



New Lough Ree Power Plant - Ireland's tallest ever precast structure

**ESB Power Station - Lough
Ree - 19 storeys high
precast structure - The
Concast Precast Group.**

The Concast Precast Group were recently contracted to provide the precast structures, for two new ESB power plants at Shannonbridge and Lanesboro on the shores of Lough Ree. The new €240 million developments are to replace existing generating facilities on the same sites. Standing 19 storeys high, the Shannonbridge plant is the tallest precast structure ever built in this country. Both Shannonbridge and the smaller Lanesboro plant are at an advanced stage of development. Between them the two plants are capable of generating 250 megawatts of power which will supply energy to over 200,000 homes.

The Shannonbridge plant comprises offices, machine rooms and a tower section. The main office block incorporates a beam and column system with integrated precast shear walls and spandrel panels. The machine rooms required increased load capacity for the heavy machinery with a variety of opes for the essential plant machinery and craneage.

A key design challenge was ensuring the stability of the precast components during the temporary condition. Concast's in-house designers, developed a special inter-connecting shear wall panel, to enhance stability during the temporary stage, to

simplify and speed up the installation process. Other innovations included the design of integrated precast units to facilitate working at greater heights. Integrated column and wall panels were designed to form a single unit and similarly spandrels and columns were integrated. This approach significantly reduced the number of individual components required for the project and improved Health & Safety by providing immediate edge protection from the moment of installation.

The commissioning of the new plants will give the ESB the capacity to deal with peak demands and ensure Ireland's self sufficiency in the production of electricity for some years to come. The peat fuel for the giant generators is delivered by train from local sources in the midlands. The development is sensitive to the local environment and demonstrates commitment by the ESB to the midlands area.

Project Team

Foster Wheeler / Project Management
Gama Construction
Virkunnen & Co Architects
Concast Precast Group