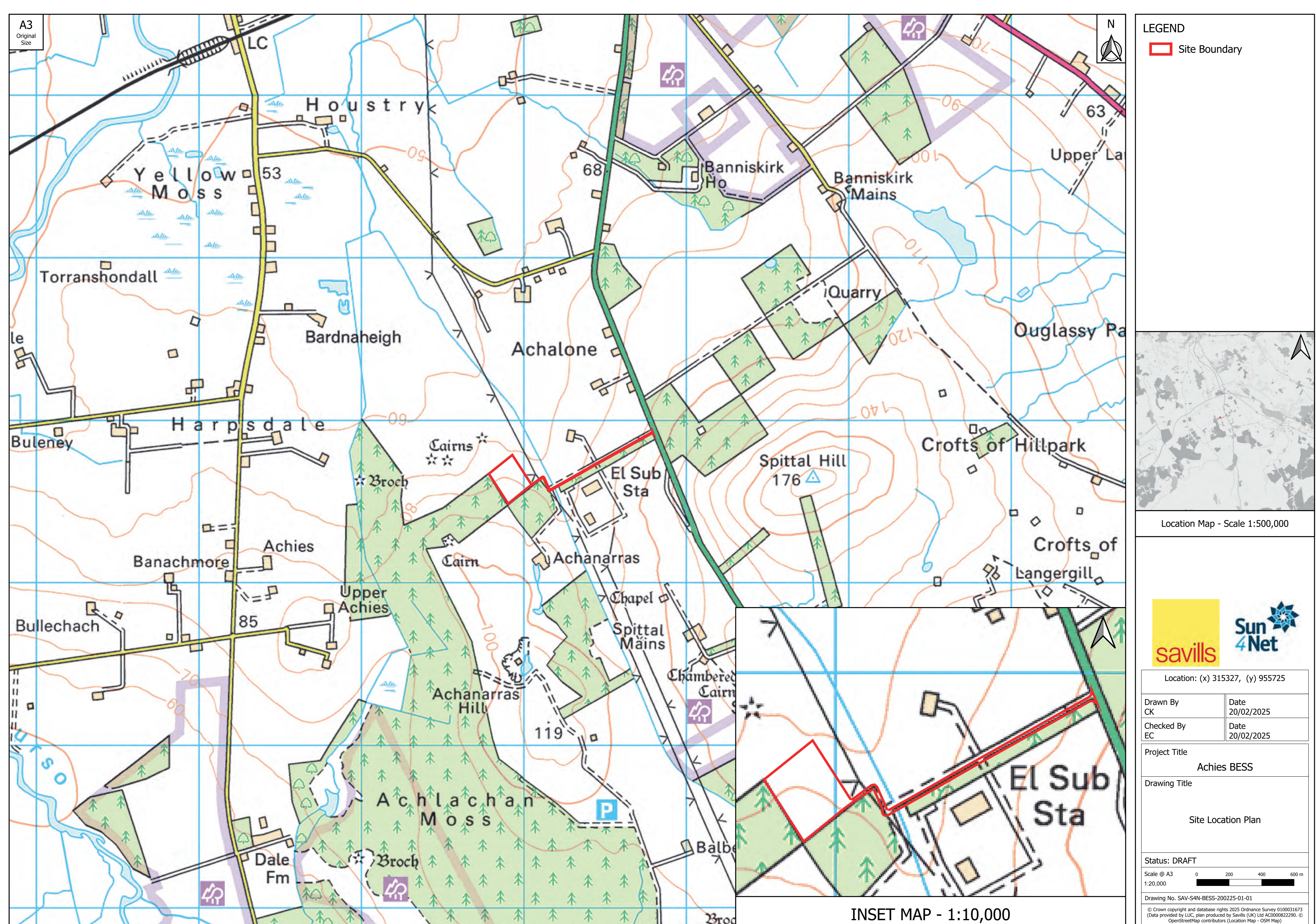


Achie's Battery Energy Storage System (BESS)



WELCOME

Welcome to our community consultation event. We appreciate your time and interest in learning more about the proposed Achies Battery Energy Storage System (BESS).

This event is designed to provide you with more information and to give you an opportunity to ask questions and make comments. Please take your time to study the display banners which outline key aspects of the proposal.

Your feedback is important so please share your thoughts, questions, or concerns with our team today. We would also encourage you to complete the community questionnaire during your visit. Alternatively, you are welcome to take the questionnaire away to complete. You can return it by 11th April 2025 using the Freepost address provided. If you would rather fill the community questionnaire in online, please scan the QR code:



CONTACT US

01786 820 111
peter.keep@sun4net.co.uk
Freepost FCHANGE

The information on display at this event is also available on our website:

www.achiesenergystorage.com



Achie's Battery Energy Storage System (BESS)



PROJECT OVERVIEW

Sun4Net develops large battery energy storage systems (BESS) which store electricity to help make the electricity grid more sustainable. We are proposing to build one of these battery systems, which we are calling Achie's BESS, on land to the north west of the existing Spittal Converter Station. If consented, the Achie's BESS will occupy around 5 acres of land and will have a grid export capacity of 162 MegaWatts (MW). We anticipate applying for permission for a temporary period ie: 40 years. The development is expected to include the following components:

- ❁ Battery energy storage units (around 70 in total, subject to final design) which will be used to store energy from the electricity grid and release it back in times of higher demand.
- ❁ A dedicated substation to step the voltage up or down so that the electricity can be transferred between the battery units and the electricity grid.
- ❁ Underground cable to connect the BESS to the existing Spittal Converter Station.
- ❁ Site access tracks for maintenance and emergency vehicles.
- ❁ Drainage infrastructure.
- ❁ Safety and protection systems including fire suppression, monitoring systems, and automated shutdown mechanisms to prevent overheating or malfunctions, as well as security systems, such as lighting, CCTV and fencing.
- ❁ Landscaping and biodiversity enhancements such as earth bunds and new tree planting and other environmental enhancement works – we are currently exploring opportunities for peatland restoration/rewetting.

Battery Energy Storage System (BESS)



HOW DO THEY WORK?

Battery energy storage systems, or BESS, are designed to support the electricity grid by storing extra energy when demand is low and exporting it back to the grid when demand is high. They typically use lithium-ion batteries, similar to those found in mobile phones and electric vehicles, but on a much larger scale, like the ones shown in the photo above. These systems are managed with advanced software to optimise efficiency and respond to real-time grid conditions.

One of the key roles of BESS is to support renewable energy sources like wind and solar. Because these energy sources are variable—producing electricity only when the sun is shining or the wind is blowing—BESS store excess energy during periods of high generation and release it when production is low. This ensures a steady and reliable energy supply, reducing reliance on fossil fuels and making renewable energy more practical and efficient.

BESS also reduce the need for constraint payments to wind operators, which are paid when wind turbines have to be switched off due to excess supply. By storing surplus wind energy instead of curtailing production, BESS play a key role in enabling Scotland's transition to a low-carbon energy system by maximising the efficiency of renewable energy generation which will ultimately lower costs for consumers.

The Scottish Government's **Draft Energy Strategy and Just Transition Plan** highlights the importance of energy storage in reducing reliance on fossil fuels, improving grid stability, and integrating more wind and solar power into the electricity network. By ensuring that excess renewable energy is stored and used when needed, BESS helps Scotland progress toward its net zero greenhouse gas emissions target by 2045 while enhancing energy security and affordability.



Background



WHY HERE?

The site for the proposed Achies BESS has been specifically chosen because of its proximity to the existing Spittal Converter Station to the immediate south east, which has available capacity for the BESS to connect into. Sun4Net has an agreement to connect into the Converter Station in July 2027.

This proximity reduces the distance between the BESS and the grid connection, minimising costs for connecting cables, reducing energy losses that are experienced as electricity travels through cables, and also minimising any environmental disruption associated with these ancillary works.

A range of environmental factors also influenced the choice of site location. Baseline environmental surveys have been undertaken over the site since 2023. These survey findings will be used to help undertake the environmental assessment work that will accompany the application for consent. Site access will be taken directly from the A9, using the same route used to access the existing Spittal Converter Station.



Environmental impact

WHAT WILL THE EFFECTS BE?

Sun4Net is committed to identifying and assessing the potential environmental effects of the proposed Achies Battery Energy Storage System (BESS). The findings of baseline assessments have been used to help select the site and will be used to inform the final design of the project, to undertake environmental assessment work, identify opportunities for environmental enhancement and any mitigation measures required to minimise and manage the impacts of the project during the construction and operational phases.

The consent application will be accompanied by a range of assessments considering both construction and operational periods with key areas of study likely to include:

- ❁ **Wildlife and habitats:** Ensuring minimal disruption to local flora and fauna, with mitigation measures in place to protect and enhance biodiversity.
- ❁ **Landscape and visual impact:** Assessing how the facility integrates with the surrounding landscape and implementing design measures to minimise visual impact for example, the use of bunding, tree planting, colour treatment of structures etc.
- ❁ **Archaeology and cultural heritage:** Identification of any historical or archaeological assets in the vicinity of the site and ensuring mitigation measures are in place if needed.
- ❁ **Air quality, noise and vibration:** Evaluating construction and operational noise levels and ensuring compliance with environmental standards, with noise mitigation strategies if necessary.
- ❁ **Traffic management and access:** Once operational, traffic entering and leaving the site will be minimal, likely to be a weekly maintenance visit only. Therefore, the transport assessment will focus upon the construction period, and will identify the likely route(s) to site, evaluate the suitability of those route(s) taking cognisance of the type and volumes of construction traffic which will be generated. Mitigation measures will be identified as required.
- ❁ **Water, peat and soil protection:** Implementing safeguards to prevent contamination, considering flood risk and drainage details. Opportunities for peatland restoration will be explored.
- ❁ **Health and Safety** – we will ensure that relevant standards relating to health and safety will be factored into the design of the BESS, for example, taking account of the latest fire safety requirements from the National Fire Chiefs Council. An Outline Battery Safety Management Plan will be submitted with the application.



Landscape and visual impact



WHAT WILL IT LOOK LIKE?

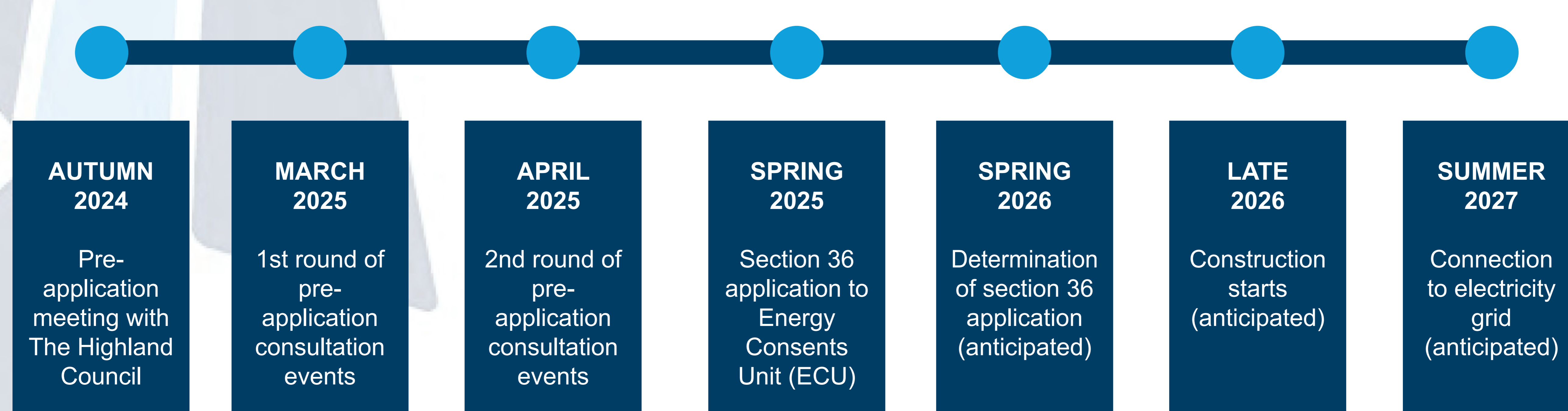
The rechargeable batteries will be housed inside shipping style containers or modular units, depending on the final choice of supplier. Approximately 70 battery storage containers measuring a maximum 3 metres tall are expected. The tallest piece of equipment will likely be a transformer with a maximum height of 4.5 metres. The final size of each element will depend on a future procurement process but is not expected to vary significantly from submitted application drawings and will be controlled by limits placed by planning consent conditions.

Sun4Net is proposing to undertake landscape planting work to screen views of the BESS. Plants and trees will be carefully selected to ensure improvements for local biodiversity. Mitigation measures built into the design to ensure the project integrates as seamlessly as possible into the local environment are expected to include:

- ❁ **Site selection and layout** of the BESS units will make use of existing and proposed screening associated with other neighbouring developments.
- ❁ **Natural screening methods**, such as tree planting and hedgerows, to blend the facility into the landscape.
- ❁ The battery units and associated structures will be kept as **low in height** as possible to reduce their visibility.
- ❁ The **exterior finishes** will be chosen to complement the natural surroundings to reduce visual contrast.

A Zone of Theoretical Visibility (ZTV) analysis has been conducted to identify areas from which the BESS may be visible. This software uses a 'bare earth' method to represent a 'worse-case' scenario. In reality, screening from existing buildings, woodland and other landscape features will reduce the visibility of the development compared to that shown in the ZTV.

Planning, consultation & indicative timeline



WHAT HAPPENS NEXT?

We will be holding a second round of public events next month (April 2025) where we will present a summary of the feedback we have received so far and provide responses to questions raised. These events will be advertised in the Caithness Courier and a leaflet will be delivered to local residents.

Projects like the Achies BESS require permission from Scottish Ministers under section 36 of the **Electricity Act 1989** and we hope to submit a section 36 application for development consent to the Scottish Government's Energy Consents Unit (ECU) in late spring 2025. The Highland Council will be a consultee in that process, but will not make the final decision on the application.

To support our application, we are proposing to submit the following documents and assessments:

- ❄ Ecology assessment (including birds)
- ❄ Landscape and visual assessment
- ❄ Flood risk assessment / drainage strategy
- ❄ Noise impact assessment
- ❄ Archaeology and cultural heritage assessment
- ❄ Outline Battery Safety Management Plan (BSMP)
- ❄ Socio economic assessment
- ❄ Planning statement
- ❄ Pre-application Consultation (PAC) Report

Following submission, these documents will be available to the public via the ECU's website as well as the project website.

Please note that comments made during this pre-application consultation phase are not representations to the Scottish Ministers. Following submission of the section 36 application to the ECU, there will be an opportunity to make representations directly to the Scottish Ministers.



Achie's Battery Energy Storage System (BESS)



View from Bridge Street, Yellow Moss

COMMUNITY IMPACT

The Achie's BESS has the potential to deliver positive impacts on the local area such as:

- ❄ Increasing biodiversity through selective planting of native species suitable for local birds, insects and other wildlife.
- ❄ Restoring areas of damaged peatland through rewetting, if appropriate.
- ❄ Surveying and establishing a record of heritage assets.
- ❄ Contributing to the local economy through the payment of business rates.
- ❄ Job creation during the construction and operation phases of the project.
- ❄ Retaining electricity in the area by storing it when it is being generated and releasing it back when demand is high.



Martyn Gorman:
Six-spot Burnet Moths



Sam Smith:
Golden Ringed Dragonfly

COMMUNITY BENEFIT

Sun4Net also aims to bring local community investment as part of the development in a way that is proportionate to the size of the project. To find out what the best type of community benefit is for the local area, we are asking local people to give us their ideas.

While you are here today, we invite you to write down your ideas and pin them to the Community Inspiration board so that we can review them and feedback at the next consultation event.

