



# LONDON BRIDGE BEST PRACTICE



## Heritage Columns & Spandrels

### Overview

The London Bridge Station Redevelopment is a unique project, involving the demolition of a Grade II listed building under listed building consent. One of the conditions of the demolition (part of the S106 obligation) is to retain various elements of the train shed roof for potential reuse, namely 10 of the upright columns and 10 of the foliate spandrels (decorative angle pieces). These parts of the Grade II-listed structure have been retained to form the cornerstone of the planned new locomotive museum in Aberystwyth. The railway, which operates small steam trains for tourists in mid Wales, will be home to a 'unique historic collection' of around 30 locomotives and rolling stock, much of which was built in the UK and had never been displayed in public.



### Innovation

The S106 obligation required the production of a condition survey to identify the columns and spandrels most suitable for retention and a method statement for their removal. Alan Baxter & Associates provided specialist heritage engineering advice and prepared the condition survey. They also worked closely with Palmers the sub-contractor for the train shed roof in developing a satisfactory method statement to ensure the safe removal of the columns and spandrels intact.

The process has been complex, in part due to complications of working round NR operational requirements; in part due to the logistical difficulties of the demolition process as a whole and also due to the nature of the retained objects – made of brittle cast iron and in the case of the columns weighing approximately 10 tons each. The removal of the columns has been further complicated by the fact that their base plates are buried within concrete below platform level. The platform area surrounding those to be removed intact had to be excavated

down to the base plate level and then the four bolts connecting the column to the base plate removed. The base plate and columns were then split apart prior to lifting out of the columns to which the spandrels (in most cases) were still attached



Whilst the column and spandrel removal process was underway, Network Rail had successfully negotiated with a railway heritage organisation who agreed to take all the agreed salvage items together with various additional materials. The retained elements were transferred to their new owners, discharging and exceeding the outstanding obligations.

### Benefits

- 16 columns, 14 beams and other elements of the London Bridge station roof donated to the Vale of Rheidol Railway
- Discharging part of the S106 obligations
- Demonstrating collaborative working; Network Rail stated that 'up until the actual structures were lifted, we were never sure if any of this would be technically possible...the teams can be really proud of what they have achieved'
- Reduced waste to landfill

### Targets & Objectives

The salvage of the train shed columns and spandrels has helped us meet our targets and objectives in the following areas:

- CEEQUAL – historic environment; waste management
- London Bridge Sustainable Delivery Statement – community involvement; heritage; waste
- London Bridge objectives & targets – reuse/salvage of assets; s106 requirements; reduce waste.