From: Colin Clark

Sent: 10 September 2010 15:17

To: Barry Colford Cc: Chris Tracey

Subject: RE: Truss End links

Barry

Comments in red. It may be worth me coming out to discuss/look at access on-site with yourself and Chris (I can do Monday or Tuesday next week). If we are looking at a 'temporary patch' it may be possible to come up with proposals but the access and safety of work force will be main constraint. This was the main reason we looked at alternative locations / new arrangement.

Let me know if Monday or Tuesday suits.

Regards

Colin

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From: Barry Colford [mailto:Barry.Colford@forthroadbridge.org]

Sent: 10 September 2010 12:23

To:

Subject: Truss End links

Coin,

With regard to the above before going down the route of replacement we need to be robust in defending the money spend (as with all the projects).

So we have had a brainstorming session here, to see if there is any way of strengthening the existing welds, bracket and posts insitu that we may have missed.

As we know, although it is difficult, we can probably work within the towers on welds 2a and 2b. It is the welds on weld 1 –especially the inner faces that are the issue.

Welds inside the towers should be straight forward. Weld 1 will have access issues re-what we connect the access to and clearance to work safely.

Bracket Member Section 2 and the End Post would also have to be strengthened and are within the zone of moving parts.

However, If we were to close the bridge overnight Saturday / Sunday for 12 hours, and carried the work out at gusts below say 25 mph at a reasonably low temp – would we be able to be confident of restricting the movement to allow these remedial works to be carried out safely?

Safe access will be the issue. At low loads it may be possible to undertake some of the work but suggest that we need to look at this. Time scale for work plus erection and dismantling of access would be required.

Again although strengthening should be to HA loading, and a BSALL assessment pass should only be viewed as temporary, this work is to meet aloading condition that in theory apart from possible diversions ceases to exist after 2016/17. Given that around 80% of the load is live load it seems likely that if we were only running busses and taxis the elements would all pass. All should be OK if only running busses as highly unlikely that required loaded lengths and weight distribution would be realised.

Actually thought just occurred if the return period for the BSALL is 6 or 7 years does that reduce magnitude? BSALL is a snap shot of the load at a given time. What we could review is the probability of being exceeded in a given period. This is currently based on 5% chance in 120 years. We will need a bit of time to look at this, but I am would think that it would only be worthwhile if we just over allowable and need a bit of comfort.

Barry

Barry Colford Chief Engineer & Bridgemaster



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