

Content Date:
22 June – 6 July

Live Q&A:
7 July – 3.00pm

BEST PRACTICE GUIDES BRIDGE WORKSHOP



LEARNING OUTCOMES

- Understand the basics of bridge management including managing bridges over the full life cycle
- Develop an awareness of the responsibilities of Council when managing bridges
- Determine appropriate courses of action using cost risk and performance as the decision framework
- Understand the levels of bridge inspection and appropriate scheduling based on risk and operational context
- Understand the differences between routine, non-routine and specialist maintenance and the impacts of preventative vs reactive maintenance approaches
- Identify the differences between bridge vehicle access assessment and bridge assessment
- Recognise the tiers of bridge assessment and how they are structured to progressively increase in complexity

COURSE INFORMATION

Bridges and other road structures are key elements of the asset base managed by local governments and similar asset owning organisations. Local governments have a responsibility to provide safe and reliable bridge access to the community while making best use of available resources. Bridge asset management is focused on managing structures over their life cycle while balancing the dimensions of performance, risk and cost in order to provide optimal value to stakeholders.

This e-Workshop will assist participants to develop an understanding of key bridge management principles and the application of lifecycle activities including inspections, maintenance, structural evaluations and heavy vehicle access assessment.

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OUTLINE OF COURSE

- **Module 1**
 - Module 1 will discuss the responsibilities of local government with regard to bridge management including legal obligations and the need to show due diligence. Key concepts of governance will be explored including record keeping and the implementation of bridge management data systems.
- **Module 2**
 - Module 2 will provide an outline of key bridge and structure terminology and discuss the scope of road structures to be managed.
- **Module 3**
 - Module 3 will explore the life cycle of a structure and discuss key considerations at each life cycle stage. An overview of life cycle costing considerations will be presented.
- **Module 4**
 - Module 4 will explore the current context of bridge management in Australia and discuss the journey from maintenance management to asset management. Decision making processes will be discussed and framed in terms of performance, risk and cost.
- **Module 5**
 - Module 5 will explore the scope and purpose of Level 1, 2 and 3 structure inspections, including recommended frequencies, expected outputs and the linking of inspection outcomes to actions. Inspector training requirements will be discussed along with considerations for the procurement of inspection services.
- **Module 6**
 - Module 6 will discuss the differences in scope and purpose of routine, non-routine and specialist maintenance, as well as preventative and reactive approaches to maintenance. Maintenance prioritisation will be reviewed along with considerations for procurement of maintenance services. A suggested process for the development of a bridge maintenance and preservation program will be presented with discussion of common issues that may be encountered.
- **Module 7**
 - Module 7 will explore the differences between heavy vehicle access assessment and bridge assessment and discuss the tiers of bridge assessment. Heavy vehicle access decision making will be discussed in the context of performance, risk and cost considerations.
- **Module 8**
 - Module 8 will discuss key elements of the performance, risk and cost dimensions for bridge asset management decision making and close out with a decision-making case study.

PRESENTERS



DARBY JOHANNESSEN - MODULES 1-8

PROFESSIONAL – FUTURE TRANSPORT INFRASTRUCTURE

Darby is part of the ARRB structures team and has experience in the areas of bridge loading analysis, risk management and asset management development through work for Austroads, Queensland TMR and DSG Tasmania. Darby was heavily involved in the development of the Bridge Management Best Practice Guide, being the lead writer for several key guide sections and contributing to most others.



EDWARD ESKEW - MODULES 4,5,6 & 8

PROFESSIONAL – FUTURE TRANSPORT INFRASTRUCTURE

Edward has been a member of the ARRB structures team since mid-2018, working in data management and analysis, applied research through the National Asset Centre of Excellence (NACoE), and structural inspections. Edward received his PhD in Structural Engineering from the University of Connecticut, focusing on Structural Health Monitoring, and has knowledge of numerical modelling and dynamic structural monitoring.

WHO SHOULD ATTEND?

The e-workshop is primarily aimed at, but not limited to:

- Structure managers
- Engineers
- Consultants
- Contractors
- Road and bridge maintenance field staff
- Works Supervisors
- Inspectors

It will be beneficial for attendees to have a basic knowledge of bridges and culverts and core lifecycle management actions.

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