# ICE to showcase how PAS 2080 is transforming tunnelling and geotechnical projects for net zero



The Institution of Civil Engineers (ICE) is set to host a pivotal event titled "Digging for Net Zero: How PAS 2080 Applies to Tunnelling and Geotechnical Engineering" on 25 November 2025. This session aims to provide in-depth insights into the decarbonisation of geotechnical and tunnelling works by applying the internationally recognised PAS 2080 standard for carbon management. The event, organised in collaboration with the British Tunnelling Society (BTS) and the British Geotechnical Association, will showcase real-world applications of the standard in earthworks and new infrastructure delivery, underlining the urgency of aligning civil engineering practices with the UK’s legally binding commitment to achieve net zero carbon emissions by 2050.

The event will feature a keynote lecture by Lewis Barlow, ICE’s trustee for climate and carbon, with opening and closing remarks delivered by the ICE President, David Porter. Participants will learn how specialised groups like the Net Zero Tunnelling Group, a BTS subgroup, are tailoring the PAS 2080 principles to tunnelling projects. A notable case study to be discussed is National Highways’ application of PAS 2080 on the Lower Thames Crossing project, illustrating the practical integration of carbon management protocols on complex infrastructure developments. Attendees will also be introduced to low-carbon innovations in geotechnical engineering, highlighting emerging technologies and methodologies pivotal for reducing carbon footprints in traditionally carbon-intensive construction processes. The event will culminate in a networking session, fostering industry collaboration and knowledge exchange.

PAS 2080 serves as a globally recognised framework designed to manage and reduce carbon emissions across the entire lifecycle of infrastructure projects, from design and construction to operation and end-of-life. Its 2023 revision expanded scope beyond infrastructure to encompass the entire built environment, adopting a whole-life, systems-thinking approach. This holistic perspective promotes collaborative working, supply chain innovation, and cost reductions while aiding the transition to net zero. Industry leaders such as Galliford Try and WJ Group have recently achieved PAS 2080 certification, demonstrating their commitment to carbon management and sustainable construction practices. Galliford Try’s certification notably reflects its capability to deliver low and net-zero carbon projects across buildings and infrastructure, underpinning the UK’s broader transition ambitions.

Beyond individual projects, broader industry movements are supporting PAS 2080’s widespread adoption. For example, the Net Zero Bridges Group advocates for mandatory carbon emission calculations on infrastructure projects, fostering consistency and accountability by embedding PAS 2080 within procurement and design processes. Similarly, RPS has become the first Irish engineering consultancy verified to PAS 2080, signalling growing international acceptance and the push for integrated sustainability leadership across engineering disciplines.

With infrastructure construction and operation accounting for over 30% of the UK’s greenhouse gas emissions, the emphasis on PAS 2080 reflects a growing recognition that reducing the carbon intensity of earthworks, tunnelling, and geotechnical engineering is critical. The ICE event offers a vital platform for industry stakeholders to exchange best practices, showcase pioneering approaches, and commit to collaborative efforts that meet the country’s net zero goals while supporting robust infrastructure development for future generations.

### 📌 Reference Map:

* Paragraph 1 – [[1]](https://www.ice.org.uk/events/upcoming-events/digging-for-net-zero-how-pas-2080-applies-to-tunnelling-and-geotechnical-engineering), [[2]](https://www.ice.org.uk/events/upcoming-events/digging-for-net-zero-how-pas-2080-applies-to-tunnelling-and-geotechnical-engineering)
* Paragraph 2 – [[1]](https://www.ice.org.uk/events/upcoming-events/digging-for-net-zero-how-pas-2080-applies-to-tunnelling-and-geotechnical-engineering), [[2]](https://www.ice.org.uk/events/upcoming-events/digging-for-net-zero-how-pas-2080-applies-to-tunnelling-and-geotechnical-engineering)
* Paragraph 3 – [[6]](https://www.nqa.com/en-gb/Sustainability/pas-2080), [[4]](https://www.gallifordtry.co.uk/news/news-centre/galliford-try-one-of-first-to-achieve-pas-2080-for-carbon-management-in-the-built-environment/), [[5]](https://www.wj.uk/pas-2080/)
* Paragraph 4 – [[3]](https://www.netzerobridges.org/action), [[7]](https://www.rpsgroup.com/about-us/news/rps-achieves-pas-2080-carbon-management-infrastructure-verification/)
* Paragraph 5 – [[1]](https://www.ice.org.uk/events/upcoming-events/digging-for-net-zero-how-pas-2080-applies-to-tunnelling-and-geotechnical-engineering), [[5]](https://www.wj.uk/pas-2080/)

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## Bibliography

1. <https://www.ice.org.uk/events/upcoming-events/digging-for-net-zero-how-pas-2080-applies-to-tunnelling-and-geotechnical-engineering> - Please view link - unable to able to access data
2. <https://www.ice.org.uk/events/upcoming-events/digging-for-net-zero-how-pas-2080-applies-to-tunnelling-and-geotechnical-engineering> - The Institution of Civil Engineers (ICE) is hosting an event titled 'Digging for net zero: how PAS 2080 applies to tunnelling and geotechnical engineering' on 25 November 2025. This session aims to provide insights into decarbonising geotechnical and tunnelling works using the PAS 2080 standard. Organised in collaboration with the British Tunnelling Society (BTS) and the British Geotechnical Association, the event will feature a lecture by ICE trustee for climate and carbon, Lewis Barlow, and opening and closing remarks from ICE President David Porter. The event will also cover real-world applications of PAS 2080 to earthworks and new infrastructure delivery, including how the Net Zero Tunnelling Group is mapping the standard to tunnelling and how National Highways is applying the standard’s key principles on its Lower Thames Crossing project. The session will conclude with a networking reception.
3. <https://www.netzerobridges.org/action> - The Net Zero Bridges Group (NZBG) is dedicated to achieving net-zero carbon emissions in bridge construction and maintenance. Their 'Take Action' section outlines steps to help achieve Net Zero Bridges, including getting informed, building nothing, building less, building clever, procurement, and sharing knowledge. The NZBG supports PAS 2080 as a common approach to managing carbon emissions across all infrastructure projects, enabling organisations to align their efforts in understanding and reducing emissions. They advocate for the wider implementation of PAS 2080 and encourage project teams to make the calculation of projected carbon equivalent emissions mandatory, establishing a clear common framework to ensure consistency.
4. <https://www.gallifordtry.co.uk/news/news-centre/galliford-try-one-of-first-to-achieve-pas-2080-for-carbon-management-in-the-built-environment/> - Galliford Try has been certified to PAS 2080:2023, the leading standard for carbon management in the built environment, covering the design, construction, operation, use, and end of life of new and existing assets with the aim to reduce costs and adapt to a low-carbon future. The Group is one of the first organisations to achieve this certification across buildings, following the expansion of PAS 2080’s scope to include the entire built environment as well as infrastructure. This achievement demonstrates Galliford Try’s ability to work with clients, consultants, and suppliers to deliver low and net-zero carbon projects and to help the UK transition to a net-zero carbon economy by 2050.
5. <https://www.wj.uk/pas-2080/> - WJ Group has achieved PAS 2080 certification, recognising its commitment to reducing carbon in infrastructure. With more than 30% of UK greenhouse gas emissions attributed to the construction, operation, and maintenance of infrastructure assets, PAS 2080 certification acknowledges businesses that collaborate to deliver low-carbon infrastructure projects and manage and reduce their environmental impacts. To achieve PAS 2080 status, WJ Group demonstrated significant progress in reducing its carbon emissions and has a systems-based approach to being a greener link in the supply chain. This includes promoting industry collaboration and reviewing its products and service methodology.
6. <https://www.nqa.com/en-gb/Sustainability/pas-2080> - PAS 2080 is a global standard for managing carbon within the built environment. It provides a common framework across the infrastructure value chain and applies to new projects or programs of work and also to the management or retrofit of existing infrastructure assets. Targeted at leaders, asset managers, designers, product suppliers, and constructors, PAS 2080 promotes best practice in carbon reduction, as well as supporting collaborative working, supply chain innovation, and reduced project costs. PAS 2080 was revised in 2023 to provide a more integrated approach to the built environment, taking a whole-life view and applying a systems-thinking approach to support the transition to net zero.
7. <https://www.rpsgroup.com/about-us/news/rps-achieves-pas-2080-carbon-management-infrastructure-verification/> - RPS has achieved PAS 2080:2023 verification, becoming the first Irish engineering consultancy to be verified to the PAS 2080 standard by the British Standards Institute (BSI). PAS 2080 is the leading standard for carbon management solutions in buildings and infrastructure development. Integrating PAS 2080 will help RPS support clients in identifying whole-life carbon reduction opportunities and challenging current practices to enable whole-life carbon reduction during design and project work. RPS's success was built on leadership in sustainability in organisations such as Engineers Ireland, ACEI, and Construct Innovate.