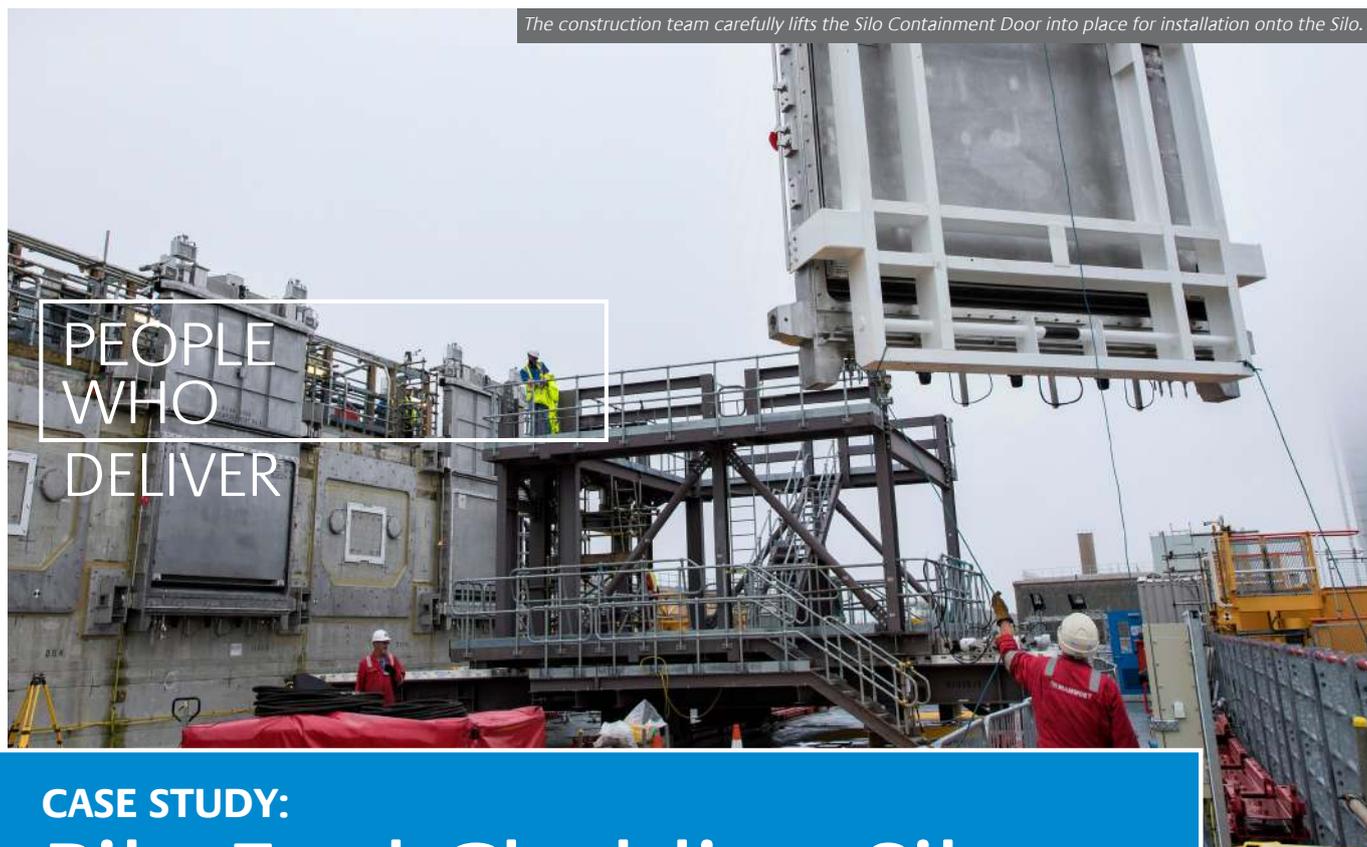


The construction team carefully lifts the Silo Containment Door into place for installation onto the Silo.



PEOPLE  
WHO  
DELIVER

CASE STUDY:

# Pile Fuel Cladding Silo

## OVERVIEW

Cavendish Nuclear was tasked with delivering plant and equipment capable of accessing historic Intermediate Level Waste in legacy Pile Fuel Cladding Silo (PFCS), removing it and transferring it into containers for safe interim storage. The project covered the entire lifecycle: from detailed design through to manufacture, works testing at our Rosyth testing facility, transportation to Sellafield, installation and commissioning. A truly collaborative project delivered three years ahead of schedule.

## KEY INFORMATION

**Customer:** Sellafield Limited

**Site:** Sellafield

**Value:** £600 Million

**Duration:** 2011 -2021

**Capabilities:** Design and Engineering  
Manufacture  
Assembly  
Test  
Install and Commission



A **fundamental shift**  
in commercial behaviours  
delivering efficiency for the  
UK taxpayer.

**3 years** ahead of schedule  
with a cost saving in  
excess of **£400m** against  
the previous scheme



## OUR SOLUTION IN DETAIL

### Our Approach

The breadth of expertise that Cavendish Nuclear possess allows us to develop a design that meets the functional requirements by the most efficient means. Our extensive knowledge of setting to work and commissioning plants to perform complex operations on nuclear licenced sites is embedded within our solutions at the design stage. Our engineering teams understand that the best solutions are usually the simplest manufacturing techniques and use proven technology and equipment that is readily available from the supply chain. Only when absolutely necessary will any bespoke equipment be specified.

Implementation of the simplest solution is still executed using the very latest design and planning tools maximising the benefit of our investment in the latest software and training for our technical staff. The 3D design model can be accessed by the Project team allowing clashes, operational issues etc to be defined and resolved before manufacture even commences.

### Project Success Factors

The Silo Access Element of the project was delivered safely, on time, to cost and quality. The retrievals element of the project is on target to meet an aggressive schedule to be ready to retrieve the first container of waste in June 2019, 3 years ahead of schedule, saving in excess of £400m against the previous scheme.

### Key Learning

There are many significant learning points to take from the PFCS project. The project ethos of collaboration must be committed to from the outset at every level, from Stakeholders and Senior Management to all working levels. This commitment must not only be in word but by deeds - selecting individuals with the right personality and attitude toward collaboration, establishing a relationship management plan and building a project structure that aligns to that relationship management plan.

The co-location of the Employer and Contractor teams is key to fostering an integrated approach to project execution and allows the team to jointly drive to deliver practical and pragmatic solutions. These solutions should consider lessons learned, push boundaries, challenge historic norms, and embrace change as a means of creating paradigm shifts to the standard way of problem solving.

Appropriate engagement of the supply chain is a key facet in project success. By reducing the emphasis on price in sub-contract tender decisions and concentrating on a supplier's ability to achieve performance expectations, this improves the likelihood of success and ultimately delivers greater efficiency.

- Taking the time to tailor programme management tools to prioritise, track and report on the critical project activities will ensure that delivery control is timely, appropriate and not considered burdensome.



Silo Containment Doors installed and access penetrations cut to enable access to the waste.



Retrievals equipment installed, commissioned and ready to operate.

Finally the importance of taking the time to reflect on shared success and recognising individual performance is the mortar that holds together a successful team.

### Achievement and Awards

- **G6 Award** at the Sellafield Ltd Excellence Awards 2016
- Cavendish Nuclear **Team of the Year** 2018

## COLLABORATIVE WORKING

PFCS retrievals represents the very pinnacle of the benefits that a collaborative working environment can realise. This collaborative approach has achieved:



A single focus on delivery to a common goal for client and contractor.



Recognising frictions and dealing with them in a positive manner.



A clear willingness on both sides to change rather than blindly deliver something that does not provide the optimum balance of delivery timescale, cost and quality.



Implementing organisational change to ensure there is no duplication or unnecessary man marking.



cavendish  
nuclear

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