

BRIDGE OWNERS FORUM

MINUTES OF MEETING BOF30: TUESDAY 19 JANUARY 2010 AT KING'S COLLEGE, CAMBRIDGE

PRESENT

Campbell Middleton	CHAIRMAN Cambridge University Engineering Dept. (CUED)
Brian Bell	Network Rail
Graham Bessant	London Underground
Graeme Brown	DoRD(NI)
Peter Brown	County Surveyors Society (CSS) and Oxfordshire County Council
John Clarke	BRB (Residuary) Ltd.
Graham Cole	CSS and Surrey County Council
Albert Daly	National Roads Authority-Ireland
Richard Fish	TECHNICAL SECRETARY
Peter Hill	Large Bridges Group and Humber Bridge Board
Rod Howe	British Waterways
Robert Humphreys	CSS Wales
Neil Loudon	Highways Agency (HA)
John Menzies	TECHNICAL SECRETARY (Retired)
Graeme Muir	Society of Chief Officers of Transportation in Scotland (SCOTS)
Andy Phillips	Welsh Assembly Government
Stephen Pottle	Transport for London
Bill Valentine	Transport Scotland
Paul Fidler	CUED

INTRODUCTION

The CHAIRMAN welcomed BOF members to the meeting by commenting on 3 key issues that were facing the industry at the present time:

- The need to progress research projects
- The need to address the implications of the Cumbria floods and bridge collapses
- The need to engage with DfT over the future relationship, and future funding arrangement, with BOF

1. APOLOGIES FOR ABSENCE

Andy Bailey	DfT
Paul Foskett	DfT
Richard McFarlane	London Bridges Engineering Group (LoBEG)
Paul Williams	London Bridges Engineering Group (LoBEG)

2. PREVIOUS MINUTES – BOF28 9 JULY 2009

N.B. BOF29 had been the International Bridge Forum (IBF) for which separate minutes were taken.

The minutes of BOF28 were accepted subject to the following corrections:

- Andrew Oldland had been referred to as Andrew *Oldham* in part of Item 4f; and
- The NRA contribution in Item 4i was £25k, not £10k.

3. ACTIONS ARISING FROM THE BOF28 MINUTES

The actions which were not to be covered by later items of the Agenda were considered by reference to the minutes and the tabled summary.

Actions had been completed apart from:

- **BOF28 - 4a.** Concerns remained over the accessibility of CIRIA reports. The Chairman will contact Chris Chiverrell at CIRIA to ascertain his views on this issue. Concern was expressed that on the first page of each report there is a statement that it is a 'Core Member' document and cannot be saved. The difficulty of finding how to download a copy on the CIRIA site is less of an issue as the reports can always be found from the link on the BOF website.

ACTION: Chairman

- **BOF28 - 4c.** No minutes of Project Steering Groups (PSG) had been received. It was agreed that Convenors should ensure that minutes are forwarded to the Technical Secretary for distribution, although the actual drafting of minutes should be the responsibility of the contractor.

ACTION: Project Steering Group Convenors

- **BOF28 - 4g (i).** The NDT of Macalloy bar project appeared to have been dropped by DfT without consultation. Other possible sources of funding were discussed and Brian Bell will report to the next meeting. Brian Bell was meeting Professor Forde on a separate matter and would informally discuss the project with him. Professor Forde had not resubmitted costs, which was understandably given the long delays in the approvals process.

ACTION: Brian Bell

- **BOF28 - 4g (ii).** Pending the outcome of the above action, Peter Brown will be the CSS representative on the Macalloy Bar project Steering Group.

ACTION: Peter Brown

- **BOF28 - 4k (i)** The Decision Support Tool project is not being managed by BOF but by UKBB; the Chairman will approach UKBB chair, Greg Perks, to ascertain how this is being handled.

ACTION: Chairman

- **BOF28 - 4k (ii)** Stephen Pottle advised that funding for Phase 2 had not been secured but agreed to post the Phase 1 report on the BOF website. He also advised that he chairs a sub-group of HAMFIG which also has an interest in the work on the Decision Support Tool (DST). A significant

sum had been spent on Phase I, but no funding was available for Phase II. However, much of the work intended for Phase II had been picked up by other groups (eg LoBEG). It will be important for BOF to follow progress on the individual projects.

ACTION: Stephen Pottle

- **BOF28 - 4k (iii)** Stephen Pottle also reported on the LoBEG DST linked to their Bridge Management software and suggested that Paul Williams should report on this at BOF31.

ACTION: Chairman

- **BOF28 - 8c (i)a** Task not completed. John Menzies questioned the benefit against the effort in securing this information. (Note: John Menzies had been asked to produce a summary of all the risk-based inspection work done over the last 5-10 years with input from those involved. This was actually no small task, a small research project in itself. It was agreed that it be dropped.)
- **BOF28 - 8c (i)b** Andy Phillips agreed to ask Atkins for a summary of all their recent bridge related contracts, including risk based inspections. Stephen Pottle agreed to invite Garry Sterrit (now TfL) to attend BOF31. Brian Bell will also update BOF31 on Network Rail's work on this topic.

ACTION: Andy Phillips, Stephen Pottle, Brian Bell

- **BOF28 - 8c (ii)** No report from DfT. To be carried forward.

ACTION: Andy Bailey

- **BOF28 - 8g (i)** The material from the US scanning tour has either been distributed or posted on the web site. A full report is expected and the Chairman will chase this.

ACTION: Chairman

- **BOF28 - 8g (ii)** The Chairman noted that the US delegation had been impressed by their visit to Finland. After discussion it was agreed that there was a need to improve international collaboration and the Chairman agreed to write to UKBB.

ACTION: Chairman

- **BOF28 - 8g (iii)** Further discussion confirmed the need to develop a Strategy for International Collaboration with identified objectives and a convincing business

ACTION: Chairman/Technical Secretary

- **BOF28 - 10** Australian "Guide to Bridge Technology" still not available.

ACTION: Chairman

- **BOF27 - 5** The BOF Terms of Reference had been sent to UKBB "for consideration" at their next meeting. They will be posted on the BOF website.

ACTION: Chairman

- **BOF27 - 9** It was agreed that the proposed presentation on Concrete Repair by Stuart Matthews be scheduled for BOF32 in September, with BOF31 (May) focussing on risk based inspections.

ACTION: Chairman

- **BOF27 - 10c** The CSS report on Masonry Arch Bridges will be posted on the BOF web site.

ACTION: Chairman

4. INTRODUCTIONS

The Chairman introduced a) Graeme Brown of DRD(NI) who had replaced Ronnie Wilson on his retirement and b) Richard Fish who had agreed to take over the role of Technical Secretary from John Menzies. He also referred to Andy Bailey who, although, unable to attend BOF30, had recently joined Paul Foskett's team at DfT. The Chairman also reported that he intended to arrange a meeting with John Dowie at DfT in the near future.

ACTION: Chairman

The Chairman expressed his gratitude for, and paid tribute to, the work of John Menzies over the years that he fulfilled the role of Technical Secretary and wished him well in his retirement. The meeting echoed the Chairman's comments and extended their sincere good wishes to John.

5. BOF RESEARCH PROJECTS UPDATE

a. Current Projects

a. (i) Bridge Inspector Competence and Training – phase 1

Stephen Pottle reported that this work was completed and would be added to the BOF website. Although a formal evaluation form would need to be completed, all concerned with the project had been impressed by the Contractor's performance.

ACTION: Stephen Pottle

a. (ii) Masonry Parapets

Brian Bell reported on this project which was about 3 months behind schedule. It was noted that the work has to dovetail with the CSS project and with the new masonry Eurocode.

ACTION: Brian Bell/Graham Cole

a. (iii) Non-metallic reinforcement

Having succeeded Ronnie Wilson as Chair of the PSG, Albert Daly reported that the proposed 2 span bridge selected as a trial had been changed to a single precast beam deck as a Contractor's alternative. It had been agreed that a section of in-situ slab would be reinforced with GRP bars but there was an issue of transfer of risk from the Contractor which needed to be resolved. Long term performance would be monitored with the use of optical fibres and strain measurements would

be included in the Principal Inspection regime. It was agreed that specific construction details would be of benefit to BOF and that Sue Taylor (Queens University, Belfast) should be invited to a future meeting.

ACTION: Albert Daly

a. (iv) Carbon Composites for strengthening of metallic bridges

Brian Bell reported on progress following the formal start date of 1 November 2009. It was expected that the research would concentrate on the application of web shear enhancement. He was shortly to attend an informal meeting with the researcher recruited from Karachi University at Herriot Watt University and would send a note to the Chairman.

ACTION: Brian Bell

a. (v) Automated Bridge Inspections

Stephen Pottle reported that the contractor was presently only concerned with existing commercial systems rather than those still at research stage. Stephen will forward minutes of the SPG and Albert Daly will send the draft specification email from the Contractor.

ACTION: Stephen Pottle/Albert Daly

a. (vi) NDT of Macalloy bars

This project was now defunct, having been dropped from the list of projects to be funded by the DfT without consultation with BOF. Much concern was expressed about the process by which this decision was taken. It was agreed that, should the project be re-established, longer term outcomes should be identified.

b. Scanning of HA Research Reports

Neil Loudon reported that the full list of the reports to be reviewed was about 2,600 documents and a process was needed to identify which reports should be scanned. Albert Daly also referred to an EU sponsored organisation, ERA-net (European Research Arena), which could assist procurement or funding for future research projects.

c. Projects submitted to Bridges Board in October 2009

Apart from c (i) below, the following projects had not yet been approved by DfT. Andrew Oldland's note for this meeting stated that *"They will be considered at a future UKRLG meeting, in light of the new specification on the role of the UKRLG with regard to research."*

- (i) Bridge Inspector Competence and Training (Phase 2)
- (ii) Review of Road Restraint Systems for Local Roads
- (iii) Best Practice for Specifying Long Road Surfacing for Bridges
- (iv) Design, Maintenance and Inspection of Concealed Metal Connectors etc.
- (v) Life-time considerations of FRP Strengthening of Bridges

c (i) Bridge Inspector Competence and Training – phase 2

Stephen Pottle is chasing Andrew Oldland at DfT to agree the proposed programme. Whilst the CSS Research Committee, scheduled to meet on 2 February, will determine CSS contributions it was thought that the £100k budget was unlikely to be adequate. The project had been extended to include Rail bridges (Graham Bessant, Brian Bell and John Clarke will be corresponding members) and BWB (Rod Howe will also have such a role). Additional funding has been requested from Network Rail (by Brian Bell) and NRA (by Albert Daly). The specification will be posted on the BOF web-site and other organisations will consider funding contributions.

ACTION: Stephen Pottle/All

6. **Renewal of BOF funding for 2010/11**

In view of the projected impact of the financial position on the public purse from 2011/12 onwards, it was accepted that the funding of BOF could not be expected to continue at present levels. It was agreed, therefore, that there was a need to reconsider BOF's role and brand, with less emphasis on research and more on policy, strategy and public safety. It was accepted that the exact role will depend on the future of UKRLG and UKBB but a possible option would be for BOF to formally provide technical support to UKBB.

Discussions developed to a possible re-branding of BOF to a "National Bridge Committee" with funding for the organisation and administration secured via "subscriptions" from constituent member organisations. It was noted that raising funding in this way might detract from funding for research projects but that, in turn, might help to drive the search for research funding from other sources. A further problem was identified in terms of replacing DfT's "client role in research contracts.

Some BOF members pointed out that the financial position might restrict funding from their own organisations, but the principle was widely accepted and it was agreed to further develop these ideas at BOF31.

ACTION: Chairman/All

7. **BOF Technical Topics** **a. Response to Cumbria Flooding**

The chairman reviewed the profession's response to the November 2009 floods from the bridge community. Although a joint statement had been prepared by Mike Winter (CSS Bridges Group) and John Carpenter (SCOSS), this seemed to have been lost in the media frenzy. NB UKBB Chairman, Greg Perks was away on leave and no UKBB statement was issued.

Noting that the BOF web-site identified scour as the most frequent cause of failure, discussion turned to the research position on scour and the lack of emergency bridging in the country.

b. HA emergency response procedures

Neil Loudon gave a presentation on the latest position and the preparation of composite evidence that would be given to the Transport Select Committee in March. DfT had formally appointed HA to review the scour impacts from the floods but concern was expressed that the required joined up approach was not apparent. Neil advised that HA were commissioning a revision to the scour advice note, BA74.

The presentation will be placed on the BOF web site as soon as Neil has clearance to do so. Similarly, the Chief Highway Engineer Memorandum would also be issued to BOF.

ACTION: Neil Loudon

Discussion extended into the availability of temporary bridge components in the UK for use in the wake of major flood events causing serious damage to bridges. It was agreed that a review was needed, both in terms of the stock and the skill capacity in terms of rapid installation. This will be considered again at BOF31.

ACTION: Chairman

c. National coordination of emergency response

Brian Bell gave a presentation based on Network Rail's experience from the 1980s onwards, including the report on the study undertaken by HR Wallingford, the CIRIA report C551 and a report by the Minnesota DoT. Brian's presentation will be placed on the BOF website, once photographs have been removed.

ACTION: Brian Bell/Chairman

Discussion also took place on competence and capacity issues in smaller highway authorities and the potential risk being passed to relatively inexperienced staff. It was noted that this level of variability also applied to the management of watercourses and in terms of the responses to emergencies.

Graham Bessant presented the LUL experience and the progress that had been made since 1990 when a detailed survey of at-risk bridges had been undertaken. Contrary to assumptions of other BOF members, Graham explained that LUL PPP financing was not directed at civil infrastructure *unless* there was a risk of failure which would disrupt services. Graham also referred to LUL tunnels below the Thames and the use of a Port of London Authority (PLA) survey boat, equipped with multi-beam sensors which give an accurate profile of the river bed. The Chairman will consider inviting the PLA (or commercial equipment provider, if more appropriate) to a future BOF meeting to present their technology.

ACTION: Chairman

Albert Daly outlined the position in Eire and the response to the heavy rainfall in November. An inspection programme of some 943 National Road bridges had been put in place at a cost of €120,000. Any identified defects would be added to the Bridge rehabilitation programme. Albert reported that, on average, a bridge collapse every year due to scour was to be expected.

After discussion, it was agreed that a collective BOF view should be collated on the national position with regard to responding to emergency situations, including the availability of temporary bridging. This could take the form of a position paper and press release, touching on issues such as risk management, wider socio-economic impacts and costs/benefits of infrastructure investment. The Chairman and Technical Secretary will discuss options.

ACTION: Chairman/Technical Secretary

8. International Bridge Forum (IBF) – Feedback and Review

Due to time pressures, this item was deferred until BOF31. In the meantime, the IBF minutes will be issued.

ACTION: Chairman

9. Bridge Research Update

Apart from the research updates reported above, further discussion on this topic was postponed until BOF31

10. Any Other Business

Due to time pressures, no items of were taken.

11. Proposed dates for other 2010 meetings

May	(BOF31)	Tuesday 11 th May 2010
September	(BOF32)	Tuesday 21 st September 2010