

INSIGHT

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INCLUSIVITY

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Box Encapsulation Plant Direct Import Facility

Provision of thermal insulation and access services at new high-tech facility built to process and store legacy waste at Sellafield.

Location: Sellafield



CASE STUDY BEPPS-DIF

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Box Encapsulation Plant Direct Import Facility

The newly constructed Box Encapsulation Plant Product Store and Direct Import Facility (BEPPS-DIF) is a solution to one of Sellafield's biggest challenges, facilitating the safe removal and storage of nuclear waste from Sellafield's Pile Fuel Cladding Silo.

The high-tech facility is the vital component between the waste coming out of the Pile Fuel Cladding Silo and being stored in one of 4 product stores. Once the nuclear waste is secured into 3m³ storage package boxes, they are then transferred into two vaults designed to provide long-term storage.

Project Summary

Enigma were selected by long term collaboration partner Balfour Beatty Kilpatrick to deliver services on the project. Balfour Beatty Kilpatrick is the primary contractor responsible for the installation of pipework throughout the BEPPS-DIF facility. Enigma's scope of work included a number of insulation solutions on the various cold and hot water, steam, and condensation pipework systems within the BEPPS-DIF facility. Additionally, Enigma delivered a multidisciplinary solution to remove and replace the insulation and cladding on the re-mineralisation tank through the provision of temporary scaffold access. This reduced the number of interfaces on the project, streamlining the works for the benefit of all stakeholders.

Value Engineering

Through early engagement with Balfour Beatty Kilpatrick, a number of challenges were explored and overcome with innovative solutions. This included Balfour Beatty Kilpatrick's requirement to replace the existing pipe shoes. Enigma designed and manufactured bespoke insulation jackets delivering a solution that mitigated potential delays on the project, combining a rapid installation system with a low-cost inspection process that eliminates the need for removal and reinstatement of insulation and cladding in the future.

Enigma are proud to cement our relationship with Balfour Beatty Kilpatrick and the Sellafield supply chain, creating a clean and safe environment for future generations.













Balfour Beatty Kilpatrick representative, Anthony Moffitt, commented:
"Enigma and Balfour Beatty have worked collaboratively on the BEPPS-DIF project since 2019. Enigma has demonstrated a high standard of workmanship during the insulation of over 3.5km of pipework and valve assemblies. Throughout the three years of collaborative working, Enigma has maintained its excellent safety record which has been established on the Sellafield site. I look forward to maintaining this well-established partnership as we continue to deliver projects to the highest standard".

On completion of the project, Enigma's General Manager, Kayvon Azadi, commented "BEPPS-DIF was the first major project that we returned to after the first wave of the COVID-19 pandemic, which brought its own challenges. The team did an outstanding job in overcoming these challenges on what was already a highly complex project; I can't praise them enough for their commitment and dedication in supporting this major project.

BEPPS-DIF also served as an opportunity to showcase our commitment to sustainable engineering solutions. The thermal jackets and cladding fabrication were delivered by Enigma's fabrication facility, powered solely by renewable energy. This future-proofs our service offering whilst demonstrating our commitment to deliver world-class solutions in a sustainable way".

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