



International System Integrators

MILLWIDE SOFTWARE, OPTIMIZATION & CONTROL SOLUTIONS

**1 Malolo Island Resort
Vunabaka Fiji**

VUNABAKA RESORT DEVELOPMENT

**“Great experience and great guys to work with”
Shane Robinson, Powersmart**



Recently, Automation & Electronics were contracted to handle the PLC and SCADA controls for the Solar Power Energy project at Vunabaka, Malolo Island Resort, Fiji.

This is a project that is at the cutting edge of solar PV projects and uses the best technology sourced from all over the globe.

In 2012 PowerSmart were approached by some developers who wanted to build a beautiful resort in Fiji, but like many Pacific Islands there was the major issue of electricity.

The PowerSmart solution involved the control of a reticulated mini grid with the capacity of 240 kW (1MW planned) of power to the resort buildings from multiple solar arrays feeding into a centralized Tesla Battery bank (4MWh - one of the largest commercial battery banks in the South Pacific), and two backup generators.



Screen Shots from the SCADA PC (operator control PC)

This is a first for A&E (green fields), and the first project for Dries Nel (new engineer) at A&E. Logistically it made sense as PowerSmart is just around the corner. Dries had this to say about the project - "With PowerSmart we were focused on solutions to achieve the project requirements and objective. In my opinion this was a Research & Development success, and the much needed Modbus TCP communication protocol was successfully used to communicate all the energy devices on the Ethernet network".

Shane Robinson from PowerSmart Solar, when asked why PowerSmart used the services of A&E on this project said "A&E are close neighbors and we have used their services before to good effect". "In this instance, A&E developed a micro grid controller which is the central brain for the power system which decides when to dispatch

backup diesel generation and maintain grid stability." "The project is mostly finished and A&E have completed their part of the project, though the installation will be doubled in size next year" Shane said. "My overall impression of Automation and Electronics involvement in this project is 8-9 out of 10, great experience, great communication and great guys to work with" he said.

Dries Nel says "A&E is still continuously working with PowerSmart to optimize processes, and everything is running smoothly". "Hopefully the partnership between A&E and PowerSmart will grow as this is a great opportunity for A&E to diversify into the energy field".

*"thank you" Powersmart Solar www.powersmartsolar.co.nz
for the use of the above photo.*

**A&E EXPO
STANDS 2017**

HMA NATIONAL CONFERENCE - CHARLESTON SOUTH CAROLINA USA - MARCH 22ND - 24TH 2017

SFPA FOREST PRODUCTS EXPO 14TH -16TH JUNE 2017 ATLANTA GEORGIA USA

WOODTECH - MELBOURNE AUST - SEPTEMBER 20TH & 21ST & ROTORUA NZ 26TH & 27TH SEPTEMBER 2017



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2 A&E - WINDSOR PROJECTS

INTERNATIONAL KILNS

“As we have come to expect, the service and support from A&E has been excellent” - Keith Robertson, Business Manager, Windsor



Pictured: West Fraser Mansfield Kiln

“The past eight months continue to be a busy time for both A&E and Windsor, installing and commissioning our Dryspec and DryTrack Echo systems for process management and HMI for batch kiln and CDK projects”. “In this period, amongst other projects, we have successfully completed three more CDK systems plus an installation of Dryspec³ onto existing batch kilns in the USA plus another CDK in Canada”. “The next six months will be even busier with another

three CDK systems on schedule for the USA, one CDK in Canada and four in New Zealand”. “Our order book is healthy with numerous kiln projects for 2016/7 all including controls software and hardware input from A&E”. “As we have come to expect the service and support from A&E has been excellent and is much appreciated. Service and support is now even more efficient with two A&E engineers based permanently in North Carolina”.

3 NZ FLOUR MILLS TIRAU-NEW ZEALAND

REDEVELOPMENT & SCADA/HMI PACKAGE

“We received excellent service and exactly what we asked for at the price quoted”
Gary Urwin - New Zealand Flour Mills



With the Mill unable to run production due to a locked out PLC, A&E were contacted to redevelop PLC code as well as provide a new SCADA/HMI package. As the existing Allen-Bradley CompactLogix PLC could still be used, it made logical sense to offer the customer a Rockwell Factory Talk SE SCADA solution to easily tie in with the controller. Scott Arendse, Project Engineer at Automation and Electronics had this to say, “Due to the time constraint as well as the number of motors and valves, PLC and SCADA objects were developed by A&E making use of the advanced functionality available within the Rockwell software packages”. “This software allowed for faster configuration and commissioning of the system and played a key role in ensuring that the Mill was able to start up without experiencing any major downtime”, he said. The project was commissioned in July this year.

Gary Urwin of NZ Flour Mills in Tirau said that from his perspective, the job entailed a complete re-write of the software program for the plant. He said that the program that came with the equipment failed and that from a long term objective he wanted to use an experienced local company that offered local specialized service. Gary said that he could not get into the existing program and found it difficult to get help, as the current equipment meant dealing with an overseas company and the problems of time delays and language barriers associated with it.

When asked why he used the services of A&E on this project, Gary said, “I knew of A&E and used them when I worked for a another company in the past with good results”. “What we received was excellent service and exactly what we asked for at the price quoted”, he said. Gary also stated that A&E are still working with NZ Flour Mills, with weekly fine tuning and making small tweaks to further optimise the program.

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WAITETE SAWMILLS TE KUITI - NEW ZEALAND

LOG CARRIAGE OPTIMIZER UPGRADE

‘The job went smoothly with no issues’ Ramish Nahna - Waitete Sawmills

With the existing controls already put in place at Waitete Sawmills by A&E a few years’ prior, the next step was to incorporate a Log Scanning/Optimisation system making use of A&E’s LogView Optimisation software and ScanMeg CV12 Scanners.

In order to accommodate the additional functions needed for Optimization, it was necessary to replace the existing HMI Screen with an Allen Bradley PanelView Plus.

The advantages of the upgrade were as follows:

- Improved throughput as operators no longer spend time aligning the log. It is just a matter of ‘SCAN-SET-CUT’.
- Consistent Opening Face based on Customisable Optimisation Settings
- Improved recovery



Photos of Carriage scanning system and Scanner mounting frame at Waitete

Ramish Nahna, General Manager at Waitete Sawmill said that when they had used A&E before they had experienced good results with their equipment and systems. “Therefore, said Ramish it made good sense to use them again and the job went smoothly with no issues”. From his perspective, Ramish said that “the project entailed scanning

systems and optimisation on the log carriage”. “As logs become more expensive we need to get the best return that we can from them and with this latest scanning/optimisation system we have seen a real improvement in production and recovery”, he said.

Commissioning Date: May 2016

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PAUL INDUSTRIES TAURANGA - NEW ZEALAND

AUTOMATE BITUMINOUS PAPER MACHINE

**‘I am building confidence in Chris and A&E’
Frank Bishop - Operations Support - Paul Industries**

Late last year, Paul Industries in Tauranga, New Zealand, contracted Automation & Electronics to upgrade Paul Industries roof safety mesh and building paper system to include event logging in conjunction with Philip Jones Electrical contractors.

This year, the forty four-year-old family business who manufacture a raft of building and fencing products, asked A&E to come up with a plan to automate their Bituminous Paper Machine.

Chris Paul (no relation), Electrical Engineer at Automation and Electronics was the engineer in this instance. Frank Bishop, Operations Support at Paul Industries, had the following to say about A&E and Paul’s involvement in the project:

“I instructed Chris to come up with a plan to automate our Bituminous paper machine and he developed a PLC code to run the current systems, and installed the PLC and hardware”.

“It was a difficult task, mainly due to the machine involved having so many manual processes, however, I am building confidence in Chris and A&E, this being the second PLC project for them”.

Frank further added that although the project is still continuing at present:

“I prefer to deal with Chris as he is very practical, knowledgeable and has good ideas on how processes work”.

“Some PLC programmers are purely focussed on their programming and software building, whereas Chris can understand machinery issues/limitations and works well with other contractors”.

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International Systems Integrators

MADE FOR SAWMILLS



NEW

JoeScan's scan heads have been made for sawmills since the company introduced its first scan head in 2002. JoeScan's newest scanner, the JS-25 X6B, is a high-performance, six-laser scanner, specifically designed for high-density, snapshot-scanning of logs on carriage headrigs. JoeScan JS-25 X6B scan heads can be mounted end-to-end to scan any length of log on six-inch spacing.

The JS-25 X6B was designed to make it easy for optimizers and sawmills to upgrade obsolete carriage scanning systems, often reusing the existing scan frame. To protect your investment, each JS-25 X6B comes with a 5-year warranty and a 10-year product support policy to safeguard against obsolescence.

JoeScan

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NEW

RUGGEDIZED CARRYING CASE

For the WAGNER
L601, L620 and L622
Moisture Meters

\$165.00^{NZ} + GST

* Available to NZ
Customers Only.



XMAS SHUTDOWN

Admin office will be closed from
12 NOON Wednesday 21st December
UNTIL 8.00AM Monday 9th January

• ALL ENGINEERS WILL BE AVAILABLE ON MOBILE
AS PER OFFICE ANSWER PHONE



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