

# Yara relies on K Home's Expertise

## to deliver new €30m CO<sub>2</sub> Liquefaction Plant at Wilton International

**YARA INTERNATIONAL ASA** is a global chemical company that is best known for the nitrogen-based products it supplies to the agricultural and industrial sectors. Employing over 8,000 people worldwide and with an annual turnover of £5bn, Yara has had a presence on Teesside for almost 10 years.

It is also currently a major supplier of carbon dioxide (CO<sub>2</sub>) to the UK food and beverage industry. In 2007, when Yara were considering the possibility of utilising the CO<sub>2</sub> that is a by-product of the Ensus bioethanol plant, they called upon the engineering expertise of Thornaby-based K Home International (KHI) to help them evaluate this opportunity.

"Our first task was to carry out a Project Concept and Costing study, which involved confirming that the initial budget allocated by Yara was achievable, assuming the raw gas from Ensus was of an acceptable quality and was available in sufficient quantity," said KHI's Project Manager David Amende.

"Yara were considering other opportunities elsewhere in the UK and so it was important that the figures on this Project stacked up before any application for funding was made.

"We were then commissioned to carry out a Front End Engineering Design (FEED) study to ensure that sufficient levels of confidence in the cost estimates, the project definition and the process design were firmly established before the Project was sanctioned.

"This involved us in developing designs, specifications, layouts and cost estimates. The process plant was sourced from Salof of the USA, and we had to ensure that it complied with European requirements. The two 50 metre long, 5.6 metre diameter storage tanks, from Rootselaar of Holland, were to be transported by sea into Teesport," added David.

Once the Project was sanctioned, K Home was awarded an Engineering, Procurement and Construction Management (EPCM) contract by Yara, with construction commencing in November 2008.



(l to r) KHI Project Manager David Amende and Yara's Engineering Manager Guillaume Holweck keeping a close eye on progress

"Our decision to appoint KHI on this Project was heavily influenced by the positive experiences of working with them on other projects," said Guillaume Holweck, Yara's Engineering Manager.

"What really sets KHI apart in our opinion is the flexibility of their approach, which is particularly important on Projects with so many variables.

"We also had high levels of confidence in their design and the associated cost estimates that they produced at each stage of the Project, backed up by an impressive Quality Management System. The local knowledge of the KHI team also proved very helpful when it came to analysing potential site options and subsequently negotiating with local suppliers.

"Yara's Project Management team is based in Brussels so we were pleased that we could rely on KHI's experience of the UK health & safety regulations throughout the design and construction stages," added Guillaume.

Construction of Yara's new CO<sub>2</sub> liquefaction plant is progressing well and is on schedule for handover, within budget, in the middle of this year. The

plant will liquefy 250,000 tonnes of CO<sub>2</sub> per year which otherwise would be emitted to the atmosphere.

"We are now in the early stages of providing support to Yara on the possible establishment of further facilities in southern England and in Norway," said David.

The Yara Project is one of a number of on-going Teesside contracts being undertaken by K Home. The Company is also currently working with many of Teesside's established operators including Johnson Matthey, GrowHow, Huntsman Tioxide, Artenius, Lucite and Croda.

KHI's successful track record makes it confident that the Teesside Process Sector will continue to generate an important proportion of its future workload.



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