

Bradwell Nuclear Power Station, Essex

John F Hunt



Magnox Ltd and Vinci Construction



£9.3m



36 months

Project Overview

Bradwell Power Station, located in the South East of England covers 20 hectares and was operational for 40 years, generating electricity to power three large towns. Work ceased in 2002 with the twin reactors undergoing decommissioning.

It comprised two separate heavily reinforced concrete reactor buildings, interlinked via a central change building, plus four 40m high boiler houses.

Total de-clad of the two reactor buildings & boiler houses, with removal of the MMMF insulation which laid beneath. Removal under fully controlled conditions within constructed enclosures, of over 1,050m³ of asbestos insulation from the reactors, boiler casings & associated pipework.

Demolition of the Central Change Building - the first building ever to be demolished within a Radiation Controlled Area (RCA).



Challenges

A purpose designed weather protection system was erected over the reactor building & maintained throughout the works.

All waste and arisings were subject to a radiological clearance process requiring radioactive inspection, clearance & tagging as part of the waste characterising process. As each consignment left site, it too was logged & individual waste notes generated.

All company employees had to have the relevant radiological training & on a daily basis went through radiation dosimetry procedures when accessing & egressing the buildings.

A radiation contaminated road bridge containing polluted pipework, connecting The Reactor Building to the Active Drum Store was removed, as was the contaminated Boiler House roofs with notifiable asbestos between the radioactive cooling vents, requiring a complex waste clearance process.

Achievements

The first time demolition had ever been carried out within a Radiation Controlled Area (RCA) anywhere in the UK.

A radioactive cooling vent stack was removed by a process of cutting and lifting, with the de-classification of plant and equipment, successfully carried out.

Zero RIDDOR incidents during the entire project.

