Natural Resources Wales permitting decisions

Variation of a bespoke Permit

We have decided to issue the variation for Severn Power Station operated by Siemens plc.

The variation number is EPR/HP3737UE/V004

We consider in reaching that decision we have taken into account all relevant considerations and legal requirements and that the permit will ensure that the appropriate level of environmental protection is provided.

Purpose of this document

This decision document:

- explains how the application has been determined
- provides a record of the decision-making process
- shows how all relevant factors have been taken into account
- justifies the specific conditions in the permit other than those in our generic permit template.

Unless the decision document specifies otherwise we have accepted the applicant's proposals.

Structure of this document

- Key issues
- Annex 1 the decision checklist

Key issues of the decision

Biodiversity, Heritage, Landscape and Nature Conservation

The following sites are within the relevant screening distances for an EPR installation with discharges to controlled water:

European Sites within 10km of the discharge point:

- Severn Estuary (SAC, SPA and Ramsar)
- River Usk (SAC)

Sites of Special Scientific Interest within 2km of the discharge point:

- River Usk (Lower Usk)
- Newport Wetlands

- Severn Estuary
- Gwent Levels – Nash and Goldcliff
- Gwent Levels – St Brides

National Nature Reserves within 2km of the discharge point:

- Newport Wetlands

The Severn Power Station installation generates the following waste water streams, which are discharged into the River Usk via a common outfall:

1. Neutralized effluent from the water treatment plant and condensate polishing plant (W1);
2. Surface water run-off from roofs and roads (W2); and
3. Oily water from process building sumps, sampling and auxiliary boiler blowdown (W3).

The current discharge point is above the high water mark on land owned by Newport Usk Sailing Club (NUSC). High velocity discharges have resulted in scouring; carving out channels in the mudflats. These channels pass through the moorings owned by NUSC and concerns have been raised that some moorings will become undermined. The operator has therefore reviewed the current outfall design and discharge point which has resulted in a proposal to relocate the outfall, which is the subject of this variation application. More specifically, a new outfall into the River Usk will be constructed which will result in the discharge point being moved 100 metres downstream from the current location. There will be no changes to the effluent volume or composition as a result of this variation. Therefore we are satisfied that the water quality of the River Usk will remain unchanged.

We consider that the new outfall will have a positive impact on the mudflats which are a special feature of the designated sites. This is because the new outfall has been designed to reduce the scouring of the mudflats on the banks of the River Usk, which in turn will improve the habitat for the species and communities that they support. The outfall will be constructed with features that will dissipate the flow such as a castellated weir and a wider outfall pipe. In addition, the operator has stated that the velocity of the flow will be reduced by up to 70%, from 2.9m/s to 1.2m/s, which will reduce the physical impact to the receiving environment. This commitment has been formalised in the operator's effluent discharge procedure which has been incorporated into the permit as an operating technique (see **Incorporating the application** section below).

There are a high number of discharges into the River Usk from other sources within 1 km of the Severn Power Station discharge point. The proposal to relocate the outfall will not impact on the effluent quality or the current water quality of the River Usk. Therefore it is not considered that this proposal will act in combination with any other permitted discharge.

On this basis, we consider that this variation is not likely to give rise to any significant effect at any of the European sites, either alone or in combination with other permissions, plans or projects.

With regard to the SSSI's, The Gwent Levels – St Brides and Gwent Levels – Nash and Goldcliff sites are "landlocked" within the screening distance area and therefore cannot be affected by the relocated outfall point. On this basis, these two SSSIs do not require further consideration.

For the three remaining SSSI's, we are satisfied that the relocated discharge outfall is not likely to damage any of the flora, fauna or geological or physiological features which are of special interest.

Having assessed the proposal it is not considered that the activity is likely to cause any increased detriment to the special features of the River Usk SSSI, Severn Estuary SSSI and Newport Wetlands SSSI. The proposal to relocate the discharge point is to reduce the physical impact to the mudflats through scouring.

The operator proposes to construct a new headwall which will be designed to reduce the flow rate and dissipate the effluent before it is discharged. The proposal does not include any changes to the effluent quality or volume therefore there will be no increased impact. The proposal to relocate the discharge outfall is to improve the situation with scouring of the mudflats which will have a positive impact on this special feature of the River Usk SSSI.

Our assessment criteria for the Newport Wetlands National Nature Reserve is based on whether or not the proposal would be likely to cause significant pollution. We are satisfied that significant pollution will not be caused, because there will be no change to the effluent quantity or composition as a result of this variation. The only physical change involves relocating the outfall location and reducing the flow velocity to reduce scouring of the mudflats, which will represent an improvement on the current situation.

Incorporating the application

The operating techniques table has been updated to include two documents provided by the operator as part of this variation application. The first of these is SOM-02 which is the application support document produced by Pell Frischmann. This has been incorporated because it contains a commitment to monitor saltmarsh vegetation for 24 months after the completion of the outfall relocation. This is a precautionary measure which will enable the operator to verify that saltmarsh vegetation has not been impacted by the change.

The second document that has been incorporated is the operator's updated effluent discharge procedure. This has been included because it sets out the controls which will be in place to control effluent releases. More specifically, the procedure confirms that the effluent discharge velocity will be at the

reduced rate of 1.2 m/s. In addition it states that “no simultaneous discharges will be undertaken whenever possible”, which means that where practicable, the discharge of effluent from W1, W2, and W3 at the same time will be avoided.

Annex 1: decision checklist
This document should be read in conjunction with the application and supporting information and permit / notice.

Aspect considered	Justification / Detail	Criteria met Yes
European Directives		
Applicable directives	All applicable European directives have been considered in the determination of the application.	✓
The site		
Extent of the site of the facility	The operator has provided a plan which we consider is satisfactory, showing the new route of the effluent pipeline and the location of the new outfall into the River Usk. The updated site plan is included in the variation notice.	✓
Biodiversity, Heritage, Landscape and Nature Conservation	The application is within the relevant distance criteria of a site of heritage, landscape or nature conservation, and/or protected species or habitat. A full assessment of the application and its potential to affect the habitats sites and species has been carried out as part of the permitting process. We consider that the application will not affect the features of the habitats sites or species. We have not formally consulted on the application. The decision was taken in accordance with our guidance. See **Key Issues** section.	✓
The permit conditions		
Incorporating the application	We have specified that the applicant must operate the permit in accordance with descriptions in the application, including all additional information received as part of the determination process. These descriptions are specified in the Operating Techniques table in the permit. See **Key Issues** section above.	✓
Monitoring	Table S4.2 of the permit has been updated to clarify the monitoring arrangements for pH at W1. pH is monitored with a continuous measurement probe, therefore the reference period in the table is “continuous”. However, the discharge of effluent from W1 is a batch process,	✓

Aspect considered	Justification / Detail	Criteria met Yes
	whereby effluent is only released if the pH is within the permitted range. Therefore the required monitoring frequency has been changed from “continuous” to “Immediately prior to batch discharge” to more accurately reflect this arrangement.	
OPRA		
OPRA Score	There is no change to the installation’s OPRA score as a result of this variation.	✓