

## Our application for an Operational Water Discharge Activity Environmental Permit

June 2018



### Why water is needed

Horizon Nuclear Power is proposing to build and operate Wylfa Newydd, a new nuclear Power Station on Anglesey.

Like all power stations that generate steam to produce electricity (which include nuclear power stations), Wylfa Newydd requires a cooling system to draw the steam through the turbine, and then condense it back to water so it can be re-used.

Wylfa Newydd will use up to 130 cubic metres of seawater per second to cool the steam turbine condenser and other systems (described as 'cooling water'), which will be then returned to the sea.

Horizon needs an Environmental Permit from Natural Resources Wales (NRW) to discharge the cooling water into the sea, as well as to carry out other related activities whilst operating the Power Station.

The UK Advanced Boiling Water Reactor (UK ABWR) is designed to reduce any potential impacts on the marine environment. We have carried out a comprehensive assessment of the potential environmental impacts to support our main application for a Development Consent Order (DCO), as well as our Environmental Permit application. This includes detailed modelling of the marine environment and extensive surveys of the organisms present in the sea around Anglesey.

# Our application for an Operational Water Discharge Activity Environmental Permit

## How water will be used

Water will be used and managed at the operational Power Station in a number of ways:

- **cooling water** will be drawn into the Power Station at an intake at Porth-y-pistyll and discharged at an outfall at Porth Wnal;
- **process effluents** will be treated on-site or retained for re-use wherever possible so that discharges of these are kept to a minimum;
- **surface rainwater run-off** will be collected, managed and finally discharged via either the cooling water outfall or surface water outfalls to the sea, depending on where it occurs;
- seawater from the **fish recovery and return system** will be returned to the sea; and
- **fish** that get collected on the intake screen will be recovered and returned with seawater.

## Our application to NRW

Horizon has applied to NRW for an Operational Water Discharge Activity Environmental Permit. Our application describes all the work we propose in more detail, and the measures we would take to manage water intake and discharge from the Power Station Site.

Our application includes:

- details of the cooling water intake and discharge, the tidal flows and other characteristics that may have an influence on the level of the environmental impact;
- how we will put monitoring equipment and systems in place;
- details of our comprehensive assessment of the potential environmental impacts of these activities; and
- how we demonstrate through assessments that there would be an overall negligible impact on the marine environment, with no adverse effects on the integrity of any European Designated Sites, the Skerries or Anglesey North coastal water bodies.

## Next steps

Having submitted our application, NRW will conduct a public consultation and carry out its own assessment of the potential environmental impacts before considering whether to issue an Environmental Permit.

**For more information visit our website at [www.horizonnuclearpower.com](http://www.horizonnuclearpower.com) where you can view a copy of our full application, together with the supporting documents.**