



Tourism contributes significantly to the Australian and Asia Pacific economies. The tourism industry has a positive impact on economic growth and employment, however, it is also a resource intensive industry that leaves a big footprint on the environment.

The environmental challenges for the tourism and resort sector include excessive water consumption, discharge of untreated water, generation of solid waste, degradation of land and ecosystems, and potential damage to marine biodiversity. With the adoption of environmental sustainability strategies the sector is becoming increasingly sustainable through more responsible environmental practices. These changes are the basis to protect the natural resources and biodiversity in the area, provide a more environmentally friendly service to the customers and enable the most efficient operational approach.

Sustainable Solutions International (SSI) has extensive experience in engineering and environmental planning delivering sustainable infrastructure for the Resorts and Tourism Sectors in Australia and the Asia Pacific. SSI provides solutions focusing on the needs and resources available for resorts on a variety of scales and the tourism sector. We take into account local communities, tourists and the environment. SSI has developed solid waste and energy harnessing systems, water and wastewater master plans, irrigation schemes, audited operational and management procedures allowing clients to implement the most cost effective and suitable solutions.

### Benefits of a sustainable approach to the Resort & Tourism industries

- Reduce operational expenditure and increase profit by adopting management strategies to reduce resource consumption;
- Reduce environmental impact through efficient water, wastewater, solid waste and energy management; and
- Enhance environmental image through forward thinking design and environmental management. This adds the marketing factor of being an environmentally friendly destination.

### WHAT DO WE OFFER?

The objective of our service is to deliver the most cost effective solution to protect the public health and safeguard the environment, focusing on the destinations needs and available resources.

### Water Services

As a part of our services SSI offers:

- Feasibility studies for new developments, upgrades and operational changes;
- Planning and negotiating with government agencies and environmental authorities to obtain the necessary licenses and permits to protect the development and ensure compliance;
- Solutions for treatment and reuse of wastewater through adopting innovative technology and systems to deliver high quality recycled water for a range of uses;
- Solutions for drinking water treatment and reverse osmosis treatment plants to provide high quality potable water inline with Australian Drinking Water Guidelines and relevant license requirements;
- Water Audits to assess historical and current water use for individual operations. Based on the results, methods of improving water efficiency can be identified. Audits can be carried out periodically to verify compliance with environmental guidelines, legislation and to allow for continuous improvement;
- Equipment procurement, construction management, commissioning, asset management and maintenance of plants; and
- Development of documentation to manage your plant, irrigation or reuse scheme.



Asset & Maintenance Management	Design Construction Management & Commissioning	Efficiency Audits & Cleaner Production	Environmental Compliance & Licensing	Master Planning	Plant Assessment & Optimisation	Sustainable Resource Management	Risk Assessments (HACCP & HAZOP)
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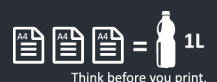
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### Solid Waste Services

SSI offers and delivers solid waste services to clients that account for environmental, social and economical benefits of implementing a well suited Solid Waste Management Plan.

As a part of our solid waste services SSI offers:

- Solid waste audits to identify solid waste streams and composition of waste produced. During this process the engineering team also identifies areas of improvement regarding solid waste generation, disposal and opportunities to convert waste to energy;
- SSI Solid Waste Management Plans are inline with the EPA hierarchy for solid waste management: Avoid, Reduce, Reuse and Recycle;
- Training and awareness to educate staff and consumers about solid waste reduction, management and disposal; and
- Selection of best suited solid waste management technologies based on cost effectiveness, labour, equipment, consumables and civil works.

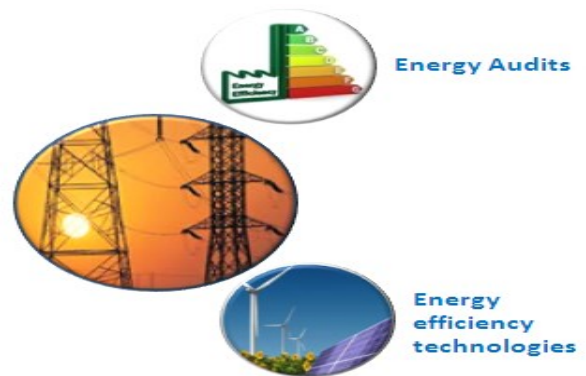


### Energy Services

As a part of our solid waste services SSI offers:

- Energy audits to assess:
  - ◊ Energy consumption;
  - ◊ Energy intensive activities; and
  - ◊ Analyse energy usage.
- Energy audits are classified as Level I, II or III depending on the level of accuracy. SSI has a qualified team that can provide any level;
- Identification of energy saving opportunities through the implementation of renewable energy systems, such as:
  - ◊ Solar energy;
  - ◊ Wind, wave and geothermal energy harvesting; and
  - ◊ Waste to energy (through the utilisation of anaerobic digestion to generate energy from waste treatment).

## Resorts & Tourism



SSI can provide strategic documentation such as commissioning plans, operation and maintenance manuals, and Standard Operating Procedures to provide direction on how to manage environmental performance or results. The documentation provided by SSI can also include monitoring specification requirements, incident reporting and emergency response procedures.

### Key Projects

#### Emirates Wolgan Valley Resort and Spa, NSW

Wolgan Valley Resort and Spa is located less than 3 hours drive from Sydney, and the area is bounded by the Blue Mountains World Heritage Site. Emirates Wolgan Valley Resort & Spa offer a range of activities to provide guests with an unsurpassed wildlife retreat experience. The Resort and Spa features: 40 individual villas, spa and gymnasium, meeting and business facilities, and accommodation for over 100 live in staff.



SSI managed initiatives including:

- Water and wastewater master planning and Government approvals;
- The design of the wastewater treatment plant and the recycled water irrigation scheme;
- Development of the Drinking Water Quality Management Plan and the Environmental Management Plan for the site; and
- Asset management and maintenance to the WWTP and drinking water treatment plant.



## El Questro Wilderness Park, WA

El Questro Wilderness Park is located in the East Kimberly area within Western Australia. The resort is managed by Delaware North El Questro Pty Ltd and consists of 3 individual resorts.

SSI was engaged by Delaware North to upgrade the wastewater treatment plant and an effluent disposal system. During the process SSI worked together with government agencies to gain the required approvals and manage the license compliance.

## Great Keppel Island Resort, QLD

Great Keppel Island is located slightly north of the Tropic of Capricorn and 7km off the coast of Rockhampton, Queensland. The Island is the largest of the Keppel Group, which consists of 14 islands. It has an area of approximately 1400 hectares (14,000,000m<sup>2</sup>) and 17 beaches. The new master planned resort comprised of 700 luxury villas, 300 luxury apartments, a 18 hole golf course, 250 suite beach front hotel, a commercial air strip, 250 berth marina and a premium retail precinct surrounding the marina.



SSI conducted the following activities:

- Assed the initial feasibility of the scheme;
- Evaluated payback periods for recommended installations;
- Prepared an overall Sustainable Water, Wastewater and Solid Waste Management Plan;
- Developed a Site Based Management Plan to support the State significant status projects report.
- Assessed the existing water and wastewater infrastructure; and
- Utilised GIS technology on the island to map all water and wastewater.

## Heron Island Resort and Wilson Island Resorts, QLD

Heron Island is located in the southern Great Barrier Reef. Currently Delaware North Companies Australia Pty Ltd holds the lease for the Resort.

SSI conducted the following work:

- Provided consultation during the upgrade of the wastewater treatment plant;
- Assumed responsibility of the design, construction management and commissioning of the drinking water chlorine boosting plant; and
- Prepared a Site Based Management Plan and a Solid Waste Management Plan for the site.

## The Hilton Ari Beach Resort, Maldives

The Ari Beach Resort and Spa Maldives is a Six Star hotel consisting of 175 rooms with 350 live in staff. The resort was master planned and redeveloped by Hilton Hotels. The aim of the project was to be one of the best examples of environmentally sustainable, economically feasible and socially responsible resort projects in the world.

SSI conducted the following consulting engineering services for the resort:

- Conducted site visits and detailed infrastructure audits of the existing water, wastewater and solid waste schemes on the island;
- Prepared Sustainable Water, Wastewater and Solid Waste Master Plans for the new resort;
- Prepared schematic design and costing for the Water, Wastewater and Solid Waste Master Plan; and
- Prepared the detailed design of the water and wastewater treatment plant (WWTP).



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