



What does our industry do in the ESG space?

ESG in the Code of Practice and Practical Application
on the WORM Project

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CNC is proudly certified to



ISO 9001 Quality Management Systems CERTIFIED	ISO 14001 Environmental Management CERTIFIED	ISO 45001 Occupational Health and Safety Management CERTIFIED
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ESG within the CoEP

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- Updates to the Code of Practice in 2022 included a section on Sustainability
- APGA Strategic Plan 2021 – 2024



ESG within the CoEP

The Social Responsibility pillar defines its objective as:

- To lead and support the industry in delivering positive environmental, social and governance outcomes



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Sustainability

- ✓ High level guidance on how to integrate sustainability into a project
- ✓ Efficient use of resources
- ✓ Protection of natural resources
- ✓ Cost effectiveness

Infrastructure Sustainability Council

- ❑ ISCA – Members based industry body
- ❑ Ratings scheme
- ❑ Recognises and rewards best practice



ISCA

- Government projects
- Critical infrastructure approvals
- Road Projects

Future APGA Guidance

Development of an APGA Sustainability Code



Practical Application

Introducing ISCA for Projects

Aims to drive whole of life benefits and outcomes from:

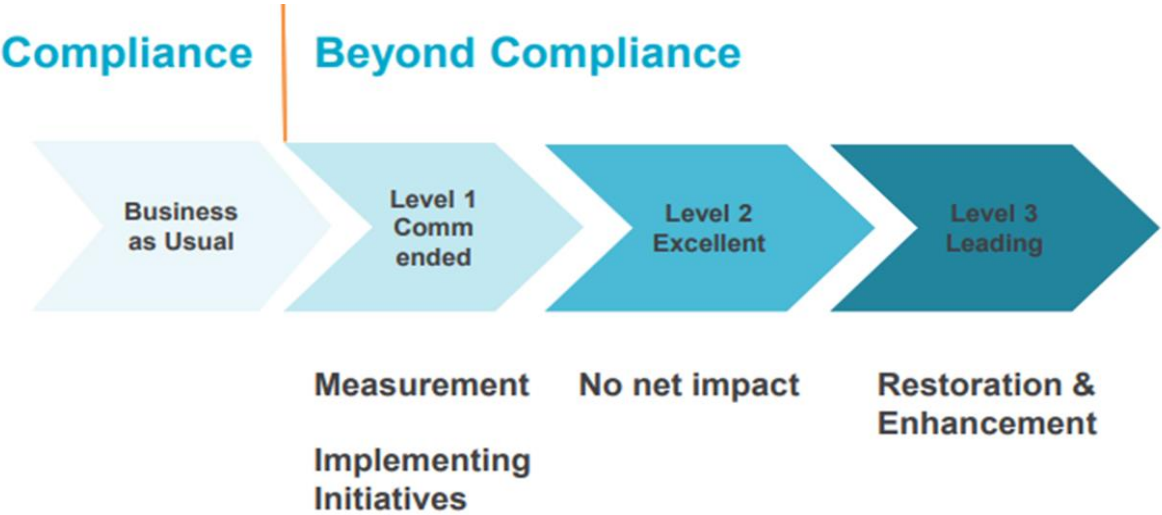
- Cultural
- Social
- Economic
- Environmental

Sectors during the **design**, construction and **operation** of Australian Infrastructure.

Infrastructure Sustainability Themes and Categories

Themes	Categories
Management and Governance	Management Systems
	Procurement and Purchasing
	Climate Change Adaptation
Using Resources	Energy and Carbon
	Water
	Materials
Emissions, Pollution and Waste	Discharges to Air, Land and Water
	Land
	Waste
Ecology	Ecology
People and Place	Community Health, Well-being and Safety
	Heritage
	Stakeholder Participation
	Urban and Landscape Design
Innovation	Innovation
Workforce*	
Economic*	

Infrastructure Sustainability Benchmark

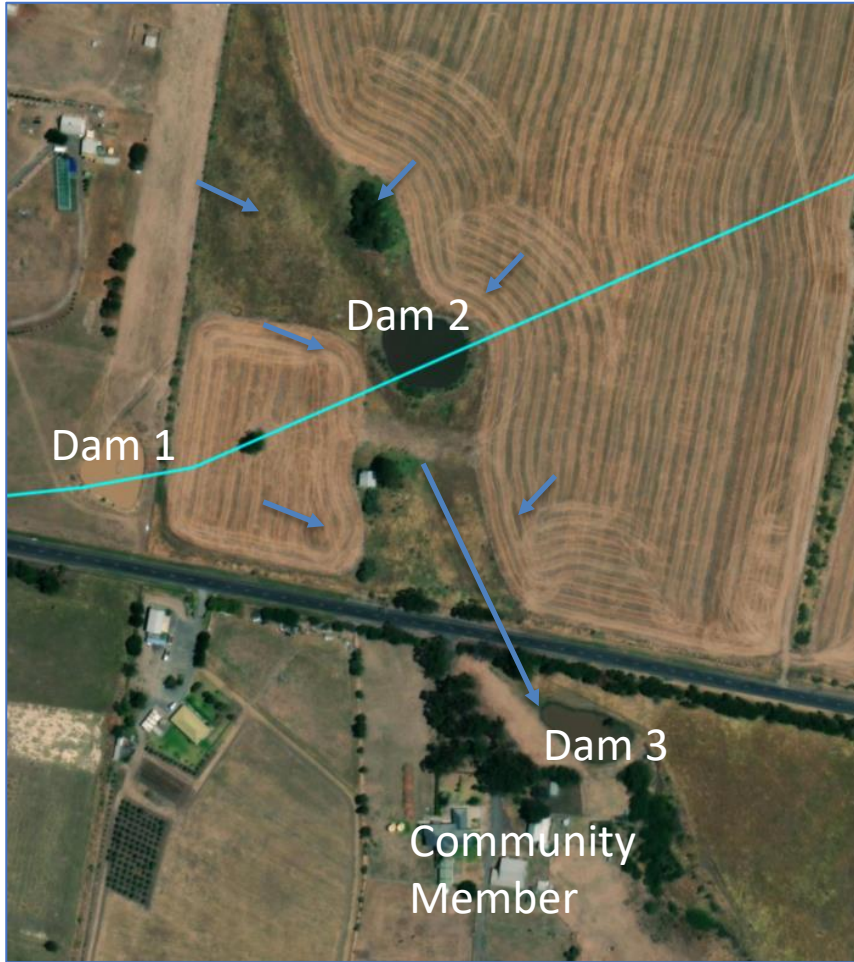


Credit: ISCA

Going beyond compliance on the Western Outer Ring Main (WORM Project):

Business as Usual community requirements:

- Community engagement with directly impacted members
- Raise awareness of Project through site posters, monthly community alerts and other collateral
- Listening, reporting and responding to community / landholder concerns and complaints



Situation where ESG principles could be implemented:

The release of water from the Project site would cause an indirect impact on neighboring property, as the water ended up in a downstream community member's dam and would likely cause it to overflow

Leaving a Positive Community Outcome

- Engaged community members about project, explained why water was flowing onto their property and ensured them the water was clean and passed quality requirements
- Avoided the attitude of - *“If it rains, the water flows into the property anyway, so no engagement is required”* or *“what if the neighbor says we can’t do it”*



APA Kurri Kurri Opportunities

While not contractually required – during the construction of Kurri Kurri Lateral Pipeline Project, Spiecapag will implement a simplified ISCA program to track resource use and identify possible reductions

Water and Carbon

Focus on savings on water and greenhouse gas emissions through:

- the use of soil binding polymers (compared to constant dust suppression with water cart, also benefits water quality)
- using non-potable water where possible (vs treated potable water)
- Using E10 in vehicles where possible (2-5% emission savings and using E10 supports Australian farmers)



Credit: Vital Chemical



Credit: Vital Chemical

How is ethanol made?



Step 1: In NSW, the manufacture of wheat products produces waste starch.



Step 2: The starch is mixed with water and yeast and fermented to produce ethanol.



Step 3: The ethanol mix is purified using a distillation process.



Step 4: Purified ethanol is carefully blended with unleaded petrol in a 1:10 ratio, creating E10.



Step 5: E10 is transported to petrol stations across NSW, ready for your tank.



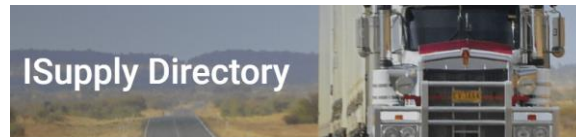
Step 6: Drivers fuel their vehicles with this sustainable biofuel.

Ethanol is produced from biomass mostly via a fermentation process using glucose derived from sugars (sugar cane, sugar beet and molasses), starch (corn, wheat, grain) or cellulose (forest products) as raw materials. In this form, it is renewable.

Most of the ethanol used to make E10 in NSW is made from starch left over after wheat has been turned into flour. The starch is transformed into glucose and enzymes are added to release the glucose from the starch, which makes it available for fermenting into ethanol.

People and Places

- Community and Stakeholder benefits:
 - Supporting local businesses during procurement
 - Early and frequent engagement



Thank you

Questions?