FIELD FYRISH BATTERY STORAGE

# WHAT ARE WE PROPOSING TO BUILD AND OPERATE?

Field builds and operates large batteries which store energy to help create a greener, more stable electricity grid.

We'd like to build one of these batteries, Field Fyrish, on land to the south-west of the Fyrish Substation.

Field Fyrish would be capable of storing up to 200 MW of electricity.

This would be achieved by storing electricity when renewable energy generation is high, and supplying the grid with electricity when renewable energy generation is low, thereby reducing reliance on high carbon energy sources.

This is expected to avoid up to 1.4 million tonnes of CO2e emissions during the first 20 years of operation. Field currently operates two sites, Field Oldham, a 20 MW battery which has been operating since Autumn 2022, and Field Gerrards Cross, which started operating in April 2024. Field Fyrish would join these sites as part of a nationwide network which, together, will help the UK reach net zero.



FIELD FYRISH BATTERY STORAGE

# INDICATIVE TIMELINE





Public consultation event 1

### Thursday 3rd October 2024 Public consultation event 2



Submission of planning application



### Determination of planning application



Construction and operation

### FIELD FYRISH BATTERY STORAGE

## 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."

\*https://www.gov.scot/policies/climate-change

### FIELD FYRISH BATTERY STORAGE

## 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.

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.

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. 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 Fyrish 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.

FIELD FYRISH BATTERY STORAGE

# 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 Fyrish 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 Fyrish.

### 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

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?

don't understand the skills employers need\*\*\*, Field recognises that educators need support to prepare young people for the jobs of the future. The programme launched 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)

### FIELD FYRISH BATTERY STORAGE

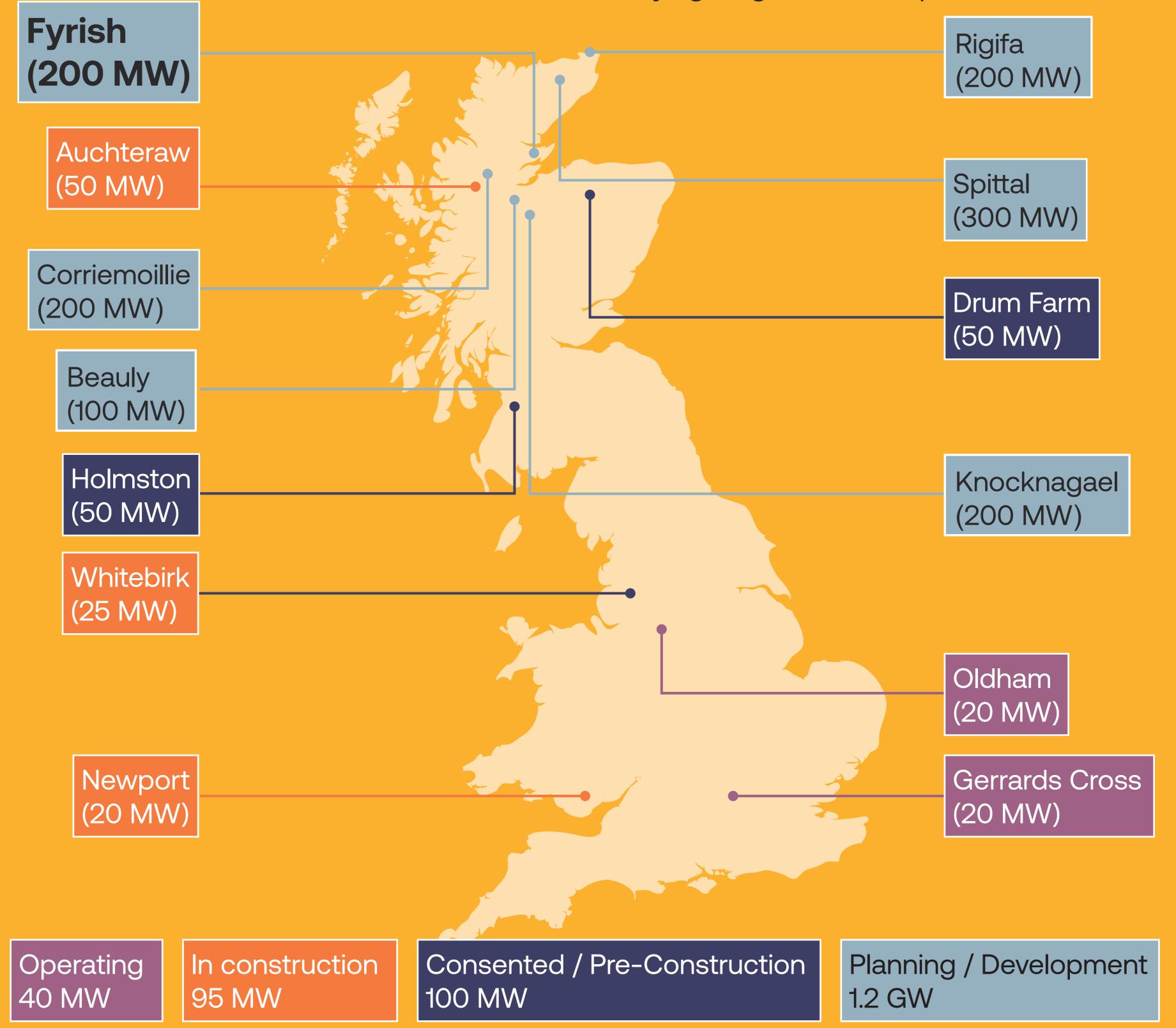
## WHO WE ARE

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 Fyrish 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:



### FIELD FYRISH BATTERY STORAGE

# 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 Fyrish Substation, which prevents the need for unnecessarily long and intrusive grid connection cables or overhead lines.

#### 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 Fyrish, 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.

#### 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 Fyrish 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.

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.

#### 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.

#### When will Field Fyrish be built?

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

#### Will the project be visible from the Fyrish Monument?

We are currently carrying out extensive visual impact surveys, which will include whether the project will be visible from the Fyrish Monument. We will provide the outcomes of these surveys at the second consultation event.

### FIELD FYRISH BATTERY STORAGE

## FREQUENTLY ASKED QUESTIONS

#### Will the project impact trees or bats?

We have selected this site because of its absence of ecologically sensitive features. We also carry out full ecological surveys, including bird and bat 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.

### 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.

#### 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 Fyrish will have robust security measures in place, including:

• Perimeter fencing and secure gated access to prevent unauthorized entry

#### 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.

- 24/7 CCTV monitoring of the site
- Appropriate security lighting to aid CCTV coverage
- Routine inspections and maintenance by Field's operational staff.

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

### FIELD FYRISH BATTERY STORAGE

## 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

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.

- Transport Statement and Outline Construction
  Traffic Management Plan
- Outline Battery Safety Management Plan
- Design Statement
- Planning / Sustainable Place Statement
- Pre-application Consultation Report.

## WHAT HAPPENS NEXT?

We're holding a second consultation event on Thursday 3rd October. Please sign up to our mailing list or check our website for details of the how to attend the second event. We'll continue accepting feedback via post or email until Friday 1st November 2024.

We'll then integrate your feedback into the final planning application and submit this to the

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.

#### Energy Consents Unit in Winter 2024.

### WANT TO KNOW MORE?



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

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

# 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 FYRISH BATTERY STORAGE

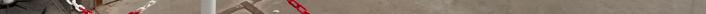




### **Field Auchteraw** 50 MW, near Fort Augustus In construction

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, industryleading safety protocols, and 24/7 remote monitoring in place, Field Gerrards Cross and Field Oldham highlight our commitment to safe, responsible operations.

FIELD FYRISH BATTERY STORAGE

# 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.

#### **Construction & Operation Oversight**

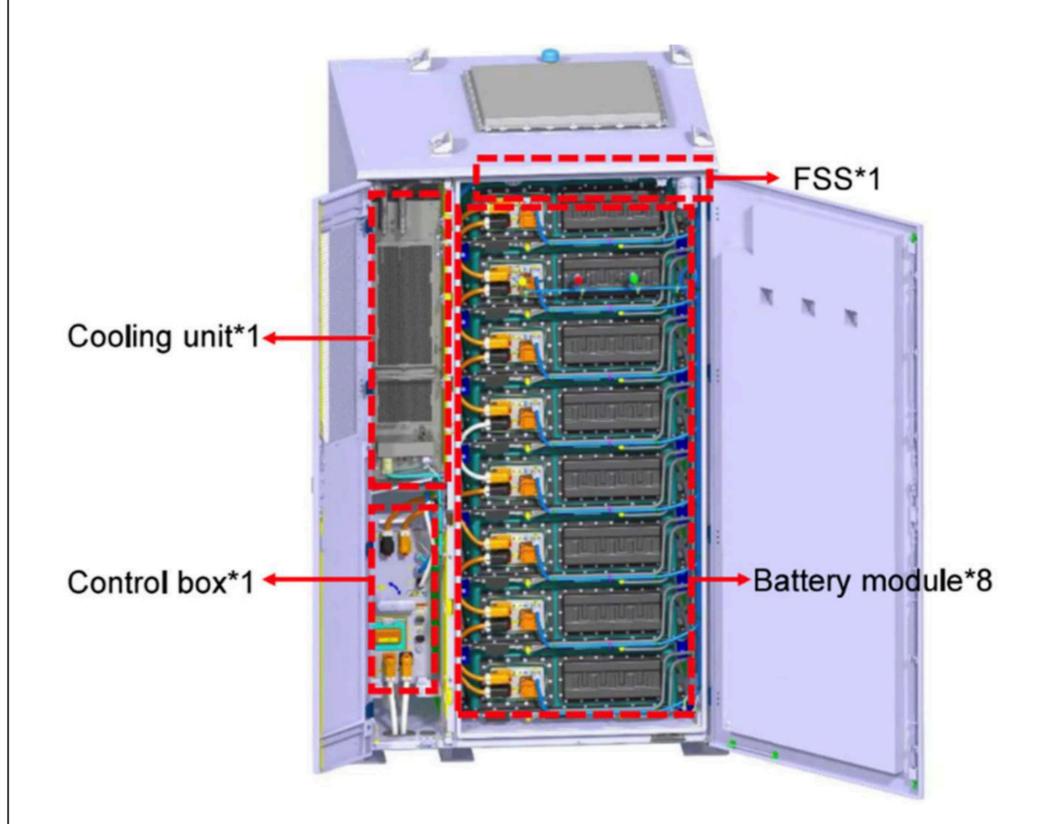
- 24-hour surveillance and fault detection systems will ensure any faults are identified, isolated and responded to as quickly as possible, including de-energisation when
- Battery containers are fitted with early fault and fire detection technology, internal fire suppression systems, and reinforced 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 onsite consultations and site familiarisation

- 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 Fyrish.



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.

### FIELD FYRISH BATTERY STORAGE

# 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 Fyrish 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 Fyrish 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)

### FIELD FYRISH BATTERY STORAGE

# FIELD FYRISH

Field Fyrish would be located on land to the south-west of the Fyrish Substation.

The built infrastructure (batteries, cables, access tracks etc.) is proposed to cover an area of approximately 5 hectares.

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



Field Fyrish 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 Fyrish 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.

### FIELD FYRISH BATTERY STORAGE

## HOW WE'LL MANAGE THE CONSTRUCTION PROCESS

The construction of Field Fyrish will involve careful planning and management to minimise disruption to local communities and roads.

Before we start building, we'll develop detailed management plans and agree these with The Highland Council to ensure works are carried out responsibly, and all impacts are reduced as much as possible.

- Agreed routes for construction vehicles to avoid sensitive areas;
- Agreed construction working hours;
- Details of any road upgrade or widening works if required;
- A procedure for monitoring road conditions and remediation works if required;
- Measures to encourage worker vehicles to avoid peak times or vehicle share where possible;

### Construction Traffic Management Plan (CTMP):

Our CTMP will be implemented to effectively manage all construction traffic to and from the site, including:

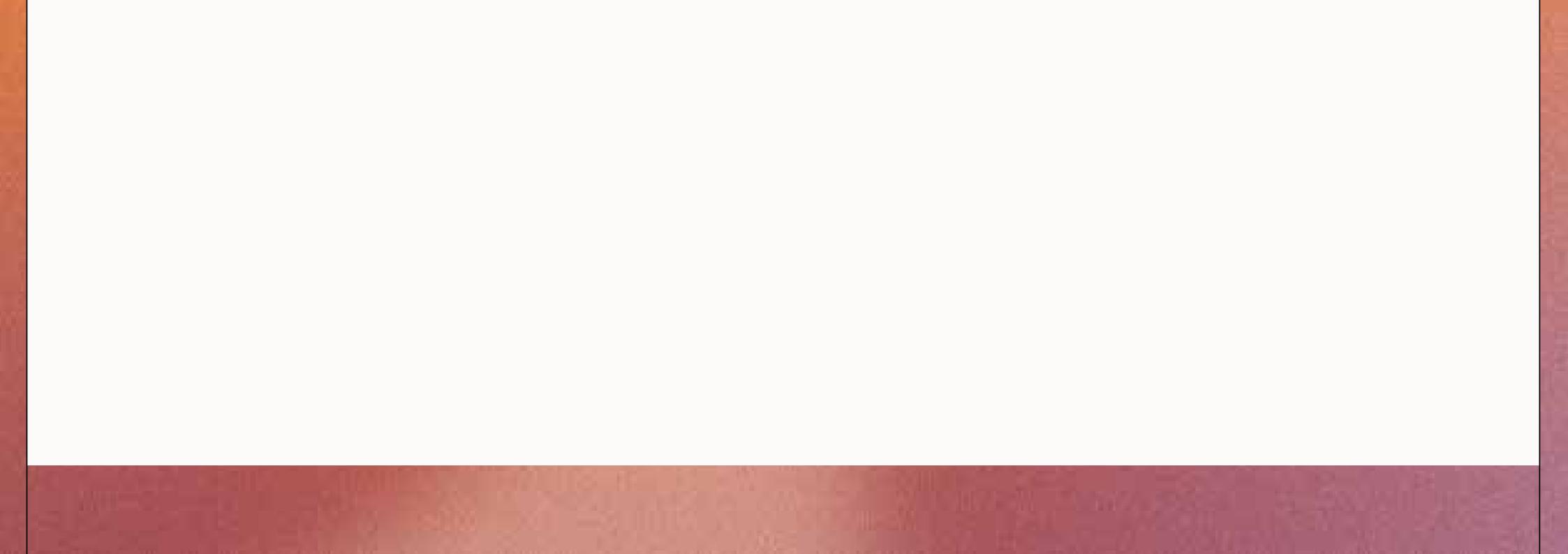
- Contact details to raise any road safety issues;
- Liaison with Transport Scotland for construction traffic via the B1976; and
- Coordination with any other planned developments in the area to manage cumulative traffic impacts



FIELD FYRISH BATTERY STORAGE

## COMMUNITY BENEFITS

We are interested in hearing from the local community on potential community benefit suggestions within the local area. Please provide your suggestions on the board below, using the pens and sticky notes provided.

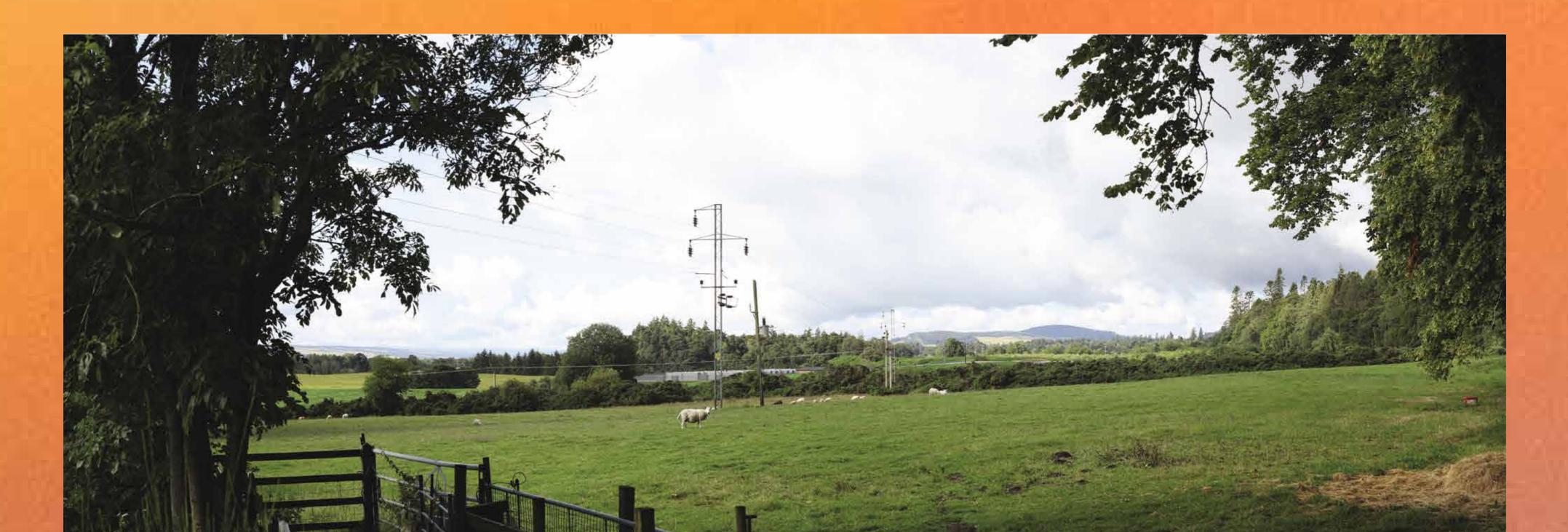


### FIELD FYRISH BATTERY STORAGE

# VIEWPOINT 1



Existing view southwest from road at Culcraggie Lodge



#### Proposed view southwest from road at Culcraggie Lodge

### FIELD FYRISH BATTERY STORAGE

# VIEWPOINT 2



Existing view north from NCR 1 at B817/Struie Rd junction





#### Proposed view north from NCR 1 at B817/Struie Rd junction

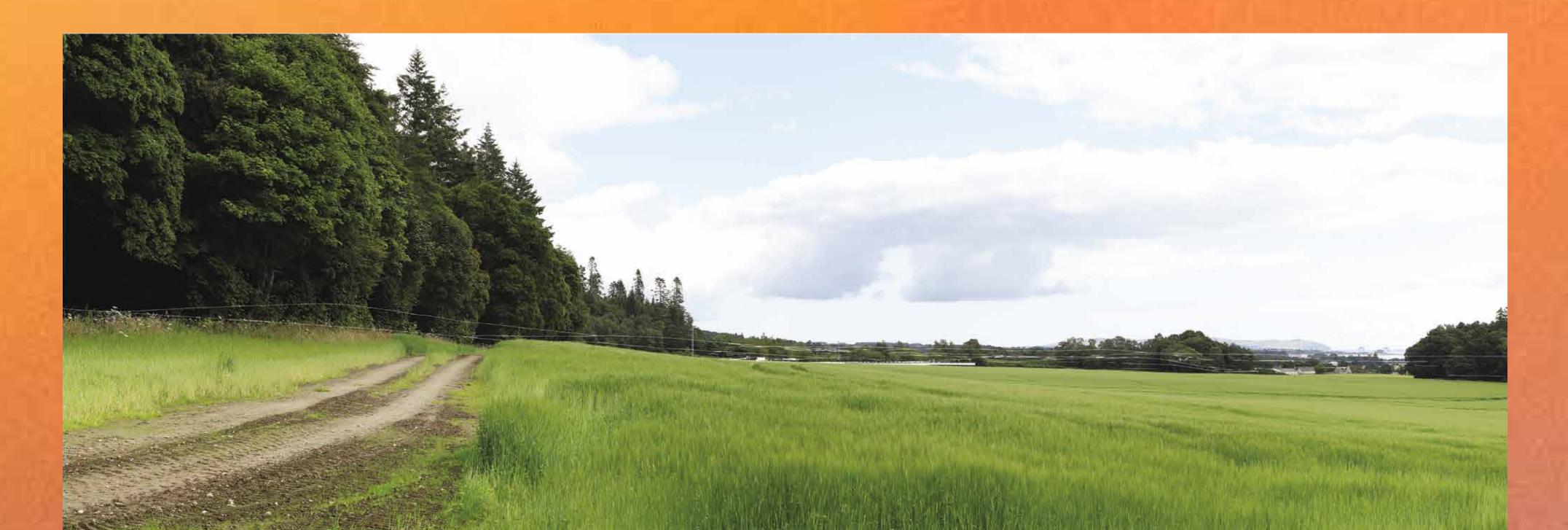
### FIELD FYRISH BATTERY STORAGE

# VIEWPOINT 3





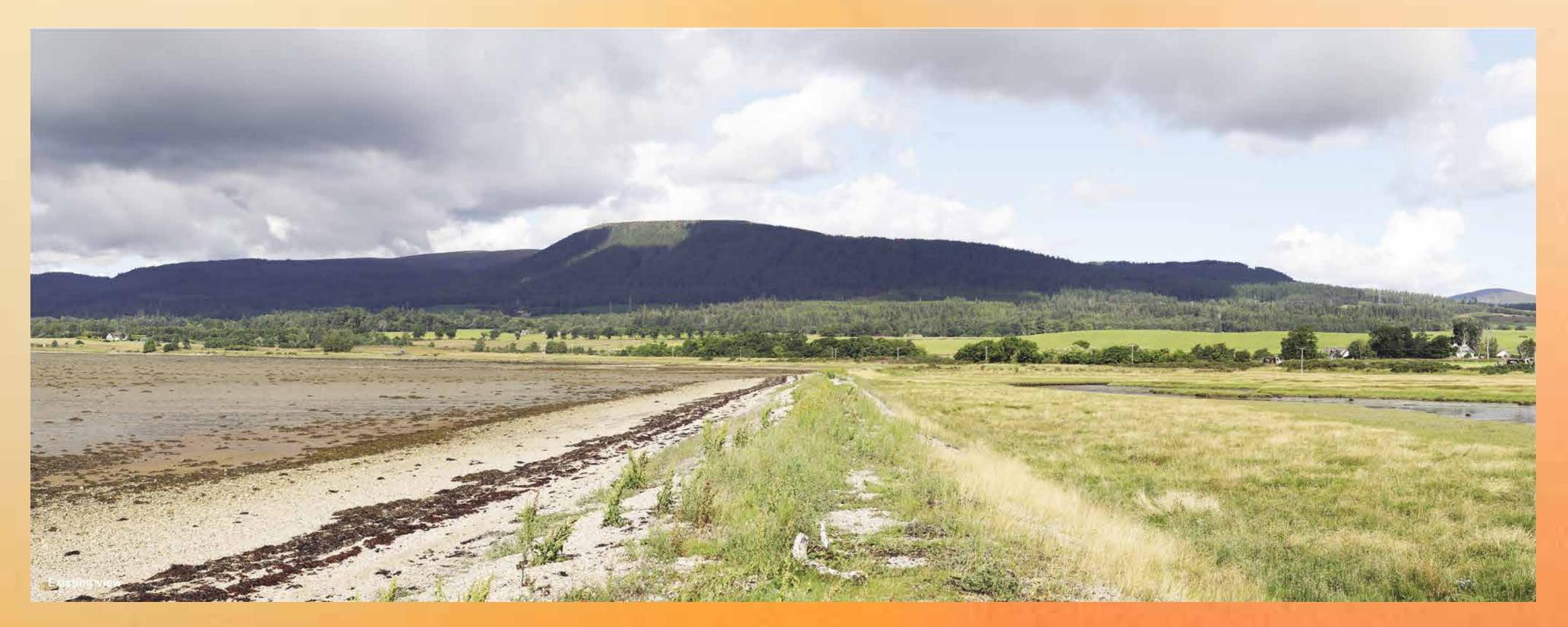
Existing view northeast from road on edge of Novar GDL



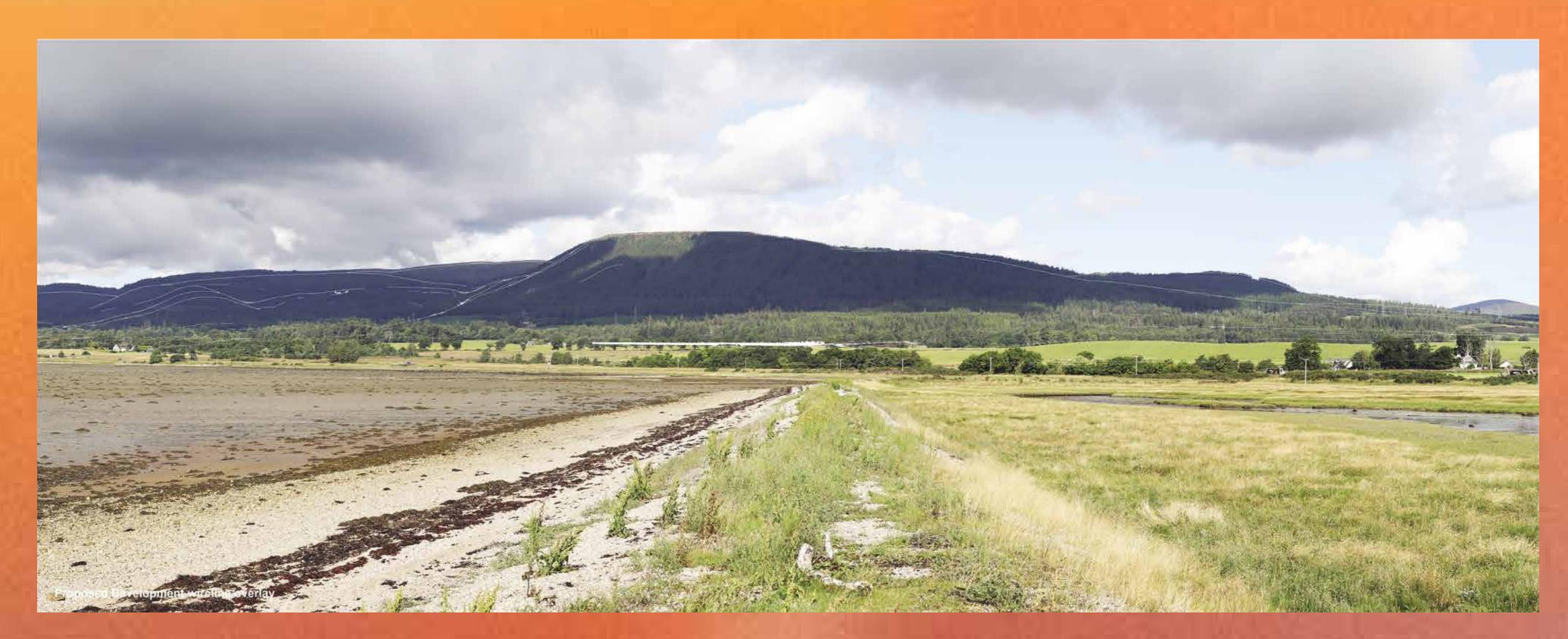
Proposed view northeast from road on edge of Novar GDL

### FIELD FYRISH BATTERY STORAGE

## VIEWPOINT 4



Existing view northwest from Core Path RC03.03, Teaninich



#### Proposed view northwest from Core Path RC03.03, Teaninich

### FIELD FYRISH BATTERY STORAGE

# VIEWPOINT 5



#### Existing view southeast from Cnoc Fyrish



#### Proposed view southeast from Cnoc Fyrish