



SEATON VALLEY COMMUNITY PARTNERSHIP: SEATON VALLEY ENERGY STORAGE INITIATIVE

OVERVIEW

The project will investigate the options in developing 'The Cut' in Seaton Sluice harbour as an energy storage and generation scheme, by funding a technical appraisal and feasibility study. 'The Cut' is a 900ft long channel that has the potential to be developed as a 'Tidal Tank' to store water via natural tidal action (10,000 cubic meters twice a day). There is also the option for further water to be pumped in during low energy periods and water being released during high energy cost periods, maximising the potential income.

SOLUTION

Seaton Valley Community Partnership (SVCP) would commission a Feasibility Study and Technical Appraisal of the proposed Energy Storage Initiative; these would provide the necessary information to help secure larger development funds, such as from the Rural Community Energy Fund and the Coastal Communities Fund. SVCP would also undertake a programme of community engagement, including both open public meetings and targeted meetings with identified stakeholders, such as local business owners, harbour users and Seaton Valley Community Council.

OUTCOMES

- Potential of a local asset for energy generation clarified
- 2 public meetings stimulating interest in local generation

Community and Voluntary Action Blyth Valley (CVABV) delivered the community engagement programme, targeting local residents, key community groups and key partners. The consultation process uncovered no direct opposition to the project. Questions and concerns were raised about around the size and scale of the kit that would have to be installed, and about noise or disruption; but the answers and information given provided reassurance, and all present were overwhelmingly keen to see 'The Cut' brought back in to productive use, for this local feature to be improved, and highlighted, as a part of the local heritage.

An interim feasibility study was commissioned to assess the

tidal range, flow patterns and to explore potential constraints, such as health & safety and ecology. It found that the capacity for 'The Cut' to store water was limited, as the bottom of the area is above the low tide water level. Basic figures were used to derive a practical estimate of the generation capacity and potential income from generation; these predicted an annual generation of 11.6 MWh which would result in income generation of £580 per annum.

The interim study concluded that, although energy could be generated from 'The Cut', the cost of engineering two dams at each end, installing turbines to benefit from the rising and falling tide, ancillary works and any ongoing maintenance would not be met by the predicted income, so the site would not be viable for commercial development.

FOOD FOR THOUGHT

The study noted that the site

could of course still be developed as a demonstration project. Other models utilising the whole harbour could also be investigated, incorporating new sluice gates, formerly used to flush the sand out of the harbour.

OBJECTIVES

The fund will help assess the potential for 18th century "Cut" at Seaton Sluice, Northumberland, to generate electricity for the 21st century.

MORE DETAILS

Project:	Seaton Valley Energy Storage Initiative
Group:	Seaton Valley Community Partnership
Theme:	Hydroelectricity
Area of benefit:	Seaton Valley, Northumberland
Date:	Nov 2016-Nov 2017
Contact:	www.seatonvalley.org.uk/seatonvalleycommunitypartnership/