

Erwood Bridge Refurbishment Scheme, Builth Wells



Client

Dawnus Construction Holdings Ltd for Powys CC

Project Description

Scheme for the partial reconstruction of Erwood Bridge over the River Wye in an environmentally sensitive area. The project involved jacking the bridge up to enable the three intermediate reinforced concrete twin column pier bents to be rebuilt in-place whilst the road remained open to non-motorised users. New deck cantilevers were constructed and parapets, road joints and bearings were all replaced. Demolition using diamond wire cutting was adopted in preference to hydro-demolition to minimise the risk to the environment. Full height temporary trestles were purpose-built to support the bridge deck and the phased cutting, sliding and lifting operations for removal of the deck edge and pier concrete in discrete blocks.

Cass Hayward Role(s)

- Coordination and checking of temporary works design
- Checking of the adequacy of the bridge deck to sustain the effects of the reconstruction process
- Technical Advisor to Client's Temporary Works Coordinator

Project Statistics

- Works value £1.1m
- Started June 2013 Completed March 2014
- Four span continuous bridge, 100m long and 11m above river level
- Demolition and reconstruction of 200 cubic metres of concrete

Special Features

- Temporary trestles constructed primarily from proprietary components were of special design to accommodate dead and live loads from the bridge deck and demolition works activities and to provided sufficient space for the cutting, removal and reconstruction activities
- Demolition system was based on cutting cross heads and column legs into 1 m³ blocks, sliding on skates to the deck edge and then lifted to the deck for disposal
- RC blocks salvaged for reuse as kentledge

Awards

- Construction Excellence Wales Innovation Award Winner
- ICE Wales Cymru Innovation Award Winner
- British Construction Industry Awards - Prime Minister's Better Public Building Award - Shortlisted / Highly Commended