



A Vision Realised

The official opening of our fully integrated steel fabrication facility was performed by Deputy Prime Minister Bill English on 12 May 2010. He commended the building as demonstrating “sheer resilience in tough economic times—a testimony to New Zealanders who have the courage to back their vision and get things done.”

The vision for what has been achieved belongs to Managing Director Mike Sullivan. Addressing 150 industry

leaders, Mike said that steel fabrication is widely recognised as the most cost effective form of construction, “and it was to maintain our position at the forefront of this market that we embarked on a tour of modern plants overseas to ensure we incorporated the most up-to-date technologies and methods in order to optimise efficiency and quality.”

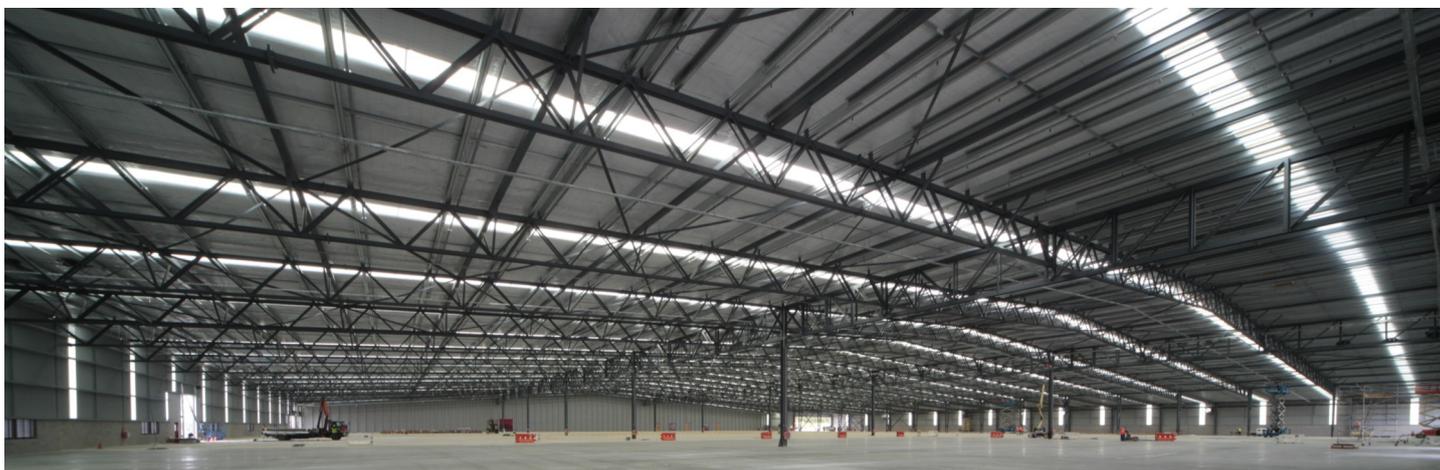
Meanwhile, the company’s projects are rolling out.

The Scale of Lion Nathan



It’s hard to envisage 20,000m² of beer bottles flying along a production line, but that’s the size of Lion Nathan’s new packaging hall at 55 Ormiston Rd, East Tamaki. The adjoining warehouse is 25,000m². Looked at as one structure, the building is just over 166m long and 150m wide. That makes for very long-span roof trusses. D&H brought all of its experience to the design table, working closely with Beca and Mainzeal to achieve cost-effective buildability.

“They fabricated a total of 33 trusses,” says Mainzeal’s Project Manager Mike Turner, “with two spine trusses. When they told us they could erect three bays at a time, we were delighted to have that kind of know-how on the team. All the other trades stopped to watch the first lift. D&H is a pretty good package, that’s for sure.”



The 20,000m² Packaging Hall is 150m wide. It has 33 trusses, two spine trusses and very few columns.



Left: One of the pipe bridges, assembled on the ground for safety, being lifted into place.



Below: Each of the 58 vessels making up the tank farm weighs 250 tonnes fully loaded. The complexity of the angles of the supporting structure demanded the best of D&H design and steel detailing.



Right: The aesthetically pleasing brewhouse.

A complex design/build for Fonterra

Right: Fonterra's new plant at Te Rapa, Hamilton — large freezer spaces at -8°C .



“We value opportunities to partner with our clients where possible, as we have most to offer when . . .

Below: Support for large chiller units and pipework incorporated into a network of suspended catwalks.

The design development was a team effort between Haydn & Rollett and D&H and involved ongoing change as the services trades, particularly refrigeration and fire protection, produced their designs, which had to be incorporated in what was already a complex network of suspended walkways hung from the underside of the roof.

The team had to address some very tricky construction details to eliminate thermal transfer between cold and hot spaces. To isolate the steel connections, they used blocks of insulating Formica.

Regular detailed testing demonstrated compliance with the Quality Assurance regime and specific steel grade selection.



To catch the sky safely



As an architectural feature atop the 19-level Deloitte Centre on Auckland's Queen Street, the 20m long 'Skycatcher' adorns this beautiful building with the romance of myth. The last time it touched the Earth was in the D&H workshop, where the fabricated frame was finally given its protective coat before being hoisted aloft forever.



The D&H men who performed this erection, however, are no dreamers. Years of training give them the skills that are needed, but it is their culture of safety that gives them their confidence.

Dean Pouwhare is Site Manager for all of D&H's erection projects. "We can have as many as 20 sites at various stages of erection, which is being carried out concurrently. The size of each team varies according to the needs of each project. All 39 of our erectors are Site Safe current and

seven are Gold Card Supervisors. Part of my job is to ensure we have Best Practice Rigging and are fully compliant with both the Health & Safety in Employment Act of 1992 and with the Regulations of 1995.

"Probably even more important than the legislation is our commitment to look after each other. Whenever possible management ensures that we assemble large frames on the ground, so minimising the work that has to be done at height. Even before we go onsite, we plan every stage of the erection programme so that every single one of us knows his role and what is expected. Nothing is left to chance because lives are at stake. We follow strict onsite procedures with safety lines for fall prevention and fall arrest. We tolerate neither the casual nor the careless, and that's why Occupational Safety & Health is pleased with our record.

"Of course, when teams take pride in working safely, they invariably work very efficiently as well. Safe practice is a powerful motivator of high performance."



Dean Pouwhare

... early project involvement allows us to contribute to cost effective design and timely procurement of materials." Mike Sullivan

... speed on site!

Three bays at a time was the order of the day when erection began at the Cadbury site in Mangere. First for safety reasons, the on ground assembly; then the multi-crane co-ordinated lift. From expandable working platforms, the erectors insert their bolts into holes drilled days before on a Numerical Computer Controlled beamline. There are no errors and no corrections needed, because everything has been planned and prepared in advance.

You might arrive onsite just after daybreak, expected to see an army of erectors swarming all over the steel like ants. Then you realise that, like ants, steel erectors can lift many times their body weight, efficiently and quietly, with no fuss. As Dean Pouwhare says, "Planned, safe erection is the order of my day!"

Cadbury exemplifies ...



Top: At the Cadbury site in Mangere, the first early morning lift goes smoothly just as planned.

Inset: From the safety of his cherry-picker cradle, one of the erection team guides the three-bay frame to the point where the bolts will secure connection.

Below: Repeat and repeat and start putting on the roof because this building will soon be fully operational.



FABSEC enhances D&H's offerings

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Protective Coatings
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Key D&H People:

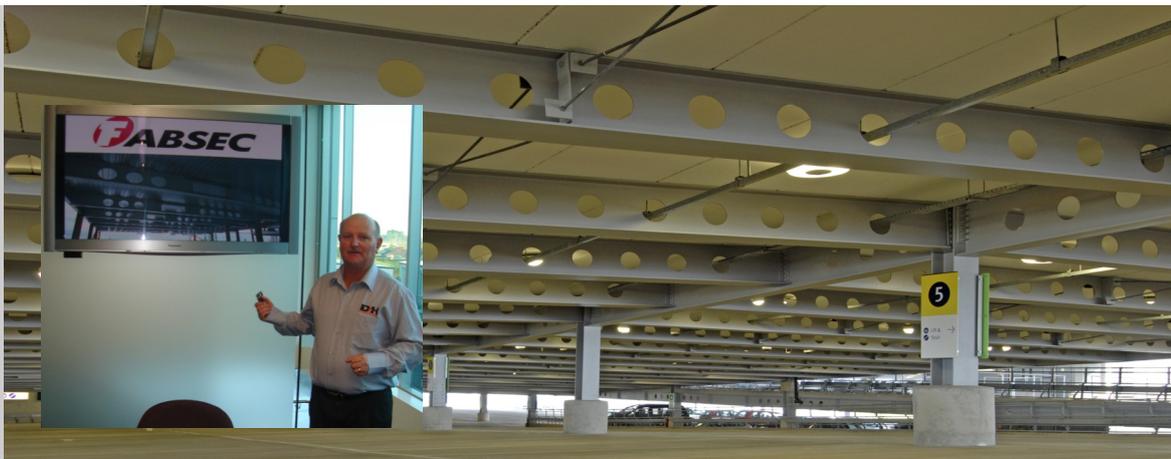
Mike Sullivan
Managing Director
Wayne Carson
General Manager
Jim Denham
Workshop Manager
Rod McIntyre
Commercial Manager
Mike Thompson
Detailing Manager
John Frederickson
Custom Welded Beams Manager
Tony Smith
Chief Estimator
Dean Pouwhare
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As part of D&H's plan to offer customers competitive alternatives, earlier this year we secured a licence from FABSEC to manufacture its

cellular beams in New Zealand. For the past decade the UK company has delivered cost-saving design innovation to many of Britain's most prestig-

ious construction projects. The FABSEC product range raises the competitiveness of composite steel flooring systems.



John Frederickson (inset) is D&H's manager of Custom Welded Beams. "The FABSEC solution reduces both weight and cost and is particularly advantageous in long-span designs where keeping columns to a minimum is a plus. In multi-level construction, architects and design engi-

neers are discovering that they have greater freedom while maintaining economy and saving time on construction. The unrivalled cell geometry of FABSEC includes circular, rectangular and elongated openings in both normal and fire-engineered conditions. The passage of building services

through the web reduces the floor sandwich depth and consequently the overall building height. The piece-count for both the fabrication and the erection processes is also reduced, giving the construction programme greater predictability."



Long service is part of our culture

It was 1975 when Jim Denham (pictured with Foreman Yakub Kadir) joined what was then known as Dixon & Haddon. Starting on the workshop floor, he worked his way up through general engineering, blasting, fabrication and painting to become foreman and in turn Works Manager. Says Jim: "When you're at the heart of D&H, making the steel lights you up! Every time I see the North Harbour stadium roof, I'm reminded that I made the trusses. As we gear up for growth, I look forward to managing double the manpower. Because I love what D&H does, I love what I do. It's my daily passion."

Add Bruce Gemmell's 14 years with D&H to Jim's 35 and between them they've clocked half a century. "I started as a driver in '96," says Bruce, "and I still enjoy driving. On a typical day I drop off the bolts and small stuff around the D&H sites. What happens when I call in sick? Don't know because I never call in sick, and I've never had an accident. Seeing jobs come together is the best part. Seeing the Brick Street plant finally opening was special. I'd say it'll make quite a difference!"

Managing Director Mike Sullivan (right), who joined Dixon & Haddon 20 years ago, says technological advances coupled with substantial investment have catapulted structural steel to the forefront of New Zealand construction. At D&H we value opportunities to partner with our clients where possible, as we have most to offer when early project involvement allows us to contribute to cost effective design and timely procurement of materials. I believe it is important to have a holistic view of each project and create a successful outcome for all parties."

