

Life Cycle Assessment Capability



"Sustainability is no longer a nice-to-have – the industry is now driving real outcomes and real change in society"
- Infrastructure Sustainability Council of Australia

ARRB's Life Cycle Assessment experts are helping drive sustainable transport infrastructure to optimise long term environmental, social and economic outcomes.

WHAT IS LCA

Life Cycle Assessment (LCA) is an established method for measuring the full extent of resource usage and environmental impacts over the lifespan of products and services. Transport infrastructure life cycle phases include:



Extraction and production of materials



Construction



Maintenance



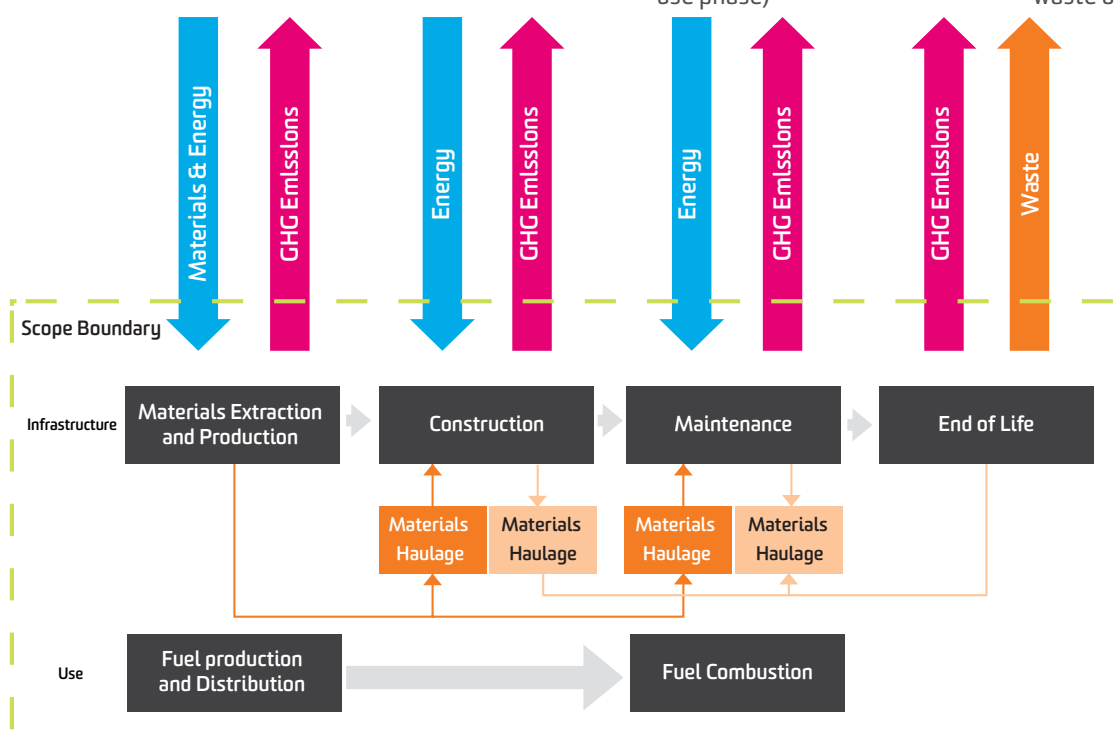
Operations (including use phase)



Material haulage



End of life (emissions and waste outputs)



LCA BENEFITS

An LCA will enable your organisation to:

- Assess the full life cycle impact of infrastructure assets
- Identify savings in environmental impacts, costs, and resources
- Compare alternative materials, designs and application scenarios
- Evaluate the return for investing in more sustainable material and practices
- Communicate the benefits of investing in sustainability to your stakeholders
- Prioritise investments in sustainability improvements and mitigations of risks
- Benchmark sustainability performance

HOW ARRB SUSTAINABILITY & RESILIENCE CAN HELP

Our Sustainability and Resilience Team can assist our client with:

- High-level and quick LCAs using national lifecycle inventory data
- Detailed LCAs supported by customised location, process and plant specific data modelled by ARRB
- Quantifying Life Cycle impacts in terms of GHG emissions, energy use, water use and IS EnviroPoints
- Supporting IS rating assessments and evidence
- Promoting the use of innovative and recycled materials

WHY ARRB SUSTAINABILITY & RESILIENCE?

- We are the National Transport Research Centre. Our trusted work is supported by over 60 years of knowledge in road engineering.
- We drive sustainability through our research, providing a one-stop applied research service in sustainable materials and infrastructure – from best-practice research, laboratory testing and field trials to technical guidance, life cycle assessments and knowledge sharing.
- Our team of Infrastructure Sustainability Accredited Professionals (ISAPs) understand your ISCA and sustainability needs.



OUR LCA EXPERTISE

- Sustainability and economic life cycle evaluations featuring innovative products and designs for infrastructure and vehicles
- Developing bespoke LCA tools and inventory data for state road authorities
- Product modelling, including recycled and innovative pavement materials (crumb rubber, poly-modified bitumen)
- Tailoring assessments to local specifications and applications
- Applying globally recognised LCA tools (SimaPro) and Australian and international life cycle inventory databases (AusLCI and Ecoinvent)

CONTACT

Please contact us via email at info@arrb.com.au or visit the website arrb.com.au/sustainability for more information.

About ARRB

Australian Road Research Board (ARRB) provides research, consulting and information services to the road and transport industry. ARRB is the source of independent expert transport knowledge, advising key decision makers on our nation's most important challenges.

VIC | 80a Turner St, Port Melbourne, VIC 3207 P: +61 3 9881 1555

NSW | 36-42 Chippen Street, Chippendale, NSW 2008 P: +61 2 9282 4444

QLD | 21 McLachlan St, Fortitude Valley, QLD 4006 P: +61 7 3260 3500

SA | Level 1, Featherstone Place, Adelaide, SA 5000 P: +61 8 8235 3300

WA | Suite 4B, Level 2, 1 Hood St, Subiaco, WA 6008 P: +61 8 9227 3000

arrb.com.au | ABN 68 004 620 651