

Case Study - Longannet Power Station

Project: Longannet Power Station, Temporary Roof and Access to Turbine Hall

Client: Scottish Power

Architect/ Contract Administrator: Scottish Power

Contract Value: £1.2M

Contract Length: 40 Weeks

Completion Date: October 2011

Reference: Martin Young 00(44) 1259 730 631

Brief Description of the work:

The 52m long steel truss roof structure over the turbine hall at Longannet power station was extensively damaged by fire in December 2009.

Over one third of the triangular roof truss, associated bracing steelwork and castellated beams forming the turbine hall roof were deemed structurally unsafe and a full repair/replacement scheme was required. Furthermore, any proposal scheme could not impact on the continual operation of the turbine hall, associated plant and 2No overhead travelling cranes.

Technical input:

A scheme was finally prepared to protect the underlying assets. This included a ground erected scaffolding to provide overhead protection and a 'landing platform' for the installation of any equipment. The fabrication of all replacement steelwork commenced off site. This included the fabrication of a 18.00m replacement chord and a 21.00 M long 'temporary chord' comprising of two 'back to back' channel sections.

In order to provide a working platform at the work face a temporary suspended deck was designed with the following criteria.

- Depth not exceeding 2.0 M. to avoid any clash with overhead crane activities.
- 1.5 Kn per M2 Loading capacity to comply with current access platform standards.
- Working platform to all work faces. Approx. 400 M2
- Working height 1.2 M to optimize manual working height.

Successful Completion:

The work scope was undertaken within a restricted time period and aggressive weather conditions. The platform installation allowed for multi activities to be conducted in an overlapping sequence maximizing continuity for all activities.

Added value/innovative solutions:

The experience gained by Zenith SAS and Zenith Consultants within the specialist access industry lead to a number of options being pursued with the client to offer the optimum solution. In summary the scheme adopted, ensured that the work could be executed in a safe and timely fashion without impacting on day to day station activities to the satisfaction of all parties.

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Longannet Power Station, Site Progress Photos

