Palm Paper Project: Norfolk

BAUER on site with 3 BG Drilling Rigs and 1 Jet Grouting Rig

During 2007, Germany's largest paper company *Papierfabrik Palm GmbH* was granted planning permission for its UK subsidiary *Palm Paper*, to construct a large-scale paper mill on the site of a former sugar plant in King's Lynn, Norfolk.

Known as Palm Paper Project (Lynn PM7), the project is part of a £400 million investment and will house a 10.63m wide paper machine, covering an area of about 4,300m^2 with a capacity of 400,000 tonnes per annum of newsprint. All production is made from 100% recycled materials.

Production of paper is due to start in September 2009 and the project is enormous in scale. The mill will be constructed from 600,000 sections of ready-made concrete and will be combined with an additional 40,000m^3 of concrete and 10,000 tonnes of reinforced steel. Upon completion of the building housing Lynn PM7 will be assembled by the end of July 2009. A total of 25,000 machine parts will be assembled and around 200km of cables and 800 motors installed. Apart from the early construction projects for the 2012 Olympic Games, Lynn PM7 is currently the largest construction site in the UK and it will be the largest newsprint machine in Europe.

BAUER Technologies Ltd was invited to tender for the project, its first in the UK, and was successful in winning the contract for the piled foundation of the new paper machine. The scope of the project was to install a secant pile wall (hard/hard) and foundation piles for paper machine base beams, to a design developed by BHM INGENIEURE Engineering & Consulting GmbH. The final value of the works performed by BAUER amounted to £4.4 million.

The main equipment deployed to the project included two piling rigs with an additional BG25 rig brought in around June 2008. At the peak of the project activities some 40 people from BAUER were on site.

From a planned start of piling date 17th March 2008, platform difficulties meant BAUER were prevented from starting until 14th April. Despite this one month delay in commencement, BAUER completed the contract quantities on time (4 months work completed in 3 months) by utilising its enviable resource pool and bringing to site an additional rig and

personnel to ensure completion of the project in budget and on time, despite the delayed start date.

Changes in the working platform and its levels required a revision of BAUER's piling methodology, in particular for the primary piles of the secant pile wall. Additional tools and materials were mobilised to site.

During site clearing operations and preparation works for the platform, numerous obstructions on the line of the secant pile wall were detected. These obstructions included concrete piles, concrete slabs, steel pipes etc. Additionally, wooden piles were found in the area too. This was overcome by performing 43 jet grouting (HDI) columns to ensure a homogeneous concrete structure was achieved.

Client:	Papierfabrik Palm GmbH, represented by BHM INGENIEURE Engineering & Consulting GmbH
EPC Contractor:	Glass GmbH Bauunternehmung
Piling Contractor:	BAUER Technologies Ltd
Contract Period:	March 2008 to August 2008
Scope of Works:	- 183nos. L=14m. bored piles - 490nos. L=25m. bored piles - 29nos. L=28m. - 127nos. L=30m.
Turnover:	£4.4 million
Equipment:	2nr. BG28 piling rigs 1nr. BG25 piling rig