ISCA and the IS rating scheme

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ISCA Overview

• Infrastructure Sustainability Council of Australia
• Member based, not-for-profit, industry council
• The IS rating tool
• First and only national sustainability rating tool for infrastructure (considered world leading)
• Measures sustainability performance across the quadruple bottom line (environmental, social, economic and governance)
• Voluntary but can be mandated
# Founding Members

<table>
<thead>
<tr>
<th>ACTEW WATER</th>
<th>AECOM</th>
<th>ARUP</th>
<th>Dedicated to a better Brisbane</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCP</td>
<td>CLAYTON UTZ</td>
<td>EVANS &amp; PECK</td>
<td>HERBERT SMITH FREEHILLS</td>
</tr>
<tr>
<td>GHD</td>
<td>Lend Lease</td>
<td>LGIS</td>
<td>Mambourin Roberts</td>
</tr>
<tr>
<td>MWH</td>
<td>NSW Office of Environment &amp; Heritage</td>
<td>PARSONS BRINCKERHOFF</td>
<td>Queensland Government</td>
</tr>
<tr>
<td>THIESS</td>
<td>WINGLOW</td>
<td>WorleyParsons</td>
<td></td>
</tr>
</tbody>
</table>

ISCA Infrastructure Sustainability Council of Australia
### Members

<table>
<thead>
<tr>
<th>AECOM</th>
<th>ARUP</th>
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<th>Lendlease</th>
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</tr>
</thead>
<tbody>
<tr>
<td>ACCSR</td>
<td>ASI</td>
<td>Australian Steel &amp; Structural Association</td>
<td>ASCP</td>
<td>BLUEScope</td>
<td>Colonial First State</td>
<td>Downer Engineering</td>
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<tr>
<td>eTool</td>
<td>Fulton Hogan</td>
<td>ECO ENVIRONMENTAL CHOICE AUSTRALIA</td>
<td>Greater Shepparton</td>
<td>Hames Sharley</td>
<td>Holcim</td>
<td>Hyder</td>
</tr>
<tr>
<td>John Holland</td>
<td>KMH</td>
<td>Laying Ground</td>
<td>LEUNOX</td>
<td>McConnell Dowell</td>
<td>oneSteel</td>
<td>OPUS</td>
</tr>
<tr>
<td>RPS</td>
<td>Salini Impregilo</td>
<td>Scott Losee Consulting</td>
<td>START2SEE</td>
<td>Sustainable Built Environment National Research Centre</td>
<td>transurban</td>
<td>UGL</td>
</tr>
<tr>
<td>Utilbiz</td>
<td>Value Advertiser</td>
<td>Victoria International Container Terminal</td>
<td>WSP</td>
<td>Parsons Brinckerhoff</td>
<td>WWF</td>
<td>Xypex</td>
</tr>
<tr>
<td>NSW Office of Environment &amp; Heritage</td>
<td>EPA</td>
<td>Transport Roads &amp; Maritime Services</td>
<td>NSW Transport for NSW</td>
<td>NSW Public Works</td>
<td>Transport NSW Delivery Authority</td>
<td>Main Roads NSW</td>
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</tbody>
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**ISCA Infrastructure Sustainability Council of Australia**
ISCA Organisational Structure

ISCA Board
- Chair David Singleton

CEO
- Antony Sprigg

Manager Technical and Business Services
- Ainsley Simpson

Development Manager
- Nicole Boyd

Finance Manager
- Eva Wang

Membership and Marketing Manager
- Hayley Jarick

Case Manager
- Kirsty Bauer
- Jessica Cairns

Board Subcommittees
- Executive Committee
- Audit & Risk Committee
- Technical Steering Committee

Members
- Australian

Working Groups
- Contractor Materials
- Local Government
- Stakeholder Participation
- Sustainability in Design
## Role of ISCA in the Industry

### Authority
- Building the business case for infrastructure sustainability
- Facilitating IS upstream
- Education and awareness

### Assurance
- Administration and independent certification for IS Rating Scheme
- Ongoing benchmarking and development of IS tools
- Accreditation of professionals

### Advocacy
- Representing our members and their interests
- Promote knowledge sharing in the industry
- Advocate across key IS policy related areas
IS RATING SCHEME
IS rating scheme

- **IS rating tool comprises**
  - IS Rating Tool Scorecard
  - IS Materials Calculator
  - IS Technical Manual

- **Assessment process involves**
  - Registration
  - Assessment support
  - Independent Verification
  - Certification and rating award

- **Education and training programmes**
  - IS Accredited Professional (ISAP)
Whole of life
IS benefits

- **Common national language** for sustainability in infrastructure
- Consistent application and evaluation of sustainability in **tendering** processes
- Scoping whole-of-life sustainability **risks** for projects and assets, enabling **smarter solutions** that reduce risks and costs
- Fosters **resource efficiency** and **waste reduction**, reducing costs
- Fosters **innovation** and continuous improvement
- Builds an organization’s credentials and **reputation** in its approach to sustainability in infrastructure
<table>
<thead>
<tr>
<th>Themes</th>
<th>Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management and Governance</td>
<td>Management Systems</td>
</tr>
<tr>
<td></td>
<td>Procurement and Purchasing</td>
</tr>
<tr>
<td></td>
<td>Climate Change Adaptation</td>
</tr>
<tr>
<td>Using Resources</td>
<td>Energy and Carbon</td>
</tr>
<tr>
<td></td>
<td>Water</td>
</tr>
<tr>
<td></td>
<td>Materials</td>
</tr>
<tr>
<td>Emissions, Pollution and Waste</td>
<td>Discharges to Air, Land and Water</td>
</tr>
<tr>
<td></td>
<td>Land</td>
</tr>
<tr>
<td></td>
<td>Waste</td>
</tr>
<tr>
<td>Ecology</td>
<td>Ecology</td>
</tr>
<tr>
<td>People and Place</td>
<td>Community Health, Well-being and Safety</td>
</tr>
<tr>
<td></td>
<td>Heritage</td>
</tr>
<tr>
<td></td>
<td>Stakeholder Participation</td>
</tr>
<tr>
<td>Innovation</td>
<td>Urban and Landscape Design</td>
</tr>
<tr>
<td>Workforce*</td>
<td>Innovation</td>
</tr>
<tr>
<td>Economic*</td>
<td></td>
</tr>
</tbody>
</table>
Benchmarking

Compliance

Level 1
Commended

Level 2
Excellent

Level 3
Leading

Beyond Compliance

Business as Usual

Measurement

Implementing Initiatives

No net impact

Restoration & Enhancement

Compliance
## IS rating Levels

<table>
<thead>
<tr>
<th>Score</th>
<th>Rating Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 25</td>
<td>Not eligible to apply for a certified rating</td>
</tr>
<tr>
<td>25 - 49</td>
<td>Commended</td>
</tr>
<tr>
<td>50 - 74</td>
<td>Excellent</td>
</tr>
<tr>
<td>75 - 100</td>
<td>Leading</td>
</tr>
</tbody>
</table>
About the IS rating scheme

HOW IS THE IS RATING SCHEME BEING USED
Traction

Registrations: 78
Projects / Assets: 53
Capital Value: $79 billion
IS registrations by location

- Complete Registered
  - 4 10
  - 1 3
  - 7 21
  - 2 11
  - 3 5
  - 1 2
  - 2 4
  - CONFIDENTIAL 2

Map of Australia and New Zealand showing IS registrations by location.
Trends

• Use through delivery of a project (D&C)
• Pilots / trials – how else can the system be used?
• Operations and maintenance – asset network level
• Integration into project systems
• Business case/planning phase integration
• Mandating the rating tool and a certain score/level
• Growing need to understand and communicate the business case for sustainability
• Benchmark current practice
Whitsunday’s STP upgrades

• The project:
  – The upgrade of two treatment plants at Proserpine and Cannonvale
  – $45m
  – QLD

• Highlights
  – First certified Design rating
  – First project/Asset to achieve an IS Design and As Built rating
  – World first use of innovative nitrogen effluent removal technology
# Whitsunday’s STP upgrades

<table>
<thead>
<tr>
<th>Costs</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rating Fees: $43,000</td>
<td>Fewer construction materials: $900,000 saved</td>
</tr>
<tr>
<td>Consulting Assistance: $16,000</td>
<td>Reduction in embodied carbon emissions of 1,661 tCO2-e (30%)</td>
</tr>
<tr>
<td>Enhanced Vegetation: $5,000</td>
<td>Reduced electricity use $120,000 saved pa Operations</td>
</tr>
<tr>
<td>Internal Labour costs: $150,000</td>
<td>Improved dust suppression $100,000 saved</td>
</tr>
<tr>
<td></td>
<td>Reduced water use through efficient use of recycled effluent 43% reduction in water use across the project lifecycle. 3GL water saved over the operation life of the asset.</td>
</tr>
<tr>
<td></td>
<td>Ecological and biodiversity value enhanced $&gt;5,000m2 new regenerated native habitat Improved Biodiversity value by 200%</td>
</tr>
</tbody>
</table>
Whitsunday’s STP upgrades

- Total saved in construction = $1.1M
- Total annual operational savings = $182,000
- ROI = >400%
Gold Coast Light Rail

• The project:
  – 13 km light rail corridor
  – $430m
  – QLD

• Highlights
  – First certified rating for Rail
  – First project to be certified with a score higher than 60 points
  – Identification of over 189 sustainability initiatives
# Gold Coast Light Rail

## Costs

<table>
<thead>
<tr>
<th>Costs</th>
<th>Rating Fees</th>
<th>Consulting Assistance</th>
<th>Initiative identification and tracking</th>
<th>Internal Labour costs</th>
</tr>
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<tbody>
<tr>
<td>Block to block closures were agreed as a trade off for the project team halting works during Christmas period.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Benefits

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Avoid the need to excavate and relocate 68,200 tonnes of waste material, 40% reduction in the quantity of concrete and steel required, Reduction in embodied carbon emissions of 3,200 tCO2-e.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovative and collaborative design</td>
<td>Savings from reduced transport and recycling fees</td>
</tr>
<tr>
<td>Recycling of sand from excavation to local beaches</td>
<td>Improvement to local beaches.</td>
</tr>
<tr>
<td>Saved 44,000 tonnes of materials</td>
<td>55% reduction in embodied carbon emissions.</td>
</tr>
<tr>
<td>156,000 tonnes of waste diverted from landfill.</td>
<td>Saved 5,000 tonnes of carbon emissions.</td>
</tr>
<tr>
<td>90% recycling of inert and non-hazardous construction waste.</td>
<td>100% recycling of spoil.</td>
</tr>
<tr>
<td>Improved outcomes for the community</td>
<td>Block to block closures were agreed as a trade off for the project team halting works during Christmas period.</td>
</tr>
<tr>
<td>Improving capability and employment opportunities within the greater Gold Coast area</td>
<td>96% of project employees were recruited from within greater Gold Coast Area. 80% living within the Gold Coast City Council area.</td>
</tr>
<tr>
<td>Saved 44,000 tonnes of materials</td>
<td></td>
</tr>
</tbody>
</table>
Gold Coast Light Rail

• Total saved in construction = $14.7M
How do you get involved?

- Planning phase advisory – early engagement
- Accredited professional (ISAP)
- Organisational Membership
Contact details:

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www.isca.org.au

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+61 419 446 703

Advancing sustainability in infrastructure planning, procurement, delivery and operation.