WHO IS ETHICAL POWER?

- Ethical Power is the only independent British \checkmark renewable energy company with competency across the entire life cycle of a project, from design through to construction, grid connection and asset management.
- Ethical Power has a track record of over 100 solar and battery energy storage projects across the UK and a growing international presence.
- Ethical Power is committed to delivering clean \checkmark energy projects which help tackle the climate and ecological emergency.
- The development team is responsible for finding suitable locations for new projects and managing the planning, design and community engagement activities.

Visit ethical-power.com to find out more



Development

Integrated solutions







WHY IS BATTERY ENERGY STORAGE NEEDED?

Reduced Carbon Emissions

Battery Storage is required to decarbonise the national grid and achieve the UK's legally binding target of net zero carbon by 2050. Urgent action is required due to the devastating effects climate change is already having on the planet.



Increases renewable energy generation

Battery Storage projects enable new renewable energy generating stations to connect onto the national grid. Without battery storage schemes, the national grid will continue to rely on energy generation derived from burning fossil fuels.



A more stable energy network

Renewable energy generation such as wind and solar, is intermittent, meaning battery storage is required to balance out the peaks and troughs of supply and demand. It also keeps the grid within safe operating parameters and reduces the risk of 'blackouts'. Battery schemes reduce the need for expensive grid upgrades which could contribute to higher electricity bills for consumers.

4

Increased energy security

Battery Storage projects help reduce the reliance on energy generation derived from burning fossil fuels including imported gas. This means the UK can become more self-sufficient in terms of generating power and less impacted by fluctuations in the global markets.







PROPOSED SCHEME



Size of the project

A 49.9MW battery energy storage scheme (BESS) including a 132kV Transformer



Storage Capacity

The scheme would store enough energy to provide instantaneous power for around 13,000 homes for 2 hours

Expected Project timeline



Visit ethical-power.com/stonebarrow-farm for the latest updates



Planting

Tree and hedgerow planting would increase biodiversity and reduce potential visual impacts





Site Security

The compound would be secured by perimeter fencing and pole mounted infrared CCTV cameras directed inside the fence line





Site Access

The c.1.5-acre site would be connected to Stonebarrow Lane via a new crushed stone access track

Lifespan of project

The project is temporary and would be decommissioned after 20 years, and the site restored to its existing use

Decommissioning and Site Restoration

(Between 2045 and 2047)

Operation & Maintenance and Biodiversity Management (20 years)



WHY **STONEBARROW FARM?**

A viable grid connection

There are significant grid constraints at a national level which means it is extremely challenging to secure a grid connection for new battery storage facilities. The Stonebarrow site benefits from a viable grid connection at Axminster substation.

The proposed site location protects more sensitive areas

The site is not subject to any statutory designations including as ecology, heritage or landscape. The scheme is located outside the areas of high flood risk and the best agricultural land.

Limited visual and amenity impacts

There is extensive natural screening along three of the four site boundaries. New landscaping is proposed including a new hedgerow with trees along the western boundary to mitigate any visual impacts. The site is located away from residential properties and would not result in adverse amenity impacts.

Safe and suitable access

A safe and suitable access can be provided through all stages of the proposed development. The local highway network can adequately accommodate the relatively small increase in traffic movements during the short 8-12-week construction stage.

> For recent news about the project visit: ethical-power.com/stonebarrow-farm



The draft site boundary is outlined in red. The lease agreement boundary is shown in blue. This enables maintenance access to hedgerows outside of the site boundary.

Draft Site Location Plan



LOCAL ECONOMIC BENEFITS OF THE PROJECT



Rural Diversification

The proposal would support the landowner to continue operating their existing agricultural business within a more sustainable financial model due to rental income from a 20-year land use agreement.



Supports the Local Economy

The scheme provides opportunities to support local jobs in construction, engineering and biodiversity maintenance.



Local Council funds

The project would contribute approximately £150,000 per annum in business rates to East Devon District Council (EDDC) which can be used to support local services and priorities.









BIODIVERSITY AND ENVIRONMENTAL BENEFITS



Addressing the Climate Emergency

- Enables new renewable energy generation stations in Britain to connect to the national grid
- Reduces need for alternative forms of energy generation derived from burning fossil fuels
- Contributes towards meeting the UK's legally binding commitment to net-zero carbon by 2050
- Increased tree and vegetation cover which will remain long after the operational period
- Contributes towards tackling the climate emergency

The proposal achieves a much greater biodiversity net gain than the minimum 10% required by The Environment Act 2021 and protects and enhances wildlife in the surrounding area.



Habitat Creation and Enhancement

- New 100m hedgerow along the western boundary \checkmark
- Native tree planting within the hedgerow \checkmark
- Landscape planting along the southern boundary
- Wildflower and grassland planting around the perimeter of the site
- Installation of bat and bird boxes if appropriate \checkmark
- Designed in collaboration with the ecology consultants following extensive survey work



Addressing the Ecological Emergency

 Allows natural 'rewilding' of field boundaries Supports pollinators and insect species Protects tree roots from agricultural machinery Increases foraging opportunities for wildlife Protects and supports wildlife in surrounding areas \checkmark Provides a measurable biodiversity net gain Contributes towards tackling the ecological emergency



WHAT IS INCLUDED IN THE SCHEME?



Battery Storage Units

Battery units store electrical energy when demand is low and release it to the grid when demand is high.



Fencing is used to secure the compound and protect wildlife from high voltage equipment.



Maintenance Cabins

Shipping container style cabins are required for site maintenance and the secure storage of equipment.



Access Track

A permeable crushed-stone access track would provide access from Stonebarrow Lane for bi-weekly site maintenance.





The transformer ensures the electrical energy between the grid and the battery units is at the correct voltage.

Remotely monitored infrared CCTV cameras would be pole mounted and directed internally toward the battery units.



TECHNICAL DRAWINGS (DRAFT)







Battery Storage Unit

132kV Transformer

Maintenance Cabin





Stock Fence and CCTV



PROPOSED LAYOUT PLAN (DRAFT)





FIRE RISK & PREVENTION

The battery units would follow the principles for Battery Safety as follows:



Safety Standards - using battery technology which has been robustly tested to the highest industry standards and proven to be at low risk of thermal runaway/fire.



24hr monitoring of equipment – automatic and remote monitoring of operational parameters, such as temperature, to promptly respond to warnings and prevent faults by switching off the system.



Fire suppression systems – in the event that fire, smoke, or other gases are detected, then systems are in place to suppress any ignition to prevent a runaway event.



Engagement with Devon & Somerset Fire & Rescue Service - Fire Risk Management Plan to be agreed with the local FRS, in accordance with recently published national planning guidance.













FAQs

<u>Why are you using agricultural land instead of previously developed (brownfield) land?</u>

Previously developed land was prioritised in our site searching process. We have not found any brownfield sites within a 5km radius from the Axminster substation that are capable of hosting a viable BESS project and have a willing landowner. The 1.5-acre scheme increases biodiversity and does not result in permanent loss of farmland.

<u>Why is another Battery Storage scheme being proposed in this area?</u> The location of new Battery Storage is determined by the availability of capacity on the national grid network. Capacity exists at Axminster substation and a search of suitable sites has been undertaken. The Stonebarrow Farm site is considered suitable for development as the environmental impacts are limited and can be mitigated.

<u>Would the Battery Storage scheme impact highway safety or cause congestion on the local road network?</u> Very little traffic would be generated except for deliveries during a relatively short construction phase of approximately 3 months. A Transport Assessment and Construction Traffic Management Plan would be produced to ensure highway safety and minimum traffic disruption during the construction phase. During the operational phase, the site would be visited once a month by engineers in a small van for routine maintenance.

<u>Would the Battery Storage scheme create excessive noise?</u> Air conditioning (AC) units are required to enable the temperature of the battery units to be controlled. The transformers and AC units create a low humming sound which is not audible beyond several metres. The equipment would not be audible from the nearest residential property which is more than 200m from the site.

<u>Would the Battery Storage scheme risk contaminating ground water supplies?</u> A containment mitigation scheme is required and would be submitted and approved by EDDC prior to construction to ensure the effective protection to local surface water and groundwater supplies, by minimising the risks in the unlikely event of a battery leak or thermal runaway event taking place on the site.

How can you ensure the supply chains for lithium-ion batteries are ethical? As a vertically integrated company, Ethical Power closely monitors its supply chain through each stage of the development process. We use the top Tier 1 Suppliers who are carefully and regularly audited and we follow stringent due diligence procedures to ensure the best industry standards are always maintained.

<u>What happens to the redundant equipment after it is decommissioned?</u> Typically, battery units have a 20year lifespan meaning most schemes have yet to reach the decommissioning stage. However, global recycling markets are beginning to emerge as battery storage development becomes crucial to reaching net zero. Initiatives have been set up such as the Global Battery Alliance (GBA) which aims to create a sustainable battery supply chain by 2030. The GBA is a public-private partnership of over 150 organisations focused principally on how best to increase the repurposing or recycling of batteries.

<u>Would the project 'just be a money-making scheme' for Ethical Power?</u> The privately owned scheme provides essential grid balancing services for the national grid. BESS schemes mitigate some of the high costs to upgrade the grid infrastructure across the country and therefore contributes to better value for money for consumers as Britain's energy usage continues to increase.





EXISTING VIEWS TOWARD THE SITE

The proposal would be very well screened in views from the surrounding public rights of way. The screening effects would be enhanced by additional tree and hedgerow planting.



CONTEXT BASELINE VIEWPOINT 6 From PRoW bridleway Hawkchurch 17a, looking east



- 286m

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Date & time of photograph - 28/06/2023 @ 12:18 Distance from site OS grid reference - 335707, 98979



CONTEXT BASELINE VIEWPOINT 8 From footpath Hawkchurch 18, looking east



















Camera make & model - Canon EOS 5D, FFS Viewpoint height (AOD) Date & time of photograph - 28/06/2023 @ 11:41 Distance from site - Canon EOS 5D, FFS OS grid reference - 335597, 99038



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Approximate extent of site

Viewpoint height (AOD) - 194n - 398m

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EXISTING VIEWS TOWARD THE SITE

The proposal would be very well screened in views from the surrounding public rights of way. The screening effects would be enhanced by additional tree and hedgerow planting.



CONTEXT BASELINE VIEWPOINT 2 From PRoW footpath Hawkchurch 17, looking north



OS grid reference - 336137, 98787



CONTEXT BASELINE VIEWPOINT 4B From PRoW bridleway Hawkchurch 17a, looking north east



 Camera make & model
 - Canon EOS 5D, FFS
 Viewpoint height (AOD)
 - 209m

 Date & time of photograph
 - 28/06/2023 @ 11:55
 Distance from site
 - 64m
 OS grid reference - 335935, 98884



P23_1175_EN_06 I STONEBARROW FARM I ETHICAL POWER DEVELOPMENT LTD

Approximate extent of site

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CONTEXT BASELINE VIEWPOINT 3B From PRoW bridleway Hawkchurch 17a/ footpath Hawkchurch 17, looking west to east



Date & time of photograph - 28/06/2023 @ 12:12 Distance from site OS grid reference - 336061, 98844



CONTEXT BASELINE VIEWPOINT 5 From PRoW bridleway Hawkchurch 17a, looking east



OS grid reference - 335805, 98932

Approximate extent of site

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- 28m

 Camera make & model
 - Canon EOS 5D, FFS
 Viewpoint height (AOD)
 - 204m

 Date & time of photograph
 - 28/06/2023 @ 11:52
 Distance from site
 - 191m

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