

9th February 2018

Dear History Study Group Member,

Please find notes of the Annual Business Meeting. If you have any comments or corrections, please do send them to me – thanks.

Annual Business Meeting, held at the Institution on Tuesday 16th January 2018 at 6pm.

Present:

Bob Barton, Paul Bell, Bryn Bird, Robert Bowles, Chris Boydell, Chris Burgoyne, Roger Cline, Daniel Doweck, Julia Elton, Matteo Francini, Bernard Gambrell, Kevin Hallaway, Bill Harvey, Alan Hayward, Alastair Hughes, Dawn Humm, Lawrance Hurst, Sinclair Johnston, Anthony Lewis, Brian Lewis, Ian Liddell, Mark Riley, Jim Simmonds, Andrew Smith, Rob Thomas, Robert Thorne, Malcolm Tucker, Dimitris Velesiotis, John Vignoles, Nick von Behr, Frank Weare, John Woods.

1. Apologies were received from:

Bill Addis, Derek Bond, Michael Bussell, Loren Butt, Geoff Cannell, Eamonn Cannon, Mike Chrimes, Brian Cook, Margaret Cooke, Colin Davies, Sue Dawes, Peter Harris (COWI), Peter Harris (ex-Maunsell), Wanda Lewis, Geoff Morrow, Alan Murphy, Brian Neale, Mark Riley, Quentin Spear, Stuart Tappin, Tony Taylor, Dimitris Theodossopoulos, Mark Whitby, David Yeomans

The Convenor spoke briefly about the wide-ranging and substantial work of Denis Smith, who died recently. Those who knew Denis may already be aware that Roger Fox is planning a memorial event but, in case any members were not aware of this, he would like to hear from anyone who would like to be involved: Roger@theatreplan.net, 020 7841 0440 or 07973 750870.

2. Report on activities during 2017:

- 10.01.17 Annual Meeting and Alan Hayward on *Preserving the timber railway bridges in Wales*, Stuart Tappin on *Trinity Church, Poplar and Armoured Tubular Flooring in Yangon (Rangoon)* and Sinclair Johnston on *Hammersmith Bridge and CARE*.
- 07.02.17 Bill Harvey on *Arched viaducts*
- 21.03.17 Paul Bell on *The Structure of the Georgian London House*
- 25.04.17 Nick von Behr on *Sir John Wolfe Barry: Tower Bridge to the BSI - engineering pathways*
- 16.05.17 Alan Hayward on *William Marriott: engineer of a Norfolk railway and a pioneer of reinforced concrete*
- 13.06.17 Sandor Vaci and John Vignoles on *The Chain Bridge, Budapest web archive*
- 12.09.17 Chris Burgoyne and Owen Mitchell on *Prestressing at Coventry Cathedral*
- 23.09.17 Visit to Coventry Cathedral
- 03.10.17 Bill Harvey and Hamish Harvey on *Assessing structures at Liverpool Road Station, Manchester*

- 31.10.17 David Wiggins on *The repair of masonry bridges in Cumbria*
- 05.12.17 Paul Bell on *John Green (1787-1852) and Benjamin Green (1813-1858) - builders, engineers and architects in the North East of England*

3. Sutherland Lecture

- 16.02.17 John Rees, Aogan Mulcahy and Bob MacKean on *A Decade in the life of the Clifton Suspension Bridge*
- 08.02.18 David Wendland on *Ribs to nowhere and pendant bosses: the structural and geometric design of late Gothic vaults*. David has agreed to write an article based on his lecture for the *Structural Engineer*.

The Convenor reported that he was expecting to be able to offer a few places on a visit to the roof void of Henry VII's Chapel in the morning after the Sutherland lecture, i.e. February 9th, arranged so that David Wendland can see this remarkable vault, which he knows only from Robert Willis' splendid C19 drawing. A Member working with Price and Myers on the Abbey's project to re-use the galleries spoke to the Convenor after the meeting and will put him in touch with the right people there, in the hope that the visit might see more than just the H7 vault. If this does come off, a notice will be sent out offering the available places 'first come, first served'.

2019 Julia Elton suggested that the Convenor should repeat his approach to Robert Mair to talk about the historical development of the understanding, control and monitoring of soil-structure interaction, as by then he will have ceased his year as the ICE President and so might have more time.

Paul Bell drew attention to a paper by Prof. Chris Calladine given to the Royal Society and published in their Philosophical Transactions on the interaction between Davies Gilbert and Thomas Telford over the design of the Menai suspension bridge. Gilbert had developed the mathematics of the catenary in a paper of 1821 and around the same time was able to convince Telford that he should double the height of the pylons above the roadway. The Convenor will explore this possibility.

The Convenor would be grateful for other suggestions and urges the members to let him know if they come across someone or something of unusual interest, whether in the UK or from elsewhere.

4. Future meetings.

The remaining schedule for 2018 is:

- 26.02.18 Bryn Bird on *The Brunel Museum's acquisition of the Thames Tunnel drawing collection and what they reveal*
- 03.04.18 David Yeomans on *Setting out of Greek and Roman buildings and medieval cathedrals*
- 24.04.18 *Temporary works and historic structures: presentations from the Temporary Works Forum*
- 15.05.18 Felicity Henderson on *Robert Hooke*

12.06.18 Rose Teanby on *Robert Howlett's photography of Saltash Bridge*

Already in the pipeline for the autumn is Mike Chrimes on the *Bridges of Jesse Hartley* and Chris Boydell on *Recent work to the Victoria Palace Theatre* (see below).

It was suggested that the Group should seek contact with the present work on the Palace of Westminster, including on Westminster Hall, with a view to arranging at least a talk about the structures and hopefully also a visit. A Member who has contact with the work spoke to the Convenor after the meeting and will see what might be possible.

Previous suggestions include Philippe Block of ETH Zurich on the *Analysis of Masonry* and Tom Leslie from Iowa State University on *Chicago Skyscrapers*.

The Convenor recalled the remarkable timber structures that some of the Group visited a few years ago in southern Germany under the guidance of Berndt Mittnach. A while ago David Yeomans was trying to arrange for Berndt to visit the UK to look at our work to restore timber structures so the Convenor will seek to build on David's approaches.

Paul Bell has suggested that the Group should seek to identify possible speakers at the Construction History Society 6th International Conference in early July. The Convenor, who cannot attend the conference himself, would be grateful if those attending the conference who are Members of both the CHS and the HSG would identify possible speakers.

The problem facing speakers even from within England, let alone from overseas, is that the Group has a small budget and so cannot pay any of their expenses: this has prevented some people from coming to talk to us. It was pointed out that the North Thames regional group of the IStructE has a budget from which they are able to pay expenses for speakers from elsewhere, and that the History Study Group should be able to do the same.

Julia Elton and Lawrance Hurst recalled that in the past the Group had periodically asked members to contribute to a fund for such purposes – indeed the Convenor was its Hon. Treasurer for a few years – and that concern that having such unaudited funds would prejudice the charitable status of the Institution had led to the present system. The Convenor will talk to the Institution about how we should go about enlarging the Group's budget to allow expenses to be paid, including the possibility that contributions by Group Members could be hypothecated for such purposes.

As always, the success of the Group relies very largely on its Members coming forward with suggestions for meetings.

5. Future visits.

Dawn Humm has suggested a visit to the Great Barn at Harmondsworth and the Convenor has arranged this for Sunday 13th May from 11.00. The Convenor will see if he can persuade either Peter McCurdy or Dominic Barrington, or both, to accompany us: Peter made some remarkable survey drawings of the barn in the late 1970's, and Dominic was in charge of the work on site by Owlsworth IJP for its recent restoration under Ptolemy Dean Architects. A notice will be sent out closer to the date.

A visit to the National Monument Record collection at Swindon has been suggested by Julia Elton who has also identified a willing staff member there: the Convenor will take this in hand.

I hope members will come forward with other suggestions.

6. Any other business.

The Convenor is concerned at the number of people who apply to join the Group but who live too far away from London to attend meetings – these include people from overseas. It has been suggested that our meetings could be recorded and made available on the web for people to view remotely, but there are several arguments against this:

- a. The recording of a meeting needs considerable editing to link speech and images before it can be loaded.
- b. All images in the presentation would need the copyright holder's consent. Obtaining this would impose a considerable burden of additional work, and often expense, on the speaker.
- c. If our speakers were required to make their presentation available in this manner, it would remove the present informality and constrict spontaneity in the discussion: the informality and lack of a record are valued by our speakers as they get valuable feed-back before they commit themselves.
- d. Members of the audience asking questions would have to wait to receive a microphone so that their contribution can be recorded, and this would prevent our present informal exchanges which allow far more to be covered in a much more open manner than would be possible if it were recorded. Julia Elton repeated James Sutherland's intention that the Group should, at its core, be a debating forum for the history of structural engineering.

For these reasons, I do not think we should try to make our meetings available in this way, but I do think it would be helpful to have a paragraph explaining this on the Group's webpage. I would be glad to hear Members' views.

Those giving our talks do sometimes give them elsewhere – to regional Groups for instance – and they not infrequently result in published articles.

Buffet

7. Presentations.

Paul Bell on *The "Kissing Bridge" in West Montrose, Ontario.*

So called because it was one of the few places where couples could kiss without risking censure in the local Mennonite community, this timber covered bridge dates from 1880 and is largely original. It has two spans each carried on a 'nested' set of Howe trusses and is stabilised laterally by tension rods from extended transverse deck beams.

Julia Elton on *The Clifton Suspension Bridge competitors.*

Partly in tribute to Adrian Andrews who died recently, Julia went very briefly through the sequence of events and designs that had been proposed for the bridge, starting with a proposal for a suspension bridge from William Chadwell Mylne and not just for the one actual competition of 1831 but for several years before that and only ceasing when I K Brunel was appointed as the Engineer. Some of the proposals were extraordinarily fanciful, if not absurd, and often claimed to be aesthetic responses to the bridge's wonderful setting. Julia intends to develop this for publication.

Alan Hayward on *Restoring the only surviving Victorian timber framed footbridge at Alton Station.*

This 1892 footbridge was enclosed by glazed and timber boarded walls below a corrugated iron roof in 1896 in response to a protest by local suffragettes about being exposed to the elements while crossing it. Although many other footbridges were built to the same design along the lines of the former London and South Western Railway, this is believed to be the only one to survive. The enclosure has largely protected the span structure from decay, but its fully exposed cross-braced supporting trestles have rotated somewhat due to decay, leading to the bridge's closure by Network Rail. Alan is working with other professionals to replace the decayed members in the trestles and to restore the bridge for public use.

John Vignoles on *Charles Blacker Vignoles in 1824.*

John showed extracts from Vignoles diary of 1823/4 when he was employed to survey the site and approaches of Capt. Samuel Brown's proposed St Katherine's suspension bridge. After looking at a site further downstream, Brown was proposing to build the bridge with its northern end where the approach to Tower Bridge was built many years later but with its alignment east of south so that its southern approach was located to the east of that of Tower Bridge. These fascinating pages give a real flavour of how a surveyor earned a living at the time and of how a project was 'marketed', CBV accompanying Brown to present it to the Duke of Wellington.

Chris Boydell has offered to talk at greater length on the *Victoria Palace Theatre improvements* for which he is responsible and so will give a talk on this in the autumn.

History Study Group

Convenor

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