

LINCOLNSHIRE ENERGY FROM WASTE NORTH HYKEHAM, LINCOLNSHIRE, UNITED KINGDOM

Vertical Walls with Concrete Facing Panels

Problem

Lincolnshire's new state-of-the-art Energy from Waste recycling plant at North Hykeham Lincoln is built on a low-lying brown-field site with a high local water table.

This high groundwater level meant that the huge waste tipping hall had to be sited at the first-floor level rather than at the usual ground-floor level. Consequently, a vehicular access ramp was required to allow the constant stream of 40-tonne waste delivery wagons to the tipping hall.

With a ramp height of 6.0m to the first-floor tipping hall deck and a maximum gradient of 1 in 10, the access ramp needed to be approximately 60m in length. Restricted space around the site meant that a long straight ramp with conventional low-angle side slopes could not be provided.

Solution

Consulting engineers, Arup, devised a curved double-sided access ramp formed of opposing vertical walls of Maccaferri MacRes® concrete retaining wall panels. These were to be tied together using PARAWEB® geosynthetic reinforcement strapping to form a reinforced soil structure similar in principle to that of a motorway bridge ramp construction.

The MacRes® structure also supports the bankseat to a bridge section at the head of the ramp and immediately adjacent to the tipping hall access portal.

The main contractor CNIM/Clugston JV brought in Maccaferri Construction who provided an indemnified design, supply and construction contract for the ramp installation.

Client: Lincolnshire County Council

Designer / Consultant: ARUP

Contractor: CNIM/Clugston Joint Venture

Products used (Qty.)

Date of construction: 07/2013 - 10/2013

[Google Maps](#)

[Google Earth](#)



Construction taking place at EFW in North Hykeham



The completed structure at EFW North Hykeham



Completed structure