



Llywodraeth Cymru
Welsh Government

Monitoring tidal energy devices and interactions with marine animals

Monitoring interactions between marine animals and renewable energy devices is often needed to meet legal requirements to protect species, it also builds our understanding of animal behaviour around devices.

Understanding such interactions ensures our important marine life is protected and it can unlock the renewable energy potential of our seas, enabling a cautious, stepwise approach to consenting.

A review of monitoring methodologies and technologies suitable for deployment in high energy environments in Wales builds confidence in our abilities to monitor interactions and to take action, if necessary, to protect marine animals from significant impacts.

Key messages from the review



Monitoring can be challenging and costly. However, there are a range of technologies suitable for use in Welsh waters to monitor interactions.



Technologies available include hydrophones to detect vocalising animals, such as dolphins and harbour porpoise and sonar equipment capable of detecting seals and seabirds.



Practical issues should not be overlooked – deploying and retrieving monitoring technologies, storing and sharing of data are important considerations.



There are challenges with the physical environment – technologies are often deployed in strong tidal currents, combined with low visibility in Welsh waters, it makes certain monitoring approaches difficult.



Corrosion from seawater and biofouling where animals settle and grow on objects also adds to the challenge, requiring monitoring equipment to be cleaned and maintained adding to project costs.

A critical message identified by the review is that opportunities exist to advance monitoring technologies to overcome challenges and enhance our capabilities to monitor animal behaviour, and detect any risk of collision between marine animals and marine renewable energy devices.

