

# Decommissioning Vulcan NRTE

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Updated Presentation Given to DSG February  
2019

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# Introduction to the Vulcan Programme

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## Agenda for the Visit

- Safety Brief
- Dounreay Submarine Prototype 1
- Shore Test Facility
- Boilers
- Presentation
- Questions

# History

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- Vulcan is the UK's Naval Reactor Test Establishment
- Work began in 1957, on a site adjacent to the civil prototype nuclear reactor site at Dounreay
- Since 1965 it has operated five different types of Submarine Reactor Core
- Provided the MOD with a comprehensive understanding of the long term operation of nuclear reactor cores
- DSMP was shut down in the 1990s
- STF began operations in 1986 providing prototype information for the PWR2 programme
- SoS announced in 2014 that sufficient information had been gathered and STF would be shut down the following year
- STF was shut down for the final time in July 2015.

# Site Visit

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- Safety Brief
- DSMP1
- STF
- Boiler House

# Vulcan Project Aims

as presented to DSG Site Restoration Sub-committee on 17 Feb 2019

- Commence Post Operations Phase following shut-down of Shore Test Facility in 2015
- Complete Post Operations Phase – all fuel removed from the site and completion of contracted transition activities
- Commence Full-Scale Decommissioning phase, remove the remaining hazards and remediate the site to a state at which NDA will accept the lease return
- Complete Decommissioning in a timeline consistent with the programme published for the Dounreay Civil site to ensure access to DSRL services remains throughout the project and as published in the National Decommissioning and Waste Management Pipeline.

# Updates since February presentation

# Vulcan site activities today

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- Keeping the site safe and secure
- Commence Post Operations Phase following shut-down of Shore Test Facility in 2015
- Complete Post Operations Phase – all fuel removed from the site and completion of contracted transition activities

# Commence Post Operations Phase

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- Vulcan is implementing the POCO strategy established at a site programme level.
- Aim to reduce our radioactive inventory.
- This will be of benefit in reducing the risks associated with future decommissioning of the plant.
- We are currently on track to achieve all this work.
- All work to date has been assessed by the Site Safety Committee and regulated by DNSR.



# Complete Post Operations Phase

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- All fuel removed from the site and completion of contracted transition activities.
- Current contract completes in Dec 2022, commercial plan is underway for next phase and to manage that transition.
- NDA is supporting our planning activities.

# Commence Full Scale Decommissioning Phase

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- Remove further hazards from the site and remediate site to a state at which NDA will accept the lease return.
- Development of Decommissioning Strategy (DNSR engagement)
- Development of Decommissioning Plan

# Decommissioning Timeline

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- Complete Decommissioning in a timeline consistent with the programme published for the Dounreay Civil site to ensure access to DSRL service remains throughout the project

# POCO Activities

# Stores Reduction

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- POCO is the post operational clear out,
- Installed items associated to the submarine and site are being reviewed for potential use on other sites and submarine projects
- Reduction in the quantity of stores at site, as the site is no longer in operations these spares can be returned to the MoD store for use on other submarine projects. Saving to the taxpayer

# Site Maintenance

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- Aligning building maintenance to ensure it is suitable for the life of the site,
- Ensuring buildings/work areas are suitable and safe for the task e.g. Reducing maintenance for buildings that will be locked and out of use
- Ensuring the site has suitable equipment and capability for the decommissioning e.g. New permanent boiler and canteen roof project

# Characterisation

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- On-going programme of land, building and groundwater characterisation
- Follows industry standards
- Land characterisation
  - Phase 2 completed early in 2019
  - Results of this inform Phase 3
  - No surprises
- Building characterisation
  - Starts in the autumn
  - Develop further knowledge of any radiological and chemical contamination in buildings on site
  - This will build as work in facilities completes and we can conduct more intrusive investigation
- Groundwater monitoring
  - On-going campaign
  - Results so far have indicated no areas of concern
- Waste
  - Continuous effort to make sure that waste is appropriately characterised and sentenced

# Vulcan the future

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- Vulcan is currently planning to move to the decommissioning phase following completion of the current VPOD contracts with Rolls Royce. The timing of this will be subject to MOD approval once all necessary information is generated to ensure the best approach is taken.
- A strategic decision between MOD and NDA will be made within this planning on the point this handover should occur.