

Sustainable Solutions International Pty Ltd (SSI) has a dynamic multidisciplinary team consisting of engineering professionals experienced in process, chemical, mechanical, environmental, electrical & civil disciplines. Services provided by SSI include development of commissioning documentation, pre-commissioning, commissioning, design and product quality verification, handover and training. Our extensive experience, dedication to safety and project management capability in a number of diverse industries allows us to offer professionalism, integrity and commitment in order to exceed our client's expectations.

## WHAT IS COMMISSIONING?

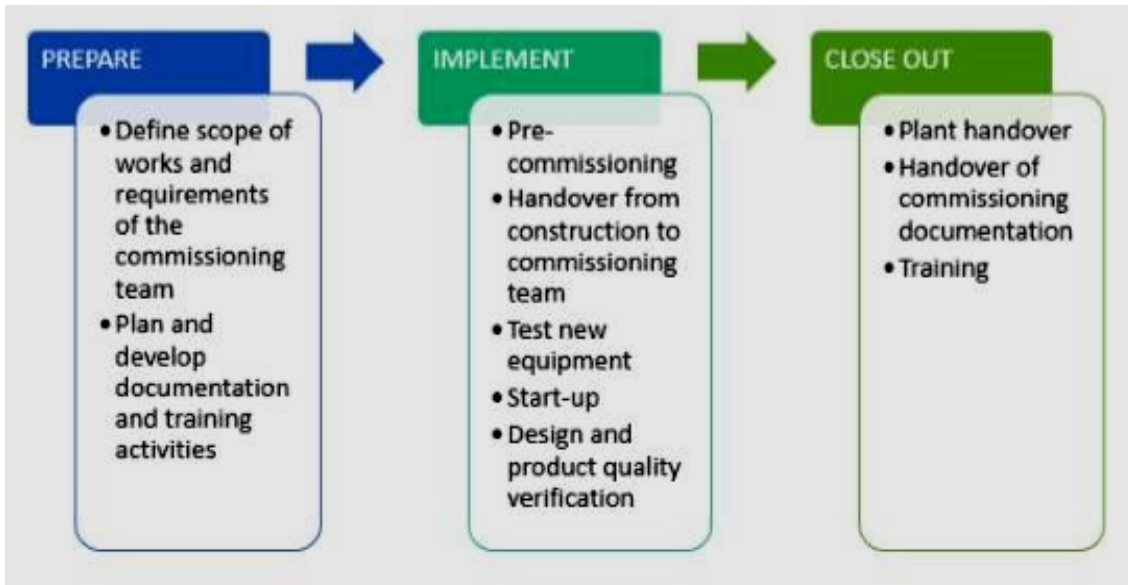
The commissioning process comprises of an integrated application of a set of engineering techniques and procedures to inspect and test every component of a facility, equipment or process, thus confirming that the plant can reliably produce high quality product according to specification.

## COMMISSIONING STAGES

### Stage 1 - Prepare

As part of the initial planning it is important to define the nature and scope of the project. During initial planning, SSI will analyze and assess the business needs and goals to be achieved. When objectives of the project are defined, a review of resources available, support personnel, project stages, activities to be carried out, deliverables, time frames and budgets will be conducted & a project baseline developed.

Preparation is essential to identify cost and resources required to effectively manage risk during project execution.



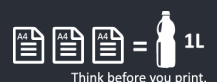
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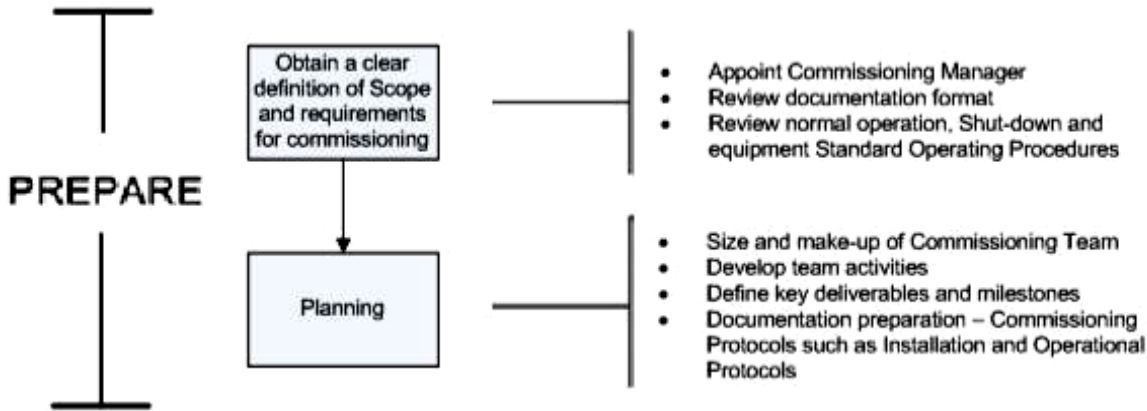
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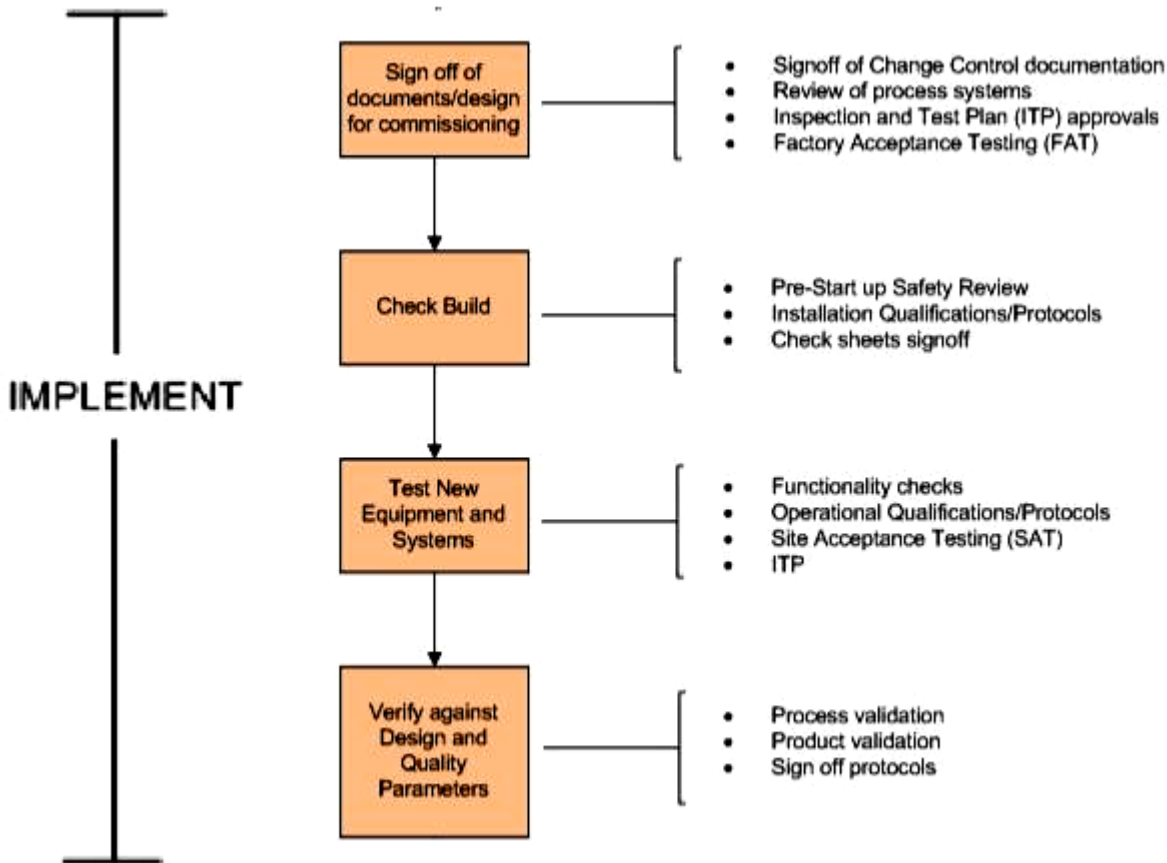
**Water.Energy.Waste.**





## Stage 2 - Implement

This phase, involves the execution of field activities such as installation checks and Pre Start-up Safety Reviews of the new building, infrastructure, equipment, instrumentation and pipework. The activities involved are: as follows:



## Commissioning Stage 3 - CLOSE-OUT

The final stage of the commissioning process is the close-out. SSI will ensure that all testing and system and trials are completed and that the plant or equipment has met its acceptance criteria prior to handover.

# Plant Commissioning

CLOSE-OUT

Handover

- Plant has met acceptance Criteria
- Handover commissioning documentation
- Complete "As Built" drawings
- O&M manuals and SOPs completed
- Training of maintenance and operational staff

Operational and Maintenance Manuals including Standard Operating Procedures (SOPs) are prepared for the end users and training of operational and maintenance staff is conducted to ensure personnel are competent and able to operate the equipment or plant.

## KEY PROJECTS

SSI has successfully delivered commissioning services and experience to numerous businesses including the following:

### Emirates Wolgan Valley Resort, NSW

Wolgan Valley Resort and Spa is located less than 3 hours drive from Sydney, the area is bounded by the Blue Mountains World Heritage Site. Emirates Wolgan Valley Resort & Spa offers 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 was appointed by Emirates Resort and Spa to commission:

- Water treatment plant infrastructure;
- Sewer collection and pumps station;
- Wastewater Treatment Plant;
- Chlorine boosting plant;
- Effluent irrigation system;
- 9,000L wet weather storage tank; and a
- Remote monitoring system.



### Exxon Mobile, Papua New Guinea

**Project Value Managed by SSI: \$4.0M**

The Papua New Guinea (PNG) Permanent Facilities Compound (PFC) is an aspect of the broader PNG Liquefied Natural Gas (LNG) project to commercialise gas reserve available within PNG. Exxon Mobil designed and installed the PFC as a permanent office, support centre and community facility for those working within the PNG LNG projects. The compound is located in Port Moresby and includes wastewater and



recycled water treatment, water reuse and diesel fuel supply for light vehicles and generators.

Leighton's Ltd (PNG) contracted SSI to perform commissioning facilities at the PFC. D&C Services requested SSI to provide technical project management and engineering review of the water treatment plant and wastewater treatment plant.

SSI witnessed and signed off the installation and commissioning of the:

- Factory Acceptance Testing of Motor Control Units (MCUs) for water and wastewater plants;
- Commissioning of the Micro Filtration Water Treatment Plant;
- Commissioning of the Wastewater Treatment Plant;
- Diesel storage and fuel transfer systems.

## The Concourse Chatswood, NSW

**Project Value Managed by SSI: \$X.XM**

### Project Summary:

The development included an Integrated Water Management System, comprising flood mitigation and water reuse, with a 5,000 kL storm-water tank. Approximately 18-20 ha of urban catchment and 1 ha of site provides source water for the scheme.



### The works conducted by SSI on this project included:

- Prepared the plant commissioning plan and managed plant commissioning; and
- Reviewed Plant Operation and Maintenance Manuals and Standard Operating Procedures ensuring and engineering sign off.



## Heron Island, QLD

Heron Island is located in the southern Great Barrier Reef. Delaware North Companies Australia Pty Ltd hold the lease for the Resort. SSI was engaged to commission the following projects for Heron Island:

- RO Desalinated Water Treatment Plant;
- Drinking water chlorination plant;
- Water supply pumps and schemes;
- Recycle water scheme including supply pumps;
- Environmental Management System;
- Sewer pumps stations and LV boards;
- Distribution boards;
- Radio alarm and monitoring system;
- Salt water fire fighting system including pumps.



## BP Blacksoil, Ipswich QLD

The BP Blacksoil Sewage Wastewater Treatment Plant WWTP treats sewage from the BP Service Station. The wastewater is processed to a Class A+ standard for water quality and water reuse in the amenities on site. Excess water is irrigated on the neighbouring acreage. The process equipment that were commissioned included:

- A Storage Balance tank;
- Anoxic, Aerobic and Clarifier process vessels;
- Ultra Filtration and UV disinfection units;
- An irrigation system; and
- PLC & distribution control boards for the WWTP.



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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