

Experience processing applications for Battery Energy Storage Systems in Abernethy

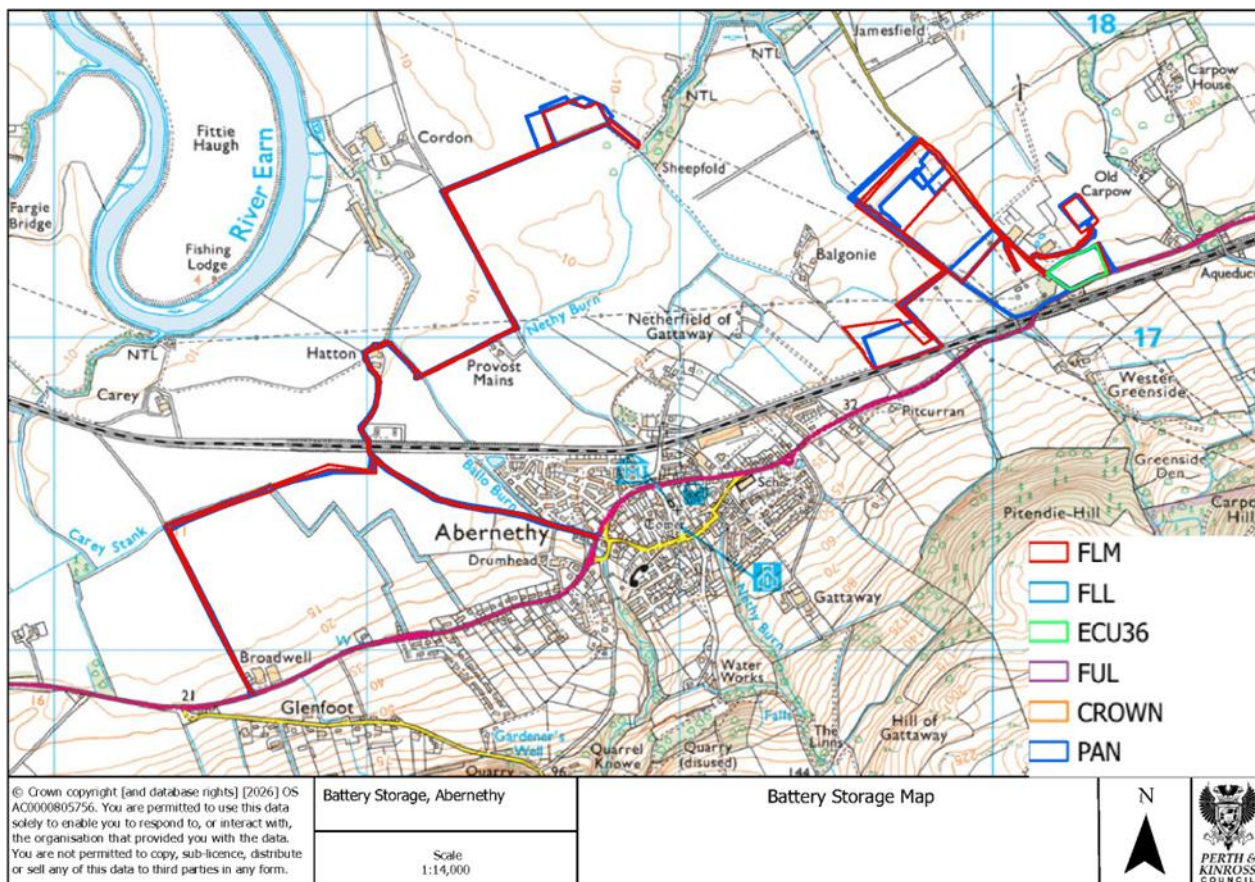


Context

Over the last three years, there have been numerous applications, Environmental Impact Assessment (EIA) screening opinions and Electricity Consents Unit (ECU) consultations for battery energy storage systems (BESS) in and around the village of Abernethy, Perth and Kinross. BESS are a form of energy storage that allows for surplus energy to be stored and subsequently output during periods of energy demand.

As a result of several pre-application requests and planning applications in and around Abernethy, it became evident that there were several challenges for BESS developments in this locality. The local landscape is characterised by agricultural fields, the wide floodplain of the River Earn, and the Ochil Hills Local Landscape Area located to the north and east of Abernethy. Electricity infrastructure including a substation, large electricity pylons and overhead powerlines, are prominent in the local landscape.





The above map depicts sites impacted by major and local applications, applications from the Energy Consents Unit and planning advice notes. This cluster of applications is due to the proximity of the Abernethy substation and the availability of vacant/farmland sites. The map provides an indication of the potential cumulative impacts, on both prime agricultural land and in terms of visual impact.

Planning Considerations

The following Local Development Plan and National Planning Framework 4 (NPF4) policies are of relevance when determining BESS applications in this area:

Local Development Plan policies:

- Prime Agricultural Land
- Archaeology and Cultural Heritage
- Landscape and Visual Impact
- Flooding and Drainage
- Roads and Transportation

NPF4 policies:

- Policy 5: Soils



- Policy 11: Energy
- Policy 22: Flood risk and water management
- Policy 29: Rural development

The following section summarises the policy considerations used to assess planning applications for BESS development within the Abernethy area.

Prime Agricultural Land

The potential cumulative impact on the extent of available Prime Agricultural Land (PAL) in the surrounding area of Abernethy needs to be considered when considering BESS developments in this locality. LDP2 states that outside the identified settlements, development on PAL will not be permitted, unless it is necessary to meet a specific established need, such as a major infrastructure proposal and only when there is no other suitable site available on non-prime agricultural land. NPF4 Policy 5 provides for essential infrastructure on PAL provided that the layout and design of the proposal minimise the amount of land that is required.

To mitigate impacts on PAL, many of the consents issued have included conditions in relation to Soil Management Plans and Decommissioning Plans to ensure that all land is reverted to its previous use in the instance where BESS activities cease on a site.

Archaeology and Cultural Heritage

BESS developments have the potential to impact archaeology and cultural heritage in relation to their siting and any discoveries during site works. There is a presumption against development which would have an adverse effect on the integrity of a Scheduled Monument and its setting, unless there are exceptional circumstances. The Council seeks to protect areas or sites of known archaeological interest and their settings. Where development is proposed in such areas, there will be a strong presumption in favour of preservation in situ.

In exceptional circumstances where preservation of archaeological features is not feasible, the developer, if necessary, through appropriate conditions attached to the granting of planning permission, will be required to make provision for the survey, excavation, recording and analysis of threatened features prior to development commencing.

The area around Abernethy has potential for archaeological remains from ancient settlements, battle grounds, and Roman camps. To mitigate impacts on archaeology and cultural heritage, many of the consents issued have included conditions in relation to ensuring if discoveries are made during any development, work should be suspended, the Council should be informed immediately, and mitigation measures should be agreed.



Landscape and Visual Impact

BESS developments can give rise to landscape and visual effects due to the industrial character of the modules or containers, visibility of access tracks and fencing. Developments should avoid:

- Eroding local distinctiveness
- Diversity and quality of landscape character areas
- The historic and cultural dimension of the area's landscapes
- Visual and scenic qualities of the landscape
- The quality of landscape experience.

Development and land use change, including the creation of hill tracks, should be compatible with the distinctive characteristics and features of Perth and Kinross's landscapes, which requires reference to the Tayside Landscape Character Assessment. All proposed developments should safeguard views, viewpoints and landmarks from development that would detract from their visual integrity, identity or scenic quality.

The proposed BESS developments in the Abernethy area will result in the introduction of an industrial development in a rural context. The landscape of this area is characterised by the River Earn floodplain, and open agricultural land with few buildings aside from farm buildings. The proposed BESS developments in the Abernethy area are generally located in proximity to the existing Abernethy substation.

It is essential that BESS proposals are supported by appropriate visual mitigation through landscape design. Inclusion of conditions to ensure that hedgerows are retained, or that appropriate and sufficient compensatory planting is undertaken, can mitigate the visual impact of BESS developments. Further, cumulative impacts on the landscape appearance and character of this area resulting from an increasing number of pre-application enquiries and planning applications needs to be considered.

Flooding and Drainage

The Council supports the actions and objectives to manage flood risk in alignment with SEPA strategies and plans. There will be a general presumption against proposals for built development or land raising on a functional flood plain. This general presumption against built development/land raising proposals also applies in areas where there is a medium to high risk of flooding from any source, or where the proposal would increase the probability of flooding elsewhere. In addition, built development should avoid areas at significant risk from landslip, coastal erosion, wave overtopping and storm surges.

All development within areas of low to high flood risk must incorporate a suitable climate change allowance as well as a 'freeboard' allowance, the use of water-resistant materials, and forms of construction appropriate to its function, location, and planned lifetime relative to the anticipated changes in flood risk arising from climate change.



BESS developments will not be supported if proposed over an existing culvert, and any proposed culverting of watercourses will not be supported unless there is no practical alternative. Further, existing culverts should be opened, and redundant water engineering structures removed whenever possible to benefit wildlife and improve amenity. In addition, a suitable riparian buffer zone between development and the watercourse should be provided.

The BESS development sites in and around Abernethy are adjacent to the flood plain of River Earn and existing local watercourses. NPF4 Policy 22 allows for the development of Essential Infrastructure within a flood plain or an area at risk of flooding. However, in the case of the proposed BESS developments in this area, a condition has been included that a Flood Risk Assessment is submitted.

Roads and Transportation

Development proposals that would have an adverse impact upon the integrity of any existing or proposed core path, disused railway line, asserted right of way or other well-used route and connectivity proposals identified in the Regional Transport Strategy and Delivery Plan, will not be permitted. Improvement of these facilities, provided that the improvements are compatible with adjoining land uses, is encouraged.

In the case of BESS developments in the Abernethy locality, access for construction vehicles is limited due to the scale of the local road network. To mitigate impacts on road and transportation, conditions can ensure appropriate and safe access for emergency vehicles and as a method to require a Construction Traffic Management Plan is provided. In some cases, a condition has also been included to ensure that the operational route will not be used for construction traffic nor for the decommissioning phase of the project.

NPF4 Policies

There can be challenges for both developers and decision makers when trying to strike a balance between LDP policies and NPF4 policies where NPF4 policies support development of essential infrastructure on areas impacted by flood risk and areas of prime agricultural land.

Other Considerations

In most cases, consultation with Scottish Fire and Rescue Service is undertaken, and any recommended conditions are included in the Committee Report. In terms of committee engagement, most BESS applications are considered as major applications due to their size. Therefore, there is an obligation on the developer to conduct a series of community consultation exercises to inform the community and give them the opportunity to express their opinions.



Lessons Learned

- Early engagement and ensuring transparency during the community consultation phase.
- Having a robust landscape and panting scheme, including sufficient and well-maintained screening.
- Using topography to sensitively site BESS developments into the local landscape.
- Providing an early screening opinion, including details of the proposed grid connection.

This case study has been prepared in collaboration by Perth and Kinross Council and the National Planning Improvement Team at the Improvement Service. We publish good practice case studies identified through our work on the National Planning Improvement Framework and the National Planning Hub. They aim to support the sharing of good practice and build collaboration across the sector in addressing common challenges. Please email us at npi@improvementservice.org.uk if your authority has a good practice case study to share.

