

Immingham Renewable Fuels Terminal (IRFT)

Energy estuary delivers record breaking clean power

£120m

/ Project value

March 2013

/ The build commenced

November 2015

/ The build was completed

Positioning clean power at the heart of the economy, the Immingham Renewable Fuels Terminal is the world's largest dedicated biomass handling facility. Award winning in its design and construction, the 11.5-acre site handles over six million tonnes per year, stores 200,000 tonnes of wood pellets and features eight silos with a total capacity of 336,000m³ – equivalent to 120 Olympic-sized swimming pools. Record breaking in its own right, the Terminal facilitated the world's largest ever single shipment of biomass, almost 60,000 metric wood pellets, in July 2015.

The Brief

The Associated British Ports (ABP) required an experienced partner to design and construct the world's largest biomass handling facility to supply Drax Power Limited with up to six million tonnes of biomass annually and provide the platform for the transformation of the UK's largest power station into one of Europe's most efficient generators of low carbon renewable electricity.



"The company's work on the Immingham Renewable Fuel Terminal is now significantly contributing to ABP's key strategic objective of 'Keeping Britain Trading!'"

Ian Schofield
Group Head of Asset Management at ABP

“Thanks for all your help this year, the site visit was excellent and the students were all in awe standing in the silos,”

Dr Matthew Frost
Loughborough University

The Challenges

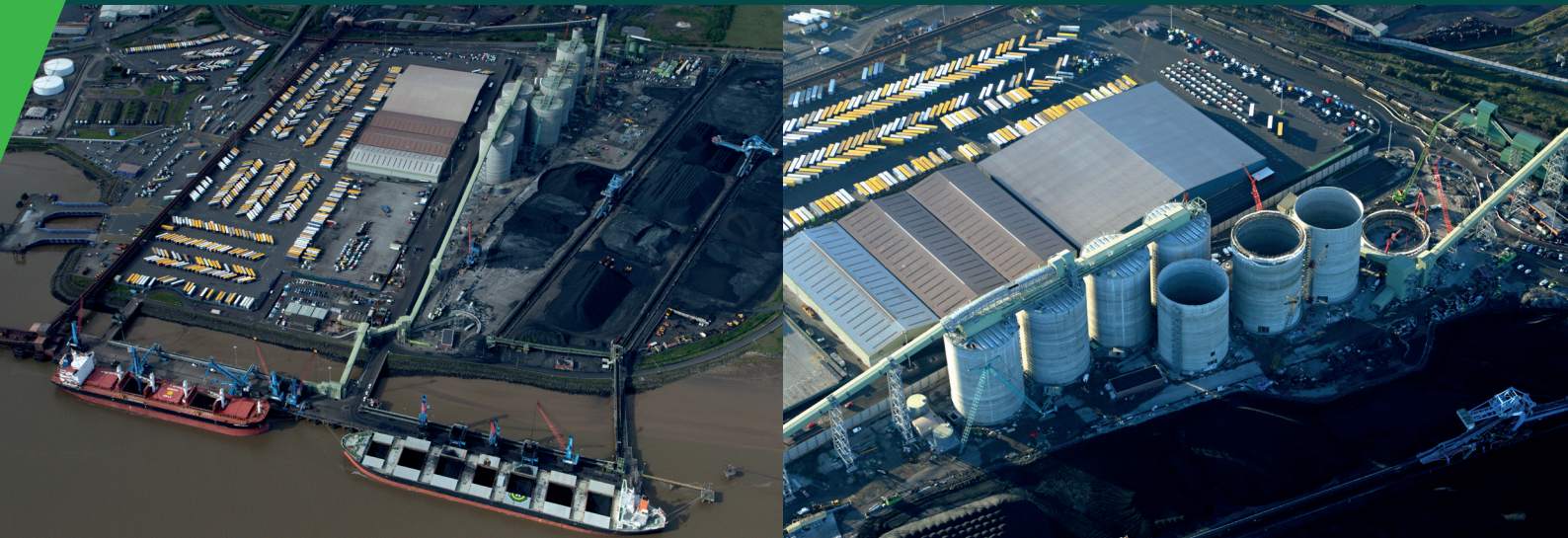
As the ABP Port was live throughout the 30-month project, maintaining port operations was imperative, and therefore all work was completed in strict adherence to Port Authority rules. Minimising operational port interfaces was also a feature of our project management and required robust collaboration with ABP to coordinate the switchover from the existing coal operations to the new biomass functionality, as opposed to abdicating our responsibilities upon completion of contractual works. A key objective of IRFT was minimising the degradation of wood pellets throughout the handling process, which was innovatively achieved through the implementation of curved chutes.

GRAHAM's added value solution

In full alignment with the UK government's climate change commitments, this £120m project is delivering lasting impact through Immingham Renewable Fuels Terminal's operational transition from coal to sustainable biomass. A world-leading, 11.5-acre site, it has the capacity to import, store and facilitate the onward transfer of millions of tonnes of renewable fuels. Complex in both design and construction, the world's largest dedicated biomass handling facility features eight 50m high, 36.5m in diameter, silos and two 655 tonne continuous ship unloaders with the ability to handle 2,500 tonnes per hour. It also includes a reclaim conveyor system of over two kilometres in length with the ability to manipulate 2,000 tonnes per hour. A lorry loading facility on the reclaim system, and a range of M&E control systems, represent the nuances of this future-proofed site, which has been constructed to ensure organic growth and additional silos.

Outputs & Benefits

- / **Award Winning:** Bronze 2016 Considerate Constructors Scheme, 'Best Renewable Energy Project or Installation' 2015 Humber Renewables and Green Energy Awards
- / **Facilitating Growth:** Site layout developed to allow the addition of future silos
- / **Record Breaking:** Almost 60,000 tonnes of wood pellets were unloaded in July 2015 – the world's largest ever single shipment of biomass
- / **Scope and Scale:** Eight storage silos with a total capacity of 336,000m³ – equivalent to over 120 Olympic-sized swimming pools
- / **Stretching the Limits:** Over two kilometres of conveyors constructed
- / **Inspiring Future Generations:** Loughborough University engineering students hosted on-site



For more information on how we're delivering lasting impact:

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