

Public Consultation: When will we get to have our say on your flood protection proposals for a new nuclear power station near Oldbury?

As outlined, we are still in the early stages of our development work and have yet to carry out any formal public consultation on our proposals to build a new nuclear power station near Oldbury.

Ahead of submitting a planning application we will hold formal pre-application public consultations in line with the new planning regime. This will give local communities the opportunity to review our proposals, have their say and help shape our plans for a potential new nuclear power station.

It is expected that pre-application consultation will take place in two stages; the first looking at our preliminary designs and the second focusing on our preferred proposals.

This is in line with the consultation activities that we are planning for our Wylfa project on Anglesey.

In the meantime we continue to engage with local people to ensure that they are kept up to speed with our project via drop-ins, our regular newsletter and via our web site.

Have your say

We want to know what you think about the issues raised today. Please complete a feedback form to give us your views and to help us improve future events.

Keep in touch

If you have any queries or issues you would like to raise with us, please call our freephone number: **0800 130 3125**

Or email us at: oldburynquiries@horizonnuclearpower.com



More information can be found at: www.horizonnuclearpower.com

HORIZON

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INFORMATION ON
HORIZON'S ON-GOING
STUDIES INTO FLOOD
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Flood protection at Oldbury

Horizon Nuclear Power is developing proposals for around 6GW of new nuclear power generation on two sites: Wylfa on the Isle of Anglesey and near Oldbury-on-Severn in South Gloucestershire.

Wylfa is our lead site and our intention is to incorporate the learnings from this programme into our plans for Oldbury. A number of significant milestones are now approaching on the Wylfa project, including the selection of a reactor vendor. These will help us to shape a clearer programme for a potential new plant at Oldbury and we expect to have more detail on our approach in early 2012.

We remain in the early stages of development work at Oldbury and it will be some time before the studies that will feed into an Environmental Statement (ES) to accompany any future planning submission for Oldbury will be complete.

In the meantime, we wanted to share our current thinking on flood protection issues with local residents and answer, as fully as we can at this stage, the questions people have on flood related issues.

Site suitability: Why is Horizon proposing to develop a new nuclear power station on a flood plain?

Land adjacent to the existing power station at Oldbury is one of eight UK sites included in the Government's Nuclear National Policy Statement (NPS). It is considered potentially suitable for new nuclear build as it has met the criteria set out by the Government as part of its Strategic Siting Assessment for new nuclear development.

The existing power station has operated on the adjacent site safely for 40 years. If designed and managed correctly, we believe the area can also safely accommodate a new development taking into account the flood plain location and the possible effects of climate change and/or a major flooding event.

What do we mean by flooding?

Flood risk is one of a number of factors that need to be balanced in assessing a suitable site for a new nuclear power station. In fact, the existing power station site is elevated above the normal ground level and there is a sea wall in place to act as a defence against flooding from the estuary. Similar but enhanced measures would be needed for any new power station in the future.

Flooding can arise for a number of reasons. In addition to the more obvious - from rivers and the sea (including storm surges), it can also arise as a direct result of rainfall on the ground, from rising groundwater and from other sources. The combined effect of all these measures will eventually need to be taken into account and considered.

In addition to demonstrating the safety of our site in the event of flooding, we will also have to demonstrate - to the satisfaction of the regulators - that measures put in place to protect the site from flooding in the future do not increase the risk of flooding elsewhere in the locality.

Flood protection: What level of flood protection are you working to?

The standards of protection required for general industrial development is typically to cater for a 1 in 100 year flood event for fluvial flooding (relating to rivers) and a 1 in 200 year event for tidal flooding. However, as part of the stringent planning and licensing process for new nuclear power stations we are required to carry out an extensive assessment of a range of potential natural events including consideration of events with a probability of up to 1 in 10,000 years, taking account of the possible effects of natural disasters such as tsunamis or storm surges, as well as the possible implications of climate change.

Our proposals to do this are currently being developed in conjunction with the Environment Agency and the Office for Nuclear Regulation. They are likely to consist of a combination of raising the site level and improving existing flood protection measures.

Additionally, we are currently evaluating the full report by the UK's Chief Inspector of Nuclear Installations, Dr. Mike Weightman, on the lessons to be learnt from the events at Fukushima after the Japanese tsunami earlier this year. We believe we are well placed to incorporate the report's recommendations into our projects from the development stage onwards.

Natural disasters: How would the site be protected against a natural disaster, such as the events of 1607?

We are aware of the historical reports of a tsunami or storm surge in the Severn in 1607. Our early modelling (see below) suggests that, given the enhanced flood protection measures that the new station would have, that even in very extreme scenarios such as this, a new station near Oldbury would be equipped with the necessary measures required to ensure that the site remains safe at all times.

What about local flooding?

We know that there are already local flooding issues in and around the Oldbury area which are more to do with surface water drainage and its ability to be released into the estuary, particularly at high tide. The development of a new power station provides the opportunity to consider whether measures can be put in place to improve upon the existing situation.

We have already had some initial exploratory meetings with the Environment Agency and the Internal Drainage Board to better understand the problems, but we welcome local views on flood related issues at this early stage.

Current work: What studies are you currently doing on flood protection?

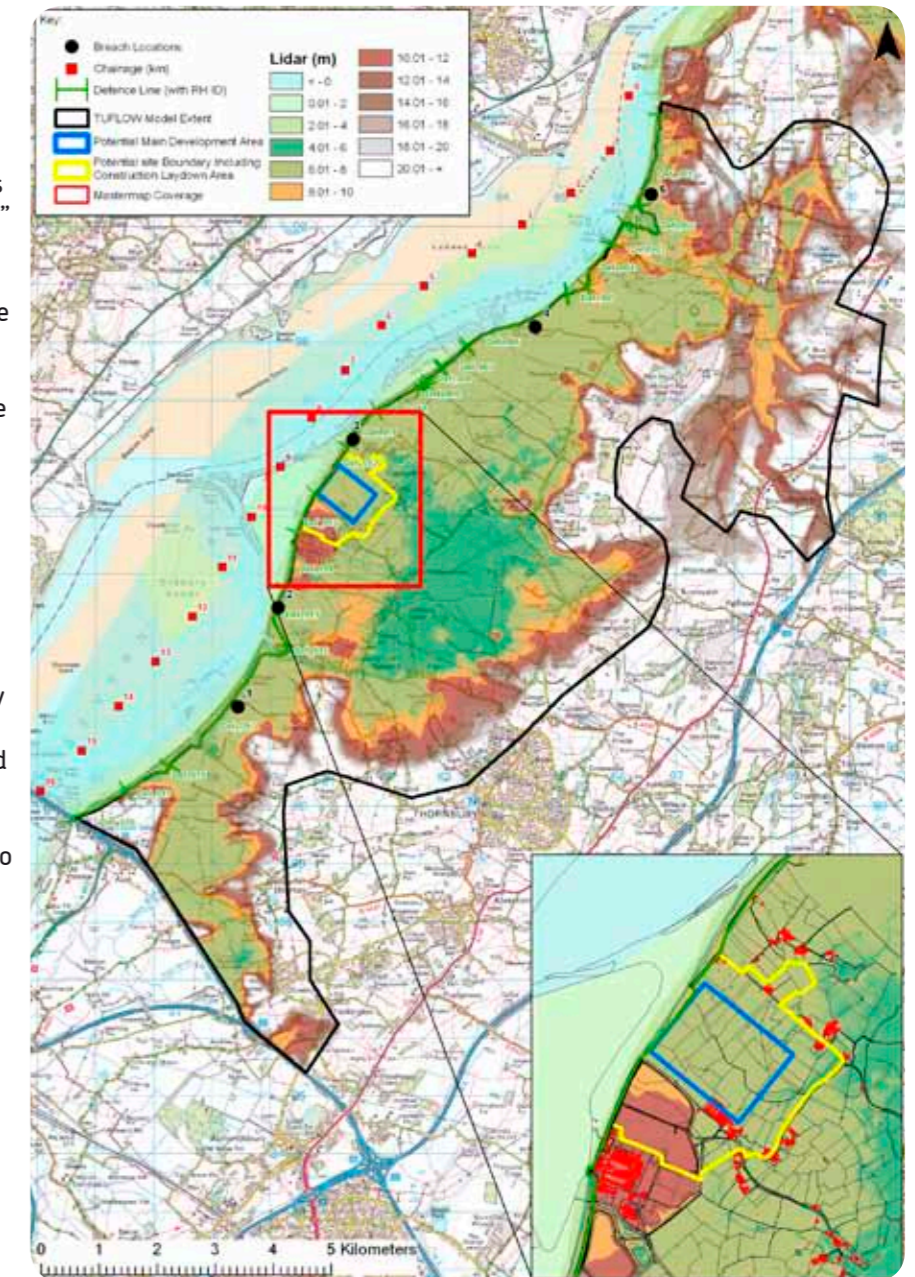
We are currently carrying out risk modelling, which uses sophisticated software to simulate the complex interaction between tides, waves, surface run-off and river volume that exists in Oldbury's estuarine setting. This allows us to examine an extensive range of "what if" scenarios.

The modelling also allows us to review the possible consequences of climate change impacts. These include looking at a range of potential sea level rises as well as wave height increases, both of which could lead to an increased risk of flood defences being overcome.

Independent environmental experts Royal Haskoning are carrying out the work for us using specialist flood modelling software, and this is being agreed with the regulators as it progresses. Essentially these studies give us the parameters that will help us in defining how we will defend the site against flood risk, and the next step will be to model potential flood risk mitigation options, which will continue into next year.

Following our detailed modelling we will be looking into the feasibility of implementing solutions at Oldbury and this study work will commence in 2012 and continue into 2013.

Our proposals with regards to flood protection along with other key aspects of our plans will of course be assessed extremely thoroughly by the regulators. The Office for Nuclear Regulation continually reviews safety arrangements against world best practice, applying knowledge from lessons learned from around the world both before and throughout the operational lifetime of a plant.



Flood risk modelling: image showing the boundary (marked by black line) of the flood risk modelling project. Inset, bottom right: the site of the proposed new nuclear power station near Oldbury.

