

BRIEFING:STANDARDS

Improving infrastructure delivery through better use of standards

Inefficient and inconsistent use of codes and standards can hamper effective delivery of infrastructure projects. Steven Wilson of BSI, Bill Grose of High Speed Two (HS2) and Colin Rawlings of CH2MHill/HS2 outline initiatives on the HS2 project to deliver successful standards.

Infrastructure cost reviews of HM Treasury's Infrastructure UK unit (IUK) in 2010 and 2014 (IUK, 2010; HM Treasury, 2014) concluded there was over-specification on major UK infrastructure projects. There was a tendency to apply higher standards than necessary and to use bespoke solutions where off-the-shelf designs would do.

The Industry Standards Group, set up by IUK, wrote a report in 2012 published by the Institution of Civil Engineers (ICE) entitled *Specifying Successful Standards* (ISG, 2012). This concluded it was differing interpretation and application of standards by designers and clients rather than the standards themselves that created inefficiencies and increased costs.

The Infrastructure Client Group (ICG, 2014), initially brought together by IUK to support its infrastructure cost reviews, also called for a programme of improvements in the infrastructure sector. One of its themes is improved whole-life planning and cost control, which includes a project on standards and codes.

Simplification of standards has now been adopted by major UK infrastructure clients such as Network Rail, London Underground, the Rail Safety and Standards Board and High Speed Two (HS2).

New standards for HS2

HS2's efficiency challenge programme was set up and specifically tasked with generating savings for the project through updating and refining existing standards.

Industry experts have been involved from designers, contractors and professional organisations including ICE, the Institution of Mechanical Engineers, the Royal Institute of British Architects and the Railway Industry Association.

HS2 has also appointed BSI to undertake research into standardisation in the areas of civil engineering, buildings and railway systems. The priority work identified by BSI currently includes the following

- development and publication of an HS2 design specification covering systems, civil engineering and buildings
- revision of BS 8002 on earth-retaining structures (BSI, 1994), BS 8004 on foundations (BSI, 1986) and BS 8002 and BS 8081 on grouted anchors (BSI, 1989)
- updating Ciria document C580 on embedded retaining walls (Ciria, 2003)
- development and publication of new BSI publicly available specifications (PASs) covering tunnel linings, temporary works and alkali-activated binders and concrete.

Technical authors have been appointed for the British standards, Ciria document and tunnelling and temporary works PASs.

In the production of the PASs, HS2 is also working closely with the British Tunnelling Society and the Temporary Works Forum. Steering committee members are being sought from contractors, consultants and clients by BSI. There will also be further opportunity for the industry to comment when all BSI documents go for public consultation.

Wider industry benefit

The initiative has been enthusiastically received by the industry. HS2's aim is that the documentation produced under this initiative will have a positive impact not only on HS2, but it will also serve to benefit other major clients and major infrastructure projects, such as the



HS2 aims to improve delivery by developing new standards and revising existing ones

Highways Agency, London Underground, Transport for London, Network Rail, National Grid, Tideway and Crossrail 2.

References

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