

## Press Release

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# Square Peg in a Round Hole - Newhaven Caisson Float

**HOCHTIEF (UK)**  
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### **HOCHTIEF float 8,000 tonne concrete basement**

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Newhaven E.R.F is designed to export around 16.5 megawatts of electricity to the national grid, the equivalent to powering more than 25,000 homes. The facility is designed to complement and not compromise recycling and composting, taking receipt of approximately 210,000 tonnes of residual municipal waste each year.

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There are many complex challenges to face in its construction. The design needed to be sensitive to its landscape setting and therefore the final height of the building is much lower than would normally be the case. To meet these conditions the refuse bunker and incinerators are set in a 17m deep reinforced concrete basement.

The Environment Agency imposed very tight conditions on construction water discharges. To enable the construction of the basement avoiding excessive water discharge, Main Contractor HOCHTIEF developed an extremely innovative construction method. First, excavation was carried out under water inside a circular cofferdam formed by a 53m diameter 28m deep reinforced concrete diaphragm wall.

The 8,000 tonne concrete basement itself was constructed at ground level next to but outside the diaphragm wall. Both were built inside a sheet piled dry dock, which was then flooded allowing the structure to be floated over into its permanent position within the diaphragm wall. This method eliminated the need for long term ground water pumping required by conventional insitu methods.

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