FORTH ROAD BRIDGE

INSPECTION DEPARTMENT
Expansion joints. Main tower / Cycle Tracks.
DATE. 2014.11.25

(E2.1 Bridge)
REPORT No.451 DATE: 25.11.14 to 25.11.14
EXPANSION JOINTS – MAIN TOWER
TO CYCLE TRACK.

Scheduled inspection of all Main Tower Cycle Track Expansion Joints (Main Span and Side Span) was carried out on the above date and the general findings are as follows:

The wear down on the sliding plates and on the apron plates remains as per previous inspections and reports.

Upper and Lower Platforms: Handrails, platform floor panels and fixings remain secure and intact with all steelwork and welds remaining satisfactory. The lower platform has evidence of corrosion with staining and paint breakdown still evident on the handrails. As previously reported Rentokil have been down and coated the area with Avigo bird deterrent gel on all the members, however, there is still evidence of very mild build-up of pigeon excrement on the floor panels themselves (Operations have a monthly routine schedule to clean these areas).

Steelwork and Fittings: No changes to report; there is still blooming, minor discolouration and corrosion evident on the bolt heads at certain locations, but overall the steelwork, fixings and welds remain satisfactory.

Tensioning Assemblies: These remain in position with no access gained to carry out a visual inspection; area of minor corrosion and paint breakdown are evident on some of the bolt heads, Hey-Pack Spring Pack Boxes , pins and fixings.

Access Cradle Support Beams: These remain in a satisfactory condition with some evidence of discolouration, staining and corrosion round the fixings.

Cycle Track to Upper Platform Access Ladders: All ladders remain satisfactory.

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Additional information. North main tower cycle track expansion joint. Main span side.

Following sporadic reports of noise coming from the North East main tower (only highlighted at certain times under certain climatic conditions) bridge inspector G. Elliott asked maintenance supervisor to attend inspection to indicate to him where these noises were coming from.
The fluted utility duct which carries services safely around the main tower leg on the main span side has a wear-down plate under the soffit of the service duct . Through tower lateral movement interaction between the two parent metal faces force the plates to grind together at times creating quite a loud grating noise. This combined with again during certain climatic conditions the lower section of the cycle track outer balustrade pilaster diaphragm plate which grinds against the east face of the utility duct creating at times quite a noise through movement. Evidence of this motion contact is quite clear to see, contact between these two surfaces have worn away the plate face to the shape of the fluted duct.

Main tower cycle track surface plate. : (Main span side).

The main span cycle track surface plate has compressive movement evident on the west side of the plate. Tensioning bolts which are located in the spring pack location boxes on the underside of the plate which in turn are connected welded location plates have wear-down and movement apparent under deflection of the plate . This can be seen quite clearly by visual inspection

Bridge Inspectors:

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