



Third Revolution Projects

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28<sup>th</sup> September 2022

Dear Sir / Madam

**Town and Country Planning (Environmental Impact Assessment) Regulations 2017: Request for a screening opinion in respect of a proposed development for a Battery Energy Storage System (BESS) on land at Bengrove Farm, Base Lane, Sandhurst, Gloucester, GL2 9NU.**

We act on behalf of RE Projects Development Ltd (“the applicant”) and we are writing to request an Environmental Impact Assessment screening opinion for the above proposed development under Regulation 6 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (“The EIA Regulations”).

## 1. Site and Surroundings

The subject site is shown on the plan below and is sufficient to identify the land to which this screening request relates. The site is presently used as low intensity farmland and is just over 0.8 hectares (just over 2 acres).

The site is in a fairly isolated rural setting, with the nearest residential receptor being a single property around 150m west of the site. The site is entirely in Flood Zone 1. The site is partially screened by existing trees and hedges around the site boundary. The site has a gently sloping topography, which slopes downwards from north to south, ranging from approximately 15m (AOD) in the north sloping downwards away to approximately 13m in the south.

There are no heritage assets on the site, with the nearest asset being the Grade II\* Listed Building at Wallsworth Hall, approximately 350m north east of the site. The site is not subject to any designations for its biodiversity value. There is a public footpath immediately to the south of the site.

For construction and operational purposes, access to the site is to be taken via the farm access track to the north of the site, which itself is accessed from Sandhurst Lane slightly further to the north.

The proposed development would be for a Battery Energy Storage System (BESS), providing an essential component of the UK's renewable energy infrastructure to meet net zero emissions.

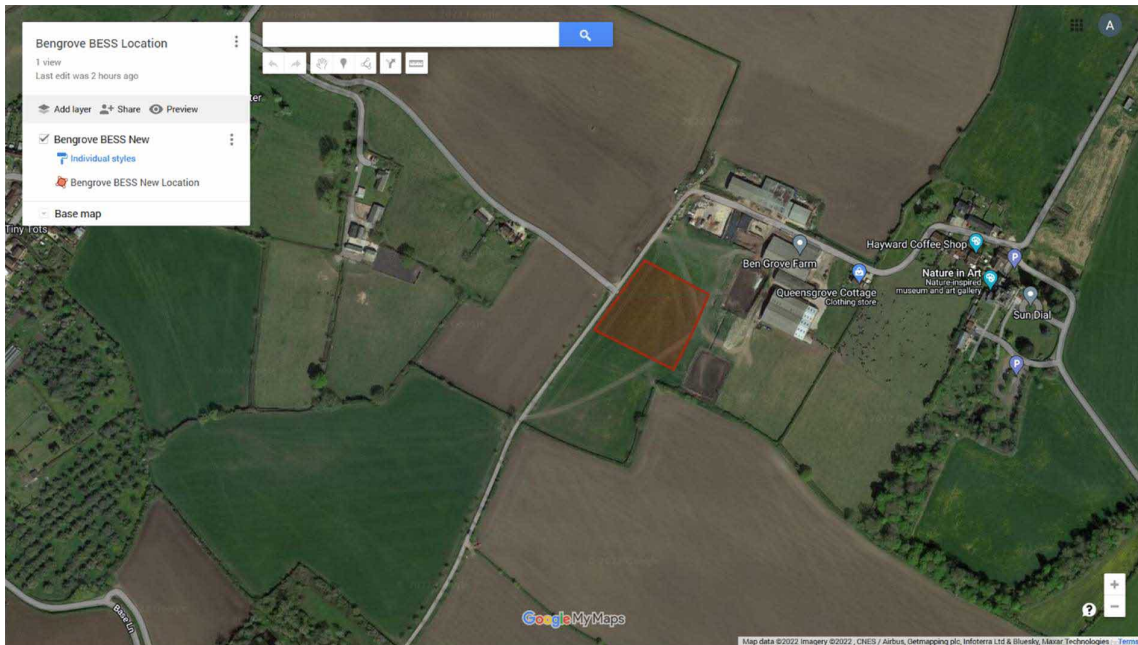


Figure 1: Proposed development area for a BESS, marked in red. (Source: Google MyMaps)

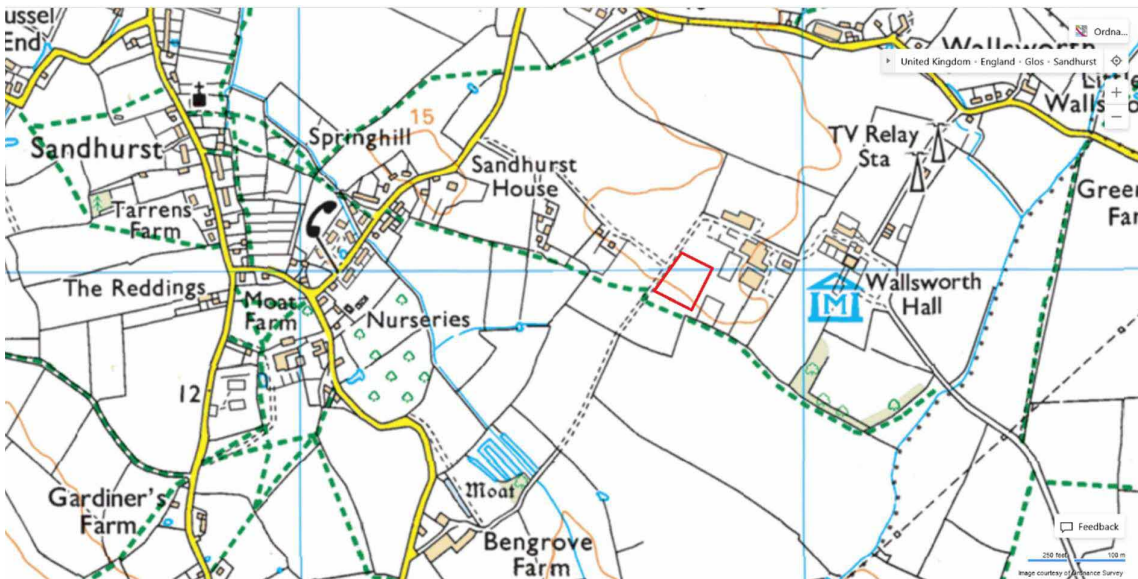


Figure 2: Location of the proposed development (Source: Bing Maps)

## 2. Development Proposal

The Description of Development is expected to be:

*“Development of a temporary Battery Energy Storage System (BESS) with ancillary infrastructure, security fence, access, landscaping and biodiversity enhancements, to provide balancing services to the local electricity grid, and associated development”*

The proposal is for sufficient capacity to store 49.9MW of energy. It will be connected to the national grid via Grid analysis undertaken by the applicant identified that majority of the substations within

the locality were constrained and could not be connected. The 33kV Overhead Castle Meads-Rotol circuit located 1.2km south west of the site was the only point within the area which was identified as having some capacity to connect a generation project. The connection to the 33kV circuit will be made via underground cabling and connection mast. The proposed development will consist of an enclosed compound area containing a BESS comprising:

- ♣ Approximately 300 Battery containers (1.3m long x 1.3m wide x 2.8m high) –exact number to be confirmed.
- ♣ Medium voltage transformers –exact number to be confirmed
- ♣ 1 x 132kV substation.
- ♣ Perimeter welded mesh Fence approximately 2.4m (design to be agreed with Council) with entrance gates.
- ♣ CCTV cameras mounted on posts.
- ♣ 1 x Control / Welfare Building
- ♣ 1 x spare parts container (tools and monitoring equipment).

The containers will provide housing for battery infrastructure management systems, a power distribution system, and auxiliary systems such as fire suppression and alarm systems, ventilation and cooling system, internal lighting and thermal control systems. The site area will be enclosed within a wire mesh fence enhanced by screening from existing and new vegetation, reducing visual impact and improving biodiversity.

The development is expected to be operational for a total of 40 years.

### 3. Introduction to Energy Storage

*“Energy storage, simply put, stores electricity for when it is needed. It is essential to a net zero system as it can store electricity when it is abundant (e.g. when it is windy or sunny) for periods when it is scarce (e.g. when demand is higher). It can do this both to balance the system nationally, and to manage constraints in local areas. It can also provide specific services to help maintain the resilience and stability of the grid. The need for electricity storage will rise as we increase the volume of variable, non-dispatchable renewables on the system and increase peak demand through the electrification of heat and transport. It will be critical to maintaining energy security as we shift away from gas over the 2020s-30s.”*

Transitioning to a net zero energy system Smart Systems and Flexibility Plan 2021, Department for Business, Energy & Industrial Strategy, July 2021.

#### 3.2 Planning and BESS

In recognition of the importance of energy storage in moving to net-zero carbon by 2050 (as required by the Climate Change Act 2008), and the interim target of 78% reduction in emissions by 2035 (required by the 6th Carbon Budget), the Government have recently introduced legislative changes to encourage larger and more effective BESS to be processed by local planning authorities (LPA).

Previously proposals for energy storage above 50MW were subject to approval through the National Significant Infrastructure Projects (NSIP) procedure. Since December 2020 however, such proposals are now to be assessed by LPAs.

In doing so the Government stated that:

*“the planning impacts of the types of storage being deployed (predominantly batteries), are much lower than other forms of generation”*

Battery energy storage systems have smaller footprints, low vertical extents and limited noise effects compared to all other forms of electrical energy generation.

#### 4. Planning Application and Accompanying Information

Subject to this screening request, a full planning application would be accompanied by the following:

- Site Location Mapping
- Layout Plan
- Sample elevation details of key components
- Photomontage visualisations
- Planning, Design & Access Statement
- Landscape and Visual Assessment
- Noise Impact Assessment
- Flood Risk Assessment
- Heritage Impact Assessment
- Preliminary Ecological Appraisal Report and Protected Species Surveys if required
- Construction Traffic Management Plan
- Landscape and Mitigation Enhancement Plan

#### 5. EIA Screening Process

The process of deciding if there is a requirement for an Environmental Impact Assessment (known as 'screening') considers the scale, nature and location of a proposed development and the likelihood of significant environmental effects arising as a result. The EIA regulations define development types for which an EIA is mandatory - and for those which need to be screened to decide if there are any likely significant effects on the environment, and if an EIA is required in order to assess those.

Development included under Schedule 1 of the EIA Regulations is mandatory. Where development falls under Schedule 2, the need for EIA is determined based on set criteria, which are as follows:

- The type of development falls within one of the classes of development stated in Schedule 2;  
AND:
- EITHER exceeds the size threshold for that class of development;
- OR is in a sensitive area as defined by the EIA Regulations;
- AND it is likely to have significant environmental effects due to factors such as nature, size or location.

The exceedance of a Schedule 2 category threshold triggers the need to consider whether the proposed development is EIA Development with reference to the criteria set out in Schedule 3 of the EIA Regulations. These are:

1. Characteristics of the proposed development (e.g. size, cumulative effects with existing/approved development, use of natural resources, production of waste, pollution, nuisance, risk of accidents, and risk to human health);
2. Location of the proposed development (e.g. environmental sensitivity of the area); and,
3. Types and characteristics of the potential effects of the proposed development (with particular regard to the extent, nature, magnitude and complexity, probability and duration, frequency and reversibility of the effect, including the likelihood for transboundary effects).

## 5.2 Planning Practice Guidance

Planning Practice Guidance (PPG) provides guidance on EIA screening and how to assess whether a development is likely to give rise to significant environmental effects. PPG 018 (Ref ID: 4-018-20170728)6 states:

*“only a very small proportion of Schedule 2 development will require an Environmental Impact Assessment”.*

In order to assist LPAs to determine whether a project is likely to require an assessment a set of indicative thresholds and criteria have been prepared and presented as a tabulated annex to the PPG (Paragraph 058 Reference ID:4-058-20150326).

## 5.3 Review of proposed BESS against EIA Regulations

The Proposed Development is not a Schedule 1 development and does not automatically require an EIA. However, it does constitute a project under category 3(a) of Schedule 2 of the Regulations as an *“industrial installation for the production of electricity”* whereby the applicable threshold to undertake screening is when the site area exceeds 0.5 hectares.

There is direct reference to battery energy storage systems (BESS) in Schedule 2 of the EIA Regulations. Energy storage facilities are recognised by Government *“as a form of electrical generating station for planning purposes”*. The proposed development therefore falls within Category 3a Schedule 2 for the purposes of screening.

## 6. EIA screening matrix

Is the project Schedule 1 development according to Schedule 1 of the EIA Regulations?	No
Is the project Schedule 2 development under the EIA Regulations?	Yes
If YES, under which description of development in Column 1 and Column 2?	3. Energy (a) Industrial installations for the production of electricity, steam and hot water (unless included in Schedule 1);  The area of the development exceeds 0.5 hectares.
Is the development within, partly within, or near a 'sensitive area' as defined by Regulation 2 of the EIA Regulations?	No (defined in the EIA Regulations as : Sites of Special Scientific Interest (SSSI) and European Sites, National Parks, the Broads and Areas of Outstanding Natural Beauty, and World Heritage Sites and Scheduled Monuments.) The nearest SSSI (Innsworth Meadow SSSI is approximately 2km away to the south east)
Are the applicable thresholds/criteria in Column 2 exceeded/met?	Yes. Site is approximately 0.82 hectares.

Would the development proposal be likely to have significant effects on the environment (nature, size, location)	No, as described in assessment table below.
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As the Proposed Development will cover an area of around 0.8ha it is appropriate to seek an EIA screening opinion from Tewkesbury Borough Council as the relevant local planning authority.

### 7. Screening review Schedule 3

The Government PPG on EIA sets out indicative screening thresholds to further guide the issues and criteria for screening for Schedule 2 developments<sup>1</sup>. For Category 3(a) developments the guidance states as follows:

Development type	Schedule 2 criteria and thresholds	Indicative criteria and threshold	Key issues to consider
(a) Industrial installations for the production of electricity, steam and hot water (unless included in Schedule 1);	The area of the development exceeds 0.5 hectare.	Thermal output of more than 50 MW. Small stations using novel forms of generation should be considered carefully.	Level of emissions to air, arrangements for the transport of fuel and any visual impact.

BESS are not thermal power stations. The threshold here refers to conventional thermal industrial power stations. The 50 MW limit for BESS was recently amended in planning legislation as described above because the *“the planning impacts of the types of storage being deployed (predominantly batteries), are much lower than other forms of generation”*<sup>2</sup>

BESS do not create any emissions to air and there is no transportation of fuel. Visual impact is likely to be limited and will be dealt with through a Landscape and Visual Impact Assessment as part of the planning process.

An appraisal of the Schedule 3 criteria are provided below, including consideration of the key issues identified above.

### 8. Schedule 3 EIA screening appraisal

<sup>1</sup> Paragraph: 058 Reference ID: 4-058-20150326

<sup>2</sup> Proposals regarding the planning system for electricity storage, Dept for Business, Energy and Industrial Strategy, July 2020.

Characteristics of Development	Screening Assessment	EIA
Size and design development	The site area is just over 0.8ha exceeding the 0.5 threshold. Maximum height of battery units are around 3m above ground level. Visual and landscape appraisals show development can be enclosed with low potential visibility due to topography, and opportunity to mitigate any close views with effective planting, retention of existing plants, and screening.	No
Cumulation with other development	<p>The planning application will include a full Landscape &amp; Visual Impact Assessment (LVIA). The site is in a rural location, with the nearest residential property being more than 150m away (Coverdine House). Due to the distance, topography, existing natural vegetation, and opportunities for additional screening around site boundaries, any additional visual impacts are expected to be minor and the proposal will not be seen from centres of population. There are no other BESS in the immediate area, but two small scale battery storage facilities were permitted elsewhere in Tewkesbury Borough between 2017 and 2019.</p> <p>There is a proposal for a solar farm in adjoining fields, that although has yet to have a full planning application submitted, was given a negative EIA screening result in July 2022. Although the BESS and solar proposals are adjacent to each other, the solar farm is approximately 25ha in size, compared to just 0.8 ha for the proposed BESS site, which will not result not lead to a cumulation of development from an EIA perspective should both developments eventually go ahead. Full impacts are also to be assessed as part of the application submission documentation on both schemes.</p>	No
Use of natural resources	BESS complements other renewable sources such as solar and wind power by providing a renewable energy store and balancing the network. The land will also be restored to agricultural land after the use has ceased. The materials used in the manufacture of the equipment for the scheme are expected to be recycled at the end of the development's life. In this regard, the use of any natural resource would be negligible.	No

Production of Waste	The development will not produce any waste during operation. At the end of the development's life, the materials used can be recycled.	No
Pollution and Nuisance	Any noise impacts are anticipated to be very low level and limited to the inverter/battery containers and batteries. This can be confirmed through a noise assessment. There will be no harmful pollutants or odours. Disturbance arising from construction and related traffic will be short term in nature. A construction traffic management plan (CTMP) will control and minimise impacts.	No
Risks to human health	Battery systems and materials used within them do not contain substances that are considered hazardous within Schedule 1 to the Planning (Hazardous Substances) Regulations 2015. Therefore, the development does not come under these Regulations. The proposed site is private land but is bordered by a public footpath immediately to the north of the site. The compound will be secure and restricted by fencing and discrete CCTV.	No
Major accident risk	<p>Battery systems are considered safe and systems are designed to comply with necessary UK standards across all aspects of the development, not only the batteries themselves. Many safety measures are incorporated into the battery system:</p> <ul style="list-style-type: none"> <li>• Typically, the system manages itself and responds automatically to abnormal temperature rises and other issues. However, the facility will also be constantly monitored to ensure effective operation. The management system includes alarms and warnings to notify operatives of the health status of each battery, faults, over-charge/ discharge/ temperature/ voltage/current. An emergency stop can be activated and the battery system enters safe mode, with each battery string disconnecting from the DC bus.</li> <li>• A ventilation and cooling system for the batteries managed by temperature sensors.</li> <li>• The containers are fire retardant and compliant with the UL 94 standard (UL 94 is the Standard for Safety of Flammability of Plastic Materials for Parts in Devices and Appliances). Under all working conditions, the tensile strength of the</li> </ul>	No



	<p>material of the container will be able to handle the internal cell pressure of the cells. There will not be any deformity or bulge on the sides under all working conditions.</p> <ul style="list-style-type: none"> <li>• Appropriately located fuses to prevent arc flash (a type of electrical explosion produced as part of an arc fault).</li> <li>• Isolator switches.</li> <li>• Many manufacturers' systems include an active fire suppression system, such as sprinklers.</li> </ul> <p>There is low risk as all equipment will comply with industry safety regulations and shall be operated and maintained in accordance with them.</p>	
<i>Location of development</i>		
Existing land use	<p>The site is currently used as lower intensity farmed land. The site contains no statutory or non-statutory designations for landscape, ecology or heritage assets. The site is 600m away from the nearest existing settlement at Sandhurst, although there are individual properties nearer than this, the nearest being approximately 150m away.</p> <p>The EIA Regulations define "<i>sensitive areas</i>" in regulation 2(1) and an EIA is more likely to be required if a sensitive area is affected. The site is not located in a sensitive area and distance, topography and intervening vegetation means it will not significantly affect local heritage and environmental assets.</p> <p>There is the potential for a limited impact on the setting of the Grade II* listed building Wallsworth Hall and its gate piers (approximately 350m north east of the site). The photographs included in Appendix 1 of this screening request show how limited the views of Wallsworth Hall are from the site, but a full understanding of this impact will be provided through a detailed Heritage Assessment will be submitted as part of a full planning application.</p>	No
Relative abundance, quality and regenerative capacity	<p>The land that will be used will be completely reversible. The site will be actively managed to enhance</p>	No

of natural resources in the area	biodiversity. Solar and wind power within the grid will be stored for times of peak demand.	
Absorption capacity of the natural environment	Initial landscape and visual assessment shows the proposed development can be absorbed into the landscape. The location of the proposed BESS will maintain and protect existing hedgerows, mature trees, and field boundaries. The site is in Flood Zone 1 and will not result in an increased risk of flooding –this will be confirmed through a full flood risk assessment and drainage strategy. Due to topography, screening and the site location there will be limited intervisibility with the setting of nearby heritage assets. In terms of proximity to residential and footpath receptors the proposed development will be screened by new hedgerows and planting. It is low lying (3m max. except for elements of the substation) and sits passively in the landscape, and will be well screened through additional planting. Noise from construction and operation will be limited and can be controlled through specific hours of construction.	No
<i>Characteristics of Potential Impact</i>		
Magnitude, extent and nature of impacts	<p>In terms of magnitude, the impacts are likely to be low and mitigated through layout, design and landscape screening measures. The potential but minimal impact of the proposed development will relate to a small temporary use of agricultural land that can be fully reversed at the end of its operational life. Impacts beyond the site boundary will be limited to visual impact at a low level due to distance, topography and intervening vegetation. The closest designated SSSI is Innsworth Meadow, approximately 2km away to the south east. The nearest heritage asset is the Grade II* Listing Building at Wallsworth Hall, which is approximately 350m north east of the site.</p> <p>There are a number of Grade II listed buildings to the east and west of the site at Twigworth (around 1.2km away) and Sandhurst (around 650m away) respectively. However, of these assets only Wallsworth Hall has any visual connection to the site due to intervening vegetation and topography. The impact of the proposed development on the setting of Wallsworth Hall will be fully considered in the full planning application, which has already been informed by a comprehensive Heritage Assessment, which has concluded that no adverse</p>	No

	<p>impacts would be anticipated for the setting of Wallsworth Hall, due to the intervening working farm, vegetation and site topography.</p> <p>Construction impacts are short term in duration. Ecological and LVIA assessments will accompany the planning application.</p> <p>Therefore, the magnitude, extent and nature of the impacts will be low.</p>	
Transboundary nature of impact	The proposed development will make an important contribution to achieving legally binding national targets to achieve net zero carbon emissions by 2050 and national renewable energy targets.	No
Intensity and complexity of impact	The magnitude of effect will be low and non-complex.	No
Probability of impact	The impacts can be reliably predicted and assessed accordingly. It is considered that, based on the preliminary assessments informing this Screening Request, the proposed development will not have a significant impact.	No
Duration, frequency and reversibility of impact	The effects of construction will be temporary (likely to be 15 - 20 weeks). The effects of operation will be long term (40 years) and fully reversible. The effects of decommissioning will be temporary and short term.	No
Cumulation of impact	<p>There are no other similar existing developments of this kind in the vicinity, but there have been three small scale battery storage applications permitted elsewhere in the borough. The distance of these locations from the proposed site means that there will be no cumulative effect with other BESS developments.</p> <p>As mentioned above, the adjacent 25ha solar farm proposal was assessed as not requiring an EIA, and the 0.9ha BESS site would not lead to a cumulation of development that would require an EIA.</p>	No
Possibility of reducing impact	Given the location and low lying nature of the proposed development, any impacts will be minor and not materially harmful to the area, and will be mitigated to an acceptable level through effective screening, new	No

	planting and biodiversity enhancements, informed by specialist surveys and consultation.	
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## 9. Conclusion

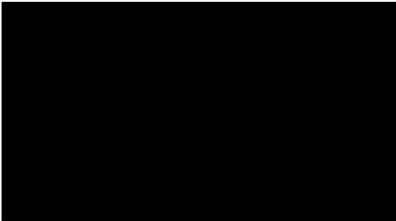
In our opinion, having reviewed the proposal in the context of the EIA Regulations, the proposed development in this location is not likely to create significant environmental impacts which require an Environmental Impact Assessment. In fact the contribution of the BESS toward achieving a zero carbon energy system and helping to tackle climate change, would provide a significant environmental benefit both locally and globally, without any unacceptable local adverse impacts. Biodiversity management will also enhance local ecological resilience.

The planning application will include a full range of assessments which will be submitted relating to landscape, visual impact, heritage, ecology, noise and agricultural land analysis and mitigation plans to reduce any likely impacts.

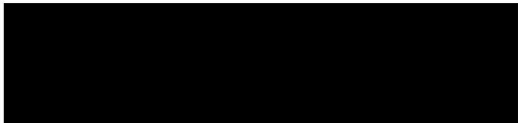
I look forward to receiving the Council's EIA screening opinion within the statutory 21 day period, and I would be grateful for confirmation of receipt of this request.

In the meantime if you have any queries please do not hesitate to contact me.

Yours faithfully



Consultant



## Appendix 1

Photographs of site showing extent of visual connection with Wallsworth Hall (from eastern edge of site)

