

CASE STUDY

EON, Liverpool Bulk Terminal

Construction of a Biomass Storage and Handling Facility



OVERVIEW

During its operation, the EON UK Liverpool Bulk Terminal at Gladstone Dock in the Port of Liverpool handled imported coal and wood pellet biomass, in-borne by ship for onward delivery by rail to power stations. It had a handling capacity of 5 million tonnes of coal or 600,000 tonnes of biomass wood pellets.



AIMS AND OBJECTIVES

Construction of a new 60,000-tonne wood pellet import and storage facility at Liverpool Bulk Terminal (LBT), which would allow for the import, storage, transfer and loading of biomass product which was destined for E.ON UK's biomass power stations throughout the UK. The project was to include all elements of the design, fabrication and construction of the facility with an objective to deliver the following:

- Ship Unloading System
- Conveyors and transfer towers to storage
- Construction of a biomass storage and handling shed
- Full reclaim facility with the ability to load to truck (when required)
- Modifications to train loading plant and equipment including transfer and conveying equipment
- Design and installation of a dust control system through operating from ship to train.

Furthermore, the installation operations would be required to take place alongside the existing coal-import dockside operations.

WHAT WE DID

EON (UK) appointed Hargreaves as main contractor for the construction of the new biomass port facility. This included sourcing and overseeing the design, civil structure engineering, manufacture, installation, EC&I and commissioning. The system incorporated a vessel unloading system, capable of handling 1,200 tonnes per hour. The storage facility had a capacity of 60,000 tonnes, complete with a submerged self-drain conveyor mechanism. The movement of wood pellet to the newly installed storage shed was environmentally controlled by means of aesthetically designed chutes, air curtains and enclosed conveyors. The Biomass was then reclaimed and sent via newly installed conveyor systems to specially designated rail loading bunkers.

LIFT OF RECTIFICATION TOWER IN PREPARATION FOR LOADING READY FOR TRANSPORTATION TO COLESHILL

OUTCOME

Hargreaves successfully carried out the safe and efficient dismantle and rebuild of the ASU plant working collaboratively with both the Client and a number of key contractors to deliver the project in line with the agreed programme. Where pipework, structural steelwork or a platform was out of tolerance due to new civil asset location, HIS used their considerable mechanical experience and knowledge to present suitable solutions whilst maintaining a time critical programme.