

Appendix 6.1.1 Solo Water Organisational Chart



### **STRUCTURE OF APPLICANT CORPORATION - NETWORK APPLICANT**



Percentages shown are the shareholding held by each entity.

Network Operator - Catherine Hill Bay Water Utility

Operations & Maintenance - will be carried out under a contract to Solo Water



Appendix 6.1.2 Experience

A Solo Waste Recovery Group Company Profile B Solo Water Company Brochure





**Company** Profile



SOLO WATER Company Profile



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### 1 Company Profile – Summary

Solo Resource Recovery forms part of an Australian owned and operated family business empire which has operated since 1932. Established locally in 1990, Solo Resource Recovery offers a range of waste and resource recovery services to industry, commerce and homes throughout New South Wales, South Australia and Victoria. These services include domestic, recycling and green waste services, industrial bins, liquid and medical waste transfer as well as other customised waste management solutions.

We pride ourselves on our ability to be innovative, enabling development with market demands and industry leadership by being customer focused, technologically advanced, self-sufficient and service orientated. As the first Australian owned and operated private waste and recovery collection operator to achieve 3<sup>rd</sup> party accreditation for our Quality Assurance System based on AS/NZS ISO 9001 we show our dedication to these initiatives. It is our goal to maintain this standard by investing the time, effort and resources required to ensure that we are the best at what we do.



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Our team of Directors is second to none and has a combined experience of over 100 years in the industry. Head Office, which operates from Chinderah, in northern New South Wales, is made up of 4 senior managers and over 40 employees, with the Solo Waste Group of Companies boasting employee numbers of 420 in 12 Branch locations around Australia.

As a constantly growing company it is an exciting time for us and we look forward to building upon the success that we have already achieved.



#### 2 **Mission Statement**

### 'To be an industry leader in innovative, environmentally sustainable and service focused waste management solutions'

Solo Resource Recovery is a proud family owned Australian Company with a long and distinguished history of service to the Community and waste industry.

Solo Resource Recovery is committed to:

- Striving for excellence in all that it pursues. \_
- Fostering the continued development of safety, technology, efficiency and productivity throughout the Waste Industry.
- The betterment of its staff through training programmes; recognising individual needs \_ for development.
- Encouraging personal recognition of the value of staff, including for their effort and contribution to the Community.
- Fulfilling the aims and objectives of the mission through constant re-evaluation.

### **Specific Objectives**

- To interact in a positive way with the Community and Councils.
- To encourage greater Community awareness and participation in recycling and waste minimisation to conserve the earth's finite resources.
- To maintain integrity and the respect of the Company throughout the Community.
- To provide and facilitate a technically advanced and economically efficient waste collection, processing system, Waste Water collection, Waste Water & Water Treatment and recycled water to the Community.
- To maintain an unblemished industrial relations record.

Solo is certified to the Quality Standard AS/NZS ISO 9001:2008 and will undergo certification to obtain Safety and Environment Certification to the Standards AS/NZS 4801:2001 and AS/NZS ISO 14001:2004 respectively in September 2012.











## 3 Declaration of Australian Ownership

Solo Resource Recovery is a wholly owned Australian business. All shareholders of Solo Resource Recovery are Australian citizens. All Directors of Solo Resource Recovery reside in Australia.

Solo Resource Recovery does not have any foreign investments and this does not channel any monies away from Australian shores. Where possible the Company strives to purchase and support **Australian Made** goods and services from **100% Australian Owned** Companies. Solo will work to ensure that the service, innovation and awareness unique to Australian Companies continue to be well represented.

Solo Resource Recovery is a member of the Australian Owned Companies Association (AOCA) and actively supports its philosophies and objectives.

Solo Resource Recovery is also a member of the:

- Victorian Waste Management Association
- Waste Contractors Association of QLD
- Waste Contractors Association of NSW
- Business SA
- Employers First NSW





## 4 Legal Form

Corporation:	Rico Enterprises Pty Ltd Trading as Solo Resource Recovery,		
	Solo Water Pty Ltd		
	ACN 110 348 537		
	ABN	62 398 515 816	
Registered Address:	86 – 88 Chinderah Bay Drive		
	Chinde	rah NSW 2487	
Date of Incorporation (Solo):	1 <sup>st</sup> July	, 1990	
Establishment of Business:	May, 19	932	
Directors:	R.W. Richards, R.E. Richards, S. Mcguren,		
	W. Willi	amson, W. Owen	
Secretary:	G.L. Ri	chards	



## 5 Company History and Current Structure

### 5.1 Our Founder – Joseph John Richards

Joe Richards was one of eight children and at an early age worked in coal mines. In 1913 at the age of 19 he migrated to Australia and joined his uncle in Kalgoorlie.

In 1932, Murwillumbah Municipality called Tenders for the sanitary service contract. Joe Richards was successful in his Tender and on May 25, 1932 became the first contractor to Murwillumbah. With his price of five pence, one farthing (5c), he transformed the service from Council operated horse and dray to automotive vehicles.

### 5.2 Company History and Background

Solo and its manufacturing arm **Rico Recovery Systems Aust. Pty. Limited** (formerly Jayrich Engineering) are still based at Chinderah, Northern New South Wales on Joe Richards' original workshop and depot site.

The history of the Richards family, commencing with Joseph John, covers three generations having in excess of 80 year experience in the waste industry.

This experience and initiative to introduce automation into the industry has established the Company as a leader in technology and equipment that others have found necessary to follow.

### Councils utilising the systems and technology of SOLO RESOURCE RECOVERY benefit from the most effective and efficient solid and liquid waste management solutions available in Australia.

Solo Resource Recovery, unlike the multi-national or overseas competitors, is not remote from the public to which it is committed. All Directors and Managers are available at any time for all enquiries.

Solo Resource Recovery is financially sound and committed to providing and maintaining a standard of excellence in the waste industry. The Company's growth has been conservative coupled with overall service improvements for existing customers.

Solo's history is dominated by innovation. The waste collection, processing operations and liquid waste treatment have assisted the engineering operation by trialling new equipment throughout the development process. Subsequently, it has enjoyed the benefits of the technological developments as and when they are perfected.

The fact that Solo Resource Recovery has achieved significant innovations through the internal processes of product development, trialling and refinement is testimony to our claim to be leaders in the manufacture of proven waste handling equipment, waste collection techniques, Liquid waste treatments and recycling.



### 6 Noted Achievement

- (a) 1932 Founder Joe Richards was one of the first waste contractors to convert from Horse and Cart collection to the Automobile.
- (b) 1950s Converted fleet from Open to Covered vehicles thereby eliminating the problem of waste being blown from the vehicle during transit.
- (c) 1960's Introduced Unlimited 55L bin policy for householders.
- (d) 1965 Developed and introduced the first Automatic Compaction/Side Loading Vehicle. It was around this time the western world opted for rear loading collection vehicles. Our founders realised the inherent advantage in side loading vehicles (1 person operated) as against rear loaders (3-4 persons).
- (e) Designed and developed a mechanised vehicle to facilitate collection for Clean-up campaigns.
- (f) 1984 1986. Revolutionised the Waste Industry in Australia (in association with Mr Steve Guest) with the design, development and implementation of the 1 Man S.O.L.O. system. Government Statutes, Regulations and Awards re-written to accommodate this system.
- (g) 1991 Designed and developed the Richards Simultaneous Collection of Recyclables and Refuse (SCORR®) system using a segmented bin system for simultaneous collection of either paper/cardboard and other co-mingled recyclables or garbage and co-mingled recyclables in a divided 240 litre MGB.
- (h) 2012 Added Water & Waste Water Utility Services to its Liquid Waste operations
- (i) 2012 Celebrating 80 years of service in the waste Industry.
- (j) One working day has not been lost due to industrial disputes since our inception in 1932.
- (k) Solo has not had any previous contractual defaults or terminations since its inception in 1932.



## 7 Management and Staff

### 7.1 Management

Idwall Richards, Tom Richards, and their sister Joyce Stephenson were the original directors of J.J. Richards & Sons Pty. Limited. The current Solo Board includes:

**Idwall Richards - Chairman of the Board**, was originally manager of J.J. Richards & Sons and subsequently Managing Director of J.J. Richards & Sons Pty. Limited following incorporation. He held this position for 31 years during which he established J.J. Richards & Sons as a waste contractor with excellent service standards, industry leading innovation and a reputation for reliability and integrity.

With his brother Tom, their experience in the waste industry is unsurpassed and as a result, both are regarded throughout the industry as two of the most knowledgeable, honourable and successful operators in Australia.

**Robert Richards - Commercial Director**, has served with the Company since 1984. He holds a Bachelor of Business (Accountancy) degree from the University of Southern Queensland. He has continued to operate Solo as an innovative, reliable waste contractor providing high quality services to both local government and the business community. Robert has successfully introduced the SCORR® and SPARRC® divided truck systems into South Australia and New South Wales; systems that have proven to be the most cost effective and user friendly of all kerbside collection systems.

**Rhys Richards - Engineering Director**, has served with the Company since 1979. He holds an Associate Diploma in Engineering (Distinction) from the Queensland University of Technology. Rhys has continued to develop the methods by which waste and recycling is collected in Australia, working towards higher levels of recycling yield, more efficient trucks and collection systems, safer conditions for collection staff and ultimately a state of the art collection system for Shire residents based on proven technology.

**Gillian Richards - Administration Director**, has served with the Company since 1976. Gillian dedicates herself to ensuring that accurate records are kept and that the intention of contracts is followed with regards to the administration. She has extensive experience in WH&S procedures, GST, insurances, rise and fall calculations, staff management and databases. Gillian is committed to the staff and customers.

**Scott Mcguren – Operations Director**, has served with the company since 1981. He holds a Trade Certificate in Metal Fabrication and is a Justice of the Peace. Scott has been involved with the Company from early design and development stages of equipment that is currently used by the Company today. Scott has a broad knowledge of the waste and recycling industry throughout Australia. He has managed the Operations of the business over the years including domestic collections, Commercial Solid and Liquid Waste services and Liquid Waste Treatment plants as well as Landfill and Transfer station operations. Scott has a can do attitude and prides himself on the quality of service provided to the Companies customers.



**Wayne Williamson – Water Project Director**, has a background with over 40 years working in the Mechanical Services Industry. He holds a Licensed Plumber No: 31396 a Registered Plumbers License in Mechanical Services, Gas Fitting, Sanitary Services and Applied Supervision Certificate, Australian Institute of Management 1977. Wayne has experienced every facet of the contracting industry with 30 years in senior executive role can expose. The last 16 years has been specifically spent working within the Waste Water Industry designing, constructing, operation and management of Water & Waste Water Treatment Plants and private utility retail operations in Australia.

**Wynn Owen FCPA:FFin:FAICD – Water Finance Director**, with over 27 years business experience, with varying senior executive management roles over the last 22 years, for publicly listed and private companies, reporting directly to the Boards of large multinational companies operating in the oil, gas, heavy manufacturing, mining and construction industries. He holds a Bachelor of Business Studies 1978, Securities Institute of Australia: Graduate Diploma in Applied Finance & Investment 1996, Australian Institute of Australia of Company Directors Diploma 2003. Over the last 10 years Wynn has concentrated on the Water & Waste Water Treatment Industry in construction and its operations.





### 8 Services Provided

- 1. Domestic / Municipal, Solid Waste, Commercial & Industrial processing and recycling management services.
- 2. Liquid Waste Services: Effluent removal services are operated in conjunction with most of the Council contracts undertaken, as well as commercial/industrial waste liquid pumping and processing and recycling services.
- 3. Design, Construct, Operate and provide water utility services to its customers for Water & Waste Water collection and recycling for domestic, commercial, industrial and open space irrigation reuse requirements.



Solo Water MBR Waste Water Treatment Facility







**Open Space Irrigation - Class A+ Domestic Reuse** 



- Recycling Systems: Solo has been involved in recycling of paper and cardboard since 1968. Solo have now designed, built and operated Material Recovery Facilities (M.R.F.'s) in New South Wales, Victoria and South Australia.
- 5. Customer Service Centres: Solo have 7 Customer Service Centres Australia wide which service over 1,000,000 household collections per week. They have been upgraded to the latest in CRM software programs and new contracts being implemented include links to in-vehicle data management and GPS systems.



Solo Resource Recovery provide over 52,000,000 Customer Pickups per Year

- 6. Organics processing services involving garden waste and kitchen waste.
- 7. Contaminated/Hazardous Waste Collection and Disposal.
- 8. Landfill sites/Transfer Stations: Management and operation of landfill sites and Transfer Stations is required under some major Council contracts. More than 25 sites are currently being managed by Solo.



## 9 Company Contact Details

Wayne Williamson
07 5447 4403
0428 303 537
wayne@solowater.com.au
1/19 Hill Street, Sunshine Beach QLD 4567
Mr Wynn Owen
03 5265 6003
0429 656 003
wynn@solowater.com.au
45 Dwyer Rd Gnarwarre, Vic 3221
Ms Kim Vartiainen
07 5447 4403
0427 320 106

### Email: kimv@solowater.com.au

### SOLO Resource Recovery Head Office:

Contact:	Scott McGuren
Phone:	02 66 747 656
Mobile:	0409 307 619
Email:	Scott.Mcguren@solo.com.au
Head Office:	P.O. Box 1427, Chinderah NSW 2487



Company Brochure



# SoloDelivering Small Scale DecentralisedWaterServicing Solutions in the Tweed Shire

Tweed Coast Decentralised Waste Water Strategy Plan for TSC



# SoloTechnologies to make the DecentralisedWaterServicing Options

## Solo Water has taken the combination of proven technologies such as:

- Reverse Osmosis Desalination WTP
- Ultra Filtration & Ultra Violet
- Membrane Bio Reactor WWTP
- Pressure Sewer collection systems
- DDC computer control systems

Solo water has packaged them into a unique process that provides significant benefits to the developer, councils, stake holders the community and the environment.



# **Solo Water Process**



**Duplex Pressure Sewer Unit** 



**DDC Control Panel** 



**DDC Panel Power Supply** 



WWTP Building



**MBR WWTP** 



**UV Disinfection Unit** 

# **Solo Water Process**



Ultra Filtration Class A+



Reverse Osmosis Class A+



Chlorine Contact & Storage Class A+



Multi Media Filter Ground Water



**EDR Desalination Ground Water** 



**Chemical Dosing** 

## **Solo Water Process**



Effluent Storage Class C



PE lined Class A Wet Weather Storage



**Pre- Filtration/Desalination Class C** 



**Open Space Irrigation** 



**MCC/DCC Control Panel** 



**DDC Graphics & Remote Monitoring** 

# **Solo** Water

## **Decentralised Servicing Options Better Value for Money**

\$ 35,966 Plus GST

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Total Indicative Capex (\$/Household)

	Cost Comparison Schedule Bu	dgets			
ITEM		DESCRIPTION		BAU	SOLO
۹.	Stage -1 , From 1 to 181 lots			\$	\$
<b>\-1</b>	IWMP			200,000	200,0
<b>\-2</b>	DERM License Application				500,0
A-3	Temp STP Upgrade based on 690 lots	Contribution \$9,090 pe	er lot	1,645,000	
<b>\-4</b>	Sewerage Pump Station & Rising main	n to STP 3.5KL		2,600,000	
A-5	Sewerage Head Works \$7,000 Per Lo	t		1,267,000	
A-6	Potable Water Head Works \$6,200 Pe	r Lot		1,222,000	
<b>\-7</b>	SOLO Stage-1			_	3,048,0
A-8	Potable Water Head Works \$6,200 Pe	r Lot x 60% Reduction		_	448,8
<b>\-</b> 9	Power supply, Potable main ext. Land	costs		-	615,0
				6,934,000	4,811,8
3.	Stage-2 From 181 to 400 Lots				
3-1	Contribution to new STP in 2016 - \$ no	ot known		-	
3-2	Sewerage Head Works \$7,200 Per Lo	t		1,576,800	
3-3	Potable Water Head Works \$6,200			1,357,800	
3-4	Potable Water Head Works 60% reduc	tion due to RC Water			643,1
				2,934,600	643,1
С.	Stage-3 From 401 to 1.200 Lots				
C-1	Sewerage Pump Station upgrade to ne	ew STP for 2,300 lots		4,000,000	
C-2	Potable water rising main upgrade from	n new reservoir		2,500,000	
C-3	Sewerage Head Works \$7,200 Per Lo	t		5,760,000	
C-4	Potable water head works \$6,200 per	lots		4,960,000	
C-5	Solo Stage - 3			-	4,963,0
C-6	Potable water head works 60% reduct	ion		-	1,984,0
				17,220,000	6,947,0
D.	Stage-4 From 1,201 to 2,300 Lots				
D-1	Sewerage Head Works \$7,200 Per Lo	t		7,920,000	
D-2	Potable water Head works \$ 6,200 per	lot		6,820,000	
D-3	Solo Stage 3			-	3,428,0
D-4	Potable water head works 60% reduct	ion		-	2,728,0
D-5	Land costs, power supply, etc			-	800,0
				14,740,000	6,956,0
			TOTAL AMOUNT	41,828,600	19,358,0
Capex		BAU	Solo Water		
Proces	s	\$ 18,166	\$ 8,758		
Potable Reticulation \$2,800 \$2,800		\$ 2,800			
Recycl	ed Water Reticulation	\$ 3,000	\$ 3,000		
Pressu	re Sewer Collection System	Simplex \$ 12,000	Duplex \$ 8,000		

\$ 22,558 Plus GST

## **Solo** Water Flexibility to Respond to Demand Growth

### Staged Industrial Development Elimbah East QLD



# SoloManaging Odour, Noise, Visual WWTPWaterwith in the Local Community



## **Sample: Surplus Effluent Irrigation Water** Management Plan



# SoloSample Surplus Effluent IrrigationWaterManagement Plan



## **Solo** Water Obtaining Environment Protection Licenses

SOLO water has already obtained License Approvals to operate as follows:

Authority	Approval/License	Location	Lots/ETS
EPA, VIC	Works Approval No. 60691	Forest Resort, VIC	700
EPA, VIC	Works Approval No. 65106	Fyansford, VIC	2 200
DERM, QLD	Service Provider No. SP 531	State of QLD	
DERM, QLD	ERA Licence No. SPDE0104361	ERA, Redlands,QLD	235
EPA, NSW	Operating Approval	Deep Creek, NSW	700
EPA, VIC	Operating Approval	Bridgewater, VIC	600





Authority	Location	Lots/ETs
PART/NSW	Catherine Hill Bay	600
EHP/DERM QLD	Elimbah East Industrial	2,500
PART/NSW	Bingara Gorge	2,000

# SoloIrrigation to Dispose of SurplusWaterTreated Effluent



# SoloMarketability of Decentralised SolutionsWaterwith Developers/Councils

- ✓ Lower cost, typically 30-50% versus BAU schemes.
- ✓ Smaller footprint, minimal buffer zone 80m to 100m distance required.
- ✓ Less sludge waste, typically 1.2%.
- ✓ No odour, no noise.
- ✓ Lower power usage.
- ✓ Less civil works.
- ✓ 24-hour remote surveillance and live data metering.
- ✓ Green, Environmentally sustainable community.
- $\checkmark$  No water restrictions.
- ✓ Assists development to gain 6-star Green rating.
- ✓ Provides Class 'A+' recycled water for domestic re-use.
- ✓ Open space Irrigation.



## **Solo** Water Class A+ Recycled Water



The recycled water quality is Class 'A+' water which can be used inside the house for toilet flushing, washing machine in addition to providing uncontrolled garden watering, car washing, fire fighting and community open space watering, golf courses, food irrigation and stock watering.

# SoloClass A+ Dramatically ReducesWaterPotable Water Consumption

The Solo water Class 'A+' water system reduces household consumption of potable water from approx. 672LPD to 268LPD = 60% less per day. This also means that existing infrastructure can service more customers & prolongs the working life of the assets.



# **Solo Water Recycling**

The Solo water solution uses this same water in the household many times over 7 to 8 times.



## **Solo** Water Councils & Other Stake Holders

Working with Councils and other stake holders (Government Incorporated Water Utilities) is a vital part of the decentralised schemes.

In NSW the IPART licensing under the WICA Act has made the introduction of such schemes much easier by amending section 68 of the planning act has reduced the risk for decentralised systems. Solo Water is continually entering into agreements with such organisations for supply agreements mainly potable water, easement access, DA changes required under the Planning Act . Some of the Councils and other stake holders we have worked with are(Solo Resource Recovery has currently over 20 contracts with local government in the eastern & southern states).

Geelong City Council	VIC
Daylesford Regional Council	VIC
Redlands City Council	QLD
Loddon Shire Council	VIC
Lake Macquarie	NSW
Tweed Shire Council	NSW
Morton Bay Regional Council	QLD
Murray Shire Council	NSW
Gladstone Regional Council	QLD
Unity Water	QLD
Hunter Water	NSW
Central Highlands Water	VIC

# SoloTypical Services from ExistingWaterThird Parties HWC


# SoloTotal Decentralised Scheme PackageWaterincluding D&C, Service Provider & Retail<br/>Model

Solo water undertakes every stage of the process:

- 1. The total risk can be transferred to Solo water.
- 2. Our Technology and IP are protected.



## **Solo** Water Total MSP Offer





- Solo Water provides Leda with a total turn key package.
- Developer provides financing and securities.
- Control of time line application.
- Staged Plant & roll-out services enables cash outflow to be phased over time for the developer.
- Solo Water provides retail charges at the local cost.
- Detailed risk mitigation plans have been established.
- Solo water is a "Green solution" with significant marketing advantages providing recycled water and no harm to the environment
- This gives the Development a distinctive market edge.

## SoloThe Solo Water SolutionWaterRisk Management

In the Solo water solution, all risks associated with approvals, design, construction, operation, licensing, retail and ownership is taken over by Solo water.

•A Private Water Utility – is responsible for all the risks normally passed on to the public utility in the business-as-usual option.

•In the unlikely event where the Private Water Utility can no longer supply water cycle services to its customers, a step in clause would apply.

•The RoLR arrangement guarantees service continuity by providing that a licensed retail supplier or a public water utility be appointed as a retailer of last resort (e.g. TSC).

## **Solo** Water

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Appendix 6.1.3 Key Personnel

A Summary Table and Solo Water Position Descriptions B Harvest WMC Company Profile C PSS Project Reference List D Systemax Attributes and References E Planit CV

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## **Overview of Key Solo Water Team Members**

Position Title	Incumbent	Skills & Experience
Solo Water Project Director	Wayne Williamson	Wayne brings a wealth of experience and knowledge to the role with over 40 years working in the Mechanical Services Industry, in particular the last 17 years within the waste water industry. Over this time Wayne's roles included the responsibility for;- industry designing, constructing, operation and management of Water & Waste Water Treatment Plants in both public and private sector operations. Wayne holds a Licensed Plumber No: 31396 a Registered Plumbers License in Mechanical Services, Gas Fitting, Sanitary Services and Applied Supervision Certificate, Australian Institute of Management 1977. Please refer to the following position description for Solo Water Project Director.
Solo Water Finance Director	Wynn Owen	With over 30 years business experience, the last 10 years within the Water & Waste Water Treatment Industry. With varying senior executive management roles over the last 22 years, for publicly listed and private companies, reporting directly to the Boards of large multinational companies operating in the oil, gas, heavy manufacturing, mining and construction industries. He holds a Bachelor of Business Studies 1978, Securities Institute of Australia: Graduate Diploma in Applied Finance & Investment 1996, Australian Institute of Australia of Company Directors Diploma 2003. Please refer to the following position description for Solo Water Finance Director.
Solo Water Operations Manager	Alan Irving	Experience in the Waste Water Industry 18 years and is a licensed plumber in NSW. Alan has worked with this company for over eight years as a Plant operator and now as our Operations Manager in overseeing the operation and maintenance of our WWTP, pressure sewer collection systems, potable water & recycled water reticulation systems. Alan role is to oversee due governance is taking place especially in daily reporting, testing and preventative maintenance. Part of his role is to assist our customer service team in making sure customers issues are being addressed in responsible time frames.
		Please refer to the following position description for Solo Water Operations Manager.
Solo Water Construction Manager	Ross Pascoe	Experience in the Waste Water Industry 24 years and is a licensed plumber in NSW. Ross has worked with this company for over ten years as a site supervisor and site manager mainly building WWTP and pressure sewer collection systems.
		Responsible and accountable for organising, constructing water & waste water plants & piping systems including potable water reticulation, recycled water reticulation and pressure sewer collection systems.
		Please refer to the following position description for Solo Water Construction Manager.
Solo Water Site Supervisor	Kris Saunders	Kris has 7 year experience and responsible for planning/programming, organising, constructing water & waste water plants & piping systems including potable water reticulation, recycled water reticulation and pressure sewer systems. Provide assistance to the Construction Site manager in organising, constructing water & waste water plants & piping systems including potable water reticulation, recycled water reticulation and pressure sewer collection systems
		Please refer to the following position description for Solo Water Site Supervisor.
Consultant – Planning Planit Consulting P/L	Adam Smith	Planit Consulting are responsible for all planning and approvals associated with Solo Water schemes. Planit is an integrated development consultancy, offering an innovative combination of planning, landscape architecture, design and environmental services. Our blend of project management, planning and design expertise provides exceptional value to clients. Our people offer unmatched depths of experience, enabling us to streamline and resolve complex projects. Our clients know they can depend on Planit Consulting to deliver a total planning, landscape design and project management service. Planit Consulting has a strong record of providing highly successful development outcomes underpinned by our commitment to sound project management and the delivery of quality services to our customers. For more information refer to the attached Planit Consulting P/L capability statement and CV for Adam Smith.



Position Title	Incumbent	Skills & Experience	
Consultant – Environmental Engineer Harvest Water	Brad Irwin	Harvest Water Management Consultants P/L specialise in the providing environmental engineering support services to water industry and land developer clients in the planning, design and operation of decentralised water, wastewater and water recycling systems. For more information refer to the attached Harvest WMC P/L company profile.	
Management Consultants P/L		Brad is an environmental engineer with over 10 years experience in decentralised water and wastewater systems in both the public and private sectors. Brad's experience with decentralised schemes was developed working with MidCoast Water on the NSW Small Towns Sewerage Program and later as a consultant specialising in decentralised and remote solutions for water and wastewater management. Brad holds current environmental engineering certifications with MIEAUST, CPENG, NPER and RPEQ.	
		Within the Solo Water team Brad's role encompasses the following:	
		<ul> <li>Infrastructure planning associated with new schemes;</li> <li>Water and pollutant balance modelling for effluent irrigation and RO reject evaporation systems;</li> </ul>	
		<ul> <li>Preparation of management plans for potable water, recycled water &amp; sewerage;</li> <li>Assistance with commissioning, validation and ongoing process improvements of the Solo Water MBR and AWTP systems.</li> </ul>	
		<ul> <li>Overseeing ongoing monitoring and compliance with management plans and license requirements;</li> <li>Contributing to the continuous improvement of all Solo Water schemes through ongoing review and assessment of operational data and incidents as they arise.</li> </ul>	
Consultant - Networks Pressure	Steve Wallace	Pressure System Solutions P/L (PS Solutions) specialises in working with clients to implement Pressure sewerage and potable and recycled water systems. Our projects routinely involve many of the key aspects required for the Catharine Hill Bay project.	
Service Solutions P/L			The unique value PS Solutions P/L provides clients is confidence of the desired project outcome will be achieved. As such we continually strive to get it right by delivering the best value solutions. This is demonstrated by our extensive project reference list and number of recurring business and multiple project commissions undertaken.
		PS Solutions P/L in-depth understanding has been generated from leading edge innovative design and first principles research. Our team has delivered all aspects of numerous projects; including master planning, policy development, collection network mains and property design, property auditing, construction supervision, control systems, sewage pumping stations, rising mains, project construction and operation of these systems.	
		PS Solutions P/L understands each step in a project vertical delivery stream because of our unequalled extensive and broad experience in delivering Pressure sewerage systems.	
		Another approach PS Solutions adopts is to design a system to facilitate longevity of the pumps.	
		PS Solutions P/L is an innovative group having developed many industry firsts in this field; however we are also conservative when needed and very aware of the long term dangers of pushing engineering principles where variable boundaries exist.	
		The specialist skills required to deliver the Catharine Hill Bay project are all linked to the planning, project management, implementation and operation of the sewerage system and are PS Solutions core business areas.	
		Refer to the attached project reference list for examples of similar projects undertaken by PSS P/L.	
Consultant – Control Systems	Tony Campbell	Systemax are specialist mechanical/electrical and control system consultants and are responsible for the design, installation and ongoing operational support relating to the Direct Digital Control System.	
Systemax P/L		For details on Systemax P/L please refer to the attached company profile.	

**Job Description of Position** 

POSITION DESCRIPTION	<b>Solo</b> water	Solo Water Position Description Issue 2012 SW00002
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Position Title	Finance Director – Wynn Owen	SPA
Position Reports To	Solo Water Board	
Direct Reports to Position	General Employees and Management Staff	
Location	Solo Water Head Office / Operational Sites / Solo	
	Head Office/ Client Locations	

#### **Primary Purpose of Position**

Responsible and accountable for the complete financial and reporting standards of Solo Water. These reporting standards will maximise business transparency through robust systems supporting the implementation of the total water solution through waste water treatment plants, water treatment plants and pressure sewerage collection and recycling systems. The position will identify and assist with the elimination of risk, enhance the group's profit producing opportunities and set clear performance guidance for the Solo Water Team.

#### **Decision Making Standards with the Position**

Due to the industry level of experience required to hold this position, the role will experience a large degree of accountable autonomy combined with conditional shareholder support to achieve the defined quality and financial company objectives. It is a position that reflects a message of strong but fair leadership with an unconditional necessity to implement successful performance management strategies.

Key Relationships	Interaction
Internal	Solo Administration Trust Team
	Office and administration staff
	Project Director
	Board Members
External	The Client
	Lawyers
	Accountants and Auditors
	Sub Contractors
	Insurance Representatives

#### **Key Measurable**

- Performance to board approved budgeted sales and EBIT plans
- Performance to board approved budgeted returns on capital employed
- Consistent performance and achievements of group financial guidelines
- Consistent high level of customer satisfaction through delivery and process
- Accounting records and reporting to no less than company nominated standards
- Accounting records and reporting to no less than Australian Tax Office standards
- The ability to produce live accurate reports providing a clear guidance to management
- To maintain an internal accounting system that provides full transparency for the board
- Financial planning and modelling with the accurate projection of outcomes
- Elimination of financial risk in all aspects of company operations

#### **Key Responsibilities**

#### Administrative and Financial

- Ensure all company operations are within the board approved budgeted guide lines
- Ensure company working capital targets are met to a return as nominated by the board
- To ensure all periodical reporting is supplied to the board accurate and final when due
- To ensure all Australian Tax Office (ATO) compliance is met and any report, return or lodgement is accurate, completed on time and lodged in the company nominated manner.
- To ensure strict financial robust systems are in place for all processes to ground level
- Maintain an internal accounting and management system that has adequate entry and allowance for succession planning and authorised third party visibility.
- To develop and maintain system to allow the prompt transfer of records , documentation and information to the nominated outsourced administrative group as required
- To ensure that all finance associated staff have a clear understanding of company policy and a complete understanding of all required ATO or legal and accounting compliance
- To continually audit internal company projects, alternate company owned trading entities, active business models for pending projects or any area that has the ability to account for income, expenses or items of a capital nature with a view to identify variance and unbudgeted movements.
- Immediately report to the board any abnormal variance or unbudgeted activity in any entity
- Immediately report to the board any increase in the company's financial risk profile
- Immediately report to the board any threatened or pending litigation
- Identify potential new projects establishing capital requirements and potential returns
- Promptly submit to board in detail potential new projects for board approval process.
- To ensure all company policies and procedures are current documented and form part of regulated training throughout the workplace
- To continue to refine and improve process of company financial planning and specific project modelling with the view to project a more accurate presentation of outcomes

#### Legal and Insurance

- Ensure all entities and individual projects have the correct legal structure in place as nominated by the board prior to any risk exposure.
- Ensure all entities and individual projects have the correct and financially adequate insurance in place prior to any risk exposure.
- Internally audit individual entities and projects to guarantee all legal and insurance

conditions and guide lines are adhered to

• Immediately report to the board any increase in risk profile as a result of any potential non compliance under any insurance policy or obligation.

#### Workplace Health and Safety – Insurance

- Ensure adequate policies and coverage are in place.
- Ensure the work place including the office in addition to any remote location is unconditionally safe and compliant with the appropriate regulatory codes and authorities at all times
- Complete regular audits of the work place to ensure compliance
- Ensure all current staff are adequately trained in all areas of Workplace Health and Safety and ensure the company has an adequate training and succession planning program in place to guarantee compliance and a safe work place in the event of personal change.
- Maintain a clean safe work environment at all times

#### People Management

- Present a pleasant professional attitude at all times.
- Ensure role model behaviours are adhered to by all company staff and management.
- Ensure you and your teams adherence to, legal and policy requirements (E.G Workplace Health and Safety, policies, harassment and discrimination laws)
- Ensure expectations are clearly understood with current position descriptions and performance plans in place.
- Ensure management has an effective recruitment system in place employing the right candidates with internal promotions where appropriate.
- Carry out consistent coaching, training and succession planning at all times to ensure development of people with understanding and adherence to company standards.
- Follow Company guidelines for any disciplinary or reward actions as required.

#### **Other Responsibilities**

- General duties as required to assist colleagues and company performance
- Other Tasks may be assigned from time to time which contributes to the overall success of the company.

#### For Recruitment – Personal Requirements

Experience: minimum 15 years experience in Senior Management

**Qualifications 1.: relevant Bachelor Degree** 

Qualifications 2.: member of a professionally recognised accounting body

#### Memberships: CPA/CA; AICD

Key Skills

#### APPENDIX 6.2.3.

#### **Job Description of Position**



Position Title	Project Director – Wayne Williamson	SPA
Position Reports To	Solo Water Board	
Direct Reports to Position	Project Operations and Management Staff	
Location	Solo Water Head Office/ Operational Sites / Solo	
	Head office/ Client Locations	

#### **Primary Purpose of Position**

Responsible and accountable for the design, construction, development and implementation of a profitable compliant robust total water solution through waste water treatment plants, water treatment plants, pressure sewerage collection and recycling systems while establishing the Solo Water brand as an industry leader by premium quality of operations.

#### **Decision Making Standards with the Position**

Due to the industry level of experience required to hold this position, the role will experience a large degree of accountable autonomy combined with conditional shareholder support to achieve the defined quality and financial company objectives. It is a position that reflects a message of strong but fair leadership with an unconditional necessity to implement successful performance management strategies.

Key Relationships	Interaction
Internal	Design and Engineering Team
	Sales and Marketing Team
	<ul> <li>Project Management and Operational Teams</li> </ul>
	Finance Director
	Board Members
External	The Client
	Consultants through design construction commissioning and
	handover to Operations and Maintenance
	<ul> <li>Project Sub Contractors and Construction Managers</li> </ul>

#### Key Measurable

- Performance to board approved budgeted sales and EBIT plans
- Performance to board approved budgeted returns on capital employed
- The meeting of project budgets commissioning and handover deadlines
- Consistent performance and achievements of group financial guidelines and KPI's
- Consistent premium quality of operations and outcomes
- Consistent high level of customer satisfaction through delivery and process
- Quality of handover and succession planning outcomes
- Achieving growth by a brand profile built on a reputation of successful implementation
- Maintaining a position at the forefront of process, design and implementation
- Successful registration of required patents, inventions, IP and design

#### **Key Responsibilities**

#### **Product Development Design and Engineering**

- To continue to refine and develop existing designs and process to improve performance, Implementation and operational capability and feasibilities
- To manage design and engineering developments within company nominated budgets
- Focus through design and engineering to reduce the Solo Water Carbon Footprint

#### **Marketing and Sales**

- To increase sales by the addition of new projects and the extension of existing contracts.
- To grow the brand awareness through effective marketing in line with company budgets
- To develop and foster key communications and relationships with existing clientele.
- Identify potential new markets and establish contact and awareness with key personnel
- Enhance profitable company sales and growth by focus on priority feasible markets.
- Identify potential new projects establishing capital requirements and potential returns
- Promptly submit to board in detail potential new projects for board approval process.

#### **Project and Site Management**

- Indentify new project potential and develop feasibility strategy to deliver project from the preliminary stage through to the commissioning hand over, operation and ongoing maintenance with performance quality and financial returns in line with company policy.
- Identify and eliminate any risk, financial or otherwise prior to any agreement to commence for any specific project implementation.
- Report to the board staged accurate progress updates in the required format when due.
- Ensure any invoice approved for payment is in fact complete with no residual exposure.
- Deliver project key stages on time in line with company and specific project budget.
- Meet project commissioning handover quality and operational standards with the relevant authorities to applicable compliance and company standards.
- Effectively manage works programmes and progress reporting meeting required authority compliance standards in line with company budgets.
- Effectively manage sub contractors and trades in line with required authority compliance standards in line with company budgets.
- Ensure that any new project or existing company managed operational site has the correct

#### insurances in place.

#### **Project and Site Management continued**

- Ensure complete compliance with all Workplace Health and Safety requirements to eliminate company risk.
- Maintain a clean safe compliant work environment at all times.
- Continually review the security on all sites and ensure there are adequate measures in place to eliminate any risk.
- To develop and implement new strategies to increase productivity, profitability and quality to enhance the delivery of the final product.
- Ensure company working capital targets are met to a return as nominated by the board
- Immediately report to the board any abnormal variance or unbudgeted activity in any entity
- Immediately report to the board any increase in the company's financial risk profile
- Immediately report to the board any threatened or pending litigation

#### **People Management**

- Present a pleasant professional attitude at all times.
- Ensure role model behaviours are adhered to by all company staff and management.
- Ensure you and your teams adherence to legal and policy requirements (E.G Workplace Health and Safety, policies, harassment and discrimination laws)
- Ensure expectations are clearly understood with current position descriptions and employee performance plans in place.
- Ensure management has an effective recruitment system in place employing the right candidates with internal promotions where appropriate.
- Carry out consistent coaching, training and succession planning at all times to ensure development of people with understanding and adherence to company standards.
- Follow Company guidelines for any disciplinary or reward actions as required.

#### **Other Responsibilities**

- General duties as required to assist colleagues and company performance
- Other Tasks may be assigned from time to time which contributes to the overall success of the company.

For Recruitment – Personal Requirements				
Experience: minimum 20 years management experience within the water industry				
Qualifications 1.				
Qualifications 2.				
Memberships				
Key Skills				



## **Operations Manager – Alan Irving**

#### Description:

Experience in the Waste Water Industry 18 years and is a licensed plumber in NSW. Alan has worked with this company for over eight years as a Plant operator and now as our Operations Manager in overseeing the operation and maintenance of our WWTP, pressure sewer collection systems, potable water & recycled water reticulation systems. Alan role is to oversee due governance is taking place especially in daily reporting, testing and preventative maintenance. Part of his role is to assist our customer service team in making sure customers issues are being addressed in responsible time frames.

Position Title: Operations Manager

Reports to: Retail/Finance Director

Location: Office

#### **Primary Purpose of Position:**

Responsible and accountable for overseeing and organising O&M activities for our water & waste water plants & piping systems including potable water reticulation, recycled water reticulation and pressure sewer collection systems.

#### Key Relationships:

Internal:

- Design & Engineering team
- Retail Director/CFO, Project Director
- Project management teams
- Finance staff
- Cost reporting
- Ordering and accounts
- Other employees

External:

- The client representatives
- Consultants
- O&M sub contractors
- Suppliers

#### **Scheme Management**

- Ensure complete compliance with all Work Place Health & Safety requirements
- Maintain a clean safe compliant work environment at all times
- Order equipment & materials
- Commissioning and ongoing O&M of Process Plant
- Continually review the security on any site and ensure there are adequate measures in place to eliminate any risk
- Report any increase in the company financial risk
- Report any threatened or pending litigation



## **Construction Site Manager – Ross Pascoe**

#### Description:

Experience in the Waste Water Industry 24 years and is a licensed plumber in NSW. Ross has worked with this company for over ten years as a site supervisor and site manager mainly building WWTP and pressure sewer collection systems.

Position Title: Site Manager

Reports to: Project Director

Location: On Site

#### **Primary Purpose of Position:**

Responsible and accountable for organising, constructing water & waste water plants & piping systems including potable water reticulation, recycled water reticulation and pressure sewer collection systems.

#### Key Relationships:

Internal:

- Design & Engineering team
- Project Director
- Project management teams
- Finance Director & staff
- Cost reporting
- Ordering and accounts
- Other employees

#### External:

- The client representatives
- Consultants
- Project sub contractors
- Suppliers

#### Site Management

- Ensure complete compliance with all Work Place Health & Safety requirements
- Maintain a clean safe compliant work environment at all times
- Order equipment & materials
- Oversee Installation & QA sign off
- Commissioning of Process Plant
- Continually review the security on any site and ensure there are adequate measures in place to eliminate any risk
- Report any increase in the company financial risk
- Report any threatened or pending litigation



## **Construction Site Supervisor – Kris Saunders**

#### **Description:**

Kris has 7 year experience and responsible for planning/programming, organising, constructing water & waste water plants & piping systems including potable water reticulation, recycled water reticulation and pressure sewer systems

Position Title: Site Supervisor

Reports to: Site Manager

Location: Solo Water Office

#### **Primary Purpose of Position:**

Provide assistance to the Construction Site manager in organising, constructing water & waste water plants & piping systems including potable water reticulation, recycled water reticulation and pressure sewer collection systems.

#### **Key Relationships:**

Internal:

- Design & Engineering team
- Project Director
- Project management teams
- Finance staff
- Cost reporting
- Ordering
- Overseeing other employees

#### External:

- The client representatives
- Consultants
- Project sub contractors
- Suppliers

#### Site Management

- Ensure complete compliance with all Work Place Health & Safety requirements
- Maintain a clean safe compliant work environment at all times
- Continually review the security on any site and ensure there are adequate measures in place to eliminate any risk
- Ensure project budgets are met
- Report any abnormal variance or unbudgeted activity
- Report any company financial risk
- Report any threatened or pending litigation



## **Company Profile**

Harvest Water Management Consultants Pty Ltd (Harvest) is a small water and environmental engineering consultancy specializing in Integrated Water Cycle Management for the land development industry, government, water authorities and water using industries.

Harvest is a newly formed company with a vision of being small and efficient to provide maximum value and personalised, professional service to clients.

We have strong skills in all aspects of the urban water cycle and offer a range of professional services, as indicated below, that can be specifically tailored to meet the needs of the client and the project. Our services are typically applied to land development projects in remote areas with limited or no access to municipal water and sewerage systems.



We have a strong commitment to sustainable development and environmental management. Our investigations provide a distinct focus on demand minimization and the use of alternate water sources like groundwater, rainwater, stormwater, recycled wastewater, as well as conventional municipal water and sewerage systems.

We provide maximum value to clients during the planning, conceptual design and management plan documentation phases of a project. This allows us to work with the client and project team to ensure appropriate Integrated Water Cycle Management requirements are incorporated into the project from an early stage.

We also provide ongoing services relating to water auditing, environmental monitoring, performance reporting and licensing for operational facilities and private wastewater treatment plants.

For further information on our company, our services or to request a project proposal, please contact managing director/environmental engineer Brad Irwin.

harvest water management consultants pty Itd

164 Rivergum Drive Burpengary Qld 4505 0488 427 878 brad@harvestwmc.com.au www.harvestwmc.com.au



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#### Table 1 - Pressure Sewer Solutions Resources Reference Sites Selection - Issue R August 2011

No.	Pressure Sewer System Project Location (Projects with paid commissions only)	Number of ET's, Building Lots or Pumps	Year First unit Installed or Designed	Project Status	Pressure Sewer Solutions P/L Involvement	Water Authority
1	Tooradin, Vic Build out to	450	2001	Constructed and Operating	Design checking, commissioning, product servicing, project extension design.	South East Water
2	Kooindah Golf Course Development -NSW	252	2004	Constructed and Operating	Design, product development and Construction Assistance	Wyong Shire Council
3	New Brighton Village - NSW	200	2003	Constructed and Operating	Street mains design, electrical and plumbing property audits, Product development and full Construction	Byron Shire Council
4	West Billinudgel Village – NSW	24	2003	Constructed and Operating	Street mains design, electrical and plumbing property audits, Product development and full Construction	Byron Shire Council
5	Yerong Creek, NSW	75	2003	Constructed and Operating	Street mains design, electrical and plumbing property audits, Product development and full Construction	Lockhart Shire Council
6	Wagga Wagga, NSW	450	2003	Constructed and Operating	Street mains design and Construction Assistance	Wagga Wagga Council
7	Cannons Creek, Vic	220	2003	Constructed and Operating	Street mains design, electrical and plumbing property audits at	South East Water
8	Warneet Village, Vic	230	2003	Constructed and Operating	Street mains design, electrical and plumbing property audits and	South East Water
9	Treeline place – Vic	26 (Masterplan to 90)	2002	Constructed and Operating	Street mains design, electrical and plumbing property audits and Product development	Yarra Valley Water
10	Corrimal, NSW	10	2003	Constructed and Operating	Street mains design, electrical and plumbing property audits, Product development and full Construction	Sydney Water Corporation
11	Gracelands Residential Estate – NSW	53	2000-2004	Constructed and Operating	Design of residential development	Advised upon request
12	Meadows Estate – NSW	65	2000	Constructed and Operating	Design of residential development	Advised upon request
13	Jacks Road Estate – NSW	45	2004	Constructed and Operating	Design of residential development	Advised upon request
14	Relfs road Estate – NSW	45	2004	Constructed and Operating	Design of residential developments	Advised upon request
15	River Bend Estate Narrabri – NSW	140	2001	Constructed and Operating	Design and Construction assistance	Narrabri Council
16	Industrial Estate – NSW	50	2004	Constructed and Operating	Design and construction assistance	Advised upon request
17	Adelong – NSW	40	2004	Constructed and Operating	For Construction Design	Tumut Council
18	Kororoit Creek Road – Williamstown Industrial – Vic	50	2004	Constructed and Operating	For Construction Design	City West Water
19	Myall Lakes ECO resort – NSW	30	2004	Constructed and Operating	For Construction Design	Private developer
20	Bairnsdale, Victoria –	30	2003	Constructed and	Product Technical Assistance	East Gippsland



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No.	Pressure Sewer System Project Location (Projects with paid commissions only)	Number of ET's, Building Lots or Pumps	Year First unit Installed or Designed	Project Status	Pressure Sewer Solutions P/L Involvement	Water Authority
	Vic			Operating		Water
21	Bradkin Rail industrial estate – NSW	10	2001	Constructed and Operating	For Construction Design	Mittagong
22	Singleton Industrial Estate – NSW	100	2003	Constructed and Operating	Construction Design	Singleton Council
23	Wakool NSW	80	2003	Constructed and Operating	Concept Design	Wakool Council
24	QLC Parklands Project – Old	15	2003	Constructed and Operating	For Construction Design	Brisbane Water
25	Oyster Cove – NSW	50	2003	Constructed and Operating	Design and authorities approvals	Advised upon request
26	Jamberoo – NSW	350	2003	Constructed and Operating	Master Planning Development (Final design by Alliance)	Sydney Water Corporation
27	Belimbla Park – NSW	100	2002	Constructed and Operating	Options study design for SWC (Final design by Alliance)	Sydney Water Corporation
28	Stanwell Park, Otford and Coalcliffe – NSW	800	2002	Constructed and Operating	Options study design for SWC (Final design by Alliance)	Sydney Water Corporation
29	Cobargo Village – Bega – NSW	470	2005	Constructed and Operating	Street mains design, Survey, electrical and plumbing property audits, Product development.	Bega Valley Council and Tenix Alliance
30	Tingha Village – NSW	235	2005	Constructed and Operating	Design and property audits	Ledonne Constructions
31	Dubbo Industrial Estate	130	2005	Constructed and Operating	Construction Design and property audits	Trenchles Constructions
32	Aberglasslyn residential Development – NSW	40	2004	Constructed and Operating	For Construction Design	Hunter Water Corporation
33	Kororoit Creek Road Altonia Industrial – Vic	66	2004	Constructed and Operating	Hydraulic Design	City West Water
34	Deep Creek – NSW	52	2004	Constructed and Operating	For Construction Design For Construction Design	Advised upon request
35	Forest Hills Development Tamworth, NSW	160	2005	Constructed and Operating	For Construction Design	Tamworth Council
36	Bridgewater – SA	60	2006	Constructed and Operating	Construction Design and property audits	S.A. Water.
37	Forbes Industrial Estate – NSW	50	2004	Constructed and Operating	For Construction Design	Forbes Council
38	Rotorua Villages (7 Villages) – NZ	2847	2006	Construction Stage	Strategic analysis and cost estimates	Rotorua Council New Zealand
39	Tamworth, NSW	3000	2004	Constructed and Operating	Master plan Design	Tamworth Council
40	Marray Eden Retirement Village – NSW	50	2005	Construction Stage	For Construction Design	Private Developer
41	Jerseyville – NSW	30	2005	Constructed and	For Construction Design	Advised upon

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No.	Pressure Sewer System Project Location (Projects with paid commissions only)	Number of ET's, Building Lots or Pumps	Year First unit Installed or Designed	Project Status	Pressure Sewer Solutions P/L Involvement	Water Authority
				Operating		request
42	Greenhills – NSW	40	2005	Constructed and Operating	For Construction Design	Advised upon request
43	Tabourie Lake NSW – Street main design	542	2005	Constructed and Operating	For Construction Design	Shoalhaven Water
44	Lake Conjola NSW – Street main design	448	2006	Constructed and Operating	For Construction Design	Shoalhaven Water
45	Wentworth Estate Development Tamworth, NSW	50	2005	Constructed and Operating	For Construction Design	Tamworth Council
46	Collingullie – NSW	95	2005	Constructed and Operating	For Construction Design	Wagga Wagga Council
47	Sovereign Gardens – NSW	360	2006	Stage 1 Constructed and Operating	For Construction Design	Ballina Council
48	Forest Resort – Vic	155	2005	Constructed and Operating	For Construction Design	Private Developer
49	Wolumla Village – Bega – NSW	330	2005	Constructed and Operating	Street mains design, electrical and plumbing property audits, Product development.	Bega Valley Council
50	Candelo Village – Bega – NSW	330	2006	Constructed and Operating	Street mains design, electrical and plumbing property audits, Product development.	Bega Valley Council
51	Trade Coast Industrial Development – Qld	100	2004	Constructed and Operating	For Construction Design	Brisbane Water
52	Acacia Ponds – Merimbula – NSW	41	2006	Constructed and Operating	For Construction Design	Private Developer
53	Mooney Mooney and Chero Point – NSW	308	2004	Constructed and Operating	Concept Design	Gosford City Council
54	Fullerton Cove – NSW	230	2004	Design Stage	Residential development Master planning	Hunter Water Corporation
55	Sundance Development – NSW	300	2005	Design Stage	Master plan Design	Private Developer
56	Mangoplah – NSW	125	2005	Design Stage	For Construction Design	Wagga Wagga Council
57	Kangaroo Valley – NSW	200	2003	Concept Design Stage	Options study design	SKM
58	Seaspray – Vic	350	2005	Constructed and Operating	Design and pressure sewer product selection	Gippsland Water
59	Stonecutters ridge – NSW	1150	2006	Concept Design	Masterplan design and detail design for stage 1.	Sydney Water Corporation
60	Kalaru – Bega – NSW	78	2006	Constructed and Operating	Street mains design, electrical and plumbing property audits,	Bega Valley Council
61	Narrabri Commercial Estate	15	2007	Constructed and Operating	For Construction Design	Private Developer
62	McKinney Development	120	2007	Constructed and Operating	For Construction Design	Rodney District Council

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No.	Pressure Sewer System Project Location (Projects with paid commissions only)	Number of ET's, Building Lots or Pumps	Year First unit Installed or Designed	Project Status	Pressure Sewer Solutions P/L Involvement	Water Authority
	Warkworth – New Zealand					
63	Alnwick Development Warkworth – New Zealand	180	2007	Constructed and Operating	Concept Design	Rodney District Council
64	Victor Habor - SA	25	2007	Constructed and Operating	For Construction Design	SA Water
65	Redbank Road Wagga Wagga - NSW	9	2007	Constructed and Operating	For Construction Design	Wagga Wagga Council
66	Mitchell Road Wagga Wagga	5	2007	Constructed and Operating	For Construction Design	Wagga Wagga Council
67	Wallaga Lake - Bega – NSW	800	2007	Constructed and Operating	Street mains design, electrical and plumbing property audits	Bega Valley Council
68	Tabourie Lake Property Works– NSW	432	2007	Constructed and Operating	Electrical and plumbing property audits.	Shoalhaven Water
69	Lake Conjola Property Works- NSW	448	2007	Constructed and Operating	Electrical and plumbing property audits.	Shoalhaven Water
70	Cudal Village - NSW	230	2008	Constructed and Operating	Pressure sewer street main design, electrical and plumbing property audits.	Cabonne Council
71	Tullamore Village - NSW	155	2008	Constructed and Operating	Pressure sewer street main design, electrical and plumbing property audits.	Parkes Council
72	Manildra Village - NSW	260	2008	Constructed and Operating	Pressure sewer street main design, electrical and plumbing property audits	Cabonne Council
73	Trundle Village - NSW	230	2008	Constructed and Operating	Pressure sewer street main design, electrical and plumbing property audits	Parkes Council
74	Donnybrook - QLD	297	2007	Constructed and Operating	Pressure sewer street main design, electrical and plumbing property audits	Caboolture Council
75	Godwin Beach - QLD	170	2007	Constructed and Operating	Pressure sewer street main design, electrical and plumbing property audits	Caboolture Council
76	Bay Ridge Development – Batemans Bay	140	2008	Constructed and Operating	Pressure sewer street main design	Eurobodalla Council
77	City of Apia - Samoa	150	2008	Constructed and Operating	Commercial properties Pressure sewer street main design, electrical and plumbing property audits	Samoa Water Authority
78	Warkworth Masterplan New Zealand	2000	2007	Constructed and Operating	Master plan Design	Rodney District Council
79	Silverdale North Masterplan New Zealand	1920	2007	Constructed and Operating	Master plan Design	Rodney District Council
80	Orewa West Masterplan New Zealand	4000	2008	Masterplanning	Block Planning Stage	Rodney District Council
81	Kumeu-Huapai	4700	2008	Masterplanning	Detail Masterplanning	Rodney District Council
82	Kumeu – Stage 1	140	2008	Constructed and Operating	Pressure sewer street main design, electrical and plumbing property audits	Rodney District Council

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No.	Pressure Sewer System Project Location (Projects with paid commissions only)	Number of ET's, Building Lots or Pumps	Year First unit Installed or Designed	Project Status	Pressure Sewer Solutions P/L Involvement	Water Authority
83	Barakula Drive Development	52 Lots	2008	Constructed and Operating	For Construction Design	Private Developer
84	Currarong Village	70 Lots	2008	Constructed and Operating	For Construction Design	Shoalhaven Water
85	Caboolture Industrial Estate	42	2008	Constructed and Operating	Street mains design, electrical and plumbing property audits,	Moreton Bay Regional council
86	Barrington Tops	123	2008	Constructed and Operating	For Construction Design	Gloucester Council
87	Lawrence	700	2008 - 2009	Constructed and Operating	Street mains design, electrical and plumbing property audits,	Clarence Valley Council
88	Donnybrook, Meldale and Toorbul sewage pumping station and RM	906	2008 - 2009	Constructed and Operating	Detail design of 2 sewage pumping station and 12,000m of RM	Moreton Bay Regional council
89	Bingara Gorge Development	740	208	Construction Stage	Masterplan and concept design	Delfin Lend Lease
90	Naracoorte	48	2007	Constructed and Operating	Full street mains design, electrical and plumbing property audits.	SA Water
91	Uriarra Village	103	2008	Constructed and Operating	For Construction Design	ACTEW
92	3 x Iluka Caravan Parks	361 Sites	2008	Design Stage	Detailed audits and concept design	Clarence Valley Council
93	Bodalla Village	160	2008	Design Stage	Full street mains design, electrical and plumbing property audits.	Eurobodalla Council
94	Koori Village	35	2008	Design Stage	Full street mains design, electrical and plumbing property audits.	Eurobodalla Council
95	Bridgewater Village	50	2007	Constructed and Operating	Full street mains design, electrical and plumbing property audits.	SA Water
96	Horsham pressure sewer masterplan	120	2007	Constructed and Operating	Masterplan	GWM Water
97	Empire Bay	91	2007	Constructed and Operating	For Construction Design	Gosford Council
98	Owen Toyota	4	2007	Constructed and Operating	For Construction Design	Private Developer
99	CHW – Blackwood tender	~400	2008	Tender Stage	Masterplan / concept design	
100	5 x Bega Caravan Parks	1000 sites	2007 and 2008	Constructed and Operating	Concept and detail design	Bega Council and CP owners.
101	Rosedale and Guerrilla Bay	320 Lots	2009	Design Stage	Full street mains design, electrical and plumbing property audits.	Eurobodalla Council
102	Kings Billabong & Nichols Point	365	2009	Constructed and Operating	Master planning and full street mains design	Lower Murray Water
103	Karumba	320	2009	Constructed and Operating	Concept design	Carpentaria Shire Council
104	Aldgate, Bridgewater &	75	2009	Construction	Full street mains design, electrical and	SA Water

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No.	Pressure Sewer System Project Location (Projects with paid commissions only)	Number of ET's, Building Lots or Pumps	Year First unit Installed or Designed	Project Status	Pressure Sewer Solutions P/L Involvement	Water Authority
	Crafers			Stage	plumbing property audits.	
105	Millfield Development	12	2009	Design Stage	For Construction Design	Hunter Water
106	Windella Development	20	2009	Design Stage	For Construction Design	Hunter Water
107	Percmaree Development Ayr	136	2009	Construction Stage	For Construction Design	Private Developer
108	Pittown Development	~700	2010	Construction Stage	Masterplan / concept design	Water Factory
109	Glenmaggie and Coongulla	400	2010	Masterplan Design	Masterplan / concept design	Gippsland Water
110	Molong Industrial Estate	15	2010	Construction Stage	For Construction Design	Cabonne Council
111	Warahoa	204	2010	Masterplan	Masterplan / concept design	Matta Matta Council
112	Yeoval	140	2011	Design Stage	Full street mains design, electrical and plumbing property audits.	Cabonne Council
113	Cumnock	165	2011	Design Stage	Full street mains design, electrical and plumbing property audits.	Cabonne Council
114	Williamtown Aerospace Business Park	411	2011	Design Stage	Full Street Mains Design	Hunter Water
115	Nigawha Springs	80	2010	Construction Stage	Full Street Mains Design	New Zealand Water authority
120	Robertson	149	2011	Construction	Full street mains design, electrical and plumbing property audits.	Lucas / Wingacarribee Council
121	Kangaroo Valley	400	2011	Construction	Full street mains design, electrical and plumbing property audits.	Shoalhaven Water
122	ERA Capalaba	200	2011	Design Stage	Development site masterplan and stage 1 detail design.	Sirex (Private Water Utility)
123	Loch Sport - Victoria	2800	2011	Master planning	Masterplan	Gippsland Water
124	Lauderdale	950	2010	Master planning	Masterplan	Southern Water
125	Gippsland Links	200	2011	Master planning	Masterplan	Gippsland Water
126	Eco Shores – Wanda Beach	250	2010	Master planning	Masterplan	Private Developer
127	Iluka Village	1150	2010	Detail Design Stage	Full street mains design, property design and plumbing audits.	Clarence Valley Council
128	Broadwater Village	200	2011	Detail Design Stage	Full street mains design, property design plumbing and electrical audits.	Richmond Valley Council
129	North Woodburn	61	2011	Detail Design Stage	Full street mains design, property design plumbing and electrical audits.	Lismore Council





## **ATTRIBUTES & REFERENCES**

Web Based Building Monitoring and Control Systems



**Systemax Pty Ltd** ABN: 49 102 691 332

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Web Services - A New BACnet Standard

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### **1 SUMMARY**

Systemax Pty Ltd is pleased to provide an introduction to our company and the Automated Logic range of Building Automation Solutions and their capabilities.

Systemax provides a wide spectrum of professional services within the Building Control and Monitoring sector. Building Control and Monitoring encompasses Extra Low Voltage (ELV) services including Building Management Systems, Security and Access Control Systems, Lighting / Power Control and Energy Management Systems with a particular regard to Green Star rating, NABERS Energy (ABGR) and general energy efficiency performance. Systemax employ accredited NABERS Energy Assessors providing experienced understanding of facility performances and energy initiatives. We are a committed group of industry leaders and specialists who provide high level technical expertise and project management resources for our customers and target markets.

Our unique approach to the on-going maintenance of BMS systems enables extensive use of the internet to provide prompt and accurate support services without the immediate need to dispatch service personnel to sites thus reducing unnecessary costs in fault finding and rectification.

Systemax strives to maintain the enviable position of using <u>ALL</u> our clients as exemplary references and as such are pleased to provide contact reference details upon request. We believe that utilising the best systems with the best people compounded by employee ownership provides the differentiator from our market competition.

Since June 2005 Systemax has utilised the Automated Logic Corporation (ALC) range of integrated native BACnet controllers, complemented by WebCTRL – A fully web based operating platform. The Automated Logic Corporation has been successfully supplying the Building Industry with Building Management Systems for over 30 years, boasting in excess of 9% of the US market. Automated Logic has been represented within Australia for the last 17 years and to date have successfully supplied, installed, engineered and commissioned a multitude of high performing systems within Australia.

Today, Automated Logic continues to provide cost-effective, user friendly building control solutions for thousands of customers. ALC systems are installed in commercial office buildings, industrial plants, critical mission facilities, healthcare and educational facilities, government complexes, hospitality/entertainment venues and retail locations worldwide.

## 2 KEY SYSTEM ATTRIBUTES

With Systemax's proven history and employee's experience, combined with Automated Logic's WebCTRL systems, we deliver solutions that:

- Are state of the art in Building Management, Control and Monitoring;
- Enables optimum use of energy against comfort conditions;
- Enables the highest levels of Web functionality;
- Allows secure (user name and password protected) access to the system from any PC on the internet, for remote monitoring, servicing and modifications with comprehensive date and time stamped activity logs;
- Allows multiple users to access at any one time;
- Provides the ability to integrate other sites to a central monitoring facility;
- Can automatically distribute alarms to nominated points via various mediums such as e-mail, mobile phones PDA's etc;
- Is reliable and easily operated;
- Provides future proof solutions;
- Has no ongoing licensing fees; and
- Is not limited by individual user licenses.

We trust this information provides a useful insight to Systemax's capabilities, applications and performance and we would welcome the opportunity to demonstrate a range of active sites should it be appropriate.

Should you require further information please do not hesitate to contact the undersigned.

Yours sincerely,

STEVE GREEN MANAGING DIRECTOR Systemax Pty Ltd www.systemax.com.au

## **3 SYSTEM SPECIFICS**

#### 3.1 Overall Functionality

WebCTRL by Automated Logic is a state of the art Building Automation System and is based on "native" BACnet communications and web based technology, WebCTRL is 100% backwardly compatible with previous Automated Logic systems.

The current range of control module and router hardware has been released over the last eight years and hence is proven in the field, whilst utilising the latest design and manufacturing techniques.

WebCTRL uses a "truly distributed" architecture; whereby all functions of the system (control logic, trend logging, schedules and alarms) are resident in each and every control module, including zone (VAV and FCU) controllers.

A comprehensive suite of Engineering, Commissioning, Energy Management and Reporting tools complement the hardware. A true Web interface (the browser interface is not a supplement to a Windows interface), provides all of the functionality that would be present in a "high end" user interface.

Access to the system, is available via Internet Explorer browser, PDA Pocket PC browser and WAP phone. WebCTRL supports XML/SOAP data exchange with other software applications.

#### 3.2 BACnet Open Protocols

WebCTRL hardware and software uses the BACnet protocol at all levels of the system, from the smallest Zone Controller to the Web Server. BACnet is supported on the 5 most popular wiring systems:

- Ethernet / IP;
- Ethernet;
- ARCnet 156;
- MS/TP (9,600-78.8k baud);
- PTP.

Most current BMS manufactures use BACnet over MS/TP. The ALC solution utilises ARC156 over BACnet which is 9-10 times faster than MS/TP in terms of data throughput. This provides many benefits including, faster alarm annunciation / response, faster trend logging capability and improved user experience when operating the "front end" software.

All of the WebCTRL hardware products have been tested to, and comply with, the BACnet Testing Laboratory (BTL) standards. Therefore, you will have a multitude of service providers available to you into the future, rather than being "locked in" to a proprietary system supplier.

Within Australia and overseas, we have many examples of integrating with other vendors BACnet products.

#### 3.3 Software Upgrades

New release versions of WebCTRL, contain upgrade tools that allow simple upgrades to the new version of WebCTRL. The new release installs in a separate folder to the older versions.

Consequently, if a new version of WebCTRL conflicts with other software which may be installed, the previous version including drivers and programs may be "run up" and used with minimal inconvenience.

WebCTRL does not require user defined ongoing annual licensing fees.

#### 3.4 Comprehensive System Documentation

As a component of all projects, Systemax provide a comprehensive set of system documentation including:

- Detailed functional description of operation submitted for approval and discussion prior to commencement of site works;
- Detailed Operation and Maintenance manuals;
- Detailed Points listings and controller specific wiring diagrams (Installed in each control enclosure);
- Detailed LAN schematic showing the type and route of all new communications cabling run as part of a project.

As standard, and in addition to specific training, interactive CD based training software for the Operator is included for every project with the WebCTRL software.

All projects are supplied with all database, engineering, control logic, graphics and Web configuration tools required to configure and operate the system into the future.





#### 3.5 Information Analysis and Reporting

Comprehensive reporting is available through the web interface. This allows for easy access to all data by remote and local staff. Standard or user defined reporting can be configured. All browser generated reports can be saved in .PDF or Excel format. Alternatively, data can be exported to a XML/SOAP compliant software package. These applications include MS Word and MS Excel.

Data is stored and archived within the SQL databases.

A Scheduling report allows fast overviews of which plant is controlled by which schedule, and the times to which it will operate.

Specific user after-hours air conditioning requests and schedules can be made through the web browser if required.

Customised billing reports can be generated automatically (user defined) for after hours energy usage.

Control strategies can be viewed with real time data through the "Logic" page of the web browser. Parameters may be viewed and edited. Plant operation can be easily identified and corrected, avoiding "blackbox syndrome".

#### 3.6 Secure Web Enabled Interface

WebCTRL is a secure Web Based interface conforming to all of the latest Internet security issues, including Secure Sockets Layer (SSL) etc.

As the only User Interface to the WebCTRL system, WebCTRL provides full functionality to the user, password access permitting.

The web based interface allows access to all parameters for viewing and editing. In addition, control logic and reporting can be easily changed by the building operator.

#### 3.7 Expandability

The web based interface allows access to all parameters for viewing and editing. In addition, control logic and reporting can be easily changed by the building operator. Additional plant can easily be added to the system without a requirement for major disruptions. The LAN infrastructure allows for easily added controller hardware without disrupting the operation of the existing system, should it be required.

Schedules and temperature set points are adjustable via a graphical interface through the web browser.

## 4 TESTING AND COMMISSIONING

With our familiarity with the Greenstar and NABERS Energy (ABGR) rating systems, we are cognisant of the time involved in the appropriate tuning requirements associated with system performance and producing commissioning verification data to achieve the required star ratings.

Historically, the term "commissioning" has referred to the process by which the HVAC systems of a building are tested and balanced according to established standards prior to acceptance by the building owner. Today's use of commissioning should recognise the integrated nature of all building systems' performance, which impact sustainability, workplace productivity, occupant safety and security.

Because building systems are integrated, a deficiency in one or more commissioning process can result in suboptimal operation and performance. Remedying these deficiencies will result in a variety of benefits including:

- Improved building occupant productivity;
- Lower utility bills through energy savings;
- Increased occupant and owner satisfaction;
- Enhanced environmental/health conditions and occupant comfort;
- Improved system and equipment function;
- Improved building operation and maintenance;
- Increased occupant safety;
- Better building documentation;
- Significant extension of equipment/systems life cycle.

Typically in an open tender environment, system suppliers do not budget for the full engineering labour requirements necessary to create a total building commissioning practise.

Systemax's preferred approach to effective system operations is to apply a "Total Building Commissioning" practise where our involvement includes planning, design, construction and post-construction involvement in our specialist areas.



The automated Logic systems have been installed in a multitude of different facilities. Some of the more interesting/challenging or system critical sites are listed below:

#### 5.1 Ergon Energy – Rockhampton, Mackay, Hervey Bay and Toowoomba

Systemax was engaged by ABI Group for Ergon Energy to provide a State-of-art Building and Energy Monitoring and Control System to the above sites. The project is based around a remote hosted Web based central server allowing password protected access to the above sites via a single interface. There is capacity in the system to allow for multiple additional sites to be seamlessly added. The system will control air conditioning plant to temperature and air quality levels incorporating comfort versus energy calculations for optimum efficiency.

Being an energy supply company Ergon Energy require a system within their own facilities to manage energy to an optimum level. The system is based on Greenstar and NABERS energy requirements to all sites. Energy reporting and environmental indexing are to be used throughout. Energy forecasting tools are to be enabled to allow solutions to be put in place where high usage or energy inefficiencies are identified.



#### 5.2 Santos Place – 32 Turbot St

Santos Place is a 36 storey, "A" Grade commercial building providing 34,500sqm of commercial office space and is designed to achieve 5 star NABERS Energy and 6 Star Greenstar environmental performances. As of mid 2010, Santos Place is one of only four buildings within Australia to achieve a 6 Star Greenstar as built rating.

BMS works incorporate complete Mechanical DDC control, integration to the smart lighting system, security systems, generators and Tri-gen systems.

Web available Thermo graphic floor layouts and plant graphical representations indicate the condition of the space and controlling equipment providing building managers and service staff an easy to understand interface with the system.

The BMS provides systems control and energy consumption via electrical, water and gas metering information for NABERS and Green Star certification.



#### 5.3 Waterfront Place – BMCS Refurbishment

Waterfront Place is a 36 storey premier commercial building on Brisbane River waterfront which has undergone a complete BMS replacement of the Johnson Control system with an Automated Logic System. The works consist of replacement controls for all plant and VAV's (approx. 1000) while maintaining current operations with an almost seamless impact to the occupants.

The project was planned for implementation over a two year program, commencing Sept 2005. Client energy performance data is conservatively recording a 40% saving under the new Building Management System when compared to pre cut-over consumption for the Mechanical plant.



## Systemax was awarded the complete BMS works associated with the new FA18 Australian Super Hornets squadron facilities at RAAF Amberley.

5.4 ASH – FA18 Australian Super Hornets Facilities - RAAF Amberley

Works consist of the supply and installation of a new Automated Logic WebCTRL Building Management System for systems in all buildings associated with the squadron including HVAC, multiple high level integration, energy metering, reporting functions and geothermal unit integration. Works were completed mid 2010.

#### 5.5 C17 Heavy Lift Facilities – RAAF Amberley

This project, comprising the SIM, HBS, SQN and AMS buildings was completed in April 2009. The works involve the supply and installation of a new ALC WebCTRL Building Management System comprising VAV and main plant controllers.

The BMS controls and monitors all HVAC systems including energy recovery units and DX plant (traditionally a PLC application), lighting, services metering and high level communications to the SIM CRAC unit.

#### 5.6 Virgin HQ – Brisbane

Virgin Air have taken possession of a three building complex in Bowen Hills as their new Australian Head Quarters. Systemax have provided the complete Web based Building Management System consisting of:

- 37 Air cooled, roof mounted PAC units low level control;
- 30 Daikin Variable Refrigerant Volume (VRV) unit control via BACnet interface;
- 270 VAV box control with local interface temp sensors;
- 10 Daikin split system units via BACnet interface.
- Interface to the AMX system for lighting, AC control and set-point adjust via BACnet.

#### 5.7 WebCentral

WebCentral is one of Australia's largest web and application hosting companies. Systemax has successfully installed an ALC system providing high level alarm and monitoring throughout the facilities critical services.

Works includes (but not limited to) data logging, hot swap PC backup, generator monitoring, electrical meter monitoring via Modbus, UPS monitoring, VESDA, Fire and Security monitoring, SNMP Alarm handling.









#### 5.8 Mount Ommaney Shopping Centre

Mount Ommaney Shopping Centre is a large retail centre located on the outskirts of the Brisbane CBD with a mixture of major and speciality retail outlets.

A \$120mil construction program began in May 2008 to expand the centre to nearly double the size.

Systemax was engaged for a complete replacement of the existing BMS and to provide a new site wide Automated Logic BMS for the new development works.

Works were successfully completed mid 2010.

#### 5.9 12 Creek St – BMCS Refurbishment

12 Creek St is a 30 storey premier commercial building located within the Brisbane CBD.

Systemax was engaged in a complete replacement of the incumbent Johnson Control BMS system with an Automated Logic system.

The scope of the project includes taking control of all the existing pneumatic controlled air conditioning plant with a fully web enabled, BACnet compliant system, while maintaining a tenant invisible impact.

Project completion was December 2008.





#### 5.10 Indooroopilly Shopping Centre – BMCS Refurbishment

Indooroopilly Shopping Centre is a large retail centre located on the outskirts of the Brisbane CBD with a mixture of major and speciality retail outlets.

Systemax was engaged for a complete design and replacement of the incumbent Invensys BAS2800+ BMS system installed with a new web based Automated Logic BMS system.

The works were successfully completed over a six month period of progressive changeovers without tenant impact.

#### 5.11 295 Ann St – BMCS Refurbishment

295 Ann St is a multi storey commercial building located within the Brisbane CBD. Systemax was engaged in a complete replacement of the Satchwell BMS system with an Automated Logic system.

This initial project involved replacing the existing controls on the central plant and the installation of BMS LAN infrastructure to cater for future works.

Further works have since been undertaking, including an upgrade of the chiller plant, AHU plant, tenant CDW system, typical floor works, metering and other minor works.

The original control system was pneumatic and inefficient. The installation of the new system has enabled energy reporting, after hours air conditioning web access and reports and has significantly reduced the energy and water consumption of the building.







#### 5.12 80 Albert St – BMCS Refurbishment

80 Albert St, Brisbane, an 18 storey commercial building including ground floor speciality shops. Works include complete retrofit of existing controls for main plant and VAV's. Change over works completed with minimal disruption to tenants.

#### 5.13 Tappoo City, Fiji

Tappoo City is Fiji's premier shopping centre. Located in Suva city centre, it is a six storey complex comprising three floors of shopping, a food court and executive offices.

The BMS controls and monitors air conditioning plant, lighting, backup generators and roller access doors.

Ongoing tuning and most maintenance is carried out remotely by our staff located in Brisbane via the internet.

#### 5.14 Enhanced Land Force Enoggera HQ

As part of the ELF Stage 2 works Systemax is installing the BMS for the HQ precinct for monitoring and control of air conditioning plant, monitoring of electrical and hydraulic services.

The BMS is connected to the Defence DESN for communication of data to the Site Wide BMS utilising fully open BACnet protocol.

#### 5.15 Enhanced Land Force Enoggera DSQ

As part of the ELF Stage 2 works Systemax is installing the BMS for the DSQ precinct for monitoring and control of air conditioning plant, monitoring of electrical and hydraulic services.

The BMS is connected to the Defence DESN for communication of data to the Site Wide BMS utilising fully open BACnet protocol.

#### 5.16 Pacific Fair Shopping Centre

Systemax is currently engaged in a complete replacement of the incumbent Continuum BMS as part of a package aimed at reducing energy consumption throughout the centre.

Energy initiatives as part of the new BMS involve Peak Demand Control and fine tuning of control functionality to provide comfortable space conditions without compromising efficiency.

The new BMS will monitor an extensive network of Smart energy meters and control plant operation relative to energy usage.

Works are due to be completed mid 2012.











#### 5.17 Centro Shopping Centre Toombul

Systemax has replaced the existing BMS which comprises a mismatch of existing systems from standalone to semi-networked.

Intelligent functional strategies incorporated into the new BMS are intended to provide the best energy efficient outcomes.

The new BMS is designed to provide a single point of interface for the management team allowing easy adjustment of system parameters, fault finding and operational data collection.

The aim is to increase the efficiency of the system and reduce energy consumption and operational costs.

#### 5.18 Moreton Bay Regional Council (MBRC)

MBRC recently engaged Systemax to replace the incumbent BMS systems at the Redcliffe Council site for the Administration Building, Cultural Centre and Library. Each building has an individual design and therefore operational parameters.

Energy consumption is monitored and utilised in control algorithms to ensure plant operates to provide the best level of comfort while using a minimum of energy.

The new control strategies and tuning regimes are forecast to produce an annual electrical energy cost savings in excess of \$130,000.

A central Web based server residing on the MBRC WAN provides control and monitoring of the three buildings and offers unlimited system expansion to meet the Councils ongoing requirements.

#### 5.19 St Stephen's School EMS

The new energy monitoring system for Sheepstation Gully Environmental Learning Centre located at St Stephen's School Algester provides an interactive platform allowing students and teachers to view the environmental conditions and energy consumption of the building.

The BMS monitors the space and fabric temperatures of the complex along with ambient conditions, electrical and water energy consumption data and displays the values through a graphics package suited to use by students from Year 1 to 8.

The Learning Centre is used by St Stephen's School and Algester State School students and teachers. There is a remote link via the Internet between the Learning Centre BMS and Algester State School.

#### 5.20 St Ritas College

St Ritas College recently added a new resource centre and science block.

The BMS provides monitoring of critical equipment and control of lighting circuits and ventilation systems along with remote monitoring and control of air conditioning provided by a third party VRV system via BACnet high level interface.

Monitoring of electrical energy consumption and hydraulic services provides an integrated package.

Access is via password protected Web based software package housed on a rack mounted server connected to the college's IT infrastructure.









#### 5.21 CSIRO – Bribie Island

The BMS system is provided for this project in a process application normally the domain of high end PLC products. The speed of processing and low system scan time of the installed BMS product is essential to success of operation.

The BMS initiates the production of heating and cooling water for the temperature control of freshwater and seawater supplied to fish tanks via heat exchanger units. The fine level of control required to maintain the critical nature of the ecosystem ensures the health and viability of the whole process.

High level interfacing to the building lighting system and  $O^2$  system provide monitoring and control for these third party systems.

#### 5.22 Queensland Law Society

A refurbishment of the building's air conditioning system involved the upgrade of the existing standalone electronic control system to a modern state of the art BMS allowing user interaction and increasing functionality to provide a more cost effective system.

Cutover works were completed outside of normal working hours to minimise occupant impact.

A new VRF system was installed on across a number of floors to meet particular requirements of spaces in addition to the floor AC and VAV system. The VRF system is integrated into the BMS via BACnet high level interface allowing remote control and monitoring of the third party system.

#### 5.23 Brisbane City Hall

Systemax is currently involved in the BMS portion of the refurbishment works to Brisbane City Hall.

The BMS combines HVAC control and monitoring with extensive monitoring of electrical and hydraulic energy consumption. Integration of electrical usage in control functionality provides energy efficient operation of plant and equipment.

The BMS is integrated to facilities management software for scheduling of plant operation for public function rooms and auditoriums.

Works are due to be completed December 2012.

#### 5.24 Sunshine Coast Regional Council (SCRC)

Sunshine Coast Regional Council requirements are for a centrally located server based control and monitoring system capable of integrating a diverse range of sites over a wide area of influence.

Systemax has provided a system with unlimited expansion capacity and currently provides services to the Eddie de Vere building Nambour, Tewantin Administration Building and Noosa Aquatic Centre.

Energy usage data is collected from a number of smaller remote sites from Smart electrical meters monitoring electrical and solar power supplies.









#### 5.25 George & Adelaide St Refurbishment

BMS works constituted an extensive refurbishment of the control system for a network of central air handler units providing conditioned air to multiple floor VAV units and zone induction units.

The induction units comprise a chilled water coil and constant volume air. Control of these units required a dewpoint algorithm to prevent the production of addition moisture in the building.

Monitoring of operational status and space temperature of tenant supplementary package units and general monitoring and control of plant and equipment including ventilation systems and light circuits provides the building management and maintenance staff with invaluable insight into the operational state of systems.

The 43 floors were successfully completed over a six month period of progressive changeovers with no interruption of services.



#### 5.26 Wacol Correctional Facility (Men's) – BMCS Refurbishment

Systemax were engaged by Q-Build and project services to produce a technical specification to replace the existing BMS system, enabling the facility management to tender the replacement works.' Systemax was successful with tendering the works and proceeded to replace the system in a three month period without impact to the inmates. During this period numerous operational items were identified as non operational which were rectified to provide a more efficient operating system.

#### 5.26.1 Wacol Correctional Facility (Women's)

As an extension to the Men's facility, Systemax has replaced the incumbent BMS system at the Women's facility for all HVAC control items with an Automated Logic BMS system.

#### **5.27 Central Pharmacy**

Central Pharmacy is a pharmaceutical production and distribution centre incorporating clean rooms, PS2 laboratories and pressure critical environments. The project requires a focus on close control of pressures and temperatures to all spaces to ensure the correct level of isolation and cleanliness to the operational requirements of the facility.

#### 5.28 API Warehouse

Replacement of the existing MSSBs and control system was required after a major flood event damaged the warehouse premises. The new BMS formed part of the MSSB replacement with local user touch screen interface linked to Web based server provided a result which increased the functionality of the system without compromising the ability of the user to easily interrogate the systems control parameters.

#### 5.29 The Reject Shop Warehouse

Replacement of the existing MSSBs and control system was required after a major flood event damaged the warehouse premises. The new BMS formed part of the MSSB replacement with local user touch screen interface provided a result which increased the functionality of the system without compromising the ability of the user to easily interrogate the systems control parameters.

#### 5.30 Other QLD Sites:

- 82 Eagle St 12 Storey commercial building;
- 33 Queen St 10 Storey commercial building;
- 333 Ann St 24 Storey commercial building, including NABERS Energy and Green Star rating;
- 308 Queen St Heritage listed retrofit and new 5 Storey commercial centre;
- 51 Wembley Rd Office complex;
- Centenary Square New commercial office complex including NABERS Energy and Green Star rating;
- Whyte Island New Brisbane fire brigade training facility;
- Coconut Grove, Port Douglas Prestigious residential and commercial complex;
- Moreton TAFE;
- Melba's Nightclub;
- Dalby Hospital.

Further site and client references can be provided upon request.

## 6 INTERESTING NATIONAL INSTALLATIONS

#### 6.1 Victorian Diseases Reference Laboratory (VIDRL)

VIDRL is aligned with GMAC (Genetic Manipulation Advisory Committee) and has World Health Organisation certification.



The Automated Logic Systems monitor and control:

- PC2, PC3 and PC4 laboratories;
- Australian high security PC4 laboratories;
- Air cooled chillers;
- Boilers;
- Cryogenic freezers (-75Deg C);
- Freezers;
- Tissue culture warm rooms;
- General monitoring of medical gases;
- Process control chilled water for electron microscopes;
- Bio cabinets within the PC4 laboratories.

In addition, the ALC system controls and monitors the "PC4 hazardous waste destruction system. This provides high pressure steam sterilization of PC4 waste. Features of this include:

- Challenge ability on samples;
- Full fail safe to containment.

#### 6.2 Robert BOSCH Australia

The Automated Logic control system at the Robert Bosch facility in Clayton, Victoria has been developing since 1995. This has been a continuous process of new works and replacing existing systems.

The facility consists of research and production. Automated Logic is responsible for control and monitoring of critical production processes, including de-ionized water and effluent discharge, production monitoring; as well as regular air conditioning.

Third party interfaces are a major component of the installation communicating with:

- Central Chiller plant;
- Central compressed air plant;
- Electrical metering across the site;
- Fire alarm panels.

Total points on the site, including hardware I/O and high level interfaces, is approaching 20,000 points.

#### 6.3 Other Notable Australian sites include:

- Westpac Data Centre
- SARDI Fisheries Research Centre
- Peregrine Semi Conductor Plant
- Torquay Water Purification Plant
- Kingsford Smith Airport Control Tower
- Eureka Tower (92 levels, 297m)
- University of Sydney (20 buildings)
- KPMG Building (5 star rating)
- DNSDA Australian Army

## **7 INTERESTING INTERNATIONAL ALC INSTALLATIONS**

- The White House
- Cisco Systems
- The Pentagon
- Ford Motor Company
- Boeing Aerospace
- Lockheed Martin Aerospace
- Sun Microsystems
- IBM
- Universal Studios
- Citibank
- Harley Davidson

Further site and client references can be provided upon request.

Additional Automated Logic details and information can be found at www.automatedlogic.com

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- NSW

- Victoria
- NSW
- Victoria
- NSW
- NSW
- NSW
- SA - NSW



#### PLANIT CONSULTING CAPABILITIES, KEY RESOURCES AND PERSONNEL DETAILS

Planit Consulting and its team members are specialists in the urban development field, with vast experience in the management of complex development applications, Environmental Impact Statements (EIS), landscape design, recreational park planning and overall project management. Planit Consulting is a medium sized (> 25 staff) urban development consultancy firm with offices located at Nobby Beach on the Gold Coast, Kingscliff in Northern New South Wales and Darwin in the Northern Territory.

Planit Consulting is an integrated development consultancy, offering an innovative combination of planning, landscape architecture, design and environmental services. Our blend of project management, planning and design expertise provides exceptional value to clients. Our people offer unmatched depths of experience, enabling us to streamline and resolve complex projects. Our clients know they can depend on Planit Consulting to deliver a total planning, landscape design and project management service. Planit Consulting has a strong record of providing highly successful development outcomes underpinned by our commitment to sound project management and the delivery of quality services to our customers.

Planit Consulting offers a unique combination of skills in project management, town and environmental planning, watersensitive urban design and landscape architecture. Our high level of skills and many years of experience significantly simplify the development application process for our clients in many areas.

Planit Consulting offers a wide range of services including:

- Project Management
- Strategic Planning
- Town Planning
- Environmental Planning
- Landscape Architecture
- Water-Sensitive Urban Design
- Expert Witness
- Marketing Services
- Energy Efficiency

Planit Consulting has assembled a highly skilled and competent group of team members to ensure that the appropriate technical knowledge is readily available to successfully deliver the consultancy service. The project team has considerable experience in the landscape design and construction coupled with an astute understanding of the importance communication and project management plays in all major projects. This experience has been gained over a number of years both within the subject study area and at broader regional and state levels. Our company personnel have vast experience across governmental boundaries which have assisted them in their professional growth and development and provide them with considerable references to draw upon.



#### ADAM SMITH

Director Specialist Land Development Consultant Senior Urban and Environmental Planner

#### **Synopsis**

Adam is an experienced Town Planner and Development Consultant with over 18 years experience in the preparation, management, coordination and assessment of many of the more complex applications and land development projects within New South Wales, Queensland and the Northern Territory in this time.

In this role, Adam has been actively involved in the delivery of projects worth well over \$3 billion and is often called upon to act as an expert witness in Planning and Environment court cases in both Queensland and New South Wales. Adam has also consistently been engaged by government authorities to assist their commercial arms with respect to the development of lands. These departments include, Department of Lands, Land & Property Management Authority, Roads & Traffic Authority, Soil Conservation Service, Department of State & Regional Development, Department of Housing and the Department of Main Roads. Adam has also been engaged by Tweed, Ballina, Lismore, and Byron to assist them with complex development and policy matters.

Prior to commencing in the Consulting industry, Adam was employed as the Coordinator of Development at Tweed Shire Council and as a Senior Development Planner at Byron Shire Council, whilst having also worked for the QLD Department of Natural Resources and Gold Coast City Council for extended periods.

Adam offers clients expertise in all facets of development consulting, including Designated Developments, Statements of Environmental Effects and Rezoning Submissions for activities as diverse as quarries and poultry farms. He is committed to providing comprehensive and professional assessment and advocacy that is supported by a thorough understanding of the principles of statutory compliance and ecologically sustainable development.

Adam is committed to providing comprehensive, professional assessment and advocacy, supported by a thorough understanding of the principles of statutory compliance and ecologically sustainable development.

#### PROFESSIONAL QUALIFICATIONS AND ACCREDITATION

- Associate Degree in Applied Science (Resource Tech) Southern Cross University
- Bachelor of Applied Science (Environmental Technology & Engineering) Southern Cross University
- Postgraduate Diploma Urban & Regional Planning University of New England, Armidale
- Member (Corporate) Planning Institute of Australia & Certified Practising Planner

#### DUTIES AND SKILLS

- Provision of planning and environmental advice to local and state authorities;
- Preparation of development applications pursuant to Environmental Planning & Assessment Act 1979, NT Planning Act, Sustainable Planning Act 2009 and Part 4 of the Queensland State Development and Public Works Organisation Act 1971;
- Preparation and implementation of town planning and environmental management strategies for private and public sector clients across a range of industries and locations;
- Project Manager for Environmental Impact Assessments of State Significant Projects for private sector clients
- High level of interpersonal and communication skills;
- Ability to work cooperatively and in a positive business manner with all project stakeholders;
- Strategies include the production of local area plans and structure plans, master planning, the preparation of planning codes, water quality monitoring programs, stormwater management plans, & flora and fauna studies;
- Planning and Environmental reports
- Flora and Fauna surveys and the recovery programs for protected species;
- Development of educational material on environmental and planning issues;
- Liaison with State and Council officers and other relevant stakeholders;
- Project management, Monitoring and Coordination;



- Preparation of reports and expert witness for appeals; and
- Expert Witness Planning and Environmental issues.

#### RECENT PROJECT EXPERIENCE

The following small sample of projects are presented to demonstrate Adam's & indeed Planit Consulting's previous experience in providing similar work to that proposed through this project. Additional experience profiles can be provided upon request. All team members of Planit Consulting included with this offer have vast experience across a broad array of projects including but not limited to the projects presented below.

#### Project: Pacific Highway Asphaltic Concrete Batching Plant Client: Tropic Asphalt & RMS Consultancy Services Provided

- Strategic and Statuary Planning
- Consultation
- Ecological Assessment
- Plan Preparation
- Visual Analysis

Lead consultants in the preparation of a detailed REF for a proposed Temporary Asphalt Batching Plan adjacent to the Pacific Highway at Pottsville. Planit Consulting undertook the preparation of the REF and associated specialist consultancy services (in conjunction with CRG Acoustics).

#### Project: Various REF's for Local Authorities (over 30 in total)

Client: Tweed Shire Council, Tamworth Regional Council, Richmond Valley Council, Department of Lands, NSW Roads & Traffic Authority (RMS), NSW Crown Lands, NSW Public Works (Department of Commerce), Soil Conservation Service & Byron Shire Council

#### Consultancy Services Provided

- Strategic and Statuary Planning
- Consultation
- Ecological Assessment
- Plan Preparation
- Visual Analysis

Planit Consulting has been engaged by the above authorities over the last five years to prepare a significant number of REF's, ranging from Water and Sewerage elements of the Byron Reclaimed Water Strategy, the undertaking of Crown Land Caravan Parks across the region and the construction of a Sewer Rising Main through the Terranora Estuary and under SEPP 14 Wetlands.

#### Project: South West Rocks Development Control Plan Client: Kempsey Shire Council Consultancy Services Provided

- Strategic and Statuary Planning
- Master planning
- Landscape Architecture
- Urban Design
- Visual Analysis



Lead consultants in the preparation of structure planning, master planning and Development Control Plan preparation for an urban release area comprising approximately 600 allotments and incorporating significant environmental and location constraints. Planit Consulting's Urban Design response has been lead by its ecologically sensitive design approach incorporating the inclusion of water sensitive urban design principles and environmental inclusion.

Project: West Pottsville Urban Release Area Client: Department of Lands - NSW Consultancy Services Provided

- Strategic Planning
- Site Planning
- Statutory Planning
- Urban Design
- Terrestrial Flora and Fauna Assessment

Planit Consulting was engaged by Land and Property Management Authority (LPMA) to prepare a request for rezoning of Lot 243 DP755701, Lot 1 DP 1120944, Lot 2 DP 1120944, Lot 3 DP1120944 & Lot 1 DP 1002122. The purpose of the proposal is to enable the redevelopment of part of the site (identified as the development foot print within this planning proposal) for a 'full line' supermarket and construction of Loop Road over two (2) stages.

This request follows from the recommendations of the recently adopted Section B21 – Pottsville Locality Based Development Code of the Tweed Development Control Plan 2008 (TDCP 2008), the Pottsville Retail Sustainability Report August 2008 (prepared by Macroplan Australia Pty Ltd on behalf to Tweed Shire Council), the Pottsville Village Strategy 1998 and the Tweed Local Environmental Plan 2000).

Ultimately this rezoning sought to expedite realisation of a number of elements within Councils strategic and development control documents relating to the ongoing development and vitality of the Pottsville Village Centre. Importantly it will secure the village center primacy in relation to proposed/potential local convenience centers within Seabreeze estate and future urban releases in Dunloe Park.

Project: Preparation of Generic Plan of Management for Community Land Client: Tweed Shire Council Consultancy Services Provided

- Strategic Planning
- Site Planning
- Recreational Planning
- Policy Formation

Pursuant to the requirements of the Local Government Act, 1993 (as amended), all Councils within NSW must prepare and adopt 'Plans of Management' for all land vested in their ownership or management and identified as 'community land'. Planit Consulting were engaged by Tweed Shire Council to prepare a generic Plan of Management for Community Land categorised as 'sports ground.'

The sports grounds covered by this plan typically provide for playing fields and facilities for organized sporting activities at the local community and broader district levels. Typically these sports fields contain facilities, informal and formal areas, playing surfaces and infrastructure associated with or catering for such sports as soccer, cricket, rugby league, rugby union, AFL, athletics, tennis, hockey, netball and softball.

Other facilities that can be found within lands covered by this plan include training facilities, club houses, amenities facilities, maintenance facilities and other similar recreational facilities and infrastructure such as skate bowls, lights, change rooms and car parking areas. The plan of management was facilitated so as to provide a foundation and fundamental basis to which the land will be utilised and managed, inclusive of resource allocation and future development.



#### Project: Review of Environmental Factors for the Tweed River Southern Seawall Maintenance Works Client: NSW Department of Lands Consultancy Services Provided

- Statutory Planning
- Development Assessment

Planit Consulting was engaged by the NSW Department of Lands to prepare a Review of Environmental Factors report. The Review of Environmental Factors (REF) assessed the environmental impacts of a project to carry out maintenance works to the southern seawall at the Tweed River entrance.

The project was triggered after it became evident that the southern side of the Tweed River southern seawall has been affected by erosion events and portions of the rock armouring have fallen into the sea. As a result, there was concern in relation to the long term stability and safety of the seawall. The cause of these concerns is not clearly apparent; however, the existing rock armouring has been in place since approximately 1962 and is now due for maintenance works. It is noted however that the jointly operated (NSW & QLD Governments) 'Tweed River Entrance Sand Bypassing Scheme' appears to have encouraged increased erosion of rock armour at the immediate interface between the beach and the southern side of the southern Tweed River entrance seawall.

The proponent of the proposed works is the NSW Department of Lands (as the owner of the existing asset). The NSW Department of Planning was the approval body for the proposed Activity. The proposed activity involved the placement of additional rock armour on the southern seawall at the Tweed River Entrance. To facilitate the proposed works it was necessary to clear existing vegetation on both sides of the existing access path leading from the terminating point of Leticia Spit Road to the wall proper. Minor earthworks were also be carried out within the cul de sac at the end of Leticia Spit Road.

In preparation of the REF key stakeholders were consulted including the Tweed Byron Local Aboriginal Land Council, the Environment Protection Authority, the previous Department of Land & Water Conservation, Planning NSW, NSW Waterways, NSW Fisheries, Tweed Shire Council and the DECC. Issues raised by the above bodies were addressed in the REF.

#### Project: Citiland P/L & Gwalwa Daraniki Association Aboriginal Leasehold Masterplan Client: Citiland and GDA

Consultancy Services Provided

- Rezoning of in excess of 30ha of urban fringe area from Aboriginal Leasehold to a major mixed use retail and commercial development site adjoining the Darwin International Airport
- Preparation of Sustainable Design Guidelines
- Detailed Ecological, Risk and Infrastructure Studies
- Preparation of a detailed 'best practice' masterplan to lead the future development of the subject lands.
- Liaison with all interested stakeholders over a six year period.

## Project: Ecological assessment & Development Advices over Crown Land located on Sandalwood Avenue and Tweed Coast Road, Bogangar

Client: NSW Department of Primary Industries – Crown Land Division Consultancy Services Provided

- Environmental Assessment
- Statutory Planning
- Financial Feasibility Advice

It is noted that the key project objective is to identify a reasonable / achievable development footprint within the subject site, which recognises critical ecological values, as a basis for further planning investigations to facilitate urban development of the site. In this regard, Planit Consulting has been commissioned by the Land and Property Management Authority (LPMA) to prepare preliminary terrestrial flora and fauna assessment documentation over land situated at Sandalwood Drive, Bogangar. This project involved a brief flora and fauna investigation and sought to describe vegetation types, habitat



associations and preliminary ecological values of the subject property. This information was intended to be utilized as a scoping document identifying potential ecological constraints associated with future intended development of the land. From this, Planit produced a number of maps synthesizing the sites opportunities and constraints, examples of which are included below.

#### Project: Crown Subdivision at Letita Road, Fingal Head

Client: Tweed River Entrance Bypassing Company (NSW and QLD State Government Authority) Consultancy Services Provided

- Statutory Planning
- Development Assessment

Planit Consulting was commissioned to prepare a Statement of Environmental Effects relating to a proposed subdivision of Lot 734 DP 48821 Letitia Road, Fingal Head. The purpose of the subdivision is to enable infrastructure associated with the Tweed River Sand Bypass Project to be sited within an individual parcel of land for leasing purposes from the land owner, Tweed Byron Local Aboriginal Land Council.

The subdivision can be best described as a 'special purpose subdivision'. In this regard, the objective of the proposal was to ensure that existing infrastructure associated with the Tweed River Sand Bypass Project is sited within an individual allotment, independent of the surrounding lands owned by the Tweed Byron Local Aboriginal Land Council. The proposed development resulted in the creation of the subject allotment on a 25 year lease agreement, as opposed to a conventional freehold title. The allotment was to be leased to the operators of the Tweed River Sand Bypass Project. This will simplify and formalise the leasing arrangements between the two parties and ensure that matters relating to liability, maintenance and management are effectively addressed.

#### Project: Gold Coast International Marine Precinct Client: Maritimo Quays Pty Ltd Consultancy Services Provided

Environmental Impact Assessment/Statement including:

- Preparation of EIS for lodgement with Coordinator General;
- Managing and collaboratively coordinating all external consultants;
- Ongoing relationship building with government authorities and departments
- Urban Planning Report;
- Conducting and Reporting on Community Consultation; and
- Terrestrial Flora and Fauna Studies and Reporting.

The Gold Coast International Marine Precinct project involves the development of an integrated industrial marina on the Coomera River located at Shipper Drive, Coomera. This involves an Environmental Impact Assessment (EIA) for the project which expands the existing Gold Coast Marine Precinct into a world class industrial marine development. This proposal was declared to be a 'significant project' under Section 26 of the Queensland State Development and Public Works Organisation Act 1971 thereby initiating the EIA process for which Planit Consulting was sought as the lead consultant for the preparation of an Environmental Impact Statement (EIS) and masterplanning process.

Planit Consulting has finalised the masterplan preparation for this project, after undertaking detailed community consultation and ongoing liaison with Queensland Coordinator General. Planit Consulting is in the process of compiling and integrating a variety of documents such as s242 Preliminary Approvals, Reconfiguring a Lot and Operational Works applications under the Sustainable Planning Act 2009, Environmentally Relevant Activities, Resource Entitlement, flora and fauna assessments, environmental studies, stormwater quality, place making and community consultation documents/plans. Furthermore, Planit Consulting seeks to incorporate a variety of features such as transit oriented development, place making, water sensitive urban design, natural buffers to Oakey Creek, impact mitigation and monitoring and stakeholder engagement and to ultimately uphold 'triple bottom line' and sustainability principles.

Approximately 42 hectares of the site will be developed for marine industry use. The remaining area includes a 40 metre naturally vegetated setback along Oakey Creek and other public access facilities. Pedestrian and bikeway paths have been



identified to connect with a proposed bridge over Oakey Creek linking the marine precinct to future residential communities at Coomera and to the Coomera Town Centre. In addition, a public access pedestrian zone will be constructed along the riverfront, providing a landscaped promenade alongside the marina. It is estimated that the total construction cost of the proposed development would be approximately \$390M (including all civil works and construction of buildings). The operating revenue of the GCIMP is projected to be in the order of \$754.4 million upon completion and is projected to provide approximately 2,700 FTE operational employment position years.

#### Project: Gold Coast International Airport Development & Design Guidelines Client: GCIA

**Consultancy Services Provided** 

- Environmental Assessment
- Preparation of Sustainable Design Guidelines
- Preparation of detailed Development Controls and Processes
- Liaison with all air side and land side stakeholders
- Input in to GCIA Masterplan

#### Project: Northern NSW Crown Coastal reserves Plan of Management Client: NSW Crown Lands Consultancy Services Provided

- Environmental Assessment
- Identification of sustainable development opportunities
- Preparation of strategic policy for all Crown land over three local government areas
- Liaison with all private and public stakeholders

#### Project: Park Ridge Connector Corridor Preservation Study

Client: Queensland Government Department of Transport and Main Roads Consultancy Services Provided

Planit Consulting has been involved with the Park Ridge Connector Corridor Preservation Study in a number of roles including:

- Terrestrial Flora and Fauna Impact Analysis
- EPBC Act Advice
- Strategic Environmental Planning and Value Mapping
- Environmental Studies Specific Species including Quolls
- Open Space and Recreational Planning
- Landscape Visual Amenity Assessment
- Environmental Assessment Reporting
- Project Management and Coordination of Historic and Indigenous Heritage Consultants

The Park Ridge Connector (PRC) is part of a future road link at motorway standard identified at a conceptual level in the SEQ Regional Plan 2009–31 and the Draft Connecting SEQ (an Integrated Regional Transport Plan for South East Queensland). PRC aims to strengthen the road network in Logan City and to ensure the existing community and planned future communities at Park Ridge, Greater Flagstone and Yarrabilba have access to employment and services.

The PRC will be designed to relieve congestion on surrounding roads including Mount Lindesay Highway and Wembley Road, while improving connections to the Ipswich Motorway, Pacific Motorway and Port of Brisbane and creating new links to the Gateway Motorway and Logan Motorway.

The key outcome Planit is responsible for delivering is the environmental assessment reporting associated with the project. To date, reporting achievements include the preparation of report which have been used for the project public consultation



and the finalisation of an assessment report to accompany a report to Queensland Government Minister for Main Roads regarding the declaration of a future state controlled road.

Through this project Planit Consulting has developed an innovative environmental mapping tool which was used throughout the project community consultation. The mapping tool was based on a complex number of GIS mapping layers represented different environmental values which were classified into high, medium and low environmental significance. This tool facilitated environmental constraints discussion with the general community who would not have otherwise been able to understand the complex raft of environmental mapping and jargon normally contained within assessment report for major projects.

#### Project: Coomera Woods Residential Development Client: Coomera Town Centre Management Consultancy Services Provided

- Development assessment
- Strategic and Statuary Planning
- Environmental impact assessment
- Environmental management general
- Environmental planning general
- Environmental studies
- Stormwater Water Sensitive Urban Design
- Wetland design
- Landscape Architecture
- Urban Design
- Visual Analysis

The Coomera Town Centre project occupies approximately 300ha of land east of the M1 at Coomera. The site is identified for a major residential development and the future town centre. The project will ultimately provide approximately 70,000sqm of commercial / retail land and 3000-4000 dwellings. The land holding also include significant future industrial and service industries land. The site is currently vegetated with various eucalypt communities occurring on the undulating slopes and ridges. Wetland communities dominate the two principal waterways of the site, one of which is Oakey Creek.

A key function Planit Consulting performed for this project is being abreast of the dynamic planning process. As mentioned the planning controls and guidelines at both a State and Local government level have substantially changes and continue to evolve. As a multidiscipline firm we advise our client on the implications of change to their holdings.

Key personnel are involved in the preparation of necessary IPA planning applications and coordinating the integration of other disciplines to deliver outcomes. Planit Consulting staff has undertaken extensive environmental investigations over the holdings both terrestrial and aquatic. The brief is to determine areas of ecological significance, establish appropriate management regimes

for retained vegetation. The scope of works has also involved the preparation of Fauna Management Plans, Open Space documentation and coordination of site storm water quality devices.

The scope of works also includes the design and planning approval process for part of the residential areas of the town centre and future industrial segments of the development, including the establishment of Open Space Urban Design Principles. Staff has also been instrumental in design response to the changing state and local government planning requirements. This has included master planning and the formulation of urban design guidelines for open space areas and the streetscape. An element of these urban design functions has been defining local and future character and formulation of public art themes and elements.



Appendix 6.1.5 Solo Waste Recovery ISO Certification



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23.7.2013









86-88 Chinderah Bay Drive Chinderah NSW 2487 PO Box 1427 Kingscliff NSW 2487 AUSTRALIA

02 6674 7647 Services: 02 6674 7656 Admin: Fax: 02 6674 7657 Email: solorr@solo.com.au Web: www.solo.com.au

Solo Water 45 Dwyers Road, **GNARWARRE VIC 3221** 

Dear Wynn,

#### RE: Triple Certification

Solo Water (SW) is a joint venture company of which Solo Resource Recovery (Solo) is currently a major shareholder.

Solo's routes in all streams of waste, both solid and liquid, and respective resource recovery management from those streams date back over 80 years.

Solo's commitment to Solo Water is both Financial and Managerial.

Solo operates with an internally developed and managed integrated management system that extends beyond the requirements of the following Quality Safety and Environment (QSE) standards.

Solo has third party certification that meets the requirements of the below Certification Standards.

AS/NZS ISO 9001:2008 AS/NZS ISO 14001:2004 AS/NZS 4801:2001

**Quality Management System Environment Management** Work Health and Safety Management

SW has been the benefactor of these management systems since it has been integrated into Solo's operational structure.

It is proposed that Solo Water will be incorporated completely in the future, including third party certification for respective QSE elements, as management systems are completely integrated.

Yours faithfully,

Joanne Simonelli QSEBDM Quality, Safety & Environment, Business Development Manager

HUNTER REGION Address: 25-27 Oakdale Road PO Box 2347 Gateshead NSW 2290 Phone: 02 4947 8511 Email: solohunt@solo.com.au MONASH AND BAYSIDE REGION Rear of 29 Garden Road Clayton VIC 3168 PO Box 8236 Carrum Downs MC 3201 Phone: 03 9547 8148 frankston@solo.com.au Email:

☐ NORTH PLYMPTON Address: 181 Morphett Road North Plympton SA 5037 08 8295 5077 Phone: Email: solomari@solo.com.au □ WINGFIELD Address: Wingfield Phone:

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401 Hanson Road SA 5013 08 8447 5725 solomari@solo.com.au

FRANKSTON REGION 47 Tova Drive Address: PO Box 8236 Carrum Downs VIC 3201 03 9770 8040 Phone: frankston@solo.com.au Email:

WARRAGUL REGION 16 Pearse Street Address: PO Box 1364 Warragul VIC 3820 03 5633 2009 Phone: Email: hawhaw@solo.com.au

3 BYRON BAY Address: PO Box 342 Phone: Email:

2 Fowlers Lane Bangalow NSW 2479 02 6687 0455 byron@solo.com.au

□ PORT STEPHENS 47 Camfield Drive Heatherbrae NSW 2324 PO Box 806 Raymond Terrace NSW 2324 02 4987 7997 Ph: solohunt@solo.com.at/ Fmail:



## SOLO Resource Recovery 86-88 Chinderah Bay Drive Chinderah NSW 2487

Operates a management system that complies with the requirements of:

## AS/NZS ISO 14001:2004 AS/NZS ISO 9001:2008 AS/NZS 4801:2001

The Scope of Certification is:

Operators of household and industrial waste and resource recovery collection, handling, transport and treatment systems.

Date of Issue: Expiry Date: Certificate Number: Certification Number: Certification Date: 14 March 2013 30 November 2014 6596000-SEQ-003 6596 13 January 1994



To confirm the currency of this certificate please email certification@ncsi.com.au This Certificate remains the property of NCS International Pty Limited ACN 078 659 211 7 Leeds Street, Rhodes NSW 2138 A wholly owned subsidiary of The National Association of Testing Authorities, Australia ACN 004 379 748 Accreditation by the Joint Accreditation System of Australia and New Zealand (<u>www.jas-anz.org/register</u>)