



Brightwater

BRIGHTWATER NEWS

ISSUE 2 SPRING 2009

CONCEPT

DESIGN

MANUFACTURE

INSTALL

COMMISSION

OPERATE

TURNKEY SOLUTION PROVIDERS TO INDUSTRY



## In this Issue

Nelson Pine Industries.....	1
Huge Accolades to BEL Manufacturing Team.....	1
Chairman's Overview.....	2
CEO's Overview.....	2
SCS Develop Static Crusher for Amuri.....	2
Worsley Alumina.....	2
Crushing The Recession.....	3
Stockton Progressing Well.....	3
Brightwater Group Sponsors Brightwater School.....	3
Fire Risk Reduction Project.....	3
Cougar Helps Stornoway Expansion.....	4
Brightwater Meo Supports ECBC Trust.....	4
Brightwater Group Scholarship – Rewarding Excellence.....	4
Visit to Stockton by Brightwater Group Board of Directors.....	4

## Huge Accolades to BEL Manufacturing Team

“Brightwater Engineering Solutions Pty Ltd, led by Mathew Fletcher, are project managing the building of key components of the first of a number of biomass plants in Western Australia.

Brightwater Engineers have been engaged for the design, fabrication and supply of various equipment components for these plants including the 50 tonne dryers, burners (and associated ducting), cyclone assemblies, conveyors, pull floors and storage bins.

Brightwater Engineers have just completed the first of these fabrication packages for a Western Australia site. To meet the demanding schedule for fabrication, the production team worked 24 hours a day on the first dryer and its associated equipment to meet the required dispatch date. The fabrication also required the manipulation of large, heavy items during the assembly. All credit to the fabrication team who carried this out safely and with minimum disruption. Each dryer, has a steel weight of 50 tonnes, consumes 8,000 man-hours for fabrication and comprises over 2,000 individual parts assembled to considerably close tolerances.

Sections of the burner were lined with castable refractory prior to shipping. This was done on site at Brightwater Engineers to further assist the installation phase on site. Once fabrication was complete the equipment was painted and packed into shipping containers and flat racks for dispatch to site. However, the dryer itself at 18 metres long, 4 metres diameter and 50 tonne weight, required a more challenging means of transport. This was lifted onto a specialised heavy load trailer and transported by road to Auckland where it was then shipped to Western Australia.”



Dryer on the road from Nelson to Auckland.

## Nelson Pine Industries New Sanderline and Cut-to-Size Sawline

Brightwater Engineers have recently completed another successful project for Nelson Pine Industries.

The project involved the installation of all the components of their new Sanding Line and the fully automated Cut-to-Size and Packing Line. The new Sander was supplied by Steinemann (Switzerland), the Sander in-feed and out-feed equipment was supplied by EMG (Italy) and the Cut-to-Size and packing and wrapping equipment was supplied by Anthon (Germany).

Some notable features of the project were... the Anthon Line introduced the first Robots to the Nelson Pine Industries site. These Kuka Titan 1000 kg Robots are the largest currently available internationally. The Steinemann Sander is a 14 head high speed machine with sanding capability of 150 metres a minute. The EMG feeder is sequential, so the board is dealt to rather like a pack of cards, to give a panel feed speed to the Sander of up to 150 metres per minute. Most of the

equipment had been trial operated in the vendor's factories before being packaged and transported to site in New Zealand.

The resulting outcome is that the total output from the 3 NPIL MDF Press lines is now all Sanded, Cut-to-Size and Packaged in a very safe and efficient process, all in a five day working week.

The overseas vendor representatives gave the construction zone a true international flavour. Brightwater Engineer's site manager had to use the tact and diplomacy of a UN general, but despite all of the language barriers and cultural differences, the team worked together to provide an excellent outcome for the client.

In addition to the installation work, Brightwater Engineers manufactured a number of panel handling convey systems for the finishing line and large ductwork for the filter system associated with the new sanderline. This was built for the filter suppliers, Windsor Engineering Group.



Kuka Titan Robot - ready for action.



Anthon Cut-to-Size saw line.



Anthon Robots load packs into the Fromm strapping stations.

# Chairman's Overview

It's great to be able to report that the Group is generally trading well in the first quarter of the new financial year.

We made another significant step forward in August with the appointment of a new Brightwater Group Chief Executive Officer. Warren Arthur joined us from RCR Tomlinson Ltd. Warren brings a wealth of experience in our industry sectors and in the Australian market where we see our future opportunity. As Group CEO he will be responsible to the Board for overseeing the operations of the companies in the Group, including standardisation and collaboration where those opportunities arise. We welcome Warren to the team and look forward to working with him to further develop the Group. 

M.W. Simm  
Chairman



# CEO's Overview

Welcome to the second edition of Brightwater News.

It gives me great pleasure to be providing this overview for the first time since becoming the Brightwater Group CEO. I commenced with BGL on 3 August having relocated from Brisbane.

Although the first few weeks have been very hectic visiting all our operations in Christchurch, Nelson, Auckland, Melbourne and Perth, it has been a pleasure to meet so many of our staff and customers. It is also very pleasing to see the caliber of people in the Brightwater Group and the excellent work being produced both in our workshops and on our project sites.

The Group is very busy with a high workload in Brightwater Engineers thanks mainly to the Solid Energy Coal Preparation Plant at Stockton on the West Coast. SCS and Brightwater Meo have a strong list of enquiries and we are poised to receive new orders shortly.

Other projects at various stages of completion are a Fuel Handling System for Austrian Energy and Environment in Western Australia, Pike River Coal for the commissioning of a coal process plant, maintenance services for Holcim in Westport and we have recently completed a Cut-to-Size Sawline for Nelson Pine Industries in Nelson.

In Brightwater Meo, we are in the process of assisting with electrical and automation of the Stockton Coal Processing Plant, Griffins Biscuits in Auckland for an automation system of the Doe Room and the second stage of the Kuala Lumpur Airport for a PLC and Scada software for a new baggage handling system.

In SCS (Screening and Crushing Solutions) we are very pleased to see that the aggregate industry is now poised to recover with recent major Government project announcements for new roads and infrastructure. This will only strengthen our SCS prospects as we are now well positioned to take advantage of this sectors growth heading into 2010.

Safety, as always, is paramount and will remain our number one priority at all times. It is pleasing to see the results of the ongoing commitment to safety from our team at New Zealand Steel, having recently received the second safety award at that site. A strong safety management system and a commitment led from the top of our organisation will ensure all our future endeavours will be performed safely at all times. 

Warren Arthur  
Group CEO



# SCS Develop Static Crusher for Amuri

Amuri Limestone has just installed a new SCS Cougar 1010 impactor crusher in its quarry near Waiau, North Canterbury.

SCS is a leading manufacturer of mobile rock crushing equipment for the Australasian market, but this is their first foray into impactor crushing equipment.

Engineering Manager, Lincoln Rayner, said Amuri were looking to expand their operation and asked SCS if they could help source a hard-rock static crushing unit for them. "A lot of engineering time, thought and effort has gone into the development of this new design. We are very happy with the result and encouraged by the potential of the Cougar 1010 in the crushing market due to its capacity and ease of maintenance."

Amuri Lime produce agricultural lime and three different grades of chip for the driveway and landscaping market.

General Manager, Grant Duncan, says SCS were a natural choice for the crusher project after completing several other

projects at the site. "They have done work on the lower processing plant, including a three-deck screen and we have been very pleased with the results" he said.

The high-speed nature of the Cougar 1010's Impactors action means it is ideal for shaping aggregate for roading applications. The machine also has a very high operating capacity, the 1m x 1/2 m feed chute can accommodate large sizes making loading easy and efficient.

Lincoln further noted that as well as being part of a primary feed circuit in a static plant set-up, the Cougar 1010 could easily be mounted on tracks to become a mobile unit. "There is no reason why the 1010 could not be on a mobile crushing plant. This would particularly suit smaller quarries."

"We haven't focused much attention on the static plant market in the past, however, now that SCS is a part of Brightwater Group, we have the capacity and expertise to undertake large-scale turnkey projects," said Lincoln. "This means we can now handle large crushing plant and infrastructure projects from conceptualisation through to design, construction and commissioning." 



The first Cougar 1010 Impactor ready for dispatch from the SCS factory.



SCS built hopper, feeder and 1010 Impactor during installation at Amuri Lime in North Canterbury.

# Worsley Alumina

In October 2008, AE&E Australia was successfully awarded the turnkey contract for the reheat multifuel CFB boiler power plant in Western Australia.

Austrian Energy & Environment, Australia are responsible for the design, engineering, procurement, construction and commissioning of a multi-fuel circulating fluidised bed cogeneration power plant with associated infrastructure and services to be built at Worsley Alumina's refinery, near Collie in Western Australia. The power plant is a key part of Worsley's Efficiency and Growth Expansion Project.

The combined budget for the Worsley E&G Expansion and the Griffin cogeneration plant is around \$A3 billion. Two power plants will produce both steam and power (106MWe). The steam is vital to the alumina refining process. Power additional to Worsley's needs will be able to be exported to the State electricity grid.

Brightwater Engineers were awarded the contract for supply of biomass and coal fuel injection system, a critical part of both the power plants. This system delivers the coal or biomass fuel from storage silos then sizes and meters the fuels to the power plant. Our scope of work included the procurement, design, fabrication and delivery of the components required to achieve this. Group partner Brightwater Meo has provided electrical design and components.

The en masse type conveyors and stainless steel chutes have all been fabricated in our Nelson workshop. The fabrication team in Nelson has delivered a high standard of workmanship and met the tight delivery requirements of AE&E. Brightwater Engineer's design staff have also provided 3D modelling for seamless integration of our components into the AE&E plant.

In addition to the above, Brightwater Engineers will also provide supervision during the installation and commissioning phase. 



Layout drawing of the BEL supplied equipment for one boiler.



Hammer Mills from BJD Crushers (U.K.)



Completed CCMW en masse conveyor sections ready for dispatch.

# Crushing The Recession - King Country Contractors Jilesen Gear Up for Growth

Jilesen Contractors Ltd has been providing excavation and earthmoving services in the King Country area for the last 20 years.

Trading as King Country Quarries, Jilesen's quarry provides metal for roading projects, reseals, ballast for railway works and increasingly, building sand for dispatch centres throughout the King Country.

The business has been coping well through the recession according to Tony Jilesen. So much so that King Country Quarries has just purchased a Powerscreen Chieftain 1400 Rinser, a Powerscreen Trident de-waterer, a Powerscreen T4026 Stacker and TC1235C Cougar 1200 Mobile Cone Crusher from our quarry equipment specialists, SCS Ltd.

"We trialed a couple of similar pieces of gear from other companies" said Tony. "Brian Court from SCS showed us a Powerscreen set-up in action. It was just what we were looking for and the Trident de-waterer gave us some more options. Basically we liked what we saw and were happy with the output and reliability of the equipment."

"The Powerscreen Chieftain unit is a wet plant, but we bought it with the optional tail conveyor so that it can be converted back to a dry machine. The Trident I takes the water out of the sand producing an almost dry product. In the past the sand by-product had just been dumped back into the quarry, but we saw an opportunity to provide sand to the building industry."

"The TC1235C Cougar, mobile cone crusher will increase production from the quarry, increase efficiency and lower production costs for us. It will also mean we can source product from other areas, and not be restricted to the one location."

"SCS sales representative Simon Stocker says the Jilesen Contractors story is a breath of fresh air in the current financial climate. "It is companies like Jilesens, who are still prepared to commit to building their businesses that will make good progress and set themselves up well when the economic situation improves."

"They have seen an opportunity, in this instance, to turn something which was essentially waste into profit. The waste material they are now processing used to be dumped back into the pit is now used to make sand, aggregate and drainage material. It is very efficient and also environmentally friendly." 



Powerscreen Chieftain 1400 Rinser supplied by SCS.

## Stockton Progressing Well

Construction is well underway on the Stockton Coal Handling and Processing Plant at Solid Energy New Zealand's Stockton Opencast Mine near Westport.

The project is the biggest Brightwater Engineers has undertaken. Brightwater Engineer's Project Manager, Mark Doherty, says it is well on track for its planned commissioning in early 2010. The Coal Handling and Processing Plant will separate large volumes of high-value coal from rock, old underground mine propping timbers and other waste material, then wash and grade it.

"We are about 70% of the way through the civil construction phase, which equates to about 30% of the overall project construction – so things are on target and progressing well," said Mr Doherty. "The final completion date has been pushed out a little, due to poor ground conditions uncovered during some deep excavations, but we are still looking at on time project completion in the early part of 2010."

"We have just finished erecting a large surge bin and are now in the process of erecting the Coal Processing Plant (CPP) structure. We have started to install some of the CPP equipment, sumps etc. Some of the major overseas manufactured equipment has now arrived in Nelson, Metso

screens, Ludowici Fine Coal centrifuges and Weir pumps, all for the CPP."

Mr Doherty says Stockton is a concurrent design-build project for Brightwater Engineers. Design work is still in progress for certain areas of the plant, while construction is underway on others. He says this is a higher-risk execution strategy, but offers a much reduced delivery time-frame for the client and a degree of flexibility for the project team.

"This type of approach is reasonably typical of the turnkey materials handling projects Brightwater Engineers specialise in," said Mr Doherty. "It allows us to build in a cost-saving factor for Solid Energy for early delivery and for innovations we are able to introduce during the project. It also allows a degree of flexibility for unexpected developments, like the unstable ground we uncovered during excavation."

At times Stockton is a challenging workplace, due to the extreme and changeable nature of the climate and the harsh abrasive environment. Brightwater Engineers however, are familiar with the Stockton landscape from past projects. The 50 strong workforce have continued to meet construction deadlines. Mr Doherty added that as at 13 August there has been zero Lost Time Injuries to date on the project.

Brightwater Group Board members visited the site in July to inspect key aspects of the project and to be introduced to members of the Brightwater project team. 



Coal Processing Plant (CPP) Ground Floor Sumps.



View of the Surge Bin and Construction Village.

## Brightwater Group Sponsors Brightwater School

The Brightwater Group is approached on a regular basis for sponsorship. There are a huge variety of requests, ranging from major events to individual endeavours, sports teams and community activities.

Liz Turpie comments "In June 2009 we were approached by Brightwater School to see if we would consider sponsoring new sports jackets for the children to wear when representing their School. "They are constantly having to fundraise for trips and equipment and the jacket request seemed reasonable. So we agreed, and Brightwater School now has their new jackets, proudly showing off our logo on their backs!

"I think the jackets will be put to good use and help Brightwater School's team spirit. Who knows, there may be some budding young engineers coming out of this school that may one day work for Brightwater Group." 



Children from Brightwater School.

## Fire Risk Reduction Project at NZ Steel Gains Award for Brightwater Meo Engineers

The autumn edition of the Brightwater News ran an article on a fire-stopping project being run by Brightwater Meo engineer Alan McArdle.

Brightwater Meo are proud to announce that on 31 July Alan and his team received a second New Zealand Steel Safety Award for their work, thus recognising the thorough risk analysis, detailed planning and efficient execution they have applied to the project.

This project is part of a wider plant improvement initiative being carried out at New Zealand Steel to enhance fire protection on their site by improving the passive fire-stopping around all electrical switchgear and main cabling enclosures. This is a significant project scheduled over a number of years and when complete, will have covered all of New Zealand Steel's operational facilities.

The award is a credit to Alan and his team! 



Alan, holding the Safety Award, and the installation teams.

# Brightwater Group Scholarship – Rewarding Excellence

BGL Board Chairman, Mike Simm, has announced the formation of a new initiative to reward excellence across the Brightwater Group. The Hugh Grey Scholarship is to be granted annually to a young employee within the Brightwater Group of Companies.

The successful nominee will be sent on a one week course of quality leadership training.

“Our people are our greatest asset and development of our next group of leaders is something that I, and the Board, are committed to for the continued growth of the Brightwater Group,” said Mr Simm. “We like to think that we offer a very supportive learning environment, but there is nothing like comparing yourself with the best of the rest and aiming to emulate them.”

To be eligible to be nominated for this award the nominee has to meet the following criteria;

- Be under 35 years of age
- Be a loyal and committed employee of the company
- Excel in his/her role with potential for further development
- Show potential to take up a leadership/management position in the short-term future. 📄

## Visit to Stockton by Brightwater Group Board of Directors

The July meeting of the Brightwater Group Board was held in Westport.

This allowed Board members to visit the Solid Energy coal handling and processing construction project at the Stockton Opencast Mine, 35 km North of Westport, above the town of Granity. The visitors were shown key aspects of the project and introduced to members of the Brightwater project team. 📄



Mike Simm (Chairman), Ian Robb, Doug Lowrey, Hugh Grey, Doug Troon.

## Cougar Helps Stornoway Expansion

Stornoway Quarrying has recently invested in new SCS equipment specifically designed to improve efficiencies and output at their Northern Tasmania quarry site in Breadalbane.

The SCS TC1235 Cougar cone crusher is making a dramatic difference to operations at the quarry and the new machine (with direct feeder and right-angle hopper) is part of the first stage of the infrastructure company's \$1.25 million investment in new rock crushing and screening equipment.

The features of the mobile SCS TC1235 Cougar include its reliability and durability, the large feed size, increased crusher reduction, good clearance under the cone for discharging crushed material and the large 40-litre accumulator.

Even with his extensive experience in the industry, Quarry Manager Brett Hoyle had never used SCS before purchasing the TC1235 Cougar. “I spent about four months researching all the different types of cone crushers and portable cone crushers from suppliers all over the world but had never been involved with SCS until now,” says Mr. Hoyle.

He eventually settled on the SCS Cougar cone crusher for a number of reasons, primarily the flexibility and capability of the feed size and the depth of crushing within the cone chamber.

“We liked the adaptability to add a feed hopper on the main unit, which made the Stornoway Quarrying machine the first to do so,” he says.

“The flexibility of the machine is incredible. We have just recently moved it off site for the first time for a contract crushing job and had to take the feed hopper off. Within an hour and a half it was ready to load onto the truck. It's a difficult job because it's very high off the ground. “Even when the cone crusher was unloaded at its end location it was ready to go again in five minutes.

The company uses the cone crusher in its own quarry about 80 percent of the time, with the machine used for outside contract crushing work the remainder of the time. “The cone crusher has helped Stornoway become one of the leading quarries in northern Tasmania,” says Mr Hoyle.

“The material that we've crushed previously by contractors was at a tonne rate that was a lot lower output per hour, we're putting out more tonnage per hour than the contractors were doing. The material we had crushed previously never came into specification, but with this machine it comes into specification automatically.”

Mr Hoyle says Stornoway would definitely consider purchasing another SCS cone crusher in the future.

“It's a machine that I think SCS is new in developing. I feel that another 12 months' down the track SCS will become one of the leading suppliers of these machines, due to their robustness. I can't see any reason for them not to be on top.” 📄



SCS TC1235.

## Brightwater Meo Supports ECBC Trust

The ECBC (Engineering Careers by Choice) Trust was set up several years ago by a group of companies.

New Zealand Steel, Brightwater Meo, Beca and Novo, set up ECBC with a common goal, to inspire young people to consider and ultimately take up engineering as a career.

More on the Trust can be found at its website: <http://ecbc.wikispaces.com/about+us>

The Trust has the following key strategies:

1. To facilitate a bridge of understanding between local industry and secondary schools;
2. To provide leadership to local industry participants in the development of career opportunities in science, engineering and technology to build local skills resources;
3. To provide leadership and mentoring support to students at secondary and tertiary levels and to their parents to encourage the uptake of engineering, science and technology careers;
4. To provide guidance to influence tertiary education organisations and students to ensure graduates of training programmes are aware of the engineering industry's needs;
5. To facilitate on the job training opportunities for promising students;

6. To develop policies and actions that promote technical skills development;
7. To leverage existing networks and organisations.

A number of activities have been undertaken or supported by the Trust over recent times, the latest being the high school careers evenings commencing with high schools in the South Auckland/Franklin area.

A careers evening at Waiuku College on the 27 July 2009 was well supported by the Trustee companies, including Brightwater Meo who provided a range of printed and slide show material showcasing a selection of Brightwater Meo's capabilities and successes. The material provided, and the personal interaction with ECBC representatives from the sponsor companies, was well received by the students and their parents.

Many students who could make great engineers, know very little about what the jobs at various levels involve. This is the challenge for us, to bridge the knowledge gap by interacting with the students and showing them something of the opportunities that are possible. 📄



Dick Parson's co host Alex Mumme (Beca) at the Pukekohe High School careers evening.



**Brightwater**

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