

**CARLSBERG BREWERY – NEW BOTTLING FACILITY
NORTHAMPTON**



The heavy duty Llamada Rig used for the Project



The Northampton Site alongside the River Nene

Carlsberg UK is a wholly owned subsidiary of the Carlsberg Group and is the UK's fourth largest brewer. It employs around 1,800 people in their 16 sites across the UK producing more than a billion pints of beer per year.

Backed by more than 150 years of Danish history, Carlsberg is a household name in the UK, widely known for its innovative advertising and sponsorship of sporting events.

This new development took place at the company's Northampton Brewery alongside the River Nene and comprised a new Bottling Hall and a Bright Beer Tank on an adjacent site. It represents an investment of £40 million and will create about 60 new jobs.

Inside the new Bottling Hall, bottles will be filled, pasteurised, labelled and packed for delivery. That work is currently carried out in factories in France, Glasgow and Cumbria which are not owned by Carlsberg.

ULTIMATE CLIENT

Carlsberg UK

CONSULTING ENGINEER

Arup

MANAGEMENT CONTRACTOR

Arup

ENABLING CONTRACTOR

John Sisk & Son

ROLE

P J Edwards UK acted as Piling Contractor

SPECIFICATION

Specification for Piling & Embedded Retaining Walls

EQUIPMENT

Llamada P-150tt Piling Rig

CASE STUDY

The foundation piles for the new Bottling Hall comprised 302 no 600mm diameter continuous flight auger piles installed to a depth of 8.5 metres.

The ground conditions consisted of Made Ground overlying soft to firm Alluvium overlying stiff Glacial Clays overlying strong interbedded Siltstones, Sandstones and Limestones of the Lias Group. The piles were designed as end bearing piles as penetration of the bedrock was not easily achieved.

Underlying the bedrock the Lias Group changed into a much weaker stratum of Mudstone, the presence of which had to be taken into account in the pile design since there was a danger that the restricted thickness of the bedrock could fail in punching shear at the toe of the pile.

To confirm design assumptions a number of selected working piles were satisfactorily proof tested. At the Bottling Hall site it was necessary to install 8 no anchor piles for each load test in order to develop sufficient tension capacity in the weak soils overlying the bedrock.

The foundation piles for the Bright Beer Tank comprised 38 no 600mm diameter continuous flight auger piles installed to a depth of 14.5 metres.

Here the founding stratum commenced with a layer of strong Limestone cobbles and boulders again of the Lias Group. The powerful Llamada piling rig employed penetrated this formation and the piles were terminated in the underlying Mudstones.

This area of the site represented a change to the usual ground conditions at the Brewery. On previously awarded contracts P J Edwards have always installed piles which terminated on the strong bedrock at an approximate depth of 8.5 metres.



The 8 anchor pile load test at the Bottling Hall
