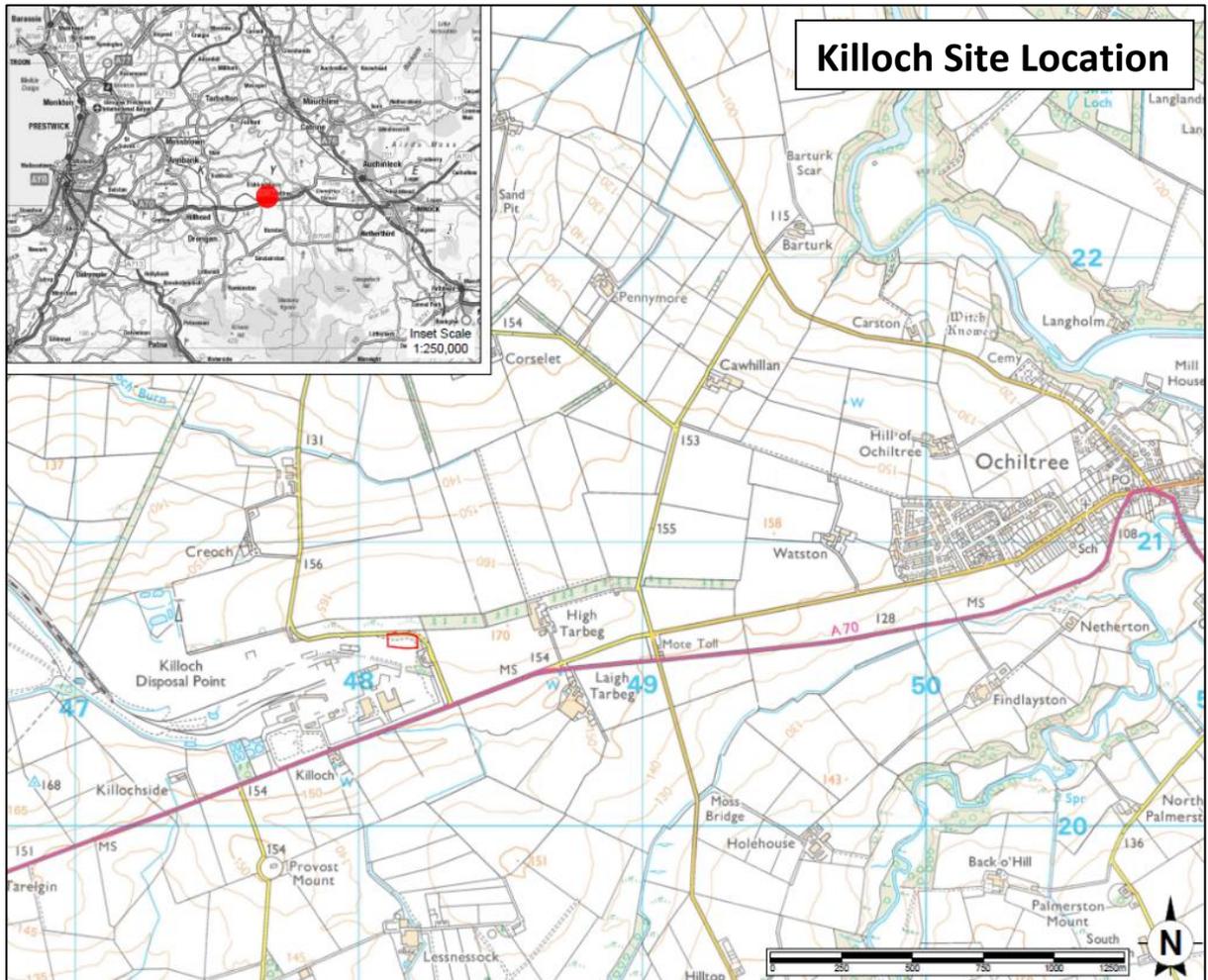


*Please Note: this application is NOT related to the Killoch Energy from Waste planning application.*

## 1. Where is the Battery Storage Facility proposed to be located?

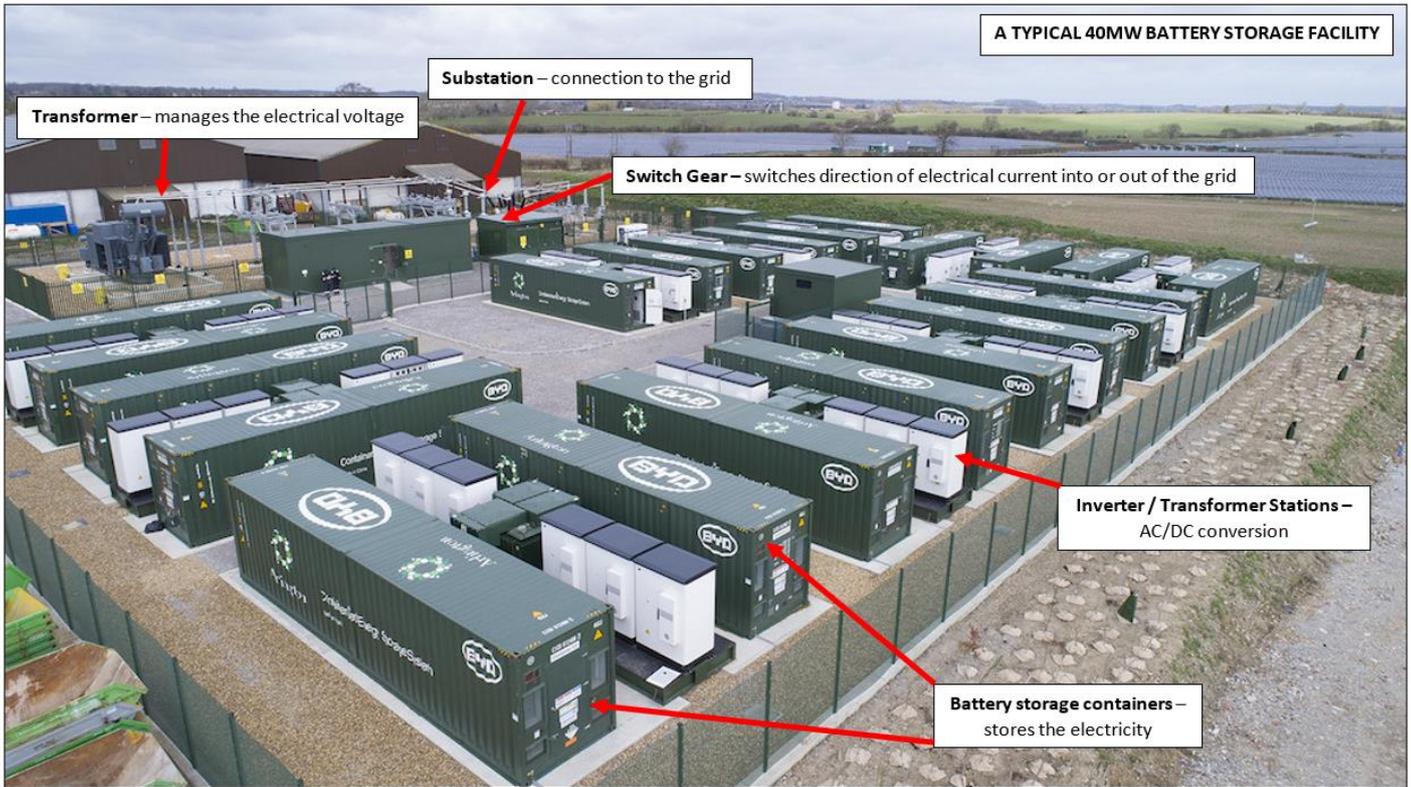
- The proposed battery storage facility is proposed on land within the former Killoch Colliery, Cumnock, East Ayrshire, K18 2QH. The map below illustrates the site location (red line boundary).



## 2. What is proposed?

- Construction and operation of a battery storage facility which uses batteries to store electrical energy. The proposal would be able to store up to 49.9 Mega Watts of electricity at any one time.
- The facility would be made up of 26 containers (housing batteries), 13 inverter / transformer stations, switchgear, main transformer, and other supporting infrastructure located within a securely fenced compound covering an area of approximately 0.49 of a hectare (which is approximately the same size as 1 ¼ football pitches). Please refer to Question 3 which illustrates the main elements of a battery storage facility
- A site location, indicative general arrangement plan, elevation plans, and a landscaping plan are available online with this FAQ sheet.

### 3. What does a typical battery storage facility look like?



### 4. How does a Battery Storage Facility work?

- A battery storage facility is connected to the grid via a substation.
- The main transformer manages the voltage of the electricity as it is imported or exported from the grid.
- The transformers / inverters manage the voltage further and convert alternating current (AC - used in the grid) into direct current (DC - stored in the batteries) or vice versa.
- The battery modules store energy.
- The switch rooms and control rooms manage the charge and discharge cycles of the batteries according to grid need. In periods of high demand, electricity is drawn out of the battery storage containers and put back into the grid. In periods of low demand and when a surplus of renewable electricity is being generated, electricity is put into storage.

### 5. Why is the battery storage facility needed?

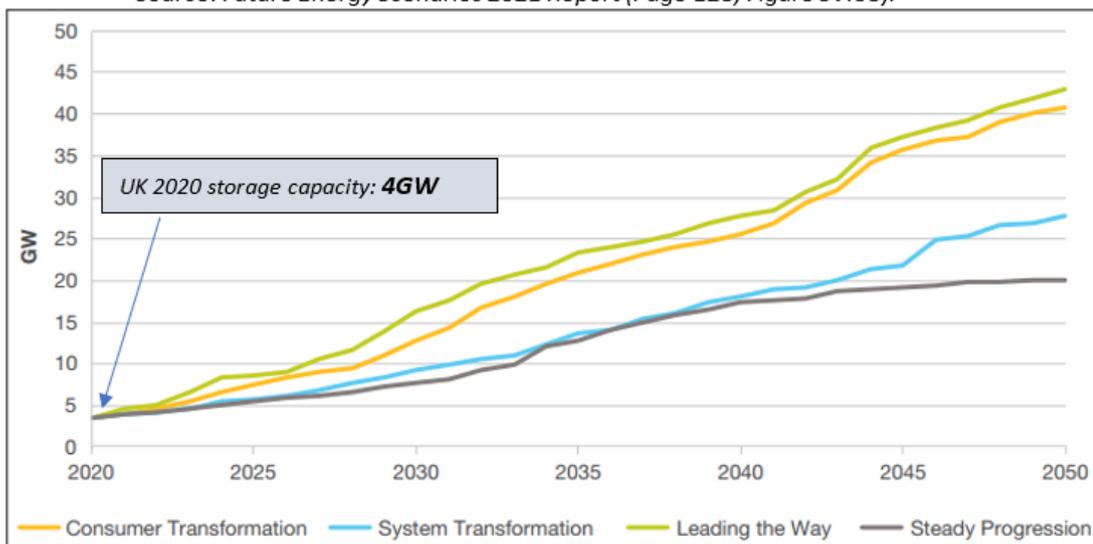
- The UK needs a secure, reliable and balanced electricity supply 24 hours a day.
- There is an ever-increasing reliance on renewable forms of energy, such as wind and solar, to supply electricity to the grid. Renewable energy sources are highly variable due to their weather dependency.
- As more and more renewable resources come online, battery storage facilities can help smooth out the fluctuations in these resources by storing the energy they generate and supplying it to the grid later when the sun isn't shining, or the wind isn't blowing. This is called a 'balancing service' which retains the electrical grid frequency at 50Hz to avoid power cuts.

- The fragility of the energy market and volatility of wholesale gas and electricity prices has been highlighted recently by spikes in energy costs. Battery storage facilities by their very nature will significantly assist in smoothing these price spikes and ensuring stability within the electricity market as it transitions to net zero.

## 6. Who says we need more battery storage facilities?

- The UK Government has set a legally binding target to achieve net zero carbon emissions by 2050 through the Climate Change Act (2019). Net zero means any emissions would be balanced by schemes to offset an equivalent amount of greenhouse gases from the atmosphere, such as planting trees or using technology like carbon capture and storage.
- To meet this 2050 deadline, a further ambitious target was outlined within the 6<sup>th</sup> Carbon Budget for the UK’s electricity system to achieve net zero carbon emissions by 2035.
- Whilst 2050 and 2035 are some years away, National Grid produces a yearly report to forecast if the UK is on track to meet the net zero deadline under 4 different scenarios which weigh up consumer lifestyle changes, renewable energy deliverability, and reliance on technical advances. Figure 1 below illustrates the scenarios and the anticipated trajectory.

Figure 1: Electricity storage capacity (excluding V2G).  
 Source: Future Energy Scenarios 2021 Report (Page 128, Figure SV.38).



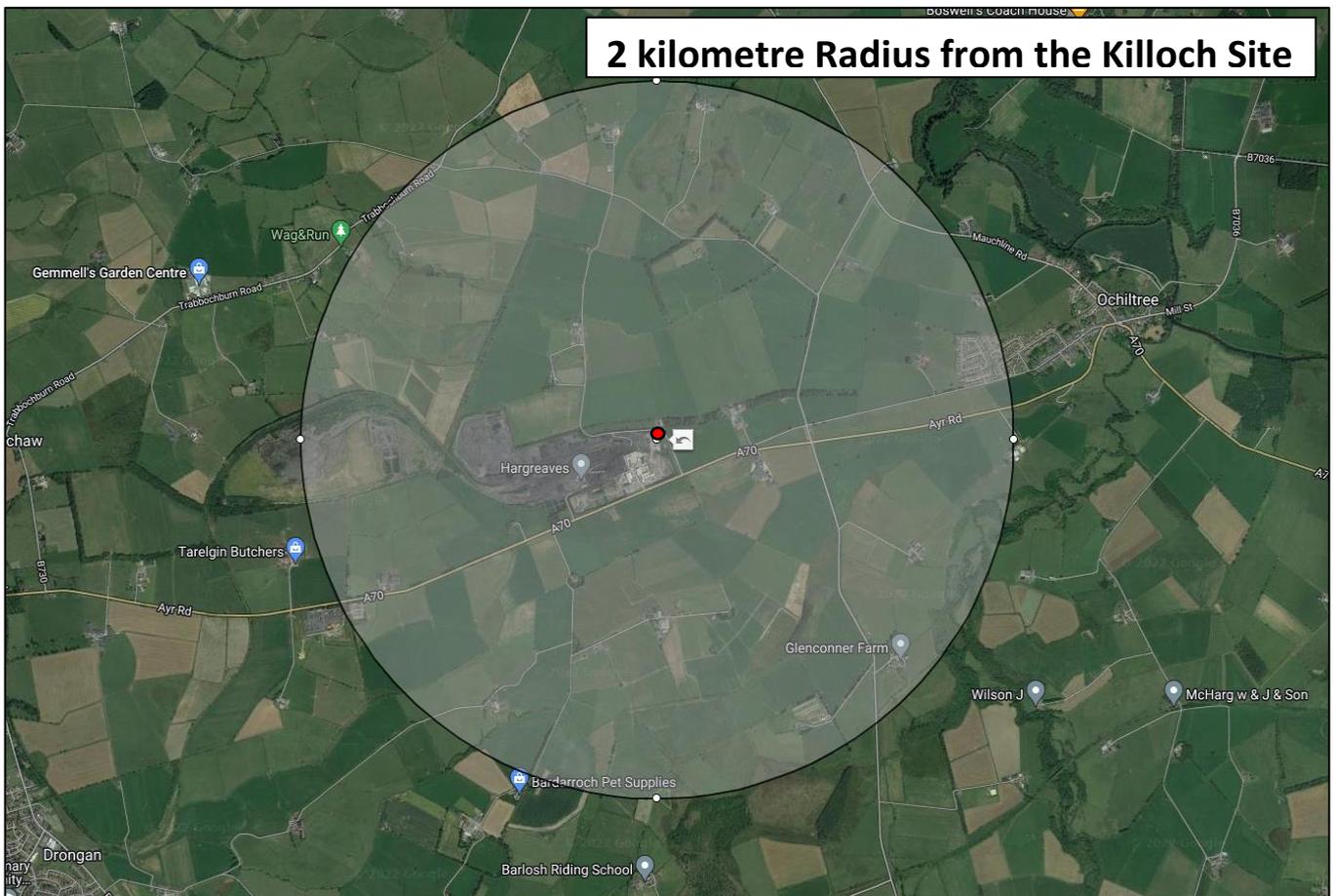
‘**Leading the Way**’ is the fastest credible route to decarbonisation (43 gigawatts needed by 2050). ‘**Consumer Transformation**’ requires significant lifestyle changes. ‘**System Transformation**’ is where less lifestyle changes are made in lieu of reliance on technical advances. ‘**Steady Progression**’ is where minimal consumer lifestyle changes are made, and unfortunately this scenario falls short of reaching net zero emissions.

- In addition, in July 2021 the Department for Business Energy and Industrial Strategy (BEIS) published the ‘*Smart Systems and Flexibility Plan 2021*’ in conjunction with Ofgem. The plan sets out a vision, analysis and work programme aimed at delivering flexible electricity systems that to underpin energy security and the transition to a net zero 2050. The plan is broken down into five sections. Notably, “*Chapter 2: Removing barriers to flexibility on the grid: electricity storage and interconnection*” sets out methods to address policy and regulatory barriers to electricity storage.

- Page 37 of the plan states battery storage is targeted to provide “*significant flexibility to the system...and helping to address many of the challenges presented by a low carbon system, including maintaining energy security*” by 2030. It continues; “*It [electricity storage] is essential to a net zero system as it can store electricity when it is abundant (e.g. when it is windy or sunny) for periods when it is scarce (e.g. when demand is higher).*”
- Therefore, battery storage is a key facilitator in the move to renewable energy and ultimately meeting the UK’s 2050 net zero target.

## 7. Who could be impacted by the battery storage development?

- The map below shows a 2km radius from the site, helping to visualise the rural nature of the former colliery site in terms of nearby residential properties.



## 8. Would the development generate any traffic?

- During the operational phase, the battery storage facility would be controlled remotely as the facility is fully automated. It would only be necessary for a maintenance engineer to visit the site on an occasional basis (i.e. monthly routine maintenance visit). As such the operational phase of the project would not generate any significant traffic impacts.
- During the temporary construction phase, initial calculations indicate that the initial enabling works phase of the project is likely to generate a total of 26 two-way movements (13 HGVs in and

13 HGVs out). During other phases of the construction HGV movements would be less. Considering the direct access from the colliery onto the A70 Ayr Road, it is not anticipated that this level of traffic would be significant.

## **9. Would the development emit any noise?**

- Battery storage components need to be cooled by air conditioning units to prevent them from overheating. There would be heating, ventilation and air conditioning ('HVAC') units at the ends of each of the battery storage containers. The HVAC units do generate noise resembling a humming sound.
- Accordingly, a detailed noise impact assessment will be submitted as part of the planning application documentation. The assessment will report the results of a noise survey undertaken at the nearest sensitive receptors (as agreed with the East Ayrshire Environmental Health Officer) during a 24-hour monitoring period. The noise recording revealed the very low background noise levels within the site's rural location.
- Noise modelling has been undertaken to understand whether the battery storage facility has the potential to cause an impact to nearby residents and whether necessary mitigation would be required around the battery storage facility. A 4m high closed boarded timber fence is proposed as an acoustic screen, which would contain the noise emitted within the development and ensure the battery storage facility would not be heard from the nearby noise sensitive receptors. Therefore, the proposal would not have a significant impact upon neighbour amenity.

## **10. Would the development produce any aerial emissions?**

- No emissions are generated by an operational battery storage facility.
- During the temporary construction phase, as is the case with all construction projects, there is potential for dust. However, due to the limited and small-scale nature of the proposal it is considered that this matter could be suitably controlled through standard construction practices.

## **11. How long will construction take?**

- The construction period is anticipated to take between 6 and 9 months.

## **12. Would there be any ecological enhancements to the site?**

- The proposal would include a landscaping scheme which is likely to include species diverse wildflower meadow and some planting along the northern border. Full details would be agreed with East Ayrshire's landscape and ecology officers.

## **13. How would the battery storage facility be secured?**

- The battery storage facility would be secured by fencing and gating and would not be open to members of the public. 4 CCTV cameras will be positioned in each corner of the compound.

## 14. How can I get involved? What are the next steps?

### **A. Review the online consultation material and submit any questions to the project team**

- The consultation website ([www.axisped.co.uk/consultations/](http://www.axisped.co.uk/consultations/)) for the proposed battery storage facility has been live since Wednesday 16<sup>th</sup> March 2022. Please review the online material and submit any questions or comments via:
  - Email: [consultations@axisped.co.uk](mailto:consultations@axisped.co.uk),
  - Phone: 01244 555001 or
  - Written comments: AXIS, Camellia House, 76 Water Lane, Wilmslow, SK9 5BB. Please submit all comments and queries no later than **Friday 13<sup>th</sup> May 2022**.
- We will update our consultation website material to include any further questions received by members of the public.

### **B. Register and attend one of two virtual consultation events**

- In person public consultation events are currently suspended in Scotland. Therefore, our public consultation events will be held via a virtual meeting on Microsoft Teams, where we will run through the proposal and have an interactive Q&A session for members of the public to ask questions to the project team.
- The first virtual public consultation event is scheduled for **Thursday 24<sup>th</sup> March at 19:00**. To register for attendance at this event, please email [consultations@axisped.co.uk](mailto:consultations@axisped.co.uk).
- The second virtual public consultation event is scheduled for **Tuesday 26<sup>th</sup> April at 19:00**. To register for attendance at this event, please email the above email address.
- A Pre-Application Consultation (PAC) report will be produced and submitted within the planning application. This document will detail all consultation activity carried out by the project team in advance of the submission of the planning application for the battery storage facility.
- The consultation website will remain live until the planning application is determined.

### **C. Submission of the planning application**

- Following the virtual consultation events, the project team will update their planning application to respond to all comments received.
- As stated above, a PAC report will be submitted alongside the planning application which will detail all consultation carried out to date.
- We are aiming to submit a planning application to East Ayrshire Council in **late May 2022**.

### **D. Opportunity to make representations to the Council**

- Once the project team has submitted the planning application to East Ayrshire council, the planning submission will be available to review online at <https://eplanning.east-ayrshire.gov.uk/online/>.
- You will have the opportunity to comment on the application during the statutory consultation period. These comments should be sent directly to East Ayrshire Council.