

Embedding sustainability skills and culture in the rail sector

Outcomes and notes

Key points

- The Sustainability Delivery Group held a roundtable in November 2022 with George Davies, director, sustainable development, at the Rail Safety and Strategy Board. The Board's new Sustainable Rail Strategy (SRS) is due to be launched in early 2023.
- See George Davies' [presentation slides](#).
- Through the SRS, the rail industry is addressing six themes: electric rail, seamless journeys, nature-based solutions, social value, data framework and culture for sustainability.
- The roundtable examined **how the environmental and sustainability consulting industry can support the implementation of the strategy**.

Take-aways for consulting firms

- **Competition for sustainability skills** poses a major challenge in rolling out the SRS, with the rail sector and sustainability consulting firms competing for the same talent, leading to growth in salary expectations.
- Consultants warned that the skills challenge posed severe difficulties in implementing the ambitious SRS goals. "The industry is under pressure because we can't retain the resources," said one participant.
- Some participants questioned whether the consultancy sector would be able to provide the input demanded by the SRS without a concerted effort to develop sustainability skills capacity, linking back to graduate recruitment and apprenticeships.
- Another concern voiced was the **limited bandwidth** available for sustainability discussions in projects that are inevitably led by engineers, not all of whom have deep sustainability expertise.
- A key focus of the SRS therefore needs to be embedding sustainability culture via the design process and through the concept of "total value".
- "The knowledge gap that we have in the engineering and design teams is crucial," said one representative from a multidisciplinary consulting firm. "The knowledge gap for carbon was fundamental enough. When you bring in resilience and nature based solutions you've then got a bandwidth issue and a **massive knowledge gap** in our core delivery teams."
- The sector needs to work on how to measure the **total value** of a project, to sit within procurement contracts, so as to ensure that sustainability topics are properly addressed.

Background

Executives from nine environmental consulting and engineering firms participated in an Environment Analyst roundtable on 16 November, organised by our Sustainability Delivery Group. Following the presentation by George Davies, the group discussed the strategic areas of social responsibility, emissions and the natural environment, as well as identifying common solutions and example “route maps”.

Davies gave a status update on the [Sustainable Rail Strategy](#) (SRS) – the first definitive whole-industry strategy for sustainable rail, across both environmental and social topics – before its launch in early 2023. The SRS is being developed by the RSSB with involvement from the rail industry and oversight by the Department for Transport. See his presentation slides [here](#).

The roundtable then addressed:

- How to secure delivery of the Sustainable Rail Strategy and embed it in the supply chain; and
- How the environmental and sustainability consulting sector can support the process most effectively.

The Plan for Rail calls for a “comprehensive environment plan that will establish rail as the backbone of a cleaner future transport system”, with “clear commitments on carbon emissions, air pollution, biodiversity, waste, water usage, noise and vibration.”

- **George Davies, RSSB**

Davies noted that clarity on funding and on government policy is needed to progress. The [Williams-Shapps Plan for Rail](#) followed by last year’s [Rail Environment Policy Statement](#) provide good starting points, he said, although those initiatives do not lay out details for comprehensive environment and social sustainability plans.

An industry level approach

“In the past we’ve been guilty of slicing up all of these different environmental issues,” said Davies. “Railway companies may struggle to implement seemingly individual initiatives without seeing the common thread. This is why an industry level approach should bring coherence to, and ultimately contribute to a cultural shift, by creating a comprehensive, credible sustainability strategy.”

Davies continued, “We’re looking at electric rail, seamless journeys, nature-based solutions, the role of social value, and the fundamental promotion of the railway as a social driver for improved quality of life. There are many elements here that can benefit, for example, retailers and other suppliers of consumables, were they to adapt their own climate change goals and commitments to incorporate a ‘goods off the road and onto rail’ approach. This is an important topic for the railway, particularly in the context of an increasingly ageing infrastructure in some very difficult terrain and landscapes.”

Common Solutions

The SRS presents 6 solutions which are essential to delivering across multiple topics.



Seeking to bring these elements together under the banner of the Sustainable Rail Strategy, the RSSB has been collaborating with the consultancy community, sustainability and environment specialists, and technical working groups to define and implement solutions to a comprehensive suite of high-level goals.

The social agenda

The strategy's social vision of a 'railway at the heart of communities' is all about placemaking. "The railway needs to be far more collaborative with master planners, architects, local authorities, and enterprise partnerships," Davies said. The meeting also discussed a new capability available to the rail procurement process: the [Rail Social Value Tool](#) (RSVT), which is an online resource to examine the impact of rail operations and projects.

Building a robust careers economy

"We are losing many employees who are entering the final phases of their careers," said Davies. "We need to engender a viable, long-term strategy to attract early-career employees to take on engineering and operational roles. The railway's inherent sustainability characteristics should make us an attractive proposition. Our development and deployment of new technologies should be appealing to college or university graduates. We are working on this in partnership with organisations like the [National Skills Academy for Rail](#)."

"Jobs and skills training need to be managed in a way that is measurable, reportable and promotional via an updated data framework. The industry needs to be able to measure performance: KPIs, metrics, reporting frequencies, in order to identify trends and to consequently analyse progress. RSSB has committed to funding the development of such a web based digital data framework."

Decarbonisation

The railway component is a key part of the industry-wide decarbonising of transportation, the group acknowledged. Rail itself is only a small part of the problem (about 1.4% of overall emissions in the transport sector) but it is a key component of the solution.

"We're trying to develop a series of solutions to offer carbon sequestration, and also to deal with surface water flooding, and with climate change adaptation," said Davies.

One roundtable member noted a risk that the government may well look at 1.4% overall emissions and then decide that there might be more pressing issues on which to allocate funding. "We definitely need to make a stronger case that the railway is a key solution for decarbonising the economy."

Funding

"How do we unlock investment?" asked Davies. "We need to wean the railway industry off of the traditional public funding model. Private finance is going to be essential – in a responsible way, with more sustainable decision making."

One attendee pointed out that, "Organisations with significant capability, large companies like Siemens for instance, should have a huge vested interest in getting on board with, and in buying into, this rail strategy to further their ESG goals".

The circular economy

“The circular economy in railways is something we're pushing for,” said Davies. “Obviously, it is a crucial approach. However, it's really only just starting to be understood as a term, let alone any significant implementation. The extent to which we consider indirect emissions in the circular economy should be entirely the same as we do in net zero.”

Roundtable participants

Kieran Ronnie	AECOM - Associate Director Head of Social Value
Edwin Barker	AECOM - Technical Director
Anne Dugdale	Arcadis - Technical Director
Lucy Swan	Atkins - Sustainability and Carbon Team Leader
Vicky Hutchinson	Atkins - Environment Practice Director
Damian Robinson	Delta-Simons - Divisional Director – Environmental Planning
Julian Rose	Environment Analyst - Chairman & Cofounder
Amanda Rafferty	Environment Analyst - Events & Community Director
Ross Griffiths	Environment Analyst - Managing Director
Lynsey Clarke	Jacobs - Director of Sustainability
Jenny Allen	Mott MacDonald - Environment Manager
Lucy Morton	Mott MacDonald - Group Environment Practice Leader
Joshua Stroud	Mott MacDonald - Principal Environmental Consultant
George Davies	Rail Safety & Standards Board - Director Sustainable Development
Nathan Swankie	Ramboll - Country Director Environment & Health UK
Jeff Turner	Ramboll - Director / Senior Managing Consultant
Gordon McGregor	Sweco - Chief Sustainability Officer
Nick Jarritt	WSP - Director Sustainability Advisory Services
Tim Danson	WSP - Technical Director Sustainability

Credits

This roundtable was organised by Environment Analyst's [Sustainability Delivery Group](#). With thanks to EA team members Julian Rose, Ross Griffiths and Amanda Rafferty for their work on the roundtable.

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