Climate and Environment:
Carbon Reduction and Resource Efficiency

Webinar 25 November 2025
9:00–15:00 CET

9:00 **Opening**
Jarmo Joutsensaari, *NVF Chairperson*

9.05 **FIDIC carbon management framework**
Andreas Linnet, Ramboll Transport *20 min*

9.35 **NordCLIMPACT – Reducing the impact on climate through joint action in the Nordic NRAs**
Bob Hamel, Norwegian Public Roads Administration *10 min*
Jon Jørgensen, Danish Road Directorate *10 min*
Åsa Lindgren, Swedish Transport Administration *10 min*
Karoliina Saarniaho, Finnish Transport Infrastructure Agency *10 min*

10.30 **What we do is more important than how we do it**
Marius Slinde, Norwegian Public Roads Administration *15min*

10.50 **Alternative fuels for heavy goods vehicles**
Martin Frimann Mortensen, Danish Road Directorate *15 min*

11.10 **Lunch**

11.50 **Circular economy and sustainable materials for biodiversity regeneration in bridge projects**
Lyubomira Vasileva, Ramboll *15 min*

12.10 **Circular salt for sustainable road maintenance**
Andreas Backstrom, Svevia AB *15 min*

12.30 **Potential benefits of replacing aluminum with (GFRP) in the installation of evacuation guidance lighting**
Jonas Andersson, Swedish Transport Administration *15min*

12.50 **Challenges with reuse of bridge components**
Andri Gunnarsson, EFLA *15min*

13.10 **Coffee break**

13.30 **The Borgarlinan project – A backbone for sustainable urban mobility in the Reykjavik Capital Area**
Hallbjörn Reynir Hallbjörnsson, Transport for the Capital Area *15 min*

13.50 **Zero emission technology and sustainability in infrastructure projects – Nordic Construction Market perspective**
Jörgen Simu, Swedish Transport Administration *10 min*
Arne-Richard Stadaas, Norwegian Public Roads Administration *10 min*
Ditte Dahl Mathiasen, Danish Road Directorate *10 min*

14.30 **Estimating variation of CO2e emissions of pavement replacements**
Marja-Terttu Sikiö, Destia Oy *15min*

14.50 **Closing words**
Karoliina Saarniaho and Hannah Sutton, NVF Theme: Climate and Environment Coordinators

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FIDIC carbon management framework

Andreas Linnet, Global Decarbonisation Lead, Ramboll Transport (NVF Road Design working group)

The presentation outlines the strategic benefits of actively working with carbon management in infrastructure projects. Integrating carbon into decision-making supports climate goals while also delivering cost efficiency, risk reduction and long-term value creation. Drawing on Nordic experience, it highlights how national tools and databases, supported by software solutions, are transforming project design and delivery, with growing requirements from clients and authorities to monitor, manage and reduce carbon. At the same time, developments are placed in a global perspective, showing how FIDIC's Carbon Management Framework sets common principles for transparent and systematic approaches across the sector.

NordCLIMPACT – Reducing the impact on climate through joint action in the Nordic NRAs

Bob Hamel, Norwegian Public Roads Administration; Jon Jørgensen, Danish Road Directorate; Åsa Lindgren, Swedish Transport Administration; Karoliina Saarniaho, Expert, Environment, Finnish Transport Infrastructure Agency (NVF theme Climate and Environment)

The NordCLIMPACT project unites Nordic road administrations to integrate climate considerations into infrastructure planning and management. Four work packages will be presented: WP1 addresses challenges in integrating life cycle assessment (LCA) climate data into BIM, proposing technical and organisational solutions. WP2 reviews how LCA and greenhouse gas data are used in strategic decision-making, including mapping land use and land use change (LULUC) emissions. WP3 examines EU taxonomy and its implications for Nordic transport agencies in the context of the Green Deal. WP4 explores how public procurement and project management can stimulate contractors and consultants toward emission reductions, innovation and climate-neutral practices.

What we do, is more important than how we do it

Marius Slinde, Senior Principal Engineer, Norwegian Public Roads Administration (NVF Tunnels working group)

A Norwegian working group analysed whether small regulatory and procedural adjustments in tunnel construction could lower costs and reduce climate impact. Findings indicated that cost savings often align with positive

environmental outcomes, reinforcing the link between efficient planning and sustainability. The most decisive climate benefits arise from fundamental choices made early in the project lifecycle, rather than from later measures such as electrification or material substitution. Developing frameworks that ensure necessary safety and performance, without unnecessary excess, is critical. Examples from the working group's report and additional Norwegian tunnel projects illustrate the importance of aligning economic and climate objectives.A Norwegian working group analysed whether small regulatory and procedural adjustments in tunnel construction could lower costs and reduce climate impact. Findings indicated that cost savings often align with positive

Alternative fuels for heavy goods vehicles

Martin Frimann Mortensen, Special advisor, Danish Roads Directorate (NVF Road Freight Transport working group)

A comprehensive overview of alternative fuels for heavy goods vehicles will address both current technical solutions and future developments. The presentation examines performance, availability and potential of renewable fuels, electrification and emerging technologies, highlighting suitability for different freight contexts. Perspectives from the industry will be included, reflecting practical considerations and expectations regarding adoption and scalability. Opportunities and challenges in transitioning to lower-emission heavy transport will be clarified, with attention to infrastructure requirements, regulatory frameworks and cost implications. By combining technical insights with sector viewpoints, the session aims to inform strategies for sustainable freight mobility.

Circular economy and sustainable materials for biodiversity regeneration in bridge projects

Lyubomira Vasileva, Designer, Bridges and Special Structures & Environmental Engineering, Ramboll Finland Oy (NVF Bridges working group)

Global resource extraction has risen from 27 to over 90 billion tonnes between 1970 and 2017, driving biodiversity loss through habitat destruction, over-exploitation, pollution and climate change. Conventional construction materials such as concrete, steel, timber, earth and asphalt have ecological impacts beyond carbon emissions. Integrating ecological considerations at the earliest design stage and applying circular economy principles can reduce resource use, waste and pressures on biodiversity. Approaches include biodiversity-friendly sourcing, waste prevention and the Biodiversity Net Gain framework, supported by monitoring and metrics tailored to site conditions. Nature-based solutions and blue-green infrastructure further strengthen resilience, restore degraded areas and embed biodiversity regeneration in bridge projects.

Circular salt for sustainable road maintenance

Andreas Bäckström, Svevia AB (NVF Operation and Maintenance working group)

The project running from May 2024 to June 2026 demonstrates the use of circular salt, produced from residual products such as fly ash from waste incineration, as an anti-slip agent in Swedish winter road maintenance. The process reduces waste, lowers emissions, and decreases dependence on imported salt, with potential CO2 cuts of up to 55% compared with conventional rock salt. Annual production is projected to reach 80,000 tonnes, reducing emissions by more than 1,600 tonnes per year. Field trials over two winters will validate spreading methods, regulatory adaptations and equipment needs. Led by Svevia AB with partners including Nordic Salts AB, Luleå University of Technology and ViaPM, the project supports circular resource use, technological innovation and more sustainable infrastructure.

Potential benefits of replacing aluminum with (GFRP) in the installation of evacuation guidance lighting

Jonas Andersson, Specialist Tunnelsafety, Swedish Transport Administration (NVF Tunnels working group)

Substituting aluminium with Glass Fibre Reinforced Polymer (GFRP) for evacuation guidance lighting in the E4 Stockholm Bypass tunnel system could cut greenhouse gas emissions by 473–819 tonnes CO_2e and reduce total material weight by 16 tonnes, improving logistics and installation efficiency. The study indicates that GFRP provides significant climate and handling advantages, especially in large-scale tunnel projects where long aluminium profiles are difficult to source and transport. Key uncertainties remain regarding long-term durability, fire resistance, and UV stability, and recyclability is currently less favourable compared with aluminium. Despite these concerns, GFRP shows strong potential for wider tunnel applications, including cable trays, signage supports and handrails.

Challenges with reuse of bridge components

Andri Gunnarsson, Specialist, Bridge engineer, EFLA (NVF Bridges working group)

Abstract will be provided later.

The Borgarlínan Project – A Backbone for Sustainable Urban Mobility in the Reykjavík Capital Area

Hallbjörn R Hallbjörnsson, Specialist, Transport for the Capital Area (NVF Urban Transport and Transport Planning working group)

The Borgarlínan project is a central element in Iceland's strategy to transform mobility, cut greenhouse gas emissions and improve quality of life in the Reykjavík Capital Area. As a 57 km Bus Rapid Transit (BRT) system, it will deliver fast, reliable and frequent service with dedicated lanes, prioritised intersections and modern stations. It is part of the Höfuðborgarsvæðið 2040 plan, supporting compact development, reduced car dependency and equitable access. Integrated with public transport and cycling networks, the project forms the backbone of a multimodal system. Developed jointly by national and municipal authorities, Borgarlínan emphasises resilience, climate action and user-centred design.

Zero emission technology and sustainability in infrastructure projects – Nordic Construction Market perspective

Jörgen Simu, Swedish Transport Administration; Arne-Richard Stadaas, Norwegian Public Roads Administration; Ditte Dahl Mathiasen, Danish Road Directorate (NVF Nordic Construction Market working group)

This joint session summarises key insights from the 3rd L2Z & NVF Conference on Zero Emission Construction Sites conference, focusing on zero-emission technology and sustainability in infrastructure projects. Highlights include the Nordic Construction Market's mandate and progress, as well as reflections on the conference outcomes. From Sweden, the recap covers Trafikverket's initiatives enabling the transition to zero-emission construction machinery, emphasising critical steps identified by Magnus Lindgren. From Norway, experiences from the RV22 Hafslund–Dondern project are presented, addressing sustainability in zoning, procurement and contracts. From Denmark, the focus is on zero-emission construction sites and collaboration between public buyers, with insights from the Leap to Zero network on shared learning and next steps for sustainable practice.

Estimating variation of CO2e emissions of pavement replacements (B4 phase, high volume roads)

Marja-Terttu Sikiö, Leading Consultant, Destia Oy (NVF Road Technology working group)

Abstract will be provided later.