

## ReDAPT Project - Key Findings of the Falls of Warness 3D Model Validation Report

Performance of tidal turbines is critically dependent on the current flow profiles

The conclusions show that tidal heights and depth-averaged currents are reproduced well in all the locations tested.

Modelling the current flow profiles provides guidance on the specific turbine sites to be assessed for suitability, prior to using measurement campaigns to collect detailed flow and turbulence data using Acoustic Doppler Current Profilers (ADCP) sensors.

A 3D hydrodynamic model of the Fall of Warness in the Orkney's has been built using the MIKE3 software developed by DHI.

General trends in the variation of the profile with direction are reproduced by the model.

Model validation has been conducted using data collected over a period of one month at four locations within the Fall of Warness