

TOWER BRIDGE - EXPANSION JOINT REPLACEMENT ON THE NORTH & SOUTH APPROACH SPANS



Project Brief

Removal of the old Type 6 expansion joints and installation of Type 5 T-Mat 30 expansion joints.

Project Team

Client: City of London Corporation
Main Contractor: BAM Nuttall
Sub Contractor: USL Ekspan

Background Information

Tower Bridge, London's most iconic landmark and one of the City's busiest river crossings, was closed to vehicles for three months to carry out vital structural repairs, refurbishment and maintenance works. The extensive use of Tower Bridge, by more than 40,000 people and 21,000 vehicles every day had taken its toll on the timber decking. This resulted in City of London Corporation awarding Bam Nuttall (on an ECI basis) the contract to carry out an intensive programme of repair works, which included operations both civil and structural. The Victorian structure, until now, had not had any significant engineering works for more than 35 years.

USL Ekspan were contracted by BAM Nuttall to undertake the removal and replacement of the worn expansion joints on both the North and South approach spans.

USL Ekspan's Workscope

USL Ekspan had to remove a total of 10 no. Type 6 expansion joints and replace these with Type 5 T-Mat 30 joints - 5 no. on the North approach span and 5 no. on the South approach span.

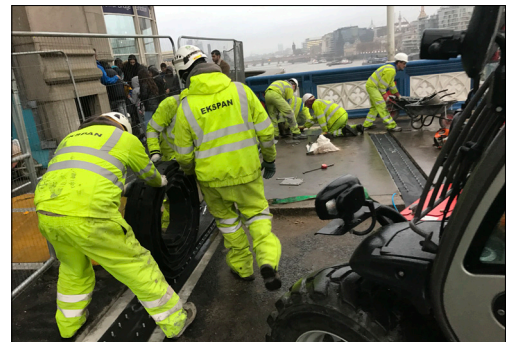
The scope of works included preparation of the road decks and footways prior to the removal of the existing joints; saw cutting the existing concrete deck and breaking out of asphalt by hydro-demolition; removal of the existing joint and lift-out using a telehandler; installation of the joint sub rails in the road and footpaths; concrete repair; installation of secondary seals, T-Mat 30 expansion joints, nosing mortar and antiskid.

The T-Mat 30 expansion joints were successfully installed across the bridge as one continuous length across the road and into the footpaths.

The success of this installation by USL Ekspan, was attributed to working in sequence with the works operations carried out by Bam Nuttall and their associated contractors; meeting all rigid deadlines and working logistically against live river traffic in line with the scheduled bascule bridge lifting times.



South Approach Span - breaking out of existing Type 6 expansion joint



Positioning of Type 5 T-Mat 30 expansion joint



North Approach Span - Installed T-Mat 30 expansion joint across bridge deck

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