

## ADEPT ENGINEERING BOARD

### NATIONAL BRIDGES GROUP

#### MEETING NOTES

**Venue:** Online – MS Teams

**Date and Time:** 10:30 on Wednesday 10 July 2024

**Present:**

Name	Present	Init.	Representing
Keith Harwood		KH	Chair
Helen Rowe	✓	HR	Secretary
Osian Richards	✓	OR	CSS Wales, Chair
Bob Humphreys		BH	CSS Wales
Caroline Haycock	✓	CH	East Mids
Abul Tarafder	✓	AT	East Mids, Chair
Clive Woodruff	✓	CWo	East, Chair
Callum Gillett		CG	East, Sec
Colin Ferris	✓	CF	Infrastructure NI
Kevin McCarron		KM	Infrastructure NI
Aidan McCusker		AMcC	Isle of Man
Alex Holden		AH	Isle of Man
Stuart Molyneux	✓	SM	North West, Chair
Colin Jenkins	✓	CJ	North West, Sec
Alastair Swan		AS	North, Chair
Nigel Burn		NB	North, Sec
Donald MacPherson	✓	DM	SCOTS, Chair
Maria Lucey		ML	SCOTS
Alan Mclean	✓	AMcL	South East, Chair
Scott Gregory	✓	SGr	South East, Sec
Rob Causton	✓	RC	South West, Chair
Maureen Robson		MR	TfL
Philip Gray	✓	PG	TfL
Sharan Gill		SGi	TfL
Chris Wright	✓	CWr	West Mids, Chair
Chris Plant	✓	CP	West Mids, Sec
Claire Richardson	✓	CR	Yorks/Humber, Sec
Edward Rees		ER	CSS Wales, Deputy Chair
<b>Guests</b>			
Kevin Dentith	✓	KD	Independent, Ex Chair of ADEPT NBG
Fred Hartley	✓	FH	Canal and River Trust
James Albone	✓	JA	Historic England

ITEM		ACTION
<p>1.</p> <p>1.1</p>	<p><b>Introductions</b></p> <p>HR chaired the meeting as KH was reported to be in France without internet access.</p> <p>There were no new attendees, so introductions were skipped.</p> <p><b>Membership changes</b></p> <p>John Burrige has retired – South West seeking a new Secretary.</p> <p>Mark Watson has retired – Yorks and Humber seeking a new Chair.</p> <p>Philip Gray replace by Maureen Robson as TfL representative</p>	
	<p><b>PRESENTATIONS</b></p>	
<p>2.</p> <p>2.1</p> <p>2.2</p>	<p><b>Fred Hartley – Canal and River Trust (CRT)</b></p> <p><b>Managing heritage bridge structures</b></p> <p>Fred is the Principal Engineer for Highway Structures at Canal and River Trust. Slides will be shared after the meeting. Note that some of the content was also shown at NCE Bridges 2023 and at BOF recently.</p> <p><b>CRT Portfolio.</b> Charitable Trust formed in 2012 to manage the waterways previously managed by British Waterways. 1136 listed bridges of a total of 2935 bridges, including arches, flat decks, swing, lift and one rolling deck many with interesting heritage features.</p> <p><b>Bridges Strategy.</b> Target is 88% of bridges in Grade A (Very Good) to C (Fair) but funding is an issue. Requires 27 condition changing projects per year over next 15 years.</p> <p><b>Pressing Challenges.</b> Loading – CRT obligation for public roads is for BE4 (24tons loading). 9% do not meet current loading standards and are managed through the 1999 protocol. Working with UKBB members to update the protocol. Accommodation bridge obligation is typically 3 tonnes but inspections are the key to managing these bridges. Assessment and upgrade is an on-going challenge.</p> <p>Abnormal loads – Increasing numbers of notifications and encouraging use of ESDAL.</p> <p>Narrow roads and alignments – bridge strikes cost £1.5m/per year on average of which 65% recovered. Collaborating with LAs to reduce risk using lighting, road markings, traffic lights, CCTV.</p> <p><b>Pontcysllte Aqueduct</b> (featured on Country File recently). Grade I listed and part of UNESCO world heritage site. 307m long structure consisting of a cast iron trough on cast iron arch ribs completed in 1805 by Thomas Telford. Extensive refurbishment while de-watered.</p> <p><b>Questions/Discussion:</b></p> <p>RC – Cornwall are considering a new swing bridge. How many swing bridges have full highway capacity? FH – Exact number not known, but some. Road swing bridges are very expensive to build and operate. Happy to provide further info.</p>	

	<p>CR – can you give more detail of the strategy regarding number of condition-changing projects which sounds clear and precise? FH – indicator motivates performance and monitoring but is challenging and 27 projects is not always achieved. Uses a similar condition scoring system to the BCI process, and degradation models, but don't use SAVI</p> <p>CWo – which was 1999 protocol that was mentioned. FH – <a href="#">Strengthening of railtrack owned structures</a></p> <p>DM – Do CRT get funding from historic England? FH – Not sure exactly but CRT do use various funding sources such as National Lottery.</p> <p>DM – how are projects prioritised. FH – road bridges are prioritised but accommodation bridges cause more problems.</p>	
<p><b>3.</b></p> <p>3.1</p> <p>3.2</p>	<p><b>Dr James Albone – Historic England</b></p> <p><b>Bridges in the Historic Environment</b></p> <p>James is Inspector of Ancient Monuments with Historic England (HE) Eastern Region</p> <p>HE are the public body responsible for the country's historic environment.</p> <p><b>Listing</b></p> <p>Protected bridges include older structures as expected but also more modern structures such as Severn Road Bridge which is Grade 1 listed.</p> <p>Scheduled Monuments is the oldest form of protection and typically includes medieval structures such as St Ives bridge. Listed Buildings came after the second world war and includes Grade I, II*, and II. Locally Listed Buildings are an informal designation by some local authorities, and many Non-designated Heritage Assets which also have merit. See <a href="#">National Heritage List</a> which includes mapping, description and excluded elements.</p> <p><b>Managing historic bridges</b></p> <p>Bridges are working monuments, traffic and loading increasing, changes to setting. Typical problems: Bridge strikes, climate change is increasing scour damage, vandalism and graffiti which is a heritage crime.</p> <p>Scheduled Monuments require Schedule Monument Consent via HE – exclusions could apply such as for H&amp;S reasons, check with Monuments Inspector. HE give advice for Grade I and II*, local authority for Grade II. Management Agreements can be drawn up.</p> <p>See advice notes on <a href="#">HE website</a> for practical advice. And see slides for regional contact details and links.</p> <p><b>Questions/Discussion:</b></p> <p>OR (CSS Wales): Listed arch bridges are potentially a flood risk due to constricting extra flow from climate change. JA: Removal would be resisted, but benefit would need to be compared to the loss of heritage. But hasn't heard of this issue in England. Flood management generally is an issue, including collection of debris behind bridges.</p> <p>OR: Listed bridges are too narrow and widening would save carbon over building a second structure. JA: Not aware of any cases in England of</p>	

	<p>widening being proposed.</p> <p>RC: Could Management Agreements cover a region rather than a single structure? JA: Yes, potentially possible either through HPA or Section 17.</p> <p>DM: In Scotland Scheduling has been removed in favour of listing for operational reasons. JA: England also carrying out the same process, to avoid duplication on a case-by-case basis.</p>	
<b>4.</b>	<b>Network Rail Liaison -</b>	
4.1	<p><b>SM</b> reported on his liaison is struggling. Julian Staden attended UKBB previously, but not last week. So no</p> <p>BE4 working group document. Sent to KH previously, to give consideration as to how it links to the 1999 Protocol update. Post meeting: KH notes that update working group has not met recently so issue not yet discussed.</p> <p><b>CP</b> reported that he liaises with David Castlo of NR, and at meeting last week also Colin George of NH on the Access Planning Group. Promoting regional coordination, eg in Midlands Chris is in touch with regional ASPRO leader Peter Bowen who attended MHA meetings and was very helpful in explaining processes. Documents to be shared via CIHT website: 94,95,96 coordination of third party assets. Issues discussed included forward programme of NR Principal Inspections, cost of required Public Liability insurance (table will be circulated of suggested values).</p> <p>Inconsistent use of zero cost BAPA for low-headroom signs. David Castlo agreed to review the inconsistency. Also BAPA for multiple structures is acceptable.</p> <p>There has not been good completion of the survey of possessions. Concern is whether bridges are being inspected. RACF questionnaire may include a question on this.</p> <p>NR installing a new management database National Enterprise Structures and Tunnels system (NEST). We will get access, due from November 2024.</p> <p>Asset Protection Customer Experience (ACE) allows online requests for access. Includes response time by NR and satisfaction surveys.</p>	<p>KH</p> <p>CP</p>
4.2	<p><b>Discussion:</b></p> <p>AMcL: Quoted an example in Surrey of reducing PL insurance requirement for a PI but this is not consistent across areas. Also Surrey have agreed zero cost BAPAs for headrooms.</p> <p>HR: Has recently agreed £1 BAPAs for headroom</p>	
<b>5.</b>	<b>Liaison with other groups</b>	
5.1	<b>CSS Wales</b> feedback on BICS to be circulated	HR
5.2	DM reported on the <b>SCOTS</b> BICS scheme. <p>The scheme is based on Lantra BICS but managed locally and is a mentoring and support scheme as an alternative to Lantra BICS. A review is needed of how it is being implemented by the 32 authorities,</p>	

	and will be discussed at the September SCOTS meeting.	
5.3	<p><b>UK Bridges Board</b></p> <p>SM reported on UK Bridges Board which met on 4<sup>th</sup> July 2024. An interesting meeting.</p> <p>NH considering relaxing CS465 on post-tensioned bridges. Reduce requirement for experience of construction</p> <p>Bridge collapses – looking at funding of CROSS reporting</p> <p>Net Zero Bridges Group – maintain rather than replace, expect funding to be based on carbon budgets, UKBB will discuss carbon reduction in September, NZBG looking for LA representation.</p> <p>BICS considering a knowledge test to reduce portfolio size, Francis McKeown stepping down as Chair.</p> <p>NH reported on developing their internal procedure for Inspector Certification, based on lack of take-up and pressure from ORR. Self-certification will be used at lower level, and BICS will not be mandated. In comparisons, Transport Scotland mandate BICS and have 20 accredited inspectors.</p> <p>Increasing HGVs for carbon efficiency proposed by DfT – UKBB opinion is that this is a non-starter.</p> <p>Update of Inspection Manual is late, and no dates for completion.</p>	
5.4	<p><b>Bridge Owners Forum</b></p> <p>HR reported on the last <b>BOF</b> meeting on 4<sup>th</sup> June 2024.</p> <p>Bridge collapse reporting to CROSS. All pre-cursors to be reported such as expansion joint failure.</p> <p>Francis Scott Key Bridge discussion on the collapse, the risk of impact, and measures that could be taken.</p> <p>Graham Cole presented on bridge strikes and potential for serious incidents on the highway due to impact on third party assets.</p> <p>Presentation by Hazel on half-joint deterioration on flyovers in Glasgow. Presentation will be circulated, and any examples of similar to be put forward</p> <p>Presentation on erroneous data from monitoring. Be careful with ownership of data, demonstration of quality, and competence of suppliers.</p> <p>Presentation by City Bridge Foundation who manage Tower Bridge amongst others.</p>	All
5.5	Minutes and presentations from UKBB and BOF to be circulated once available	HR
5.6	<b>HRESAF</b> will be meeting on 16 <sup>th</sup> July, Alistair Dore will update at our next meeting.	Alistair Dore
5.7	KH has asked DfT to convene a strategic <b>Abnormal Loads Liaison</b>	KH

<p>5.8</p> <p>5.9</p>	<p><b>Group</b> and will provide an update at the next meeting.</p> <p><b>Bridge Strike Prevention Group</b> met recently but Chris Rook was not available to report to this meeting.</p> <p><b>Discussion:</b></p> <p>CH: A listed structure is on the point of collapse. Following the BOF feedback this will to be reported to CROSS.</p> <p>HR: The CROSS reporting is intended to gather pre-cursors that warn of potential collapse, and will be of benefit to us all. The reporting process is straight forward and comprises a single page, after which CROSS may be in contact for further discussion.</p> <p>CF: Richard Fish is publishing a book, before year end, on bridge collapses.</p>	
<p><b>6</b></p>	<p><b>PRESENTATION</b></p>	
<p>6.1</p>	<p>Colin Jenkins presented on the North-West region BICS scheme.</p> <p>Colin is the Bridge Engineer at Warrington Borough Council and Secretary of the North-west Area Bridge Group.</p> <p>A regional BICS sub-group developed the scheme based on the Perth and Kinross scheme, adding questions from the Wales scheme and with updated photographs.</p> <p>The assessment process combines training with mentoring and peer review and is based on the CS450 competency areas. Scheme reviewed every 5 years. The assessment is managed through the Asset Management System which is a unique feature, and includes questions and photograph assessment:</p> <ul style="list-style-type: none"> <li>Part 1: Defect Identification 33 questions from a bank of questions</li> <li>Part 2: Defect photographs</li> <li>Part 3: Open book test of a specific structure from photographs.</li> <li>Part 4: Interview – local or adjacent Council</li> </ul> <p>Continuing professional development</p> <p>The scheme will continue to develop as it introduces drone inspections, new materials, handover inspections, whole life costing etc.</p> <p>North-west region would hope to work with Lantra and UKBB towards a consolidated approach building on CS450.</p> <p><b>Discussion:</b></p> <p>KD: This looks a well-developed and comprehensive scheme. Eventually there could be one ADEPT scheme although this might be out of reach.</p> <p>KD: To use the ADEPT name the scheme must be endorsed by this meeting and shared with the ADEPT Secretariat.</p> <p>CR: Impressed by the automation. What is the involvement of Sheffield Hallam University? CJ: They are the training provider offering a 3-day course over Teams which is excellent.</p>	

6.2	<p>CR: How did you resource the database of questions? CJ: Combined ADEPT schemes using examples from SCOTS and from Wales with additional photographs. The strength of ADEPT would be the ability to share such lists of questions.</p> <p>CJ: The strength of the North-west scheme is the use of the Asset Plan database which allows sharing and management of the scheme.</p> <p>OR: Agrees the scheme is fantastic. CSS Wales questions have expanded and are also online.</p> <p>CJ: Would be exciting if we could agree on a single scheme. Others agreed with nods and words.</p> <p>RC: Cornwall are basing their process on the Devon scheme. One ADEPT scheme would be of great benefit to us all and would give more weight to ADEPT's views.</p> <p>KD: It may be difficult to combine all schemes into one as people have spent a lot of time on their own schemes. Concerned that the NH scheme is self-assessment, less review than any of the ADEPT schemes or Lantra BICS. OR suggested similar concerns.</p> <p>OR: Recognises that Lantra BICS is a gold standard, a really good assessment of competency but too difficult for smaller authorities to achieve.</p> <p>The meeting endorsed the north-west BICS scheme by a unanimous show of hands.</p>	
9.	<p><b>Knowledge Sharing and Discussion</b></p>	
9.1	<p><b>Commuted Sums</b> – Updated guidance has been issued by ADEPT. Should we update our bridge specific guidance?</p> <p>AMcL: Could SAVI be used as a calculator of commuted sums as it includes all the same works and costs.</p> <p>HR: Will remind KH that he has an outstanding action to review SAVI as a tool for Commuted Sums.</p>	HR/KH
9.2	<p><b>NUAR</b> – At our last meeting NUAR were not clear on what data should be provided for Structures, suggesting that we should provide all the data that we have in our systems. Should we draft a recommendation for all authorities to use, along the lines of:</p> <ul style="list-style-type: none"> <li>• Location – a point, preferably a polygon</li> <li>• Name or reference</li> <li>• Owner</li> <li>• Comments</li> <li>• Desirable data: Description, Carries, Crosses, Restrictions</li> </ul> <p>CWr: Too much data can cause confusion and note also that Streetworks Gazetteer has similar on sites of engineering difficulty. Data should be minimal, and consistent with other data released such as to ESDAL.</p> <p>HR: Be wary of providing data on structures owned by others.</p> <p>CF: A similar question was asked in compiling the Northern Ireland GIS asset database. Much of our data is un-verified and should not be included. Agreement was for polygon location, name, number, and</p>	

	<p>whether the data has been verified.</p> <p>HR: How would data for reinforced earth embankments and walls be provided for NUAR. RC: Walls and anchors are included in the polygon data.</p> <p>HR: A bridge has several bridge numbers (LA and NR for example). Should this be included? Who will be providing data on private bridges? CF: Need to quote the number as we wouldn't know which structure they were asking about. CWR: Bridge numbers are important even bridges owned by others that the Highway Authority needs to track.</p> <p>CR: Asked about liability for the data. HR: NUAR stated that the liability for checking the data lay with the utility company.</p> <p>HR to circulate a proposed list of data to be provided to NUAR</p>	HR
9.3	<p><b>RAC Foundation questionnaire</b></p> <p>KD gave the background to the questionnaire which is circulated annually. He is happy to carry on liaising with RACF regarding the questionnaire. The results provide good publicity and headlines for our industry but, unfortunately, we don't have the resources to analyse the data to any great extent.</p> <p>UK Bridges Board have suggested additional questions – does this group have additional questions CWO: The publicity has helped increase Essex' budget. Questions should remain consistent.</p> <p>SM: UKBB were looking for avenues to engage with the authorities that do not join in with national groups by asking for example how many bridge engineers in the authority.</p> <p>KD: Staff levels would be difficult to interpret as authority needs and procurement models differ.</p> <p>OR: Ask how many structures have been reported to CROSS. KD asked that Osian draft the question.</p> <p>KD: Devon spend significantly on retaining walls so questions on these should be added.</p> <p>HR: Asked that a question on retaining wall numbers and collapses. Agreed that the collapse question should also include retaining walls.</p> <p>RC proposed a question on whether retaining wall anchors are checked which KD suggested would be best suited to a separate, maybe mid-year, questionnaire.</p> <p>CR queried the definition of a retaining wall. KD and others: Generally 1.35m height is considered an RW.</p>	OR KD
9.4	<p><b>Inspection Manual Update</b></p> <p>KD is still involved with the Inspection Manual with WSP now that he has retired from Devon. Kevin's feedback, with feedback from KH and others, has led to a delay in the programme as the draft document did not achieve its objectives.</p> <p>In particular the pictures are to be improved to show clear defects and the impact of those defects, with more that are focussed on local</p>	



	<p>authority bridges. The result should offer a good training resource.</p> <p>HR: Will FRP be added? KD: Yes, it has its own chapter. Timber will also be updated.</p>	
9.5	<p><b>CRT Agreement Update</b></p> <p>Des Harris will be invited to the next meeting, so please provide any feedback before then.</p>	All
<b>10.</b>	<p><b>Minutes of last meeting, actions arising– 20<sup>th</sup> September 2023</b></p>	
10.1	<p>Minutes agreed.</p>	
10.2	<p>Future roles leading the NBG</p> <p>KH is taking over from Richard Fish as Technical Secretary of BOF and so will not be able to continue as Chair of this meeting from about January onwards.</p> <p>He has nominated HR as possible Chair, and Callum Gillett has offered to be Vice-Chair. OR and KD both supported the role of Chair for HR. RC is still considering options.</p> <p>Any other nominations or volunteers please let KH know before the next meeting.</p>	All
10.3	<p>Leadership of ROW liaison group</p> <p>AMcL volunteered to lead the group, and RC volunteered to play a role. KH will contact the ROW leadership.</p>	KH
<b>11.</b>	<p><b>Future events</b></p>	
11.1	<p>NCE Bridges Conference is on 18<sup>th</sup> July. Several NBG members are attending</p>	
11.2	<p>BOF website has future bridges events on it. <a href="http://www.bridgeforum.org">www.bridgeforum.org</a></p>	
<b>12.</b>	<p><b>AOB</b></p>	
12.1	<p>CJ asked whether we should install <b>bridge name plates</b>. CWr commented that their bridges have engraved plates. CF: NI are resisting name plates as costly and of no great benefit. DM: Ownership on a bridge would be useful, but no more data.</p>	
12.2	<p>CJ asked about <b>inspection and management of masts</b>. In Warrington they are managed by the traffic group, but inspected on request by the Structures team. However, they are not mapped or databased and often have not been through Technical Approval.</p> <p>CWr: Masts 15-20m have type approval which should be submitted, but barriers should be approved. An inspection and test plan should be approved. The issue should be escalated to UKBB or Streetworks Coordination Group.</p> <p>HR: Local Type Approval is being processed rather than accepting the existing. Kent are stringent and also carry out TA for barriers.</p> <p>CF: In NI masts go through TA. Note that Type Approval does not typically cover foundations.</p> <p>CJ: Are the utility company inspections provided to the LA? How to do</p>	

	<p>retrospective AIPs?</p> <p>CF: Retrospective AIPs should not be done as there is no option to reject the proposal. Regarding inspections, all liabilities lie with the utility company but the location and owner should be recorded in the asset management system.</p> <p>AMcL: Compliance certificate is often not provided. Another problem is that planning process does not look into enough detail, relying on the need for a license at a later stage.</p>	
<b>13.</b>	<b>Future Meetings/ Date of Next Meeting</b>	
13.1	Acceptance that future meetings should be on-line	
13.2	<p>Next meeting:</p> <p>Wednesday 9<sup>th</sup> October 2024 – MS Teams 10:30-15:00</p> <p>Next UKBB 26<sup>th</sup> September 2024</p> <p>Next BOF 5<sup>th</sup> November 2024</p>	
13.3	The meeting finished 8 minutes early	