert direct current (DC) stored in the batteries to alternating current (AC) for grid use and convert AC from the grid to DC to charge the batteries. The battery units are fitted with inbuilt ventilation and fire suppression systems to ensure that the equipment does not overheat. A metering substation compound is proposed including a 400kV substation and a transformer yard, which change the operating voltage when transferring energy to or from the grid.
- 4.5 The synchronous compensators are DC-excited synchronous motors, whose shaft is not connected to anything but spins freely. Their primary purpose is to adjust conditions on the transmission grid, including to either dynamically absorb or supply reactive power as needed to adjust the grid's voltage, or to improve power factor. After the synchronous compensators are synchronised with the network they behave like synchronous motors with no load, providing short-circuit power to the transmission network. They also provide the necessary inertia for the power grid by means of their rotating mass and during emergencies or contingencies the synchronous compensators can provide a significantly higher rating for a short time. They are not generators of power and there is no combustion in a synchronous compensator, no emissions including carbon emissions, and no storage of power on-site (this is the role of the BESS, hence the two technologies complement each other).

Amount and Scale

- 4.6 The total area of the application site is circa 45.3ha, including the cable connection route. The Greener Grid Park main compound area and mini substation (the developed areas) would occupy 8.6ha area.
- 4.7 The BESS component would comprise 4 quadrants of 125MW, with each quadrant consisting of modular battery energy storage units, inverter and transformers. The BESS Facility will include the elements listed below:
 - 1 Up to 144 battery block units each with inverter skids. Approximately 36 battery block units would be located within each quadrant, and each row of battery block units would be a maximum of 30.9m L x 5m W and 4.5m H. The units will be of a recessive colour, likely to be olive green;
 - 1 metering substation compound, comprising a 400kV substation and a transformer yard (61m (W) x 74.5m (L)), containing 2no. 400kV/33kV transformers (8.4m (W) x 12.6m (L)) x 12.5m (H));
 - 3 Mini substation south of the main BESS compound, including two transformers (6.5m high) and command and LV room (47 m L x 45 m W and 6.2 m H);
 - 4 12no. air-cored reactors (1.5m D x 1.67m H);
 - 5 4no. emergency diesel generators (4.37m L x 1.6m W x 3.5m H);
 - 6 2no. coolers (11.68m L x 2.4m W x 2.7m H);
 - 7 4no. control containers (12.2 mL x 2.5m W and 2.85m H);
 - 8 2no. switchgear rooms (25.11m L x 6.24m W x 6.25m H);
 - 9 2no. control & metering rooms (14m L x 4.86m W x 6.25m H);
 - 10 2no. store buildings (6.0m L x 2.4m W and 2.6m H);
 - 11 2no. comms & LV rooms (12.16m L x 5.63m W and 6.25m in H);
 - 12 2no. welfare and office buildings (9.75m L x 3.05m W and 2.73m H);
 - 13 1no. operations compound (14.1m L x 3.7m W x 5.55m H);
 - 14 Internal access roads and 13no. car parking spaces for maintenance personnel;
 - 15 Underground water tanks (13 mL x 2.5 m W) and hydrants as part of the fire protection system;
 - 16 Lighting and CCTV masts (6m H);
 - 17 Drainage works and landscaping;
 - 18 Noise attenuation fence (4m H) and bund (5m H);
 - 19 Palisade perimeter and high voltage compound fencing (at a standard 3.4m H) to secure the Site, and
 - 20 Livestock fence outside this (1.1m H).
- 21 The four synchronous compensators each with a 'fly wheel' and associated equipment will be housed in two buildings south of the two transformers, in the central main compound.

The dimensions of each of the buildings are: $24m L \times 16m W \times 7m H$ providing a total footprint area of 329.6 sq.m (GIA).

Layout

- 4.8 The layout and design of the Greener Grid Park components is determined by the function of the equipment necessary to efficiently operate the facility and safety requirements.
- 4.9 The proposed layout plan (enclosed, below) has been developed to meet the National Fire Chief Council's (NFCC) guidance for BESS (2023) in line with industry best practice, guidance and appropriate regulation. It has also been discussed with Buckinghamshire Fire and Rescue Service (BFRS) who have raised no issues. Further details of the assessment of fire safety are provided in in Section 6.0.
- 4.10 The batteries are proposed to be positioned into four quadrants each containing 36 battery block units and inverters. Two battery quadrants are proposed either side of the central metering substation compound and transformer yard, where the synchronous compensators are also proposed.
- 4.11 On the southern part of the substation compound are proposed various buildings integral to the operation of the Green Grid Park, including the switchgear rooms, control and metering rooms, storage buildings comms and LV rooms and the welfare and office building.
- 4.12 A 'mini' substation is proposed south of the main compound including two transformers and a command and LV room.
- 4.13 The internal access roads have been designed so that all vehicles can park and turn within the main compound area, entering and exiting the facility in a forward gear, ensuring a safe and efficient use when vehicles enter from and exit to the local road network.

Figure 4.1 Proposed Site Layout



- BESS technology and its design is rapidly evolving. The Proposed Development has therefore built in flexibility relating to the battery units and inverters proposed, so that Statkraft has the flexibility to select the appropriate battery storage technology that aligns with detailed design and procurement stages that typically occur post planning permission.
- 4.15 To achieve this, permission is sought for maximum design parameters for the proposed four battery quadrant areas on the Site (shown as the green cross hatched boxes in Figure 4.1 above and on the drawings submitted for approval 'STA008-PL-03B and 'STA008-PL-04B), adopting the principles of the 'Rochdale Envelope' for the purposes of the environmental assessment. The flexible elements within the four battery quadrants relate to the layout and design of the proposed battery block units and invertor skids. The maximum design parameters (quantum, height, row length and width) assessed in the application are

those described in paragraph 4.7(1) above and shown on drawing 'STA008-SD-01' 'Battery Block Plan', submitted for approval.

- 4.16 The application has assessed a worst case scenario in relation to the battery block units and invertor skids, and if the details of these elements are brought forward in time within the parameters defined, the impacts must be assumed to be no greater than that identified within this application, including the ES.
- 4.17 An Indicative Detailed Operational Layout Plan (Ref: STA008-PL-01B and STA008-PL-02B) has been developed to support the EIA, and is included at Appendix C2 of the ES. This is based on the Proposed Layout Plans submitted for approval, and shows one way in which the detailed layout of the four battery quadrant areas could come forward.
- 4.18 Design details are provided in the application for all other components of the proposed Greener Grid Park.

Appearance

- 4.19 This is a bespoke development designed by the applicant and optimised to ensure the facility functions and responds effectively to the demands placed on it by the grid network, and meets relevant operational safety requirements. Whilst this is a key priority, good design and aesthetics have been considered, adopting an architectural principal of simplicity and functionality, with clean lines and appropriate cladding.
- 4.20 The external surfaces of the main development components would provide muted finishes. The battery containers will be finished in olive green to help blend them with the landscape. The synchronous compensator buildings will have a pre-galvanised powder coated steel portal framed finished with olive green corrugated cladding (RAL 7009). The palisade fence will be finished in a suitable colour to be agreed with the Council.
- 4.21 The proposed development includes sensitively designed, native planting to help integrate it into the landscape and ensure any associated visual impacts are minimised.
- 4.22 There is significant energy infrastructure in the area associated with East Claydon substation adjacent to the application site that is visible from the surrounding areas and form part of the prevailing landscape character. This context is relevant to the assessment of the proposal in terms of its visual effects and appearance.



Figure 4.2 3D aerial visual of an indicative site layout (at Year 10) looking south-west across the Site

Source: ArcMedia

Access

- 4.23 During operation, the Proposed Development would be accessed using the existing access from East Claydon Road, which would be extended northwards to the proposed Greener Grid Park compound, along the disused railway track. This existing access track will be the subject of minor works and laying of consolidated material to ensure it is suitable for operational traffic. The access junction onto East Claydon Road will be upgraded to achieve the required visibility splays.
- 4.24 The operational access road will be 3.7m wide for its entire length, with two passing bays (each 6m wide) being provided on the east side of the vehicular access road, located approximately 82.5m and 489.5m north of the proposed upgraded junction with East Claydon Road.
- 4.25 The internal layout of the site has been designed to accommodate all vehicle types needed to serve the development. 13 car parking spaces in the main compound are proposed for maintenance and inspection personnel.
- 4.26 A temporary construction vehicular access track is proposed on the north side of East Claydon Road approximately 260m west of the existing vehicular access to the East Claydon substation opposite an existing field access on the south side of the road. This will

comprise minor works and laying of consolidated material to ensure it is suitable for construction traffic. The construction access will be 6m wide along its entire length except on its bends which will be widened to between 8m to 8.8m. The track will be removed at the end of the construction period.

4.27 The site has good connections to the strategic road network. The construction vehicle route when leaving the site will consist of East Claydon Road, Granborough Road, Burleys Road, Vicarage Road, the A413 High Street, Buckingham Road and London Road and the A241 (east and west), and then onwards to the strategic highway network (Figure 4.3).



Figure 4.3 Proposed Construction Vehicle Route (to and from Site)

Source: CTMP (April 2025)

4.28 The Greener Grid Park will be operated remotely and will be unmanned on a day-to-day basis, so once operational there will be minimal vehicle movements relating to servicing and maintenance. These will be an average of 4 LGV two-way movements over a period of approximately a month. These movements will be made by a 7.5m box van outside of the AM and PM peak hours.

Landscaping and Drainage

4.29 The landscape proposals have been designed to respond to the existing landscape features and views of the site. The proposals include new native tree and shrub planting, species rich wildflower meadow, new wetland planting surrounding the proposed waterbodies and a landscaped bund to the south west corner of the BESS compound to provide additional screening (Figure 4.4). 4.30 The Flood Risk Assessment (FRA) indicates the site is in an area at low risk from all sources of flooding both now and in the future. A sequential approach has been applied to the design of the proposed development to ensure that battery storage, transmission and switch equipment are restricted to parts of the site within a very low or low risk of surface water flooding. It is proposed construction materials are used to raise the level of the temporary proposed construction access and permanent proposed operational access by a minimum of 300mm, ensuring these accesses are clear of the surface water flood level. Additionally, SuDS comprising attenuation basins with permanent pools of water and attenuation swales are proposed to the north and south of the main compound.



Figure 4.4 Landscape Proposals

Source: Urban Green

Site Levels

4.31 Earthworks will be required across the Site to create the proposed Site levels and development platforms, with consideration given to the drainage requirements. A cut and fill assessment has been completed.

- 4.32 The excess soil generated throughout the construction phase will be retained and reused onsite where possible, to create screen mounding, the landscaping bund and for planting within the landscaped and wildflower meadow areas.
- 4.33 Any surplus beyond these activities will be reused within the landowners landholding near to the Site.

Grid Connection

- 4.34 Statkraft has secured a grid offer from the network provider to connect to the national grid. The point of connection will be the new replacement East Claydon substation, in the field west of the current substation and south of East Claydon Road. The proposed BESS cable connection route is included in the application boundary; this would be 2.6km in length and comprise an underground cable constructed via open-cut trench and cover methodologies, with a Horizontal Directional Drill (HDD) proposed for the crossing of East Claydon Road.
- 4.35 National Grid is due to undertake a next phase of public consultation on its replacement substation proposals in Spring/Summer 2025, with a planning application targeted for Summer 2025. The substation application is entirely separate from this BESS application. National Grid has advised that the replacement substation is needed as the current substation, originally built in the 1960s, is coming towards the end of its useful life and does not have sufficient capacity to connect new customers to the national grid transmission network. It is anticipated that the replacement substation will be completed by 2030.

Security and Lighting

- 4.36 A 3.4m high palisade perimeter security fence is proposed around the site perimeter. Secure access gates will be provided at the entrances to the proposed substations and battery container areas.
- 4.37 A Closed Circuit Television ('CCTV') system will be installed externally around the Greener Grid Park compound to monitor the operation of the plant. The cameras (with lighting) will be mounted on poles at an overall height of 6m.
- 4.38 All lighting will be operated by Statkraft's central facilities building in Wales and will only be turned on during periods when inspection and maintenance teams are on-site during night time hours. As such, the significant majority of the time the site will be unlit.

Construction

- 4.39 The construction period is expected to last approximately 24 months and follow the below sequence of activities:
 - 1 Construction mobilisation;
 - 2 Soil stripping and foundation works and ducting;
 - 3 Access and drainage works alongside further foundation works and services ducting;
 - 4 Major equipment delivery and assembly;
 - 5 Construction of main buildings over installed equipment;

- 6 Installation of supporting equipment;
- 7 Testing and commissioning; and
- 8 Boundary fencing and landscaping.
- 4.40 The applicant seeks a permission that allows for development to commence within a five year period to align with the development of the new replacement East Claydon substation which will be the grid point of connection (POC) for the Greener Grid Park. Development of the new substation is expected to start in 2027 and complete in 2030.

Decommissioning and Length of Development

- 4.41 A temporary planning permission is sought for a 40-year period.
- 4.42 At the end of this period, the installed infrastructure will be fully decommissioned and the land restored. The decommissioning period is anticipated to take place over 2 years at the end of the 40 year life of the development, and will mirror the construction phase in reverse.

5.0 Planning Policy Context

- 5.1 Section 38(6) of the Planning and Compulsory Purchase Act 2004 states that if regard is to be had to the development plan for the purpose of any determination to be made under the Planning Acts, the determination must be made in accordance with the plan unless material considerations indicate otherwise.
- 5.2 This section outlines relevant planning policy and guidance that should be accounted for when determining the application. Further details are provided in Appendix 2.

Statutory Development Plan

- 5.3 The statutory Development Plan for the Aylesbury Vale area of Buckinghamshire comprises:
 - 1 Vale of Aylesbury Local Plan (VALP, September 2021);
 - 2 Buckinghamshire Minerals and Waste Local Plan 2016-2036 (July 2019); and
 - 3 Various Supplementary Planning Documents and other 'Material Considerations' Documents (including the Vale of Aylesbury Design SPD 2023, Biodiversity Net Gain SPD July 2022 and Aylesbury Vale Landscape Character Assessment May 2008).
- 5.4 The site is located outside of a defined settlement boundary and is not within a designated Neighbourhood Plan area. The policy documents also show that the site is:
 - 1 not affected by any designated sensitive areas for nature conservation interest (e.g. Special Area of Conservation, Special Protection Areas or Sites of Special Scientific Interest) within or in close proximity to the site;
 - 2 within Flood Zone 1 ('low' probability of flooding);
 - 3 Grade 3b ('moderate quality') agricultural land;
 - 4 not directly affected by any heritage assets;
 - 5 not affected by public footpaths or rights of way crossing it. There are some public rights of way in the wider surrounding area;
 - 6 partly within a Minerals Safeguarding Area for Alluvium (clay, silt, sand, and gravel); and
 - 7 adjacent to an area of woodland close to the northern boundary of the Site, to the east of the disused railway line, that is designated as deciduous woodland under the Priority Habitat Inventory.

Material Considerations

5.5

In addition to the Statutory Development Plan, there are a range of other documents that are considered relevant and material in determining the application. Notable amongst these include:

- 1 Electricity Distribution Networks: Creating Capacity for the Future (February 2025);
- 2 Clean Power 2030 Action Plan: A new era of clean electricity (December 2024);

- 3 National Grid ESO Future Energy Scenarios: ESO Pathways to Net Zero (2024);
- 4 Climate Change Committee Progress in reducing emissions 2024 Report to Parliament (2024);
- 5 Beyond 2030 A national blueprint for a decarbonised electricity system in Great Britain (2024);
- 6 Overarching National Policy Statement for Energy EN-1 (NPS EN-1) (Updated January 2024);
- 7 NPS for Renewable Energy Infrastructure EN-3 (NPS) (Updated January 2024);
- 8 The National Planning Policy Framework (NPPF) (2024);
- 9 The National Planning Practice Guidance (PPG) (2024);
- 10 Powering Up Britain (2023);
- 11 British Energy Security Strategy (2022);
- 12 Energy White Paper 'Powering our Net Zero Future' (December 2020);
- 13 National Infrastructure Strategy (2020);
- 14 Ten Point Plan for a Green Industrial Revolution (2020);
- 15 Smart Power National Infrastructure Commission (March 2016);
- 16 Buckinghamshire Council Biodiversity Net Gain Supplementary Planning Document (SPD, 2022);
- 17 Buckinghamshire Council Travel Plans: Guidelines for Developers (2022);
- 18 Vale of Aylesbury Design SPD (2023);
- 19 Aylesbury Vale Watercourse Advice Note (2022); and
- 20 Aylesbury Vale Landscape Character Assessment (2008).
- 5.6 The Winslow Neighbourhood Plan 2022-2033 was updated and adopted in March 2023. The application site is beyond the Neighbourhood Plan Area which borders the eastern edge of Claydon Brook. Whilst the policies of the Neighbourhood Plan do not directly apply to this application, policies 1 ('A Spatial Plan for the Town') 12 (Local Green Spaces') and 13 ('Environment and Heritage') have some relevance in terms of the wider site context.
- 5.7 Overall, it is concluded that the detailed assessment of the proposal against the VALP provided in this Statement, particularly with regard to landscape and visual effects, could be applied to the Winslow Neighbourhood Plan policies, with the Neighbourhood Plan policy requirements being met.

Emerging Policy

5.8 The Council is in the early phase of producing the Local Plan for Buckinghamshire which will provide the framework for development in the area up to 2040. The Council issued its draft vision and objectives for consultation in 2023. Given its early phase of development, with no draft plan currently produced, no material weight is afforded to it in the assessment of this application.
Key Planning Considerations

A review of relevant policies and other material considerations is provided in Appendix 2, and this detailed review is not repeated here.

- Based on this review, the key topics for consideration in determining this application are:
 - 1 Need and the principle of development;
 - 2 Design and landscape;
 - 3 Ecology, nature conservation and trees;
 - 4 Flood risk and drainage;
 - 5 Highway operation and safety;
 - 6 Noise;

5.9

5.10

- 7 Heritage;
- 8 Minerals safeguarding; and
- 9 Other environmental and safety considerations: agricultural land quality, fire safety, air quality and contamination.

^{5.11} The next section considers these key planning topics, referencing policies of the statutory development plans and other material considerations as appropriate.

6.0 Key Planning Considerations

6.1 In accordance with Section 38(6) of the Planning and Compulsory Purchase Act 2004, this section considers the acceptability of the proposed development against the NPPF, the statutory development plan and other material considerations.

Topic 1: Need and the principle of development

(a) National policy context

- 6.2 Great Britain's electricity system is undergoing an ambitious and vital transformation to tackle climate change.
- 6.3 It is clear that battery storage deployment is a central component of the Government's sustainable energy strategy, with industry and government being expected to work in partnership and at pace to deliver a decarbonised grid by 2030 and net zero by 2050.
- 6.4 The NPPF sets out the policy support for renewable and low carbon energy developments. Paragraph 168(a) states that "When determining planning applications for all forms of renewable and low carbon energy developments and their associated infrastructure, local planning authorities should: a) **not require applicants to demonstrate the overall need for renewable or low carbon energy** and **give significant weight to the benefits** associated with renewable and low carbon energy generation and the proposal's contribution to a net zero future ..."
- 6.5 The PPG adds further detail, stating that energy from renewable and low carbon technologies will help to make sure the UK has a secure energy supply, reduces greenhouse gas emissions to slow down climate change and stimulates investment in new jobs and businesses. Regarding BESS, it states that, "*Electricity storage can enable us to use energy more flexibly and de-carbonise our energy system cost-effectively for example, by helping to balance the system at lower cost, maximising the usable output from intermittent low carbon generation (e.g. solar and wind), and deferring or avoiding the need for costly network upgrades and new generation capacity." (Paragraph: 032 Reference ID: 5-032-20230814)*
- 6.6 The Government's position on energy is also set out in the Overarching National Policy Statement for Energy (EN-1), which requires management of the risks of security of energy supply by ensuring sufficient electricity capacity to meet demand at all times, which it notes will only be achieved by a diverse mix of technologies and supply routes. Battery storage is noted as having, "...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."
- 6.7 There is a wide suite of other national government policy and guidance documents that explain the imperative for upgrading the energy generation and transmission network to deliver the country's clean energy transformation. These are summarised earlier in Section 2.0 and in Appendix 2 (the document list is not exhaustive and is provided to demonstrate the considerable support), and are directly relevant (and material considerations) in assessing the principle of the development and policy need. The key points raised in the documents include:

- 1 Whilst renewable energy generation is increasing, the UK still heavily relies on energy from fossil fuels (represented 31.5% of the energy mix in 2024⁹);
- 2 The consequences of failing to meet changing patterns of energy supply and demand have become clear at transmission level, with network connection dates being pushed out significantly;
- 3 The transition to net zero will make the energy system increasingly dependent on electricity, with demand for electricity expected to increase by around 50% by 2035 and to double by 2050;
- 4 A decisive, countrywide effort is needed over the coming years to upgrade the network in a coordinated manner to create the capacity needed to transmit all the energy generated by renewables;
- 5 The energy industry needs to continue developing renewable energy generation and storage technologies to deliver these benefits;
- 6 Flexibility is crucial for the country's energy system and battery storage has a major role to help minimise investment in costly network expansion and provide additional capacity to the network;
- 7 There is a growing demand by network operators for a broad range of services such as management of inertia and fault levels on the grid. Grid-scale batteries are able to provide many such services, including grid stability, constraint management and balancing mechanisms; and
- 8 Up to 27GW of battery storage capacity is targeted by 2030, representing a five-fold increase on current levels.
- 6.8 There is also a growing demand by network operators for a broad range of services such as management of inertia and fault levels on the grid. Grid-scale batteries and synchronous compensators are able to provide many such services, including grid stability, constraint management and balancing mechanisms.
- 6.9 The key benefit of the proposed synchronous compensators is to help stabilise the electricity grid system as it becomes more reliant on renewable technology, generating 'inertia' that was previously provided by fossil fuel power stations and is not provided by renewable energy technology. Inertia helps the electricity system to run at the right frequency and thereby enable more renewable generation to operate and a stable energy system. Without enough of it, power outages can occur. It is therefore an essential element of energy infrastructure that is being developed alongside the growth in renewable energy generation.
- 6.10 Overall, it is clear that battery storage is a central component to the Government's sustainable energy strategy, with industry and government being expected to work in partnership and at pace to ensure the clean energy transformation is delivered. Synchronous compensators also have a crucial role to help stabilise the electricity grid system as it becomes more reliant on renewable technology.

⁹ Energy Trends UK, October to December 2024, Statistical Release 27 March 2025, Department for Energy & Net Zero

(b) Local policy context and principle of development

- 6.11 The national policy position is carried forward at the local policy level.
- 6.12 VALP Policy C3 supports renewable energy in principle, subject to addressing the environmental and amenity considerations listed in the policy (criteria a to g).
- 6.13 Whilst it is acknowledged that the proposed BESS does not constitute a source of renewable energy generation (it does not generate energy), its direct purpose is to facilitate renewable energy generation, as well as helping with grid stability alongside the proposed synchronous compensators. This makes it an essential element of the energy infrastructure mix in the region and local area, to be delivered alongside the growth in renewable energy generation and will help to enable this growth. The proposed development therefore aligns with the key aim of Policy C3 and should benefit from its support where the criteria listed in the policy are met.
- 6.14 Regarding these criteria, the site is a considerable distance from the Green Belt and therefore no impacts on Green Belt openness are anticipated (criteria d is therefore met / not applicable). Similarly, given the nature of the proposed Greener Grid Park, no impacts are envisaged on aviation activities (criteria e is therefore met / not applicable).
- 6.15 Parts h to r of Policy C3 are also not considered relevant to this proposal on the basis they relate to other forms of developments/uses where renewable energy and energy efficiencies form a component of the development (e.g. part of a residential or mixed use development), whereas this application is for energy infrastructure only.
- 6.16 The relevant policy criteria (a to c and f to g) are assessed below in this section and demonstrate compliance with Policy C3.

Site Location

- 6.17 The site is located beyond a settlement boundary and in policy terms is therefore considered countryside land, with VALP Policies S1 (Sustainable development for Aylesbury Vale) and S2 (Spatial strategy for growth) applying.
- 6.18 Policy S1 requires new development to contribute to meeting the vision and strategic objectives of Aylesbury Vale and the sustainable development principles of the NPPF. The spatial strategy for growth is set out in Policy S2, which includes provision for at least 28,600 new homes, development of at least 27 hectares of employment land and over 36,000 sqm of retail floorspace along with "associated infrastructure to support the above."
- 6.19 The VALP's vision for growth and the housing and commercial delivery targets of Policy S2 is based on creating a "*thriving*" and "*vibrant place to live, work and visit*" (para 2.4 of the VALP). However, Policy S2 is clear that this development needs to be delivered alongside key infrastructure. Without it, it risks creating unsustainable development that would undermine the VALP and core principles of the NPPF. Strategic growth locally and nationally requires a reliable and efficient energy network with renewable energy at its core to deliver the country's net zero ambitions, a strong and competitive economy and to power the future of homes and industry. The proposed Greener Grid Park will contribute to this aim and therefore accords with VALP Policies S1 and S2.

- 6.20 No other allocations or designations directly affect the proposal site.
- 6.21 The proposed Greener Grid Park has been strategically located near to East Claydon substation - National Grid has confirmed that the replacement substation will be developed in the adjacent field directly west of the current substation. A key site selection requirement for BESS and synchronous compensator development is proximity to the national grid point of connection (POC) from which it takes and stores energy and then releases energy back into, as well as providing stability services. With transmission losses associated with the 'transport' of electricity, the closer the location to the substation, the more efficient and effective its contribution to satisfying local demand. The same principle applies to the synchronous compensators, with a greater distance from the substation reducing the effectiveness of the technology. The close proximity will also avoid the need for lengthy transmission cables, significantly reducing construction-related disruption.
- 6.22 NESO has identified an issue with voltage instability in the Home Counties and an associated need for additional voltage support and grid balancing to address the network risks of power fluctuations and disruptions in supply. East Claydon is strategically located on the transmission grid, in the East of England Region but is also electrically closely connected to the London Region, the South Central Region and West Midlands Region. This means it provides an important role in managing several regions of the grid and is identified as a critical high-voltage substation. This makes it an ideal point for reinforcing the grid. The area is experiencing increasing connections of renewable energy generators, which require enhanced voltage regulation. This has led National Grid to develop the proposals for the replacement East Claydon substation, to provide more electrical capacity to accept new connections.
- 6.23 The new substation will be located next to the current one, to serve development in the area, ensure a much shorter connection and reduce the amount of infrastructure required (including overhead lines), and enable a smooth transition when the existing substation is switched off and capacity is transferred over. While the replacement East Claydon substation will increase capacity, it will not provide the real-time voltage and frequency response needed to manage fluctuations. Statkraft's East Claydon Greener Grid Park will export reactive power from the substation in periods of high flows to support low network voltages; and import reactive power during low demand periods to manage high voltages. This will contribute to reducing system operating costs (and therefore impacts on consumer bills) and CO2 emissions by providing an alternative to relying on gas power stations.
- 6.24 Another consideration for selecting the site is that it must also have adequate space for the batteries, synchronous compensators and ancillary equipment. Sites within built up areas or town centre locations are rarely considered appropriate due to lack of available land. As such, it is necessary to find sites which are more isolated, including countryside locations with relatively flat ground levels. The application site is available and, by virtue of the lack of ecological value and distance from sensitive receptors, is considered suitable for the proposed development.
- 6.25 The ES (Chapter H) assesses the impacts of the Proposed Development on climate change. It concludes that overall, there will be a Beneficial effect on local and UK carbon budgets by curtailing a total of 8.8 mmtCO₂e¹⁰ emissions over its 40 year lifetime. In doing so, it will

¹⁰ Million Metric Tons of Carbon Dioxide Equivalent

contribute to local and national policy ambitions, by supporting the decarbonisation of the grid, allowing for more sustainable use of renewable energies, and reducing the dependence on fossil fuels.

- 6.26 The (i) national and local policy support for BESS development, subject to compliance with other policies in the local plan, and the significant contribution of the project to reducing carbon emissions and facilitating the transition to more renewable sources of energy, (ii) the availability of the site, and (iii) its proximity to where the new replacement East Claydon substation is planned and that it will connect to should be given significant weight in the Council's assessment of the application, as required by the NPPF.
- 6.27 In this context, and on the basis that the development would not lead to any material adverse environmental impacts as demonstrated below, it is concluded that the requirements of VALP Policies S1, S2 and C3 are met, as are the principles set out in the NPPF Paragraph 168(a) and NPS EN-1.

Topic 2: Design and landscape

- 6.28 Good design that is sympathetic to local character and landscape setting whilst optimising the potential of sites is encouraged by the NPPF (Paragraph 135c). The VALP policies set out various principles to promote good design that respects and complements the physical characteristics and natural qualities of the site and its surrounding, alongside protecting the amenity of residents (Policies BE2, BE3, BE4, NE1, NE2, NE4, NE8, C3 and C4). Further details are also provided in the Aylesbury Vale Design SPD (2022).
- 6.29 The Greener Grid Park is a bespoke development designed by Statkraft, optimised to ensure the facility functions and responds effectively to the demands placed on it by the grid network, and meets relevant operational safety requirements. Whilst these are key priorities, good design and aesthetics have been considered from the outset, adopting an architectural principal of simplicity and functionality, with clean lines and appropriate cladding. The built form within the Proposed Development will comprise materials, finishes and hues which are evident in the local landscape and are considered to be visually recessive.
- 6.30 The location of the built form within the Site has been landscape designed to minimise the existing visual envelope in views from the immediate, local, and wider landscape. This has meant a smaller area of land being developed (8.6ha) of the wider site (45.3ha), with the significant majority left undeveloped and enhanced for landscaping and biodiversity, alongside continued farming use.
- 6.31 The design evolution has been an iterative process over the past 12 months. This has been developed to respond to the key environmental constraints and to try to blend the infrastructure within its landscape setting, also noting its close physical relationship with East Claydon substation and the associated energy infrastructure that is part of the landscape (pylons, overhead power lines etc.). Design amendments have included:
 - 1 Adjusting the position of the battery units, internal access road and attenuation swales in the main compound to retain a 10m ecological buffer to the top of the watercourse that flows from the northern boundary of the site towards Claydon Brook;

- 2 A landscaped 5m bund introduced on the south western corner of the Greener Grid Park compound to screen views of the Proposed Development from sensitive visual receptors to the west and also to provide further noise mitigation to these receptors;
- 3 The extent and alignment of the permanent access road upgrade and the number of passing places along its route has been adjusted from four to two, to minimise trees loss and encroachment into root protection areas following arboricultural and ecological assessment work;
- 4 A detailed grounds levels design has been completed to try and match the existing grounds levels where possible, and minimise levels changes and excavated materials, thereby avoiding having to export materials from the Site and reducing the adverse effects associated with the Proposed Development's embodied carbon; and
- 5 Developing a sequential approach to the design layout (including adapting to the EA Flood Map updates published in January 2025) to ensure that battery storage, transmission and switch equipment are restricted to parts of the site within a very low or low risk of surface water flooding.
- 6.32 The external surfaces of the main development components would provide muted finishes. The battery containers will be finished in olive green to help blend them with the landscape. Similarly, the synchronous compensator buildings will have a pre-galvanised powder coated steel portal framed finished with olive green corrugated cladding. The palisade fence will be finished in a suitable colour to be agreed with the Council.
- 6.33 The proposed development includes sensitively designed, native planting. This will help integrate the development into the landscape and reinforce the landscape character of the locality and of the surrounding landscape context, whilst also minimising the visual impacts of the built form. The key proposed landscape strategy includes:
 - 1 Setting development centrally within the northern field parcel, away from the more sensitive southern boundaries, providing buffers to the existing retained vegetation;
 - 2 Retaining existing woodland, tree groups and belts, individual trees and hedges within and adjacent to the boundaries of the Site wherever possible;
 - 3 Removal of a limited amount of existing mature vegetation to facilitate the development;
 - 4 New native tree and shrub planting of appropriate species characteristic of the local landscape to provide screening to the main Greener Grid Park compound and to strengthen the existing mature vegetation to the boundaries of the Site;
 - 5 The sowing of species rich wildflower meadow to the areas surrounding the compound to improve biodiversity;
 - 6 New wetland meadow planting surrounding the proposed waterbodies; and
 - 7 A landscaped bund to the south west corner of the BESS compound to provide additional screening.
- 6.34 The installation of lighting in certain areas is required to provide a safe and secure night time environment, whilst ensuring that the lighting design respects the setting of the surrounding area and minimises the effect on sensitive receptors where practicable. The

proposed detailed lighting design takes into account the surrounding sensitivities including those relating to ecological areas and the rural landscape, and is based on the use of low light, directional fittings. The lighting will be operated from Statkraft's central facilities building in Wales and will only be turned on when inspection and maintenance staff are onsite during night-time hours, meaning the site will be unlit the significant majority of the time.

- 6.35 There is significant energy infrastructure in the area associated with East Claydon substation adjacent to the application site that are visible from the surrounding areas and form part of the prevailing landscape character. This context is relevant to the assessment of the proposal in terms of its visual effects and appearance.
- 6.36 The ES (Chapter D) assesses the landscape and visual effects of the proposed development. The appended Landscape and Visual Impact Assessment (LVIA) provides a robust assessment based on field surveys undertaken in April, May and October 2024.
- 6.37 The ES identifies that the landscape character at the national and regional is considered to be of medium value, with a medium susceptibility and medium sensitivity to the proposed change. The same sensitivities are noted as applying at the Site and district level.
- 6.38 The ES and LVIA notes the following terms of operational effects:
 - 1 Minor Beneficial effects are anticipated in relation to vegetation within the Site;
 - 2 Moderate Adverse effects are anticipated to the existing land use and to the Site landscape character. The ES notes that these effects will be borne in an area that has an existing relationship with the energy infrastructure elements including the lines of pylons and East Claydon Substation within the wider landscape setting and will largely be offset by the new landscape scheme;
 - 3 Effects on the local and regional landscape character types and areas are anticipated to range from Minor Adverse to Negligible;
 - 4 Effects on local heritage assets are anticipated to be Negligible Adverse or Neutral;
 - 5 The proposed built form is located deep within the Site and views from the wider landscape surrounding the Site are limited. Visual effects in Year 1 of the operation are anticipated to range from Major - Moderate to Moderate Adverse for residents of the Monkomb Farm complex, Moderate Adverse to Minor Adverse for users of Bridleway BM ECL 2/ Minor Adverse to Negligible for residents of Station House and Minor to Negligible Adverse for users of East Claydon Road. The LVIA also assesses the effects at Year 10 of operation, after the landscaping and tree planting has matured. At this point, it concludes that the proposed landscaping features will have provided sufficient screening of the Proposed Development, reducing the effects on these receptors, with no significant visual effects anticipated. The ES assesses Years 1 and 10; it will be the case that the significance of any visual effects reduces in the intervening period between Year 1 and Year 10 as the landscape planting matures.
- 6.39 In terms of cumulative landscape and visual effects, the ES (Chapter J) notes that
 Cumulative Scheme 1 (Tuckey Solar Farm, see Figure 6.1 for reference), Cumulative Scheme
 5 (Rosefield Solar Farm), and Cumulative Scheme 6 (East West Rail Line) are located in
 closer proximity to the Site. The schemes are noted as having a visual relationship with the

Site and the ES advises that there are a number of locations where the Site and these schemes will be visible within the same view, however views are anticipated to be primarily to the existing mature vegetation and the proposed landscape scheme of the Site and the cumulative schemes. It is noted that limited views of the proposed built form within the Site and the above schemes may be possible therefore it is considered that the visual cumulative effects could range from Major – Moderate Adverse (Significant) to Moderate Adverse (Not Significant) for receptors in close proximity to the Site.

6.40 The ES assessment anticipates that cumulative effects on the landscape character are expected to arise as a result of Cumulative Schemes 1 (Tuckey Solar Farm), 2 (Rookery Farm), 5 (Rosefield Solar Farm) and 6 (East West Rail Line) being located within proximity of the Site and located wholly or partially within the same Local Character Area (LCA) (5.6 – Claydon Valley). The cumulative effects are considered to range from High to Medium magnitude resulting in a Major to Moderate Adverse (Significant) to Minor Adverse (Not Significant) effect. The high magnitude of effect on the local landscape is considered in the ES to be primarily a product of the extensive nature of Cumulative Scheme 5 (Rosefield Solar Farm) and the proximity to Cumulative Scheme 1 (Tuckey Solar Farm). It is also noted that intervisibility between the built form within the Site and Cumulative Scheme 5 is anticipated to be extremely limited.



Figure 6.1 Map of Cumulative Schemes

Source: Source: Based upon Ordnance Survey mapping with the permission of His Majesty's Stationery Office. © Crown Copyright reserved. Licence number 100017707. Lichfields Annotations.

- 6.41 The landscape and visual cumulative effects assessed in the ES are based on a worst-case scenario, including assessing plans and projects beyond those that are 'committed' in planning terms. Cumulative Scheme 5 (Rosefield Solar Farm) is an extensive site and the main contributor to the magnitude of potential change to the landscape character of the area. This scheme is currently at the pre-application stage of the Nationally Significant Infrastructure Projects (NSIP) process. It is unknown what the outcome of that process will be in terms of whether a Development Consent Order (DCO) will be granted and what changes the Rosefield Solar Farm scheme design may go through during the DCO process if it is brought forward for development. Notwithstanding, if it is developed in its current form, the above conclusions i.e. views anticipated to be primarily to the existing mature vegetation and the proposed landscape scheme of the Greener Grid Park and the Greener Grid Park and Rosefield Solar Farm are clearly material to the assessment of the Greener Grid Park proposal.
- 6.42 In summary, the LVIA concludes that the Site will, whilst wholly replacing portions of the landscape character at the Site level, sit within the existing retained landscape character at the local, regional and national level. It notes that whilst some negative adverse landscape and visual effects will arise from the proposed development, landscape and visual effects are largely limited to the Site and local level receptors only. It further notes that where adverse impacts have been identified these have been mitigated through the proposed landscape strategy, which seeks to soften the edge of the development and set built form back from away from sensitive boundaries. The LVIA adds that any anticipated effects are expected to reduce over time as planting matures.
- 6.43 The Greener Grid Park being a temporary development is also relevant to assessing the landscape effects. After 40 years, it would be decommissioned, removed and the land restored. The applicant is willing to accept a planning condition to this effect.
- 6.44 Overall, the design has been developed to meet its operating requirements whilst also being directed by the surrounding landscape context. A landscape strategy has been developed guided by local landscape management strategies, that will diversify the landscape structure within the Site and ensure the long term replacement and reinforcement of local green infrastructure networks, ensuring that the longevity and vigour of local vegetation is maintained within the Site. It is therefore considered that the proposed development will sit within the existing landscape character. It is also a temporary development, fully reversible and will be decommissioned and the site restored after 40 years.
- 6.45 Accordingly, it is considered that the proposed development complies with the NPPF (Paragraph 135c) and VALP Policies BE2, BE3, BE4, NE1, NE2, NE4, NE8, C3 and C4.

Topic 3: Ecology, nature conservation and trees

6.46 Proposals should minimise impacts on and provide net gains for biodiversity and recognise the wider benefits of trees, woodlands and other ecosystems (NPPF, Paragraph 187). VALP Policy NE1 ('Biodiversity and Geodiversity') sets out a range of matters to be considered when assessing development proposals including, inter alia, requiring ecology surveys to be undertaken and the results and recommendations to be included within applications, seeking a biodiversity net gain, and avoiding significant harm to biodiversity through appropriate design, mitigation and/or (as a last resort) compensation.

- 6.47 The ES (Chapter F) and the appended Ecology Report has been prepared by Applied Ecology. These confirm that none of the Site is designated as a statutory or non-statutory wildlife site. The closest designated wildlife site is noted as being a non-statutory Biological Notification Site called "*Grassland near Addington*" located 500m due north. The closest statutory designated wildlife site is Sheephouse Wood SSSI located 4.45 km to the southwest. The Ecology Report confirms that neither of these sites would be directly or indirectly adversely impacted by the proposed Greener Grid Park.
- 6.48 The assessment has been informed by a walkover survey in April 2024 and an extended Phase 1 habitat survey was completed in May 2024. The Ecology Report advises that the Site is dominated by arable and improved grassland habitats of low relative biodiversity and nature conservation value. It explains that the central plantation woodland belt along the side of the former rail line embankment - where the operational access is proposed provides a wildlife corridor function but is to be largely retained and protected as part of the development. Further, it notes that the development layout necessitates the permanent loss of a species poor hedgerow that adjoins to the eastern side of the central plantation woodland belt; a loss that is offset by the proposed landscape enhancements that include planting of native hedgerows.
- 6.49 In terms of protected species, the Ecology Report explains that the proposed development has the potential to result in the permanent displacement of up to three pairs of skylark from the Site because of the permanent loss of arable land, and the associated reduction in size and attractiveness to skylark of remaining arable land in the northern half of the Site. Further, it anticipates the temporary displacement of one pair of skylark from arable land in the southern half of the site where the temporary construction access track is proposed. The Report notes that the single section of hedgerow that is proposed to be removed is overgrazed along its base by sheep and is not important bird nesting habitat. All other hedges are to be retained and the development is not considered likely to adversely impact nesting yellowhammer.
- 6.50 The Ecology Report advises that the extensive planting and management of large areas of arable and improved grassland around the main Greener Grid Park compound as native wild flower meadow and native scrub and tree groups will provide a year round foraging resource for a range of specialist farmland bird species including yellow hammer, grey partridge and linnet, and should compensate for the predicted permanent loss of two to three pairs of skylark plots from the Site.
- 6.51 A four hole badger sett is noted in the Report as being present within the central former rail line embankment and occurs within 30m of proposed construction related activity and is therefore susceptible to disturbance during construction.
- 6.52 Three vantage point surveys of the Site were completed in 2024, corresponding with the spring, summer and autumn bat activity periods. The Ecology Report advises that the central plantation woodland belt that would be subject to minor habitat loss and fragmentation at its northern end and an adjoining hedgerow that would need to be removed in its entirety have both been shown to be used by a range of bat species. However, it notes that the majority of high value bat habitat within the study area namely field boundary hedgerows and the belt of plantation woodland along the former rail line embankment in the centre of the Site will be retained as part of the development, and the loss of plantation woodland and hedgerow represents only a minor loss of bat forage habitat

from the Site and a negligible loss of an individual bats core sustenance zone. Further, it concludes that significant adverse impacts on commuting bats resulting from the proposed removal of linear feature habitat are not predicted to occur as they are only used by low numbers of individual common species of bats for commuting.

- 6.53 The Ecology Report advises that there are no ponds or other standing waterbodies within the Site, and no off-site ponds or other waterbodies that have not been subject to previous Great Crested Newt (GCN) surveys occur within 250 m of the Site boundary. It notes that one pond occurs within 250 m of the study area boundary on private land to the east near Tuckey Farm and was subject to GCN presence/absence survey previously in 2018 when GCN were confirmed to be absent from it. This pond is separated from the Site by the Claydon Brook, which the Ecology Report identifies as a barrier to GCN dispersal between the pond and the Site.
- 6.54 Mitigation and enhancement measures recommended in the ES chapter and Ecology Report include:
 - 1 Provision of eight skylark nesting plots to be provided in retained arable land within the Site as a long-term compensation measure to ensure no loss of skylark numbers from the Site;
 - 2 Range of embedded construction mitigation to be delivered through a Construction Environmental Management Plan (CEMP) in accordance with the Framework CEMP included at Chapter C of the ES;
 - 3 Clearance of any vegetation and soil stripping should take place outside the bird breeding season, in the period September–February, or immediately after a check by an experienced ornithologist that verifies nesting bird absence from the Site;
 - 4 Subject to ongoing monitoring to confirm continued badger occupancy, the identified four hole badger sett should be subject to temporary closure under a Natural England badger sett closure licence in advance of construction commencing. The badger sett closure period is between July and November;
 - 5 Two barn owl nest boxes to be erected on suitable mature trees in retained field boundary habitats as a biodiversity enhancement measure on land to the west and east of the central former rail line corridor;
 - 6 Landscape and Ecological Management Plan (LEMP) or similar to be agreed (via planning condition) to monitor and manage newly planted habitats for the statutory 30 year period; and
 - 7 The use of artificial lighting at night during construction or operation of the development should be avoided or minimised to ensure that retained trees, hedgerows and boundary habitats are unilluminated to avoid disturbance to light sensitive bat species and other nocturnal wildlife.
- 6.55 The measures are accepted by the applicant and can be secured by planning condition(s).
- 6.56 The ES (Chapter F) concludes that the proposed development will result in the displacement of ground nesting farmland birds (skylark) from the Site as a result of the replacement of arable land with hard infrastructure and the associated reduction in the size and attractiveness of remaining adjoining arable land to skylark. However, it advises that

this adverse impact will be compensated by the provision of skylark nest plots in retained arable land within the wider Site such that there should be no loss of skylark numbers from the Site. With this mitigation, the ES concludes that the effects on this receptor are expected to reduce to Neutral and Not Significant, and no significant adverse residual ecological effects are predicted to occur on other receptors during construction.

- 6.57 During operation, the ES advises that significant adverse impacts on important ecological receptors are not predicted to occur because the effects are relatively benign and unlikely to result in significant disturbance to on-Site flora and fauna. Further, with the embedded primary mitigation (habitat creation) the ES confirms that the proposed development should deliver a significant Biodiversity Net Gain (BNG) uplift of 58.50% for habitat units and a +10.24% BNG uplift for hedgerow units which is considered to be a Minor Beneficial Effect on local habitats. This is significantly in excess of the minimum 10% BNG requirements of the Environment Act (2021) and should be weighted accordingly in the Council's assessment of the planning balance.
- 6.58 VALP Policy NE8 ('Trees, hedgerows and woodlands') requires development to seek to enhance and expand Aylesbury Vale's tree and woodland resource, and avoid significant adverse effects on the continued well-being of trees, hedgerows, veteran trees or woodland. Where loss is unavoidable, the policy requires this to be offset by replacement planting. The policy also requires developers to aspire to achieve a 10m (minimum 5m) natural buffer around retained and planted hedgerows (100m with a minimum 25m buffer around woodlands) for the benefit of wildlife, incorporating a dark corridor with no lighting.
- A Tree Survey and Impact Assessment accompanies the application and is based on a survey completed in April 2024. The Assessment explains that the scheme has been developed to minimise impacts on trees and hedges whilst retaining space for extensive new tree planting. It identifies that¹¹:
 - 1 Some breaks in hedgerows (number refs 67, 82 and 89) would be required to accommodate the proposed construction access – this impact is noted as minor given the overall length of the hedgerow and can be addressed by replanting once the temporary access is removed. The Assessment notes that breaks in hedgerows are commonplace in agricultural landscapes and would not materially detract from the benefits these hedges provide;
 - Proposed access tracks linking the eastern and western battery storage quadrants require the loss of a short section of tree belt 22 (including trees 36 and 37) and hedge 11 which border the former railway line that passes between the battery storage areas. The Assessment advises that these impacts are minimal and would not materially detract from the long tree-lined track that runs from East Claydon Road in the south to the site boundary in the north;
 - 3 The layout of the eastern battery storage quadrant requires hedge 56 to be removed. The Assessment advises that the lower vegetation of the hedge has been removed by livestock grazing resulting in a bottomless hedge with limited benefits. It is noted that the proposed replacement of the hedge with a diverse native hedge will offset the loss and result in a comparably better long-term contribution to the hedgerow network;

¹¹ Refer to Tree Protection Plan (Ref: 2291-KC-XX-YTREE-TPP01RevB) for tree and hedge number referencing

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- 4 Access to the compound areas requires the loss of two stems from number 26, 29 30 and a short section of hedgerow 11; and
- 5 The permanent access track upgrade has been designed to be within the footprint of the existing track, avoiding impacts to trees that run alongside the track. The exception is two passing bays alongside the eastern side of the maintenance track that require the loss of stems from the belt of trees that run alongside the track. The Assessment advises that this loss is barely perceptible against the backdrop of the retained tree belt and so results in no material loss nor impact on landscape character. To enable a revised entrance bellmouth, where the track meets the public road, the Assessment advises that it is necessary to remove three ash trees (number 10) that are suffering from Ash Dieback and whose loss is inevitable due to the disease.
- 6.60 In total, the Assessment concludes that 34 trees and 375 linear metres of hedge are proposed for removal to accommodate the proposals. However, it notes that this loss will be significantly offset by the proposed planting of 175 specimen native trees and circa 1,700 linear metres of retained and enhanced hedgerow.
- 6.61 The Assessment confirms that the proposed developed area is remote from the veteran tree (number 60) that lies towards the eastern boundary (the buffer zone is significantly in excess of Natural England guidance) and other trees, and can be delivered without impacting them. It advises that the minimum buffer distances around retained and planted hedgerows and around woodlands as required by Policy NE8 are met.
- 6.62 Overall, it considered that any impacts on protected species can be suitably mitigated. The retention of established trees and hedgerows on the site and the proposed landscaping proposals that strengthen the boundary planting and green infrastructure connections with surrounding areas will help achieve BNG. The requirements of the NPPF (Paragraph 187) and VALP Policies NE1 and NE8 are therefore met.

Topic 4: Flood risk and drainage

- 6.63 Planning policy at all levels requires new development to ensure that flood risk is not increased elsewhere and that major developments should seek to incorporate sustainable drainage systems (NPPF Paragraphs 181 and 182 and VALP Policy I4 'Flooding').
- 6.64 A Flood Risk and Drainage Strategy (FR&DS) accompanies the application. This explains that the site lies in within Flood Zone 1 ('low probability of flooding' i.e. less than 1 in 1,000 annual probability of river or sea flooding). It notes that parts of the Site are located within the low, medium and high risk surface water flood extent, mainly associated with the existing linear ditch/watercourse features that are present on the Site.
- 6.65 The FR&DS advises that infiltration will not be possible based on the soil sampling collected for the agricultural land classification survey. This shows that the soil structure (slowly permeable seasonally waterlogged clayey soils) will not empty water in the subsoil via infiltration.
- 6.66 Instead, the FRA&DS proposes the following drainage strategy:
 - 1 Construction materials would be used to raise the level of the proposed operational access by a minimum of 300mm, ensuring the access is clear of the surface water flood level. The same approach is proposed for the temporary construction access track;

- 2 The new surfacing of the proposed main compound and substation areas would finish a minimum of 150mm below the proposed buildings and equipment;
- 3 Components of the main compound area will need to discharge to an attenuation basin via an oil separator for treatment purposes (i.e. coolers, generators and transformers) so these will be situated on an impermeable platform (concrete hardstanding or similar) with a separate drainage connection to the oil separator;
- 4 SuDs will be provided. These will include attenuations basins and swales. Surface water runoff to the existing ordinary watercourse to the north of the Site will be restricted by three HydroBrake Flow Control Chambers that will control discharge to 34.40 l/s for the 100 year + 40% climate change critical rainfall event, which is the permitted Independent Drainage Board (IDB) discharge rate for the proposed permanent impermeable area of the site; and
- 5 The proposed main compound area will be a Type C No Infiltration Pervious Pavement comprising of a 25mm pervious surface layer and 375mm type 3 subbase that will provide approximately 4,692m³ attenuation storage. The proposed substation will be a Type C No Infiltration Pervious Pavement comprising of a 25mm pervious surface layer and 375mm type 3 subbase with 30% void ratio that will provide approximately 331m³ attenuation storage. The pervious pavements will connect to the main drainage network that discharges to the existing watercourse via flow controls to maximise the attenuation storage in the pervious pavement sub base during extreme rainfall events.
- 6.67 The FRA&DS explains that the ordinary watercourse that flows from the northern boundary of the site towards Claydon Brook assuming a 1m offset from boundary fenceline has been accounted for in the main compound area layout to ensure a minimum 10m ecological buffer zone is provided. Similarly, the on-site ditches have been accounted for in the substation and main compound area layout to ensure a minimum buffer zone is provided, in accordance with VALP Policy NE2.
- 6.68 In terms of surface water flooding, the FRA&DS confirms that this will not be a constraint on the site because the developed areas will either be outwith the surface water flood risk areas or, in the case of the proposed main compound area and the operational access, will be elevated above the surface water flood risk areas with an existing network of ditches; or, in the case of the proposed temporary construction access and East Claydon Road from both accesses towards the west, the flooding appears worse than it would actually be due to the presence of a culvert under the disused railway track in this location, and during the 40year lifetime of the development, Statkraft as the operator of the site will maintain the ditches and culvert associated with this location.
- 6.69 The FRA&DS advises that a sequential approach has been applied to the design of the proposed development to ensure that battery storage, transmission and switch equipment are restricted to parts of the site within a very low or low risk of surface water flooding. In terms of the sequential and exceptions test, the FRA&DS concludes that on the basis the FRA indicates the site lies within Flood Zone 1 i.e. land assessed as having less than a 0.1 per cent (1 in 1000) chance of river flooding occurring each year as defined in Government Guidance on Flood risk and coastal change and indicates a low risk of flooding from all sources both now and in the future, sequential and exception tests are indicated not to be required for the proposed development.

- 6.70 The FRA&DS confirms that foul water will be disposed of via a 'Port-a-loo' type facility and disposed of via a licensed waste carrier. During operation, the report advises that foul water discharge will be minimal and can be accommodated by an 8,000 litre holding tank that will be manually pumped out on a scheduled basis and disposed of by a licensed waste carrier.
- 6.71 The FRA&DS includes a fire water management plan in the unlikely event of an incident. This confirms that to address the NFCC guidance that BESS sites should be capable of delivering no less than 1,900 litres per minute for at least 2 hours, it is proposed that the last two attenuation basins prior to the two outfalls have an attenuation volume greater than 228m³, and the attenuation swales and basins have an impermeable liner to ensure these areas can be reinstated after a fire without fire water impacting the wider area.
- 6.72 Further, it is proposed that pervious pavement areas in the battery locations are lined with an impermeable separating geomembrane at the sides and base to ensure these areas can be reinstated after a fire without fire water impacting the wider area. The FRA&DS explains that the proposed pervious pavement areas in the battery locations will also provide long term storage capacity for the fire water, with the pervious pavements providing around 3,585m³ storage capacity. Fire water will need to be contained within the SuDS in the event of a fire and not be allowed to interact with any surface water flood extents. To address this, the FRA&DS proposes that the open SuDS features that will serve the proposed main compound area will predominantly be located in areas at Very Low risk of surface water flooding, except for the smallest swale and basin in the western half of the site that will be located in the Low risk of surface water flood extent. Also, purpose Designed Water Pollution Containment Device Chambers will be installed downstream of the last two attenuation basins to contain site runoff such as fire water in an emergency.
- 6.73 In summary, the FRA&DS confirms that the results of the hydraulic modelling show that the drainage strategy outlined above can attenuate and discharge surface water generated in the 1 in 100-year + 40% rainfall event without flooding. This manages flood risk on and off-site and reduces overall local flood risk. The IDP and LLFA have been consulted on the proposal during the pre-application process.
- 6.74 Overall, it is considered that the requirements of the NPPF (Paragraphs 181 and 182) and VALP Policies NE2 and I4 are met.

Topic 5: Highway operation and safety

- 6.75 Development proposals should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be 'severe' (NPPF Paragraph 116). VALP Policy T4 ('Capacity of the transport network to deliver development') states that new development will be permitted where there is evidence that there is sufficient capacity in the transport network to accommodate the increase in travel demand resulting from the development, or when the transport impacts can be mitigated (Local Plan Policy T5 'Delivering transport in new development').
- 6.76 The transport effects of the proposal are assessed in the ES (Chapter G), which includes a Transport Statement (TS), Abnormal Indivisible (AIL) Load Assessment and Construction Traffic Management Plan (CTMP).

- 6.77 It was agreed with Buckinghamshire Council that when the Proposed Development is operational, it will generate minimal traffic flows and there will be minimal impact on the surrounding highway network, and therefore an operational phase assessment is scoped out of the EIA. This agreement is documented within the Scoping Opinion from Buckinghamshire Council, included within Appendix B2 of the ES. The separate TS details the operational phase effects (Appendix G3 of the ES).
- 6.78 The ES and TS confirm that:
 - 1 Traffic flow and road safety data demonstrates that the roads that will be used to access the site during the construction and operation phases (see CTMP summary details below) are safe and suitable to serve the proposed development;
 - 2 The swept path analysis for the proposed upgraded operational access from East Claydon and within the site can safely accommodate 16.5m articulated vehicles; and
 - 3 During operation, the number of vehicles that will access and egress the site will not be significant, with an average of four Light Good Vehicle (LGV) two-way movements anticipated each month for maintenance and inspection purposes, and an average of four HGV two-way movements yearly.
- 6.79 The CTMP provides a framework to manage the vehicle movements associated with the construction of the Greener Grid Park. Details of the proposed construction vehicle routing, numbers and the construction period along with measures to manage construction vehicles and their potential impacts are included in the document.
- 6.80 In summary, the CTMP explains that a temporary construction vehicular access will be provided on the north side of East Claydon Road approximately 260m west of the existing vehicular access to the East Claydon substation opposite an existing field access on the south side of the road. This will be the subject of minor works and laying of consolidated material to ensure it is suitable for construction traffic. The CTMP explains that all construction vehicles will use the temporary access and route to the site via East Claydon Road, Granborough Road, Burleys Road, Vicarage Road, the A413 High Street, Buckingham Road and London Road and the A241 (east and west), and then onwards to the strategic highway network. The CTMP confirms that this route has been developed in discussion with highways officers at Buckinghamshire Council, and as part of this has been subject to assessment work to review width constraints, road safety records, speed limits, footways and cycle paths, and on street parking use.
- 6.81 Regarding construction deliveries and movements, the CTMP explains that the construction is predicted to generate a maximum of 141 two-way daily movements between Weeks 1 to 5 (Phase 1) with a maximum of 44 LGV two-way daily movements and 97 HGV two-way daily movements. In addition, it is predicted to generate a maximum of 119 two-way daily movements between Weeks 6 to 18 (Phase 2) with a maximum of 58 LGV two-way daily movements and 61 HGV two-way daily movements. It is also predicted to generate a maximum of 125 two-way daily movements between Weeks 19 to 24 (Phase 3) with a maximum of 55 LGV two-way daily movements and 70 HGV two-way daily movements. Overall, the CTMP concludes that these predicted construction movements are not significant, in the context of the existing traffic flows on the surrounding highway network, and taking into account the proposed mitigation, which will limit the impact on the

surrounding highway network. The proposed mitigation includes (further details provided in the CTMP):

- 1 Traffic will be managed and controlled at the proposed construction vehicular access on East Claydon Road by a trained banksman;
- 2 A trained banksmen will be also provided at the compound areas;
- 3 Warning signs will be located on approaches to the traffic control signage and directional signage will be provided along East Claydon Road and the proposed temporary construction route;
- 4 Construction vehicle movements will be scheduled using a booking system;
- 5 Direction and access point maps and site delivery rules and times will be provided to delivery drivers;
- 6 All deliveries made by a 16.5m articulated vehicle and a 26.5m articulated heavy load vehicle will be escorted by a support vehicle;
- 7 Engagement with local residents and businesses on construction vehicle movements; and
- Fixed construction and delivery times (construction vehicle movements between 08:00 17:00 Monday to Friday and between 08:00 13:00 on Saturdays, and construction on site between 07:00 18:00 Monday to Friday and between 07:00 14:00 on Saturdays).
- 6.82 With the proposed construction mitigation in place, the ES concludes that the residual construction stage (and decommissioning) effects will be Negligible to Minor Adverse.
- 6.83 During the operational phase, the TS states that there will be very minor vehicle flows relating to maintenance limited to occasional fuel deliveries and one to two transit van visits per week associated with maintenance and inspection purposes. The TS concludes that this level of trip generation will have a negligible impact on the local highway network. Further, it advises that the 13 proposed parking spaces would be suitable to accommodate the small number of vehicles visits anticipated at any one time.
- 6.84 Overall, it is considered that any transport impacts would not be 'severe' or unacceptable in highways safety terms (individually or cumulatively when assessed with other schemes in the area), with the proposed mitigation in place, and accord with the NPPF (including Paragraph 116) and VALP Policy T4.

Topic 6: Noise

6.85 Planning decisions should ensure that new development is appropriate for its location accounting for the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment (NPPF, Paragraph 187). In doing so, the NPPF requires development to mitigate and reduce to a minimum potential adverse impacts resulting from noise from new development and avoid giving rise to significant adverse impacts on health and the quality of life (Paragraph 198a). At the local level, VALP Policy BE3 ('Protection of the amenity of residents') seeks to ensure that any aspects of residential amenity are not unreasonably harmed, and Policy NE5 ('Noise pollution') requires significant noise generated by developments to be mitigated to acceptable levels in accordance with Government guidance.

- 6.86 A noise assessment is provided in the ES (Chapter E). This includes a qualitative construction noise assessment that proposes mitigation to address potential noise effects associated with the proposed earthworks within 125m of one receptor at Station House. The mitigation proposed includes restricting core construction hours following good practice including implementing the proposed CTMP. With this mitigation, the noise assessment concludes that the BS 5228 threshold is not anticipated to be exceeded for these short term construction activities. Accordingly, the ES concludes there will be a Minor Adverse and not significant residual construction noise effect.
- 6.87 Operational noise has been assessed in the ES following the BS 4142 standard, including a review of the baseline (inclusive of background levels and residual levels) and noise predictions of the Proposed Development based on a noise model and candidate plant assumptions. Two scenarios of plant and technology have been considered to provide a range of representative results. The noise assessment concludes that noise mitigation is required at night-time to address potential noise affects at Tuckey Farm, Tuckey Barn and Monkomb Farm. The mitigation proposed is the use of acoustic fences and bunds. The noise assessment explains that the proposed design (reflected in the assessment) assumes a 4m acoustic fence in the Southeast corner and a 5m bund in the Southwest corner along with some specific BESS plant mitigation, including selecting appropriate battery units, transformers and inverters. With these in place, the ES concludes there will be Minor Adverse and not significant residual operational noise impact.
- 6.88 The NPPF (paragraphs 187 and 198a) and Local Plan Policies BE3 and NE5 requirements are therefore met.

Topic 7: Heritage

- 6.89 A heritage assessment is provided in the ES: Chapter I covers archaeology and Chapter J includes consideration of the built heritage cumulative effects. A Heritage Statement is also submitted (Appendix J2 of the ES).
- 6.90 In accordance with the NPPF (Paragraph 207) and VALP Policy BE1 ('Heritage Assets'), the assessment establishes the significance of the heritage assets (above ground) which would be affected by the proposal, including an understanding of their setting and how it contributes to significance, and considers the effects of the proposed development on significance and any below-ground archaeological remains.
- 6.91 The Heritage Statement advises that a study area radius of 1km was agreed with the Historic Environment Records Team for Buckinghamshire County Council to assess above ground heritage. The study area shows that the nearest designated heritage asset to the Proposed Development is the Grade II listed Tuckey Farmhouse, circa 420m to the east of the Site boundary. It notes that a further 11 listed buildings are present in the wider Study Area, circa 690m southwest of the Site boundary, within East Claydon.
- 6.92 A field visit was conducted in April 2024. The Heritage Statement explains that this field visit identified that no significant adverse visual effects are anticipated on the setting or significance of Tuckey Farmhouse as mature trees screen all views towards the proposed

development. Similarly, due to mature vegetation, local topography and intervening distance, the assessment concludes that no significant adverse effects are envisaged on the setting and significance of listed buildings within the 1km Study Area.

- 6.93 The ES therefore focusses on assessing the cumulative built heritage effects only this was agreed with the Council through the EIA Scoping process. The cumulative assessment on built heritage assets has considered effects from views, noise, vibration, and traffic.
- 6.94 The scheme scoped in for the built heritage cumulative assessment is Tuckey Solar Farm, as the Scheme is located between the Proposed Development, and the listed Tuckey Farmhouse. The cumulative assessment has scoped out the remaining Schemes including Rosefield Solar Farm due to no common receptors being identified that share impacts with other Schemes.
- In terms of construction, the ES concludes that the Proposed Development is not located in 6.95 the same visual envelope as the other schemes identified for assessment for cumulative effects, as there are no schemes between the 11 listed buildings located within East Claydon, while all views from Tuckey Farmhouse are screened by mature vegetation and local topography. It is noted that although Tuckey Farm Solar Farm is located between the Proposed Development and the listed Tuckey Farmhouse, as stated they are not visible from the listed building. In addition, the agricultural fields where the Proposed Development is located does not form part of the historical, agricultural hinterland and will not impact its historical setting. Therefore, it is assessed that there will be no cumulative effects (direct visual or to the assets setting) produced by the Proposed Development during construction. Construction noise and transport effects have also been reviewed to consider whether there would be any cumulative effects caused by air, traffic and vibration. The proposed construction traffic route will not pass any of the built heritage receptors. The ES therefore concludes that there are no significant residual effects relating to these topics produced by the Proposed Development as a result of construction.
- 6.96 During operation, the ES explains that the proposed green colour of the battery containers and extensive landscaping adding to the existing mature landscaping will mean these aspects sit more easily into the surrounding landscape, impeding views from Tuckey Farmhouse and screening all views from designated heritage assets located with East Claydon.
- 6.97 The ES also notes that the majority of designated heritage assets are nucleated within East Claydon, which is not proposed to be used as the operational route to access the Site (although operational traffic associated will be little and occasional), while the Grade II listed Tuckey Farmhouse is only privately accessible, meaning that there is not anticipated to be any adverse cumulative effects from increased traffic or noise. In addition, Chapter E (Noise) of the ES confirms there will be no operational vibration associated with the Proposed Development.
- 6.98 As such, the ES concludes there will be no significant effects in EIA terms on Built Heritage during operation arising from the Proposed Development.
- 6.99 The ES also explains that consideration of the other cumulative schemes has identified no added intrusion into key views towards or from the designated assets. Further, it notes that

significant effects caused by air, traffic and vibration have been considered and no effects have been identified as a result of operation.

- 6.100 Regarding archaeology (ES Chapter I), the assessment concludes that there are no designated heritage assets within the proposed development area. It notes that there are five non-designated heritage assets recorded by Buckinghamshire HER located within the proposed main developed compound area; these relate to the Roman Road between Akeman Street at Fleet Marston and Thornborough (203400000), which is also an archaeological notification area, as well as the former course of the Aylesbury to Buckingham Railway (578800000) and the extent for East Claydon (265700000). The remaining non-designated heritage asset are identified as relating to isolated, unstratified metal findspots of a Medieval and Post-Medieval coin found during metal-detecting. During the historical map regression, the ES explains that aerial photography and LiDAR analysis conducted as part of the desk-based assessment identified three further heritage assets within the proposed development area these relate to possible ridge and furrow cultivation that appear to have been levelled or disturbed; a former 19th century field system and footpath recorded of low importance.
- 6.101 From assessment of the available evidence, the ES advises that the potential for hitherto unknown significant archaeological remains to be present within the site is considered to be medium, and minor to moderate direct effects are anticipated without mitigation.
- 6.102 A geophysical (magnetometry) survey has been conducted across the whole Site that detected a range of magnetic anomalies predominantly of a modern, natural, or agricultural character. However, anomalies suggestive of a probable and possible archaeological origin were identified.
- 6.103 A WSI for a programme of archaeological trial trenching was approved on the 13th February 2025 by the Senior Archaeology Officer for Buckinghamshire Council and the fieldwork element of the evaluation was completed at the end of March 2025. The archaeological trial trenching report was not available at the time of producing this Statement and will be reported separately.
- During construction, the assessment notes that activities which may have an impact upon buried archaeological remains include soil stripping to accommodate the Proposed Development containers and infrastructure, excavation for any foundations for structures within the Proposed Development and excavation for buried cables as well as topsoil stripping for the access road. The ES confirms that the detail of any appropriate mitigation measures will be confirmed on completion of the archaeological evaluation trial trenching, with the results establishing the nature, date and importance of remains at the Site. Mitigation may include preservation in-situ of archaeological remains, advance archaeological excavations to clear areas for construction where impacts cannot be avoided, and an archaeological watching brief for ground works in areas of high potential for the presence of previously unknown remains.
- 6.105 The ES explains that during operation if areas of archaeological remains are preserved in situ at the Site as part of the above potential mitigation strategy, measures to avoid accidental damage might be required, such as demarcation of areas and limits on activities such as plant movements and land maintenance. This would be determined and secured

through consultation with the Senior Archaeology Officer for Buckinghamshire Council as a condition of consent.

6.106 With this mitigation, the ES concludes that there will be no significant residual archaeology effects during construction, operation and decommissioning. Accordingly, it is considered that the requirements of the NPPF (Paragraph 207) and VALP Policy BE1 are met.

Topic 8: Minerals safeguarding

- 6.107 Part of the eastern area of the site is identified in the Buckinghamshire Minerals and Waste Local Plan (MWLP) as a Minerals Safeguarding Area (MSA) for Alluvium (clay, silt, sand and gravel), which forms a relatively small area of a larger swathe of the MSA that extends further to the north, east and south of the site.
- 6.108 Policy 1 ('Safeguarding Mineral Resources') requires development proposals in MSAs (other than exempt developments, which the proposal is not) to demonstrate that (i) prior extraction of the mineral resource is practicable and environmentally feasible and does not harm the viability of the proposed development; or (ii) the mineral concerned is not of any value or potential value; or (iii) the proposed development is of a temporary nature and can be completed with the site restored to a condition that does not inhibit extraction within the timescale that the mineral is likely to be needed; or (iv) there is an overriding need for the development. The policy requires a mineral assessment to accompany proposals for non-mineral development in MSAs. The NPPF states that local planning authorities should not normally permit other development proposals in MSAs if it might constrain potential future use for mineral working (paragraph 225).
- 6.109 A Minerals Resource Assessment Report accompanies the application. This combines desktop research and ground investigation work completed in January 2025 to assess the proposals against policy requirements. It confirms that superficial deposits of Alluvium and River Terrace Deposits originally identified as being a potential mineral resource were only encountered at four locations within the footprint of the proposed development site, based on the ground investigation work. Within these locations, it concludes that a maximum superficial deposit thickness of 1.2m was recorded. The assessment advises that the presence of superficial deposits on site is limited to being present within the eastern footprint of the proposed main compound and where these deposits are encountered, they are relatively thin.
- 6.110 The geotechnical classification testing provided in the report also concludes that the quality of sand and gravel deposits present at the site are considered to be poor quality. It notes that all samples collected are classed as clay and generally being composed of material with a large amount of fines (<0.0063mm grain size) making up the majority of the samples.
- 6.111 The report therefore concludes that the evidence indicates that sand and gravel deposits identified on the eastern part of the developed area are limited in amount, are of poor quality and are not considered to be of value for extraction. It also notes that planning permission is sought for a temporary 40 year period after which the infrastructure will be removed and the site restored, meaning any resource would only be sterilised in the medium term and could be extracted in the future, notwithstanding the resource is considered to be of poor quality. It is also considered that the proposed Greener Grid Park would meet an overriding need, as demonstrated earlier in this section and Section 2.0.

6.112 Accordingly, the requirements of Policy 1 of the MWLP and NPPF (paragraph 225) are met.

Topic 9: Other environmental and safety considerations

(i) Agricultural Land Quality

- 6.113 The diversification of agricultural land and other land-based rural businesses is supported by the NPPF, in promoting a prosperous rural economy (Paragraph 88). The guidance also states that planning decisions should recognise the economic and other benefits of the best and most versatile (BMV) agricultural land (Paragraph 180) and that where significant development of agricultural land is demonstrated to be necessary, areas of poorer quality land should be preferred to those of a higher quality (Footnote 62). BMV agricultural land is defined in Natural England guidance¹² as comprising Grades 1 ('excellent quality') to 3a ('good quality'). VALP Policy NE7 ('Best and most versatile agricultural land') promotes similar principles, seeking to avoid the use of BMV agricultural land except in certain circumstances (i.e. if there are no other sites of poorer agricultural quality and the benefits of the development outweigh the loss of the land).
- 6.114 An Agricultural Land Classification (ALC) Report accompanies the application. The report is based on a site visit undertaken by a specialist team who gathered soil samples from trial pits. Analysis of these samples confirms that the Site is Grade 3b ('moderate quality') and therefore does not constitute BMV agricultural land.
- 6.115 Also relevant to the assessment, the proposal does not represent an irreversible loss of agricultural land. At the end of the temporary 40 year period, the infrastructure will be removed and the site restored. The use of agricultural land is necessary in this case as the location of the proposed development is directed by the need to be close to the replacement East Claydon Substation for the reasons explained earlier in this Statement.
- 6.116 The overriding need for the development, its temporary nature that will enable the site to be restored for agriculture use in the future and the avoidance of using BMV agricultural land are important material considerations, and the applicant is willing to accept a planning condition limiting the BESS operating period to 40 years.
- 6.117 Overall, it is considered that the requirements of the NPPF (Paragraphs 88 and 180 and footnote 62) and VALP Policy NE7 are met.

(ii) Fire Safety

- 6.118 A Fire Safety Strategy (FSS) report accompanies the application. This explains the engineering controls, stakeholder consultation processes, and design aspects implemented to prevent, control and mitigate fire hazards. The FSS explains that these standards have been derived from a risk aware approach to the proposed development, wherein the primary focus throughout the project lifecycle is safety and protection of the local environment, noting:
 - 1 Statkraft has actively addressed the requirements of the National Fire Chief Council's (NFCC) guidance for battery energy storage systems. The design and safety measures

¹² <u>https://www.gov.uk/government/publications/agricultural-land-assess-proposals-for-development/guide-to-assessing-development-proposals-on-agricultural-land</u>

have been discussed, developed, and agreed with the Buckinghamshire Fire and Rescue Service (BFRS);

- 2 The safety features embedded in the design and operating procedures are based on current good engineering practice and the most relevant industry standards and codes (UL9540A, NFPA 855). These minimise the fire risk at the installation to As Low as Reasonably Practicable;
- 3 The risk to personnel and first responders in an unlikely event of a major fire will be managed effectively through an Emergency Response Plan (ERP) prepared in collaboration with BFRS; and
- 4 The risk to general public is negligible due to the location and design of the site.
- 6.119 Fire safety has been embedded into the overall design of the proposed development from the outset to firstly minimise the risk of a fire event occurring, and then further reduce the impact of such an event should it occur. The FSS includes a Plume Dispersion Study. This demonstrates that the residential areas and road receptors are sufficiently far away from the battery enclosures so as not to be impaired by any of the simulated fires in terms of heat flux, visibility and toxicity. Full details are provided in the FSS.
- 6.120 The VALP does not have development policies that address this type of fire safety requirement. However, the FSS demonstrates that the BESS fire safety design will comply with the NFCC guidance and the fire safety provisions have been discussed with BFRS during the pre-application, in accordance with the Planning Practice Guidance (Paragraph: 034 Reference ID: 5-034-20230814).

(iii) Air Quality

- 6.121 Developments are required to contribute towards compliance with limit values or national objectives for pollutants, including accounting for Air Quality Management Areas and Clean Air Zones and the cumulative impacts of development on air quality. Opportunities to improve air quality or mitigate impacts should be identified (NPPF Paragraph 199). VALP Policy NE5 ('Pollution, air quality and contaminated land') requires development to not exceed national air quality standards or materially affect quality in the surrounding area.
- 6.122 The proposed development would not generate any emissions during its operation. There is no on-site combustion and so it will not give rise to any unacceptable air quality effects on health, amenity or the natural environment.
- 6.123 As explained above, very limited traffic would be generated by the development once operational. Construction traffic will not be significant and will be temporary. Emissions from vehicles during the construction and operation of the site will not therefore result in any material effect.
- 6.124 Overall, it is considered that the proposals accord with the NPPF (Paragraph 199) and VALP Policy NE5.

(iv) Contamination

6.125 New development is required to address ground conditions and any risks from contamination, including land remediation if needed (NPPF, Paragraphs 196 and 197).

VALP Policy NE5 ('Pollution, air quality and contaminated land') advises that development on or near that is or may be affected by contamination will only be permitted where a land contamination assessment has been carried out and remediation implemented if necessary to ensure the development can safely proceed.

- 6.126 A Phase 1 Desk Study accompanies the application and considers the potential for significant soil or groundwater contamination, both at and in the immediate vicinity of the site. The qualitative risk assessment concludes that potential source-pathway-receptor linkages on-site are generally "very low" to "low" classification due to its current and historic use as agricultural land. It therefore concludes that there are no unacceptable risks from the proposed development to human health, sensitive ecology, controlled waters and off-site buildings and structures. It identifies a "low to moderate" contamination risk for proposed on-site buildings and structures but concludes this does not require a targeted geo-environmental ground investigation. It adds that given the low level risk, during the construction, safety measures for site workers can be managed by a construction phase risk assessment and method statement. The Phase 1 Desk Study includes a Discovery Strategy providing information for the contractor to follow if unexpected, contaminated soils are encountered.
- 6.127 Accordingly, it is considered that with this mitigation, the requirements of the NPPF (Paragraphs 196 and 197) and VALP Policy NE5 are met.

7.0 Summary and Conclusions

- 7.1 The clear message from the national bodies and Government responsible for: (i) meeting the 68% reduction in emissions compared to 1990 levels by 2030, (ii) delivering a decarbonised electricity system by 2030, and (iii) achieving net zero by 2050, is stark and unwavering. A countrywide effort is needed to upgrade the energy grid network with decisive action needed now to deliver the fundamental changes required to achieve a fair, affordable, sustainable and secure clean energy system. At the current rate of progress the country is not on track to hit these targets.
- 7.2 The Labour Government's position was confirmed by the Secretary of State for Energy Security and Net Zero in one of his first addresses to parliament in July 2024, saying that it will hold fast to its clean power mission. This commitment was carried forward more recently in the updated NPPF that requires local planning authorities to: "…not require applicants to demonstrate the overall need for renewable or low carbon energy and give significant weight to the benefits associated with renewable and low carbon energy generation and the proposal's contribution to a net zero future …"
- 7.3 The day after the updated NPPF was released, the Government published its Clean Power 2030 Action Plan setting out the strategy to "...build the grid that Britain needs, overturning decades of delay; install clean sources of power at a pace never previously achieved." The Action Plan refers to the opportunities offered by battery storage as "huge" due to their scalability and ability to deploy relatively quickly and also because "Batteries can reduce the amount of generation and associated network that needs to be built to meet peak demand, helping Britain reach clean power in a cost-effective way and reducing delivery risk associated with other types of energy infrastructure."
- 7.4 The proposal has a strong alignment with national and local sustainable energy policy objectives. The NPPF is clear that the planning system should support the transition to a low carbon future including supporting renewable and low carbon energy and associated infrastructure. Local planning policy also encourages renewable energy generation and associated infrastructure, with the benefits of this being weighed against the environmental effects of new development.
- 7.5 Given this context, significant weight should be afforded to the proposals' ability to contribute to meeting national and local renewable and low carbon energy needs.
- 7.6 The application demonstrates that the proposed development with mitigation will not have a significant adverse impact on views to/from the surrounding landscape, nor on landscape character, over time as the proposed planting matures. The ES and other technical assessments accompanying the application also demonstrate that there will be no significant adverse impacts on local amenity, biodiversity, trees, and other natural features, heritage, transport, air quality, noise, flood risk, or on ground conditions and minerals, and avoids use of 'Best and Most Versatile' agricultural land.
- 7.7 Locating the facility near to the intended grid connection point the East Claydon replacement substation - is essential to avoid inefficient transmission losses and provide a responsive, reliable energy supply and grid stability services. The close proximity will also avoid the need for lengthy transmission cables, significantly reducing construction-related disruption.

- 7.8 NESO has identified an issue with voltage instability in the Home Counties and an associated need for additional voltage support and grid balancing to address the network risks of power fluctuations and disruptions in supply. East Claydon substation is (and its replacement substation will be) strategically located and provides an important role in managing several regions of the grid, being identified as a critical high-voltage substation. This makes it is an ideal point for reinforcing the grid. While the replacement substation will increase capacity, it will not provide the real-time voltage and frequency response needed to manage fluctuations. Statkraft's East Claydon Greener Grid Park will export reactive power from the substation in periods of high flows to support low network voltages; and import reactive power during low demand periods to manage high voltages. This will contribute to reducing system operating costs (and therefore impacts on consumer bills) and CO2 emissions by providing an alternative to relying on gas power stations.
- 7.9 The site therefore represents an appropriate location for the Greener Grid Park, given the prevailing operational requirements of the facility and limited environmental effects of its development.
- 7.10 Overall, the requirements of the Statutory Development Plan and the overarching aims and objectives of National Planning Policy Guidance and other material national and local guidance have been met the proposed development being appropriate at this location and bringing with it considerable sustainability benefits.

Appendix 1 Environmental Mapping







Agricultural Land Classification:

0				
	Grade 3			
Constraints:				
	Flood Zone 2			
	Flood Zone 3			
	Registered Parks and Gardens			
	Conservation Area			
ightarrow	Statutorily Listed Building: Grade I			
	Statutorily Listed Building: Grade II*			
\bigcirc	Statutorily Listed Building: Grade II			

All designations are sourced from external sources and are as current and accurate as the GIS mapping data obtained. All designations must be verified accordingly. There may be additional designations that should be verified via MAGIC/DEFRA sources.

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Title Agricultural Land Classification & Constraints

	Client	Statkraft UK		
	Date	24.04.2025		
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Appendix 2 Development Plan Policies and Material Considerations

Vale of Aylesbury Local Plan (September 2021)

Policy S1 – Sustainable development for Aylesbury Vale: explains that all development must comply with the principles of sustainable development set out in the National Planning Policy Framework (NPPF). Notes that proposals that accord with the development plan will be approved without delay, unless material considerations indicate otherwise. Further, it explains the council will work proactively with applicants to find solutions so that proposals can be approved wherever possible, and to secure development that improves the economic, social and environmental conditions in the area.

Policy S2 – Spatial strategy for growth: the policy makes provision for new homes, employment land, retail and associated infrastructure to meet the Local Plan delivery targets for the period to 2033. The policy notes that the primary focus of strategic levels of growth and investment will be at Aylesbury, and development at Buckingham, Winslow, Wendover and Haddenham supported by growth at other larger, medium and smaller villages. The policy strategy also allocates growth at two sites adjacent to Milton Keynes which reflects its status as a strategic settlement immediately adjacent to Aylesbury Vale.

Policy S3 – Settlement hierarchy and cohesive development: states that development in the countryside should be avoided, especially where it would: a. compromise the character of the countryside between settlements, and b. result in a negative impact on the identities of neighbouring settlements or communities leading to their coalescence.

Policy S7 – **Previously developed land**: explains that development in Aylesbury Vale will be expected to make efficient and effective use of land, including the reuse of previously developed (brownfield) land in sustainable locations, subject to site-specific considerations including environmental value and the impact on local character, and subject to other policies in the Local Plan.

Policy T1 – Delivering the sustainable transport vision: explains the Council's strategy to deliver sustainable transport in Aylesbury Vale based on encouraging modal shift with greater use of more sustainable forms of transport and improving the safety of all road users.

Policy T4 – Capacity of the transport network to deliver development: states that new development will be permitted where there is evidence that there is sufficient capacity in the transport network to accommodate the increase in travel demand as a result of the development.

Policy T5 – Delivering transport in new development: requires that new development will only be permitted if the necessary mitigation is provided against any unacceptable transport impacts which arise directly from that development, including, inter alia, ensuring that the scale of traffic generated by the proposal is appropriate for the function and standard of the roads serving the area.

Policy T6 – Vehicle parking: requires that all development must provide an appropriate level of car parking, in accordance with the standards set out in the Local Plan (Appendix B). If a particular type of development is not covered by the standards then the policy requires other criteria to be taken into account in determining the appropriate level of parking, including, inter alia, the accessibility of the site, including the availability of public transport, and the type, mix and use of development.

Policy BE1 – Heritage assets: requires that all development, including new buildings, alterations, extensions, changes of use and demolitions, should seek to conserve heritage assets in a manner appropriate to their significance, including their setting, and seek enhancement wherever possible. The policy adds that proposals for development should contribute to heritage values and local distinctiveness and that where a development proposal is likely to affect a designated heritage asset and/or its setting negatively, the significance of the heritage asset must be fully assessed and supported in the submission of an application. In this regard, the policy explains that the impact of the proposal must be assessed in proportion to the significance of the heritage asset and supported in the submission of an application by way of a Heritage Statement and/or archaeological evaluations.

The policy explains that proposals which affect the significance of a non-designated heritage asset should be properly considered, weighing the direct and indirect impacts upon the asset and its setting. Further, the policy states that there will be a presumption in favour of retaining heritage assets wherever practical, including archaeological remains in situ, unless it can be demonstrated that the harm will be outweighed by the benefits of the development. In these circumstances, the policy states that heritage statements and/or archaeological evaluations may be required to assess the significance of any heritage assets and the impact on these by the development proposal.

Policy BE2 – Design of new development: requires that all new development proposals shall respect and complement the following criteria: a. The physical characteristics of the site and its surroundings including the scale and context of the site and its setting b. The local distinctiveness and vernacular character of the locality, in terms of ordering, form, proportions, architectural detailing and materials c. The natural qualities and features of the area, and d. The effect on important public views and skylines. The policy explains that more guidance on the detail for the application and implementation of this policy will be provided in the Aylesbury Vale Design SPD.

Policy BE3 – **Protection of the amenity of residents**: the policy explains that planning permission will not be granted where the proposed development would unreasonably harm any aspect of the amenity of existing residents and would not achieve a satisfactory level of amenity for future residents. It adds that where planning permission is granted, the council will use conditions or planning obligations to ensure that any potential adverse impacts on neighbours are eliminated or appropriately controlled.

Policy BE4 – Density of new development: explains that the proposed densities of developments should generally constitute effective use of the land and reflect the densities of their surroundings, and will be appraised on a site-by-site basis to ensure satisfactory residential amenity. The policy notes that where large scale developments are proposed, particularly towards the edge of settlements, higher density areas should be located towards

the centre of the sites whilst the rural edge should be a lower density. The policy crossrefers to The Aylesbury Vale Design SPD for further guidance.

Policy NE1 – Biodiversity and Geodiversity: <u>for protected sites</u> that policy explains that development proposals that would lead to an individual or cumulative adverse impact on an internationally or nationally important Protected Site or species, such as SSSIs or irreplaceable habitats such as ancient woodland or ancient trees, will be refused unless exceptional circumstances can be demonstrated as follows: a. the benefits of the development at this site significantly and demonstrably outweigh both the impacts that it is likely to have on the features of the site that make it internationally or nationally important and any broader impacts on the national network – for example of Sites of Special Scientific Interest, and b. the loss can be mitigated and compensation can be provided to achieve a net gain in biodiversity/geodiversity. The policy requires sufficient information to be provided for the council to assess the significance of the impact against the importance of the Protected Site and its component habitats and the species which depend upon it, noting this include the area around the Protected Site and the ecosystem services it provides and evidence that the development has followed the mitigation hierarchy.

For the protection and enhancement of biodiversity and geodiversity, the policy requires various measures to be achieved, including a net gain in biodiversity by protecting, managing, enhancing and extending existing biodiversity resources, and by creating new biodiversity resources. If significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or as a last resort, compensated for, then the policy requires that development will not be permitted. Further, the policy explains that development which would result in damage to or loss of a site of biodiversity or geological value of regional or local importance (such as Local Wildlife Sites or Local Geological Sites) including habitats of principal importance (known as Priority Habitats) or the habitats of species of principal importance (compared for, and benefits of the development significantly and demonstrably outweigh the harm it would cause to the site, and the loss can be mitigated and compensation provided to achieve a net gain.

Policy NE2 – **River and stream corridors**: states that development proposals must not have an adverse impact on the functions and setting of any watercourse and its associated corridor, and should conserve and enhance the biodiversity, landscape and consider the recreational value of the watercourse and its corridor through good design. The policy adds that opportunities for de-culverting of watercourses should be actively pursued and planning permission will only be granted for proposals which do not involve the culverting of watercourses and which do not prejudice future opportunities for deculverting. The policy explains that development proposals adjacent to or containing a watercourse shall provide or retain a 10m ecological buffer (unless existing physical constraints prevent) from the top of the watercourse bank and the development, and include a long-term landscape and ecological management plan for this buffer.

Policy NE4 – Landscape character and locally important landscape: requires development proposals to recognise the individual character and distinctiveness of particular landscape character areas set out in the Landscape Character Assessment (LCA), their sensitivity to change and contribution to a sense of place. The policy sets out a range

of criteria to be met to consider the characteristics of the landscape character area: (a) minimise impact on visual amenity, (b) be located to avoid the loss of important on-site views and off-site views towards important landscape features, (c) respect local character and distinctiveness in terms of settlement form and field pattern, topography and ecological value, (d) Carefully consider spacing, height, scale, plot shape and size, elevations, roofline and pitch, overall colour palette, texture and boundary treatment (walls, hedges, fences and gates), (e) minimise the impact of lighting to avoid blurring the distinction between urban and rural areas, and in areas which are intrinsically dark and to avoid light pollution to the night sky, (f) ensure that the development is not visually prominent in the landscape, and (g) not generate an unacceptable level and/or frequency of noise in areas relatively undisturbed by noise and valued for their recreational or amenity value. The policy notes that development will be supported where appropriate mitigation to overcome any adverse impact to the character of the receiving landscape has been agreed and that where permission is granted, the council will require conditions to best ensure the mitigation of any harm caused to the landscape.

Policy NE5 – Pollution, air quality and contaminated land: the policy requires significant <u>noise-generating development</u> to minimise the impact of noise on the occupiers of proposed buildings, neighbouring properties and the surrounding environment. It states that developments likely to generate more significant levels of noise will be permitted only where appropriate noise attenuation measures are incorporated which would reduce the impact on the surrounding land uses, existing or proposed and sensitive human and animal receptors, to acceptable levels in accordance with Government guidance. The policy adds that where necessary, planning conditions will be imposed and / or a planning obligation sought in order to specify and secure acceptable noise limits, hours of operation and attenuation measures.

In terms of <u>light pollution</u>, in developments where external lighting is required, the policy states that planning permission will only be granted where all of the following criteria are met: (a) The lighting scheme proposed is the minimum required for the security and to achieve working activities which are safe, (b) Light spill and potential glare and the impact on the night sky is minimised through the control of light direction and levels, particularly in residential and commercial areas, areas of wildlife interest or the visual character of historic buildings and rural landscape character, (c) The choice and positioning of the light fittings, columns and cables minimise their daytime appearance and impact on the streetscape, and (d) In considering development involving potentially adverse lighting impacts to wildlife, the council will expect surveys to identify wildlife corridors and ensure that these corridors are protected, and enhanced where possible.

Regarding <u>air quality</u>, the policy states that developments that may have an adverse impact on air quality will be required to prove through a submitted air quality impact assessment that: (e) The effect of the proposal would not exceed the National Air Quality Strategy Standards (as replaced) or (f) The surrounding area would not be materially affected by existing and continuous poor air quality.

For development on or near that is or may be affected by contaminated land, the policy requires developments to: (g) an appropriate contaminated Land Assessment carried out as part of the application to identify any risks to human health, the natural environment or water quality, and (h) where contamination is found which would pose an unacceptable risk

to people's health, the natural environment or water quality, the council will impose a condition, if appropriate, to ensure the applicant undertakes a desktop study, and if required, an intrusive site investigation, remedial measures and a validation report to ensure that the site is suitable for the proposed use and that the development can safely proceed.

Policy NE7 – Best and most versatile land: the policy states that the Council will seek to protect the best and most versatile farmland for the longer term. The policy explains that proposals involving development of agricultural land shall be accompanied by an assessment identifying the Grades (1 to 5) Agricultural Land Classification and that where development involving best and more versatile agricultural land (Grades 1, 2 and 3a) is proposed, those areas on site should be preferentially used as green open space and built structures avoided. It adds that where significant development would result in the loss of best and more versatile agricultural land, planning consent will not be granted unless: (a) There are no otherwise suitable sites of poorer agricultural quality that can accommodate the development, and (b) The benefits of the proposed development outweighs the harm resulting from the significant loss of agricultural land.

Policy NE8 – Trees, hedgerows and woodlands: the policy requires developments to seek to enhance and expand Aylesbury Vale's tree and woodland resource, including native black poplars. It states that where trees within or adjacent to a site could be affected by development, a full tree survey and arboricultural impact assessment to BS 5837 (as replaced) will be required as part of the planning application, and the implementation of any protective measures it identifies will be secured by the use of planning conditions.

The policy explains that development that would lead to an individual or cumulative significant adverse impact on ancient woodland or ancient trees will be refused unless exceptional circumstances can be demonstrated that the impacts to the site are clearly outweighed by the benefits of the development.

The policy adds that development that would result in the unacceptable loss of, or damage to, or threaten the continued well-being of any trees, hedgerows, community orchards, veteran trees or woodland which make an important contribution to the character and amenities of the area will be resisted. Where the loss of trees is considered acceptable, the policy states that adequate replacement provision will be required that use species that are in sympathy with the character of the existing tree species in the locality and the site. Where species-rich native hedgerow (as commonly found on agricultural land) loss is unavoidable, the policy requires the developer to compensate for this by planting native species-rich hedgerow, which should result in a net gain of native hedgerow on the development site.

The policy requires developers to aspire to retain a 10m (with a minimum of 5m) natural buffer around retained and planted native hedgerows (100m with a minimum 25 m natural buffer around woodlands) for the benefit of wildlife, incorporating a dark corridor with no lighting.

Policy C3 – Renewable Energy: states that planning applications involving renewable energy development will be encouraged provided that there is no unacceptable adverse impact, including cumulative impact, on the following issues: (a) landscape and biodiversity including designations, protected habitats and species, (b) visual impacts on local landscapes, (c) the historic environment including designated and non-designated assets

and their settings, (d) the Green Belt, particularly visual impacts on openness, (e) aviation activities, (f) highways and access issues, and (g) residential amenity.

Policy C4 – Protection of public rights of way: states that the Council will enhance and protect public rights of way to ensure the integrity and connectivity of this resource is maintained. The policy notes that the protection and conservation of public rights of way needs to be reconciled with the benefits of new development. The policy requires development proposals to retain and enhance existing green corridors, and maximise the opportunity to form new links between existing open spaces, adding that planning permission will not normally be granted where the proposed development would cause unacceptable harm to the safe and efficient operation of public rights of way.

Policy I1 – Green infrastructure: states that Green Infrastructure should provide a range of functions and provide multiple benefits for wildlife, improving quality of life and water quality and flood risk, health and wellbeing, recreation, access to nature and adaptation to climate change. The policy explains that the council will support proposals for green infrastructure where there is no significant adverse impact on: (a) Wider green infrastructure networks including public rights of way and green infrastructure opportunity zones identified by the Buckinghamshire and Milton Keynes Natural Environment Partnership, (b) Potential to contribute to biodiversity net gains, (c) Management of flood risk and provision of sustainable drainage systems, (d) Provision of a range of types of green infrastructure, (e) Provision of sports, recreation facilities or public realm improvements, (f) Potential for local food cultivation by communities, (g) Achieving a satisfactory landscaping scheme including the transition between the development and adjacent open land.

Policy I4 – **Flooding:** requires that all development proposals requiring a Flood Risk Assessment will assess all sources and forms of flooding and must adhere to the advice in the latest version of the Strategic Flood Risk Assessment (SFRA). The policy sets out a range of criteria to be met by developments to manage flood risk at the application site and elsewhere having regard to all potential sources of flooding. It requires all development to design and use sustainable drainage systems (SuDS) for the effective management of surface water run-off on site, as part of the submitted planning application and not increase flood risk elsewhere, including sewer flooding. The policy states that applicants will be required to liaise with the lead local flood authority, Internal Drainage Boards, and the Environment Agency on any known flood issues, and identify issues from the outset via discussions with statutory bodies.

Policy I5 – Water resources and Wastewater Infrastructure: states that the council will seek to improve water quality, ensure adequate water resources, promote sustainability in water use and ensure wastewater collection and treatment has sufficient capacity.
Buckinghamshire Minerals and Waste Local Plan (July 2019)

Strategic Objective 2 – Safeguarding of Minerals Resources: states the aim to define Minerals Safeguarding Areas to protect mineral resources of local and national importance within Buckinghamshire from development that would hinder their future use. In particular, the policy highlights the sand and gravel resources within the Thames and Colne Valley as well as in the north of the county, brickclay resources (around Bellingdon) and white limestone in the north of the county are recognised as being important to support the needs of future generations.

Policy 1 – Safeguarding Mineral Resources: states that minerals are a finite natural resource; in order to secure their long-term conservation Mineral Safeguarding Areas (MSAs) have been defined within Buckinghamshire to prevent mineral resources of local and national importance from being needlessly sterilised by non-minerals development. The policy requires proposals for development within MSAs, other than that which constitutes exempt development, to demonstrate that: (i) prior extraction of the mineral resource is practicable and environmentally feasible and does not harm the viability of the proposed development; or (ii) the mineral concerned is not of any value or potential value; or (iii) the proposed development is of a temporary nature and can be completed with the site restored to a condition that does not inhibit extraction within the timescale that the mineral is likely to be needed; or (iv) there is an overriding need for the development. The policy requires a Mineral Assessment to accompany planning applications for proposed non-minerals development in MSAs.

National Material Considerations

National Planning Policy Framework (December 2024)

The NPPF is a material consideration for planning applications. Its central aim is to establish a presumption in favour of sustainable development as the cornerstone of decision-taking and plan-making.

Paragraph 168 states that:

When determining planning applications for all forms of renewable and low carbon energy developments and their associated infrastructure, local planning authorities should:

- a not require applicants to demonstrate the overall need for renewable or low carbon energy, and give significant weight to the benefits associated with renewable and low carbon energy generation and the proposal's contribution to a net zero future;
- b recognise that small-scale and community-led projects provide a valuable contribution to cutting greenhouse gas emissions;
- c in the case of applications for the repowering and life-extension of existing renewable sites, give significant weight to the benefits of utilising an established site.

Other key statements of the NPPF that are relevant to the proposed development site include:

Paragraph 187 which promotes decisions to contribute to and enhance the natural and local environment by protecting and enhancing sites of biodiversity or geological value; recognising the intrinsic value of the countryside; minimising impacts on and providing net gains for biodiversity; and preventing development from contributing to unacceptable levels of soil, air, water or noise pollution or land instability.

Paragraph 198 states that decisions should ensure that new development is appropriate for its location taking into account the likely effects of pollution on health, living conditions and the natural environment.

Planning Practice Guidance 'PPG' (2024)

On 29th November 2016, the Government published the PPG. This was updated most recently on 14th August 2023. The Renewable and Low Carbon Energy section of the PPG is of relevance to the development proposals.

This section focuses on increasing the amount of energy from renewable and low carbon technologies to help ensure that the UK has a secure energy supply, reduce greenhouse gas emissions to slow down climate change and stimulate investments in new jobs and businesses. Planning has an important role in the delivery of new renewable and low carbon energy infrastructure in locations where the local environmental impact is acceptable.

Electricity Distribution Networks: Creating Capacity for the Future (February 2025)

The National Infrastructure Commission's February 2025 report underscores the pivotal role of electricity distribution networks in accommodating the UK's growing solar generation and battery storage capacities. As the nation advances towards its net-zero objectives, the integration of decentralized energy sources, such as rooftop solar panels and community solar farms, necessitates a more adaptable and responsive distribution infrastructure. The report emphasises that without proactive investments and regulatory reforms, the existing networks may struggle to efficiently manage the influx of distributed renewable energy sources. NIC

Battery energy storage systems (BESS) are highlighted as essential for balancing the intermittency of solar power and ensuring grid stability. The report notes that the current regulatory framework does not sufficiently incentivise the deployment of BESS at the distribution level, potentially hindering the full utilization of solar energy. To address this, the Commission recommends revising regulations to encourage the integration of storage solutions, thereby enhancing the grid's flexibility and resilience.

The report also identifies the need for improved planning and coordination among stakeholders to facilitate the connection of storage projects to the grid. It suggests that distribution network operators (DNOs) adopt more strategic approaches to network development, anticipating future demands and technological advancements. By doing so, it notes that DNOs can better accommodate the rapid growth of battery storage systems, ensuring that the grid remains robust and capable of supporting the energy transition.

The National Policy Statement for Energy EN-1 (NPS) (from early 2024)

The Overarching National Policy Statement for Energy (EN-1) [NPS EN-1] sets out national policy for the energy infrastructure.

Paragraph 3.3.1 states that electricity meets a significant proportion of our overall energy needs and our reliance on it will increase as we transition our energy system to deliver our net zero target. We need to ensure that there is sufficient electricity to always meet demand; with a margin to accommodate unexpectedly high demand and to mitigate risks such as unexpected plant closures and extreme weather events.

Paragraph 3.3.2 states that the larger the margin, the more resilient the system will be in dealing with unexpected events, and consequently the lower risk of a supply interruption.

Paragraph 3.3.3 states that to ensure that there is sufficient electricity to meet demand, new electricity infrastructure will have to be built to replace output from retiring plants and to ensure we can meet increased demand.

Paragraph 3.3.4 states that there are several types of electricity infrastructure that are needed to deliver our energy objectives. This includes additional electricity storage.

Importantly, paragraph 3.3.6 states:

Storage and interconnection can provide flexibility, meaning that less of the output of 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. 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).40 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.

Clean Power 2030 Action Plan (2024)

The Government's recently published Clean Power 2030 Action Plan: 'A new era of clean electricity' (December 2024). This seeks a fundamental overhaul of the energy sector to achieve its 2030 targets, with the aim being to: "...build the grid that Britain needs, overturning decades of delay; install clean sources of power at a pace never previously achieved; identify the energy mix needed for the 2030 power system and reorder the connection queue to achieve it; develop a flexible system that can accommodate and store Britain's renewable resources; deliver these benefits to consumers, people, households, and businesses as swiftly as possible."

It highlights the need for a "*mission focus*" with industry and government working in partnership at pace to achieve "*rapid deployment*" of new clean energy capacity across the UK. The key targets are noted as: 43-50 GW of offshore wind, 27-29 GW of onshore wind, and 45-47 GW of solar power, complemented by flexible capacity including 23-27 GW of battery capacity (Figure 2.2).

The Action Plan refers to the opportunities offered by battery storage as "huge" due to their scalability and ability to be deployed relatively quickly.

The Action Plan explains that "*Batteries can reduce the amount of generation and associated network that needs to be built to meet peak demand, helping Britain reach clean power in a cost-effective way and reducing delivery risk associated with other types of energy infrastructure.*" It notes that currently there is 4.5 GW of battery storage capacity in Great Britain the majority of which is grid-scale; the targeted increase to up to 27 GW represents a six-fold increase within six years. The Action Plan identifies a number of hurdles to be overcome to achieve this increase, that include, inter alia, the planning system which it comments requires action to cut down on delays and "…*deliver the huge increase in grid-scale battery capacity.*" (Page 96)

National Grid ESO 'Future Energy Scenarios' (2024)

National Grid's Future Energy Scenarios [FES] Report 2023 looks at the investment required in energy infrastructure, the policy decisions and impacts in how we consume energy that need to be considered between now and 2050 to meet the net zero target. It sets out a number of future scenarios that explore how societal change and the rate of decarbonisation will lead to various possible pathways with regards to energy supply.

Page 118 of the report notes that:

Electricity storage is necessary across all our net zero pathways to help balance the grid and ensure security of supply. Different durations of energy storage offer different benefits. Two to four-hour storage can meet short variations in demand and supply, provide short-term reserve and help manage the network. Long-duration storage can help secure the system over longer periods of high or low renewable generation output. The electricity storage sector is a rapidly developing one... We will continue to review our assumptions as more market information becomes available. Between 23–30 GW of electricity storage is now expected to connect into the system by 2030. Our pathways reflect this increase and also consider the relevant supply chain issues, planning considerations and connection delays.

Page 121 adds that:

With the retirement or conversion of unabated gas plants post-2030, delivering the levels of energy storage and low carbon dispatchable power needed for security of supply will be essential.

NGESO 'Beyond 2030 – A national blueprint for a decarbonised electricity system in Great Britain' (March 2024)

NGESO explains that Britain's electricity needs are set to rise substantially (by up to nearly 65 per cent) by 2035, as our everyday lives become more digitally intertwined and we move towards more electrified heat and transport options. Coupled with this, it notes that the UK Government has set an ambition to have a fully decarbonised electricity system by 2035. It says, *"This means producing more electricity and transporting it in a smarter, cheaper, and greener way...The current electricity grid is reaching its capacity and is unable to transport much more electricity without reinforcing the network."* (Executive Summary)

It goes on to say that "Investment in renewable energy generation has exceeded investment in transmission capacity over the past decade, resulting in bottlenecks on the electricity network. Currently, energy is being wasted as the grid cannot transport it to where it can be used. Because of these bottlenecks, as the system operator, we sometimes have to ask wind farms to switch off to prevent the grid becoming overloaded – wasting cheap, sustainable, homegrown wind power." (Executive Summary)

NGESO emphasises that a countrywide effort over the next decade is needed to upgrade the network in a coordinated manner to minimise impacts on communities and ensure the benefits of this evolving energy system can be seen across the breadth of Great Britain.

As part of this upgrade, NGESO notes that, "One of the biggest problems Great Britain faces is the inability to easily store large volumes of electricity. Grid-scale storage is becoming increasingly important in managing peaks and troughs in the electricity system." (Page 24) It anticipates this will continue into the future as part of an integrated, clean energy mix (Figure 2.2).

Powering Up Britain (2023)

The Powering Up Britain policy paper was updated in April 2023 is the Government's blueprint for the future of energy in this country. By bringing together the Energy Security Plan, and Net Zero Growth Plan, the paper explains how the UK will diversify, decarbonise, and domesticate energy production by investing in renewables and nuclear, to power Britain from Britain.

British Energy Security Strategy (2022)

The British Energy Security Strategy policy paper was updated in April 2022 to set out the Government's priorities and intentions to improve energy efficiency and reduce the amount of energy that households and businesses need.

This paper states that accelerating our domestic supply of clean and affordable electricity also requires accelerating the connecting network infrastructure to support it. Within this decade, our modern system will prioritise 2 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. The paper goes on to state that flexibility has always been the valuable heart of our system, ensuring power can flow quickly from where it's produced to where it's needed.

The Government will ensure a more flexible, efficient system for both generators and users by encouraging all forms of flexibility.

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

The Energy White Paper sets out how "the UK will clean up its energy system and reach net zero emissions by 2050".

The White Paper states that the electricity markets need to adapt as the deployment of renewable generation increases. It goes on to state that gas-fired power stations have

traditionally provided flexibility to meet demand at peak hours but flexibility will likely now come from new, cleaner sources such as energy storage from batteries. Page 72 of the White Paper states that new forms of flexibility could lower the future costs for consumers by minimising expensive network reinforcement or reducing the need for additional generation.

Page 75 of the White Paper sets out the Government's support for the new technologies require for the transition to increasing levels of renewable generation such as the proposed development.

UK's Integrated National Energy and Climate Plan (January 2020)

The UK NECP was completed in January 2020 and sets out the UK Government's climate and energy objectives, targets, policies and measures covering the five dimensions of the Energy Union. The NECP makes clear that in order to meet the UK's 2050 climate change target, improvements in energy efficiency and energy management are required. This includes smart technologies such as energy storage and system balancing.

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

The white paper puts net zero and the country's effort to fight climate change at its core, following the Prime Minister's Ten Point Plan for a Green Industrial Revolution.

It presents a vision of how the Government wants to make the transition to clean energy by 2050 and what this will mean for the people of the UK as consumers of energy in their homes and places of work, or for how businesses use energy to produce goods and services.

The National Infrastructure Strategy (2020)

The National Infrastructure Strategy (NIS) was published by the UK Treasury in November 2020. The strategy outlines the government's plans to invest in infrastructure to achieve a number of goals, including:

- 2 Decarbonisation aiming to reduce the UK's carbon emissions and achieve net zero by 2050;
- 3 Economic growth aiming to drive economic growth and reduce the gap in prosperity between different regions of the UK;
- 4 Infrastructure delivery: aiming to improve the consenting process for major infrastructure projects;
- 5 Private investment: aiming to support private investment in infrastructure; and
- 6 Climate change adaptation: aiming to adapt to climate change.

Ten Point Plan for a Green Industrial Revolution (2020)

The Ten Point Plan brought together Government policies and significant new public investment, and sought to mobilise private investment to deliver up to an estimated £42 billon of private investment by 2030 across energy, buildings, transport, innovation and the natural environment. The Ten Point Plan focussed on: 1) Advancing offshore wind, 2)

driving the growth of low carbon hydrogen, 3) delivering new and advanced nuclear power, 4) accelerating the shift to zero emission vehicles, 5) green public transport, cycling and walking, 6) jet zero and green ships, 7) greener buildings, 8) investing in carbon capture, usage and storage, 9) protecting the natural environment, and 10) green finance and innovation.

Smart Power- National Infrastructure Commission (March 2016)

The National Infrastructure Commission [NIC] produced a report entitled 'Smart Power' (March 2016), examining how the market can better respond to the energy supply and demand needs of a modern Britain.

The central finding of the report is that the development of 'smart power', based around three principles: interconnection, storage and demand flexibility, is key to helping the country meet its carbon targets, save consumer's money, and secure the supply of energy for many decades to come.

The Smart Power report acknowledges that electricity storage can play a key part in delivering a flexible electricity system. In the future a wide range of storage technologies deployed at every level from the large scale through to households could help deliver the flexibility we need [Paragraph 2.24].

It is important to recognise that electricity storage is not one single technology, but a diverse range including batteries, pumped hydropower and supercapacitors. This allows storage to play more than one role in increasing the flexibility and robustness of the electricity system, including [Paragraph 2.26]:

Making the system more resilient to short term imbalances in demand and supply and allowing the integration of a larger share of renewables in the generation mix.

Enabling network owners to increase the capacity of their networks more cost effectively than simply building additional cables.

Allowing customers (including households, businesses and electricity suppliers) to manage their usage more actively, taking and storing electricity at times of low demand and prices and then using it at peak times, which both reduces costs and helps to balance production and demand.

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