

28 February 2023

EIP021

### **Energy Innovation Basecamp**



### Background

Flood Mitigation is a key RIIO-ED2 commitment, to 'Complete flood-related activities in compliance with obligations' with a target to 'Complete works at c.73 sites across our network in line with ETR138' and can be seen in our ED2 business plan, Environmental Action Plan (EAP), and Climate Resilience Strategy.

Flood mitigation measures currently in place or proposed for ED2 works to protect our substation assets from flooding include only traditional hard-engineering solutions.

SSEN are looking to identify alternative nature-based solutions which would deliver the desired flood mitigation in a more sustainable way with additional biodiversity benefits, while also providing flood protection for the surrounding landscape and not just our substations.

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Identifying nature-based solutions to deliver flood mitigation for substation assets <sup>2</sup>



- To date, there has been no other work on nature-based solutions for flood mitigation carried out in SSEN.
- Modelling of substations and their flood risk will be required to further refine and understand risk.
- Initial research shows that potential solutions may include:
- re-wetting upland peat bogs as natural storage reservoirs
- restoring river channels and meanders

- planting trees and hedges to increase water absorption, catch rainfall and slow down surface water run-off
- improve soil cover with plants to reduce water pollution and run- off
- divert high water flows and create areas to store water (ie.
  Swales and SUDS)
- create leaky barriers to slow water flow in streams and ditches
- restore salt marshes, mudflats and peat bogs

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#### **Constraints**

The delivery of catchment-scale work is likely to require permits/consents from environmental regulators e.g. Reprofiling or adding woody debris and leaky dams to water courses would require permissions from SEPA or the EA.



#### **Involvement and Implementation**

- The reduction of flood risk to SSENs assets.
- Consumers benefit through a reduction in interruptions.
- Improved industry toolkits for addressing flood risk.
- There are also other avenues utilised as a source of experience in this area:
  - Partnership working to leverage other funding sources/pool resources for innovative solutions
  - Partnership working for expertise
- No 'hard' implementation date, however, ideally be implemented early into ED2



### **Supporting Images**

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### #Basecamp28 Participant joining code Slido.com

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