

BUXTON ROAD BATTERY ENERGY STORAGE SYSTEM

Project Summary

Greenergy Renewables UK is proposing a 20MW stand-alone Battery Energy Storage System (BESS) on land off Buxton Road (A6), High Peak. With a confirmed grid connection at Buxton Substation, this project will help meet the UK's energy security, affordability and climate targets by storing surplus electricity and supplying it back to the grid when it is most needed.

Buxton Road BESS will store enough power to provide for 60,000 homes per hour, more than enough to power the entire High Peak district.

There have been no objections to the application and we hope you will support the officer's recommendation for approval.

The case for battery storage

As the UK moves towards a zero-carbon electricity system by 2030 (as committed to by the current UK Government), battery storage is no longer optional - it is essential. With intermittent renewables like solar and wind becoming dominant, we need flexible systems to balance supply and demand. Currently:

- Electricity demand is set to double by 2050, driven by electrification of transport, heating and industry.
- In 2022, £932 million was spent curtailing renewables and activating gas power to fill the gap - a cost passed on to consumers. It is estimated that wind curtailment costs could be slashed by up to 80% annually if sufficient battery energy storage is developed.
- The UK has set a target of 20GWh of battery storage by 2035. Today, we have less than 6GWh installed.

Buxton Road BESS will:

- Store electricity when renewable generation exceeds demand.
- Release it during peak periods - supporting local and national grid reliability.
- Reduce emissions and consumer costs.
- Help avoid the need for expensive grid reinforcements and fossil fuel backup.

With a four-hour duration, this project is aligned with National Grid's Future Energy Scenarios and will provide flexibility to match the UK's growing variable renewable output.

Secured grid connection in a constrained market

One of the most significant barriers to deploying BESS is grid access. Most applications face **10-15 year delays** or unaffordable upgrade costs due to a lack of spare capacity.

Buxton Road is different – it has a **confirmed connection at Buxton Substation**, which means:

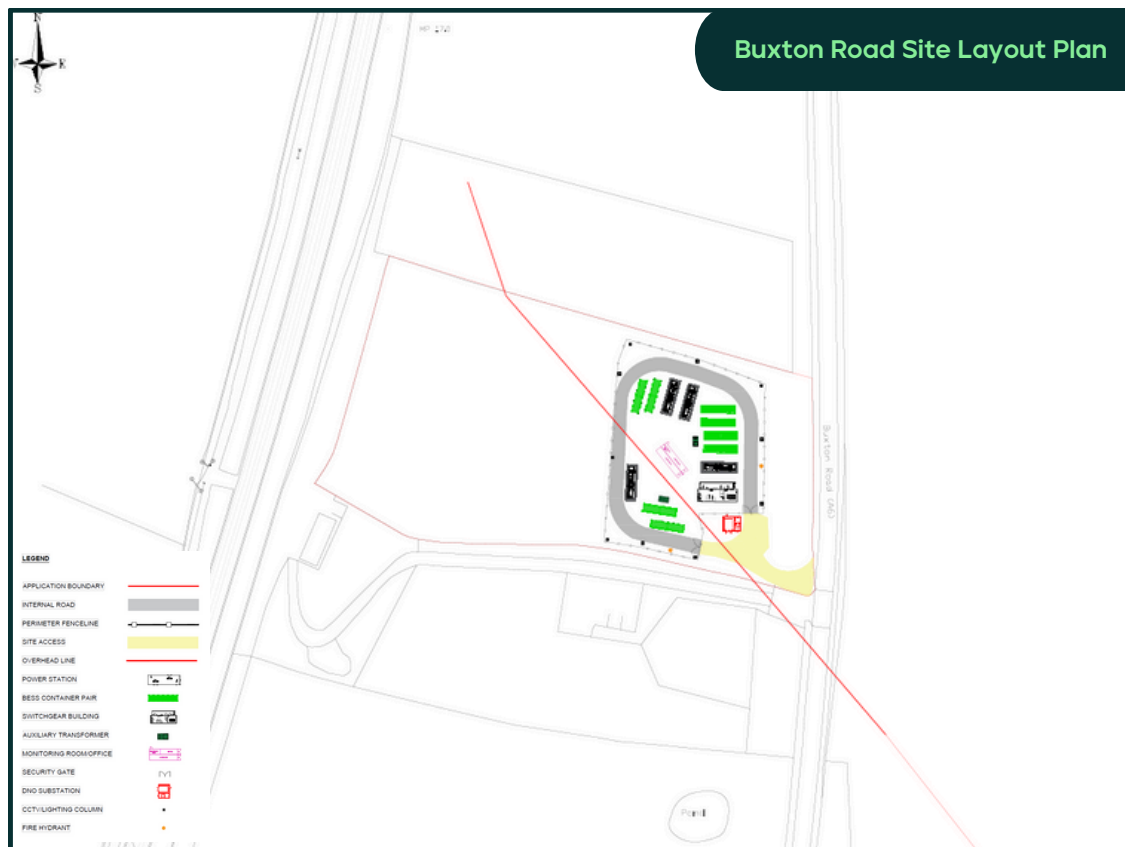
- No long lead times or speculative access.
- The project is ready to deliver as soon as planning permission is granted and pre-commencement works are carried out.
- Valuable grid capacity will be put to immediate use in an otherwise constrained region.

Why this location?

The location off Buxton Road was chosen after careful site selection and technical evaluation, based on:

- Proximity to the Buxton Substation- the site is located just over 1km away from the point of connection
- Avoidance of sensitive receptors – away from residential properties, flood zones, or Best and Most Versatile (BMV) land.
- Commercial viability – the site needs to have a willing landowner that can enter into a long-term lease agreement on acceptable terms for project delivery.

BESS must be sited close to substations for efficiency and cost reasons – typically within 3km, beyond which cabling cost become prohibitive. No suitable brownfield or previously developed land exists within this range.



Site design and landscape integration

The design prioritises discretion and ecological sensitivity:

- **Battery containers** are 2.8m high and arranged on permeable gravel to support drainage.
- **High Voltage transformer**, the tallest element at just over 5m is the 33kV transformer which will be housed in a brick building meaning the most intrusive electrical infrastructure will not be visible.
- **Over 25% Biodiversity Net Gain** through provision of native wildflower meadows and new tree/woodland planting.
- **Access via Buxton Road**, utilising an existing access and minimising disruption.
- **No impact to public rights of way**, with none located in close proximity to the site.

A Landscape and Visual Impact Assessment (LVIA) has been carried out and found impacts to be acceptable. Additional screening will further reduce visibility from nearby receptors.



Heritage and setting

No listed buildings are impacted by the proposed development. During initial site investigations it was discovered that the proposal site contains part of the line of a Roman road thought to run from Buxton to the fort at Melandra, Glossop. An amended layout and landscaping plan was produced and submitted during determination period which applies an additional 5m buffer from the earthworks associated with said feature, and the Heritage Officer is satisfied that the development proposals would have no harm to this heritage asset.

Environmental and community benefits

- **Carbon savings of up to 350,000 tonnes** over the project lifespan.
- **Flexibility to integrate more renewables** into the local and national grid.
- **Minimal construction footprint** - under one hectare of developed land.
- **Quiet operation** - fans emit low-frequency sound, but over 300m separation is maintained from properties, and noise levels are deemed acceptable by Environmental Health.
- **Community Fund**- will be available upon commissioning of the site and will contribute towards local schemes and initiatives, suggestions for which are to be gathered post-consent

Summary and recommendation

The Buxton Road BESS project will deliver essential grid flexibility, support energy security, and reduce carbon emissions - all in line with national and local policy goals.

With a confirmed connection, a considered site layout, no community opposition, and no objection from statutory consultees, this project is both **strategic and achievable**.

We respectfully ask you to support the planning officer's recommendation to approve the application.