

CONSTRUCTORS NEWS

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**McCONNELL
DOWELL**

CREATIVE CONSTRUCTION™

**DRIVING
PROGRESS**

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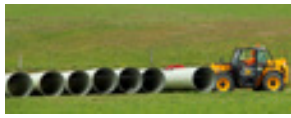
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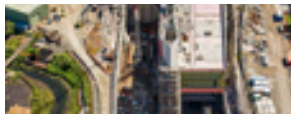
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Front cover image:

Alice completed her journey at Auckland's Waterview Connection Project on Monday 19 October.



From the desk of Roger McRae

“It’s about awareness, and everybody taking ownership – of their own safety and the safety of others.”

Home without harm

I wanted to begin this issue with a topic of utmost importance to every one of us – safety. I am very concerned by the disappointing number of our people hurt on the job in the last couple of months. This is unacceptable to me personally and a reminder to us that more than ever, safety in our workplaces must be our top priority. Our company-wide Safety Stand Down on 1 October served as an opportunity to stop, reassess and review our attitudes and behaviours.

I remind each one of you that it is the responsibility of all of us to be alert to our working environment, and the changes in it, and to respond accordingly. That means **speaking up** if you see something that could hurt you or others – even if it’s outside your immediate area of responsibility. In the coming months, you will be hearing a lot on the topic of Safety – please take it seriously.

It is an ongoing challenge to be alert to, and aware of, the changing environment that we work in. Our people being hurt on our projects is unacceptable and I would like to see each one of us making a concerted effort to stop the harm to our people and on our jobs.

New leadership for MCD

At the end of September, the Auckland and Christchurch teams were pleased to host a visit from our outgoing and incoming CEOs David Robinson and Scott Cummins. David has been an outstanding leader, both within MCD and the Civil Construction industry, taking our business from \$300M to \$3B in value over his 15 year term as CEO.

He has a real passion for our industry and knowledge and breadth of experience in a wide range of construction sectors.

I have always admired his willingness to challenge and fight for what he felt was right. David has a strong connection with people and has always been very supportive of the NZ and Pacific business. We wish him well in his future endeavours - he will be greatly missed.

We welcome new CEO Scott Cummins to the company, and look forward to working with him to grow our business. Scott and David recently toured some of our project sites in Auckland and Christchurch and met the teams in those offices over drinks. He’s very approachable and I encourage you to say hello if you come across him at any stage.

Farewell and welcome

This month we farewell our PR and Communications Manager Clare Farrant. Over the past two years Clare has done an exceptional job as MCD’s first ever Communications Manager. She has done an exceptional job of developing our understanding of how Communications

adds value to our business, and has improved both our internal and external communications – including this publication. We wish her well for the future and hope she will continue her involvement with MCD in the future.

We also welcome Natalie Dyer, who steps into Clare’s shoes as National Communications Manager and a member of the Senior Management Team. Having spent over eight years with Beca, Natalie brings a good knowledge of our industry and a wide range of communications expertise. I am confident she will add continued value to our business, as our communications practice goes from strength to strength.

Summer and our Christmas break is almost around the corner. But there’s plenty still to be done. Keep up the great work and especially your focus on all the Safety and Business practices that will contribute to the ongoing growth and success of our business.



From left: Roger McRae, David Robinson, Scott Cummins



Tonga *by Brian Fuller, Pacific Operations*

Malo e lelei from Vava'u

Progress continues to chug along at a steady pace here in the pleasant island of Vava'u, Tonga. With all the earthworks, pavement works and preparation works now complete, we look forward with great anticipation to the final chip seal and finishing works. This will commence on Monday 5 October with the arrival of the sealing crew and the rest of their supplies. We have around one week of pre coating chip etc, then up to six weeks of chip seal overlays, paint marking and demobilisation.

On a different note, during our time here most of us have had the opportunity to experience some - if not all - of the things that the island has on offer, namely spear fishing, fishing, sailing, diving, snorkelling or checking out the local vanilla plantations. However the one thing Vava'u is most popular for is its whale watching and swimming. It is one of only two places in the world where you can actually get in the water and swim alongside a mother and her calf.

I had the pleasure of doing this a while back and it is definitely an experience one should not miss if given half the chance. The season is only around three months long, normally running from the start of August to the end of October, and places fill up fast so it's well worth booking early. If a slightly more intrepid and exciting winter break appeals to you next year, then cancel Fiji and come to Vava'u!

Tonga warmth

The Vava'u people have embraced the airport works as a huge contribution to the Island, not only for the future of the Vava'u economy but also the employment of local work force. However while there



is work, there is also time out for the expats and work crews.

The locals have opened their arms up with their warm hospitality and friendly attitude towards McConnell Dowell staff. The business community has also welcomed the works of the airport, knowing what it will do for their own individual businesses. This appreciation is shown through their invitation to family functions during non-working times. The warmth of the family atmosphere at a beach function is like being back at home. Pig on the spit and lobster with



fish is generally on the menu. Oh, and 'snags' for those that don't like the other stuff, lol! Supporting the community is also on the cards, with the MCD staff attending fundraising for the hospital, fishing competitions and agricultural show days. Red and White is the flavour of the month here at the moment due to the Rugby World Cup, but every now and then we throw in The All Blacks just to let everyone know who the world's best team is. The project will be full steam ahead as of the beginning of October when additional equipment and resources will be here.





Crushing and screening of AC aggregates continues

Fua'amotu Runway Project in Tongatapu

by Brian Fuller, Pacific Operations

Work is well underway on the main runway overlay, although a lot of wet weather has hampered progress again this period. The recent tsunami warnings reminded us of the vulnerability of living in the islands and thankfully this time the initial warnings resulted in a non-event.

We were faced with an internal audit this month and it was nice to see a familiar face from Head Office. It was even nicer to see the back of that familiar face on completion! Jokes aside, the audit provided a good opportunity for new staff to learn more about the MCD system and also allow the project as a whole to make positive improvements in terms of compliance with the company systems.

Whale season is upon us and we have had the pleasure of having a cold drink at some of the local resorts whilst watching the whales swimming and jumping out of the ocean. Some of the team have even made the effort to go swimming with the whales in between the shift work.

In addition to adverse weather, we have had some teething problems with some of our new plant, mainly in relation to the

asphalt plant, but our experienced team are improvising and ensuring it doesn't hold us back too much!

The next two months are vital and should see us coming to the end of the runway as we complete approximately

50 lineal metres per shift, chipping away at chainages in between busy flight schedules. As the night shift overlaps in to sunrise we can see the end of the 2.1km overlay or 'light at the end of the tunnel' - or more literally, 'grass at the end of the runway'!



Sharing the runway with domestic flights provides some interesting photographs



Whale blow viewed from Keleti Beach Resort



International Apron and Taxiway re-surfaced and re-lined



American Samoa *by the team*

We are in the middle of a quiet spell up here in the tropical paradise of Pago: we are in the final stages of completing the works at the international airport where we are renewing all of the runway lights and signage, and we have just about completed the reinstatement of Route One as part of the East Side Villages upgrade for ASPA.

The tender box is busy though, and we have submitted bids for the Upper Pago Water tank and pipeline in Fagasa and for the sub-contract package for the Service wharf. We hope to understand where we sit on these projects in October.

There are several other bids in the pipeline that we are looking forward to working on and these include a new fuel tank for Pacific Island Energy, Package 5 of the East Side Villages project for ASPA, the overlay of Runway 05-28 for the Department of Port Administration and several smaller projects for the Department of Public works.

Completion of 3R

The American Samoa annual 3R Road Improvement Program 2015 was successfully completed 6 weeks ahead of program and within budget during August and after five months of asphalt milling and new asphalt surfacing to both the east & west side of the Island.

Supervisors, Tony (Radar) McDowell and Sulusi (Juice) Schwenke, (seen on the right side of the above photograph) and the team completed the work under live traffic conditions at all times and without incident - a great result.

The program required 44,358 m² of asphalt milling 50 mm deep and replacement with 6323 tonnes of 50mm DG20 asphalt, along with soft spot replacement and re-shaping of the base



The asphalt surfacing was completed ahead of schedule and without incident

course, mostly crushed coral, under the usual weather difficulties of an average of 3.50 m of rain per year. A big thank you to all those who added to the successful completion of the program. So, until next year then!

workshop, quarry, crusher, AC and concrete batching plants. Peter was in his role for over 3¹/₂ years and whilst he is sorry to be leaving he is looking forward to the new challenges that Kiribati will bring.

Farewell Peter Brannigan

We said farewell to Peter Brannigan in mid-September. Peter was our Production Centre Manager and looked after the

The team from the Production Centre put on a great leaving party for Peter and his wife Bridget and this left them with some very special memories.



Farewelling Peter and Bridget Brannigan



Our Island home

Kiribati *‘Mauri’ (hello) from Tarawa* by Richard Robins, Kiribati Projects Manager

Road project gains momentum

We have been gaining momentum in recent times as we approach the last few turns before the home straight. Asphalt to the main road has now progressed up and over the island’s highest point at 3m above sea level (“Mount Tarawa” as it is named by the MCD team), and now it is all downhill to the finish line.

Over the weekend of 3-4 October, asphalt was laid across the last remaining causeway at Ambo Village; another significant milestone location. Only 9km of the original 25km of main road remains to be completed. Other advance trades such as kerbs and drainage are well out in front with 5km and 2km respectively to complete.

Following trades such as concrete footpaths have gathered significant momentum with our day and night shift operations and they are following close behind. Installation of road furniture

(such as the 241 solar street lights and 33 bus shelters) have all commenced and the 650 road signs will arrive in early November. These are all good signs and motivators that we are nearing the end.

There is still significant work ahead and some challenges to face, however. Supply and transportation to the island of raw materials for asphalt production is hindering our desired progress, as is the ongoing wet weather caused by the El Nino pattern which just wants to stay over Tarawa forever it seems.

We have received some heavy torrential rain storms at times that always seem to come on our days off (Sundays) and generally it rains at some time during the day almost every second day.

Flights in and out of the island have also been cancelled recently due to these storms. The team here continues to remain positive and battles through these issues without wavering.



Local traffic

Increased safety awareness

On the downside, we had two LTI incidents in the month of September which was unfortunate and disappointing. A traffic controller was hit and run over by a local bus. Luckily he received only deep bruising and non-threatening impact injuries but it could easily have been much worse. In the second LTI, an engineer slipped on wet ground and dislocated and fractured his ankle.



Bus shelter construction



Asphalt to the main road



At the formal closing ceremony function one of our engineers (Tony Whittington - back row, blue t-shirt) managed to photo bomb the official party photo which included four Presidents/Prime Ministers, other key delegates and the Prince. (third from the left)

Kiribati ... continued

He was treated in NZ and will be off site for at least another six weeks. Both of these incidents caused us to reflect on what caused them and consequently changes were made to our operations here from these learnings.

They also highlighted a need to be better focussed on our Situational Awareness and task planning and the need to step back/take 5 and properly assess what you will be doing, what is around you, under you and also above you.

Tarawa has some unique traffic situations and driver habits which challenge our management processes. Some really have to be seen to be believed. We are constantly reviewing our management processes to improve the controls we put in place and to ensure our employees remain safe and are out of the line of fire.



'Disneyland'

Life on Kiribati

The team also continues to bond well and most weekends there are numerous stories (and some questionable rumours) of the activities that took place.

Recently an 'I'll dress you, you dress me' activity took place where a small group decided to draw names of a person to dress for a Saturday night excursion to the bar in outfits that were far from flattering and for some, not appropriate.

The group had fun and I am told there are several dubious photos circulating (none of which were shared with me for this article or that could go to print). We have a dedicated and astute Trivia/Quiz group



Local bus - for safety reasons locally hired MCD workers are not permitted to travel to work in this way!



I'll dress you, you dress me



Rugby World Cup supporters

that regularly does well at the weekly quiz night at a local bar. The Rugby World Cup also has high interest at the moment and during the games the jerseys come out in support (refer to photo above).

We have the usual complement of die-hard AB supporters (all un-biased), others from Australia, South Africa, Wales, England, Samoa, Tonga and Fiji, and a few who won't show their allegiances until the Final, I suspect. At the time of writing, our lone English supporter was looking a bit sad after that team's early exit.

The country recently celebrated its National Holiday and Independence with a week-long public holiday. 'Disneyland' even came to town! European Royalty

also visited us over 9-12 October with His Serene Highness Prince Albert II of Monaco arriving for a Climate Change Event that was also attended by several Pacific Island Prime Ministers.

The Prince was staying at the same motel as our Airport project crew. Quite a few of the crew bumped into him and had casual conversations - he was very approachable, down to earth and quite casual. He even joined some of the Airport project boys and watched a Rugby World Cup game with them on Sunday morning at the motel.

Airport upgrade slows

The Bonriki International Airport upgrade is having some problems that have

stalled progress. Similar to the road, issues around supply and delivery of raw materials for asphalt production are not allowing the project to gather momentum.

The crew however remains positive and focussed and the asphalt boys are turning their hands to new skills, undertaking the airside drainage and fibre optic duct installation. The Kiribati Island team has welcomed new arrivals - Ross Edens (Senior PE), Damian Brandon (HSE), Steve Polwart from American Samoa. All good additions to the team.

'Ko Rabwa' (goodbye) from Kiribati.



Crew members from Concrete Treatments

Christchurch *Health and Safety at Southern Relief* by Kelli Campbell, Communications Advisor

As part of the SCIRT alliance, MCD is repairing the Southern Relief Trunk main, a wastewater box culvert that takes waste from over 200,000 households around Christchurch to the Bromley Wastewater Treatment Plant. Here we look at some of the safety measures in place on this project.

Diverting the flow

The first section of pipe (approx 800m), was emptied of waste to ensure a safe, dry working space for the crew. To empty the pipe, bungs were placed within collector mains and the trunk main itself, flows were diverted from a pressure main and a collector main is currently being over pumped.

Emptying the culvert created concerns of overflows and the engineers for the project worked closely with the

Christchurch City Council (CCC), Environment Canterbury (ECAN) and SCIRT.

Modelling by CCC was used to show the normal rate of flows in the area and effects of the works diverting the flows. The engineers also consider different scenarios such as worst case rain events and different times (6pm at night when the flows are highest). The project has consent to overflow into the river at

certain flows, as this is what would occur in a normal instance.

The worst case scenario occurs when the flows become too high and the waste will be diverted to flood the trench. Flooding the trench could affect the schedule of the project as well as being costly. The hard work of the engineers allowed CCC, ECAN and SCIRT to feel confident that the project was properly planned and had taken all risks into consideration.

About the project

- The work is taking place on two streets in the eastern suburbs of Christchurch, Woodham Road and Worcester Street.
- It involves the dig and relay of an 80m section of box culvert, confined space entry for crack repairs, and a number of manhole repairs and replacement.
- The crew are currently working on a section of the wastewater trunk main that is 1.6m high by 1.2m wide. The pipe carries on average around 800-900l/s of waste that is enough flow to full an Olympic sized swimming pool in five hours.
- The works began in May 2015 and are expected to be complete by the end of 2016.
- As on all McConnell Dowell jobs, health and safety is at the forefront of the crew's mind. There was a large amount of pre-planning with local authorities, changes to equipment used as well as on-site drills to comply with industry standards.

Emergency drill

While the engineers put in extensive planning before works began, McConnell Dowell's sub-contractor Concrete Treatments focused on potential risks when working on site. The crew members are lowered into the 1.6m x 1.2m wastewater trunk main to work on a daily basis. Recently, they invited the local fire brigade to take part in an emergency drill.

The crew undertook the mock emergency involving one of the team members pretending to hurt his leg in the pipe. The crew quickly rushed into action lifting him onto a trolley within the pipe and pushing him to the nearest exit shaft. The crew member was then winched to safety and walked away happy. The fire brigade was impressed with the set up and has asked to use the pipe to test their own equipment and train their crew.



The fire brigade on site

Control Measures

Real time data was required to ensure that crews could be ready to evacuate the pipe in the event of a large influx in water (eg due to a large rain event). Wet weather flow rates can reach more than 5 million litres per hour.

Engineers on site receive weather graphs daily showing the probability of different amounts of rain expressed for each day. The team also receives real-time data informing them of the amount of rain that has fallen. Crews are unable to work within the pipe if 50mm of rain has fallen within 24 hours, and the pipe will be flooded if 60mm has fallen in 24 hours.

Critical manholes around the work area are monitored for flows. Float alarms sit within the manholes and are powered by solar panels. Currently there are six monitors on the trunk main, the collector main and a pressure main. These monitors are above the normal monitoring undertaken by CCC at pump stations.

On this project there are two critical pump stations and if these are shut down for six or more hours, the trunk main will be opened up to flows. CCC joined with McConnell Dowell in increasing their safety on site. They did more checks on

the pump stations and made them safer where needed.

All stop logs and bungs are designed to be easily removable in a short space of time. The crews cannot work with just one inflatable bung in place and required a steel plate stop log as well. To ensure that crews are safe, the bungs and steel plates can be removed from the road via winches. This is especially important as this is most likely to occur in wet weather which would make the pipe even more dangerous.

Robot

Another challenge faced by engineers prior to work beginning was undertaking crack repairs within a 1.6m by 1.2m box culvert. The use of hydro excavation, while common, is extremely dangerous for humans within such a confined space.

A hydro excavation lance, at its legal length, would have been too long and difficult for a crew member to control in the confined space. When Auckland company Concrete Treatments came on-board as the sub-contractor for the site, they bought with them a solution.

The Aqua Cutter 410A robot, which has been modified to fit the pipe, is around 1.2m by 900mm with a hydraulic arm that can be programmed to cut any shape

as well as being suitable for confined spaces. This model - the only one in the Southern Hemisphere - was assembled in Australia, with parts coming from around the world. The use of the Aqua Cutter 410A has provided a safer solution for Concrete Treatments.

The robot is remote controlled and removes the need for a crew member to be in the direct work site as well as mitigating against health and safety risks in crew such as fatigue. The robot has different heads which can be attached depending on the type of pressure and cut required. Once the area has been hydro excavated the crew will bond the pipe with a polyurethane injection sealing the crack.



The robot and the different types of cuts that it can make



The children of Linwood North School meeting the robot for the first time

Christchurch *Adopt a bot* by Kelli Campbell, Communications Advisor

The children of Linwood North School were in for a treat when the Aqua Cutter 410A was bought to their school. The school on Woodham Road is not far from where the robot will be working.

Just off the boat from Australia the 1000kg robot was lowered by hiab within its container to the school. The children, who had seen photos and videos of the robot were surprised by its size and were not disappointed when it started to move.

With the children circled around the netball courts the robot was the centre of attention as it raised and lowered its appendages.

The crew from Concrete Treatments, who were just as excited to see their new toy, then turned the robot off and allowed the children to get a closer look.

The children were told that the robot is brave and helps the crew work in the pipe, it is not afraid of the dark as it works underground and that it weighs around the same as two polar bears.

The Aqua Cutter 410A is the only one of that model in the Southern Hemisphere. It has been 'adopted' by Linwood North School as part of an 'Adopt a Bot' programme being run by McConnell Dowell, a first in the SCIRT programme.

While the robot has an amazing personality, it was missing a name. With the children now being able to see the robot they were given one week to either draw a picture of the robot and give it a name or write a story about it. The winner of the competition was Michael aged five.



With the robot switched off, the children were able to get a closer look.



Geo the Robot lowered into the pipe for the first time

Michael named the robot Geo. Geo has been lowered into the pipe and will now start helping to repair the cracks.



Russley Road *by Jessica Riordan, Communications Advisor*

Steady progress has been made out at the Russley Road 4 laning project over the last few months.

Relocation of the services in the new road alignment is nearing completion, with almost 95% of the 30km of cabling and 20km of ducting laid. Working around the numerous services has been the McConnell Dowell Downer team's biggest challenge to date. Keith and Derek are hard at work diligently closing out these critical works.

A 180 tonne crane was mobilised to site to carry out piling work required for the underpass construction. Noise and vibration monitors have been set up in the Harewood roundabout site area to ensure we do not exceed industry standards and disrupt the locals, including a church in very close proximity to the site.

With a cemetery nearby too, the team had to brainstorm how to safeguard the headstones during our works. As a precaution, the headstones, which already looked a little precarious after the earthquakes, were propped with timber supports.

Phase 1 of the Harewood Roundabout traffic management is in place and the piling and frame are now well established. Excavation has progressed well and the first base pour is planned for this week. Casting of the base pour is planned for this coming week, with completion of the first two phases by end of January. Mason, Todd, Ryan, Fiona, Andrew and Chris are all very hard at work. The pre-

casting for the subway is well established and the quality of the units is first class.

Our engineers have been hard at work resolving how to deal with unforeseen asbestos in the Brevet landfill.

The landfill contains various contaminants including heavy metals and asbestos. Careful consideration is given by everyone involved in handling the landfill material.

To enable construction of the new carriageway and embankment fill, there are approximately 10,000 tonnes of contaminated fill to be transported to approved landfills. Currently we have encountered materials eight times above the current levels of acceptance of the depositories so additional processing will be required. This work impacts on the slip road construction and the Memorial Bridge works. Jordan and Mark are hard at work progressing this sensitive issue to a timely and compliant resolution.

The main works on the permanent approaches to the Memorial Avenue and Russley Road interchange has begun.

We anticipate moving traffic onto the slip roads in the first half of next year, to open up a large work area for bridge and embankment construction. Steve, Charlotte, James and the survey team of Nathaniel and Ken are busy! The team is looking forward to the completion of the service cut overs so main works can really get rolling! Working alongside State Highway 1 has its own set of challenges. With an estimated 30,000 vehicles

per day using Russley Road and key stakeholders such as the Christchurch International Airport wanting to ensure there are minimal delays for their passengers, the team is kept busy!

Detailed planning for The Arch and Memorial Bridge are progressing well with procurement of these components now well advanced. The thinking behind the procurement of The Arch has also focussed on the quality attributes of this iconic feature so that when it's finally built it will set this project apart from all others!





Kawarau Falls Bridge, Queenstown *by Liz Emery, Communications Manager*

The NZ Transport Agency has awarded McConnell Dowell a design and construct contract for a new, two-lane bridge at Kawarau Falls in Queenstown, New Zealand. McConnell Dowell has teamed up with Novare Design Ltd of Wellington for the bridge design.

Speaking on the award, Transport Agency Senior Project Engineer Phil Dowsett said “McConnell Dowell has recently completed, very successfully, the two new bridges over the Waitaki River near Kurow for the Transport Agency.

They will utilise their team based in Christchurch including some of those people who worked on the Waitaki Bridges”. The completed project will eliminate delays at the existing one-lane bridge and improve the State Highway link from Queenstown to Southland and Milford Sound. Detailed design will commence immediately, along with site establishment and some preparatory works. Construction of the bridge structure will start at the end of 2015 and is expected to be completed in the third quarter of 2017.

The target is to open the new bridge before the busy winter 2017 season then focus on making the adjacent existing one-lane historic bridge fit for purpose as a walking and cycling route as part of the Queenstown Trails network. A sod-turning will take place on site towards the end of the year.



Concept design of the new bridge

“A construction project must tackle head on how to deliver a state of the art project to the client without compromising the values that safeguards our environment and the community.”

Kawarau Falls Bridge *Protecting the environment*

by Eiko Fuimaono, Environmental Engineer

In 2500BC the Egyptians were pouring concrete; later on in the early 'ADs' the Romans were using it to construct the Pantheon and the Colosseum. Fast forward hundreds of years and concrete is seen crossing major rivers with it being used by the Europeans for bridge construction since the 1800s.

In short, heavy construction has been around for decades and so has its impacts on the environment. Modern recognition however dictates that at this pace of modernization, the two are both essential for mankind to survive or else one will become the death of the other. A balance is required and a construction project must tackle head on how to deliver a state of the art project to the client without compromising the values that safeguards our environment and the community.

At the forefront of the tender competitive arena, McConnell Dowell has successfully won yet another tender for the construction of a major bridge in the South Island of New Zealand – a new two lane bridge across the Kawarau River, south of Queenstown.

Our environmental obligations in maintaining our ISO 14001 certification means our project leaders are looking at environmental aspects of our projects before a shovel even hits the ground.

Getting Kawarau Falls environmentally set

Being adjacent to, in and over the Kawarau River, with a topography of steep banks running down each side of the river, the project site is an environmentally challenging task to begin with, in terms of temporary works before the actual construction on the bridge even starts.

For laydown areas to be established, major earthworks are required. The construction team is starting to remove some of the trees currently holding the banks together, then will cut and fill the steep gradients while ensuring there is no runoff into the pristinely clear Kawarau River.

Both the Otago Regional Council (ORC) and Queenstown Lakes District Council (QLDC) are major stakeholders with the Project team to ensure all the environmental management plans are submitted and approved, with resource consent requirements guiding the project until handover.

What's the approach?

'Green' will be incorporated from the beginning, starting with proper design of laydown areas to have an on-site run-off/drainage system to minimise runoff, and proper materials used to minimise dust pollution.

Erosion and sediment controls will ensure land is stabilised to help control surface water flows generated by works. This in turn will help limit the amount of dirty water entering the receiving environment. No undue nuisance from silt, dust, and noise or vegetation clearance will be tolerated in such a pristine environment where the preservation of natural features is very important. A comprehensive Erosion and Sediment Control Plan will be in place with hard controls implemented prior to each new stage of works.

Noise and vibration may impact on nearby residents and bystanders with vibration having potentially detrimental effects to the adjoining old Kawarau Bridge. The project team is currently working on plans to ensure mitigation measures minimise disturbance to the surrounding community.

Spills: As the first counter measure to spills, all machinery used on and in the river will contain biodegradable oil to reduce the impact on the aquatic environment. Hydrocarbons used during the course of the project will be stored in a suitably bunded area. Refuelling activities will be conducted away from the river and in bunded areas. A Spill Response Management Plan is currently in draft due for submission to ensure all aspects and possible spill hazards associated with the project are captured with practical controls to implement them.

Archaeology and cultural heritage: Works will be going over and beside a historic mill stone wall and Heritage New Zealand (formally Historic Places Trust) has requirements around working near heritage structures. An archaeological Authority is required and the team is working to ensure this is approved prior to works starting.

Concrete slurry/alkaline water: Probably one of the biggest risks with modern bridge construction over flowing waters is dealing with concrete and its by-product, concrete slurry. There are potential hazards associated around spills

to land running off into water or seeping into groundwater, and a more elevated risk of direct spills into water.

This would instantaneously change the river pH, causing injury/death to river fauna and flora. Methodologies are currently being evaluated on the best way to handle concrete slurry and disposal of any concrete waste on such a constrained site. There are opportunities to use new technologies instead of the traditional lined basin which normally requires a large ecological footprint not available in the current laydown area.

Waste management: With the site constraints and remoteness from landfills, recycling and reuse rate of materials is expected to be high to reduce disposal costs. As the project progresses, it is hoped that innovative ways will be adopted to make use of any waste materials to improve the environment and cut costs at the same time.

Building a Green culture: By far the most important aspect of the job is the staff and work crews. The right culture on site can have a significant impact on reducing environmental harm. Training and briefing the team on the environmental risks and the importance of always ensuring the correct controls are in place is vital to a successful project. When the link is made that reducing impacts on the environment can have positive effects for their family's recreational activities, then this brings the change required.

As previously experienced with other McConnell Dowell projects, the most brilliant environmental ideas can often arise from crew members who understand and realise the values of the work that he/she does and its impact on the surrounding environment whether it be short term or long term.





NOIC Pipeline work begins by Amber Trower, Communications Advisor

The new network installation in North Otago is underway, with the first pipes hitting the ground in September. A total of 110km of pipe will be constructed across 90 farms throughout the Waitaki district. These pipes will allow NOIC shareholders to fully utilise the allocated water take from the Waitaki River and will irrigate an additional 25,000ha of land.

Six shipments (around 1/3 of the pipes) have arrived to site from Turkey. The pipes, which come nested with smaller pipes inside the larger pipes, are sorted and transported to various lay down areas along the Expansion alignment.

McConnell Dowell is self-performing the first stage of the work – the construction of the Main Stem. The 1200mm Main Stem pipe is the largest section of pipe, feeding water to seven other branches.

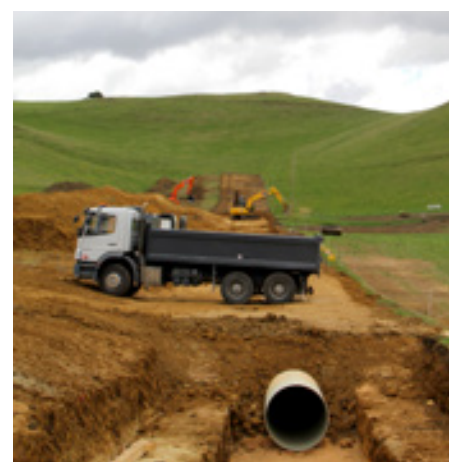
The engineers are currently undertaking trials to confirm the optimum trench configuration on the Main Stem, in terms of the materials used for the bedding and pipe embedment. The team hopes to utilise as much excavated material as possible, with the remainder of the

bedding comprising approved pipe material aggregate imported from local quarries. Once the trials are completed to meet the specifications they expect to lay between 100m to 250m of pipe per day, depending on the diameter of the pipe.

The team has also filled the newly expanded head pond and begun constructing concrete plinths at Pump Station 1 and Pump Station 2 (PS1 and PS2) ready for the pump installations.

These recent project milestones on the Expansion, including the installation of the first pipes, completion of the head pond and improvements to PS1 and PS2, have been well received by the community. With the arrival of spring, irrigation is at the forefront of farmers' minds, so it's exciting for them to witness such progress being made.

The changes irrigation has already brought to the region have been hugely beneficial and the increased construction activity is continuing to improve the economic growth of the community beyond the farm gate.



McConnell Dowell has engaged many locals to work on the project, as well as bringing on board skilled people from further afield. The Oamaru office is growing, with a total of 27 staff now working on the project. This number expected to grow, as productivity on the pipe network increases.

NOIC (North Otago Irrigation Company) operates an irrigation scheme for the North Otago Downslands area, providing water for irrigation, stock, domestic, industrial and community use.





Waterview Connection *by Justis Kamu, Communications Advisor*

“The win is something everyone who works, or has worked, on the project can take pride in.”

It was exciting time for the tunnel team at the Well-Connected Alliance (WCA) as Alice Tunnel Boring Machine approached her second breakthrough. She finally completed the second tunnel at 11.51am on Monday 19 October.

The tunnel team is predominantly made up of MCD people with sprinklings of personnel from other home companies.

Tunnel Construction Manager and McConnell Dowell’s very own Chris Ashton says that Alice’s steady approach has been a key factor to completing the Waterview Connection project – New Zealand’s biggest ever roading project.

“Alice’s steady efficiency kept it on schedule for the planned breakthrough.”

With less than 100 metres to go, Chris said “Our tunnel team hasn’t done anything dramatically different in terms of our approach. Alice isn’t going faster or slower but our team has been together for two years and that experience has proved invaluable.”

During its drive down tunnel two, Alice TBM had no delays or faced any significant tunnelling or production issues, only stopping for five days in late July for a planned break to replace hundreds of steel fibre brushes on its shield. The brushes helped to form a waterproof seal when the concrete tunnel segments are lifted into place.

“It’s very pleasing that our team has managed to construct the tunnel by ensuring Alice’s production remained consistent each day but more importantly was carried out safely.”

Alice TBM’s second breakthrough at the southern end was watched by guests of the project, all Well-Connected Alliance staff and Project Alliance Board members including Chairman (and MCD MD) Roger McRae.

Alice TBM averaged 16 metres per day and at the time of her launch was the 10th largest TBM in the world.

Waterview team recognised for community engagement

Congratulations to the Waterview Connection project’s Communication team, which has won the ‘Connecting With Our Community’ award in the NZ Transport Agency’s prestigious GEM awards.

GEM (which stands for Going the Extra Mile) celebrates and recognises NZTA suppliers who go the extra mile for customer service and safety. The comms team beat some strong contenders (including an entry from the McConnell Dowell, NZTA and Opus team for the Waitaki Bridge replacement project).

The team’s entry ‘Big Project Big Heart’ included examples of involvement with people and the wider community

Including:

- a garage sale to raise money for Wesley Intermediate School;
- a special tunnel visit for a terminally ill boy and his family;
- donating tunnel concrete segments to the Te Kauwhata and Districts Lions Club to build an ANZAC war memorial for the town.



GEM trophy

Alliance Project Manager John Burden says the win is something everyone who works, or has worked, on the project can take pride in.

“For many of us, the way we interact with the community is business as usual. But it’s not - in reality we do actually go the extra mile, all of us. The GEM award is recognition for this and the whole team’s commitment to connecting with our communities.”

The GEM judges recognised the work done by everyone on the project to “walk with the community” in small and large ways.

“Waterview moved the benchmark for large projects to pick up even the smallest aspects that can help a community,” they said. “Much of the actions were driven within the whole project team, which showed total commitment to connecting with the community.”



Mangere BNR *Graduate insight to being a Site Engineer* by Bertie de Ronde, Site Engineer

Bertie retrained at Unitec as a civil engineer after a university degree and a few years pursuing other careers. He joined McConnell Dowell earlier this year as a graduate engineer and is currently working on the BNR project in Auckland.

Straight out of school I completed a conjoint Bachelor of Arts and Commerce degree at Auckland University, spent a year in an office and decided that I didn't want to be sitting behind a desk all day. I worked as a personal trainer and then an AstroTurf installer. A couple of years into installing artificial grass, a close friend of mine spoke to me about his job as a civil engineer.

He told me about the long hours the constant challenges and stresses, but most importantly the satisfaction he felt after the completion of a successful project. I got excited and enrolled into the New Zealand Diploma of Civil Engineering at Unitec. With a bit of grit and perseverance I passed my exams and landed a job with McConnell Dowell.

I have been working as a Graduate Engineer on the Blended Sludge Storage Tank which is part of the Mangere BNR

(Biological Nutrient Removal) Upgrade project at the Mangere Waste Water Treatment Plant. I started while the site offices were still being set up and one of my first jobs was helping put together the furniture for all the offices here.

Guidance from my Project Engineer, Site Engineer and Construction Supervisor has led to a steep learning curve in real life construction practices. I have been involved in many challenging tasks and have been able to absorb so much in my first three months on the job.

I have become accustomed with reading drawings and specifications and the importance of a keen attention to detail. In the office I have been sketching drawings for the precast panels, calculating quantities and helping with procurement. On the job site I have helped with surveying and levelling, setting out the piles for the tank, the



Bertie on the job

levels of the finished piles, the setting out and levels of the tank base sub, and soon, the setting out of the precast panels, which are nearly ready to be erected.

Other jobs comprised the checks, quality assurance and then the as built of the panels. Workplace safety and care for the environment has also been part of my job. One of the first jobs on site was putting the silt fence up and ensuring the stormwater drains were protected from any silt run off, and I recently spoke for the first time at a Toolbox meeting on attitude towards safety and work in general.

The attitude toward safety on the job site has been first-rate with full care being taken in all activities. Everyone is keen to contribute and adhere to the safety requirements of the operation.





“The attitude toward safety on the job site has been first-rate with full care being taken in all activities. Everyone is keen to contribute and adhere to the safety requirements of the operation.”

Both the crew onsite and in the office have been always willing to answer any questions and share their knowledge with me and has made my first three months enjoyable and rewarding. In my short time as a Graduate Engineer I have become aware of the need for some personal traits required for the job.

Communication and logic are key in helping with problem solving, and the ability to work as part of a team and be an effective team member is crucial, as all the work is carried out as a team.

Being in a positive environment, each member is focused on performing their role to the best of their abilities allows work to become more productive. I see this every day when I come to work and I look forward to building structures that will have long useful lives.

In working as a civil engineer I have found a career which is challenging, yet enjoyable and rewarding.





Orewa *by Derek Austin, Project Manager*

August/September has seen wet weather saturating the ground and hampering progress, while the HDD drillers are also struggling to complete the pipe installations due to challenging ground conditions.

With the assistance of a new HDD contractor we have now installed the pipe in the last long drill shot (220m) - a recovery operation following the initial attempt of the pipe installation in June.

Work on this drill shot has required the excavation of a large “recovery” hole to access the end of the stuck pipe and enable the contractor to connect to the pipe and then pull it into position.

The last pipe to be installed was a technically difficult shot with steep entry hole and an exit into a manhole adjacent to the local creek. With these two pipes installed we can now start the finishing works to the last four manholes and complete the project.

All the other (available) manholes have now been completed with benching, droppers and lids installed and signed off by the client engineers, GHD.

There will still be a final manhole (which is situated in another developer’s area)

to be completed, probably after the project has been demobilised, when the developers works have progressed sufficiently to allow access.

With the various sites around the project having to be returned to their original (grass/parkland) state, extensive top soiling, seeding and mulching is being carried out and hopefully the recent spell (well, one week) of warmer and dryer weather will kick start the current green ‘fuzz’ to develop into suitable grass cover.

This will allow the environmental controls to be removed sooner rather than later. To achieve the final finish, the areas will need to be graded so that the grassed areas are left suitable for the Council’s mowing operations.

This grading and final seeding is likely to be carried out in mid to late October when the ground will be dry enough to use the construction plant required for the work.

With the project nearing completion, the site team is gradually reducing, with Craig Langsford, James Fruh, Russell Faulkner and me remaining. Bala Lakshmanan and Quinfen Bao have now relocated to NOIC in the sunny south, and Richard Mossman transferred to Waterview at the end of September.

What is the project?

This project is a new 3.15km gravity wastewater pipeline north of Auckland connecting a series of new subdivisions to an existing pump station. It is designed to service a land area of approximately 234 ha which equates to about 2,674 houses when the developments are completed.

- 1900m of OD polyethylene pipe installed using Horizontal Directional Drilling
- 1220m of ID reinforced concrete pipe using micro tunnelling
- 32 permanent manholes: 1200mm to 3000mm diameter, 2m – 18m depth
- 1 temporary manhole
- New 3.0m ID manhole lifting station

Triangle Rd

Early September saw the completion of the booster pump station at Triangle Road in West Auckland.

A successful tie-in to the existing Watercare water distribution system, followed by pump testing/proving, the facility was handed over to the client by the (revised) completion date.

When the weather allows, the final landscaping, top soiling, seeding and mulching will be completed to the site compound area which then will allow this area to be handed back to the horses when the grass has grown.



IT Tips *Meet face to face via Skype for Business*

by Natalie Dyer, National Communications Manager

Did you know you can hold video meetings with your colleagues – wherever in the world they are – from your desk?

All you need is a McConnell Dowell email address and internet connection with good speed (unfortunately some of our projects may not have adequate broadband infrastructure for this service).

In Skype for Business (formerly known as Lync), you can:

- See at a glance if your colleague is free to talk,
- Send a brief instant message (as an alternative to an email),
- (Audio) call from your computer,
- Video call,
- Send an email,
- Share your screen with the others on the call, and
- Schedule a Skype meeting (that will appear in your Outlook calendar).

For information on how to use Skype for Business, go to the Intranet and click on: Services > Information Technology > Office 365 - Quick Reference > Lync 2013 Essentials

Connecting is easy:

Navigate

If your computer runs on Microsoft Office 2013:

Start > All Programs > Microsoft Office 2013 > Skype for Business

If your computer runs on Microsoft Office 2010:

Start > All Programs > Microsoft Lync > Microsoft Lync 2010

*If you can't find this pathway, please email

MacdowIT@macdow.co.nz for the software to be installed

Log in

Enter your @mcdgroup.com email address.

Your password is the one you use to log into your laptop.

Connect

Click 'Connect'



To contact someone at MCD

1. Type in the 'find someone' field the name of the person you wish to contact via Skype.

2. Right click on your chosen contact to call, video call, Instant Message (IM) or email

To set up a Skype meeting

Open a new Outlook appointment in the usual way, then click 'Skype meeting' to add the meeting link to the invite

To join a Skype meeting

Open the Outlook appointment and click 'Join Skype meeting'

Excellence and Values Awards

Excellence Award *Jake Barker, Environmental & Sustainability Manager*

Nominated by Alasdair Mawdsley for the McConnell Dowell values of Protect, Lead, Sustain, Grow & Deliver

Jake is a team player and is always willing to help others get involved, learn more, grow as individuals and as a team because he can clearly see the positive outcomes it will have for not just an individual but also the wider community.

He is committed to helping others develop and learn about the environment and tries to make every bit of Safety & Environmental training hit home by taking it to a personal level which has a greater impact on those involved. We can always rely on Jake to do the right thing for people as we see in his safety talks, environmental training and general on site discussions.

He is a leader who doesn't give up on people but rather finds another way to make the message sit in their hearts and minds if one way isn't working. That is real commitment. Jake is also committed to protect the environment and it doesn't just stem from the fact that it's his job. It's a personal value he carries and you can

clearly see this when he is talking about the future generation and what we leave behind for them. He is also committed to protecting the company's reputation, the community itself and overall culture of McConnell Dowell. With the Karawau falls project I can see how Jake is completely invested into protecting the environment, the company and also the community, by the way he talks about involving them and having genuine interest in their wellbeing and how our works will affect them. That speaks volumes in terms of how much of a great Manager Jake is.

He really deserves recognition for all his hard work across all of our projects. So much goes into project set up. I realise even more so now how stressful it can be to set up due to environmental consents, hazards and the list goes on, but Jake never gives up and it's because he is passionate about people and the world we live in. You can trust Jake to do the right thing.



Lead and Deliver *Christchurch Communications team* *Nominated by Grace Schaefer*

I nominate Elizabeth Emery and her Christchurch Communications team, which includes Kelli Campbell, Rebecca Smith, Amber Trower, Jessica Riordan, Matt Wilson and Shaelah Hayford, for two values - to Lead and Deliver. We recently hosted a function to celebrate McConnell Dowell's sponsorship of the Christchurch Arts Festival. The event was attended by senior Canterbury dignitaries including the Deputy Mayor, Sir Tipene O'Regan and 57 primary school children! Liz and her team kindly offered to

assist with the event and they were absolutely wonderful. Our event could not have gone as smoothly without their assistance on the day. They welcomed all our guests, took charge of handing out gifts and catering, and helped lead all the children and guests from the function to the ARBORIA exhibit in Cathedral Square. A room full of little children did not faze this team at all!! They were warm, welcoming and in control which made for an enjoyable event for everyone involved.



Lead, Deliver and Grow *Jonathan Navarrete, Engineer Technician*

Nominated by Norm Coffey

In recent times due to key staff members on Annual Leave and sick leave the Mechanical workshop has been extremely busy. Jonathan has voluntarily stepped up to ensure the smooth running and efficiency of the workshop - he has excelled in supervision, engineering, procurement and quality assurance. Jonathan continues to exceed our clients' expectations, delivering on time and to the highest quality.

His leadership on the projects he is involved with exemplifies the work ethic he brings to the team. Jonathan continues to grow his skills and knowledge during this busy time which is a credit to him. A much valued member of the team.



Lead *Lorena Vigoya, Environmental Administrator*

Nominated by James Skurupey

Since Lorena starting her position as an Environmental Administrator, significant improvements in construction compliance and conformity in the Christchurch Infrastructure Rebuild can be associated to her professionalism and tenacity in making sure hazards and incidents were followed up, as well as ensuring that audits are being conducted in a timely manner. Lorena's performance has been exceptional and she continues her high

performance while taking on additional duties of managing other sections of the HSE database at various stages.

Her constant positive and proficient attitude sets a great example for her fellow HSE coworkers, as well as MCD employees the like. Lorena is a great example of excellence at the workplace within MCD!



Sustain and Protect

Nominated by James Skurupey

Terry express the MCD values every day in Christchurch. He specifically exhibits the MCD Values of Sustain and Protect in his daily duties as a Yardman on the Christchurch Infrastructure Rebuild Project.

SUSTAIN - Daily Terry works to maintain the Lismore Street Site yard for incoming and outbound materials for multiple projects across Christchurch. Terry constantly maintains order of incoming materials, making sure any contaminated waste is sorted appropriately, protected accordingly and removed form site properly. He constantly takes initiative in keeping the Environment team informed

Terry Quittenden, Lismore St Yardsman

and seeks to do what's right for the environment.

PROTECT- Terry daily manages the high risk of dust air contamination on site. He vigilantly moves a sprinkler system across the yard to ensure all areas of the yard have an adequate road moister, thus mitigating the environmental risk.

Dust is a major concern of the Canterbury Regional Council and is a prevalent human health and environmental risk of Christchurch. Terry is an excellent example of the MCD Values at work. He sets the bar high and I encourage others to follow his lead!



Protect

Okesene Solomona and his team

Nominated by Geoffrey Wineera



I would like to nominate the three teams led by Okesene, Robert and Steve, that work in the Segment yard on the Waterview project. All three crews have all been extremely proactive in ensuring

Protect

Robert Connolly and his team

Nominated by Geoffrey Wineera



that their yard remains safe and accident free. Considering the yard has daily material movements of 30tonnes every 20 minutes, including moving plant, I think it is a credit to the planning and

Protect

Steve Anderson and his team

Nominated by Geoffrey Wineera



organizational skills of Okesene, Robert and Steve ensuring everyone stays safe in the segment yard.

Health and safety *Visibly Leading Safety* by Chris Haefele, National Health and Safety Manager

Through numerous procedures and protocols, McConnell Dowell already sets out to some extent how we work day-to-day. Beyond simple compliance, this is the first step towards Safety leadership as a business. Now, it's time to move to the next level, by increasing the level of personal responsibility each of us takes

towards a consistently safe workplace. In the coming months, you will start hearing about the concept of 'Visible Leadership' in Health and Safety. It's a concept that each one of us needs to become familiar with, and to incorporate into our day-to-day approach to our work.

'Visible leadership' has two parts

1. Our senior leaders must actively and visibly champion a safety culture in the workplace.

As a business we have formally defined the expectations we have of our people managers when it comes to Safety leadership.

McConnell Dowell's new Visible Leadership Matrix, which will be rolled out in the coming months, highlights the need to hold safety conversations which encourage two-way dialogue, build trust and addresses safety concerns. The matrix also identifies areas where safety behaviours can be improved.

2. Each of us must play a role in a 'no compromises' safety culture.

This starts with actively participating in pre-start meetings, being fully engaged in the discussion and actively contributing to drafting the daily plan. It continues throughout each day in your attitude towards actively identifying and reporting hazards, and being willing to speak up about risky behaviours in others.

Visible Leadership takes guts and a real belief in your own ability to be part of the solution. Don't look to others to lead. Whatever your role, level or location, be the leader.



I Chose to Look the Other Way *by Don Merrill*

I could have saved a life that day
But I chose to look the other way.
It wasn't that I didn't care,
I had the time and I was there.

But I didn't want to seem a fool,
or argue over a safety rule.
I knew he'd done the job before
If I spoke up he might get sore.

The chances didn't seem that bad
I'd done the same, he knew I had,

So I shook my head and walked on by,
He knew the risks as well as I.

He took the chance, I closed an eye,
And with that act, I let him die.
I could have saved a life that day,
But I chose to look the other way.

Now every time I see his wife,
I'll know I should have saved his life.
That guilt is something I must bear,
But it isn't something you need share.

If you see a risk that others take,
That puts their health or life at stake,
The question asked or thing you say
Could help them live another day.

If you see a risk and walk away
Then hope you never have to say,
I could have saved a life that day
But I CHOSE to look the other way.

"We need to work much harder to elevate our awareness of risks, and that applies throughout the company.

It starts with me but it flows right through to everyone. It's about everyone taking ownership of their own safety and the safety of others."

Roger McRae, Managing Director

GOLDEN RULES



1. START SAFE

Always check the job is safe - where applicable, check the JSEA or complete a START Card



6. DRIVING VEHICLES

Always plan your trip to allow time to arrive safely and follow all road rules



2. CRANES & LIFTING

Always keep clear of exclusion zones, suspended loads and lifting operations



7. ENERGISED EQUIPMENT

Always isolate all energy sources and verify the isolation is effective before working on equipment



3. WORKING AT HEIGHT

Always ensure there is a fall protection, prevention or arrest in place before working at height, including when working over water



8. ELECTRICAL EQUIPMENT

Always check electrical equipment is free of faults, tagged according to date schedule and leads are off the ground and clear of water and traffic paths



4. WORKING NEAR MOBILE PLANT

Always keep clear of moving plant and don't enter the operating zone without a positive signal from the operator



9. TRENCHING & EXCAVATION

Always check trenches over 1.5 m are battered, benched or shielded before entering and barricade and sign open trenches



5. OPERATING MOBILE PLANT

Always advise others working nearby before you start operating mobile plant and stop your machine and signal others when it is safe for them to pass



10. CONFINED SPACE

Always ensure only trained personnel enter a confined space after they have checked the atmosphere is safe and the required rescue equipment and a stand-by sentry is in place.

HOME
WITHOUT HARM

MCCONNELL
DOWELL

CREATIVE CONSTRUCTION™

Firstly, thanks to all for making my first few weeks with McConnell Dowell so enjoyable. I've had great support from everyone and have really enjoyed meeting all the new faces and getting feedback on all the stuff that's valued across the business and also on the challenges we face as a team going forward.

With the mid-year performance reviews behind us (there are some stragglers by the way), it's almost time, dare I say, to look to the end of year reviews and goal setting. So, I thought it would be timely to remind ourselves of some basics.

Why Performance and Development?

If we get it right, an effective performance and development system means our employees:

- Clearly understand what is expected of them
- Receive regular feedback on how they are progressing
- Are able to identify what they are good at and also where they need to focus their development for the year ahead
- Get to know what the “big picture” is and how they best contribute to it!

Our Values

Our values are at the core of all we do. Our strategy and business goals tell us what we need to do; our values tell us how we should go about it.

In Summary

If you are a people manager, it's not just about the mid-year and end of year reviews, it's about ensuring your team members get regular one-on-one feedback throughout the year.

Open and honest feedback, tackling those “courageous conversations” and transparency are important components to ensure a successful outcome for all.

Remember, it's also not just about understanding and addressing non-performance, it's also about recognising great performance and celebrating others' achievements!

Good luck and call us if you need a hand with anything.



Goal Setting

SMART goals ensure we understand what result is expected, how well it must be done and the target date for completion.

SMART	Descriptive	Ask Yourself
Specific	The goal should be as precise as possible about what is to be achieved	Does my goal statement express a concrete outcome?
Measurable	The goal should describe the measure of success. (This could relate to quality, quantity, cost, timeframe, etc.)	How will I know if I have achieved my goal?
Aligned	Each goal should support team, project and business goals	How does this goal connect to overall business goals?
Realistic	The goal should be challenging but realistically attainable	What resources do I need to achieve the goal? How is the goal a “stretch”?
Time Specific	A specific date for the achievement of the goal should be set within the review period	By what date should this goal (or key milestones) be delivered?

Finding roles at McConnell Dowell

Did you know we have an internal careers hub on our intranet?

Here, it's easy to locate available roles, set up a job alert or refer a job to a friend.

To find it, go to the intranet home page and click Quicklinks > Internal Careers.

If you have trouble accessing the intranet from your location, visit <http://www.mcconnelldowell.com/people-careers> or ask your site administrators or HR Advisors for assistance.



Learning and Development *by Anand Naidu, Learning and Development Manager*

Safety critical training

Training for renewal of Certificate of Competencies (CoC's) is well underway.

A series of training courses is being organised by the L&D team. Please note that all CoC's must be renewed by 1 January 2016.

Before we can submit an application for renewal of your tickets, you need to do the following:

- Complete all relevant training and achieve the necessary unit standards
- Hold a current first aid certificate
- Obtain a 'fit-and-proper' person report.
- Update your CV
- Submit a 'criminal record history' from the Ministry of Justice. Do this online at <http://www.justice.govt.nz/services/criminal-records/how-to-get-a-copy-of-your-criminal-conviction-history>

If you need to certify any of your documents or sign a declaration, your Learning and Development manager Anand Naidu is also a Justice of Peace, so can help. Please contact him on anand.naidu@mcdgroup.com

Annual training plan 2016 - Workshop day

Our annual planning workshop will be held in November with the aim of producing the Annual Training Plan for 2016. All project managers are requested to send in their project training requirements to learning@mcdgroup.com

Aspiring leaders programme

The Aspiring Leaders programme commenced on 2 September and is well underway with day 2 completed on 23 September.

All 12 participants will be working on a project of their choice which they will be presenting to senior management on Wednesday 9 December at Head Office in Auckland. Planning is in progress for this final day of presentation.



For all queries relating to Learning and Development, please email learning@mcdgroup.com

What's involved in your role at McConnell Dowell?

Did 'marketing' come to mind? It should have! As MCD people, we are the face of our business and every one of us has a role to play in protecting the reputation and perception of our business.

Whenever you wear the McConnell Dowell logo, drive a branded vehicle, hand over your business card, or communicate with others in the course of your work, you are representing our brand.

What do your actions say about us? Do you deliver on time? Communicate appropriately with your clients? Drive safely and considerately? Accept feedback graciously? Speak up about hazards? Our success as an organisation is down to each one of us.

How will you become a member of the MCD Marketing team?



What's the latest at MCD?

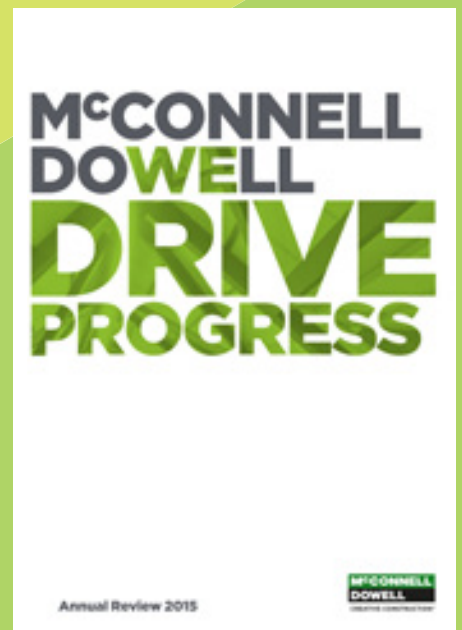
Look out for two new publications now hot off the press!

In the latest edition of Progress magazine, you can hear from new CEO Scott Cummins, read about the 37-year MCD career of outgoing CEO David Robinson, and find out about some of the projects and community involvement going on around our global business.

In the Annual Review, you'll find a summary of our performance over the last financial year, and insights into future direction.

Incoming CEO Scott Cummins is introduced, and our Regional Heads provide an insight into what's been happening in Australia, NZ and the Pacific, South East Asia and the Middle East.

The Annual Review has been posted on MCD's LinkedIn page <https://www.linkedin.com/company/mcconnell-dowell>. Why not share it with your connections?



As a Platinum Partner of KidsCan, McConnell Dowell is helping disadvantaged New Zealand children achieve a brighter future. At a Sponsors' get together in Auckland in September, Natalie Dyer and Clare Farrant heard about some of the shocking statistics that incentivise KidsCan and their sponsors to keep up the hard work.

Around 17% (180,000) of all kiwi kids experience material hardship, which means going without the basics in life. They have insufficient nutritious food or go to school hungry, their families are unable to keep the main rooms in the house warm or pay power and utilities bills on time, they live in a cold damp house, they miss out on important childhood opportunities like school outing and sports activities, and they have lower educational achievement and poor health.

KidsCan provides food, raincoats, shoes and socks, and hygiene items to kids at 500 schools around New Zealand. Each quarter, about 25 more schools join the waiting list – so there's always more to be done! Where possible, the team will also organise services such as head lice checks and treatment, giving away packs that include the special head lice shampoo and even towels.

The guests at the event heard from the Children's Commissioner and practising paediatrician Dr Russell Wills, who spoke about some of the observations he and his teams make in the hospitals they work in.

He said most children coming into hospital are suffering from easily

treatable respiratory illness or skin conditions (because their family can't afford the cost of the appointment and medication or their home is damp and/or overcrowded).

Dr Wills explained how an extended family (sometimes up to 18 people) might all sleep together because they can only afford to heat one room, which means illness spreads easily.

Aside from being ill, children may also stay home from school because they don't have all the uniform, a raincoat for the walk to school on a rainy day, or lunch to take. All this causes lasting damage – absence from school or doing badly means leaving without qualifications and not getting a good job, which perpetuates the cycle of hardship.

There are also wider economic consequences – our ageing population means more people are leaving the workforce (retiring) than entering it. This means higher labour costs and consequent inflation, as well as fewer income tax dollars. Hardship is a 'brake' on the economy. We need every working-age New Zealander to be as productive as possible!

What you can do

If you would like to add your own personal contribution in addition to McConnell Dowell's sponsorship of KidsCan, please visit <http://www.kidscan.org.nz/how-to-help/support-a-new-zealand-child>.

For as little as 50c a day, or \$15 a month, you can sign up to support a child and become an 'In Our Own Backyard' supporter. This will help KidsCan to provide food at school, raincoats, shoes and socks and basic health and hygiene items to disadvantaged Kiwi kids.



The realities of child hardship

- The toasted sandwich provided by KidsCan at lunchtime was the only hot meal one child could expect to receive in a day.
- After his head lice treatment, one seven year old was nit-free for the first time in his life.
- Some families don't even own towels.



Some facts about child hardship:

- Generally, poor budgeting or spending decisions are not the issue. Many families are excellent at budgeting – there is simply not enough money to cover everything.
- 53% of children living with hardship live in a sole parent family, 47% live in a two parent family.
- Even if a family's hardship is temporary, the harm done in a child's first five years cannot be reversed when their situation improves.
- Children living with hardship often miss school because they have no raincoat to get there dry, or are unable to concentrate because they are hungry.
- Half of all Maori and Pacific students leave school without qualifications. This means not enough young NZers are suitably equipped to enter the job market.
- Not all food in schools programmes are helpful, since children don't like being singled out as 'poor'. The successful programmes are a community affair and facilitate relationship building between the parents and school, and result in kids feeling cared for, and parents understanding the value of their children attending school.
- There is more information about child poverty in NZ at www.childpoverty.co.nz



ARBORIA *Bringing light and colour to Christchurch* by Megan Twist, Liz Emery and Natalie Dyer

As the Creative Construction company, McConnell Dowell was proud to support another form of creativity as a cornerstone sponsor of the Christchurch Arts Festival in September.

The ARBORIA luminarium, installed in Cathedral Square, proved to be a huge hit with more than 10,000 people taking the opportunity to wander its light-filled corridors and be bathed in colour. With ticket prices just \$5 per person thanks to our sponsorship, ARBORIA was experienced by people from all walks of life.

A programme of activities was based around the concept of constructing 'Serious Fun' and the New Business team leveraged the opportunity to raise our profile with clients and key stakeholders including community and business groups.

An opening event was attended by senior dignitaries and a number of MPs, local councillors and business leaders. Following refreshments and speeches by Sir Tipene O'Regan, Deputy Mayor Vicki Buck, MCD NZ Managing Director Roger McRae and Christchurch Regional Manager Rob Wotherspoon, guests were presented with a pair of merino socks (it's shoes-off in ARBORIA) in order to experience in comfort the wonders of the luminarium.

An arts competition to find out how creative Christchurch children can be saw over 90 children design their own luminarium. Six year old Coral Murray from Ao Tawhiti Unlimited Discovery School was chosen as the winner, for her design that replicates the experience of



Linda Constable, Roger McRae, Deputy Mayor Vicki Buck

walking through a rainbow. In recognition of her efforts, Coral and all her classmates joined McConnell Dowell and special guests to celebrate the grand opening of ARBORIA.

As part of our ongoing support of the local community, we also invited students from Linwood North School, who are heavily affected by SCIRT rebuild works



New Business Team in front of the McConnell Dowell sponsored Luminarium ARBORIA

located outside their school, to join in the grand opening. As a thank-you to the Christchurch project team, all staff and their families were invited to visit ARBORIA on Thursday 10 September.

Unfortunately the Christchurch weather had different ideas and due to health and safety conditions, the luminarium was closed soon after our event started.



Linwood North School with their entries



Shanti Reed from Architects of Air



McConnell Dowell ARBORIA launch



Sir Tipene O'Regan and Rob Wotherspoon



Elizabeth Emery, Kelli Campbell, Shaelah Hayford, Rebecca Smith, Jessica Riordan, Bruno Hay

What is a luminarium?

A luminarium is a monumental inflatable sculpture that visitors can walk or relax inside. 'Vivid reflections of liquid colour' spill across the curved walls of winding paths and soaring domes of the maze, creating a calming, restful and futuristic world.

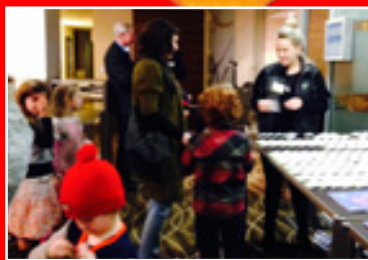
ARBORIA is the 22nd luminarium to be produced by Architects of Air. It "celebrates the patterns and forms of the forest, with luminous trunks, leaves and branches that stretch overhead, and a sound-experience originated in the Ecuadorian Cloud Forest".

Facts about the luminaria

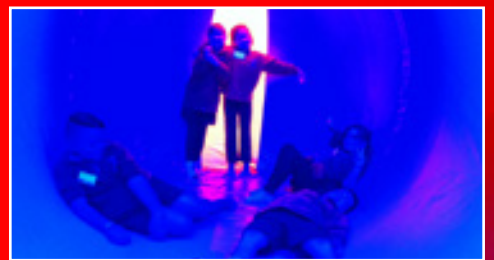
- Each luminarium is made up of around 20 elements that are zipped together on site.
- They are made of a type of plastic produced uniquely for Architects of Air.
- The colours are created by daylight transmitted through the coloured PVC.
- No two visits are alike as the atmosphere inside alters according to changing weather and changing light outside.
- Only four colours of plastic are used to generate a great diversity of subtle hues.
- They typically occupy an area of 1000 square metres.
- Laying out the structure and anchoring can take as little as 4 hours and inflation takes just 20 minutes.



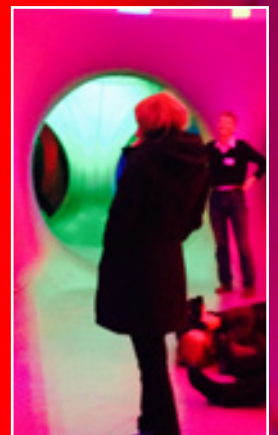
Our winner Coral, fourth from left, standing with her classmates from Ao Tawhiti Unlimited Discovery School



Elizabeth Emery welcoming the children and handing out socks



Children having fun inside ARBORIA





Kawarau Falls Bridge project

New Business *Winning new work* by Megan Twist, Proposal Writer

Submissions Update

Recent successes:

- Tauranga Harbour Crossing – Southern Pipeline, Tauranga City Council (shortlisted to tender stage)
- Waitaki Dam Enhancements, Meridian Energy (preferred tenderer for ECI Phase)

We are currently responding to the following opportunities:

- Christchurch Northern Corridor (Arterial)
- Ballance Urea Ammonia Upgrade Project

And are awaiting outcomes on the following proposals:

- Tekapo Intake Gate – Genesis (preferred tenderer, ROI to provide services for constructability)
- Artillery Drive, Auckland Council
- Barry’s Point Storage Tank
- Glen Eden, Watercare
- Te Mato Vai, Cook Islands Government

Kawarau Falls Bridge project

- We are currently in the detailed design phase.



Cathy Allan – Now managing ‘new work’ at home

Cathy worked right up until the last minute before the arrival of her little baby boy. She is now on maternity leave, returning sometime at the end of January/early February, depending on how the new man in her life behaves.

We wish her and her family all the best in their exciting journey ahead.



Cathy Allan, Proposals Manager



Léa meeting her new baby brother

Client appreciation

“I cannot adequately express my admiration for what you and your team have achieved in an email and as I informed you, unfortunately I will be in Australia on the 19th October therefore unable to join you on this momentous occasion to congratulate you and your colleagues in person.

In delivering this complex tunnelling project [Waterview] with an exemplary health and safety record, which is probably the best achieved ever, anywhere in the world, this truly represents the best and most tangible safety legacy possible for New Zealand and the 29 fallen miners at Pike River whose 5th anniversary we will remember exactly one month later on 19th November.”

Tony Forster

Chief Inspector Mines and Extractives (Mines, Tunnels & Quarries)
High Hazard Unit, WorkSafe New Zealand

“MCD, along with the other SCIRT Alliance members, have provided environmental initiatives, lessons learnt and sound collaborative environmental management on the Christchurch Infrastructure Rebuild Project.

I hope the work of the Environment Leadership Group becomes a legacy for environmental management on future civil projects in Christchurch.”

Heather Holder-Lunn

Christchurch City Council
September 2015

In the spotlight

Sue Perry, Human Resources Manager

As HR Manager, Sue's role is to support the MD from a strategic HR perspective, oversee the provision of all aspects of HR for the NZ business including remuneration, learning and development, performance management and organisational development, and

champion our company values in everything we do. Sue is supported by a team of HR, L&D and Recruitment specialists based at Head Office in Auckland, and remotely by HR specialists within the WCA and CER projects.

1. How long have you been with McConnell Dowell? I started work with McConnell Dowell on 31 August so am a relative newbie.

2. What attracted you to the company? Well, in my case the grass was definitely greener on the other side! I had heard good things about the culture and it seemed to fit nicely with my previous experience in the Construction industry, and they say a change is as good as a rest.

3. What makes a day at work a 'good day' for you? A good day is when I've talked to lots of people, traded stories and got to know someone better, and importantly for me, had a laugh.

4. Where were you born? I was born and grew up in Whakatane, Bay of Plenty.

5. What's the greatest thing about being your nationality? Everyone around the world has heard of NZ and embraces 'Kiwis'. Having lived overseas, I think we have a great country on our doorstep.

6. Do you have any hobbies? I try to keep fit (badly), I like to dabble in some basic DIY and gardening, love being on holiday and travelling, and am a keen All Black supporter.

7. What talents/interests/hobbies do you have that aren't widely known? I could stay on a horse over a (small) jump if I had to and can back a horse float into a small gap on a good day.

8. What is the most interesting country you have travelled to? I think Oman, from the perspective that I didn't know much about it when I visited. Lots of history and I was fascinated by the

frankincense and myrrh at the local market.

9. Where else in the world would you like to see? I would like to visit Cuba.

10. What's your favourite sport? Rugby, as a spectator.

11. What's your favourite film? Sound of Music followed closely by Love Actually.

12. If you could live anywhere in the world or within NZ, where would that be? I would love to live in New York.

13. What did you want to be when you grew up? I originally wanted to be a pilot in the Air Force but when I left school there was no such thing as female aircrew of any description.

14. What's your favourite saying? I asked my girls and apparently I say, "Drunk as a skunk" all the time.

15. If you could learn any language fluently what would it be? Spanish

16. At what age did you realise Santa wasn't real? I can still vividly remember the conversation with a school friend at age 9.

17. Is the glass half full or half empty? A glass half full, maybe with a tiny waver every now and then.

18. What's your favourite radio station? My daughters would be horrified but I'm going to say The Breeze.

19. Do you know CPR? Yes.

20. Do you live by any motto or philosophy? Treat others as you wanted to be treated yourself, and look for one good thing about everyone you meet.



Supporting the All Blacks' first ever game played in the USA, in Chicago last November.

21. Do you collect anything? No.

22. Are you introvert or extrovert? Definitely not an introvert, probably just to the right of centre.

23. Are you a valuable asset on a Pub Quiz team? Yep, except not for the music or art rounds.

24. What do you do to keep fit? Walk regularly and visit the gym irregularly (three times a year was my attendance record over the last year).

25. What have you done that you are you most proud of? I have two gorgeous daughters who I am very proud of.

26. Who is the most inspirational or intelligent person you know? I would have to say both my parents for teaching me to live by what's right and wrong and by walking the talk.

27. What's the best piece of advice anyone has ever given you? There's been a fair bit but I think "Let it go" is probably the wisest.



Our people *Who's where in McConnell Dowell*

This is not a full list of our people. We are planning an online database which will incorporate every person's name, role and location. In the meantime, if you would like to locate an individual please email: mcdnz.hr@mcdgroup.com



Head Office

Alan	Brock	Kiran	Ram
Anand	Naidu	Leslie	Simpson
Andrew	Eng	Lily	Zhu
Anna	Mercado	Manfred	Schieck
Bhavika	Sanghani	Matt	Wood
Bruce	Ramsay	McInnes	Taljaard
Bryn	Jones	Meg	Twist
Cathy	Allan	Merita	Teika
Celeste	Rauner	Michael	Buckland
Cesar	Tolon	Michelle	George
Chris	Haeefe	Mike	Wilson
Clare	Farrant	Naaz	Nisha
Craig	Lane	Natalie	Dyer
Daniel	Patten	Nick	Smith
Dave	Lewy	Nuryel	Tolon
David	Falco	Paul	Lavoipierre
Ed	Ayre	Paul	Cooper
Evan	Darwen	Peter	Lai
Grace	Schaefer	Phil	Thumath
Greg	Howe	Rachel	Sharp
Hannes	Potgieter	Renee	Bell
Harmeeet	Marzara	Roger	McRae
Hayley	Nieuwoudt	Sant	Kumar
Jake	Barker	Satesh	Chandra
Jill	Hanlon	Shivani	Siva
Joanne	Adams	Stacey	Millar
Joe	Edwards	Stefan	Hanke
John	Oey	Sue	Perry
Karen	Jowett	Trevor	Cook
Kevin	Beesley	Wayne	Donnelly

Christchurch

Afshin	Khiavi	Ken	Davis
Alexis	Montador	Kimberly	Jupp
Ali	Damsteegt	Konstantinos	Dermitzakis
Amanda	Storey	Lachie	Mac Intyre
Amber	Trower	Les	Tredinnick
Amir	Saadatjoo	Liz	Emery
Anna	Harrison	Lyn	Horsburgh
Bec	Smith	Marcus	Brown
Ben	Crosbie	Mark	Johnston
Berenice	Frankland	Matt	Longstaff
Bruno	Hay-Fourmond	Matt	Wilson
Chris	McHugh	Matthew	Crighton
Craig	Baynon	Mike	Simpson
Craig	Daniels	Nicole	Hill
David	Pollard	Nikki	Liddell
Dylan	Stange	Peter	Brown
Eiko	Fuimaono	Peter	Hosking
Ella	Farrell	Peter	O'Grady
Emma	Hilston	Phil	Stevenson
Gareth	Maguire	Phil	Terry
George	Rankin	Ray	Coleman
Greg	Bates	Reza	Shafiei
Gregory	Valentine	Rob	Wotherspoon
Gwynmarie	Tomlin	Russell	Cox
Hudson	Klein	Russell	Wark
Ian	Alsweiler	Sam	Anania
Ivan	Fernandez	Sarah	Stevenson
James	Skurupey	Scott	Gebbie
Jamie	Stark	Shaelah	Hayford
Jenny	Bond	Shane	Soulsby
Jeremy	Burns	Simon	Fulford
Jess	Riordan	Stavros	Kantzidis
Jhon	Arevalo	Stuart	Anderson
John	Fee	Sumith	Mudiyanse
John	Tamoua	Tamasine	Ryan
John	Tuimaunei	Thomas	Hogan
Juny	Wang	Todd	Williams
Karen	McIntyre	Wendy	Graham
Kava	Aloua	William	Mahady
Kelli	Campbell		

Mangere BNR

Andy	Bould
Bertie	De Ronde
Bruce	Williams
Edison	Salas
Flora	Jiang
Greg	Wichman
Hops	Hopper
James	Ferrier-Kerr
Justin	Ellison
Laurie	Miller
Mark	Anderson
Mark	Donnelly
Nirav	Shah
Peet	Zwart
Ross	Wingate
Stephen	Merriman
Steve	Lawlor
Victor	Panchia

Mechanical / Plant

Adrienne	Edlin
Andrew	Majurey
Devon	Stewart
Elisa	Cuevas
Jonathan	Navarrete
Justin	Cox
Norman	Coffer
Ryan	Bayley
Ryan	Fielder
Sajid	Ali
Sheena	McAllum
Simon	Batchelor

Ports of Auckland

David	Pattinson
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SCIRT

Dave	Bain
David	Fitzmaurice
David	Hanham
David	Kentell
Emmanuelle	Maucor
Glenn	Fountain
Ian	Campbell
Karen	Warner
Linda	Plover
Marianne	Rogers
Mel	Sands

Meredith	Wain
Theo	Kritikos

Kawarau Falls Bridge

Mike	Simpson
Steve	Proud

Waterview

Aaron	Cain	Joel	Maturan
Ahmed	Shah	Jon	Tiwha
Alain	Giauque	Justis	Kamu
Alan	Phillips	Karun	Kumar
Albert	Durham	Katy	Whiting
Alistair	McPhee	Kenneth	Teh
Andrew	Page	Kerryn	Rosell
Andy	Schmidt	Laura	Simmons
Ankush	Chauhan	Leah	Jacobs
Anthony	Penk	Leena	Kalburgi
Bhargava	Jinukula	Lloyd	McLeod
Brendon	Grennell	Luke	Burnell
Brent	Whiting	Luke	O'Connell
Brett	Zimmerman	Mark	Bawden
Brian	Harris	Mark	Burke
Brian Moran	Moran	Mark	De La Rosa
Bronwyn	McMurtry	Matt	Coll
Candy	Mawer	Matt	Simmons
Carlos	Gomez	Mayer	Tong
Chris	Ashton	Michael	Batey
Claudia	Cenkier	Michael	Potts
Colin	Stewart	Mitch	Cartwright
Dan	Ekanayake	Nicholaas	Maas
Daniel	Caine	Nick	Fu
Daniel	Harris	Nigel	Goldstone
Daniel	Sauer	Paddy	Arnold
Daniel	Smolenski	Paul	Hague
Darryn	Battersby	Paul	Stone
Dave	Marshall	Peter	Farr
David	Young	Peter	Garizio
David	Nicholl	Peter	Lilley
Devon	Bainbridge	Rex	Toohill
Dominic	Preest	Richard	Hart
Eddie	Tahi	Rick	Smith
Gav	Mecchia	Ricky	Mossman
Glenn	Taylor	Ronald	Bradley
Grant	Maclean	Sam	Williams
Grant	Myocevich	Sebastian	Rodriguez
Harold	Gibbens	Shyahara	De Silva
Harpreet	Singh	Simon	Ferris
Harry	Reader	Stan	Schwalger
Iain	Simmons	Stephen	McLaughlin
James	Hunt	Steve	Shortland
James	McKay	Steve	Welsh
Janine	Pepperell	Sue	Myocevich
Jason	Ingle	Tereza	Obsilova
Jen	Heaphy	Viki	Nunns
Jiayi	Li	Will	Southon
Joe	McArdle		

NOIC

Amber	Trower	Quinfin	Bao
Andrew	Armour	Robin	Eastwood
Arnel	Loira	Roger	Mayo
Bala	Lakshamam	Stephen	De Leeaw
Ben	Cormack	Steve	Herbst
Clayton	Howell	Toni	Hill
Dan	Mullin	Weila	Li
Denis	Faamau		
Jason	Hudson		
Kerie	Forbes		
Luke	Hazlett		
Mac	Hemera		
Mike	Southby		

Triangle Rd

David	Embleton
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American Samoa

Kenneth	Costin
Loloane	Auala
Murray	Holmes
Nick	Strange
Pouifi	Tufuga
Stuart	Pilat

Kiribati

Alois	Bohm
Andrew	Withers
Anthony	Toma
Ashley	Evans
Bex	Rappel
Brendan	Gardiner
Clarence	Mikasa
Colin	Elliott
Dale	Mitchell
Damien	Brandon
Dan	Milford
Daniel	Power
Dilly	Faulkner
Ernesto	Maglinao
Faaiuga	Leilua
Fernando	Navarro
Garry	Hopkins
Gary	Ellery
Geoff	Donley
Greg	Weir
Hemi	Kohu
Jay	Hayes
Jerome	Kimura
Kuli	Faletau
Leon	Aorangi
Louis	Eikenhout
Mark	Lees
Mike	Brown
Mike	Wynne
Munendran	Reddy
Paul	Banister
Paul	Bennett
Peter	Armstrong
Peter	Brannigan
Peter	Hill
Pio	Wulf
Randall	Gempton
Ravi	Narayan
Reggie	Wulf
Richard	Robins
Robert	Faroden
Rolando	Larang
Ross	Edens
Samuel	Downing
Sandra	Hughes
Sant	Prasad
Scott	Meyers
Stefan	Filer
Stephen	Polwart
Sushil	Lal
Thomas	Bernes
Tim	Samau
Tim	Saumaki
Tony	McDowell
Tony	Whittington
Tony	Price
Tumama	Faavae

Tonga / Tuvalu

Brian	Fuller
Bruce	Denekamp
Gary	Sleet
George	Kolo
Harry	Lose
Ian	Burrow
John	Mill
Lee	Feldwick
Matt	McKinlay
Paul	Stanley
Richie	Clunie
Robert	Potter
Simon	Burgoyne

Cook Islands

Craig	Faulknor
Mark	Johnson
Mike	Bonnette

City Rail Link

Alasdair	Mawdsley
Bob	Mawdsley
Chris	Powell
Hugh	Robinson
Mark	Anderson

66kva

Michael	McAllister
Richard	Milsom
Yuriy	Melnychok

Russley Rd

Aidan	Brannan
Andrew	Haines
Carl	Worthington
Christopher	Pearman
Derek	McDermott
Fiona	Gillani
George	Benjamin
Keith	Griffin
Ken	Davis
Mason	Teira
Rey	Rifareal
Ryan	Hickey
Todd	Whitehead
Wendy	Weekes

Te Mihi

Andrea	Pattinson
Steve	Sweeney

Orewa

Craig	Langsford
Derek	Austin
James	Fruh
Russell	Faulknor



CREATIVE CONSTRUCTION™

DRIVING PROGRESS

McConnell Dowell
Constructors Ltd
510 Mt Wellington Highway,
Mt Wellington, Auckland 1140, New Zealand
PO Box 2758 Shortland Street
Phone: +64 9 573 5891

mcdgroup@mcdgroup.com

New Zealand & Pacific
Australia
South East Asia
Middle East

www.mcconnelldowell.com