

Project name, location	M8 Kingston Over Bridges - Stobcross on-ramp
Year of completion	2006
Client	Glasgow City Council
Contractor	Graham Construction
Engineer	Fairhurst



Project description

Stobcross on-ramp joins the west bound M8 motorway with the Kingston Bridge, one of Europe's busiest river crossings with 180,000 vehicle crossing per day. The £11M refurbishment of the on-ramp is part of the on-going repair and strengthening works of the Kingston Bridge and its associated structures.

Structural Systems UK Limited were employed to undertake the installation, stressing and grouting of 64 No. 40mm and 28 No. 50mm diameter high tensile steel bars through preformed holes. These bars were installed to clamp the concrete deviator and anchor blocks to the existing bridge deck. The deviator and anchor blocks were needed for the post-tensioning system to be installed at a later date as part of the over-all strengthening scheme.

Specialist hydraulic equipment was used to permanently stress each bar in incremental stages to loads of up to 1400kN. Upon completion of the stressing sequence, the bars were then grouted in-situ with a blended cementitious grout to provide protection to the bar from the ingress of corrosive contamination.

PT tonnage	5t
PT system(s) and size(s)	Bonded macalloy bar, 50mm and 40mm dia
Principal benefits of using PT on this project	Strength