



**Brightwater**

# BRIGHTWATER NEWS

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CONCEPT

DESIGN

MANUFACTURE

INSTALL

COMMISSION

OPERATE

INNOVATIVE SOLUTIONS TO INDUSTRY



## In this Issue

- Brightwater Wins Environmental Award..... 1
- Brightwater Achieves Zero LTIFR..... 1
- CEO Overview..... 2
- Pike River Tribute ..... 2
- Barro Crushing Plant Underway ..... 2
- Change in Group Structure ..... 2
- Nelson Pine Industries Ltd Oil Heater ..... 3
- New Brightwater Westport Facility ..... 3
- 2010 Scholarship Winner ..... 3
- New CNC Lathe ..... 3
- Brightwater MEO Integration ..... 3
- Brightwater Manufacturing VSI Machine..... 4
- Brightwater Services ESCO Distributorship..... 4
- Stockton Milestone ..... 4

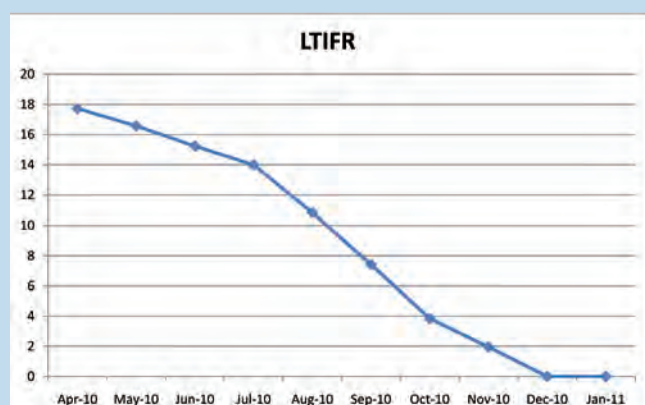
## Brightwater Achieves Zero Lost Time Injury

The Brightwater Group is proud to announce that in December 2010 the company achieved a Zero Lost Time Injury Frequency Rate across all divisions on both sides of the Tasman.

This includes Brightwater's Stockton Coal Handling and Processing Plant project in which the company contributed 400,000 man-hours without a Lost Time Injury.

Brightwater Group CEO Warren Arthur says this remarkable achievement was made possible following the introduction of a range of new safety initiatives backed by the Group's core values, leadership and commitment from the Board of Directors, Executive Management and all Employees.

"This milestone is a wonderful example of what the Brightwater Group can achieve when we unite and work towards common goals and values with our clients, contractors and suppliers," says Arthur. "The Brightwater core value for safety is 'Zero Harm'. This commitment is strongly supported at all levels of the organisation and safety is our number one priority at all times."



Brightwater Engineering Solutions award winning Wood Pellet Facility at Port Albany

## Brightwater Wins Environmental Award

In November 2010, Brightwater Engineering's Australian subsidiary Brightwater Engineering Solutions (BES) won the prestigious "Environmental Project of the Year" for their Wood Pellet Export Facility at the Australian Bulk Handling Awards held in Brisbane.

The award was made even more prestigious as BES was selected over such companies as SKM, Aurecon Hatch and Rio Tinto. The award also capped off a fantastic year for Brightwater's operations in Western Australia.

Brightwater Engineering Solutions designed and constructed the West Australian export facility which receives, stores and loads-out 250,000 tonnes of wood pellets per annum and comprises a reception grizzly, shuttle conveyor and a fabric clad building. The wood pellets are exported to Europe and are a renewable fuel source for boilers.

The AUD \$13 million project was carried out for Plantation Energy Australia. Plantation Energy Australia Pty Ltd is

Australia's largest manufacturer and exporter of Densified Biomass Fuel (DBF) pellets. The pellets are reclaimed within the building and then conveyed and loaded into ships utilising the existing Albany Bulk Handling ship loader.

The final design was driven by several key factors; such as time frame for completion, resistance to corrosion, capital cost and operational flexibility. Various systems were explored including silos, conventional buildings and fabric-clad buildings. The fabric clad building was selected as it met all of the client's criteria and could be constructed to meet the exceptionally tight schedule. The time line for the work was six months which included planning, lease negotiation and construction.

Brightwater Engineering Solutions was established in Perth three years ago led by General Manager Mathew Fletcher. Over the last three years the business has grown to 15 full time professional engineering staff and up to 80 construction personnel.

During this period the Brightwater team has delivered in excess of \$70 million in projects and grown at a phenomenal rate amidst the global financial crisis. Mathew credits the success to the dedication of the staff. "The core of our business is based on integrity, courage, value and trust. At Brightwater people come first, and with happy people we are in a much better position to deliver for our customers," said Mathew.



Inside view of the Wood Pellet Facility



Tandem trailer truck waits to be loaded

## CEO's Overview

Well, what a start to the year! Just when everyone was looking to 2011 as a new beginning; once again the forces of nature have struck. Another catastrophic earthquake hits Christchurch, devastating flooding to the entire eastern states of Australia, and now the most horrendous earthquake and tsunami strikes Japan. Our thoughts are with all those people and their families affected by these catastrophic events including our clients and our broader business community.

On a brighter note, we have been fortunate enough to have experienced a number of achievements recently, and we have highlighted some of them for your interest. These include an outstanding milestone in safety, where we have achieved a Zero LTI Frequency Rate in all divisions across the Group. We have completed a large Wood Pellet and Storage Facility in Albany Western Australia, which resulted in winning the "Environmental Project of the Year" from the Bulk Material Handling Review in Australia with much credit going to Mathew Fletcher and his team Brightwater Engineering Solutions in Perth.

Other articles explain significant changes within the Brightwater Group Structure where our new look operational businesses are Engineering, Manufacturing and Services. I am also very pleased to say that Brightwater Engineering has recently been awarded several significant new projects in New Zealand and in Australia, whilst Brightwater Services continues to build its foundation and is set to establish several new regional centres of excellence, which includes Westport, Christchurch and Auckland. Brightwater Manufacturing is set to become a world class manufacturer of the Brightwater range of heavy industrial equipment products, located in Christchurch, which will include the full "SCS" range of mobile screening and crushing equipment plus the Brightwater and internationally acclaimed "Madill" Yards.

2011 represents a new year for all of us and at Brightwater; we look to the future and remain positive and focused. Our people, their families and our valued customers remain at the forefront of our business values and we look forward to the many exciting and new challenges ahead. 



Warren Arthur  
Brightwater Group CEO

## Pike River Tribute

At least once in a generation a disaster seems to impact on the greater New Zealand community that becomes a defining point for that era, events such as the Tangiwai disaster 1953 and the Wahine disaster in the 1968. Unfortunately in the past six months there have been three such tragic events. We have seen disaster strike with the Australian floods, the Christchurch earthquakes and the Pike River Coal mining disaster which will all become defining moments for many of us.

The Pike River Mine Disaster is destined to go down as another tragic date in our history, particularly those who have lost family and friends. We often wonder what can we do to support those families whom we know and the business community who have all been affected. The simple answer is we don't really know other than to offer our support, our condolences, and our utmost consideration for them and what they are going through during this time of loss.

None of us at Brightwater and especially at Gray Brothers Engineering in Greymouth, need to be reminded of the personal impact of this disaster from the perspective of lost friends and relatives or the stresses placed on our business. What we must never lose sight of is the positive ways we can support each other and our community during these times.

We at Brightwater will continue to do everything we can to acknowledge and support those who have been affected whilst we move forward with the greatest level of respect and remembrance.

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Warren Arthur  
Brightwater Group CEO

## Barro Group Wyndhamvale Crushing Plant Underway



The Wyndhamvale Quarry. Foreground: The primary station; Background the secondary and tertiary crushing buildings


### In May 2010 Brightwater was awarded a significant contract for the Barro Group Wyndhamvale Crushing plant in Victoria, Australia.

The Barro Group is one of the largest independent suppliers of concrete aggregates and other cement products to the Australian market. The capacity of the plant is nominally 600t/hr, and Brightwater's scope consists of all civil, structural and mechanical design, supply and installation of the five screening stations, the secondary/tertiary crushing station building, blending station and over 40 conveyors.

Design of the project is nearing completion, and procurement is progressing rapidly. Fabrication works are being sourced from the Brightwater Group of companies as well as other

fabricators throughout Australasia. Mobilisation of the site began in January 2011 with the delivery of the Brightwater 20t Franna crane and the JLG 600 Cherry picker.

A team of Brightwater engineers are currently on site erecting the structural steel for the secondary and tertiary crushing stations which will then house the five Terex Jaques crushing units. Two units are in the Secondary crushing process, the SG1200 and Canica 2000 crushers, and three crushing units in the Tertiary crushing process, the Canica 2500 and two J50 Crushing units. The secondary crushing reduces from 125mm size and produces aggregates up to 20mm size. The Tertiary crushing reduces from 100mm size and produces aggregates of five different sizes for blending into required specified products.

This is a significant project for Brightwater as it strengthens our credibility in this very competitive market sector in Australia. 

## Change in Group Structure

### The Brightwater Group has implemented a strategic change to its organisational structure. The Group now has three operational divisions: Engineering, Manufacturing and Services.

As a result of this restructure Brightwater Meo has been integrated into Brightwater Engineering and Screening and Crushing Solutions (SCS) will become Brightwater Manufacturing. The restructure will be effective from April 1 2011.

"The new structure aligns with our strategic plans for the future which will offer an even greater value of service and capabilities to our clients and industry partners," said Warren Arthur Brightwater Group CEO. "In addition to the clear strategic benefits each of the three divisions will be highly complementary to each other's core offerings, thus creating increased benefit from the Group's synergies and capabilities which will be even more dedicated and focused around our clients, our market sectors and growth opportunities".


As a result of the restructure Rick Herd will continue to be the Chief Executive of Brightwater Engineering, Peter Reiber will now become General Manager of Brightwater Engineering's Auckland Operations. Mitchell Easton will continue as Brightwater Services General Manager and Brightwater

Manufacturing will receive the benefit of a new General Manager with specific experience relating to this heavy industrial equipment manufacturing environment.

The integration of Brightwater Engineering (Engineering, Design & Construction) and Brightwater Meo (Automation and Electrical) will provide better use of resources and synergies within the projects division of the Brightwater Group.

The key benefit to existing Brightwater Meo clients, as well as future clients, will be the significant increase in capability and wider expertise. This is a result of Brightwater Engineering's experience in turnkey project management, mechanical and process engineering, fabrication and installation expertise as well as a resource pool of over 200 engineers and trade staff.

The transition from the standalone SCS business to the integrated Brightwater Manufacturing business model will extend its capabilities beyond its traditional output of screening and crushing equipment. This now includes other Brightwater "engineered products" such as Yards, Gold Screens and mining products that fit into the Brightwater Group's strategies. Brightwater Manufacturing will be based out of the current Brightwater facilities in Christchurch.

"Over the past six months the company has undertaken comprehensive integration planning and we now have clear metrics to drive our success. Our organisational changes will also enhance the Brightwater brand and market awareness of our capabilities. It will also strengthen our position as the most effective and innovative solution provider to industry among our peers and competitors," says Arthur. 

## Nelson Pine Industries Ltd Oil Heater

Brightwater has recently completed the installation of a new thermal oil heater for Nelson Pine Industries Ltd (NPIL).

During the Christmas period shut-down at NPIL Brightwater Engineering replaced the existing 8.5MW Eckrohrkessel tube bank type oil heater with a new 10.5MW multi coil single pass thermal oil heater for Nelson Pine's No 1 MDF production line.

Brightwater, in conjunction with Dieffenbacher of Germany, designed, supplied and installed the new plant.

Smith Cranes supplied a 250t track crane to remove the existing heater in two sections, with the new heater being installed in three sections.

Additional structural modifications were made to the existing oil heater to support the new heater. Also a new pump set was supplied, installed and connected up to the new heater and existing oil lines. **❏**



Installed and operating Heat Exchanger

## Brightwater Meo Becomes Part of Brightwater Engineering

Three years ago Meo Engineering Group Ltd became part of the Brightwater Group and were known as Brightwater Meo.

Under this new ownership, Brightwater Meo became the provider of electrical, control and automation disciplines for Brightwater Group projects. It has continued its role as a principal provider of professional, mechanical and electrical services to New Zealand Steel and providing electrical engineering and industrial automation solutions to broad range of other industries including manufacturing, processing and logistics.

Three years on, and with Brightwater Meo now firmly entrenched into the Brightwater Group, clear opportunities exist to further maximise the offering to Brightwater Meo clients through a full integration with Brightwater Engineering Ltd, the projects and engineering business unit of the Brightwater Group.

With full Brightwater Engineering resources available out of the Auckland office, existing clients of Brightwater Meo will now benefit from an increased depth of mechanical engineering, design and project management capability. The Auckland Office will also be pivotal in accommodating

the increase in technical resources required to support the growth of the business there, and will play an active role in positioning and growing the awareness and capability of Brightwater Engineering in the Northern Region.

Former Brightwater Meo GM, and now Brightwater Engineering GM of Auckland operations, Peter Reiber says; "This integration is an exciting development in the evolution of the Brightwater Group and will be an important vehicle for cementing an integrated, professional offering of mechanical engineering, electrical engineering and industrial automation capabilities to industry." **❏**



Brightwater Engineering Auckland General Manager Peter Reiber

## 2010 Scholarship

Congratulations to Andrew Begg from Brightwater Engineering, who is the 2010 winner of the Hugh Grey Scholarship.

Andrew is a production engineer for the Engineering division based in Brightwater and is also studying towards his Certified Associate in Project Management credential with the Project Management Institute.

Andrew started in the fabrication workshop in Brightwater four and half years ago and through his own initiative has progressed from the workshop floor to where he is today. "I put a lot of my progression down to the

support and opportunities that have been given to me by the management here at Brightwater and winning this scholarship will provide me with yet another opportunity to move closer towards my goals within the company," said Andrew. **❏**



Brightwater Engineering's Scholarship winner Andrew Begg

## New Brightwater Westport Facility

Brightwater Services is finalising the construction of a new purpose-built workshop facility in Westport to support our existing customers, ESCO distributorship and planned projects in the region.

For many years Brightwater has provided a remote service for Westport from our facilities in Nelson and Greymouth. However this has often been a compromise to both Brightwater and our customers.

The workshop will be high-bay with a 30t crane capacity, enabling it to handle a wide range of industry requirements. The new branch will be overseen by Eddie Grey as part of our West Coast Service operation. The new facility will be up and running early in the second half of 2011.

The workshop facility will provide local project support, a highly qualified trade base, an ESCO store along with a multi-purpose design workshop facilities – supported by the Brightwater Engineering and Manufacturing divisions.

If any of our customers have any feedback for us on features or services that should be included in the final build we would be more than happy to hear from you. **❏**



Architect's drawing of the new Brightwater Westport Facility

## New CNC Lathe

Brightwater Engineering expands machining capabilities with New Zealand's largest horizontal diameter CNC lathe.

Brightwater Engineering's in-house fabrication and machining capabilities have received a major boost with the purchase of a new heavy-duty CNC lathe. With the capability of machining up to 1.8m in diameter it is thought to have the largest swing of any CNC lathe in New Zealand.

The impressive specifications of Brightwater's new lathe will significantly reduce the manufacturing cost of multiple large-diameter components such as large conveyor pulleys and winch drums.

According to Workshop Manager Marcus Foster; "Not only will the new lathe improve productivity of manufacture for in-house projects, but it will open an opportunity to provide cost-competitive, specialist, machining services for other engineering businesses and clients throughout New Zealand."

Critical Specifications for Brightwater's new CNC lathe include:

- Swing over bed 1.8m Swing over cross slide 1.3m
- Distance between centres 4m
- Load capacity between centres, without steady 13 tonnes
- Load export between centres, with a single steady 16 tonnes **❏**



Brightwater CNC Operator Scott Thorpe puts the new Lathe through its paces.

## New VSI Machine

### Brightwater Manufacturing has recently Manufactured Australasia's Largest Track-Mounted VSI For M&M Quarries.

M&M Crushing have purchased Australia's largest commercially available mobile Vertical Shaft Impactor (VSI). The machine, developed from Brightwater Manufacturing's quarry and minerals product range, has an output capacity of up to 450 tonnes per hour via a direct drive diesel powered Auspactor VSI unit.

M&M Crushing is located on Queensland's Gold Coast and operate a fleet of track mounted mobile crushing units. Their General Manager Jason McDonald says the VSI unit will provide a welcome addition to their existing crushing capacity. "We found that we could not keep up with the demand for specialised smaller grade aggregates."

"The new Brightwater machine will produce aggregate at 7, 10, and 14mm, mainly for asphalt. We also have a demand for shaping various road bases and also material for concrete," said Jason McDonald.

"This is our second tracked VSI impactor. We are getting triple the throughput from this machine compared to the old unit. It sits at around 340 tonnes per hour comfortably," said McDonald. "This gives us tremendous flexibility in plant setup and right off the float it was producing more than our old VSI, running at 30% of its huge capacity and burning less fuel per tonne. The old VSI was the bottleneck before, now we need more screen capacity!"

"The SCS TC3070V VSI impactor allows us to have a larger feed size and we can now offer our customers higher tonnages of in spec rock, and that's a good result for everyone."

McDonald says that the track-mounted VSI fits M&M's shift towards mobile responsive crushing capabilities. "We sold our quarry last year and made the conscious decision to focus on expanding our mobile crushing capabilities."

Brightwater Manufacturing's Brian Court says the new VSI machine demonstrated flexible and an end-user focused approach. "We were asked by M&M to develop a track-mounted VSI unit with a more powerful power-plant, with a superior yield than what they currently had."

"We worked with M&M and Auspactor to produce the TC3070V. Auspactor produce a great Vertical crushing unit. The unit we fitted for M&M is powered by a 720hp Caterpillar turbo diesel, which provides power directly to the shaft via the SCS designed direct drive. This system is far more efficient and powerful than hydraulic powered equivalents."

"The result for our client has been a mobile track-mounted unit with significantly more power and through-put than they previously had. It fits their business model and will allow them to expand their product offering and significantly ramp-up their output to meet demand."

In developing the TC3070V Impactor track machine, Brightwater Manufacturing has built Australasia's largest direct-driven VSI available on the market. The most notable advantage in the direct diesel drive design is that by utilising increased engine speed to increase the rotor tip speed, engine power to the rotor increases with engine speed to compensate for the higher kW/tonne throughput required by VSIs when rotor speeds are increased. [B](#)



The new TC3070V in action

## Brightwater Services Acquire ESCO Distributorship



Left: Southstar 610 harvesting head, Right: Brightwater Log forks

### Brightwater Services is pleased to announce the successful appointment as ESCO and Southstar distributor throughout New Zealand.

ESCO Corporation is a leading global provider of wear parts and attachments for the mining and construction industry.

Brightwater Services General Manager, Mitchell Easton says the ESCO distributorship, coupled with Brightwater's existing customer relationships and reputation as a leading engineering supplier, provides a natural synergy, adding credibility to both companies brands.

Following the expiration of ESCO's license agreement with Bradken on June 30 2011 Brightwater will offer a complete range of crusher wear manganese products, bi-metallic wear buttons and blocks, and the Ultralok® Construction Tooth System in New Zealand. The available product offering will expand to include a full line of ESCO Ground Engaging Tools (GET).

Brightwater's Nelson Service Centre of Excellence for Forestry and Wood Processing has continued to develop its services and complementary products suite. Along with the ESCO forestry products it has announced the delivery of the Southstar Tristar 610 harvesting head to its Nelson facility. The Southstar product, designed by Dave Cochrane (ex owner of Waratah) includes a number of new innovations to ensure exceptional reliability and low operating costs. Additionally, Brightwater Services continues to build on its existing capabilities including excavator "log build" fit outs and the Brightwater loader log forks.

Our Service Centre of Excellence in Greymouth (Gray Brothers Engineering) which is focused on the resources sector in that region, continues to deliver innovative servicing and project solutions to its growing customer base.

Gray Brothers continues to support its regional clients and provides a quality service with the very best trades staff in the industry. As an established West Coast business, this still remains a clear point of difference. [B](#)

## Stockton Milestone

### The Stockton Coal Handling and Processing Plant (CHPP) has been operating and producing market specification coal products since wet commissioning back in April 2010.

Practical Completion of the CHPP was awarded on the 12th May 2010, and the milestone of Final Completion was achieved by the Stockton Project team on the 17th December 2010.

The Stockton CHPP has been designed to process a range of raw coal with wide variations in size, contamination and moisture content. When the plant became operational it was apparent that these wide variations were causing processing problems in some areas of the Coal Processing Plant.

Brightwater made a 100% commitment to this project phase to ensure the plant achieved the performance criteria required by Solid Energy. The decision was made to replace the existing Divergator between the ROM Chain Feeder and the Rotary Breaker with a Vibrating Screen to more

effectively screen the raw coal into size fractions. The revised configuration also improved the removal of reject materials such as pit props, railway irons and large rocks from the feed stream.

The time frame for the Christmas/New Year plant shut was tight and the installation of the Vibrating Screen was the culmination of six months of planning and detailed engineering work. Early indications are that the new Vibrating Screen has enabled the plant to reach full capacity and is performing well.

Solid Energy have advised that in February 2011, the Stockton CHPP reached the significant milestone of producing 1 million tonnes of processed coal and the plant is achieving full design capacity of 275 tonnes per hour. [B](#)



Photograph shows the final positioning of the Rotary Breaker and the new Screen Underpan (foreground)



**Brightwater**

#### New Zealand Head Office

Address 7 Spencer Place  
PO Box 43, Brightwater  
Nelson 7022, New Zealand

Telephone +64 3 543 5300

Facsimile +64 3 543 5301

Email [inquiries@brightwater.co.nz](mailto:inquiries@brightwater.co.nz)

Web [www.brightwater-group.com](http://www.brightwater-group.com)

#### New Zealand Branches

Auckland Christchurch

#### Australian Branches

Perth Melbourne Brisbane

Email [inquiries@brightwater.net.au](mailto:inquiries@brightwater.net.au)

Web [www.brightwater-group.com](http://www.brightwater-group.com)