2008 kicked off on a very positive note. C Lund & Son was awarded the contract for the new Biological Sciences Building at the University of Canterbury just prior to breakup after a very busy 2007.

The project was fully funded, fully documented, had resource conscent and was ready to go from both ours and the University's point of view. It did not start until six months later, however, and this says a lot about the building environment we are working in. It is a handful. Delays in commencing that project were entirely due to the procrastinating bureaucracy administering the Resource Management Act.

Full credit to everyone who has managed to work in with us in our changing industry and under the current difficult financial circumstances. Commercial builders like ourselves have very quickly had to turn to more traditional clients as the success of developments and speculative projects has become very uncertain. It has impacted on us all and created a huge amount of work for all those in the office pricing jobs and finalising new work.

The willingness on everyone's part to participate where needed and get stuck in on the work we have won is appreciated. The uncertainty of it all is a big challenge and a concern but on the bright side, life is never dul!!

To be flexible and adaptable are traditions and strengths for C Lund & Son, and they will keep us trading for another 50 years.

I hope everyone enjoys Insite and catching up with everything that has been happening. Our reputation and the quality of work we produce as a team continue to be of the highest standard and appreciated by all our clients.

For this newsletter Paul Titus interviewed Dad. Paul says that Dad was not interested in talking about past jobs. I know he has lots of stories but I guess it is a case of what goes on camp, stays on camp. I also need to say that I'm not sure about some of Dad's business conclusions. My brother Russell and his wife Sue organised Dad's 'surprise' 70th party, and it was very special. After a very serious dose of apprehension, Dad thoroughly enjoyed the evening, the entertainment, and the chance to catch up with friends and colleagues.

Happy Christmas from everyone at C Lund & Son. Andrew, Wayne and I all hope you take that well earned time off to rest and relax, and have some special family time. (Our family news is that Adele has been selected as Head Girl for St Andrew's College next year. It was an inspired choice that has nothing to do with her neglectful parents!)

Kind Regards and Happy Christmas



# Lunds gets the nod to build Timaru Courthouse

When tenders were sought to carry out the \$7.5m redevelopment of the Timaru Courthouse, only one locally based company had the capacity to carry out the job – C Lund and Son.

The refurbishment and expansion project retains the original courthouse, which was built in 1877. Behind it will sit a new building designed to maintain the look and feel of the historic one. It will hold two courtrooms as well as jury rooms, holding cells, dispute rooms, lawyers' rooms, judges' chambers, and large public and administrative spaces.

Lunds project manager Dave Mason says work started on site in March, 2008 and everything is on track to have the first stage completed by February. Later in 2009 the Lunds team will carry on with stages two and three of the project, which includes refurbishing the historic courthouse and demolishing a 1980s extension that now obscures the historic façade.

Site supervisor for the project is Mick Leonard, and he heads up a team of 12 Lund builders.

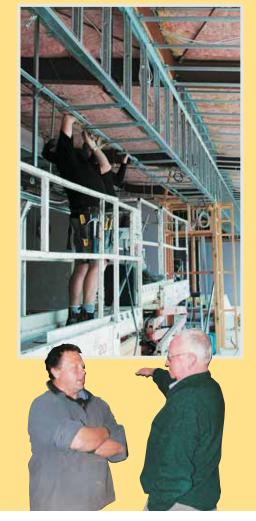
"The construction consists largely of precast panels and structural steel, which we have supplied. Some interior and exterior walls are concrete block. There is a lot of glass to provide natural light in the public areas. The rest of the exterior walls carry zinc cladding. The courtrooms have matai wood paneling which Lunds Joinery will supply and install along with judges' stands, jury seating and witness boxes," Dave says.

The lead design consultant for the courthouse project is Opus International. Opus architect Colin Corsbie says it is a good experience working with the experienced construction team led by Dave and Mick.

"They are very experienced guys. We take a team-oriented approach to our work and Lunds shares that philosophy. Their communication and workmanship are excellent," Colin says.

"The building itself is not overly complicated. The challenges come from working around the existing courthouse so it can keep functioning. That is why the project is being done in stages."

Mick Leonard (left) and Dave Mason.



# Prison job a break from the ordinary

'Out of the ordinary' is the best way to describe the work C Lund and Son recently carried out at Christchurch Women's Prison.

Lunds was contracted to build the prison's visitors centre and upgrade the receiving area, where new prisoners are processed into the system, and a testing centre, where prisoners are checked for drugs.

A prison is not a normal construction site. Security determines who is allowed to work inside and the protocols of how they come and go.

Site foreman John Taggart says the project involved a lot of subcontractors due to the number of services the prison requires: specialist hardware, security cameras, data and alarm systems as well as the usual sprinklers, electricity, heating and ventilation. Because all subbies had to have security clearance, it could cause delays if someone could not be on the spot when required.

To the public, the most visible part of the project is the new entrance way and visitors centre. The visitation room is 23m x 16m and full of secured tables where prisoners can meet their families and guests. In addition to the guards who keep an eye on their interactions,

ceiling-mounted cameras watch over the room and they can zoom in on a particular table if anything unusual happens.

John says the ceiling of the visitors centre created some head scratching because it slopes and has angled sections and flat sections that run into each other. It required a bit of effort to get the different angled sections to mesh evenly all around and some panels have double curved faces.

The walls of the visitors centre are Thermomass panels, which consist of a layer of insulation sandwiched between layers of concrete. C Lund and Son's pre-cast plant made the panels, and one of the company's 100 tonne cranes was on hand to lift them into place.

The processing rooms and drug testing facility created a different set of issues. They are both located in an older section of the prison that John and his crew had to refurbish.

"That wing was built in 1972. It has 200mm concrete walls that were poured in situ. They really know how to build in those days. Two of our tradesmen – Bob Sleeman and Noel Drury– were apprentices on the original job with ML Paynter Ltd," John says.

The visiting room at Christchurch Women's Prison.



## Biological Sciences building taking shape

This year it is a case of back to school for C Lund and Son. The company's largest current project is a seven storey, energy efficient building for Canterbury University's School of Biological Sciences.

The Biological Sciences building is adjacent to the Commerce building, which Lunds built several years ago.

Heading up the project are structural site foreman Jim Wells and site supervisor Steve Mouat. They explain that the job has posed a number of interesting challenges.

These include linking the new building to the existing Zoology building, lowering the ground water enough to dig the basement, and adjusting to new sustainability guidelines.

Steve says the enabling work to get the project off the ground included rerouting existing services – power, water, storm water, and sewerage – to maintain supply to the surrounding buildings. It was also necessary to move three protected native trees, which required a registered arborist.

The biggest hurdle, however, was the groundwater. It had to be lowered to build the large underground basement that will hold the plant to run the specialist systems such as air

conditioning, and salt water and distilled water used in the labs.

"There was an six month delay in starting the project as we worked with ECANZ to sort out how to dewater the site. In the end we dug eight bores around the university.

"To lower the groundwater, we are pumping 300 litres a second from the building site. We reinject 100 litres of that into the artesian aquifer through the bores, and we discharge the other 200 litres into Okeover Stream, which runs through the university," Steve says.

Jim explains that once the first two levels of the building are completed it will be heavy enough to hold itself in place and the dewatering can cease.

"Because the basement will be permanently below the water table, all of its surfaces are wrapped in Volclay sheeting to waterproof the concrete," Jim says. The Biological Sciences building will also

The Biological Sciences building will also test the skills of Lunds' precast team. Jim says the structure of the building consists of interlocking precast frames that resemble goal posts.

"On the IRD building we poured the columns in situ and tied them together with horizontal precast beams. It is easier for us to use the

precast frames as long as they are made correctly. They have to be accurate. Each frame links into the frame above midway through the next storey. The joins will be at eye level, so the precast guys have to get it exactly right."

Biological Sciences is the first major building Lunds has built under new sustainability guidelines. This means the company must ensure that as much as possible, materials used on site come from renewable sources and as much waste as possible is recycled. Extra efforts must also be made to control dust and sediment so that it does not get into the storm water system or pollute groundwater.

No big construction project is a solitary exercise. On this project David Browne Contractors is installing the mechanical services, Aotea Electric is the electrician, Graham Bond is the plumber, and Texco is doing dewatering and excavation.

## REFLECTIONS ON 50 YEARS OF BUILDING AND BUSINESS

Earlier this year Bruce Lund celebrated his 70th birthday. Bruce is the father of C Lund and Son general manager Joanne Macgregor, and his birthday seemed like a good time to ask him to reflect on the nearly 50 years he spent in the building industry.

Bruce says when he entered the trade in Timaru in 1956 most things were still done by hand. That included mixing concrete and

sawing timber.

"Your ability to work was an important part of whether you were considered a good builder in those days, and that meant shovelling shingle and digging ditches. We didn't have skill saws. Your basic kit was a claw hammer and three saws, and you used them everyday.

According to Bruce the building industry began to change in the late 1960s with the start of the large hydro schemes, and the pace

of change picked up in 1970s.

"At that time, the freezing works were upgrading to improve their hygiene to meet EEC [European Economic Community] standards. We helped to rebuild both of Timaru's freezing works, Smithfield and Pareora.

"One of the big changes that came in then was working to a schedule. Before that you started on a job and finished when you finished. The freezing works needed the work done in the off-season so we upgraded our machinery to meet their deadlines.

"Hiring the bigger gear wasn't an option, so we started spending the money to buy it. Once you have the mechanical means to do a job it is so much more efficient. With the excavators, you eliminate most of the manual digging and with lifting devices like cranes and forklifts you can handle much heavier materials. The only problem with gear is it doesn't procreate. If you want another one you have to go out and buy it.

"The precast revolution happened at about the same time. Before that it was mostly block work. It took 60 percent less time using

At this time C Lund and Son expanded rapidly and took on jobs in other parts of the South Island. Despite the growth, Bruce says the company did not perform as well financially as it could have.

"I probably spent too much on gear and my bother Ross, who was our quantity surveyor, didn't really know the true costs of the operations so our margins weren't big

"You are only as good as your management skills. We built some bloody big buildings. We had very skilled tradesmen and the confidence to build anything but not the financial skills to really nail things.

In the early 1990s Lunds began doing more work in Christchurch. They set up an office there and later moved into the yard and office complex on Halswell Junction Road. During this time that Joanne and her husband Andrew took on a bigger role in the business.

"I am not exaggerating when I say Jo is the best thing that ever happened to this company. She has tremendous judgement, and that includes her choice of husband. Under her leadership we implemented modern, farreaching policies around contract management and computerised costings.

Very few companies have survived employing large numbers of men rather than operating solely as project managers with subcontractors. By doing that and having our own plant, we are in a strong competitive position.

"When Joanne began we had already accumulated a lot of gear and the joinery shop was established by my grandfather but she consolidated the business and put her stamp on it. She never hesitated to support the precast shed, which was a turning point because it makes such a big difference in quality control.

"And women don't get any latitude in this industry. They have to be better than men to be accepted.

Bruce retired in 2003 at age 65. He says he is very grateful for his lifetime in the building industry. These days he spends most of his time teaching schools kids to sail Optimist, P-Class and Starling boats with the Timaru Yacht



#### Contract work boon for precast

In addition to providing panels for the company's own projects, C Lund and Son's precast operation has had a busy year providing panels for other builders.

Construction engineer and director in charge Andrew Macgregor says 2008 saw more contract work for precast than usual.

"Building work was tight. Normally something like a new school building would attract three or four tenderers. This year 20 or more builders were registering interest in pricing those jobs. With our precast facility we have the ability to keep our building team employed when things slow down," Andrew says.

"We have more than 20 builders working on precast at the moment, and during really big jobs we can use more than 30."

A quick tiki tour around Christchurch reveals several of the new buildings made with Lund panels. They include a classroom block for Riccarton High School, a multi-storey parking building for Westfield shopping mall, an office and commercial building complex near Addington Raceway, and the Novotel Hotel in Cathedral Square.

Precast foreman Phil Brook says each of these had its own issues.

"It took 2.5 km of rebate to create the architectural features on the exterior panels at Riccarton High School. This made them a bit trickier than your straight flat panel.

"There were also some very big panels in this job. The biggest was 12m long and about 5m high. It was too big and too heavy for us to carry with our trucks, so we had to get another company in to shift it."

Phil says the issue with Westfield car park was the sheer speed at which it was built. Lunds produced 226 panels for the job, and it took a bit of effort to keep up with the pace of the

"The carpark building has a steel structure and the panels clip onto it. There was a delay in getting the building started, and at one point we had 100 panels in the yard waiting for them. When they did get going, it all happened very fast. At the end we were just one or two days ahead of them."

The Addington Park commercial complex required some very large panels, a number of which feature exposed aggregate. The exposed look is created by water blasting the concrete to make the composite shingle visible. The trick with this technique, Phil says, is to make all the panels look the same.

The Novotel Hotel project brought its own challenges. The 14 storey hotel is being built alongside and as an addition to the historic Warner's Hotel.

"For the first four storeys we had to match the look of the existing building. Those panels are 400mm thick with curved windows," says

"The upper stories are a bit more repetitive. They consist of lighter 120mm-thick window bearing panels which are linked into 250mm reinforced structural panels."

The new carpark building at Westfield Mall, Christchurch.



### Lunds' reinforcing steel maestro

C Lund and Son precast foreman Phil Brook says Mika Rairi is a "bloody godsend". Mika heads up the team that ties the reinforcing steel that is at the heart of Lunds' precast panels.

"Mika is 64 but he can out work most 18 year olds. It is quite a skill to get the reinforcing steel right. We can adjust it a bit when we do the pours but it slows us down, so it is important to get it right the first time," Phil says.

Mika hales from Rarotonga. He says he learned the art of tying reinforcing steel years ago from a Dutchman, Hank, who had been working on the Manapouri Power Station.

I worked for Ron Patterson, who was a builder in Christchurch. Later I worked on some jobs for the Ministry of Works. In those days they did not have to work so fast and they could afford to be fussy. The work had to be spot on, and I like to maintain that standard of workmanship.

"In the old days the detailers knew how to draw plans. Now they draw plans in all sorts of different ways, and I have to try and figure out what they want."

For most of his working life Mika's primary job was in the freezing works, where he says he did just about everything. Tying reo steel was his offseason job, which meant working outside in winter.





#### New office puts metal merchant on top of heap

Trevor Munro reckons he has the best scrap yard office in the world, thanks to his neighbours, C Lund and Son.

Trevor's metal recycling business, Metalcorp NZ Ltd, is just a hundred metres down the road from the C. Lund

& Son office and pre-cast plant.
The new office block C. Lund & Son built for Trevor is certainly a step up from the buildings that preceded it, all of which were built from material salvaged from his business.

"We bought the yard in 1989 and our first office was the back of an old ice cream truck," Trevor says. "We built the next one out of a couple of dozen sheets of galvanised tin. It had a chimney but it fell over, and we had to sit with our heads out the window when the wood stove was on.

"Then we bought an old wrecked shed for \$500 and added two lean-tos to it. We had to put a loader bucket on top of it to keep the roof from blowing away when it was windy. The last office we had was an old barracks block from Wigram Air Base. I really liked the balcony on it, so I had one put onto to our new one.

With the cost of scrap metal skyrocketing in recent years, Trevor decided it was time for some better digs. The new office has a tea room and showers for the yard workers, and plenty of high quality office space for Trevor and his administration team. The balcony overlooks the 11,000 square metre yard where Trevor's team stores, processes, compacts and bales all sorts of metal for the export market

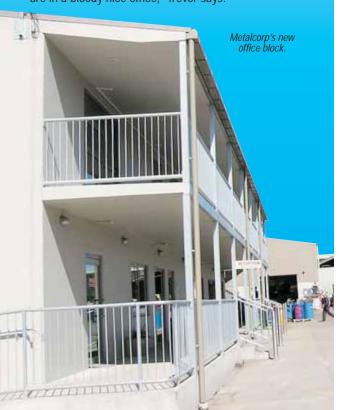
Trevor and his daughter Korina designed the office in consultation with C Lund and Son quantity surveyor

Wayne Radburnd.

"We've even got a wheel chair ramp and double glazing all around," Trevor says, seemingly somewhat amazed at how politically correct he has become.

'Mr Yasu Masimoto is a Japanese scrap metal dealer, who has visited yards all around the world. He reckons this office is as good as any he has seen.
"The price has fallen out of the commodity market

now so even if we aren't making any money at least we are in a bloody nice office," Trevor says.





The contract to make the entrance panels for two TimeZone arcades had to be done quickly.

#### Joinery team showcases hardwood capability

It is not often that Lunds Joinery get a chance to carry out major contracts in solid timber rather than the more common fibreboards. This year, however, two of the joinery division's

largest jobs have called upon it to make some beautiful items out of some beautiful hardwoods.

Currently the joiners are in the midst of building and installing all the joinery for the new five-star Rainforest Hotel, a luxury lodge near Franz Josef Glacier.

Contracts and accounts manager Glenn Chittock says Lunds Joinery will build all the vanities, wardrobes, bed heads, and bedside tables for 100 bedrooms as well as the reception counters, bars and other large items for the public areas.

"The Rainforest Hotel joinery is all in saligna, a species of blue gum grown on plantations. They ordered a huge wine rack, which took 100 hours to complete, and the buffets and counters all have curved doors, so we are building some pretty cool looking pieces for them.

The other solid timber contract

Lunds Joinery is working on is the judges' boxes, witness stands, and jury seating for the new Timaru Courthouse. They are in native black pine (matai), sapele, and English tawa.

To provide the finish on the wood for the two contracts Lunds Joinery has

> acquired a new SCM belt sander.

"We will be finishing 9000 metres of timber for the Rainforest Hotel alone, so it was a good time to up-grade," Glenn says.

A couple of this year's joinery jobs had to be done at very short notice. One was to provide all the

fittings for New Zealand's new embassy in East Timor. It had to be ready and delivered to for shipment in containers in five weeks. The other quick turnaround contract was for spray lacquered entrance panels and display cabinets for two TimeZone gaming arcades in Christchurch.

To keep up with the latest trends in the joinery world Glenn and senior staff member Mark Webb attended the biannual tradeshow put on by the Australian Woodworking Industry Suppliers Association (AWISA). Glenn says he did not come away from the show with any new toys but it was good to see where the technology is heading.





## Mixed bag of projects keeps Timaru builders scrambling

Timaru saw a lot of C Lund and Son in 2008. The company completed a range of commercial construction jobs around the city and has several more on the go.

Lunds project manager Dave Mason says the Girls' High technology block was a very interesting contract.

"We built the roof for the atrium area on the ground out of 250mm x 50 mm joists. They were covered in ply to hold the Butynol roofing and gutters. Then we lifted it into place with using our 30 tonne and 40 tonne cranes.

"We started this job in December 2007 and it was finished on time for the start of the third term of school in July."

Other missions accomplished include a precast and concrete wash stand built for Allied Concrete. The job included construction of two water reclamation bins, a slurry pond, and a main pond. Using the new system, Allied Concrete can recycle the water used to clean its trucks.

Harvey Norman now has a bigger

warehouse thanks to Lunds. This job consisted of adding nearly 500 sqm of floor area using 360 UB portal rafters and 410 UB portal legs. Five precast panels 8m high by 5m wide made up one of the walls

Another contract was a 625 sqm workshop extension for the engineering firm Anderson and Rooney based in Winchester.

Currently C. Lund & Son are constructing a 10 sqm bunker to hold a 60,000 litre tank for corrosive liquids such as acid and caustic soda. The job is at the Timaru port warehouse of Orica, which imports the chemicals.

The Orica contract also entails building two 16m ducts out of precast panels. The panels are placed in a trench flush with the ground and then fibre glassed. The ducts catch any spills that occur when trucks are being filled with chemicals.

These days, along with the new Timaru Courthouse, another Lunds crew is at work refurbishing and expanding the hall at Bluestone Primary School in Timaru.



Raising the roof on the Technology Block at Timaru Girls' High



#### Earthquake strengthening takes centre stage

For well over a century the Malthouse has given pleasure to a lot of people in Christchurch. It was built in 1867 to process malt for a local brewery. Since the 1950s the building has been a children's theatre, and today it also houses a costume hire business.

After earthquake strengthening by C Lund and Son, the old stone building will continue to entertain Cantabrians well into the future.

A team of five Lund builders led by Robbie Halliday and Rex Jellev carried out the second stage of the work on the Malthouse. Four years ago C Lund and Son did the first stage of earthquake strengthening, which included pouring new walls on the east and west side of the building and tying them into the original walls with structural steel.

are about half a meter thick and to get the grout mix into the cavity the Lunds crew drilled in through the masonry on the exterior wall.

The Malthouse's theatre space and 'greenroom' (where actors gather to relax) are on the second storey. There a triangular ring beam was installed around the entire perimeter to tie the walls together.

"The ring beam has a core of deformed steel and concrete. In an earthquake it should compress and bend so the walls themselves are protected," Rex says.

"We also bolted structural steel to the original timber trusses. The trusses were old and sagging. The PFC steel will do a good job of holding them together and we added diagonal beams to keep them apart."

together off site and delivered in sections. A Lunds crane was on site to lift the steel up to the second storey.

'We brought some of the materials in through the windows and we had to cut through the walls to get some of the structural steel inside," says Rex. "Fortunately we were able to get a hydraulic lifter upstairs that we could use to hold them in place while we connected them."

Manager of Malthouse Costumes Kathy Beswick says the Lunds construction team was entirely professional and very helpful.

"They went out of their way and were very considerate when they were working in our space. They are nice guys. I was very impressed," Kathy says.



#### Social Club feeds the wildlife



The social club had a jolly old year that began with a family picnic at Orana Wildlife Park, a trip to Dunedin to see an All Blacks Tri Nations test match, and finally a 'mini Olympics' at Terrace Downs resort.

Social club organiser Trish Hickman says in addition to viewing the animals in the open range zoo, the March trip to Orana Park included an Easter egg hunt for the kids, an egg throwing contest for children and parents, and a barbeque.

Some people might think it a good idea that the social club find other ways of amusing themselves than attending All

Blacks' games, given that the team loses whenever Lunds people are in the audience. Nevertheless, Trish says, it was a great outing.

"Christchurch social club members boarded the bus on Saturday morning, bright and early. We even had our very own security guard. We headed to Timaru to collect our fellow rugby supporters.

"Along the way we got fitted with pink armbands so we could be identified when we got back on the bus. Although some of us thought that was a little unnecessary, it did prove very useful after the game when other supporters tried to hitch a ride on our bus."

The trip south included stops at a number of pubs to stretch the legs...and arms.

"We arrived in Dunedin and were deposited right outside the front gate. As we were early, we decided to find a nice warm pub. We did as did every other person in Dunedin. It was wall-to-wall bodies," Trish says.

Although a few of the lads misplaced their sense of direction during the game, eventually everyone got back to the bus, and ultimately home.

In November Lunds held a Christmas

party at Terrace Downs. On offer during the day were archery, golf, claybird shooting and a Segway slalom.

People could try their hands at the various activities at their leisure. The two-wheeled Segway electric vehicles were very popular, with some people requesting Lunds trade in a couple of its trucks to get a small fleet of them.

Points were kept for the archery and claybird murdering competitions. The Timaru division claimed the men's prizes for both while the Christchurch division bagged the women's prizes.

Special mentions go out to John Taggart for being the official golf tutor and to Trish for scoring the most points on another person's target during the archery competition.

And we won't mention the apprentice who, on the way home stepped out of the bus to have a pee and right into an irrigation race.

Judith Middlemiss (pays the wages) displays skills on the segway.



C. Lund & Son cadets (from left) Keegan Longdin, Shane Aitchison, and Alister Melville.

#### Next generation moving through the ranks

In addition to the nine apprentice builders who are doing their practical training with C Lund and Son, the company is also the training ground for three cadets, two quantity surveyors and a civil engineer.

Shane Aitchison is in his fourth year with Lunds. He received his diploma in civil engineering from at Christchurch Polytechnic Institute of Technology (CPIT) in 2004.

Currently he is on-site at the Canterbury University Biological Sciences job. Along with doing quality assurance he is the sustainability officer for the site. He ensures that all the materials used in the project come from renewable sources, which is a growing trend in the building industry. He also ensures that waste is separated into categories and recycled whenever possible rather than simply tossed together and thrown away.

The two quantity surveyor cadets are Alister Melville and Keegan Longdin. They began working with Lunds two years ago and both have now completed their two-year QS diplomas at CPIT.

While were studying at CPIT, they worked with the company one day a week and full-time during the school holidays.

Keegan and Alister both worked onsite at the IRD building project, which involved a lot of cleaning up and watching what everyone else was doing.

Keegan is now working along side Shane at Canterbury University. His tasks include quality assurance and coordinating the work of subcontractors.

Alister says among the practical tasks he has done with Lunds during his training are measuring precast panels for tenders, and back costing to determine how accurately a project's estimates match its final cost. Currently he is costing precast panels for one of the jobs Lunds is tendering for.

Dave Mason is responsible for the oversight of Lunds apprentice builders. He says all of them are going very well, though some find it a bit difficult to keep on top of the books. He congratulates Nathan Westaway, who has completed his apprenticeship.

C. Lund & Son wishes all its staff and colleagues in the building industry a happy Christmas and New Year.



601 Halswell Junction Road PO Box 16 342, Christchurch, NZ Ph: O3 349 6900 Fax: O3 3496901 Email: lund@lund.co.nz