Nuclear Restoration Services (NRS)

Oldbury Site

Environmental Management Plan (Decommissioning)

Issue Eighteen 2025

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EXECUTIVE SUMMARY

In March 2007, Magnox Electric Ltd (now Nuclear Restoration Services) applied to the Health and Safety Executive (HSE) for consent to decommission Oldbury Power Station in accordance with the Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations 1999 (as amended). An Environmental Statement accompanied the application.

After a period of public consultation, the HSE, now the Office for Nuclear Regulation (ONR), duly granted consent in February 2008. Conditions were attached to the consent, including one relating to the production and maintenance of an Environmental Management Plan covering the ongoing mitigation measures to prevent, reduce and, if possible, offset any significant adverse environmental effects of the decommissioning work.

The Plan is to be re-issued by the site licensee annually or at intervals agreed with the ONR. This document is the eighteenth issue of Oldbury Site's Environmental Management Plan.

As Site Director for Oldbury Site, I look forward to continuing a successful decommissioning project and on behalf of Nuclear Restoration Services I give my commitment to minimising any adverse effect on the environment as a consequence of our decommissioning operations.

John Alderton

Site Director

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1. Introduction

Oldbury Power Station (hereafter Oldbury Site) ceased generation of electricity on 29th February 2012 and shortly thereafter began defueling. Prior to commencing this work Nuclear Restoration Services (hereafter NRS), the Licensee of the site, is legally required to seek consent from the Office of Nuclear Regulation (ONR), formerly the Health and Safety Executive (HSE), to carry out the decommissioning project.

An application was therefore made in March 2007 to the Health and Safety Executive (HSE) (hereafter ONR) for consent to carry out the decommissioning project at Oldbury Site. In support of this application, an Environmental Statement[1,2] was provided, which assessed the impacts of the project on the environment. Following an extensive public consultation, the ONR granted consent to carry out the decommissioning project at Oldbury Site in February 2008, subject to certain conditions. The conditions are listed in full within the Consent in Appendix A.

Condition number 2 requires the licensee of the site to prepare and implement an Environmental Management Plan (EMP) to cover mitigation measures to prevent, reduce and where possible offset any significant adverse effects on the environment. "The EMP shall:

- *list the mitigation measures that are already identified in the environmental statement and evidence submitted [to the ONR] to verify information in the environmental statement; and*
- *list the work activities where mitigation may be required but where assessments to identify mitigation measures will only be possible in the future."*

It is a requirement of the conditions attached to the consent to describe the effectiveness of the mitigation measures over time. This EMP is therefore a living document that will be periodically reviewed and revised throughout the decommissioning project. The EMP will be reissued annually or at other intervals agreed with the ONR. Future submissions will include a summary of the effectiveness of the mitigation measures over the previous 12 months.

Further information on the ONR's decision to grant consent to decommission Oldbury Site can be found in their decision report, which describes the content of the conditions attached to the Consent and the main reasons and considerations for the decision.

On 22nd March 2016 the Office of Nuclear Regulation (ONR) confirmed that the site had taken reasonable steps to prove that the site is free of Magnox fuel and as a result the site was declared as a fuel free site. In accordance with Government Policy, work is now well underway to systematically remove (or decommission) the plant and buildings associated with electricity generation at the site.

[1] European Council Directive 85/337/EEC, as amended by Council Directive 97/11/EC, sets out a framework for the assessment of the effects of certain public and private projects on the environment. The Directive is implemented in Great Britain for decommissioning nuclear reactor projects by the Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations 1999 (as amended).

[2] British Nuclear Group (2007) Oldbury Nuclear Power Station Environmental Statement (in support of the application to decommission Oldbury Nuclear Power Station as required by Statutory Instrument 1999 No. 2892: Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations 1999 (as amended).

Copies of the decision report document are available from:

Office for Nuclear Regulation
4N.1 Redgrave Court
Merton Road
Bootle
Merseyside
L20 7HS

Email: onrenquiries@onr.org.gsi.gov.uk
Internet: www.onr.org.uk

Any queries relating to the decommissioning activities at Oldbury Site or requests for copies of this EMP should be addressed to:

Environment Team
Oldbury Site
Oldbury Naite
Thornbury
South Gloucestershire
BS35 1RQ

N.B. Magnox Limited rebranded to Nuclear Restoration Services on 31st October 2023.

This EMP is also available to the public at Nuclear Restoration Services - GOV.UK (www.gov.uk)

2. Scope of the Environmental Management Plan

This EMP details the mitigation measures to prevent, reduce and where possible offset any significant adverse effects on the environment throughout the decommissioning of Oldbury Site. The decommissioning project at Oldbury Site is divided into three phases as described in Box 1. NRS decommissioning strategies are currently being reviewed and updated. However, these have not been finalised and therefore this EMP follows the previous strategy. This is discussed further in Section 7.

Box 1: Summary of the decommissioning phases[3]

- **Care and Maintenance Preparations** is the first phase of decommissioning and is expected to take approximately 25 years. During this phase most of the radioactive and non-radioactive plant and buildings on the site (other than the reactor building) will be dismantled and cleared.
- **Care and Maintenance** is the second phase of decommissioning which could potentially last for some decades, during which no significant dismantling will be carried out. The site will continue to be managed, monitored and maintained.
- **Final Site Clearance** is the last phase and is expected to take about 8 years. This involves the dismantling of the remaining structures on the site, including the reactors and the clearance of any residual radioactivity to the applicable standard.

This EMP is similarly structured around these three phases; this is predominantly because mitigation measures may change in the future in light of experience and developing technologies. Where mitigation measures are still to be developed in more detail, or require changes, these will be described in subsequent issues of the EMP together with the reasons for any changes made.

The environmental impacts and mitigation measures associated with decommissioning were grouped in the Environmental Statement according to the topic area; these are listed in Box 2. Reference to these topic areas, the associated mitigation measures and the effectiveness of any mitigations being implemented are discussed within this EMP (see Box 2).

[3] The decommissioning phases terminology is also in the process of being updated. For ease we have not updated the terminology in this EMP. However, they will be updated when the strategy has been clarified in line with other updates.

Box 2: Environmental Assessment Topics

- Air Quality and Dust;
- Archaeology and Cultural Heritage;
- Ecology;
- Geology, Hydrogeology and Soils;
- Landscape and Visual;
- Noise and Vibration;
- Socio-Economic;
- Surface Waters; and
- Traffic and Transport.

In addition to the mitigation measures, a brief description of Oldbury Site and its surroundings is presented in this EMP together with an overview of the types of operations that will be carried out during Care and Maintenance Preparations (the first phase of decommissioning when most of the demolition works will take place). Further details for all phases of the decommissioning project at Oldbury Site are presented in the Environmental Statement. Future issues of this EMP provide information on any decommissioning works that have been carried out since the previous submission. Future issues will also contain details of decommissioning works planned for the coming year, the effectiveness of any mitigation employed to date and a review of any changes required to the mitigation measures in respect to ecological changes at the site and/or experience gained.

3. Stakeholder Engagement

NRS remains committed to engaging with stakeholders at all phases in the decommissioning process. Regular meetings have been and will continue to be held with the Site Stakeholder Group as well as other organisations (see Box 3) that will also be kept informed of activities at the site. These organisations were also involved in the public consultation process for the Environmental Statement.

As well as regular meetings with stakeholders, where appropriate, other interested parties will also be kept informed of specific decommissioning activities. Some examples are shown in Box 4.

Box 3: Local Stakeholders

- Oldbury Site Stakeholder Group;
- South Gloucestershire Council;
- Environment Agency;
- Natural England; and
- Lower Severn Internal Drainage Board.

Box 4: Examples of Additional Stakeholder Activities

- Liaising with local wildlife groups regarding mitigation measures proposed for sea clover and reptiles;
- informing and liaising with Natural England, RSPB, Marine Management Organisation (MMO) and Gloucester Harbour Trustees in preparation for removal of the tidal reservoir wall; and
- informing local residents of any short-term activities that may cause a noise nuisance.

3.1. The Role of the Nuclear Decommissioning Authority (NDA)

The Energy Act (2013) requires that the NDA must prepare a strategy for carrying out its functions and from time to time to review that strategy. This strategy must set out the steps that the NDA proposes to take for:

- *"giving appropriate publicity to its responsibilities and strategy;*
- *explaining them both to persons having a particular interest in matters relating to the carrying out by the NDA of its functions and to the general public;*
- *ensuring that the NDA is kept informed at all times of the opinions about such matters of persons having such a particular interest; and*
- *facilitating the communication by such persons of their opinions to the NDA."*

In September 2019 NRS became a wholly owned subsidiary of the NDA. The NDA leads the decommissioning of the UK's earliest nuclear Sites and aims to do so safely, securely and cost-effectively. The NDA is also committed to achieving its goals sustainably, and is working with stakeholders to develop and improve the sustainability strategy.

The NDA is also required to give encouragement and other support to activities that benefit the social or economic life of communities living near those sites for which it has responsibilities, including Oldbury.

The NDA has given its ongoing commitment to openness and transparency and to the continued development of a proper and effective stakeholder engagement framework.

4. The Site and Surrounding Area

4.1. Site Description

Commissioned in 1967, the twin reactors and associated turbo-generators of Oldbury Site had a capacity of up to 460 megawatts (electrical) [MW (e)]. The site ceased generation on 29th February 2012. Since fuel free verification in 2016 the main focus for the site has been decommissioning.

The reactor building comprises two reactors of the gas-cooled magnox type[4]. Each reactor is enclosed in a pre-stressed, post tensioned, concrete pressure vessel lined with mild steel. Oldbury Site was the first nuclear power station in the UK to have such a pre-stressed concrete pressure vessel. Also contained within each pressure vessel is graphite, control equipment (including control rods and associated mechanisms), and a range of monitoring equipment (e.g. to monitor temperature and pressures). The reactors were cooled using carbon dioxide. Each reactor has four boilers which were used for heat removal and steam production which in turn drove the turbines located inside the turbine hall. Cooling of the steam to return it to water was provided by water from the River Severn which had been passed through condensing units located on the floor of the turbine hall beneath the turbines. The cooling water intake and outfall structures are located offshore and are connected to the turbine hall by means of large underground culverts.

Other buildings and plant associated with operation of the site include the cooling water pump house, the national grid substation (now removed), workshops, stores and offices.

Photograph 1: Oldbury Site viewed from the Nature Trail

[4] The term 'magnox' refers to the first generation of gas-cooled nuclear reactors used for electricity generation. It is derived from the cladding material (magnesium non-oxidising alloy) that surrounded each individual uranium metal fuel element.

4.2. Surrounding Landscape

The Oldbury Site is located in South Gloucestershire on the eastern bank floodplain of the River Severn Estuary, close to the village of Oldbury-on-Severn and approximately 15 miles northeast of the centre of the city of Bristol. The nuclear licensed site boundary encloses the operational site only, with land occupied by Oldbury Technical Centre[5], Oldbury Conference Centre, car parking, an orchard, meadows, scrub, and woodland now delicensed. To the north and south of the site are Silt lagoons 1, 2 and 3 respectively which were previously utilised for the settlement and deposition of estuary silt dredged from the tidal reservoir and are no longer operational. To the west of the site is the River Severn and to the east open fields.

Oldbury Site is located in the Severn Shoreline Estuary Character Area, approximately 10 m Above Ordnance Datum (AOD) on the edge of the Oldbury Levels, an essentially low-lying area bounded to the east by the sharply rising ground of the Severn Ridges Character Area. Within this flat, semi-open landscape, the power station often comprises a dominant element in the view.

Photograph 2: Aerial view of the Oldbury Site and surrounding landscape

4.3. Transport Infrastructure

The main vehicular access route to Oldbury Site from the strategic road network is from the M5 then the A38 which runs to the east of the site. When travelling to the site from the north the site is accessed via the A38 then the B4061 through Upper Morton to Butt Lane, Oldbury Lane and then onwards via Foss Lane to the site approach road. When travelling from the south access is via the A38, Grovesend Road, Morton Way, Butt Lane, Oldbury Lane and finally Foss Lane to the site approach road. There is a limited bus service to Oldbury-on-Severn village and Shepperdine, otherwise the nearest bus services are at Thornbury. There is no rail access close to the site; the nearest railway stations for passenger services are at Pilning and

[5] In the Environment Statement the Oldbury Technical Centre was referred to as the Oldbury Training Centre.

Patchway, both stations approximately 9 miles from Oldbury but with limited services. The main line train station at Bristol Parkway approximately 11 miles from the site; or Chepstow, approximately 10 miles from Oldbury on the opposite and western side of the River Severn. Although there are provisions made for cyclists on the Site, there are no specific facilities for cyclists and pedestrians connecting the Site to any of the local villages or Thornbury town. In general, the number of staff walking or cycling to work is low.

4.4. Local Watercourses

The main surface water feature in the area is the River Severn. The estuary and the coastal floodplain is a dynamic environment that is constantly evolving by natural processes, including sediment deposition and erosion, and by human influences such as the reclamation of land. The dynamic nature of the estuary is partly due to its large tidal range – reaching in excess of 14.5 m at Avonmouth at spring tide. The Severn Estuary has the second largest tidal range in the world. This means that large volumes of water enter the estuary, often at high speed, and rapidly change the estuary's physical character through erosion, deposition and sediment transport. Some areas of the estuary are eroding rapidly as a consequence. However, this is not the case along the section of coastline occupied by Oldbury Site.

4.5. Geology and Hydrogeology

The Oldbury area is directly underlain by Estuarine Alluvium overlying the Triassic Mercia Mudstone Group (formerly known as the Keuper Marl). The upper part of the Mercia Mudstone extending beneath the water table is weathered and is characteristically comprised of lithorelicts of weak and very weak siltstone and sandstone in a red-brown clayey silt matrix. The Alluvium comprises a soft to stiff blue-grey clay, sandy in places with occasional gravel and peat layers (the latter in the northern part of the site). The mean thickness of the alluvium is some 4.0 m, with site wide thickness ranging from 1.0 m to 8.0 m. In many of the post construction boreholes the Alluvium is shown to be overlain by fill consisting of reworked mudstone with gravel and cobbles in places. The base of Mercia Mudstone overlies the Dolomitic Conglomerate which without conforming overlies the Thornbury beds of the Devonian Lower Old Red Sandstone. These comprise red-brown sandy mudstones with subordinate sandstones.

The Oldbury area is underlain by 'seasonally wet deep clay' soils. Superficial geology is indicated to be Alluvium, comprising clay, silt, sand and gravel. These soils are considered likely to have low, although slightly variable permeability that is ultimately dependent upon the relative proportions of clay, sand and gravel.

The region surrounding the Oldbury Site is classified by the Environment Agency as 'Indicative Tidal Floodplain'. The Alluvial deposits and Mercia Mudstone Group beneath this area of estuarine floodplain is regarded by the EA as a 'non-aquifer'.

4.6. Sensitivity of the Receiving Environment

The nearest settlements to the site are the villages of Shepperdine, about ½ mile to the northeast, Oldbury-on-Severn and Oldbury Naite both approximately ¾ mile to the south and southeast respectively, and the towns of Thornbury, 3 miles to the southeast and Chepstow 5 miles to the west. The city of Bristol is located approximately 6 miles to the south of the site.

The area around the site is adjacent to the River Severn and contains an intertidal zone of mudflats, sandbanks, rocky platforms, saltmarsh and grazing marsh. The estuary forms one of the most important inter-tidal zones in Britain, providing internationally important feeding grounds for over-wintering and migratory waders and wildfowl. The estuary also attracts large populations of important migratory fish species. The area is of international, national, and local conservation importance with the following conservation designations:

- Severn Estuary Site of Special Scientific Interest (SSSI)[6];
- Severn Estuary Wetland of International Importance under the Ramsar Convention[7];
- Severn Estuary Special Protection Area (SPA)[8]; and
- Severn Estuary Special Area of Conservation (SAC)[9].

The estuarine extent of the above designations is to the top of the riverbank (i.e. up to the coastal footpath) hence only the Oldbury cooling water intake jetty is included within the designations.

There are no Scheduled Ancient Monuments on the power station site. The nearest is Oldbury Camp, an iron-age fort at Oldbury-on-Severn approximately 1.5 km to the south of the site. There are also no Listed Buildings on the Oldbury Site, however there are a number of Grade II Listed Buildings within the village of Oldbury-on-Severn. There are no parks or gardens of historic interest on or adjacent to the site. There are no registered historic battlefields on or adjacent to the power station, the nearest is at Whitcliff Park approximately 5 km to the north east of the site.

[6] Under the Wildlife and Countryside Act 1981, the Joint Nature Conservation Committee (JNCC) has a duty to notify areas of land which it considers to be 'of special interest by reason of any of its flora, fauna or geological or physical features'.

[7] Designated under the Ramsar Convention on Wetlands of International Importance especially as a waterfowl habitat.

[8] Areas which support certain endangered, rare or vulnerable species (found in Annex 1 of the Directive) or regularly occurring migratory birds of European importance can be designated as SPAs under The European Communities Council Directive on the Conservation of Wild Birds (79/409/EEC), commonly referred to as the Birds Directive.

[9] Areas containing rare or vulnerable habitats or species which are of EU interest can be designated as SACs under the European Communities Council Directive on the Conservation of natural habitats and of wild fauna and flora (92/43/EEC, amended by Directive 97/62/EC). The Severn Estuary Candidate SAC had its status approved as a SAC by the UK government from the 10th December 2009.

5. Mitigation Measures

It is a requirement of the conditions attached to the consent (Appendix A), to implement the mitigation measures and describe their effectiveness over time. This chapter discusses the processes in place at Oldbury Site to do this. Tables 1, 2 and 3 list the mitigation measures for each phase of the decommissioning project at Oldbury Site.

There are no changes to the mitigation measures that were submitted in the Environmental Statement and reported in previous submissions of the Environmental Management Plan.

5.1 Implementation of Mitigation Measures

There are a number of processes at Oldbury Site which ensure that the identified mitigation measures are implemented when required. All decommissioning projects and modifications to plant are assessed during the project proposal stage in accordance with robust company management control procedures. A decommissioning project approval form is used to assess whether there may be any changes to the baseline and determine whether further environmental assessment and mitigation is required. An Environmental Risk Assessment process has been implemented (Appendix B) and is applied to all work on site where there is a potential for an environmental impact. The Environmental Risk Assessment ensures that appropriate mitigation measures are implemented. This risk assessment is subject to approval and sign off by the site environmental qualified person.

In addition, there are a number of other tools to ensure that all environmental impacts are minimised. The site ensures compliance with BS EN ISO 14001:2015 by following the Company Procedure for environmental management which is itself embedded into the Integrated Management System (IMS) for NRS.

Oldbury Site also undertakes Best Available Techniques (BAT) studies for those projects where it is deemed that there is a potential for significant radioactive and non-radioactive discharges and disposals from the site. BATs are also used where it is required to demonstrate that these impacts are minimised through evaluation by a clear, systematic and transparent process.

Alongside this EMP, Oldbury Site has a Biodiversity Action Plan (BAP). The BAP is a separate document which describes measures to maintain and enhance the biodiversity of the site in accordance with the local and national BAPs (LBAP and UKBAP). Oldbury's BAP aims to complement those mitigation measures as described in the Environmental Statement and EMP. Advice and assistance from local wildlife groups are to be sought to assist in updating and implementing the BAP.

The latest Oldbury BAP (issue 9 – 2023-2024) was issued in February 2023. A new BAP is currently being drafted which will run from 2025-2035. Information on this and previous BAPs can be obtained from the Oldbury Site Environment Team.

5.2 Demonstrating the Effectiveness of Mitigation Measures

The site aims to continually monitor the effectiveness of the specified mitigation measures over time, and where necessary review, in order to ensure the success of reducing significant environmental impacts. Interaction between the Project and Environment Teams from the conceptual stage through to completion of the project allows for the identification and planning of any required mitigations. It also enables appropriate supervision and practical evaluation of the effectiveness of the mitigation measures implemented. Evaluations can provide valuable feedback on any difficulties encountered, changes required or highlight further mitigation requirements.

The site aims to measure the effectiveness of mitigations in a number of ways, these are outlined below.

1) Environmental Performance Monitoring and Surveys

Environmental performance monitoring such as dust, noise and groundwater monitoring and ecological surveys can provide both baseline and post-mitigation assessment. Post-mitigation environmental monitoring will be used to measure the effectiveness of mitigation measures for larger projects on site such as building demolition and projects involving large numbers of HGV movements. The requirement of this method of measuring effectiveness is determined on an individual project basis as appropriate.

2) Visual Evidence

Site photographs can be taken before the start of a project to provide a good visual indication of the surrounding area and help to identify potential environmental receptors in the vicinity (e.g. surface drains) and highlight the mitigations that may be required.

Visual inspections and photographs during and after the work can also provide an indication of the effectiveness of a mitigation measure. For example, the presence of mud on roads can be an indication of insufficient wheel washing of HGV's.

3) Review of Regulatory Action, Complaints and Internal Event Reporting

Review of regulatory actions, complaints and internal event reporting is a form of reactive monitoring which can provide valuable information about where mitigations may not be effective or where further mitigations are required. The site operates a robust system of internal event reporting, where workers report conditions which are unsafe, or potentially pose a threat to safety or the environment. These reports will be investigated and rectified as appropriate. This reporting system also includes a formal process to manage any external complaints and together they could indicate effectiveness of mitigation measures. For example, complaints from members of the public on noise related activities on site can be an indication that additional silencers on equipment may be required or internal reporting on sediments entering surface water drains, may be an indication of ineffective seeding of soil stockpiles on site.

Although a 'clean sheet' may not necessarily mean mitigation measures are completely effective, it can indicate over a period of time that a significant environmental impact is effectively being mitigated.

5.3 Care and Maintenance Preparations

Mitigation measures already identified (Condition 3a)

Environmental Impact	Mitigation Measure	Action	Comments
Air Quality and Dust			
Dust Emissions (from on-site) • Increase in site dust emissions due to construction, demolition and waste / materials handling operations etc. which could impact on residential and industrial receptors.	The following best practice measures will be implemented as appropriate: • On-site roads to be regularly cleaned of mud/dust deposits, including the use of re-circulating water wheel washers and road cleaners as appropriate; and sheeting of vehicles carrying potentially dusty loads; • Minimisation of unnecessary material and waste handling as far as practicable; • Use of water sprays for external demolition activities as appropriate; • Use of water sprays during outside infill operations; • Avoidance of vehicular use of un-surfaced (soft) ground where possible and limits on vehicle speeds on such surfaces where it cannot be avoided; • Use of water sprays during particularly windy or dry conditions; • Use of water sprays to maintain damp surfaces during dry and windy weather (e.g. soil stockpiles, demolition rubble); or sheeting or seeding of surfaces of stockpiles of soil or other dusty materials; • Sheeting or seeding of surfaces and/or use of wind fences; and • Covering of containers and/or use of wind fences.	• Routine control will be enforced through existing site procedures. Any additional requirements will be considered as part of the environmental, health and safety justification produced as part of individual decommissioning project plans. • The effectiveness of dust mitigation will be monitored. There are a variety of means of measuring dust deposition (e.g. sticky pads); directional monitoring will be used if possible. It may be appropriate to initiate monitoring before works commence in order to determine the background contribution to which the site may add. Arrangements will be discussed and agreed in advance with the local authority as necessary.	• These mitigation measures primarily concern impacts on humans. However, their implementation will also offset possible impacts of dust deposition on sensitive habitats immediately adjacent to the site. Sensitive habitats include the foreshore habitat.
Dust Emissions (road side from vehicles) Increase in dust at residential properties along traffic routes due to soiled vehicles or vehicles carrying dust loads.	As appropriate: • Sheeting of lorries carrying dusty loads; and • Provision of wheel and body washing where appropriate for, as a minimum, heavy goods vehicle leaving the site.	• Routine control will be enforced through existing site procedures. Any additional requirements will be considered as part of the environmental, health and safety justification produced as part of individual decommissioning project plans. • These mitigation measures will be considered as part of the development of the Transport Management Plan.	These mitigation measures primarily concern impacts on humans and aim to reduce the potential for complaints associated with fugitive dust.

Environmental Impact	Mitigation Measure	Action	Comments
Archaeology and Cultural Heritage			
No significant adverse environmental impacts identified arising from decommissioning activities.			
Ecology			
Badgers • Loss of foraging habitat and potential loss of setts	No works within 30 m of a badger sett without a licence from Natural England. • Provision of up to 5 m width foraging zones alongside retained hedgerows and trees around those meadows to be developed for the benefit of foraging badgers.	• Head of Environment to ensure that measures are put in place sufficiently in advance of the works and, if required, to ensure that a qualified and experienced ecologist is used in the process of obtaining a badger licence. • These mitigation measures will be considered as part of the environmental, health and safety justification produced as part of individual decommissioning project plans.	
Great Crested Newts/Reptiles • Incidental Mortality	• Under licence from Natural England, fence off and clear amphibians from areas having been identified as offering suitable foraging habitat and only as and when the areas are planned to be used for materials storage and car parking: i.e. meadows 1, 2, and 3 (see Figure OLD/EC/03 of the Environmental Statement).	• This mitigation measure will only be implemented when an area that has been identified as suitable foraging habitat for amphibians, is planned to be used. An experienced ecologist will be employed to oversee this work and to obtain a licence from Natural England. • Head of Environment to ensure that measures are put in place sufficiently in advance of works and that the advice of a suitably qualified and experienced person is first obtained.	
Peregrine • Disturbance	• Buildings to be checked for nesting peregrine prior to demolition to ensure compliance with the Wildlife and Countryside Act.	• Head of Environment to ensure that periodic visual inspections are carried out for active nest sites using a suitably qualified ecologist.	Although the impact has been assessed as 'not significant', peregrines receive some protection under the Wildlife and Countryside Act 1981, mitigation is therefore required.
Sea Clover • Loss of habitat	• Sea clover seeds to be collected in July from individual plants within development area and scattered on vegetation gaps within the foraging zones identified as mitigation for the loss of foraging habitat for badgers. Restoration of the developed areas to take place at end of Care and Maintenance Preparations phase using a similar mix of species ideally including sea clover seed, cuttings or transplants.	• Head of Environment to ensure that measures are put in place sufficiently in advance of works and that the advice of a suitably qualified and experienced person is first obtained.	
Semi-Improved Grassland • Loss of habitat	• If used for decommissioning, meadows 1,2, and 3 (see Figure OLD/EC/03 of the Environmental Statement) to be re-sown with a species-mix matching the plant communities currently found and ideally containing sea clover seed or transplants.	• This measure will be implemented as part of the decommissioning project plan.	Although the impact has been assessed as 'not significant' the meadows will be re-sown as good environmental practice and to encourage biodiversity.

Environmental Impact	Mitigation Measure	Action	Comments
Severn Estuary SPA/SAC/SSSI/Ramsar • Dust deposition on coastal saltmarsh; • Loss of feeding habitat for birds during removal of tidal reservoir wall; and • Disturbance of fish due to noise and vibration during removal of the tidal reservoir wall.	• Undertake removal of tidal reservoir wall at low tide only and outside of peak period when significant numbers of SPA birds may be present (December to February). • Use of water sprays for external demolition activities as appropriate.	• These mitigation measures will be considered as part of the environmental, health and safety justification produced as part of individual decommissioning project plans. • Decommissioning Team to seek assistance from the Environment Team.	
Geology, Hydrogeology and Soils			
• Inadvertent or uncontrolled disturbance or spreading of existing contaminated soils, including movement by windblown dust, entrainment in runoff, attachment to vehicles and/or inappropriate soil handling operations.	• Desk studies and site investigation, if necessary, before works commence in order to determine the presence or absence of contamination, so that appropriate working practices can be adopted from the outset. • Controlled access to or from known or potentially contaminated working areas as appropriate. • Use of re-circulating wheel washers on HGVs leaving site as appropriate. • Follow relevant pollution prevention guidance for the storage of oil and pollution prevention for construction and demolition sites. • See also dust control measures. • See also measures under 'Inadvertent contamination of soils and/or groundwater arising from temporary storage of contaminated soils, wastes or materials.'	• These mitigation measures will be considered as part of the environmental, health and safety justification produced as part of individual decommissioning project plans.	• Wheel washing addresses dust, ecology, surface waters and highways impacts also.
• Mobilisation of existing contamination by direct rainwater infiltration due to changes in ground cover or the creation of open excavations.	• Investigation of contaminated soils prior to the removal of hard-standings or buildings/foundations with prior remediation if necessary. • Excavation dewatering, if necessary, with monitoring and appropriate management/disposal of any waters arising. • Tenting of exposed areas or excavations, if necessary.	• These mitigation measures will be considered as part of the environmental, health and safety justification produced as part of individual decommissioning project plans.	• Although the impact has been assessed as 'not significant' these mitigation measures are proposed because they constitute good practice.
• Mobilisation of existing contamination due to changes in water table levels and consequential changes to the groundwater flow regime (e.g. due to changes in ground covering and rainwater infiltration).	• Desk studies and site investigation, if necessary, to determine groundwater levels, flows and characterise the full extent of any contamination (both in the saturated and unsaturated zones). • Dewatering of affected areas, if necessary, to avoid mobilisation of contaminants. Remediation may be required if contamination is significant. • Better constrain current baseline conditions for groundwater quality to provide suitable comparison to any future changes.	• These mitigation measures will be considered as part of the environmental, health and safety justification produced as part of individual decommissioning project plans.	

Environmental Impact	Mitigation Measure	Action	Comments
• Creation of new contaminant migration pathways (e.g. due to the creation of boreholes, piles or excavations connecting previously unconnected geological strata).	• Compliance with BS 5930 (Code of Practice for Site Investigations) and BS 10175 (Investigation of Potentially Contaminated Sites – Code of Practice). • Compliance with EA Technical Report P5-065/TR (Technical Aspects of Site Investigation). • Production of risk assessments, method statements and contingency plans. • Follow relevant pollution prevention guidance. • Production of risk assessments, method statements and contingency plans. • Use of made ground that does not exceed average permeability of in situ material to cause groundwater flow issues. • Placement of flow barriers and monitoring of level and flow pattern impacts, as required.	• Routine control will be enforced through existing site procedures. Any additional requirements will be considered as part of the environmental, health and safety justification produced as part of individual decommissioning project plans.	
• Inadvertent contamination of soils and/or groundwater arising from temporary storage of contaminated soils, wastes or materials.	• Sampling and testing of soils, wastes and materials prior to storage as appropriate. • Segregation as appropriate. • Use of containment (e.g. membranes) to eliminate cross-contamination, as appropriate. • Management of rainwater run-off from storage areas for contaminated or potentially contaminated soil, wastes and materials.	• Routine control will be enforced through existing site procedures. Any additional requirements will be considered as part of the environmental, health and safety justification produced as part of individual decommissioning project plans.	
• Inadvertent contamination of soils and/or groundwater arising from inappropriate use of contaminated soils, wastes or materials as infill materials.	• Sampling and testing of potentially contaminated soils, wastes and materials prior to use as appropriate. • Authorised disposal of unsuitable soils, wastes and materials.	• Routine control will be enforced through existing site procedures. Any additional requirements will be considered as part of the environmental, health and safety justification produced as part of individual decommissioning project plans.	
• Inadvertent effects on groundwater flow and quality due to infill of deep basements and the breaching of basement structures to prevent ponding.	• Improved characterisation of groundwater levels and flow direction prior to the start of decommissioning. • Sampling and testing of potentially contaminated soils, wastes and materials prior to use as appropriate. • Puncture all remaining services and foundations to reduce the likelihood of ponding.	• These mitigation measures will be considered as part of the environmental, health and safety justification produced as part of individual decommissioning project plans.	
• Changes in soil and groundwater quality due to spills or leaks of non-radioactive substances.	• Follow relevant pollution prevention guidance for hazardous liquids storage and handling. • Follow site arrangements for emergency spill response.	• Routine control will be enforced through existing site procedures. Any additional requirements will be considered as part of the environmental, health and safety justification produced as part of individual decommissioning plans.	

Environmental Impact	Mitigation Measure	Action	Comments
Landscape and Visual			
• Light spill	• Any new lighting to be installed on site should be directional lighting.	• This mitigation will be considered as part of the environmental, health and safety justification produced as part of individual decommissioning project plans.	• The impact associated with any additional lighting on site has been assessed as 'not significant'. However, this mitigation measure is proposed as a measure of best practice, in order to contain the extent of illumination to those areas which are intended to be lit only.
• Trees	• Careful siting and use of protective fencing where necessary compliant with BS 5837:2012, Trees in Relation to Design, Demolition and Construction.	• This mitigation will be considered as part of the environmental, health and safety justification produced as part of individual decommissioning project plans.	• The impact associated with the construction of car parking or working areas has been assessed as 'not significant'. However, this mitigation measure is proposed as a measure of best practice in order to protect existing trees. Any damaged trees to be re-planted at the end of Care and Maintenance Preparations.
Noise and Vibration			
Local residential properties, recreational areas & industrial receptors • General changes to noise directly from the site and associated changes in traffic.	As appropriate: • Use of equipment fitted with effective silencers where practicable; • Appointment of a site contact to whom complaints/ queries about construction/demolition activity can be directed - any complaints to be investigated and action taken where appropriate; • Local residents informed of exceptional activities; • No potentially significant external working outside of normal working hours without prior agreement with the local authority; and • All construction activity to be undertaken in accordance with good practice as described by BS 5228:1997 Noise and Vibration Control on Construction and Open Sites. This includes minimising unnecessary revving of engines, turning off machines when not required and routine maintenance of equipment.	• These mitigation measures will be considered as part of the environmental, health and safety justification produced as part of individual decommissioning project plans.	The use of noise barriers between particularly noisy activities and sensitive receptors may be appropriate but is not currently proposed. Upon completion of the detailed methodology of work, an agreement with the local authority under Section 61 of the Control of Pollution Act 1974 may be appropriate.
Socio-economic			
Direct Employment • Long-term loss of jobs	• NRS will encourage its contractors to make use of local labour, equipment and services as far as practicable. • NRS will attempt to re-deploy affected staff & support staff in re-training/re-skilling for decommissioning roles.	• Contractors will be provided with a list of local companies known to be capable of involvement as sub-contractors in decommissioning works.	

Environmental Impact	Mitigation Measure	Action	Comments
Surface Waters			
• The potential release of turbid and/or contaminated water from decommissioning activities on the site.	Where necessary: • Wetting down (e.g. excavation or construction/ demolition areas) to prevent windblown spread of dust into locations where subsequent washing into surface water drains would be likely, and appropriate management of wastewater arising. • On-site roads to be regularly kept free from mud/dust deposits, including the use of re-circulating water wheel washers and road cleaners as appropriate. • Sheeting or seeding of any long-term stockpiles of soil to reduce wash-off of suspended solids. • Careful design and siting of spoil mounds as necessary to manage run-off, including use of low walls around such mounds if appropriate. • See also measures under geology, hydrogeology and soils in relation to turbid and/or contaminated water entering the storm drainage system.	• These mitigation measures will be considered as part of the environmental, health and safety justification produced as part of individual decommissioning project plans.	• Wheel washing addresses dust, ecology, geology etc. and highways impacts also.
• Potential minor spills and leaks of non-radioactive substances.	• Follow relevant pollution prevention guidance for working on/near water and for hazardous liquids storage and handling. • Oil separation facilities on the surface water drainage system at appropriate locations. • Follow site arrangements for emergency spill response, including spills kits maintained and available, as well as trained staff at all times.	• Routine control will be enforced through existing site procedures. Any additional requirements will be considered as part of the environmental, health and safety justification produced as part of individual decommissioning project plans.	
Traffic and Transport			
• Impacts on safety on roads (Fosse Lane, Hill Lane, The Naite.)	• No specific mitigation is possible because of the absence of specific accident clusters and causes and/or because the routes benefit from accident records at or below the national average. However, a Travel Plan will be implemented which will encourage communal transport or car sharing (see Appendix C).	• Development of a Transport Management Plan to encourage communal transport or car sharing.	
• Environmental Impacts e.g. proximity of vehicles to pedestrians, pedestrian amenity and mud on roads etc.	• No specific mitigation is possible because of the absence of specific accident clusters and causes. However, a Travel Plan will be implemented which will encourage communal transport or car sharing (see Appendix C). • Wheel washing of HGVs as necessary.	• These mitigation measures will be considered as part of the environmental, health and safety justification produced as part of individual decommissioning project plans. • The mitigation measures will be considered as part of the development of the Transport Management Plan	• Wheel washing addresses dust, ecology, geology etc. and surface waters impacts also.

Activities where mitigation may be required but specific measures cannot yet be selected (Condition 3b)

Environmental Impact	Mitigation Measures Under Consideration
No such activities have been identified.	

Activities where mitigation may be required but it is not yet possible to identify possible mitigation measures (Condition 3c)

Environmental Impact
No such activities have been identified.

5.4 Care and Maintenance

Environmental Impact	Mitigation Measure	Action	Comments
Geology, Hydrogeology and Soils			
Several tasks carried out during Care and Maintenance Preparations may give rise to ongoing impacts for the subsequent decommissioning phase. In respect of these ongoing impacts then some or all of the impacts and mitigation measures (all of which would have been applied in the preceding phase) are as described above under Geology, Hydrogeology and Soils for the Care and Maintenance Preparations phase. The impacts and mitigation measures associated with any maintenance to be carried out during the Care and Maintenance phase would be encompassed by those discussed for Care and Maintenance Preparations. There are no other significant adverse environmental impacts so far identified as arising from decommissioning activities during this phase.			

5.5 Final Site Clearance

Mitigation measures already identified (Condition 3a)

Environmental Impact	Mitigation Measure	Action	Comments
Air Quality and Dust			
Dust Emissions (from on-site) • Increase in site dust emissions due to construction, demolition and waste / materials handling operations etc. which could impact on residential and industrial receptors.	The following best practice measures will be implemented as appropriate: • On-site roads to be regularly cleaned of mud/dust deposits, including the use of re-circulating water wheel washers and road cleaners as appropriate; and sheeting of vehicles carrying potentially dusty loads; • Minimisation of unnecessary material and waste handling as far as practicable; • Use of water sprays for external demolition activities as appropriate; • Use of water sprays during outside infill operations; • Avoidance of vehicular use of un-surfaced (soft) ground where possible and limits on vehicle speeds on such surfaces where it cannot be avoided; • Use of water sprays during particularly windy or dry conditions; • Use of water sprays to maintain damp surfaces during dry and windy weather (e.g. soil stockpiles, demolition rubble); or sheeting or seeding of surfaces of stockpiles of soil or other dusty materials; • Sheeting or seeding of surfaces and/or use of wind fences; and • Covering of containers and/or use of wind fences.	• Routine control will be enforced through existing site procedures. Any additional requirements will be considered as part of the environmental, health and safety justification produced as part of individual decommissioning project plans. • The effectiveness of dust mitigation will be monitored. There are a variety of means of measuring dust deposition (e.g. sticky pads); directional monitoring will be used if possible. It may be appropriate to initiate monitoring before works commence in order to determine the background contribution to which the site may add. Arrangements will be discussed and agreed in advance with the local authority.	• These mitigation measures primarily concern impacts on humans. However, their implementation will also offset possible impacts of dust deposition on sensitive habitats immediately adjacent to the site. Sensitive habitats include the foreshore habitat.
Dust Emissions (road side from vehicles) • Increase in dust at residential properties along traffic routes due to soiled vehicles or vehicles carrying dust loads.	As appropriate: • Sheeting of lorries carrying dusty loads; and • Provision of wheel and body washing where appropriate for, as a minimum, heavy goods vehicle leaving the site.	• Routine control will be enforced through existing site procedures. Any additional requirements will be considered as part of the environmental, health and safety justification produced as part of individual decommissioning project plans. • These mitigation measures will be considered as part of the development of the Transport Management Plan.	• These mitigation measures primarily concern impacts on humans and aim to reduce the potential for complaints associated with fugitive dust.

Environmental Impact	Mitigation Measure	Action	Comments
Archaeology and Cultural Heritage			
No significant adverse environmental impacts identified arising from decommissioning activities			
Ecology			
Impacts and mitigation measures associated with this phase are expected to be very similar to those identified for the Care and Maintenance Preparations phase except for the removal of offshore structures including removal of the tidal reservoir wall. The mitigation measures proposed for the C&M Preps phase are therefore repeated here for completeness however, prior to any works commencing a number of ecological surveys will be undertaken to determine the presence or absence of protected species and habitats or species of conservation concern, both within and immediately adjacent to the site and up to an agreed distance from the site boundary. Proposed mitigation measures will be reviewed and revised as appropriate at the time in light of the results of the new surveys and nature conservation policies at that time.			
Badgers • Loss of foraging habitat and potential loss of setts	• No works within 30 m of a badger sett without a licence from Natural England; • Provision of up to 5 m width foraging zones alongside retained hedgerows and trees around any meadows to be developed for the benefit of foraging badgers.	• Head of Environment to ensure that measures are put in place sufficiently in advance of the works and, if required, to ensure that a qualified and experienced ecologist is used in the process of obtaining a badger licence. • These mitigation measures will be considered as part of the environmental, health and safety justification produced as part of individual decommissioning project plans.	
Great Crested Newts/Reptiles • Incidental Mortality	• Reptile proof fencing to be used to prevent reptiles from moving into working areas. Under licence from Natural England, fence off and clear amphibians from areas. Reptile proof fencing should be installed prior to works commencing, allowing a period of time for reptiles to move out of a work area identified as offering suitable foraging habitat.	• This mitigation measure will only be implemented when an area that has been identified as suitable foraging habitat for amphibians /reptiles is planned to be used. An experienced ecologist will be employed to oversee this work and to obtain a licence from Natural England. • Environmental Engineer to ensure that measures are put in place sufficiently in advance of works and that the advice of a suitably qualified and experienced person is first obtained.	
Peregrine • Disturbance	• Buildings to be checked for nesting peregrine prior to works being carried out to ensure compliance with the Wildlife and Countryside Act.	• Head of Environment to ensure that periodic visual inspections are carried out for active nest sites using a suitably qualified ecologist.	• Although the impact has been assessed as 'not significant', peregrines receive some protection under the Wildlife and Countryside Act 1981, mitigation is therefore required.
Sea Clover • Loss of habitat	• Sea clover seeds to be collected in July from individual plants within development area and scattered on vegetation gaps within the foraging zones identified as mitigation for the loss of foraging habitat for badgers. Restoration of developed areas to take place at end of the decommissioning phase using a similar mix of species ideally including sea clover seed, cuttings or transplants.	• Head of Environment to ensure that measures are put in place sufficiently in advance of works and that the advice of a suitably qualified and experienced person is first obtained.	

Environmental Impact	Mitigation Measure	Action	Comments
Semi-Improved Grassland • Loss of habitat	• If used for decommissioning, meadows 1,2, and 3 (see Figure OLD/EC/03 of the Environmental Statement) to be re-sown with a species-mix matching the plant communities currently found and ideally containing sea clover seed or transplants.	• This measure will be implemented as part of the decommissioning project plan.	Although the impact has been assessed as 'not significant' the meadows will be re-sown as good environmental practice and to encourage biodiversity.
Severn Estuary SPA/SAC/SSSI/Ramsar • Dust deposition on coastal saltmarsh	• Use of water sprays for external demolition activities as appropriate.	• This mitigation measure will be considered as part of the environmental, health and safety justification produced as part of individual decommissioning project plans.	
Geology, Hydrogeology and Soils			
• Inadvertent or uncontrolled disturbance or spreading of existing contaminated soils, including movement by windblown dust, entrainment in runoff, attachment to vehicles and/or inappropriate soil handling operations.	• Desk studies and site investigation, if necessary, to determine the presence or absence of contamination, so that appropriate working practices can be adopted from the outset. • Controlled access to or from known or potentially contaminated working areas as appropriate. • Follow relevant pollution prevention guidance for the storage of oil and pollution prevention for construction and demolition sites. • Use of re-circulating wheel washers on HGVs leaving site as appropriate. • See also measures under 'Inadvertent contamination of soils and/or groundwater arising from temporary storage of contaminated soils, wastes or materials.' • See also dust control measures.	• These mitigation measures will be considered as part of the environmental, health and safety justification produced as part of individual decommissioning project plans.	• Wheel washing addresses dust, ecology, surface waters and highways impacts also.
• Mobilisation of existing contamination by direct rainwater infiltration due to changes in ground cover or the creation of temporary open excavations	• Investigation of contaminated soils prior to removal of hard-standings or buildings/foundations (possibly by desk study alone if appropriate), with prior remediation if necessary. • Excavation dewatering, if necessary, with monitoring and appropriate management/disposal of any waters arising. • Tenting of exposed areas or excavations, if necessary.	• These mitigation measures will be considered as part of the environmental, health and safety justification produced as part of individual decommissioning project plans.	• Although the impact has been assessed as 'not significant' these mitigation measures are proposed because they constitute good practice.
• Mobilisation of existing contamination by direct rainwater infiltration due to the creation of temporary open excavations.	• Desk studies and site investigation, if necessary, to determine groundwater levels, flows and characterise the full extent of any contamination (both in the saturated and unsaturated zones). • Dewatering of affected areas to avoid mobilisation of contaminants. • Better constrain current baseline conditions for groundwater quality to provide suitable comparison to any future changes.	• These mitigation measures will be considered as part of the environmental, health and safety justification produced as part of individual decommissioning project plans.	

Environmental Impact	Mitigation Measure	Action	Comments
• Creation of new contaminant migration pathways (e.g. due to the creation of boreholes, piles or excavations and/or placement of permeable made ground connecting previously unconnected geological strata).	• Compliance with BS 5930 (Code of Practice for Site Investigations) and BS 10175 (Investigation of Potentially Contaminated Sites – Code of Practice). • Compliance with EA Technical Report P5-065/TR (Technical Aspects of Site Investigation). • Production of risk assessments, method statements and contingency plans. • Follow relevant pollution prevention guidance. • Use of made ground that does not exceed average permeability of in situ material to cause groundwater flow issues. • Placement of flow barriers and monitoring level and flow pattern impacts, as required.	• Routine control will be enforced through existing site procedures. Any additional requirements will be considered as part of the environmental, health and safety justification produced as part of individual decommissioning project plans.	
• Inadvertent contamination of soils and/or groundwater arising from temporary storage of contaminated soils, wastes or materials.	• Sampling and testing of soils, wastes and materials prior to storage as appropriate. • Segregation as appropriate. • Use of containment (e.g. membranes) to eliminate cross-contamination, as appropriate. • Management of rainwater run-off from storage areas for contaminated or potentially contaminated soil, wastes and materials.	• Routine control will be enforced through existing site procedures. Any additional requirements will be considered as part of the environmental, health and safety justification produced as part of individual decommissioning project plans.	
• Inadvertent contamination of soils and/or groundwater arising from inappropriate use of contaminated soils, wastes or materials as infill materials.	• Sampling and testing of potentially contaminated soils, wastes and materials prior to use as appropriate. • Authorised disposal of unsuitable soils, wastes and materials.	• Routine control will be enforced through existing site procedures. Any additional requirements will be considered as part of the environmental, health and safety justification produced as part of individual decommissioning project plans.	
• Inadvertent effects on groundwater flow and quality due to infill of deep basements and the breaching of basement structures to prevent ponding.	• Improved characterisation of groundwater levels and flow direction prior to the start of decommissioning. • Sampling and testing of potentially contaminated soils, wastes and materials prior to use as appropriate. • Puncture all remaining services and foundations to reduce the likelihood of ponding.	• These mitigation measures will be considered as part of the environmental, health and safety justification produced as part of individual decommissioning project plans.	
• Changes in soil and groundwater quality due to spills or leaks of non-radioactive substances.	• Follow relevant pollution prevention guidance for hazardous liquids storage and handling. • Follow site arrangements for emergency spill response.	• Routine control will be enforced through existing site procedures. Any additional requirements will be considered as part of the environmental, health and safety justification produced as part of individual decommissioning plans.	

Environmental Impact	Mitigation Measure	Action	Comments
Landscape and Visual			
• Light spill	• Any new lighting to be installed on site should be directional lighting.	• These mitigation measures will be considered as part of the environmental, health and safety justification produced as part of individual decommissioning project plans.	• The impact associated with any additional lighting on site has been assessed as 'not significant'. However, this mitigation measure is proposed as a measure of best practice, in order to contain the extent of illumination to those areas which are intended to be lit only.
• Trees	• Careful siting and use of protective fencing where necessary compliant with BS 5837:2012, Trees in Relation to Design, Demolition and Construction.	• This mitigation will be considered as part of the environmental, health and safety justification produced as part of individual decommissioning project plans.	• The impact associated with the construction of car parking or working areas has been assessed as 'not significant'. However, this mitigation measure is proposed as a measure of best practice in order to protect existing trees. Any damaged trees to be re-planted at the end of Care and Maintenance Preparations.

Environmental Impact	Mitigation Measure	Action	Comments
Noise and Vibration			
Local residential properties, recreational areas & industrial receptors • General changes to noise directly from the site and associated changes in traffic.	As appropriate: • Use of equipment fitted with effective silencers where practicable; • Appointment of a site contact to whom complaints/ queries about construction/demolition activity can be directed - any complaints to be investigated and action taken where appropriate; • Local residents informed of exceptional activities; • No potentially significant external working outside of normal working hours without prior agreement with the local authority; and • All construction activity to be undertaken in accordance with good practice as described by BS 5228:1997 Noise and Vibration Control on Construction and Open Sites. This includes minimising unnecessary revving of engines, turning off machines when not required and routine maintenance of equipment.	• These mitigation measures will be considered as part of the environmental, health and safety justification produced as part of individual decommissioning project plans.	
Socio-economic			
• No significant adverse environmental impacts identified arising from decommissioning activities during this phase.			
Surface Waters			
• The potential release of turbid and/or contaminated water from decommissioning activities on the site.	Where necessary: • Wetting down (e.g. excavation or construction/ demolition areas) to prevent windblown spread of dust into locations where subsequent washing into surface water drains would be likely, and appropriate management of wastewater arising. • On-site roads to be regularly kept free from mud/dust deposits, including the use of re-circulating water wheel washers and road cleaners as appropriate. • Sheeting or seeding of any long-term stockpiles of soil to reduce wash-off of suspended solids. • Careful design and siting of spoil mounds as necessary to manage run-off, including use of low walls around such mounds if appropriate. • See also measures under geology, hydrogeology and soils in relation to turbid and/or contaminated water entering the storm drainage system.	• These mitigation measures will be considered as part of the environmental, health and safety justification produced as part of individual decommissioning project plans.	• Wheel washing addresses dust, ecology, geology etc. and highways impacts also.

Environmental Impact	Mitigation Measure	Action	Comments
• Potential minor spills and leaks of non-radioactive substances.	• Follow relevant pollution prevention guidance for working on/near water and for hazardous liquids storage and handling. • Oil separation facilities on the surface water drainage system at appropriate locations. • Follow site arrangements for emergency spill response, including spills kits maintained and available, as well as trained staff at all times.	• Routine control will be enforced through existing site procedures. Any additional requirements will be considered as part of the environmental, health and safety justification produced as part of individual decommissioning project plans.	
Traffic and Transport			
• Impacts on safety on roads (Fosse Lane, Hill Lane, The Naite).	• No specific mitigation is possible because of the absence of specific accident clusters and causes and/or because the routes benefit from accident records at or below the national average. However, a Travel Plan will be implemented which will encourage communal transport or car sharing (see Appendix C).	• Development of a Transport Management Plan to encourage communal transport or car sharing.	• These mitigation measures will be re-considered on the basis of repeat traffic surveys prior to final site clearance.
• Environmental Impacts e.g. proximity of vehicles to pedestrians, pedestrian amenity and mud on roads etc.	• No specific mitigation is possible because of the absence of specific accident clusters and causes. However, a Travel Plan will be implemented which will encourage communal transport or car sharing. • Wheel washing of HGVs as necessary.	• These mitigation measures will be considered as part of the environmental, health and safety justification produced as part of individual decommissioning project plans. • The mitigation measures will be considered as part of the development of the Transport Management Plan	• These mitigation measures will be re-considered on the basis of repeat traffic surveys prior to final site clearance. • Wheel washing addresses dust, ecology, geology etc. and surface waters impacts also.

Activities where mitigation may be required but specific measures cannot yet be selected (Condition 3b)

Environmental Impact	Mitigation Measures Under Consideration
No such activities have been identified.	

Activities where mitigation may be required but it is not yet possible to identify possible mitigation measures (Condition 3c)

Environmental Impact
Additional mitigation measures (or any changes required to those measures listed above) for activities during final site clearance will be based on the technologies available at that time, decommissioning experience and any future environmental assessment deemed necessary. In particular, repeat ecology and traffic surveys, the former including bat, protected species and breeding bird surveys, prior to final site clearance are proposed followed by a reconsideration of the appropriate mitigation measures.

6. Site Management and Decommissioning

6.1 General Site Management

Hours of Work

Current normal working hours are between 07:25 and 17:00 hours, Monday to Thursday. Most decommissioning work on site will also be undertaken during these hours under a single shift working arrangement, but this may alter for certain activities. For example, from time to time the working day may be extended and/or some weekend (Fri-Sun) or night-time working may be required in order to complete specific items of work such as concrete pouring. Seven days a week, 24 hours a day shift working may be necessary for retrieval of operational ILW and for subsequent waste packaging operations. South Gloucestershire Council will be notified in advance of any potentially significant work outside of regular Monday to Friday working hours and will be provided with a site contact in the event of any queries or complaints.

Lighting

The existing night-time illumination of the site consists mainly of internal lights within the transparently clad parts of the reactor building together with low level ‘street’ lights.

During Care and Maintenance Preparations and Final Site Clearance, further lighting may be necessary at times. Use of such lighting, which would only normally be used at the start and end of the working day during the winter months, will be at the discretion of the relevant Site Supervisor. Should significant additional lighting be required close to the riverbank, advice will be sought from Natural England.

During Care and Maintenance it is expected that there will be occasional low level ‘street’ lighting on service roads, provided for staff attending site during the hours of darkness, and lighting activated by site security systems.

Transport

Vehicle movements to and from Oldbury Site will be subject to the provisions of a Transport Management Plan (see Appendix C).

6.2 Decommissioning Methods

Conventional Area Decommissioning

Conventional plant and buildings will be de-planted and demolished using standard construction industry methods. The exact methods to be employed will be detailed in method statements for individual projects.

The interior of buildings will be first de-planted and decontaminated as necessary prior to demolition of the buildings themselves. To facilitate this, large or heavy plant/equipment may be cut or split into components or sub-component parts prior to their removal. It is expected that after de-planting etc. is complete, demolition will be carried out using conventional methods. All buildings will be demolished in their entirety, the structures including any cabling removed to ground level and the voids backfilled where appropriate.

Work is progressing, by both NRS and the Environment Agency, which aims to provide the Site with the regulatory framework to retain suitable demolition material from conventional buildings, to be re-used as appropriate.

The only existing road/hard standing to be retained into Care and Maintenance will be the road that enters the main gate, turns right and passes round the reactor building and radioactive waste storage building before returning to the main gate via the same approach. Otherwise, most existing hard standings, paths and roads will be punctured to assist the growth of vegetation. A car park will be retained into the Care and Maintenance period.

Demolition of Radioactive Facilities

Radioactive plant in the reactor building will be decontaminated, where practicable, and dismantled. Plant and equipment will be decontaminated in situ and recycled, also where practicable to do so. Examples of these decontamination processes are shown in Box 5. Contamination control provisions will be applied (e.g. work will be done within temporary enclosures) and working procedures will take account of the requirement to minimise workers exposure to radiation to As Low As Reasonably Practicable (ALARP).

Following decontamination and de-planting, buildings scheduled for demolition during Care and Maintenance Preparations will be demolished, using conventional techniques. Monitoring checks will be made on the building as demolition proceeds and on the resulting demolished materials prior to disposal.

Box 5: Examples of Decontamination Techniques

- **Chemical decontamination** involves the use of chemicals to remove the surface contamination
- **Scabbling** involves the physical removal of surface contamination, predominantly on concrete
- **Shot blasting** uses high velocity shot to remove surface contamination
- **Water jetting** involves the use of a pressurised water jet to remove surface contamination
- **Wipe down** where decontamination is removed by 'wiping'; specialist equipment and materials are usually required

6.3 Waste Management

Intermediate Level Radioactive Waste (ILW)

Various types of Intermediate Level Waste (ILW) have arisen during the generation, defueling and decommissioning phases of Oldbury Site, including:

- IonSiv Cartridges and Filters previously retrieved from the Ponds.
- Miscellaneous Contaminated Items (MCI) from Waste Cells 1 and 2, Interim ILW Store Building B75 and the Pondwater Filtration Plant (PFP) Spent Filter Store.

In this reporting period no ILW shipments were made, however the wastes described above are discussed in turn below.

1) IonSiv Cartridges and Filters retrieved from the Ponds

As discussed in previous Environmental Management Plans, ten DCIC MOSAIKs® were successfully packed with ILW IonSiv Cartridges and Filters and conditioned using the Ambient Temperature Conditioning System (ATCS) in January 2019. The ten DCIC MOSAIKs® were then moved to a temporary store within Oldbury Site. This is a facility which has been adapted to include heaters and a dehumidification unit to ensure the packages are maintained at their optimal environmental conditions as per operating and storage instructions stated by the Design Authority.

Four of the DCIC MOSAIKs® (IP2 MOSAIKs®) met the IP-2 Transport Licence and were transported to the Berkeley Interim Storage Facility (ISF) in March 2019. Six DCIC MOSAIKs® remain managed at Oldbury Site in the temporary store until a Type B (M) Transport Licence and specialised transport equipment becomes available.

2) *Miscellaneous Contaminated Items (MCI) from Waste Cells 1 and 2, Building B75 and the PFP Spent Filter Store*

The Station Waste Cells have been utilised during multiple phases of Oldbury's lifecycle. The Waste Cells were used to store Miscellaneous Contaminated Items e.g. fine filters, vacuum debris etc. The Site's inventory of MCI has been reduced over recent years, with MCI Phases 1 & 2 completed between 2018 and 2019. Waste from Waste Cells 1 & 2, PFP Spent Filter Store and Building B75 (an additional ILW Buffer Store) were retrieved, sorted, segregated, characterised and repacked into drums. Approximately half the drums were characterised as Low Level Waste (LLW) and were processed as LLW throughout 2019. Re-characterising waste previously thought to be ILW as LLW is in keeping with the Waste Hierarchy ensuring that only the minimum ILW is processed and stored in the UK's limited facilities.

MCI Phase 3 began in mid-2019, which included loading the characterised MCI into Type VI Ductile Cast Iron Containers (DCICs) using a purpose-built Contamination Controlled Area C3 facility; throughout 2019 and 2020 three DCICs were filled and transferred to the Temporary Store. Two of these DCICs were consigned to the Berkeley Interim Storage Facility (ISF) in July 2021 and the third was consigned in January 2022.

MCI Phase 4 began in February 2021 which saw a fourth DCIC being delivered to site and initial loading commenced in March 2021. During 2021 MCI sand was retrieved from the Station Waste Cells, dried, characterised and repacked into drums. The ILW sand was loaded into this DCIC with the remaining MCI and was consigned to the Berkeley ISF.

Low Level Radioactive Waste (LLW)

Operational LLW routinely arises at nuclear power stations. Because of this, LLW management facilities already exist on site to process and package LLW before it is dispatched for onward treatment or disposal through a contract with the Low Level Waste Repository (renamed Nuclear Waste Services). Through this contract, a variety of disposal and recycling options, known as *Diversion Routes*, are available (for example decontamination of metal and incineration of combustible wastes) to help meet the aim of avoiding waste disposal at the Low Level Waste Repository, in much the same way as controlled waste is diverted from landfill.

During the reporting period all of Oldbury's consignments of radioactive waste were diverted from the LLWR. The shipments consisted of 7 via the metallic recycling route and 6 via the incineration route.

Non-radioactive wastes

The management of waste at Oldbury follows the Environmental Protection Act 1990 Duty of Care principles and aims to minimise the need to use landfill by following the Waste Hierarchy. The site produces a variety of wastes, including those found in an office setting as well as an industrial site.

A particular waste type of note, due to the age of the site, is asbestos. Insulation containing asbestos is removed under stringent safety conditions, in strict accordance with the Control of Asbestos at Work Regulations 2012, using specialist personnel working in tented areas subject to airlocks and a negative air pressure system. With the exception of the now demolished 132 kV Switch-house,

Oldbury Site has not commenced bulk asbestos removal, but small asbestos strips and repairs have been carried out.

Near the end of the reporting period (and ongoing at the time of writing), Oldbury site began the demolition of the Oldbury Technical Centre (formerly a training school then company Head Office). This has produced standard demolition wastes such as brick, glass, metal and wood.

Non-radioactive effluent continues to be disposed of to the River Severn in accordance with Oldbury's discharge permits under the Environmental Permitting (England and Wales) Regulations 2016. Discharges under these permits include stormwater and fully treated effluent from the site sewage treatment plant.

7. Changes to the Environmental Management Plan

Funding constraints within NRS have had minor impacts to planned work at Oldbury Site. This fiscal year (25/26), Oldbury is fully funded for planned work within the Turbine Hall and Ponds areas. Delays have incurred on ILW enabling projects such as Vacuum Fill House completion, Advanced Vacuum Drying System design and FED retrievals (centrally run project). Plans will commence to install a new innovative sort and segregation system within the RCA boundary.

The LC35 milestone of "All operational / legacy ILW (outside the Reactor Building) retrieved, packaged and in interim storage" remains unchanged at present with an expected completion date range 2035-2040.

It is recognised that the current EIADR project description may not yet reflect alternative decommissioning strategies such as on-site disposal and rolling programme of decommissioning. These will be assessed in line with internal standards and incorporated in the EIAB project description once site specific details are defined and agreed and when necessary underpinning to implement the change that has been carried out. These will be addressed in future issues of the EMP as and when appropriate.

8. Decommissioning Activities

A number of decommissioning projects have been undertaken at Oldbury Site in 2024/25. This section summarises these projects under the headings; Oldbury Cooling Pond, Asset Management, Intermediate Level Waste Strategy, Site Restoration and Land Quality Investigations, Decommissioning Programmes and Waste Projects.

8.1. Oldbury Cooling Pond

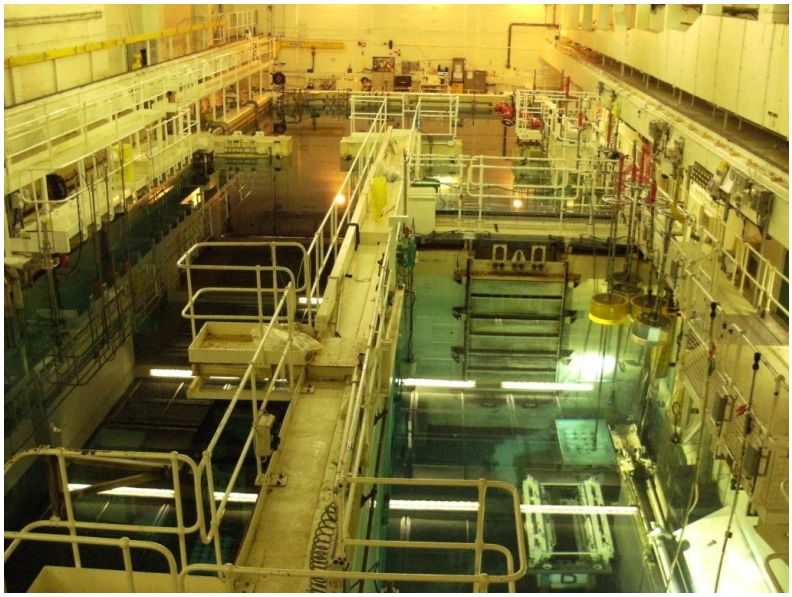
The Oldbury Pond Decommissioning Project commenced in April 2016. During the period to February 2025 the focus of the project was to complete the configuration of the pond facility for Care and Maintenance (C&M), and the continued decommissioning of the Pondwater Filtration Plant (PFP).

Pond Facility & Pond Pump Room Basement

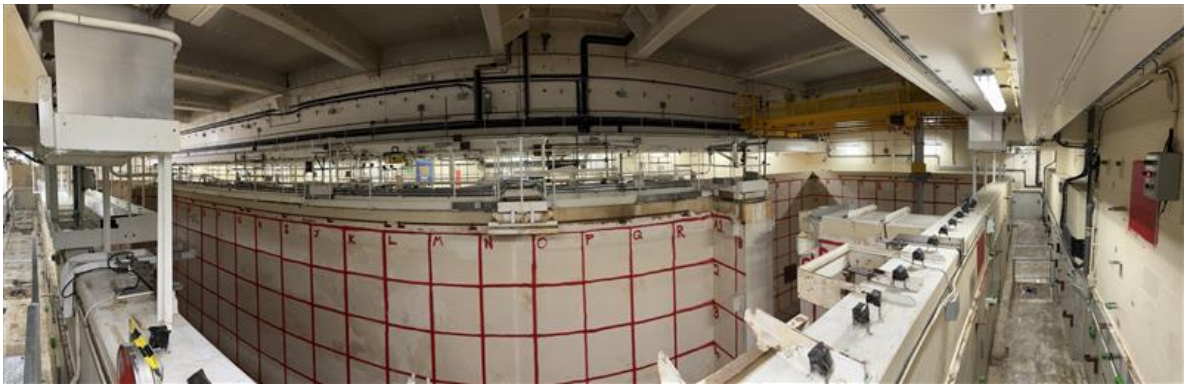
For the pond facility and the adjoining pond pump room basement, the project's objective was to prepare them for the Care and Maintenance (C&M) Phase.

During the period to February 2025 the following was achieved:

- The pond reached a significant milestone, in that it was configured for C&M entry.
    - All non-operational contaminated plant was removed from the pond, access restrictions to voids were installed, new C&M pond inspection routes were painted, and new inspection platforms were fabricated and installed.
    - Pond Ventilation Plant (PVP) and filter building: Now that the pond building is designated C2, and before permanently removing PVP contaminated plant, arrangements have begun to implement a monitoring period with the pond building extract fans turned off (but available if required).
- Pond Pump Room Basement: All non-operational contaminated plant was removed from the basement. However, System B drains remains operational and will not be decommissioned until the old Redundant Air Blast Chiller Pit has been prepared for C&M (future scope).



Photograph 3: Pond facility before decommissioning



Photograph 4: Pond facility configured for Care & Maintenance (C&M)

Looking ahead, the focus for the period to February 2026 will be on collating monitoring data to demonstrate that the pond facility can remain naturally ventilated, thus freeing up the PVP contaminated plant for deplanting.

Pondwater Filtration Plant (PFP) Building

At Oldbury Site the end state of the Pondwater Filtration Plant (PFP) building is for all tanks to be de-planted such that the building is no longer contaminated and so can be safely demolished using conventional demolition techniques.

Most of the tanks in the PFP building were installed in concrete containment cells that were built around the tanks with no consideration of the future access requirements for decommissioning. This means that the contaminated plant needs to be size reduced in situ.

All the tanks in the PFP building are constructed of 8-12 mm thick stainless steel. Due to the volume of material and excessive time that would be taken to size-reduce using conventional cold cutting techniques, a plasma cutting method has been selected.

During the period to February 2025 the following was achieved:

- The project has continued to deploy the plasma cutting method to safely de-plant the Settling Tank Resin (STR) from within the PFP building.

Photograph 5: Status of the STR tank within the PFP building (February 2025)

Looking ahead, the focus for the next period to February 2026 will be to complete Settling Tank Resin (STR) and decommissioning of the next tank called Fine Filter Suction Tank A.

8.2. Asset Management

Civil Block refurbishment

The Oldbury Site Civil workshop offices and welfare facilities have been refurbished during 2024 to ensure that the asset continues to support Oldbury's accommodation requirements. The work was successfully completed by a collaborative effort utilising NRS, site framework contractor staff and a sub-contractor.

As part of the refurbishment, offices were decorated, and locker rooms were created. A considerable amount of the equipment that was installed was recycled; having been taken from redundant buildings on the Oldbury site that are to be demolished during decommissioning. The recycled equipment included carpet tiles, doors, notice boards, kitchen units and cupboards along with lockers and benches.

Photographs 6-7: Refurbishment of the Civils Block using recycled equipment

8.3. Intermediate Level Waste Strategy

The waste management strategy for all ILW streams is detailed in the site's LC35 decommissioning programme and is described in the Oldbury Site Radioactive Waste Management Case. The majority of the ILW will be retrieved from its current location during C&M Preps and packaged into Ductile Cast Iron Containers (DCICs). Methods to be used will be waste stream specific, with some ILW requiring pre-treatment (either by size reduction or drying). There may also be a requirement for conditioning, to create a waste package suitable for interim storage and final disposal.

Packaging proposals for each waste type are set out in Letter of Compliance (LoC) submissions which endorse the disposability of that specific design of waste package. ILW packages may be stored on site in an intervening stage; prior to inter-site transfer to the Berkeley ISF or in the case of ILW Pond Skips to Hinkley 'A' where they will be encapsulated and stored in the Hinkley ISF, pending transfer to the national Geological Disposal Facility (GDF) when available.

MCI Sort, Segregation & Characterisation

After completion of a Sorting, Segregation and Characterisation campaign of MCI by Waste Operations, a Waste Loading Plan was developed. The Project – MCI Phase 3 – to fill DCICs with the characterised MCI began in mid-2019 and has now been completed. To date four DCICs have been filled and transported to Berkeley Interim Storage Facility. Any MCI generated during decommissioning will be characterised and filled into further DCICs in the future.

ILW Skip Store

ILW Pond Skips currently remain in the 9th Floor Fuel Buffer Store awaiting transport to Hinkley for encapsulation. The date for transfer is awaiting approval of planning permission and the completion of the storage and packaging facilities currently being constructed at Hinkley.

Sand, Sludge and Resin

Sampling of tanks and vessels which contain Sand, Sludge and Resin has been completed and results have been returned to NRS confirming the waste to be ILW as expected.

A Vacuum Fill House has been constructed which uses vacuum technology to empty tanks into DCICs before conditioning. The system has been inactively commissioned, see Section 8.6 for more details. This system has been used successfully at other NRS sites for similar wastes.

Fuel Element Debris

Currently, no additional physical work has been carried out. A programme of early FED retrievals is being progressed to enable further analysis of the waste within the vaults, see Section 8.6 for more details. This package of work will underpin BAT methodologies to be used for bulk retrievals.

Funding restraints and higher priorities at other NRS sites have resulted in changes to planned project retrieval start dates. When settled and taking in learning from other sites, full processes and procedures will be developed.

8.4. Site Restoration and Land Quality Investigations

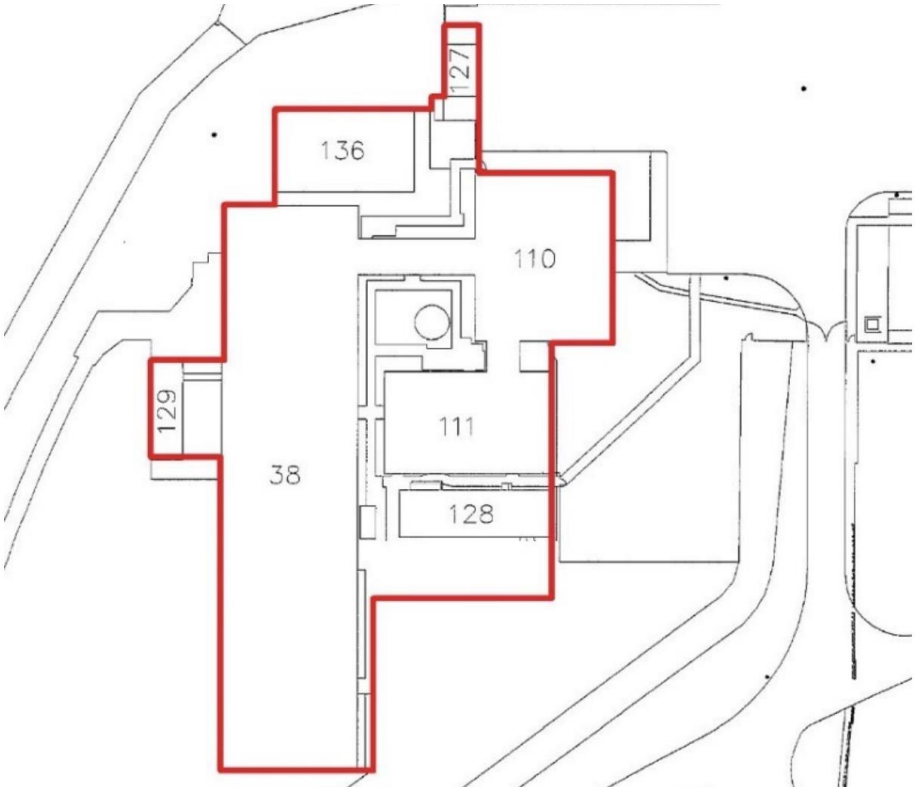
Groundwater samples were obtained from three boreholes in February 2024 for the handover of the 132 kV substation lease.

Oldbury Site has 23 Areas of Potential Concern (APCs) with respect to land contamination. An APC is an area of land subject to a past or current use that may have given rise to contamination of the ground or groundwater, or where contamination is known to be present.

A site wide land quality monitoring programme is conducted to detect potential migration of contaminants from APCs. The monitoring includes analysis of groundwater samples for a suite of radiological and non-radiological contaminants. Routine quarterly groundwater monitoring was conducted as planned in March, June, September, and December 2024. No adverse trends were recorded.

8.5. Decommissioning Programmes

Oldbury Technical Centre (OTC)



Photograph 8: Map of Oldbury Technical Centre

OTC commenced demolition in December 2024 and will be complete by March 2025, the work covered the asbestos removal, soft strip and demolition of:

- Building 38 – OTC Offices
- Building 110 – OTC Offices
- Building 111 – OTC Welfare and Offices

- Building 127 – OTC Garage
- Building 128 – OTC Offices
- Building 129 – Transformer and Chiller Plant
- Building 136 – OTC Maentwrog Suite Offices

An environmental mitigation to reduce noise disturbance for ecological receptors was required as part of the Prior Approval of Demolition permitted development submission: the working area was surrounded by acoustic barriers for the duration of the project.

Photograph 9: Acoustic barriers used to reduce noise disturbance during the demolition of OTC

The project had a total of 278 waste movements, a combination of skips, tipper lorries and tankers. Only 2 asbestos skips were sent to landfill, the remaining waste was either recycled or energy from waste. The total waste from project was 2,382 tonnes.

Photograph 10: Asbestos removal of OTC

Photograph 11: Soft strip of OTC

Photographs 12-13: Demolition of OTC

Turbine Hall

The Turbine Hall complex is nearing the end of being fully terminally isolated, this includes all electrical, mechanical & sewage connections. Major electrical isolations (cable cutting) were carried out over two weekends to significantly reduce time and therefore resource use. Temporary welfare cabins were powered using renewable energy.

Photograph 14: Welfare cabins used during cable cutting campaigns that were powered by renewable energy

The Asset Care Team is supporting decommissioning by progressing some projects to ensure the safe integrity of the facilities by removing loose cladding (RFT tanks) and felt/roofing materials (link bridge). They are also preparing to demolish several modular buildings that are in poor condition in and around the Turbine Hall complex.

The project will now focus on the last enabling works:

- Install demolition supply (to reduce generator use by contractors and enable monitoring of energy use to provide better data for carbon accounting)
- Clean out tanks, vessels & pipework
- Update LiDAR 3D model
- Overhead Cranes surveys (refurbishing existing generation-period equipment that can be reused during de-planting)

Before preparing the Invitation To Tender (ITT) documentation and issuing to the DAR framework.

It is anticipated physical works will commence in 2027.

Photograph 15: LiDAR model of a section of the Turbine Hall

8.6. Waste Projects

During 2024/25, Oldbury Site completed the installation of mechanical and electrical equipment to enable the Vacuum Fill House to operate. This included pipework to convey wet waste from the holding tanks in the Pond Filtration Building and Active Waste Vault Building and associated mechanical and electrical cabling and control systems. On completion of installation, commissioning of the system was undertaken using both water and simulant to verify sufficient suction was achieved to remove wet waste from the required depths from within the tanks.

Any waste produced during this period was managed in line with the approved Project Waste Management Plan and compliant with the site's health physics requirements. Specific health physics strategies were put into place to ensure the water and simulant were tested prior and post commissioning to demonstrate it had not been radiologically contaminated. In proving this case, they were able to be disposed of using non-hazardous waste disposal routes.

The Vacuum Fill House will now undergo a period of dormancy from March 2025 until the Advanced Vacuum Drying System Facility has been completed (date to be confirmed). This will enable the full process of wet waste retrieval and conditioning to be completed. During this dormancy, Oldbury site will ensure that the system is maintained.

Photograph 16: Vacuum Fill House interior

Photograph 17: Vacuum Fill House Exterior with pipework to transport wet waste

Early FED retrievals

The Active Waste Vault Building at Oldbury Site comprises seven vaults, of which five vaults are used for the storage of Fuel Element Debris (FED). Oldbury FED largely comprises magnox metal that was removed from fuel elements prior to dispatch offsite.

The baseline waste management strategy is to retrieve the FED and segregate High Dose Rate Items (HDRI) such that the FED can be transported to a third-party waste management provider for super-compaction and subsequent disposal at the Low Level Waste Repository.

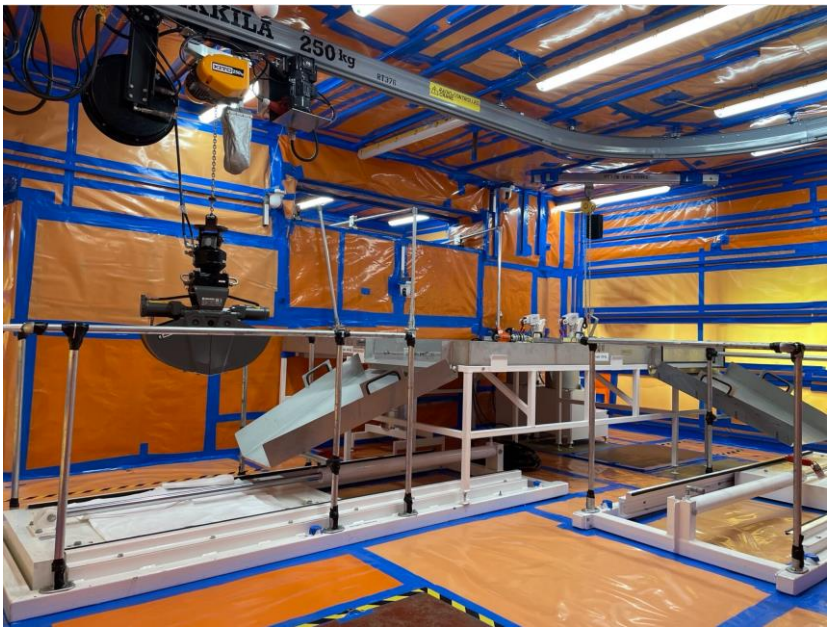
The Early FED Retrievals Project aims to carry out an early retrievals campaign from the site's five Active Waste Vaults to inform the future waste retrieval strategy. Information and material generated will be provided to the main Oldbury FED Project to support the development of the full-scale retrieval, processing, and packaging solution. The concept design work for this full campaign solution started in earnest in September 2023.

On 26 March 2024, the project entered the Inactive Commissioning phase and commenced to verify that all equipment and safety systems of the facility are installed, tested and operated properly within the operational requirements. The project focus shifted to Active Commissioning which was achieved in June 2024.

The design requires operators to stand behind a shield wall whilst using CCTV, using over wall tools and remotely operating equipment to retrieve, sort and segregate waste. During this time, data such as timings and assay information about the retrieved FED waste is recorded, as well as details of any fuel fragments, nimonic springs and other High Dose Rate Items.

The project operates through a fully manual waste sorting process, but makes use of new equipment such as a gamma camera to greatly ease the identification of any fuel fragments, nimonic springs and other High Dose Rate Items from the bulk FED. The project is also working to directly support the NDA-funded Auto-SAS (Sort & Segregate) development project/trials through the retrieval of representative waste for testing with the new equipment.

We have completed retrievals from the first vault (vault 3), obtaining important data about both the radiological and physical characteristics of the waste within vault 3 and moved on to the second vault (vault 4) in January 2025.



Photograph 18: Retrievals equipment setup

Photograph 19: Operator's area behind shielding wall

8.7. Activities planned in 2025/26

Significant activities planned for 2025/26 are:

- Ponds Project;
    - Continue Pondwater Filtration Plant decommissioning enabling and commence de-planting works
    - Size reduction of ponds related piepwork external to the Ponds building
- Commence preprations for procurement of Sort and Segregation system (Auto-SAS)
- Continue targeted asbestos remediation
- Continue early FED retrievals
- Dispatch remaining Ionsiv MOSAIKs to Berkeley Interim Storage Facility
- Decommissioning Programmes;
    - Commence Turbine Hall tendering process
    - Commence demolition of small timber office buildings on site
- Silt Lagoon 3 improvements

Appendix A

Letter Providing Consent to Decommission and Attached Conditions

Decommissioning Project Consent No.1 18 February 2008

NUCLEAR REACTORS (ENVIRONMENTAL IMPACT ASSESSMENT FOR DECOMMISSIONING) REGULATIONS 1999

CONSENT

granted under regulation 4(b)
in accordance with regulation 8(3)
with conditions attached under regulation 8(4)

OLDBURY POWER STATION

The Health and Safety Executive, for the purposes of regulation 4(b) in accordance with regulation 8(3), grants consent for carrying out the project[1] applied for under regulation 4(a), in particular, to remove all buildings except the reactor buildings, alter the reactor buildings for a period of deferment, retrieve and package operational intermediate level waste, and store the intermediate level waste until it can be removed from site, and clear the site, subject to the conditions under regulation 8(4) attached.

Dated: 18 February 2008

Signed A. N. Hall

For and on behalf of the Health and Safety Executive
Dr A N Hall
A person authorised to act in that behalf

[1] Project as defined in regulation 2

Conditions attached to Decommissioning Project Consent No.1 18 February 2008

NUCLEAR REACTORS (ENVIRONMENTAL IMPACT ASSESSMENT FOR DECOMMISSIONING) REGULATIONS 1999

CONDITIONS

attached under regulation 8(4)

to Decommissioning Project Consent No. 1 granted under regulation 4(b)

OLDBURY POWER STATION

Condition 1

The project[1] shall commence before the expiration of five years from the date of this Consent.

Condition 2

(1) The licensee is required to prepare and implement an environmental management plan to cover mitigation measures to prevent, reduce and where possible offset any significant adverse effects on the environment.

(2) The project shall not be carried out except in accordance with the environmental management plan.

Condition 3

Within 90 days of the date of this Consent, with reference to the environmental statement provided under regulation 5(1) and evidence to verify information in the environmental statement, provided under regulation 10(9), the environmental management plan shall:

a. list the mitigation measures that are already identified in the environmental statement and evidence submitted to verify information in the environmental statement;

b. list the options to implement work activities where mitigation measures may be required but where selection of an option will only be possible in the future;

c. list the work activities where mitigation measures may be required but where assessments to identify mitigation measures will only be possible in the future.

Condition 4

Subsequent to condition 3, the environmental management plan shall:

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[1] Project as defined in regulation 2

a. with reference to condition 3b, identify the mitigation measures for options that have been selected, giving reasons for their selection;
b. with reference to condition 3c, identify the mitigation measures from assessments carried out, giving reasons for their selection;
c. describe the effectiveness of the mitigation measures over time;
d. describe significant changes to the mitigation measures in light of experience, giving reasons for such changes.

Condition 5

The licensee is required to:

a. provide the environmental management plan to the Health and Safety Executive within 90 days of the date of this Consent and every year thereafter, or within such longer time as the Executive may agree;
b. make the environmental management plan available to the public within 30 days of the plan being sent to the Health and Safety Executive, or within such longer time as the Executive may agree; the plan may replace earlier versions.

Condition 6

The licensee is required to provide notice to the Health and Safety Executive of any significant change to a mitigation measure to prevent, reduce and where possible offset any major adverse effects on the environment no less than 30 days before the change is made, or within such shorter time as the Executive may agree.

Dated: 18 February 2008

Signed A. N. Hall

For and on behalf of the
Health and Safety Executive
Dr A N Hall
A person authorised to act in that behalf

Appendix B

Example Environmental Risk Assessment Form

Environmental Risk Assessment Form

This Risk Assessment must be completed and signed before work commences. It must be available at the point of work and retained for the duration of the works. All mitigations must be implemented as described.

Please refer to OLD-MCP-020-005 for guidance on filling in this form.

Name		**Phone:**		**DPAF / WOC Ref:**	
Company		**Planned Work Start Date & Duration:**			
Work Location					
Work Description					

No.	Parameter	Consider the following ***in the absence of mitigation:***	No	Yes
1	**Discharges / Permit (Liquid)**	Does the work have the potential to breach an existing Environmental Permit, challenge any of the conditions or require a new Environmental Permit?		
2	**Discharges / Permit (Gaseous)**	Does the work have the potential to breach an existing Environmental Permit, challenge any of the conditions or require a new Environmental Permit?		
3	**Liquid Substances / Containment**	Will the work involve the use, generation or storage of chemicals, oils, fuels or other hazardous liquids which could result in spills to land, water or drains? Could the proposed work have the potential to impact the integrity of existing liquid containment (e.g. tanks or bunds)? ***Note: A COSHH assessment must be provided for all chemicals and hazardous substances used***		
4	**Other Licenses / Consents**	Does the work require any other environmental licenses, authorisation, consents or registration *E.g. wildlife management license, marine consents, PCB registration?*		
5	**Drainage**	Will the work impact or have the potential to impact any site drainage systems e.g. changes to configuration? Is there any potential for substances to damage to the system (e.g. detergents)?		

No.	Parameter	Consider the following ***in the absence of mitigation:***	No	Yes
6	**Land Quality**	Could the work have significant impacts on land quality or groundwater? This includes potential for any ground or groundwater contamination (spillage), changes to groundwater levels and flows or mobilisation of contaminants? **Where excavations affecting the Sub-surface (unmade ground) are proposed tick Yes and the requirements of S-154 will need to be reviewed with an Environmental SQEP to ensure mitigations outlined in this form remain adequate.**		
7	**Noise, Vibration & Light**	Could the work have a significant effect on noise, vibration or light levels to site staff or local residents?		
8	**Plant / Equipment**	Does the work involve bringing plant / equipment onto site containing hazardous substances? This does not include fuels, oils etc. in manufacturer installed tanks (fuel tanks, engine oil sumps) but does include hydraulic oils in lifting equipment. Does the work involve breaking into systems which could have the potential to contain hazardous liquids or gases (e.g. chemically dosed water systems, oil filled cables, Ozone Depleting Substances)?		
9	**Air Quality & Dust**	Could the work have a significant impact on air quality and dust (e.g. emissions of gaseous pollutants and particulate, raising and dispersion of dust, or creating dust source such as stockpiled material) both on and off site?		
10	**Ecology**	Could the work have significant impacts on ecology? This includes impacts to protected species and habitats, such as working near the estuary or buildings used for nesting etc.		
11	**Traffic & Transport**	Could the work have significant impacts on traffic and access? Consider significant increase in HGV traffic on/off site, disturbance to local residents, impacts on safety / environment, mud on roads etc.		
12	**Landscape & Visual**	Could the work have significant impacts on landscape and views? This includes visual changes to exteriors of buildings and structures, or landscape changes within the site boundary.		
13	**Socio-economic**	Could the work have significant impacts on socio-economic factors in the local population? This includes changes to employment and expenditure, accommodation and housing and local services etc.		
15	**Material Management**	Will the work require the management of material or treatment of waste for the purposes of reuse on site (e.g. infilling voids, adoption of CL:AIRE Protocol)?		
16	**Resources**	Will the work lead to a significant increase in resource use (e.g. energy, water, diesel / fuel, chemicals) or change the carbon footprint?		

For any parameters ticked yes, identify in the table below the mitigations to be implemented for each. *Initial the 'completed' column once the mitigation is implemented*			
No.	Parameter	Mitigation to be Implemented	Completed
For completion by the environmental SQEP: Does the work represent a change to the Aspects Register? If 'yes' copy ERA to Area Engineer			**Y/N**

NRE / Site Engineer	**Name**		**Signature**		**Date**	
Environmental SQEP	**Name**		**Signature**		**Date**	

Appendix C

Principles for a Transport Management Plan

Objective

All decommissioning operations involving transport will be managed to minimise the environmental effects of these operations, as far as is reasonably practicable. The principles for achieving this are defined below.

Transport Management Principles

- HGVs will be required to exit the site through the Main Gate and, where appropriate, to follow preferred routes to and from the strategic road network;
- The numbers of individual transport movements will be minimised as far as is reasonably practicable;
- Employees and contractors will be encouraged to share transport (or use public transport) when travelling to and from the Oldbury Site;
- NRS and their contractors will be required to maintain their vehicles in a good standard of condition;
- When appropriate, vehicles leaving the site will be subject to wheel wash and inspection to ensure that earth and other material is not unduly dispersed;
- On site roads will be swept as necessary to minimise the spread of material off-site and/or into drains or watercourses;
- Signage will be provided at site exits to reinforce the contract requirements on vehicle drivers;
- Where practicable, transport distances will be minimised by the use of local recycling companies, disposal sites, etc.;
- Most HGV transport movements will be undertaken during normal working hours; and
- In the event of need for an abnormal load to be transported, a specific plan for this movement will be developed.