

Legacy Energy Storage System

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Welcome

Welcome to the Legacy Energy Storage System proposal Community Consultation Event.

Novus and Innova are proposing a 1,025MW (Megawatt) Energy Storage System ('ESS') on land at Bersham, near Rhostyllen, Wrexham. Once connected this proposal could meet the power demands of around 2,406,600 homes continuously for a two-hour period.



An important part of the development process is to engage with the local community. This event seeks to provide an opportunity for local residents to meet our team, to ask questions and provide feedback on the proposed project.

We look forward to discussing our proposals with you.

Key Project Elements:

- Site infrastructure including housed energy storage containers, a substation and other electrical equipment and access tracks.
- Electricity would be imported from, and exported to, the National Grid substation, located close to the site, via an underground cable.
- Delivery of Biodiversity Net Gain through an increase in habitats for local wildlife and additional vegetation planting.
- Potential direct and indirect employment opportunities in the local area during the construction period.



About Novus & Innova

Novus Renewable Services is a leading independent renewable energy consultancy who have been active in the development of renewable energy projects since 2010. Our mission is to support the delivery of utility scale renewable energy projects using multi-technologies fit for the transition to Net Zero.

Our in-house team of renewable energy industry experts and trusted consultants have extensive experience delivering and operating renewable energy projects across the United Kingdom, including two recent approvals for solar farms with energy storage in Wrexham.

We are working in partnership with Innova who will build, own, and ultimately operate the Legacy Energy Storage System.



Point of Connection

Need for Energy Storage Developments

There is a widespread awareness of the need to reduce dependence on fossil fuels and transition to renewable energy sources.



- The UK has a legally binding target to achieve Net Zero by 2050 and has committed to fully decarbonising the electricity network by 2035.
- The Welsh Government has an ambitious target for Wales to meet 70% of its electricity demand from Welsh renewable sources by 2030 and are consulting to push further to meet 100% by 2035.
- The result is an increase in low carbon and renewable developments across the UK.
- Renewable energy generation is intermittent and Energy Storage Systems help to balance this by storing electricity at times of oversupply and releasing this at peak demand. This allows us to make better use of our existing electricity supplies and for electricity generated from renewable energy sources to be fully utilised.
- Electricity demand will increase in the coming years as more sectors (transport & heating) rely more extensively on electricity as a fuel source. National Grid¹ indicates that the UK will need more than 250GW of energy storage by 2050 to support this.
- The UK has c1.5GW of energy storage in operation, 1.5GW under construction, and 10GW consented, not yet been built². A significant increase is required in order to meet the projected requirements.

¹The Future Energy Scenarios, 2022 ²Renewable UK, April 2022

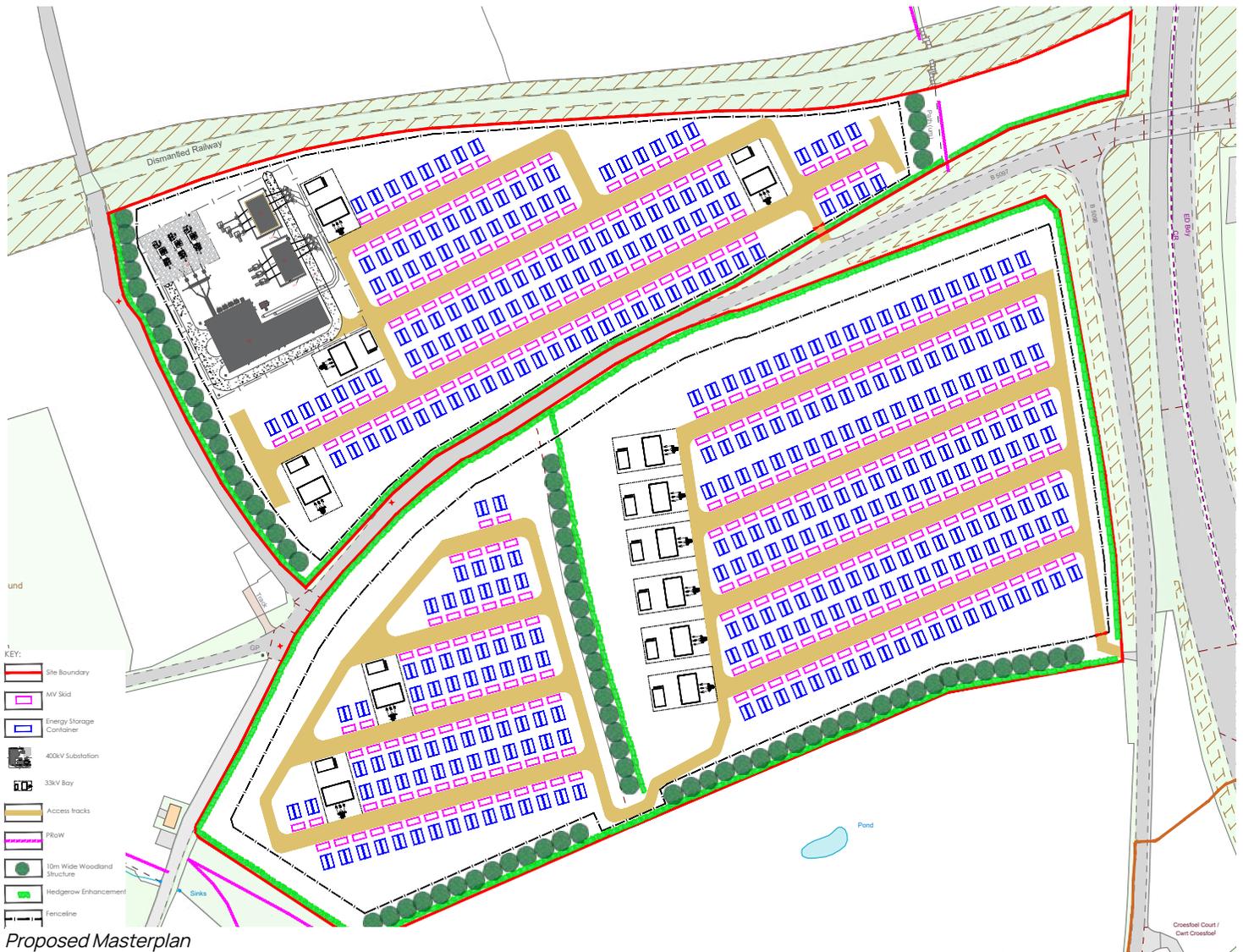
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The Proposed Project

We are proposing an Energy Storage System on land at Bersham, near Rhostyllen, Wrexham.

The site has been carefully selected and the design informed through an ongoing detailed assessment process.



We undertook a Site Selection Assessment which sought to identify an optimum site of suitable size within a 2.5km study area from the Legacy National Grid substation. A total of 29 locations were initially identified and, when these sites were assessed against a set of key criteria, the site now identified for development was classified as the most suitable.

This site we have selected has the following benefits:

- The confirmed availability of physical space and grid capacity for both import and export of electricity into the National Grid substation.
- Suitable access off the A483 for construction vehicles and abnormal loads.
- Existing mature woodlands and railway embankment to screen proposals.
- Located outside of any statutory landscape or ecological designations and is not expected to significantly impact any heritage assets.
- The proposal presents an opportunity to deliver significant biodiversity net gain onsite.

The Proposed Equipment

Energy Storage

The development will primarily consist of liquid cooled batteries, the size of a shipping container.



Medium Voltage (MV) Skid

The MV Skid is required to convert the Direct Current (DC) to Alternating Current (AC) via an inverter.

Transformers

The purpose of these transformers is to raise and lower the voltage for export and import between the site and National Grid.



Substation

The main substation contains the largest items of plant, consisting of a Gas Insulated Switchgear (GIS) hall, transformers and filters. It will have a footprint of approximately two acres.

Access Tracks

Access tracks would be established across the site. During the construction phase a construction compound would be established for storage of materials, plant, parking and worker offices and welfare units.



Security

A fence would be installed around the perimeter of the development at a height of approximately two metres and the site will be monitored by inward facing CCTV cameras.

Ecology

A Preliminary Ecological Appraisal has been completed across the site. This confirmed that the land parcels comprise typical farmland with the fields used for grazing, silage or arable rotation. Whilst there are no statutory designated sites of biodiversity importance within the site boundary or in immediate proximity, a number of waterbodies are located within 250m of the site. These have been assessed for Great Crested Newts (GCN), with the eDNA survey results confirming that GCN are not present.

Our ecology consultant is currently undertaking further surveys for breeding birds, badgers and bats which will in turn inform any Biodiversity Net Gain (BNG) and mitigation measures. These will be included within an Ecological Impact Assessment report submitted as part of the planning application.



INDICATIVE PLANTING SCHEDULE

NATIVE TREES

PLANT SPECIES
 Acer campestre
 Betula pendula
 Carpinus betulus
 Quercus robur
 Prunus avium
 Sorbus aucuparia

NATIVE WOODLAND MIX

PLANT SPECIES
 Acer campestre
 Betula pendula
 Corylus avellana
 Prunus spinosa
 Prunus avium
 Quercus robur
 Sorbus aucuparia
 Sambucus nigra

NATIVE INFILL HEDGEROW PLANTING MIX

PLANT SPECIES
 Crataegus monogyna
 Ilex aquifolium
 Corylus avellana
 Prunus spinosa
 Rosa canina

Landscape and Ecological Proposals:

- Retention and enhancement of the existing hedgerows with infill and hedgerow tree planting.
- Buffers between equipment and public rights of way.
- Hedgerow management at least 3m to screen development.
- 10m wide woodland structure boundary planting.
- New planting and habitat creation provides significant Biodiversity Net Gain.

Transport

Two access points are proposed for the construction phase, one of which will be from the B5097 and one from the B5098. These access points are currently used by large agricultural vehicles and will require some improvements to accommodate construction traffic. Internal access tracks are proposed to route throughout the main development areas.

Operational Traffic

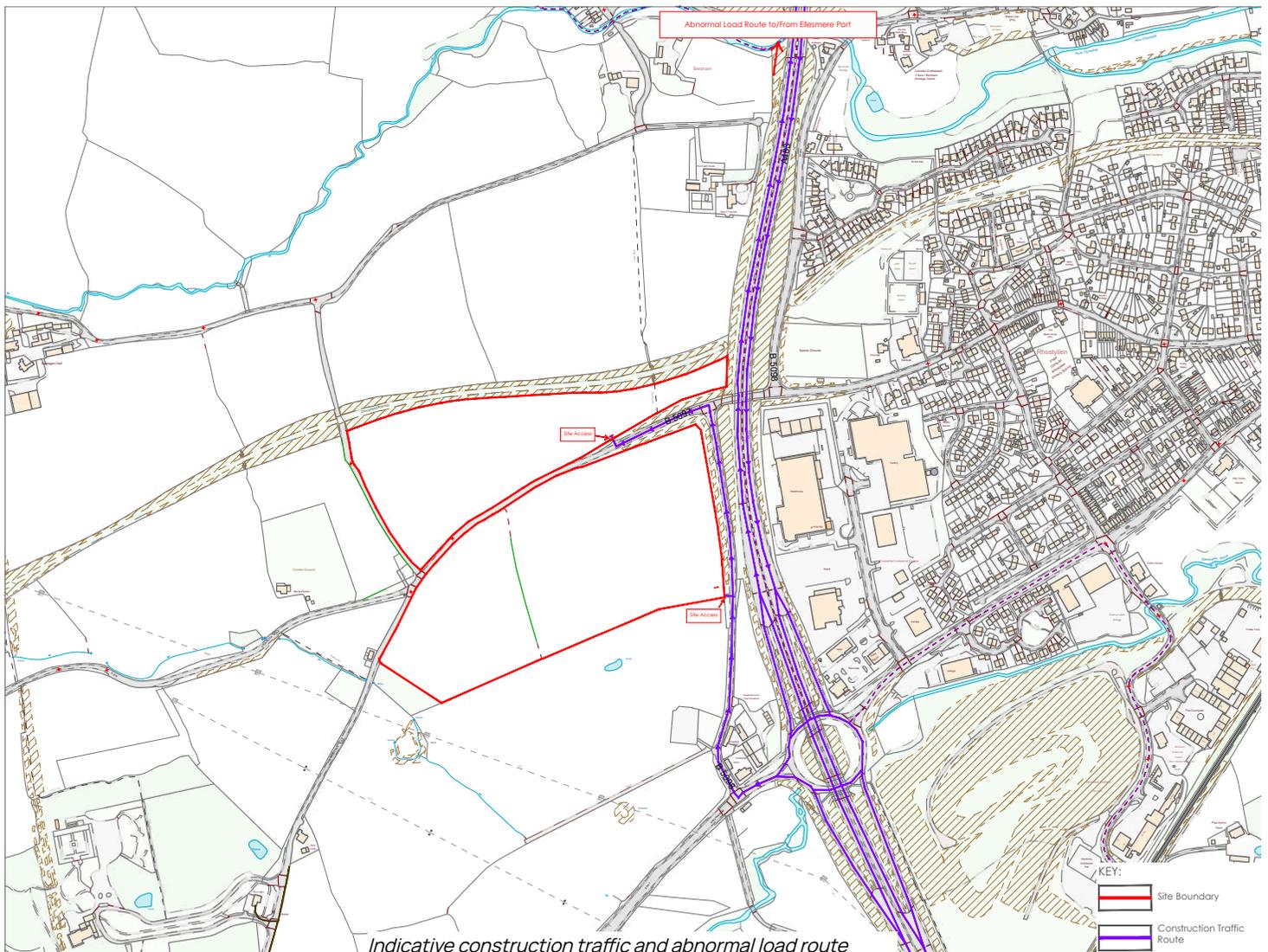
Once operational the site will be visited for occasional routine maintenance, usually by a light goods vehicle. In the first five operational years, regular visits will be made by landscape contractors and ecologists to monitor and manage completed landscape works.

The figure on this board illustrates the indicative construction traffic route.

Construction Traffic

We have undertaken an assessment to confirm that the necessary abnormal load construction vehicles can safely access and egress the site. A small number of loads may require abnormal load transportation. The identified access route for abnormal loads is likely to be from Ellesmere Port, via the A483, the B5098 and the B5097. This route will be agreed with the local highway authority and police, who will also be informed of delivery timings once this information is available.

We are currently assessing the number of construction vehicles which will be required and this will be detailed within the Construction Traffic Management Plan which will be submitted as part of the planning application.



Technical Assessments

Noise

The planning application will be supported by a Noise Impact Assessment.

To date we have undertaken a preliminary noise analysis which has identified the closest noise receptors and informed the proposed layout. We will continue to work with our acoustic consultants to implement the appropriate design and mitigation steps to ensure the development does not cause significant noise impacts.



Hydrology

The majority of the site is located within Flood Zone A, meaning it is not constrained by flood risk.

We are currently undertaking a Flood Consequences Assessment and surface water drainage strategy which will form part of the planning application. This will be consulted on by Natural Resources Wales and Wrexham council's SAB body to ensure the proposed design is suitable and the scope of mitigation measures does not result in flooding on or offsite.



Agricultural Land Classification (ALC)

An ALC survey has been completed confirming the site comprises Grade 2 and 3a agricultural land. In planning policy terms, 'Best and Most Versatile' agricultural land comprises grades 1, 2 and 3a. Previous surveys of this general area of Wrexham have shown higher grade land is common and suitable sites on lower grade land are not available.



Archaeology and Heritage

We have liaised with Clywd-Powys Archaeological Trust (CPAT), archaeological advisers to Wrexham County Borough Council and Cadw, the statutory heritage consultee for Wales.

An Archaeological Desk Based Assessment has been completed which considers the proposal in the context of designate heritage assets, such as nearby Offa's Dyke, as well as the potential for sub-surface non-designated assets. Following this and upon recommendation of CPAT, a geophysical survey of the site has been completed.

A Settings Assessment will be completed to determine the potential for any effects on heritage assets within 3km of the site. It is anticipated that, with appropriate mitigation, such as screening, sensitive site design and considered planning of the cable route, the potential impact of the development on nearby above ground heritage assets will be minor to moderate.



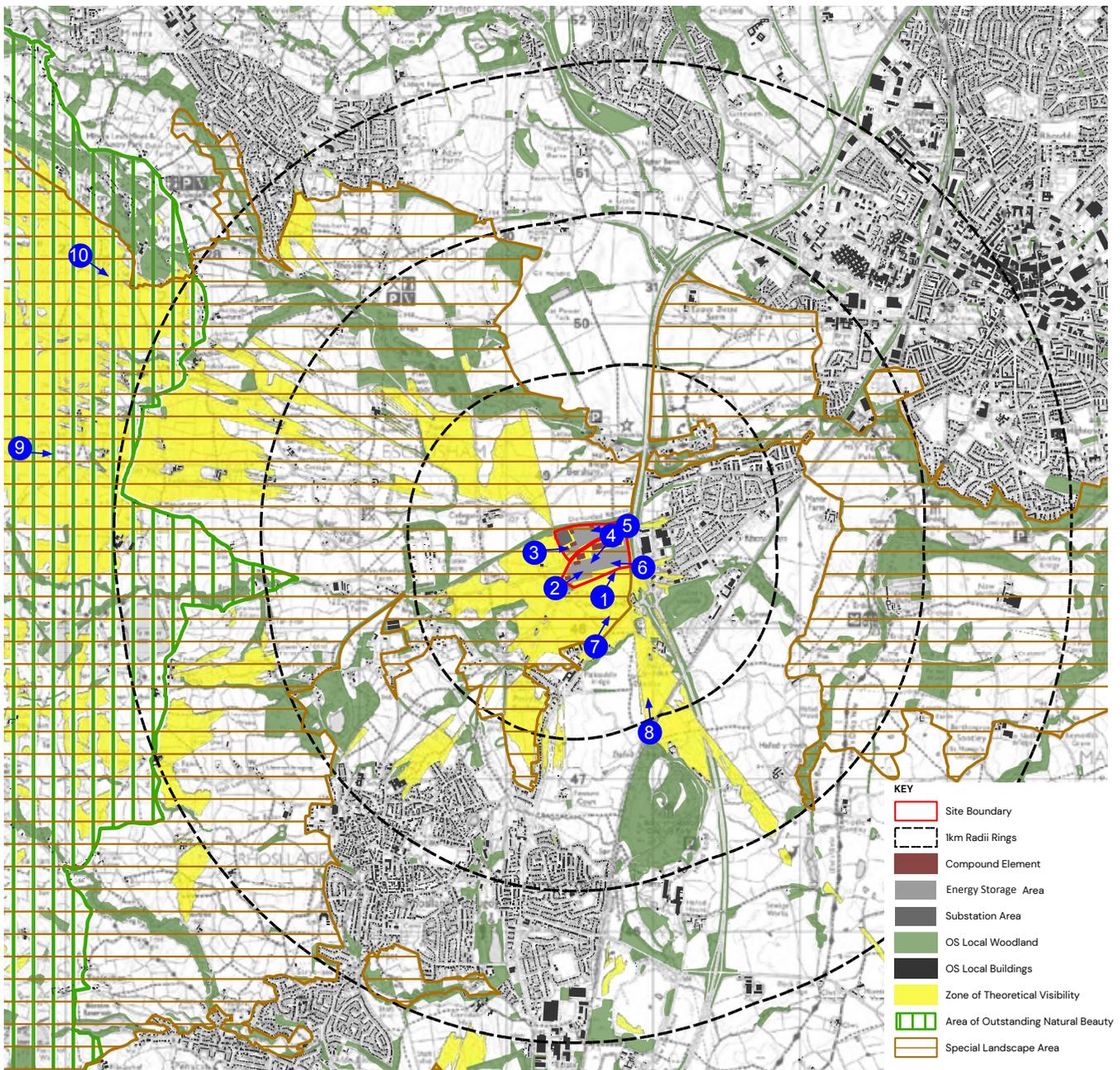
Landscape and Visual Impact

We have completed a Landscape Appraisal and are currently undertaking a full Landscape and Visual Impact Assessment (LVIA) which will accompany the planning application. Key viewpoints from the surrounding area will be assessed and provided with this LVIA.

The site is not included in any national designations. However, the site is within a Special Landscape Area, a local landscape designation defined by Wrexham County Borough Council. The site also lies approximately 1.8km to the east of the Clwydian Range and Dee Valley Area of Outstanding Natural Beauty (AONB) however due to distance, landform and intervening vegetation there are minimal views.

The site benefits from some physical and visual enclosure due to the wooded dismantled railway embankment to the north and existing roadside woodland to the east and southeast, which restrict views south towards the site and west from the A483 and Rhostyllen in the east.

The Landscape Appraisal concluded that with retention and enhancement of existing landscape features any notable effects on landscape character and visual amenity as a result of the proposed development would be localised and could be further reduced with additional measures, which would provide increased filtering and screening of the proposed development as planting matures. Proposed features are noted on the Ecology board.



Proposed Viewpoints



Viewpoint 1



Viewpoint 3



Viewpoint 4A

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Proposed Viewpoints



Viewpoint 4B



Viewpoint 4C



Viewpoint 9

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Operation

Energy Storage Systems are a safe technology and there are many sites across the UK operating today. The development will incorporate a number of embedded safety mitigation measures to ensure that it operates safely and in accordance with regulatory requirements and the requirements of the local fire service.



Will there be a site contact during construction?

A site manager will be located on site during the construction phase and contact details will be provided to the local community.



How much operational traffic will there be?

Once operational, it is likely that a member of staff will visit the site once a month in a light goods vehicle to undertake general maintenance of the site, e.g. checking on planting, cleaning pieces of equipment, removal of any debris around equipment blown into the site and any equipment maintenance.

Who deals with planting?

We would instruct an Engineering, Procurement & Construction company (EPC) to oversee construction. This company will carry out the planting which will be set out on the Landscape Planting Plan. Following construction, Innova would operate the site and will be responsible for its upkeep and maintenance.

How many jobs will be created?

The proposal will create potential opportunities for the local area during the construction phase. As part of our procurement process we will hold 'local supplier information events' to raise awareness of these opportunities and encourage local businesses to tender for work.

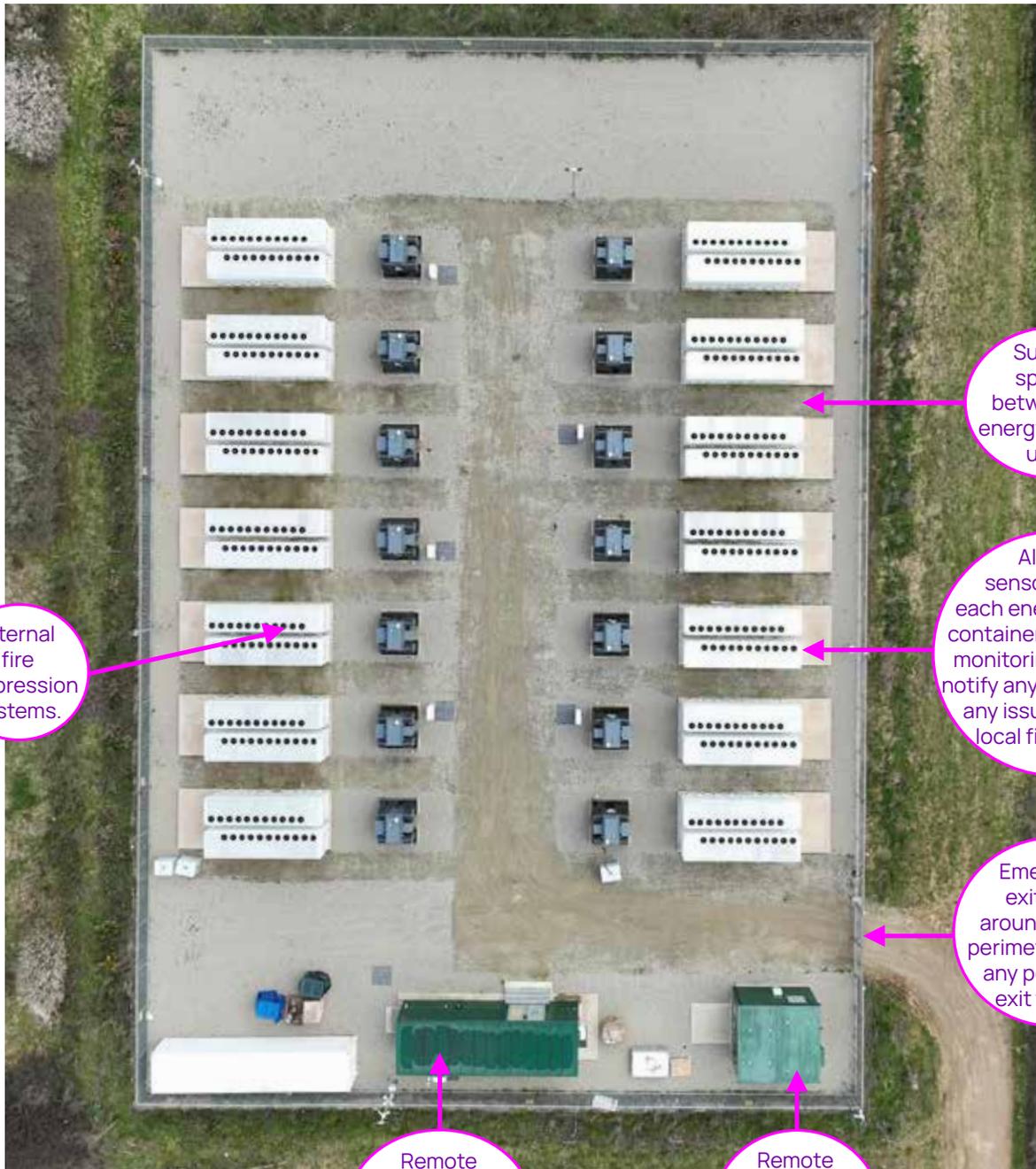


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Safety

The safety of our sites is of key importance to Innova who will be both owning and operating the development. We are designing a proposal which includes a number of safety measures to ensure the surrounding residences, buildings and the equipment on-site remain in suitable working condition.

The design of the proposed development incorporates several safety measures. It is anticipated that measures will include:



Internal fire suppression systems.

Suitable spacing between the energy storage units.

Alarms/sensors within each energy storage container linked to our monitoring system to notify anyone on site of any issues, and the local fire service.

Emergency exit gates around the site perimeter to allow any persons to exit the site.

Remote control of the site to switch on/off the equipment.

Remote 24 hour monitoring of the equipment.

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Supporting the Community

Our Community promise

We believe it is important that local communities share in the benefit our project brings. For all our energy storage projects we offer a community benefit fund, which can be used to support local projects and priorities. We will work with our host communities to agree the best way to provide and administer that fund.

Every year for the 50-year project lifespan, this 1,025MW Storage System proposal will contribute £50 per MW to the community benefit fund. A further £20 per MW will be made as an annual charitable donation. The total annual payments which would be generated for this project are set out below.

The smart future
of green energy



From early in the process of developing all our sites, we like to reach out to the community which will host the development and set out the local benefits this can bring. This includes setting up a Community Benefit Fund and a Charitable Fund, which would be funded by the project with an annual sum, based on the installed MW capacity of the site, paid into each fund for the entire lifespan of the project.

£51,250

To Community Benefit Fund



per year

£20,500

To Charitable Fund

OUR COMMUNITY PROMISE

The above figures are based on the contributions which will be made every year for the 1,025MW project of £50 to the local community and £20 charitable donation per MW installed

Community Involvement

- Work with community councils and local stakeholders to place funds.
- Interested to hear community suggestions.
- We have worked with schools to deliver STEM sessions.

Local Economic Benefits

- Local supply chain and employment during construction (Contractors, materials, security, hospitality etc.).
- Significant business rates retained locally.
- Rural diversification.

Next Steps

Pre-application and community consultation - Current

We have submitted a pre-application advice request to Wrexham County Borough Council.

We will consolidate the feedback from this consultation event and the Council's pre-application response to help us finalise the planning application and ensure we have taken everything into account.

We would appreciate any feedback you choose to share with us at our event, either in person or using the feedback forms provided. If you would like a little more time to consider the proposals once you have met with us, you can contact us through the project website.

Environmental Surveys - Ongoing

We are finalising our site-specific assessments and design of the proposed Energy Storage System. The ongoing surveys include the flood risk assessment, various ecology surveys, landscape and transport.

Planning Application Submission – Summer 2023

The planning application is expected to be submitted to Wrexham County Borough Council in Summer 2023.

As part of the planning process, a statutory pre-consultation period of 28 days is required before submission of any major application and the proposals made available to the public and a range of statutory consultees. Following this period and any further amendments to the application this will be submitted to the Council. The application documents will be available to view on the Council's website once an application has been submitted and stakeholders will be able to comment.

Construction and Operation

If we are successful in securing planning permission, our construction period would be kept to a minimum duration. Planting would be implemented in the first planting season following the construction activities.



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