Case study

Energy from Waste Facility

The development includes an energy-from-waste facility processing up to 200,000 tonnes per year of Solid Recovered Fuel from various sources. It features Material Recycling, In-Vessel Composting, and Anaerobic Digestion facilities, alongside a Gasification Plant and material storage on an adjacent site.

The design teams, managed by Spencer's D&B delivery team, were tasked with meeting the project's commercial, technical, and programme requirements. Through close collaboration with all stakeholders, including regulatory bodies, client, contractor, and technology providers, critical factors were addressed, and potential issues mitigated. The project was delivered on time and within budget. The civil and structural design tackled site constraints, including flood protection (raised structures), on-site attenuation, and containment, due to the proximity to the rivers Hull and Humber. Foundations, slabs, and bases were designed to withstand dynamic forces from process plants and high wind loading, requiring both dynamic and static analysis.

The facility includes key components such as the Fuel Handling Building (waste separation and grinding), Balance of Plant (BOP) Building (turbine), Air Condensing Coolers, Gasifier Train, and Energy Academy Building. Enabling works involved River Wall repair and stabilisation, as well as integrated drainage (SW/foul/process). AWP designed the enabling works, foundations, bases, slabs, bund walls, and mezzanine structures.

Alan Wood & Partners

Location:
Hull

Client:
The Spencer Group

Architect:
Elevation Design

Value:
£200m

Civil Engineering | Structural Engineering | Geotechnical and Geoenvironmental

Engineer / Manage / Deliver /