

Sustainability Symposium

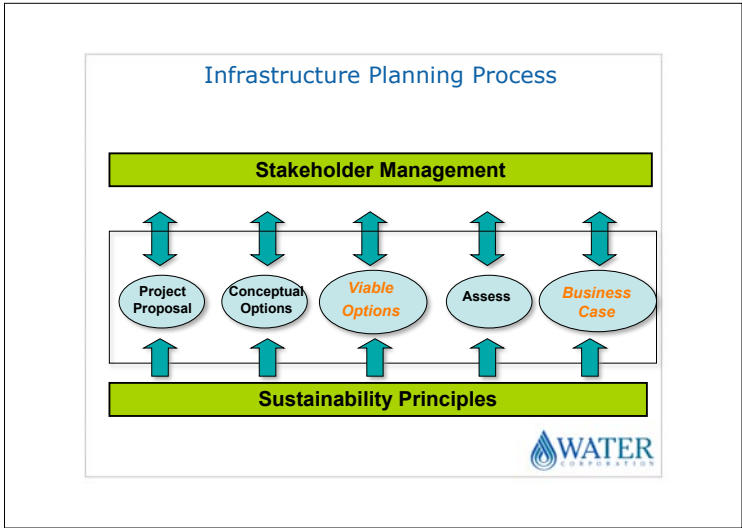
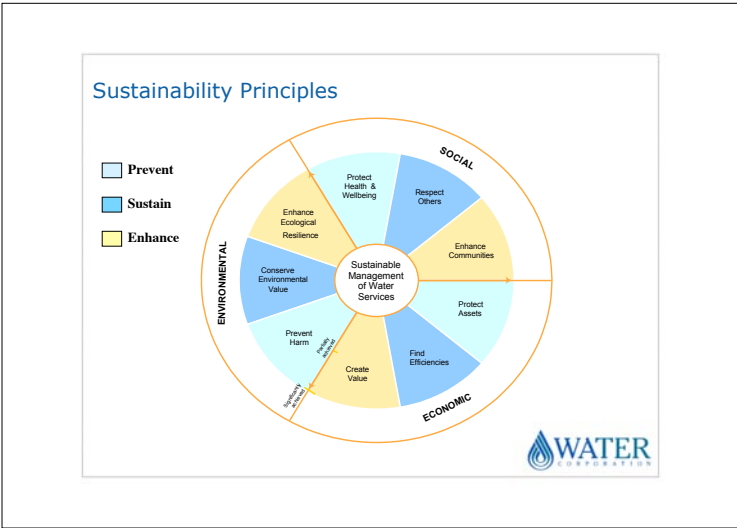
Integrating Sustainability into Infrastructure Planning

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We deliver
Nearly **350 GL** to over 300 communities

We operate
101 wastewater treatment plants
and treat over **140 GL**
of wastewater per year



Sustainability in the Planning Process

Developed a process to ensure consistency of application:

- Series of 8 guidelines, and
- A methodology to assess sustainability of options.

- Transparency and communication.
- Sustainability assessment is embedded into the infrastructure planning process.



Sustainability Guidelines

- Environment:
- Clearing native vegetation
 - Discharges to the environment
 - Energy
 - Water for the environment



- Social
- Social Values
 - Heritage

- Economic
- Affordability
 - Economic Impact



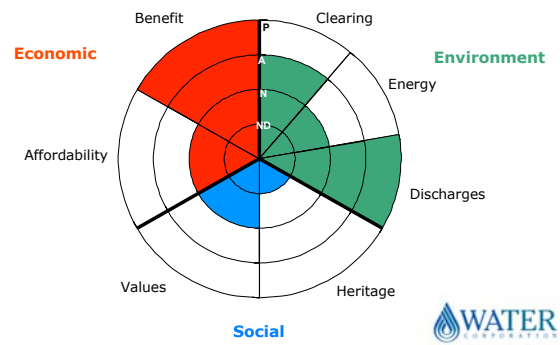
Clearing Native Vegetation

Increasing acceptability →

Not Desirable	Negotiable	Acceptable	Preferred
In National Parks, or where DRF, RAMSAR, or TECs exist.	Vegetation is in good condition but not recognised as significant.	Vegetation is degraded and has low ecological value.	No clearing of native vegetation OR Opportunity for enhancement



Presenting Outcomes

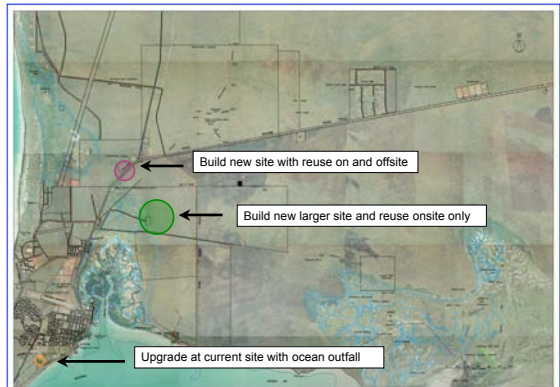


Case Study: Broome Wastewater Planning

- Wastewater treatment plant is at capacity.
- Growth is predicted to increase – tourism



Site Options



Option 1: Upgrade at current site with ocean outfall



- Upgrade from pond system to activated sludge
- Ocean outfall into Roebuck Bay
- \$73 M

Benefits:

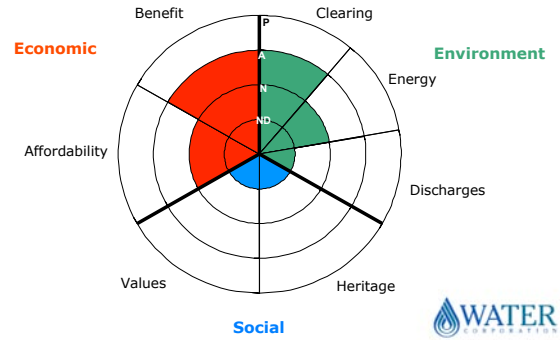
- Minimal to no clearing
- Gravity system reduces energy consumption

Negatives:

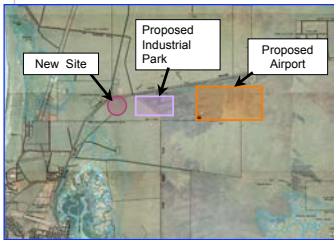
- Ocean disposal
- RAMSAR site
- Aboriginal heritage issues



Option 1: Upgrade at current site with ocean outfall



Option 2: Build new site with reuse on and offsite



- Pond system with small storage
- Disposal to woodlots and industrial reuse
- \$46 M

Benefits:

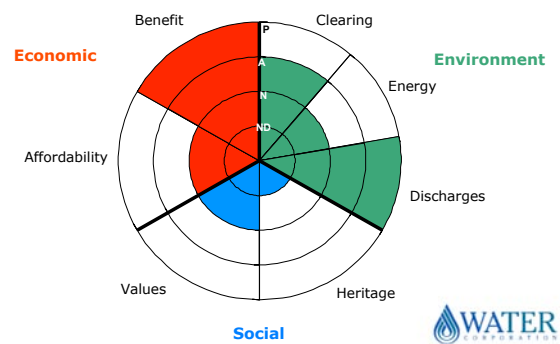
- 95 ha owned site
- Close to re-user opportunities
- No significant flora / fauna

Negatives:

- Aboriginal community close to site
- Potential for odours & overflows



Option 2: Build new site with reuse on and offsite



Option 3: Build new larger site with reuse onsite only



- Treatment: pond system with large storage
- Disposal onsite
- \$46 M

Benefits:

- 200ha owned site
- Ponds in centre to maximise odour buffer
- Heritage clearances OK
- Reuse opportunities
- No significant flora/ fauna
- Neighbouring pastoral station for reuse.



Option 3: Build new larger site with reuse onsite only

