### Key issues

The proposed Energy from Waste facility is located around 600m from the Humber Estuary European Marine Site (HEEMS) comprising of the Humber Estuary Special Area of Conservation (‘the SAC’) and the Humber Estuary Special Protection Area (‘the SPA’). The Humber Estuary is also a Ramsar site and SSSI.

Likely effects of the proposed development included those resulting from air and noise emissions which both have potential to impact upon valued ornithological species within and adjacent to those designations.

Some plant communities within the designations are sensitive to nitrogen deposition and have baseline levels of nitrogen that are already very close to, or in excess of, recognised critical levels for the species concerned. Detailed assessment of these communities and of the likely effects that nitrogen deposition will have in combination with existing changes to the environment is required.

### Purpose of the project

The project involved development of an 18MW Energy from Waste plant that could export heat to future neighbouring businesses. The plant will use gasification technology taking in Refuse Derived Fuel (RDF) consisting of the post recycling elements (paper, plastic and card) of commercial and industrial waste.

TNEI coordinated the EIA, undertook noise, socio-economic impact assessment and provided planning support.

### Description of the project

The project is located on a derelict site within an industrial estate on the southern banks of the Humber Estuary. It will consist of 3 gasification lines within a single large steel portal frame building with a single 55m stack.

It consists of an Energy from Waste facility utilising gasification technology to produce a Synthetic Gas to generate steam that will drive a steam turbine. RDF will be imported to the site daily from processing sites within the UK.
Lessons learnt

Early and continued consultation with Natural England allowed for a clear, agreed scope of survey and assessment works. Natural England has excellent knowledge of the local area and assisted in focussing the assessment on the main likely effects.

Local knowledge was used to produce a robust assessment. Ecological specialists with local experience were brought into the project team. In addition, the Humber Estuary benefits from the role played in the planning process by a local ecological partnership, funded by commercial members who have interests in the area. The partnership provided data and advice during the assessment based on previous experience and acted as a medium between the EIA team and Natural England adding further local understanding and insight.

Some data on disturbance of bird species during construction is available and this can provide guidance when considering the level of effects.

While nitrogen deposition as a result of air emissions needs to be considered it is important to take into account the sensitivity plant species in question to atmospheric nitrogen and the impact that other natural processes are having on the habitat.

Lessons learnt cont.

There are overlaps between the EIA and environmental permitting processes and the EIA coordinator must understand both processes and the opportunities to minimise abortive works as far as possible between the two. Detailed consultation with the Environment Agency at an early stage is required.

The EIA was undertaken based on Front End Engineering Design (FEED). It was important throughout to recognise the uncertainty around the final design and to undertake assessment based on a worst case design envelope. For example air quality assessment was based on achieving maximum emissions levels in accordance with the Industrial Emissions Directive and design of the stack allowed for headroom in concentration levels at sensitive receptors.

Contact details

For more information contact Jason McGray at Jason.mcgray@tnei.co.uk (0191 211 1430) or visit www.tnei.co.uk.

For access to more EIA case studies and hundreds of non-technical summaries of Environmental Statements visit: www.iema.net/qmark