



Annual General Meeting

Friday 10th May 2019

Albert Suite 1-2, Park Plaza Victoria
239 Vauxhall Bridge Rd, Pimlico, London SW1V 1EQ





Chairman's Opening Address

Nigel Threadgold





A bridge between London's boroughs

The London Bridges Engineering Group's (LoBEG) deputy package leader, Joe Figurado, explains the evolution of bridge management in London

Working groups and asset management initiatives

LoBEG has been successfully achieving the objectives set out here through its central committees, the Thames Crossings co-ordination group, Network Rail Working Group, the Asset Management Working Group and other appropriate forums.





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It is sometimes easy to overlook the fact that along with iconic landmarks such as Tower Bridge (main picture), Millennium Bridge, Westminster Bridge and Albert Bridge, London has more than 5,000 highway bridges and structures including some Grade I, II and III listed structures. With ownership divided between the 33 London authorities and Transport for London (TfL), and given the considerable number of other interested stakeholders, a co-ordinated approach to management is vital. The local authorities own and manage 3,186 of these structures. (See Figure 1 below.)

Formation and history

The London Bridges Engineering Group (LoBEG) was formed in 1986 with the aim of implementing, where appropriate, co-ordinated and consistent management and maintenance practices for highway structures, and to share good practice. LoBEG is a sub-group of the London Technical Advisers Group (LoTAG) and all 32 boroughs and the City of London are members, as is TfL, since its formation in 2000.

LoBEG believes the benefits of partnership and working together are there for all to see. Individually, each of the London boroughs is a relatively small authority but by working together in partnership they have developed a method of working now admired by other regions in the UK. Key objectives of LoBEG include the following:

- Act in an advisory capacity to LoTAG – Group 2 – Infrastructure – on the matters of bridge and highway structure engineering with the objective of promoting best practice
- Encourage and facilitate the exchange of information and experience on bridge and related engineering matters
- Formulate, develop and implement a Bridge Management Strategy for the authorities in London (this includes the operation of BridgeStation, the Bridge Management System developed and used by LoBEG)
- Undertake the commission from TfL to manage and advise on the allocation of funding for TfL's Bridge Assessment and Strengthening Programme for the London authorities. This process uses LoBEG's Prioritisation System.

Working groups and asset management initiatives

LoBEG has been successfully achieving the objectives set out here through its central committees, the Thames Crossings co-ordination group, Network Rail Working Group, the Asset Management Working Group and other appropriate forums.

The LoBEG Asset Management Working Group has been highly active, meeting every four to six weeks. It has set a clear vision for bridge management, breaking this down into distinct components that can be developed and rolled out to members.

These crucial developments are being freely shared with the bridge community throughout the UK and are recognised as being at the cutting edge of bridge management in the country. LoBEG's good practice guides and models can be downloaded from its website, (www.lobeg.com)

Some of the more recent technical advice documents the group has developed include:

- Lifecycle planning for highway structures – good practice guide (version 2.0, August 2011)
- Maintenance prioritisation for highway structures – good practice guide (version 4.0, August 2011)
- Creating consistent element inventories for highway structures (version 2.0, August 2011).
- Asset valuation for highway structures – technical note (version 1.1, May 2007)

A structure inspection and sign-off process has been administered by the group and has

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Figure 1: Local authority-owned structures

Total	Bridges	Culverts	Retaining / River walls	Footbridges	Pedestrian subways / Underpasses	Tunnels / Underpasses	Vaults	Gantries	Other structures
3,186	982	642	633	615	237	18	4	7	48



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just completed its 10th year. The project has enabled the collection of useful condition data across the bridge stock.

The group is currently working on new initiatives and good practice guides, including risk-based maintenance prioritisation and inspections as well as guidance on the implementation of the new highways code of practice.

Along with pioneering asset management processes and tools, LoBEG has also developed a web-based advanced bridge management system called BridgeStation. BridgeStation is owned by LoBEG and is developed by bridge engineers for bridge managers.

LoBEG has embedded the processes and tools from the good practice guides into BridgeStation in order to ensure that all members have access to the latest processes and techniques.

Along with standard inventory management features, the advanced modules developed by LoBEG include:

- Data gap and performance reports, which help authorities identify gaps in their data
- Element hierarchy specific inspections – inspect only the elements that are present on the structure
- Inspection sign-off system – set up inspectors and managers and have users submit inspections for approval
- Inspection Programme tools – manage the year's inspections with programme tools, including submitted reports, maps and charts
- Enhanced condition history – provides summaries and reports, allowing users to view reports of latest and historic condition along with summaries, charts and graphs
- Support to identify structures at risk – BridgeStation's value for money function helps identify the structures most at risk

and provide a priority score

- Help to build maintenance schemes – puts together scheme options and let the system calculate a value for money (VFM) score
- Lifecycle planning tools – create 60-year deterioration models for structures based upon inspected elements in BridgeStation in accordance with the Structures Asset Management Planning Toolkit (SAMPT)
- A financial management and funding monitoring system for use in a bridge works programme in London.



Upcoming enhancements to BridgeStation will include improvements to its lifecycle planning functionality, the release of a mobile inspections app, a new maintenance management module and updated restrictions and interim measures features.

BridgeStation is also popular outside of London. Several other local authorities, county councils and unitary authorities use the software to manage their bridge stock. Biannual user groups allow these users to feedback enhancements and development ideas to LoBEG.

The development of these tools has meant LoBEG has been able to analyse London's bridge stock effectively. The asset valuation module in BridgeStation has allowed LoBEG to return a £4.48bn (Gross Replacement Cost), £4.13bn (Depreciated Replacement Cost) valuation for London's stock. This is only for the 33 local authority-owned highway structures and does not include TfL stock, which may

double the figure. It also excludes all Network Rail-owned structures and other owners.

Benefits of LoBEG's approach

By applying the techniques developed over recent years, LoBEG members have seen a general improvement in the condition of their structure stock. There has been a marked improvement in the quality of data held in BridgeStation due to sustained efforts by all authorities and TfL to ensure that important data held regarding their assets is accurate.

LoBEG has seen that increasing the quality and accuracy of structure data has had a direct influence on making sure that the right work is carried out on the right structure at the right time – something that is important now more than ever, when budgets are being tightened.

An added benefit of LoBEG's approach has been to ensure that data is collected, stored and used in a consistent way. This also means the decision-making processes used by LoBEG are more consistent and transparent. With BridgeStation incorporating these processes, it means that asset management is made more efficient.

In terms of maintaining a state of good repair, for the past 15 years around £145m has been invested collectively in the bridge stock through TfL, the Department for Transport and the local authorities. However, analysis indicates even as budgets are squeezed, there is an urgent need to invest around £200m to £250m to maintain and improve the state of good repair while meeting safety standards.

LoBEG has represented all highway authorities in London for over 30 years and developed asset management practices and even software of its own along the way. The strength of the organisation stems from its membership and given this, LoBEG will be able to contribute to asset management practice for many years to come. ☺



Agenda 1 of 2

09:00 – 09:30 Coffee/tea on arrival

09:30 – 09:35 **Chairman's Opening Address**
Nigel Threadgold - LoBEG Chairman

09:35 – 09:50 **Matters Arising**
Nigel Threadgold - LoBEG Chairman

End of Year Reports

09:50 – 10:10 **Chairman's Report** - Nigel Threadgold
Package Leader's Report - Richard McFarlane
Treasurer's Report – Mark Earle
Report from LoBEG/Network Rail Working Group – Jasdeep Bhachu
Report from Pipe Subway Working Group - Martin Coulthard
Report from LoBEG/LUL Working Group

10:10 – 10:25 **Election of office bearers**
(Executive Committee posts of Chairman, Vice Chairman, Secretary and Treasurer)

10:25 – 10:45 **Presentation: Weathering Steel**
Norman Proud (WSP)

10:45 – 11:00 Coffee/Tea Break



Agenda 2 of 2

- 11:00 – 11:30 Presentation: Bridge Asset Maintenance Solutions with 'Sandwich Plate System' (SPS)
Bob Gill (TSG MARINE)
- 11:30 – 12:00 Presentation: Engineering Challenges
Jarrod Hulme, Tom Nicotra (Taziker)
- 12:00 – 12:30 Presentation: Bearings, Joints and Waterproofing
Waleed Kamal and Ashley Wilkins (USL)
- 12:30 – 12:40 Presentation: Developing Restoration Curves for Bridges Exposed to Hydraulic Hazards
Prof Stergios Mitoulis (University of Surrey)
- 12:40 – 12:50 FAQs
- 12:50 – 13:00 Chairman's closing address
Nigel Threadgold - LoBEG Chairman

13:00pm Walk to About Thyme Restaurant (Networking and Refreshments)





Matters Arising

Nigel Threadgold - LoBEG
Chairman





End of Year Reports Chairman's Report

Nigel Threadgold

