

# The Role and Conclusions of the HPA Regarding the Partial Delicensing of Oldbury Power Station Nuclear Licensed Site



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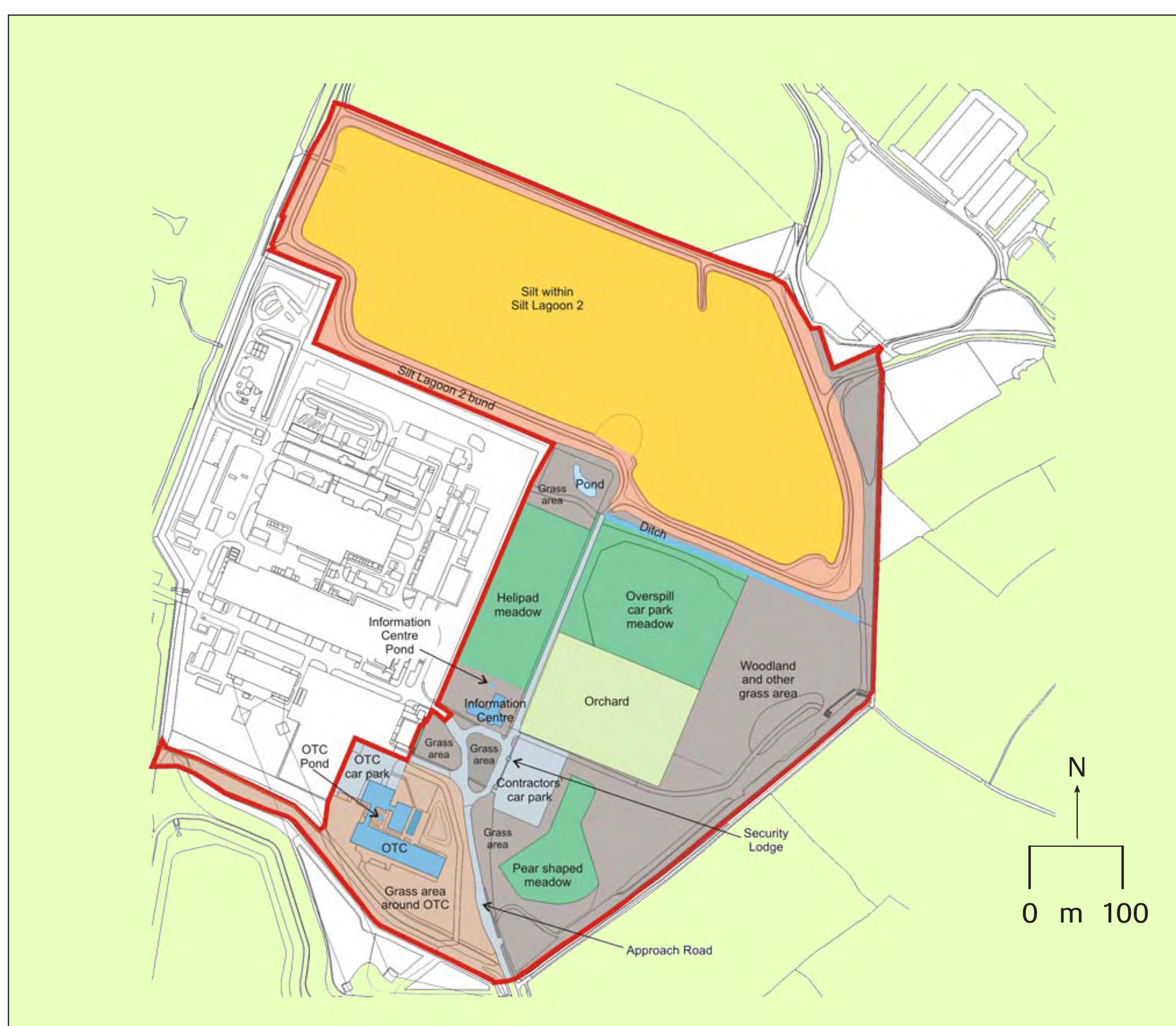
## Introduction

The Health and Safety Executive (HSE) appointed the HPA to perform an independent final site survey of the area to be delicensed around the Oldbury power station nuclear licensed site. The HPA also examined the licensee's methodology and conclusions drawn from analysis of the licence holder's data to ensure that all conclusions drawn are valid.



The Oldbury nuclear licensed site consists of the twin Magnox reactor power station and adjacent land (total 71 ha) located on the southern bank of the River Severn estuary, eleven miles north of Bristol. The power station was constructed in the 1960s and first generated electricity in 1967. It remained operational at the time of the partial delicensing; however no part of the power station site fell within the area to be delicensed

The area to be delicensed was relatively large consisting of around 32 ha all of which were situated outside of the site security fence. Much of the area was relatively inaccessible due to either being marsh land or densely wooded. In addition a large part of the area had been designated a site of nature conservation Importance (SNCI), making access difficult.



The application area was sub-divided into a number of smaller zones for the purposes of the delicensing. These were:

- a silt lagoon and its associated raised bund
- open undisturbed grass and woodland
- roads and car parks
- Oldbury Technical Centre and Oldbury Conference Centre



The Data Quality Objective system was followed with this being the first site in the UK to be granted a variation in license based on this methodology.

The HPA's sample and measurement results together with the levels of agreement with the license holder's results are presented.

	95% upper confidence limit <sup>137</sup> Cs, Bq g <sup>-1</sup>	
	License holder	HPA
Silt lagoon and associated raised bund		
Open undisturbed grass and woodland	0.038	0.033
Roads, car parks and Oldbury Technical Centre	0.012	0.020
	0.018	0.023

In the UK, the main legislation governing health and safety at work is the Health and Safety at Work etc. Act. 1974. In addition the Nuclear Installation Act 1965 (as amended) provides the framework for the regulation of the safety of nuclear installations. The Office for Nuclear Regulation (ONR) is an Agency of the HSE that regulates safety at nuclear installations within the UK. Once a nuclear site licence has been issued, the licensee's period of responsibility can only be ended, when, in the opinion of the HSE, there has ceased to be any danger from ionising radiation from anything on the site to be delicensed.

This principle of 'no danger' has been expanded on by the issue of further guidance from the HSE. This states: HSE have further stated in their guidance document<sup>(1)</sup>, that their preferred position was that land should be cleared to the values given in RS-G-1.7<sup>(2)</sup> to demonstrate achievement of the policy criterion of the residual risk of death being one in a million per year, which broadly equates to the 'no danger' criterion.

It is worth putting the one in a million risk of death in context by comparison to the average annual risk of death in the UK to some other causes<sup>(3)</sup>.

Smoking 10 cigarettes a day	1 in 200
Heart disease	1 in 300
Accident in the home	1 in 15,000
Accident on the road	1 in 17,000
Homicide	1 in 100,000

Results Across the Area to be Delicensed as a Whole			
Zone	RS-G 1.7 value <sup>137</sup> Cs, Bq g <sup>-1</sup>	95% upper confidence limit <sup>137</sup> Cs, Bq g <sup>-1</sup>	
		License holder	HPA
Application area	0.1	0.065	0.05

## Conclusion

The overall conclusion is that the area to be delicensed around Oldbury nuclear licensed site meets the no danger criterion of a risk of less than 1 in a million.

## References

- (1) HSE, 2008. Guidance for Inspectors on the interpretation and implementation of the HSE policy criterion of no danger for the delicensing of nuclear sites. Available from [www.hse.gov.uk/nuclear/delicensingguide.pdf](http://www.hse.gov.uk/nuclear/delicensingguide.pdf)
- (2) International Atomic Energy Authority (2004) "Application of the Concepts of Exclusion, Exemption and Clearance Safety Guidance. RS-G-1.7.
- (3) Office for Nuclear Regulation, June 2011. Delicensing of a part of the Oldbury power station nuclear licensed site. Available from <http://www.hse.gov.uk/nuclear/delicensing-part-oldbury.pdf>