

Editorial

Hot topics



Rob Ross
New Zealand



Dave MacDonald
Australia

The Carbon Market Emissions Trading Scheme, cool store issues and industrial growth in China are all topics which have received recent press coverage and which feature in our recent project line-up.

The carbon market and environmental improvements are subjects with which we are assisting an increasing number of clients. In this issue of we discuss how the emerging field of emissions management may affect the Food and Beverage industry.

Demand for cool storage is soaring and over the past 10 years Beca has designed and project managed a number of new coolstores in Asia,

Australia and New Zealand, built as replacement or new capacity. Back in New Zealand we feature our work with Lion Nathan on their Greenfield brewery and beverage facility.

Our work in China continues to grow with such projects as the General Mills dumpling factory expansion. Gaining traction in this important market, Beca offers 15 years in-country experience from our 80+ staff based in Beijing and Shanghai.

We also introduce some experienced new team members who are ready to add value to your business. We hope you enjoy this update.

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General Mills dumpling factory (see story inside)

Demand for cold storage facilities in Vietnam

Growth sees cold storage at capacity

The past few years has seen the demand for cold storage facilities in Vietnam soar. Most recently, Beca's Sydney team was commissioned to design a Greenfields store for Swire Vietnam Cold Storage in Long Hau, just outside Ho Chi Minh City and not far from Song Than. This is the area where the team has completed five cold store projects for Swire during the past ten years, all of which are now full to capacity. While these projects were the first western style standard public cold storage facilities in Vietnam at the time, the country's growth over this period has been spectacular and there are now several operators in Vietnam with which Swire competes.

The Long Hau Stage 1 project comprises an initial 26,000 pallets in a 5.45 million cubic foot store, which will add 50% to Swire's Vietnam capacity. The site presents some difficult ground conditions, including large expected settlements and very poor bearing capacity, which will add to the normal challenges of designing to suit the Vietnam market and conditions. Stage 2, when it is completed, will ultimately double the size of Long Hau.

Global projects

The Sydney team also continues to deliver a steady stream of cold storage designs for clients in Australia and internationally. In addition to Swire Vietnam, the team is undertaking cold store work for Swire, Rand, Austrak and Montague in Australia and for Woolworths in Australia and overseas. We are also assisting Beca's China offices in the design of a cold store for Guangdong Swire Cold Chain Logistics in Guangdong, China. This project will be developed as a joint venture between Swire Pacific and Guangdong Foods, and represents Swire's first investment in cold storage in China.

For more information, contact: Rhys Davies
Email: rhys.davies@beca.com
Telephone: +61 2 8833 1018



More dumplings please

Massive expansion at General Mills Shanghai

With a population of over 1.2 billion people, China's appetite for dumplings is seemingly insatiable. Helping to accommodate this craving, Beca is currently assisting North American food giant and longstanding client, General Mills, to upgrade its dumpling plant in Shanghai.

Built over two years ago, with Beca as project managers, General Mills' dumpling factory is now undergoing a massive expansion seeking to double its production capacity from two million cases of dumplings per year to four million.

Beca is meeting the challenge of the complex project management necessary to design and manage the upgrade, while still keeping the factory operational with minimum shutdown time.

A decision to increase the number of spiral freezers - key process components in the factory - from three to four, has been an additional challenge for the team; especially to achieve the completion end date of late 2008.

A key project challenge lies in coordinating expertise from around the Asia Pacific region. Beca New

Zealand engineers and local office staff (coordinated on site by Industrial Manager Mark Farrell and Project Manager Glenn McSparran) have been working closely with the client's US engineering and local operations team to manage many local contractors and suppliers. John Mazengarb from Beca's Auckland office has provided extra client support, travelling to China to help with scheduling, tender document and contracts preparation and drawing up the commissioning programme.

With design and construction of the extension now complete, Andrew credits much of the project's progress to the cohesion of the contributors. "It's a well oiled machine we have," he says. "We all have our own responsibilities, but we deliver as one team."

For more information, contact: Andrew Wilson
Email: andrew.wilson@beca.com
Telephone: +64 9 300 9134

For more information, contact:
 Mark Thomas Farrell
Email: mark.tfarrell@beca.com
Telephone: +86 21 6359 1133



Emissions trading and the Food & Beverage industry

Emissions Trading

In response to the threat of climate change, the New Zealand government has introduced an emissions trading scheme (ETS) as a tool to drive mandatory greenhouse gas reduction.

The ETS is based on trading government allocated units which targeted industries will be required to surrender to the Crown to cover their emissions. Directly or indirectly, the ETS will introduce additional incentives for energy efficiency and this means that companies may need to find new ways of working in order to remain economically and environmentally sustainable for the long term.

While the Food and Beverage industry is not required to participate in the ETS, there is an increasing demand from conscientious consumers for manufacturers to account for themselves with regard to the origins of their raw ingredients and the ethical and environmental issues around their processes.

This is of most interest to a growing number of exporters in the F&B industries where participation in the voluntary carbon market may make good business sense. Beca's growing experience in this area means that looking at how to reduce

a business's carbon footprint is becoming as fundamental to the way we approach projects as environmentally sustainable design and other energy reduction initiatives.

Beca Senior Environmental Engineer Camilla Needham recently presented a paper entitled "Carbon Pricing and Emissions Trading – A Reality" at the Institute of Brewing and Distillation Pacific Convention in Auckland, highlighting some of the impacts of the ETS, particularly on the brewing industry.

"Food and beverage industries will need to factor increased costs of basic utilities into their financial forecasts," she says. "Wholesale electricity price increases are predicted to be in the range of 10%-40% depending on the trading price of emission units."

For more information, contact: Camilla Needham

Email: camilla.needham@beca.com

Telephone: +64 9 336 9407

Voluntary participation
an option in response to
consumer demand



New home for Lion Nathan in Auckland

Project Management

A long-standing relationship of over 50 years between Beca and Lion Nathan enters another phase as Beca provides project management and engineering services for Lion's new \$250 million beverage facility in South Auckland.

This key initiative for Lion, dubbed "Project Century", sees them moving from their home in Newmarket to a new purpose-built site in East Tamaki covering 16.7ha, with roughly 50,000m² of building to be completed. Once open fields, the site for the new brewery and beverage manufacturing has begun its transformation towards a world-class facility as the first walls are erected and concrete pouring gets underway.

Beca is responsible for the engineering, procurement, and project management. Sue Bradley, Beca's Project Manager, says one great advantage of a long-term client relationship is that Beca has a very good understanding of Lion's needs as several people on the team have already worked with Lion establishing a new brewery in China and on many other projects.

"We're enthusiastic to be partnering with Lion on this exciting project. It's not often that a new brewing and beverage facility of this size is built

in New Zealand, and it's a chance for us to really demonstrate our skills in project management and procurement."

For more information, contact: Sue Bradley

Email: sue.bradley@beca.com

Telephone: +64 9 300 9673

Construction underway
for a world class facility



The first specially manufactured "glasscrete" – a mixture of concrete and crushed recycled glass – is poured on site. The sheer scale of the project means that thousands of tons of recycled glass will be used during construction.

New faces

Eric Wisse



Eric has recently joined Beca from Fonterra and is based in our Hamilton office. He brings a wealth of experience in the dairy industry, with five years as a member of Fonterra's project

management team and more than eight years with other New Zealand dairy producers under his belt. Eric has overseen a number of major projects both in New Zealand and internationally. His most significant recent project for Fonterra was the construction of an FMCG cheese cutting, processing and packing facility with high speed equipment; incorporating both technology and scale new to New Zealand. Eric also chaired a technical group responsible for developing a company standard for early fire detection technology on spray driers.

In his new role Eric will provide leadership and an even stronger link and interface between Beca and the dairy industry.

Email: eric.wisse@beca.com
Telephone: +64 7 838 3898

Bill Pepper



Bill Pepper is a Process Engineer who has joined the New Plymouth team, bringing along with him 11 years of experience in a broad range of engineering, design, operational and

project management work. His experience spans the pharmaceutical, oil and gas, engineering consultancy and dairy industries; so he has a wealth of production, project management and engineering experience to draw upon in his new role.

Of particular interest is his seven years in the dairy and pharmaceutical fields, which Bill says has given him an excellent working knowledge in a range of disciplines including milk treatment, membrane processing, standardization, evaporation, spray drying, GMP and clean-in-place processes.

Email: bill.pepper@beca.com
Telephone: +64 6 759 5733

Rod Willis



Rod joined the Auckland Food and Beverage team in August last year. Previous experience includes eight years in food ingredient manufacturing and nine years in assorted industrial

manufacturing industries in New Zealand; and he spent eighteen months with MWH Consulting before joining Beca.

In the F&B team, Rod has been involved in designing Greenfield consumer foods manufacturing facilities and warehouse logistics as well as undertaking a bio-ethanol feasibility study.

Email: rod.willis@beca.com
Telephone: +64 9 300 9739

Derek Burrough



Derek joined the Hamilton Industrial team in May 2007, having just emigrated from the UK. Derek brings experience and knowledge from previous employers Corus UK and Schneider

Electric. At Corus he designed and managed Instrumentation/Automation upgrade projects within the steel making process, specifically slab casters. With Schneider Electric Derek supported and managed projects involving Schneider Electric's Automation products such as PLC's and Drives (VSD's) across various industries; including projects with pharmaceutical giant Glaxo Smith Kline.

Since joining Beca, Derek has been involved in the SPO project at Glenbrook and also with many ongoing automation projects for Fonterra.

Email: derek.burrough@beca.com
Telephone: +64 7 838 3523



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Send your feedback and suggestions for future issues to food@beca.com