

BRIDGE OWNERS FORUM

BOF 74: TUESDAY 7 November 2023

**via MS Teams and in THE BEVES ROOM,
KINGS COLLEGE, CAMBRIDGE**

PRESENT:

In person:

Tim Arianpour	TfL (LUL)
Graham Cole	HRA
Paul Fidler	CUED
Richard Fish	Technical Secretary
Colin Hall	Network Rail
Keith Harwood	ADEPT
Nicola Head	TfL
Trish Johnson	Big Bridge Group
Hazel McDonald	Transport Scotland
Cam Middleton (Chairman)	CUED
Ian Norriss	Environment Agency
Santosh Singh	National Highways
Paul Thomas	Railway Paths Ltd.
Sue Threader	Rochester Bridge Trust

Guests:

Alex Bouas	Environment Agency
Helen Rowe	Rochester bridge Trust
Helena Russell (part)	
Jo Saunders	Ringway Island Roads

Virtual:

Kris Campbell	Department for Infrastructure – Northern Ireland
Malcolm Cattermole	Forestry England
Henry Dempsey	SCOTS
Andy Featherby	Canal and River Trust
Jason Hibbert	Welsh Government
Osian Richards	CSS Wales

Guests:

Cameron Archer-Jones (part)	NZBG
David Castlo (part)	Network Rail
Brain Duguid (part)	NZBG
Colin George (part)	National Highways
Peter Hill (part)	National Highways
Francis McKeown (part)	National Highways
Sara Subtil (part)	National Highways
Hideo Takano (part)	National Highways

NB Any statements recorded in these minutes, and attributed to an individual, are their own personal views and not those of their employer.

1. Welcome

The Chairman welcomed everyone to BOF 74, both those attending in person and those joining via MS Teams. Although he was pleased to see such a good attendance, he expressed some concern that several members had opted to join online very late in the day, having previously committed to attending in person. With regard to the consequences (and cost) for the domestic arrangements, he would have to consider reverting to in-person only meetings.

ACTION 1: Chairman

2. Introductions and Apologies

The Chairman invited the various guests attending to introduce themselves:

Alex Bouas is working with Ian Norriss on a bridge management system for the Environment Agency (EA). His career in the UK had started with Halcrow before returning to his native Greece, working for a contractor. Coming back to the UK, he had worked briefly for the EA before joining WSP and then taking up his present post.

Jo Saunders is the Structures Manager for Ringway Island Roads, part of Vinci Construction, delivering the 25-year highways PFI on the Isle of Wight. She is also the company's Business Manager. The PFI had seen an upgrade to very high performance standards of the stock of about 200 bridges and 600 retaining walls during the core investment period, which now have to be maintained at that level. Jo was also an ICE President's Apprentice under David Balmforth, focussing on innovation.

Helen Rowe had joined the Rochester Bridge Trust in April this year. A graduate of Liverpool University, she had initially worked in the water sector before moving to bridges, both with consultants and the, then, Highways Agency. She had also worked as a designer for a sheet piling contractor. Helen is passionate about all things STEM and has possibly a unique family perspective in that both her father and eldest daughter are also civil engineers.

The Chairman praised the impressive gender diversity ratio of 6:8 of those present in person. He noted a new collective noun for female engineers: a "miracle"!

Richard Fish recorded that apologies had been received from the following:

Jasdeep Bhachu	LoBEG
Mark Downes	EWR
Liam Duffy	Transport Infrastructure Ireland
Martyn Thomas	SSE

3. Matters Arising from BOF 73 Minutes

The Chairman noted that the accuracy of the BOF 73 minutes had been approved by email and that they were now on the BOF website.

The Chairman referred to the BOF 73 Action Update sheet that had been issued with the agenda:

Actions 5 to 9 and 12: BOF Website Operational details

Not taken specifically, but to be discussed.

ACTION 2: Keith Harwood/Richard Fish/Chairman

Action 15: STEM Resources

Sue Threader reported that the area on the Rochester Bridge Trust's website is now ready for links from other BOF members. Any STEM material should be sent to Sue direct.

ACTION 3: All

The Chairman suggested that BOF should support all STEM activities and encouraged everyone to contribute to this. A link is to be set up on the BOF website to the Rochester Bridge Trust's site.

ACTION 4: Keith Harwood/Sue Threader

Actions 20 21 and 35: National Highways Updates

Not taken¹.

Actions 31: Use of Non-Statutory Standard for Welsh Highway Authorities

Not taken but raised in passing under item 4.

Action 41: BOF Technical Secretary

The Chairman announced that there had been only one expression of interest to replace Richard Fish as Technical Secretary – Keith Harwood. Keith would formally take up the role at BOF 77 in November 2024 but, handover arrangements would be discussed in the interim.

ACTION 5: Richard Fish/Keith Harwood

4. Investigations into Highway Bridge Collapses – Update on meeting with CROSS

Hazel McDonald gave a summary of the meeting held via Teams on 29th September, which she had chaired (as Chair of UKBB) and attended by Alastair Soane and Paul

¹ Information on these actions issued with Technical Secretary's email dated 13th November. See item 19.4.

Livesey of CROSS, Julie Bregulla (ex BRE and affiliated to ICE), and the Chairman and Richard Fish representing BOF.

The meeting had referred to the proposal considered by BOF and submitted to UKBB and UKRLG for a formalised system for investigation, reporting and knowledge sharing of bridge collapses. In discussion, it had been noted that reporting of close calls, in other words pre-cursor events, should also be part of the scheme. It transpired that this initiative was also aligned with a wider infrastructure failure reporting mechanism being promoted by the ICE. Parallels were also drawn with the Hackett review following the Grenfell Tower tragedy.

It had been agreed that meetings of this group would continue and the next had been arranged for 27th November.

ACTION 6: Chairman/Hazel McDonald/Richard Fish

In parallel, the Chairman agreed to speak to David Coles and Sarah Sharples at the DfT.

ACTION 7: Chairman

Similarly, Hazel McDonald and Richard Fish would seek the views of the ORR.

ACTION 8: Hazel McDonald/Richard Fish

Osian Richards noted that some progress had been made between the Welsh Government and CSS Wales, but issues remained as to whether reporting should be voluntary or mandatory, together with questions around anonymity. He agreed to report further at BOF 75.

ACTION 9: Osian Richards

5. M20 Footbridge Collapse

Although informally reported to BOF soon afterwards, following the request at BOF 73, Hideo Takano gave a presentation on the collapse of the M20 East Street Footbridge in 2016. Hideo agreed that the presentation could be uploaded to the members only area of the BOF website.

ACTION 10: Paul Fidler

Hideo described how the bridge had been struck by the arm of an excavator being carried on a low loader. The suspended span between two half-joints had fallen onto the carriageway hitting both the low loader and another vehicle. The bridge dated from 1971 when contemporary headroom requirements were less than those presently in the DMRB. Similarly, it had only been in the early 1970s that the, then, Ministry of Transport had adopted a system of Technical Approval, so it was probable that this was not in place when the bridge had been designed.

The fixed end of the suspended span had been secured by a single large diameter steel dowel and it had been this that had failed rather than the concrete elements.

Following the collapse, a number of CHE memoranda had been issued and a risk ranking established to identify similarly vulnerable bridges. As well as the more technical issues, the incident had also prompted reminders to hauliers such as the need to properly secure loads, to be aware of the total vehicle height and to carefully plan the route.

The Chairman thanked Hideo for his presentation and invited questions. Trish Johnson asked whether any costs had been recovered by claiming on the haulier's insurance. Although Hideo was unsure of any final settlement, he was aware that a counter claim had been made suggesting that the bridge was due for demolition which had been assisted by the incident! Richard Fish asked if there had been any economic assessment in terms of the consequences of the collapse itself and the knock-on effects to the surrounding network. Hideo was not aware of any such studies.

Keith Harwood referred to the issue of CHE memoranda and questioned why these were considered only to be appropriate for structures on motorways and trunk roads, when there were equivalent risks for local authority bridges. Peter Hill offered to review this issue and suggested that Santosh Singh should work with Keith to enable those memos deemed to be of wider benefit to be added to the list of information on the BOF website.

ACTION 11: Santosh Singh/Keith Harwood

As well as the above consideration, Peter Hill suggested that there should be a standing item on BOF agendas for updates from National Highways, including any developments with regard to the DMRB.

ACTION 12: Richard Fish/Santosh Singh

The Chairman stated that sharing of knowledge was essential and encouraged all parties to do so. He speculated on a future equivalent inquiry into a UK bridge collapse, suggesting that a contributory factor of knowledge not having been more widely known would be unforgivable.

Returning to the details of the footbridge collapse, Tim Arianpour asked if the opportunity had been taken to examine the condition of the half-joint. Hideo replied that the concrete in the lower nib had seemed in good condition, but the problem had been the lack of horizontal resistance provided by the dowel.

The Chairman asked about recent developments in bridge strike prevention. Colin Hall advised that, even where detection devices had been installed, they did not always work and were themselves vulnerable to being struck. He reminded the meeting not only of a presentation at a recent BOF² by Network Rail's Mark Wheel but also that the

² BOF 59, 29th January 2019

responsibility for measuring bridge heights and signage was the responsibility of the Highway Authority. In response to a question from the Chairman, it was confirmed that checking bridge clearances was a requirement at every Principal Inspection. He went on to ask whether low bridge heights could be added to Satnav systems; Colin Hall noted that this had been trialled but there was no guarantee that headrooms would not have changed due to road surfacing overlays. Peter Hill added that there were always going to be driver errors in that they had not been aware of the height of the load, as was the case with the M20 incident. Hazel McDonald confirmed that hauliers are reminded of this responsibility after every bridge strike.

Andy Featherby concluded this item by noting that a meeting of the Bridge Strike Prevention Group was due to be held on 21st November and agreed to report on it at the next meeting.

ACTION 13: Andy Featherby

6. BICS

The Chairman welcomed Peter Hill, Sara Subtil and Francis McKeown from National Highways who were attending via MS Teams specifically for this item. Peter Hill gave a presentation which he agreed could be uploaded to the members only area of the BOF website.

ACTION 14: Paul Fidler

As one of the organisations which had helped to establish BICS, Peter confirmed that National Highways remained fully supportive of the scheme's original intentions. Along with others, however, he had come to the conclusion that the low numbers of successful candidates showed that it was not working as intended.

Peter began by referring to National Highways' bridge stock and especially with respect to its relatively young age as the majority had been built during the last half of the 20th century. As the decades passed, however, it was clear that there was going to be a spike in future maintenance interventions in line with the age profile. This would add another level to the importance of inspections.

Peter also highlighted National Highways' "Priority Risk" bridges which included those with half-joints, concrete hinges, scour and fatigue prone structures as well as prestressed bridges. He illustrated the last of these by referring to the M4 Wick Wick bridge that had recently been identified with significant signs of distress. Peter noted that in order to comply with the DMRB, National Highways had to commission 46 inspections every day.

As for BICS, Peter suggested that there might be some merit in amending the number of levels from two to four, adding junior and principal inspectors as well as the current inspector and senior inspector. He reported that he had shared this proposal with Hazel McDonald ahead of this meeting who had suggested that the four levels could be trainee, junior, inspector and senior inspector with the last two as per the existing

scheme. Hazel's suggestion had been included in Peter's presentation. Peter concluded by emphasising that he saw this as the start of a discussion and proposed that a workshop should be arranged to attempt to re-energise the scheme.

The Chairman thanked Peter for his presentation and his proposal. He also agreed with all of the concerns that had been raised, noting that most had been covered at almost every BOF meeting, both before and since BICS had been established. He repeated his view on the importance of having both competent inspectors and a nationally recognised scheme against which an individual's competence could be tested. He invited further discussion.

As Chair of the BICS Steering Group, Francis McKeown commented that there was now a general acceptance that the Scheme's original bar had been set too high. He also noted that several changes to the scheme had already been made, such as modularisation, in an attempt to make it more attractive to existing inspectors. Osian Richards suggested that more fundamental changes, and not simply adding more levels, were needed if the Scheme was to be widely accepted by local authorities. Henry Dempsey agreed, suggesting that a greater input was needed by council bridge engineers into the proposed banding as they had to be cognisant of the constraints of local authority pay grade structures. Kris Campbell added that not all local authorities recognise any professional qualifications which might make it harder to incentivise inspectors to seek accreditation. Sara Subtil noted that National Highways had looked at blockages within their own inspectors; some had tried to become accredited and failed whilst others had shown little interest.

Paul Thomas considered that LANTRA's performance needed to be addressed. He cited an example of one of his staff members who struggles with IT and had yet received no help from LANTRA. Jo Saunders pointed out that many local authorities had very small structures teams and, as such, there was no opportunity for career progression.

Graham Cole noted that he had been the Scheme's lead assessor since 2016 and agreed with Francis McKeown that changes had been made in an attempt to address earlier concerns. He summarised the feedback that he had received over the years as issues of expense and complexity. He also referred to the statistics in Peter Hill's presentation from which he had calculated that National Highways had to have 233 inspectors, either in-house or from their agents. His question was why had this cohort not been required to be qualified in the last six years? Peter Hill accepted this point and agreed that he could not direct staff to seek accreditation but could only encourage them to do so. Graham also noted that the revision of the DMRB had not been helpful in promoting the Scheme with the requirement in the old BD 63 not being carried forward to the new CS 450.

As a member of the BICS Steering Group, Hazel McDonald noted that there were several ideas which were currently being considered but agreed that LANTRA were part of the problem. She considered that the proposed workshop was a good idea.

The Chairman summarised the discussion by repeating how critical inspector competence was to the safety of our infrastructure. He also agreed that a workshop was a good idea. Peter Hill confirmed that Sara Subtil and Francis McKeown would make arrangements for this in the new year. Feedback would be given at BOF 75.

ACTION 15: Hazel McDonald

Post meeting note: The workshop has been arranged for 24th January 2024, in Birmingham.

7. Network Rail: Carbon and Net Zero update

The Chairman welcomed David Castlo from Network Rail who was attending via MS Teams. Brian Duguid and Cameron Archer-Jones had also joined virtually for this item. David gave a presentation which he agreed could be uploaded to the members only area of the BOF website.

ACTION 16: Paul Fidler

David set out the challenges within the current Network Rail Control Period (CP7) up to 2029, including a 50% reduction in carbon in infrastructure. He also gave examples of some successes such as new platform copers which had not only reduced carbon by 70% but also cost by 50%. He concluded by noting that progress was being made in a number of other areas, including procurement, standardisation and data capture.

The Chairman thanked David for his presentation but decided to delay discussion until after Item 8, when both could be discussed.

8. Net Zero Bridges Group update

The Chairman invited Brian Duguid and Cameron Archer-Jones to give their presentation which they agreed could also be uploaded to the BOF website.

ACTION 17: Paul Fidler

Brian advised that the NZBG now had 33 member organisations. The Group had also recently revised its website³ and created a LinkedIn page. It continued to promote net zero at every opportunity, including conferences and papers in the ICE Bridge Engineering Journal. Additionally, guidance was being drafted on a method to measure and minimise carbon in new bridge designs.

The Chairman thanked Brian and Cameron for their update and invited questions, both for this and the previous item.

Santosh Singh was impressed with both presentations and suggested that there were two important issues: ensuring consistency of measurement and the need for data to be

³ [Net Zero Bridges Group](#)

shared between organisations. Brian Duguid agreed; on the latter point he noted that HS2 has access to huge amounts of data which was not, as yet, readily available to other parties. The Chairman asked about blockers to sharing and Cameron Archer-Jones replied that whilst it was important to have worthwhile data, some companies had concerns of commercial confidentiality as well as a fear of being open to criticism. Brian added that the buildings sector seemed to be much better at data sharing, with the Built Environment Carbon Database.⁴ David Castlo noted that Network Rail were considering changes to contract requirements after CP7, and to move beyond the current requirements of the Rail Safety and Standards Board.⁵

Sue Threader praised the example of platform copers given in David's presentation which she suggested should be widely publicised to dispel the myth that saving carbon meant increased costs. She encouraged all organisations to make a start on carbon rather than wait for exact guidance (although noting that there was an option of using the X29 Clause in the NEC as a contract requirement). Sue also made the point that the focus should not just be on new bridges but on the maintenance of existing where measures such as avoiding closures and diversions, work force travel and alternative fuels should be taken into account. Colin Hall agreed, noting that Network Rail were also working on re-use and re-utilisation strategies.

Ian Norriss noted that his colleague, Neil Guthrie, had presented on the Environment Agency's work on net zero at BOF 67 in April 2021, including a risk-based asset management approach. Santosh Singh noted that National Highways were also looking at adding carbon considerations in existing asset management strategies.

The Chairman questioned what the next steps might be. Brian Duguid expressed the view that client bodies seemed less inclined to participate, other than in meetings such as BOF and UKBB, and suggested that improved engagement was essential. The Chairman offered to discuss this issue with key parties outside the meeting.

ACTION 18: Chairman/Hazel McDonald/Richard Fish

Trish Johnson suggested, and it was agreed, that Carbon and Net Zero should be a standing item on BOF agendas to enable best practice and new initiatives to be shared.

ACTION 19: Richard Fish

9. BOF Website

The Chairman welcomed Helena Russell to the meeting, recalling that it was Helena's review of the old website which had been instrumental in helping to facilitate the new one. He explained that Helena had agreed to repeat her review for the new site and had prepared a short report which Richard Fish agreed to issue.

ACTION 20: Richard Fish

⁴ [Built Environment Carbon Database \(becd.co.uk\)](https://www.becd.co.uk)

⁵ [Home \(rssb.co.uk\)](https://www.rssb.co.uk)

Post meeting note: Issued with Richard Fish email dated 13th November 2023.

Aside from a few points of detail, Helena was largely complimentary about the new site but suggested that a decision was needed as to how it would be maintained and kept updated.

ACTION 21: Keith Harwood

The main discussion point was whether BOF minutes should be accessible to all or just uploaded to the members only area. Helena considered that having them easily accessible by media interests might lead to some unwanted news items. After some debate, it was agreed that that existing and future minutes should be put in the members only area, although presentations would continue to be at the discretion of the author.

ACTION 22: Paul Fidler

It was also agreed that a short summary of each meeting should be prepared and posted in the public area of the website.

ACTION 23: Richard Fish

The Chairman thanked Helena for her review and for her contribution to the discussion.

10. Grand Challenge Zero and Updating Grand Challenges

Richard Fish referred to the last meeting at which he had tabled a draft over-arching Grand Challenge Zero. As well as feedback being requested, it had also been agreed that the five other Grand Challenges should be refreshed. Volunteers had been sought but without success.⁶ Sue Threader had subsequently agreed that there were sufficient funds remaining in the website budget for Helena Russell to be commissioned for this piece of work.

Helena asked about the purpose of the Grand Challenges and the scale of the refresh. In the ensuing discussion, it was agreed that they were an opportunity to promote BOF and to share our thoughts with the wider bridge engineering community. Hazel McDonald suggested that they should also help to focus any potential research initiatives. Keith Harwood asked if they were still the right challenges, but it was generally felt that revisiting numbers and titles was possibly a step too far. Jo Saunders suggested that relating them to the UNSDGs would be worthwhile.

Helena suggested that the revised versions should be set out in landscape orientation in order to make them easier to read on a screen. She also proposed the use of a graphic designer to enhance the quality. The Chairman agreed to check on the availability of funding for this⁷.

ACTION 24: Chairman

⁶ BOF 73 Actions 16 and 18.

⁷ Graphic design budget has since been confirmed.

It was agreed that Helena should liaise with Richard Fish in the first instance, although anyone wishing to join a small editorial sub-group would be welcome to do so. A progress report will be given at BOF 75 with a view to re-launching at Bridges 2024.

ACTION 25: Richard Fish/All

The Chairman concluded this item by thanking Helena for her contributions.

11. Update from Suicide Intervention Sub-Group

As Chair of this group⁸, Trish Johnson reported on a meeting held on 10th October 2023. It had been agreed that a best practice guide, to be accessed via the BOF website, would be an appropriate output although recognising that there would be no one-size-fits-all solution. The following points will be included:

- Dealing with vulnerable persons
- Physical deterrents
- Softer deterrents
- Rescue requirements
- Dealing with stakeholders and emergency services
- Data on incidents
- Dealing with the media
- Legal aspects
- Dealing with thrill seekers

Trish will also consult with other interested bridge owners and had arranged to speak to Nicola Tweedie at National Highways with regard to DMRB standards. Hazel McDonald advised that any new standard would incorporate wider network assets and she understood that the next revision to CG 300 would ensure that self-harm prevention would be included in AiPs for new bridges.

Trish agreed to provide a further progress report at BOF 75.

ACTION 26: Trish Johnson

The Chairman thanked Trish and other members of this group for the update on this important piece of work.

12. Heritage Railway Association (HRA) – Background and Current Issues

Graham Cole gave a presentation on the HRA which he agreed could be uploaded to the BOF website.

ACTION 27: Paul Fidler

⁸ Trish Johnson, Hazel McDonald, Sue Threader (plus her Bridge Manager, Jim Booth), Henry Dempsey and Osian Richards

Graham outlined some figures associated with the HRA, not least that the sector contributed some £600m of economic benefit to the UK every year. It has 281 members, including 173 working railways, with a total of approximately 2000 bridges. As with Network Rail, the HRA is regulated by the ORR which had produced a report in 2023⁹, recognising some shortcomings (including the occasional lack of asset management capacity and competence). The sector is not without other challenges, including environmental considerations and, almost by definition, the fact that its infrastructure is very old.

The Chairman thanked Graham for his presentation and welcomed the addition of the HRA to BOF membership.

13. RAAC in Bridges?

Richard Fish noted that he had added this item to agenda following widespread media coverage of defective concrete in public buildings. Although it was highly unlikely that RAAC was present in major structural elements of bridges, there was every chance that it had been used as planks in footbridges or in service duct covers. The Chairman admitted that he had been unaware of the issue until it had been covered in the CROSS presentation at BOF 72.

Santosh Singh reported that a search of the National Highways asset database had been conducted and there were some RAAC elements discovered in the roof cladding of a motorway service station. Tim Arianpour advised that the main concern related to the detailing of the reinforcement within RAAC components and that it was on a list of problematic materials like HAC concrete, but not recorded in the TfL asset database.

It was agreed that any cases should be reported at BOF 75.

ACTION 28: All

14. Connections between BOF and TRIB¹⁰, DfT etc.

The Chairman advised that he (in his academic role) was a member of the TRIB Infrastructure Working Group (IWG). Recently, there had been some proposals to TRIB, being offered by research bodies and effectively bypassing any bridge expertise. Examples included one on crack width limitations (which the Chairman supported) and another, the PLEXUS¹¹ proposal from UKCRIC¹². The latter was considered to be somewhat vague and the IWG had suggested that it should have first been tested at UKBB or BOF before being considered. This in turn had led to a discussion as to whether BOF should have a more formal affiliation with TRIB. The Chairman confirmed that he was attracted by this idea, suggesting that it was another opportunity

⁹⁹ [Minor and heritage railways | Office of Rail and Road \(orr.gov.uk\)](#)

¹⁰ Transport Research and Innovation Board [TRIB](#)

¹¹ [Priming Laboratory EXperiments on infrastructure and Urban Systems](#)

¹² UK Collaboratorium for Research on Infrastructure and Cities [Home | UKCRIC](#)

to enhance BOF's profile. In reality, this would mean little change other than the Chairman wearing a BOF hat as well as one of academia. After a short discussion this was widely supported.

ACTION 29: Chairman

It was also suggested and agreed that there should be a standing item on BOF agendas for TRIB IWG updates.

ACTION 30: Richard Fish

15. The Future of UKBB & BOF

The Chairman reported on a meeting which he had hosted on the day before BOF 74 (6th November) with Hazel McDonald, Keith Harwood and Richard Fish. He had wanted to have the reassurance that the current governance of bridge related matters in the UK was still appropriate, with the subtle differences between UKBB, ADEPT and BOF, and to ensure that BOF retained the right level of value to its members. Although the meeting had been inconclusive in an existential sense, it had been felt appropriate to test some ideas at this meeting. Before inviting discussion, the Chairman posed a number of questions: was the status quo acceptable? Should we consider another bridge consultants' forum¹³? A bridge researchers' forum? Another international bridge forum¹⁴? He considered that widening invitation to meetings to other, often more junior, members of a BOF organisation had been a very worthwhile exercise; should BOF consider a more formal mentoring role? The chairman also noted, with a degree of pride, the contribution that BOF had made to bridge related research over the first quarter of the twenty-first century with almost every initiative having had its genesis at a BOF meeting. He invited comments.

Paul Thomas replied that he had found BOF an essential platform for smaller bridge owners such as his organisation and, although perhaps being able to give only a little, what he had been able to take from it was immeasurable. He especially cited the more recent BOF work on carbon which was invaluable. Ian Norriss felt that one of BOF's strengths was the ability to be able to drill more deeply into any of the topics in the bridge management cycle. Graham Cole, as a long standing BOF member, agreed: BOF had long had the versatility to focus on any or all such subjects.

Discussion then extended into specific topics. Henry Dempsey referred to the widespread introduction of electric vehicles with considerably higher weights, and the potential additional loading, especially in car parks. Noting this concern, Santosh Singh agreed to refer it back to National Highways.

ACTION 31: Santosh Singh

¹³ The Chairman reflected that two such events had been held since 2000.

¹⁴ The Chairman noted that during his recent sabbatical he had found that the issues facing bridge owners in the UK were the same the whole world over.

Osian Richards cited BOF work on masonry arches with regard to both assessment and strengthening and especially where there was a shortfall between loading and capacity on listed structures. With respect to listing, Colin Hall agreed; Network Rail had had particular issues with the listed Tyne bridge and its timber deck which had led to difficult maintenance considerations.

Tim Arianpour asked about communications between BOF members *between* meetings. Although it was noted that there was a BOF LinkedIn group, it was agreed that the preference remained the use of emails from the Technical Secretary.

ACTION 32: Richard Fish

The Chairman thanked the meeting for an encouraging debate. Returning to international issues, however, he recalled the strong links between BOF and the AustRoads Bridge Task Force¹⁵ and noted that there should be a connection to their website on BOF's.

ACTION 33: Keith Harwood/Paul Fidler

16. BOF and Freedom of Information Requests

Following discussions at the last meeting, Sue Threader had looked into this issue and advised that, as BOF is not a public body, it was *not* subject to Freedom of Information (FoI) requests. There could, however, be an alternative approach in that a BOF member, who works for a public body, could be asked via an FoI about an issue that had been discussed at a BOF meeting. Sue suggested that, in this scenario, and unless the information being sought was very sensitive, the best approach would be to respond but not under a formal FoI. She added that, in her view, any FoI request by this route was highly unlikely.

The Chairman thanked Sue for this advice, and for the research that she had undertaken on the subject.

17. Bridges 2024 – BOF Lifetime Achievement Award

Richard Fish advised that the Bridges 2024 conference¹⁶ organisers had decided not to have any awards next year but to make them biennially for the foreseeable future. They had offered BOF the choice of following suit with our Lifetime Achievement Award or having it again in 2024, as a standalone. After a short discussion, and a show of hands, it was decided *not* to have a 2024 award but to keep in line with the other awards. Richard Fish agreed to communicate this decision to José Sanchez.

ACTION 34: Richard Fish

¹⁵ [Bridge Task Force and projects | Austroads](#)

¹⁶ To be held in Coventry on 13th and 14th March 2024 [Bridges Conference 2024 - Bridges 2024 \(tn-events.co.uk\)](#)

18. Updates on Current Bridge Issues and/or Research

The Chairman invited comments from the meeting. Those that had points to make are listed below:

National Highways: Santosh Singh referred to the use of a 3-D printed concrete headwall being installed on the A30 improvement scheme in Cornwall. He agreed to provide more details at BOF 75.

ACTION 35: Santosh Singh

Big Bridge Group: Trish Johnson advised that an ICSBOA¹⁷ workshop covering European bridges was to be held on 21st November. Trish agreed to give feedback at BOF 75.

ACTION 36: Trish Johnson

SCOTS: Henry Dempsey referred to a project that he was undertaking in Glasgow in partnership with Strathclyde and Turin universities, involving satellite and sensor calibration on a suspension bridge over the river Clyde. Sue Threader noted that she had worked with the Italian Space Agency on a similar project on the Rochester bridges and agreed to issue the link to the report.

ACTION 37: Sue Threader

Post meeting note: Link¹⁸ issued with Richard Fish email of 13th November.

Welsh Government: Jason Hibbert gave a brief update on the work he was undertaking with WSP and Cowi on over-loaded HGVs. A Steering Group was due to be held in November and Jason agreed to report at BOF 75.

ACTION 38: Jason Hibbert

CSS Wales: Osian Richards referred to a scour study being conducted by Strathclyde University and agreed to provide more details.

ACTION 39: Osian Richards

19. Any Other Business

19.1 The Chairman referred to occasional letters from academics or other research organisations, seeking support in principle from BOF for bridge related research proposals. Richard Fish advised that he had recently received a request from Dr Eda Majtan at Salford university for a research proposal into flooded masonry arches. The Chairman's view, and one shared by the meeting, was that BOF should *not* offer support in its own right, but it was up to individual member

¹⁷ International Cable Supported Bridge Operators Association

¹⁸ <https://ieeexplore.ieee.org/document/9617280>

organisations to endorse, or even financially support, proposals at their discretion. The Salford proposal would be issued.

ACTION 40: Richard Fish

Post meeting note: issued with Richard Fish email of 13th November.

19.2 On the subject of BOF subscriptions, the Chairman advised that all had now been paid and invoices, or request for purchase orders, for next year would be issued next week, with no price increase.

ACTION 41: Chairman

19.3 The Chairman also noted that full BOF accounts were now available and, once he had reviewed them in detail, they would be posted on the BOF website.

ACTION 42: Chairman

19.4 Santosh Singh noted that he had had some actions not taken under item 3 and agreed to send his comments to Richard Fish for onward issue.

ACTION 43: Santosh Singh

Post meeting note: issued with Richard Fish email of 13th November.

20. Next Meetings

BOF 75: 6th February 2024 to be held in Cambridge (option of hybrid facilities to be considered¹⁹).

BOF 76: 4th June 2024 probably to be held in Cambridge, unless an option for a visit is proposed.

BOF 77: 5th November 2024 to be held in Cambridge.

ACTION 44: All

21. Close

The Chair drew the meeting to a close, thanking everyone for their contributions and wishing everyone a safe onward journey.

Richard Fish,
BOF Technical Secretary,
7th December 2023

¹⁹ See Action 1