

No: IGS 260

Infrastructure Group Safety Bulletin

Bridge Demolition

This bulletin is for the attention of:

Infrastructure Projects; Asset Management, Network Operations, Principal Contractors and Design Consultants.

Background:

On 8th April 2012, a side arch belonging to a 3 span bridge at Beenham Lockside, collapsed following the demolition of the centre span.

The matter is subject to Formal Investigation however initial accounts suggest that the propping forces of the centre span may not have been considered during the planning process. As a consequence, it seems that the demolition was carried out without adequate temporary support in place in order to prevent the side thrust from the unrestrained arch pushing over the pier, leading to the subsequent collapse of the structure.

This is a known hazard to be considered when demolishing multi-span bridges containing arches. In the early 1990's at St Johns in Kent, two workers were fatally injured following an uncontrolled collapse similar to this.



Collapsed arch at Beenham Lockside

Action Required:

All staff involved in the planning of work associated with the demolition of bridges are to make sure that:

- The stability of the whole structure is assessed for all stages of the demolition and the use of temporary supports considered at all times. The temporary supports must be specifically designed by competent engineers.
- In the specific case of multi span bridge arches, adjacent arches and piers are to be stabilised by temporary works specifically designed to provide the restraint necessary to prevent an uncontrolled collapse, whilst the works are carried out.

