

FIELD RIGIFA

Field Rigifa would be located on land to the south-west of the planned Gills Bay substation and would comprise the following key components:

- Battery energy storage units, which store the energy from the grid.
- Power conversion systems (including inverters and transformers), which convert energy from alternating current to direct current, so that it can be stored by the batteries.
- Transformers and an interface substation, which steps up or down the voltage of energy being used.
- An underground cable to connect the battery to the planned Gills Bay substation.
- Site access tracks to allow vehicles to safely navigate the site.
- Drainage infrastructure, including an attenuation basin.
- Site security, including CCTV, fencing and lighting.
- Landscaping and biodiversity enhancements.

Since our last consultation event, we've made some changes to our site layout to reflect ongoing environmental studies, constructability requirements, and engagement with stakeholders including The Highland Council. In summary, these changes include:

- Progression of drainage design including the inclusion of an attenuation basin to the north of the transformers and control room
- Progression of access design, including:
 - Selection of the eastern accessway as the preferred access point
 - Swept path analysis to ensure all oversized construction and emergency vehicles can access the site
 - Design of passing places along eastern access road
- Further design of interface substation
- Cut and fill design to inform constructability and create flat surfaces for main site compounds
- Landscape and visual impact analysis to inform areas required for landscaping treatments
- Breeding bird surveys to identify any on-site potential habitats



OUR OTHER BATTERY SITES

Field's experienced team manages each battery storage project's full lifecycle. With projects going through every stage of development and operation, we apply learnings and best practices across our portfolio to ensure reliable, safe and sustainable facilities. A brief overview of three of these sites is included below:



Field Auchteraw

50 MW, near Fort Augustus
In construction

Field Auchteraw will be capable of producing up to 50 MW of electricity once operational. Located near Fort Augustus, Field is continuing to work closely with The Highland Council, with the project expected to start operating in late-2024.

The project demonstrates Field's expertise in developing battery storage on greenfield sites while prioritising landscaping and biodiversity measures to complement the surrounding environment. We've worked closely with the local community to manage traffic impacts; including implementing a one-way system for construction traffic to half the number of construction vehicles on a sensitive local road in response to concerns raised by the community.



Field Oldham

20 MW, near Manchester
Operational

Field Oldham started operating in 2022 and can produce up to 20 MW of electricity. The site is located in a warehouse in the Greater Manchester region.



Field Gerrards Cross

20 MW, Buckinghamshire
Operational

Field Gerrards Cross started operating in April 2024 and can produce up to 20 MW of electricity. The site occupies an existing industrial site alongside an operating water treatment plant.

With automated systems, industry-leading safety protocols, and 24/7 remote monitoring in place, Field Gerrards Cross and Field Oldham highlight our commitment to safe, responsible operations.

INDICATIVE TIMELINE



Early 2024

Early environmental assessments and design work



25 June 2024

Public consultation event 1



22 August 2024

Public consultation event 2



Autumn 2024

Submission of planning application



2025

Determination of planning application



2027 onwards

Construction and operation

FIELD RIGIFA

Field Rigifa would be located on land to the south-west of the planned Gills Bay Substation.

The built infrastructure (batteries, cables, access tracks etc.) is proposed to cover an area of approximately 10 hectares.

We'll also provide biodiversity enhancements to ensure we are having a positive ecological effect on the land we use.

Field Rigifa will be made up of the following components:

- **Battery energy storage units**, which will be used to store the energy from the grid.
- **Power conversion systems** (including inverters and transformers), which convert energy from alternating current to direct current, so that it can be stored by the batteries.

- **On-site transformers and an interface substation**, which either steps up or steps down the voltage of the energy being stored.
- An **underground cable connection** to connect the battery to the proposed Gills Bay substation.
- **Site access tracks** to allow vehicles (including emergency vehicles) to safely get around the site.
- **Drainage arrangements** to allow surface water to drain from the site at the same rate as the existing site.
- **Site security**, including CCTV, fencing and lighting.
- **Landscaping** for biodiversity enhancement.



STORING ENERGY IN THE HIGHLANDS

Scotland has set a target to become net zero by 2045.* Batteries enable much greater use of renewable energy, and therefore play an important role in helping Scotland reach net zero.

Batteries are a vital part of how we can make the most of renewable energy, which is why they are integral to the Highland Council's "Future Highland" Programme. The Highland Council stated in their Net Zero Strategy (2023) that:

"The Council's "Future Highland" Programme sets out a vision of Highland, a centre for global renewable energy, by capitalising on our areas of immense natural capital to deliver alternative energy solutions including developing solar, hydrogen, Hydro, wind and wave solutions."



WHY DO WE NEED BIG BATTERIES?

To reach net zero, increase energy security and help reduce energy bills, we need to store renewable energy and improve the electricity grid's stability and reliability.

Our batteries are designed to fill gaps in the UK's electricity supply by charging up when renewable energy is being produced (such as on windy or sunny days) and discharging energy back into the grid when needed (e.g. when the wind isn't blowing, the sun isn't shining, or we aren't able to import enough energy from elsewhere). This ensures plenty of electricity is available for people to make their morning cuppa, even on a calm, overcast winter's day.

These batteries work a lot like the batteries you use at home, only instead of using our batteries to power a torch or TV remote, we operate large, 'grid scale' batteries.

This means we can rely more on renewable energy and less on expensive fossil fuels to provide electricity to thousands of homes and businesses.

Batteries are also very good at keeping the grid stable, by maintaining a constant and predictable supply of electricity to the grid, at the right frequency.

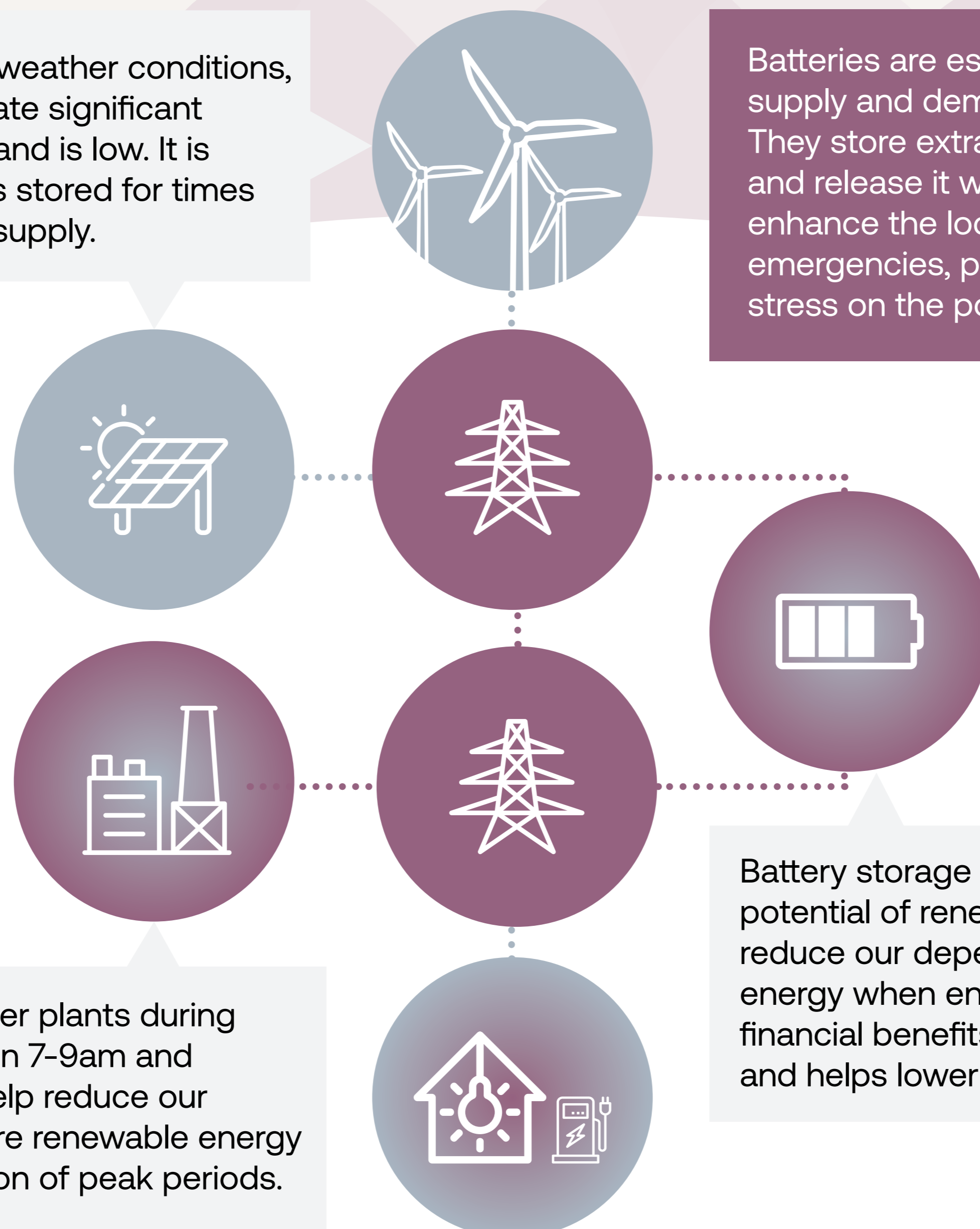
Changes in the supply and demand of electricity on the network create changes in this electrical frequency. This needs to be closely monitored, as if frequency is too high or too low, the network can't operate properly. Field Rigifa will help to keep this frequency at the right level, which in turn helps reduce the chances of network disruptions or blackouts.

Wind and solar energy rely on weather conditions, meaning they can often generate significant amounts of energy when demand is low. It is important this excess energy is stored for times when demand is greater than supply.

Batteries are essential for managing energy supply and demand throughout the day. They store extra energy when demand is low and release it when demand is high. They enhance the local power grid's stability during emergencies, preventing blackouts and reducing stress on the power infrastructure.

We currently turn on gas power plants during peak periods such as between 7-9am and 6-8pm. Battery storage will help reduce our reliance on gas power, as more renewable energy can be stored up in anticipation of peak periods.

Battery storage allows us to maximise the potential of renewable energy sources and reduce our dependence on fossil fuel based energy when energy demand is highest. This has financial benefits, such as reducing energy costs, and helps lower greenhouse gas emissions.



WORKING WITH LOCAL COMMUNITIES

Our batteries will provide huge benefits to the UK, and we take great care to make sure this is not to the detriment of the communities that host them.

We will own and operate Field Rigifa throughout its lifetime. As a responsible developer and operator, listening to local communities matters to us, as it allows us to understand and respond to local issues, and ultimately build and operate better battery sites.

We engage early with communities throughout the development process, oversee the construction on-site and we're responsible for the project once it's in operation. We're part of communities for the long-term.

COMMUNITY BENEFITS

Field is working with the National Schools Partnership (NSP)* to design a community-based education programme which invites and equips young people to explore the diverse range of careers that exist within the renewable energy sector.

The programme is currently in development and will be initially rolled out to local schools surrounding Field Rigifa.

WHY WE'RE DOING IT

The Highland Council recognises that the renewable energy industry is a future growth sector for the Highlands and offers significant local employment opportunities.**

With 65% of young people stating that they don't understand the skills employers need***, Field recognises that educators need support to prepare young people for the jobs of the future.

Field aims to support educators by providing key insights about the diverse types of jobs that exist, the education or training required, and the steps that young people can take to pursue local careers in the renewable energy industry.

WHEN WILL IT LAUNCH?

The programme will launch across several pilot catchment areas across the Highlands at end of August, for the start of the new academic term. Depending on feedback, the programme could be rolled out in other areas.

* The National Schools Partnership is an education network (run by the Brand and Social Impact Agency, We Are Futures) providing free teaching resources to schools across the UK.

** Developing a Strategy to Enable a Future Workforce – A Strong and Fair Economy for all, The Highland Council (2023)

*** Youth Voice Census Report (2022)

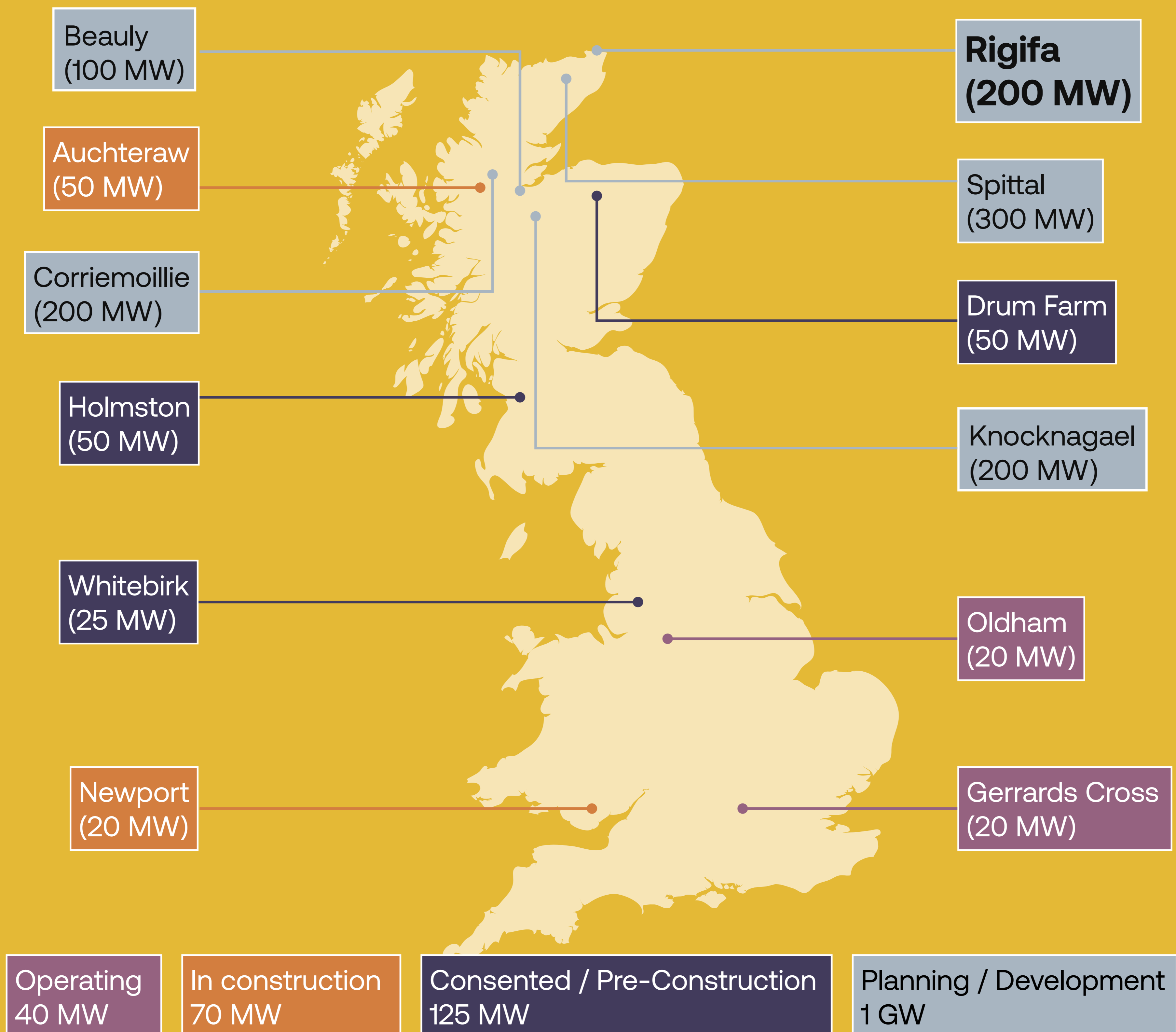
WHO WE ARE

Field is a leading developer, owner and operator of grid-scale batteries across the UK and Europe. Field's aim is to develop battery projects that reduce climate change emissions, support the stable operation of the electricity grid, and bring down electricity prices for consumers.

We're responsible for all stages of project development, from initial landowner engagement through to concept design, planning, construction and operation. We're committed to designing, building and operating projects that are safe, environmentally sustainable and have as little impact as possible on the communities around them.

We value ongoing engagement with our communities to understand and respond to local perspectives and concerns, and will work with local communities throughout every stage of the project.

Field Rigifa would form part of Field's extensive portfolio of battery projects across the UK and Europe. In the UK, we have several projects at varying stages of development:



FREQUENTLY ASKED QUESTIONS

Why do we need batteries in this area?

The Highlands has an abundance of renewable energy resources like wind, hydro and tidal power.

Locating the batteries in close proximity to the Highlands' renewable assets like wind farms ensures this stored energy can be utilised as efficiently as possible, with minimal transmission losses.

At a local level, we've selected a site as close as possible to the planned Gills Bay Substation, which prevents the need for unnecessarily long and intrusive grid connection cables or overhead lines.

How does this help Scotland's energy security?

Scotland has set an ambitious target of becoming net zero by 2045. Achieving this will require a massive increase in renewable energy generation and widespread electrification of transport and heating.

However, this transition also creates challenges around managing Scotland's energy security and resilience as we need more electricity and as we become more reliant on weather dependent renewable resources like wind and solar power.

Projects like Field Rigifa act as giant electric reservoirs, charging up when renewable energy is being produced, ensuring a steady supply of electricity, regardless of the variable renewable conditions. They allow more renewable energy to be used and reduce dependence on fossil fuels.

By storing the abundant Scottish renewable energy for when it's needed, batteries will play a vital role in keeping the lights on across the country while the energy system decarbonises.

When will Field Rigifa be built?

We will be submitting our planning application to the Energy Consents Unit in Autumn 2024. If we are granted consent, we would look to start construction in 2027 and it will take about two years to complete construction.

Are battery energy storage sites noisy?

The main noise associated with batteries are the cooling fans, which keep the batteries from overheating. Noise is measured against existing background noise levels and noise levels are required to meet the relevant British Standards and World Health Organisation Noise Guidelines.

For Field Rigifa, we have carried out baseline noise surveys to understand the existing background noise conditions around the site. We'll carry out a detailed noise assessment to model the predicted noise levels from the operational battery equipment against existing background levels.

This assessment will identify any potential noise impacts on nearby noise-sensitive receptors like homes. Where potential impacts are identified, we'll incorporate mitigation measures into the design, such as acoustic fencing or the orientation of equipment, to ensure operational noise meets relevant regulations.

During construction, noise will also be carefully managed and monitored through our Construction Environmental Management Plan to minimise temporary disturbances to local communities.

Will the project impact local traffic?

Once operational, the battery will have minimal impact on local traffic, with only occasional visits required for maintenance.

When the battery is being built, construction traffic is managed through a Construction Traffic Management Plan. This will include details of construction traffic numbers, vehicle routing and working hours.

As with all aspects of the development, we welcome input from the local community to help reduce any impact on local roads where possible.

FREQUENTLY ASKED QUESTIONS

Will the project cause flooding or impact drains?

Because our projects contain electrically sensitive equipment, flood risk is a key consideration during site selection and project design. We carry out detailed flood modelling to ensure equipment is located outside or above any modelled flood depths, which also ensures there is no increase to flood risk on or off-site.

Existing flood risk at this site is low. We design and build appropriate drainage infrastructure to ensure surface water run-off remains at an acceptable level and does not increase the risk of flooding. These will include rural sustainable drainage solutions, such as swales, which can collect and discharge water into existing drains at no greater rate than the current greenfield situation. Our flood risk assessment and drainage strategy will consider any consequential impact on nearby areas prone to flooding to ensure the development does not worsen any areas susceptible to flooding locally.

Will the project impact trees or ecology?

We have selected this site because of its absence of ecologically sensitive features. We also carry out full ecological surveys, including bird surveys, to identify any potential ecological impacts, and we provide biodiversity enhancements to compensate for any impacts that do occur. This is typically through the planting of native species as part of our landscaping, which will also help to minimise any potential visual impacts.

Are the batteries safe?

Grid-scale batteries are safe facilities. We work hard throughout site design, construction and into operation to ensure the safety of our sites. We only use batteries that have best-in-class fire safety performance and will be compliant with all relevant fire safety standards.

The batteries will be constantly monitored and in the unlikely event that a fire does occur, the facility will employ automatic fire detection and suppression systems.

We're also working with the Scottish Fire and Rescue Service to ensure suitable emergency response procedures are in place, including a Battery Safety Management Plan.

How will the site security be managed?

The security and safety of our battery storage facilities is extremely important. Field Rigifa will have robust security measures in place, including:

- Perimeter fencing and secure gated access to prevent unauthorized entry
- 24/7 CCTV monitoring of the site
- Appropriate security lighting to aid CCTV coverage
- Routine inspections and maintenance by Field's operational staff.

How are cumulative impacts assessed with other planned developments in the area?

We are aware of several other developments proposed in the surrounding area. We are working with other developers where possible to ensure that cumulative impacts, particularly in relation to noise, traffic and visual impacts, are appropriately managed. The final details of these mitigation measures will be agreed before construction starts, when the exact timelines for all projects are known. We welcome any feedback or knowledge from the local community about other proposals you are aware of, so that we can ensure these are appropriately considered.

How will our local community benefit?

We're currently working with the National Schools Partnership* to deliver an educational programme in local schools to encourage and equip young people to explore careers in STEM and renewable energy. Field will work with local schools to provide information to students about how to build a career in the renewable energy sector, including the varying jobs that exist.

PLANNING APPLICATION

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

- Ecology Statement
- Ground Condition Risk Assessment
- Landscape and Visual Impact Assessment
- Flood Risk Assessment / Drainage Strategy
- Noise Impact Assessment
- Archaeology and Cultural Heritage Statement
- Transport Statement and Outline Construction Traffic Management Plan
- Outline Battery Safety Management Plan
- Design Statement
- Planning / Sustainable Place Statement
- Pre-application Consultation Report.

Following submission, these documents will be available to the public via the Energy Consents Unit's website.

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

WHAT HAPPENS NEXT?

We're holding a second consultation event here at Mey Village Hall, Castle Entrance, Mey, Caithness, KW14 8XH, on Thursday 22nd August 2024. We'll continue accepting feedback via post or email until Friday 30th August 2024.

We'll then integrate your feedback into the final planning application and submit this to the Energy Consents Unit in Autumn 2024.

After it's submitted, you will have the opportunity to make a representation about the application to the Scottish Ministers, via the Energy Consents Unit.

WANT TO KNOW MORE?



For more information, please visit our website at www.fieldrigifa.co.uk

If you have any questions or you'd like to provide comments, please do not hesitate to email us at feedback@fieldrigifa.co.uk.

FIRE SAFETY MANAGEMENT

Safety is our top priority. We take a comprehensive approach to fire risk management through careful design, operating procedures, and emergency planning.

Battery Design and Safety Systems

- Batteries must be compliant with all relevant fire codes and safety standards, and we'll only use batteries with the highest fire safety ratings and performance will be used.
- Battery containers are fitted with early fault and fire detection technology, internal fire suppression systems, and reinforced casing to ensure fires do not spread to other units.
- Appropriate separation distances are provided between battery strings, access roads, and surrounding properties to ensure firebreaks are in place.

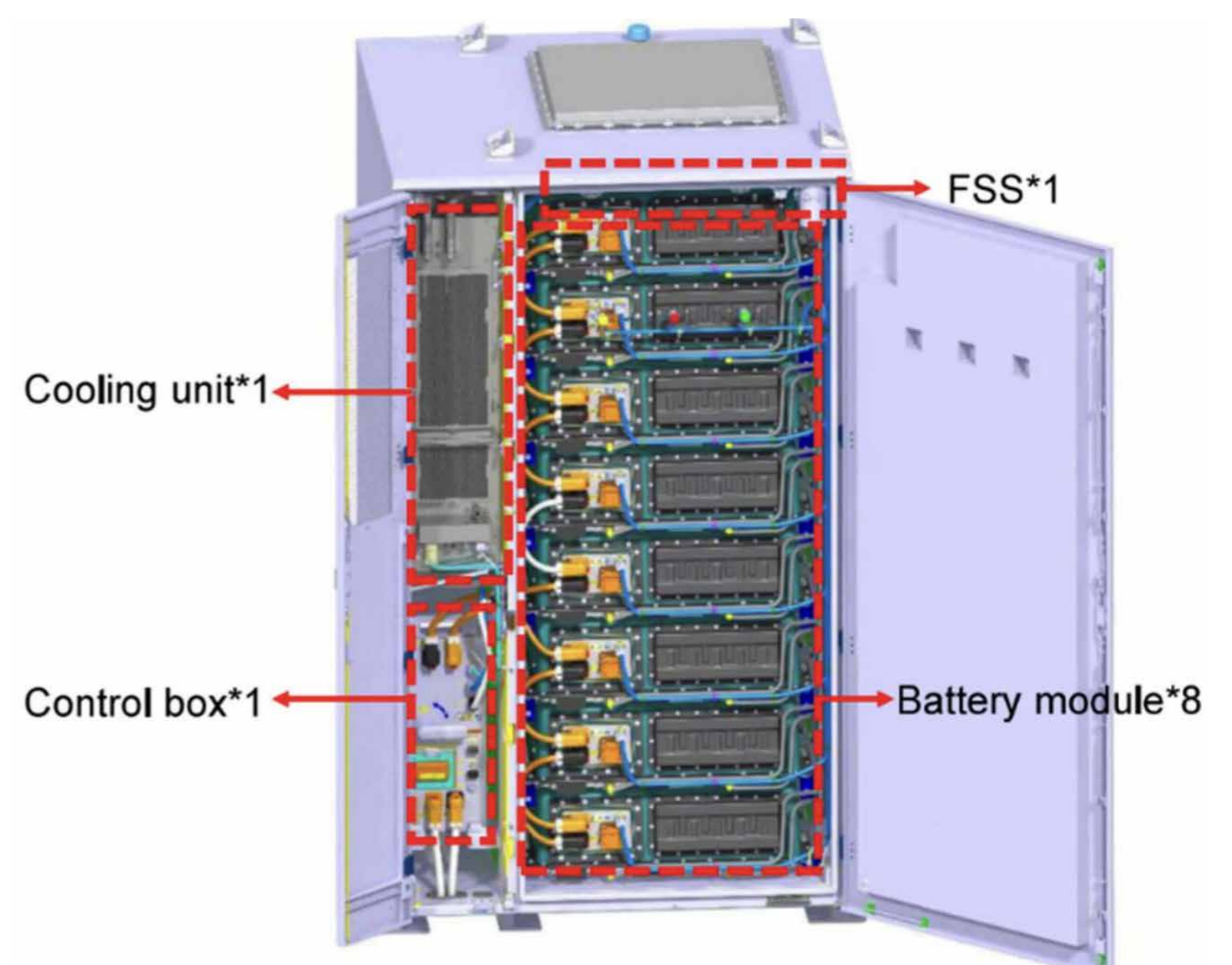
Emergency Planning and Response

- A detailed Battery Safety Management Plan is being developed, which will be agreed with relevant authorities before the project starts operating. This identifies potential hazards and associated safety mechanisms for the long-term operation of the Project.
- Field is continuing to engage with the National Fire Chiefs Council and Scottish Fire and Rescue Service across our portfolio of projects, including regular on-site consultations and site familiarisation visits. An Emergency Response Plan will be prepared in consultation with the Fire and Rescue Service for use in the unlikely event that there is an emergency on site.

Construction & Operation Oversight

- 24-hour surveillance and fault detection systems will ensure any faults are identified, isolated and responded to as quickly as possible, including de-energisation when necessary.
- Field will undertake routine site inspections, maintenance and testing throughout the life of the project.

Field is committed to implementing industry best practices and working closely with fire authorities to ensure the safety of our facilities, our staff, and local communities. We welcome any further inputs as we finalise the fire safety approach for Field Rigifa.



WHAT OUR BATTERIES WILL LOOK LIKE

Our battery units will be housed in secure cabinets, similar to those shown in the images below, which were taken at our Field Newport site. These allow for a modular design where individual battery racks can easily accessed during routine inspections and maintenance.

Field Rigifa will comprise multiple battery cabinets arranged in rows, known as 'strings'. These will be connected via underground cables to other important electrical infrastructure like transformers, an on-site substation, and underground cabling to the main grid connection point at the planned Gills Bay substation.

To reduce visual impacts of the proposal, native landscaping will be incorporated to help screen and soften views of the site.

The below image shows what the proposed battery storage units look like. While the infrastructure may be visible from select viewpoints, our design aims to minimise impacts on the local landscape as much as possible.



An image taken at Field Newport (April 2024)