Forth Estuary
Transport Authority

FORTH ROAD BRIDGE

Temporary wedge installation.

Following the completion of the main cable / hand-strand inspection / survey carried out between dates 22/01/7 to 24/01/07 by bridge inspector G. Elliott to try and establish a possible reason for the high quantity of acoustic activity being recorded on the monitoring system at specific locations throughout the length of the main cable. Having diagnosed a possible / probable explanation as to why the Acoustic monitoring system was recording this excessive noise / interference, a decision was taken by the Maintenance Manager to try and establish a proven method of work to reduce / try to eliminate this occurrence taking place.

Following discussions between maintenance staff, a possible method of reducing / eliminating the high level of acoustic activity being recorded, a method of work was decided upon. This was in the form of hardwood wedges being driven between the top of the hand-strand cable casting clamp post and the phosphor bronze sleeve / bolt thus ensuring reduction / possible total elimination of any excessive vertical / horizontal movement of the hand-strand cable casting. A trial was carried out at an accessible location by bridge staff to establish if this method could be / would be a success. On completion of this trial it was decided that this method would be used throughout the main cable at locations identified as probable areas of concern.

On the 16/05/07 locations identified on the South main-span (East & West) were completed . Pre & Post monitoring carried out on the acoustic sensor system showed that the method used proved to be successful and results recorded an almost total elimination of noise compared with that had previously been recorded. On the 04/05 /06/07 all other locations identified throughout the suspended span were completed.

All relevant information in relation to wedge installation locations recorded and supplied on individual sheets.

Bridge Inspector. :