

MANCO

MATTERS

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The Sound Of Silence

Palmerston North's streets are certainly quieter after the City Council commissioned two new Manco fully electric waste collection vehicles.

The two new electric units replace part of the Palmerston North City Council's (PNCC's) diesel-powered recycling fleet, and mark the first step towards their target of a 100% fully electric waste fleet. One vehicle provides a new multi-colour kerbside separation, combining an intermediary low level sorting trough with individual glass pre-sorted wheelie-bin capability. The second is Manco's popular 8m³ Electricat Rear Loader. This proven performer utilises a state-of-the-art full width tuck-away comb lifter, and is capable of dealing with wheelie-bins from 80 to 1100 litres in size.

Feedback from residents shows that they appreciate the quietness of the trucks and their environmental advantages. They also support the council showing leadership in this area. The truck drivers find electric trucks physically lighter and quieter than diesel.

The project was approved for \$350,000.00 of co-funding from the EECA, the Low Emission Vehicles Contestable Fund.

The Manco EV's are great hill climbers. The high torque and lack of gears mean they climb better and more smoothly than a petrol or diesel counterpart, and with the regenerative braking, it means that they recharge going downhill. (continued over page)



Manco Environmental is proud to be part of their vision to become an 'Eco City'

The Sound Of Silence continued...

As a long-term supplier and partner of PNCC, Manco Environmental is proud to be part of their vision to become an 'Eco City'. Moving towards an electric waste collection fleet is a big part of this, and – thanks to support from the Energy Efficiency and Conservation Authority (EECA) – it's a transition the council has been able to launch earlier than anticipated.

Both new vehicles are powered by Manco's EV10 cab chassis, assembled in its Auckland production facility and utilising a 132kW per hour battery and 200kW drive motor – producing 2,300Nm of torque. Depending on hydraulic requirements, this typically gives the units up to 180km of range with maximum recharge in under six hours.



Best of all, these state-of-the-art electric vehicles are helping Palmerston North residents enjoy a lot less noise on the streets.

Long-Time Wellington Manco Clients Complete Upgrade

Wellington based Daily Waste is a family owned business established in 1987. The highly respected family business is owned and operated by 3 brothers Teina, Ian, Glen and sister Diana. Keeping it in the family, Teina's wife Denise manages a domestic operation based in Porirua and Ian's wife Angela looks after the Sales and Marketing. Diana's son Michael joined the business 12 years ago in the workshop and as a relief driver.

Daily Waste have over 30 years' experience in the commercial and domestic waste industry, servicing the areas from Wellington, through to Mana and to Upper Hutt. During this time they have established a loyal customer base ensuring personal contact with their clients is paramount. The business operates from purpose-built premises at Landfill Road, Owhiro Bay which they had built in 2008.

They have noticed the changes in the industry and have kept up with the technology which is on offer, this was obvious when Daily Waste purchased their first frontloader from Manco Environmental 18 years ago, followed by another Manco unit shortly after. They have just replaced their two well used start of the millennium Manco FL250's, with two new generation Manco FL280Z frontload units on Nissan UD Condor cab chassis. Their first new unit delivered in May 2018 (nicknamed after the driver Billy Goat) and the 2nd unit into service in January 2019.

Manco is proud to be a key supplier to Daily Waste. With nearly two decades of hard work from their existing front load units and now with the introduction of their state of the art new units to strengthen their fleet into the future.



Investing In New Zealand's Manufacturing Future

Manco is firmly committed to developing New Zealand's manufacturing industry, and some of the company's most recent investments are proof of this.

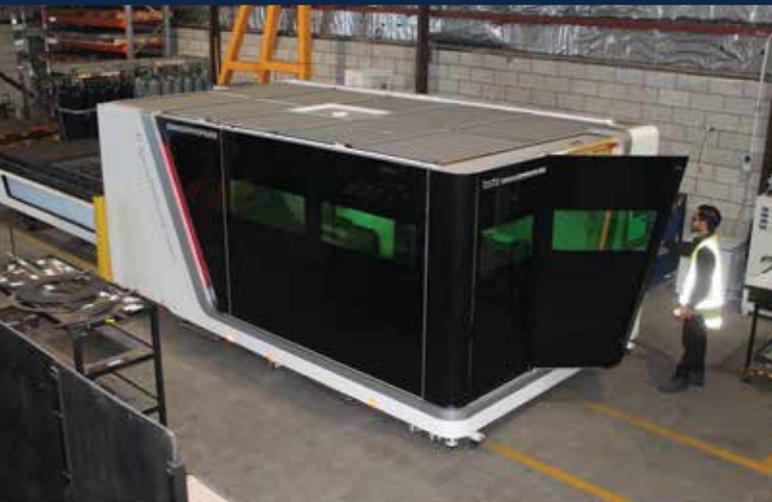
Since opening its new Auckland manufacturing facility in East Tamaki, Manco has made major investments in a range of key materials handling equipment to increase productivity and improve output.

"Thanks to four radio remote controlled 8 tonne gantry cranes and a four pedestal, 48 tonne capacity column lift vehicle hoist, we've seen productivity levels at each assembly bay significantly enhanced," says Manco Managing Director, Bryan Black.

"But, perhaps the most important addition has been the capital intensive, high tech Bodor CNC Laser profiling machine, interfaced with an automated 5 Axis 150 tonne Press Brake."

With all of its manufacturing operations now under one roof – including Design, Manufacturing & Production, Servicing, Parts Supply, Sales and Administration – Manco is able to provide a cohesive operating structure, which is currently being recertified to ISO 9001.

"These investments irrevocably confirm Manco's commitment to manufacturing and our intention to stay at the forefront when it comes to supplying exceptional, quality equipment for both the Rail and Waste Industries in New Zealand, Australia, Asia and the Pacific Islands. "



Making The Most Of Manco's Collection Technologies In Tasman

Tasman District Council is a significant user of Manco's Collection technologies, putting both Multicell Separation container and Bigbelly Bins to good use around the region.

Multicell Separation Container

Reusing shipping containers has recently become a worldwide architectural phenomenon, and when you weigh up the benefits it's easy to see why.

Some of the most significant advantages are affordability, an incredibly fast build time and the extremely mobile nature of the containers – which can be moved easily from site to site as required.

So when Tasman District Council was looking for an alternative public recycling solution for its ratepayers, Manco's multicell separation containers were the obvious choice. The containers are designed to allow the public to easily dispose of their colour sorted glass, cardboard, aluminium cans and plastics. And, best of all, reusing shipping containers helps reduce the use of steel. Reusing just one container saves up to 3500 kilograms of steel. Yes, just one container!



Bigbelly Bins

With peak summer tourist numbers in the popular Tasman region causing bins to overflow, the Council installed more than 20 Bigbelly Bins – distributed in New Zealand by Manco Environmental. Over two years later, the bins have proven to be an effective solid waste management tool.

Bigbelly's solar powered technology increases the capacity of a normal 120 litre bin by around five times, allowing for up to 600 litres of loose recyclables or waste. In addition, the cloud-based asset management software provided with the bins lets contractors know how full each bin is, improving collection efficiencies, reducing collection costs and eliminating the risk of overflowing bins.



“ Some of the most significant advantages are affordability, an incredibly fast build time and the extremely mobile nature of the containers ”



Green Bin Concept A Success In The Hastings Region

In 2014, Hastings District Council (HDC) started on a journey to develop a drop-off collection system for domestic recycling – something we looked at in the Spring 2015 edition of Manco Matters.

What they were looking for was greater control and flexibility of collection and servicing; informed and engaged communities; reduced contamination and associated sorting costs; a user friendly system; affordable collection and a uniformed regional approach.

HDC staff developed a concept, building on the basic bin service provided by other councils and contractors. The concept took elements from existing 20-foot containers for use as recycling collection receptacles.

Since then, the fleet has continued to expand (most notably over 2015 and 2016) and today HDC has a fleet of thirty nine green bins at eight permanent recycling depot sites over the district.

So What Are These Green Bins?

The bins are essentially 20-foot shipping containers on hook frames with identical slots/shutters and fold down platforms to allow for swap out servicing. Single cell bins are used at sites with large volumes, while smaller sites use six-cell bins – which have six compartments and internal doors that can be adjusted to increase or decrease capacity of the three compartments down each side.

Having uniform green bins across all recycling facilities in the district ensures that the bin types are easily identifiable for all users. Sites range from remote communities using one six-cell bin to the main refuse transfer station with eight single cell bins.

Article courtesy of Angela Atkins, Hastings District Council

These eight bins at the main refuse transfer station were installed during an upgrade earlier this year, and include ramps at each end to provide full user-friendly access. Three of them are used for glass (one for each colour), two for plastics and cans, and the final three for paper and card.

The green bins have allowed HDC to gather much more accurate data as each commodity is weighed by the contractor, rather than the weights being estimated (i.e. based on bin size). They've proven so successful that they're now being used at big events such as the Hawkes Bay A&P Show and the Air New Zealand Hawkes Bay International Marathon, as well as outside the region by the Tasman District, Selwyn District and Horowhenua District Councils.

Bin servicing costs are dependent on location and commodity prices, but HDC and Manco have worked together to develop a flexible procurement approach around the collection, storage and servicing of recycling in small rural areas and larger permanent sites.



Electric Trains – 100 Years On

A century after Melbourne’s first successful electric train trial, Manco Rail are involved in the \$1.6 billion rail crossing removal project from Caulfield to Dandenong.

It’s hard to believe that during the later stages of World War 1, Melbourne rail engineers and their electrical engineering colleagues were in the final stages of completing the design and manufacture of Melbourne’s first electric train. On 6 October 1918, after spending four days energising overhead wiring at 1,500 volts, four motor and trailer units travelled from the Newmarket substation to Flemington Race Course and back. The trial attracted much fanfare and was deemed “an undoubted success” – especially given that most British and Australian factories had been ordered to work on the war effort. It was the start of Australia’s transition from steam to electrification and the beginning of an exciting new era for Melbourne commuter rail.

100 years on and Melbourne’s peak hour commuter trains operate on as little as three minute intervals. With a level crossing barrier cycle time of approximately six minutes, road traffic delays as long as 82 minutes have been recorded! These holdups have spurred a \$1.6 billion rail crossing removal project, involving the removal of nine dangerous and congested level crossings between Caulfield to Dandenong and the construction of five new ‘futuristic’ stations.

The contract was awarded to a Joint Venture between CPB Contractors and Lendlease, with Manco Rail providing a significant amount of the materials handling and overhead electrification plant. This includes 12 tonne radio remote straddle cranes, rail carrying dollies, concrete surge silos, 40 tonne lifting frames and unique truck mounted elevated work platforms – fully operational without the need for a driver in the cab when operating on rail.





However, perhaps the most unique element was the development and introduction of the world's first Road Rail Truck mounted wire tensioning consist – traditionally used in Europe on rolling stock with locomotives. Working in conjunction with Italian company OMAC, this new concept has provided a new benchmark in productivity achievement. With dual wire (contact and catenary) rolled out simultaneously under final operating tension, the Manco-Omac consist has reduced normal traditional roll outs by a third.

With the two Road Rail Vehicles locked together as one and fully controlled from a central control room, tensioning values up to 20KN per wire at up to 6kph were achieved. While an observer was placed in the lead vehicle cabin, the consist can operate fully with a single operator – including the adjustment by radio remote of the dual wire positioning mast. Alternatively, this function can be undertaken by an operator in an elevated work platform using a similar radio remote signal.



BIN TRIM HELPS HOTEL BECOME ZERO WASTE

CASE STUDY



First Sydney hotel sending nothing to landfill

“ The Bin Trim program has really brought recycling to the front of our minds – the equipment received through the Bin Trim Rebates program showed us the importance of separating waste into the correct streams. In addition, the Bin Trim waste assessor and waste service provider have helped us achieve our goal of becoming the first zero waste to landfill hotel in Sydney. ”
Chris Turner, Paramount Hotel



The Paramount Hotel had its sights set on achieving zero waste to landfill which is a big challenge for a rapidly expanding enterprise. With some good ideas, and a NSW EPA Bin Trim rebate, it's now Sydney's first zero waste hotel.

Paramount Hotel

The Paramount Hotel is located in the heart of Sydney's Surry Hills. As with all inner-city hotels, space is an issue. The hotel has also undergone a period of expansion, adding new restaurants and bars, resulting in more food waste.

Results

The hotel then also introduced a compactor for all general waste to be sent to a waste-to-energy plant instead of ending up in landfill. The compactor has allowed the hotel to optimise their limited space, reduce collection costs, cut CO₂ emissions, and help keep waste streams clean.

New bar developments were planned, so the hotel also introduced a glass crushing machine to deal with their high volume of glass.

For ease and lower upfront costs, the hotel opted to lease the glass crusher and waste compactor, and purchased the organics recycling machine. They also offered training on how to operate the machinery, giving their staff the chance to upskill, and helping to boost staff morale.

In 2018, Paramount Hotel became Sydney's first zero waste hotel.

How Bin Trim helped

After meeting with their waste company and a Bin Trim assessor, the hotel's management looked into purchasing machinery to support their goal of achieving zero waste to landfill. The assessor recommended that Paramount Hotel purchase a waste-to-water machine. A Bin Trim rebate halved the cost of the organics recycling machine, saving the hotel \$35,000.



The numbers

- Bin Trim rebate: \$35,000
- New equipment: organics recycling machine; general waste compactor, glass crusher
- \$30,240 saved on waste collection fees annually
- 53,000 tonnes of food waste diverted per year
- Sydney's first zero waste hotel

The benefits

-  **Less waste going to landfill**
-  **Higher staff morale**
-  **Staff training for equipment**
-  **Achievement of sustainability goals**
-  **More recycling**
-  **Lower waste disposal costs**
-  **Purchase of recycling equipment**
-  **Saving on space**

Take action

Could your business save on waste? Register your interest to join 22,000 businesses recycling more through the Bin Trim program.

Visit: www.epa.nsw.gov.au/bintrim

Email: Bin.Trim@epa.nsw.gov.au

Call: 131 555
(ask for the Business Recycling Unit)





Bottle Sonic Maxi for Bondi's Icebergs Dining Room and Bar

Icebergs Dining Room and Bar believe that when the food and the atmosphere combine in a way that allows each to shine, you receive an experience that will stay with you.

The Management at Icebergs are always looking for ways to be more efficient in managing their operations, to allow them to spend more time achieving a specialised customer experience for their diners. Their decision to change from a single feed bottle crusher to a Bottle Sonic Maxi multi feed crusher has seen them reaping the benefits for over six months. We talked to Maitre-D Valerie Rowbotham to find out more.

What made you make the swap to Bottle Sonic?

Ultimately it was time. Staff were spending far too much time feeding the glass crusher one by one, so being able to do multiple bottles at a time has definitely made this process more efficient. It was also a space issue. Our bin area is extremely limited on space and we used to have double the amount of bins before transitioning to the Maxi with larger bin capacity. It's helped us create space by reducing the number of bins – we now get an average of 10 bins collected weekly.

What's the best thing about working at Icebergs?

The location is second to none and when guests arrive for their meal, from so many far flung places around the world, it's wonderful to see the look in their eyes when they see the view. Sunny or stormy, it always looks amazing.

Is there a recycling champion you'd like to do a shout out to?

There really isn't just one person I can pinpoint, because so many of our staff are doing their part. It's great to see the rise in people bringing in their own reusable water bottles and coffee cups over the last year, in fact I don't think a single staff member now uses a single use bottle or cup. I do have to make a special work mention to our bar staff, who are taking the steps to create recipes where they use all parts of the fruit, cutting down on waste by a huge amount.



MANCO BW3000

AUTOMATED BIN WASHING & PUBLIC SPACES SANITATION SYSTEM

Environmental & Hygienic Mobile Cleaning Solution

The Manco BW3000 is our latest development, revolutionising hygiene in public spaces providing efficient daily cleaning for municipalities & commercial operators.

The Manco BW3000 system is capable of sanitising two 120 - 360 litre bins at the same time or one 660, 1100 litre bin.



no chemicals, quiet operation & environmentally friendly

100% pure hot water high pressure cleaning system

New operational Health and Safety management practices require safer quality standards. Mobile and self-contained for safety & convenience, our closed system sanitises outdoor spaces as well as waste & recycling bins.

Dirty waste and recycling bins attract rodents and insects such as maggots, flies, cockroaches create foul odours from rotting putrescible waste and provide a breeding ground for harmful bacteria. The Manco BW3000 can kill harmful bacteria and remove all stubborn debris & odours without the use of chemicals. Waste water is collected for responsible handling. Dirty water generated from the cleaning process is recovered in our corrosion resistant tank for safe disposal meeting EPA regulations.

The bin lifter hydraulically elevates into the washing chamber which then fully encloses to ensure maximum operator safety before starting the sanitation process.

**PROTECT
OUR OCEANS**

**GERM
FREE ZONE**

**REMOVE
BAD ODOURS**

**NO MORE
PLASTIC
BIN LINERS**

product description



Located at the rear of the body is our fully automated bin washing system. Two washing heads inside the washing chamber wash the inside of the bin.

A series of mobile washing bars positioned on the inner walls of the washing chamber sanitise the bin exterior. All oversized solids are collected on stainless screens that are easily removed for cleaning.

360° rotating Turbo Jet nozzles & high pressure water curtain, ensuring maximum sanitation automated robotic arms. Danfoss Hot Water System with a high pressure pump that delivers 45 l/min at 160 bar.



Bin sanitation takes between 30 - 60 seconds depending on the contamination and the regularity of the service.

Operation through ergonomic operator controls with LCD touch screen display.

Various Tank Capacities & Chassis Configurations Available

Innovative Technology With Quality Corrosion Resistant Materials

Control & Storage room for wet weather gear, safety equipment and multiple attachments.

Up To 80 Metres Of Hose Range, Feeding Multiple Operators, Maximising Productivity.

Wide Range Of High Pressure Cleaning Attachments.

option equipment

RFID Identification | Reverse Sensors
Multiple Light & Safety Packages Wide Range of Attachments | Chassis Mounted Toolboxes

specifications

Canbus Control System With Customised Control Programs

Parker Hydraulic Controls

Parker Wet Spline Pto With Load Sense Pump

Dual Danfoss Diesel Powered Hot Water System

German Water & Pneumatic Controls

2 X 3000 Litre Stainless Tanks

2 X 360 Degree Multi Turbo Jet Rotating Heads With Raise & Lower Functionality

14 Additional Spray Nozzles Moving On RodLess Pneumatic Controlled Booms

1 X 40 Metre Hi Pressure Retractable Hose (Additional Hose Optional)

1 X 15 Metre Hi Pressure Retractable Hose

2 X Operator Lances

1 X Foaming Gun & Soap Tank

Hot & Cold Water Operation

Led Flashing Beacons & Work Lights Are Fitted As Standard

Fitted With All Relevant Local Government & Roads Safety Labelling

Electric Push Button Controls For Bin Raise & Lower With Enable For Operator Safety

Bin Lifter Accepts All Standard Mgb's

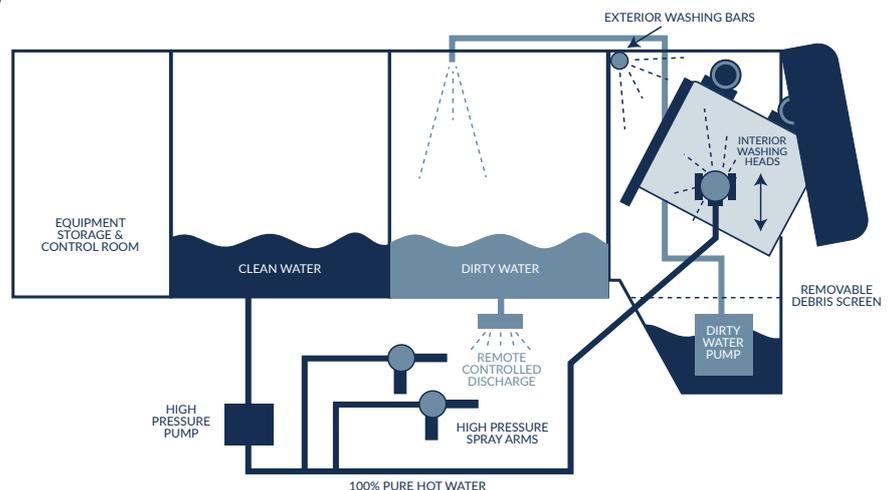
Rotary Actuator Style Lifter For Quiet Operation With No Linkages/Crush Points For Operator Safety

Safety Labelling

Hydrant Jack and Piping To Tank (Hydrant Tap Not Included)

Large Toolbox With Wet Weather Clothing Cabinet

Single Man Operation



Below Rail & Track Infrastructure

Manco

Surveying specialist Chrisfil Tesoro removing the surveying markers on the first of two metro railway tunnels deep under Sydney Harbour.

Going in deep

Utilising its extensive in-house expertise, Manco Rail was able to provide a unique solution to a challenging project.

Meeting the challenge of increasing rail services in cities where space is at a premium has led to more projects extending the capabilities of what is possible in major rail construction projects.

In Sydney, this has led to projects going underground, with the massive Sydney Metro project, Australia's largest public transport infrastructure project, being built largely below the city.

According to Bryan Black, managing director of Manco Rail, this presents an opportunity for businesses such as his.

"With the degree of rail infrastructure projects occurring throughout the Southern Hemisphere, there is a real opportunity for rail equipment engineering companies to make a considerable investment in both time and capital with innovative, efficiency enhancing plant, that enables contractors to improve productivity and performance by

changing from traditional rail construction methodologies."

While construction-related headlines have been dominated by the movements of the five tunnel boring machines above and below Sydney harbour, constructing a metro line largely underground has required suppliers and subcontractors to transform the delivery of systems to the project.

For Manco Rail, a project such as this fits into the company's DNA as an OEM with the ability to innovate. Operating extensively throughout Australia and New Zealand, the company has extensive manufacturing facilities at three locations in New Zealand and an expanding operation at Wetherill Park, NSW.

In the case of Sydney Metro City and Southwest, it was these qualities that led the line-wide contractor, Systems Connect to select Manco. A joint venture between

CPB Contractors and UGL, Systems Connect will deliver the laying of track, power, communications, and signalling equipment to the project between Chatswood and Bankstown. The project involves delivering rail and track on twin 15.5km tunnels between Chatswood, under Sydney Harbour, below the Sydney CBD, and on to Sydenham. It is here that Manco's equipment comes into its own.

"Over the years, our equipment has ended up operating in rail tunnels by the very nature that most tunnels interface with a tunnel network of some sorts, whether it be due to terrain or underground stations to accommodate CBD or high density areas," said Black.

Compounding the standard complexities of installing new track, the project is constrained by having only three major access points for equipment and materials along 31km of tunnels. In addition, gradients in the tunnels are steep, at 4.5 per cent, said Paul Ryan, senior project manager at Systems Connect.

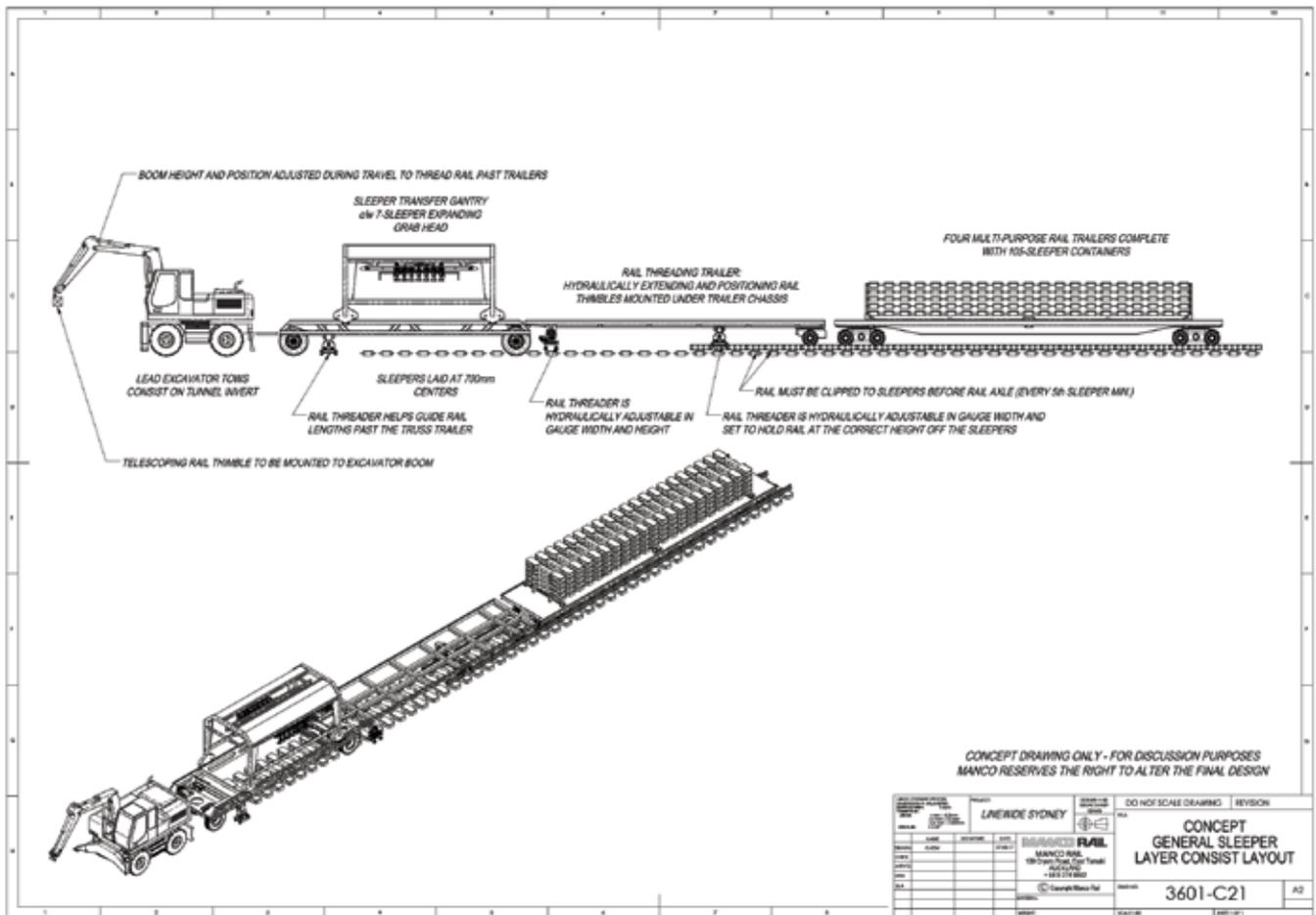
"Construction within this tunnel environment is inherently complex. Access is limited, spaces are confined and grades are steeper. We worked with Manco Rail to custom design equipment that overcomes these challenges," he said.

The particular equipment that Manco has provided for the Sydney Metro CBD and South West project are rail transfer equipment and sleeper-laying trailers.

The rail transfer equipment consists of two specially converted wheeled excavators equipped with material handling booms, automatic rail threading units, and rail carrying dollies.



Sydney Metro project will deliver rail and track on twin 15.5km tunnels below the CBD.



Going in deep continued...

The sleeper-laying trailers are equipped with a sleeper grab straddle, rail threader trailer, tug units, sonar detection systems, and a track guidance system fitted to the equipment.

Developed over 14 months, the custom designed equipment lays the rail, spreads it out, places the sleepers, and then pulls the rail back over the top. The process of developing this one-of-a-kind equipment took a blank slate approach, said Black.

“The design and interface of each plant item has involved hundreds and hundreds of design hours. Utilising a highly competent team of young mechanical engineers tasked with starting with a ‘clean piece of paper, and fresh ideas’, brain storming meetings were held on a regular basis, where even the most radical concepts were discussed,” said Black.

“Ultimately, rational thinking prevailed, which – however – incorporated some of the vast array of available technologies, in electronics, motive power, hydraulics, fabrication materials and ergonomics.”

The entire process is radio remote controlled, crucially limiting the number of people in high-risk areas.

The Manco equipment will be used in two stages. First, it will lay the track components. Then the track form will be concreted, and mechanical and electrical systems and signalling equipment will be installed. Afterwards, the Manco track-laying equipment

will return, including wheel excavators, trailers, and tugs, to assist with concreting activities, and electrical and mechanical installations.

The confined nature of the working environment demands a sequential process, and Manco’s familiarity with working in railway tunnels led to the company being selected by Systems Connect for the complex project. Past work not only in Australia, but New Zealand, Hong Kong, Thailand, and Malaysia, enabled Manco to be selected as the subcontractor.

What was key in the relationship between Manco and Systems Connect was Manco’s ability to modify and custom design equipment for the particular project. The team collaborated to automate processes wherever possible and combine innovation with safety.

“Ensuring safety and optimising project delivery are priorities for Systems Connect,” said Ryan.

Manco’s extensive experience in rail construction was also important as Systems Connect required rail network certification. A higher level of testing and compliance requirements were applied to the project, particularly due to the steep gradients in the tunnels. Manco’s previously experience in rail certification across Australia, as well as their ability to supply fully certified equipment prior to construction, led to the company being selected by Systems Connect.

Manco’s knowledge of the rail sector enabled this requirement to be met.

“All equipment manufactured is designed around specific and well known standards. Some standards are unique to rail and some to elevating personnel, suspended loads, and general operational safety,” said Black.

“Manco Rail has dedicated compliance officers that are specialists in their particular fields, be it, engineering quality, through to safety and the working environment approved emissions.”

A combination of innovation, safety, and proven capacity has seen Manco rail deliver on this major infrastructure project. 🚆



Manco’s extensive experience in rail construction was also as important as Systems Connect required in rail network certification.

Waterview Tunnel Elevated Work Platform

The Waterview Tunnel is the key infrastructure component of Auckland's Western Ring Route, a 48km motorway connecting Manukau, the city, West Auckland and the North Shore. Manco has supplied a key piece of equipment for this massive project.

The Waterview Tunnel spans 2.4km between Pt Chevalier and Mount Roskill. It was developed at a cost of \$1.4 billion and opened in July 2017.

"Manco supplied their SCJ-13 Elevated Work Platform for the project," says Jan Van Zyl, M&E Supervisor for the Waterview Tunnel. "It solved all our problems with access in one go. Everyone is impressed with this Elevated Platform technology."

Two of the units have successfully been in operation, with the first commissioned in February 2018 to service the overhead LED lighting, fire suppression and air ventilation ducting throughout the tunnel.

Pictured below is Waterview Tunnel's SCJ 13-V in operation, alongside Construction Specialties' identical unit, working during the night on the overhead maintenance.

The units can be operated with a Class-1 NZTA licence and allow for a 13 metre working height and eight metre outreach length at 120kg load (7m/200kg). The radio remote control offer ease of use to control the stabilising feet, boom and engine stop/start.

At time of going to press, Manco has been favoured with a further order for the larger 15 metre platform that will attend to both approach and tunnel lighting, as well as CCTV cameras.

"It solved all our problems with access in one go. Everyone is impressed with this Elevated Platform technology."

says Jan Van Zyl, M&E Supervisor for the Waterview Tunnel



Smart Glass Collection

Tauranga City Council has recently awarded its glass collection contract to Smart Environmental - and they're certainly setting a new benchmark in kerbside glass collection.



With six front line Low Entry Vehicles, four with direct colour-sort side loading and two with intermediary trough side loading, this modern fleet has already earned a positive response from the approximately 55,000 residents.

Kerbside glass collection can be a noisy affair, but Smart's policy of Engineered Sound Control (ESC) saw significant emphasis placed in this area - especially when over 100 tonnes of colour sorted glass per week is involved. The Operations Team's design demands resulted in a totally Polyurethane body, offering significant noise reduction and a rust free, light-weight option over a traditional steel body.

With a council-run positive promotion to residents, the subsequent results compared to the national average speak for themselves. While the national output rate for a fortnightly collection typically sits at 40%, Smart's Tauranga operations are running at an average of 60%, with some peak collections as high as 88%.

"Educating the community on sustainable purchasing is clearly having good results," says Johnny Dick, Smart's Tauranga Contract Manager. "I'm amazed with the number of household items such as peanut butter glass jars and the like that were never so dominant in our kerbside uptake."

" Educating the community on sustainable purchasing is clearly having good results. "



Ward Demolition

Peter Ward Managing Director and owner of the Auckland based high profile demolition company Ward Demolition is a seasoned campaigner when it comes to rugged and robust equipment to handle his extensive range of job site operations.

With over 500 successful demolition jobs under his belt since commencement in 1987, 32 years ago, Wards team of competent and safety conscious operators have completed some of New Zealand's most difficult tasks. As a result of the 6.3 magnitude February 2011 Christchurch earthquake the 28 level Grande Chancellor hotel sustained such extensive structural damage that the resulting noticeable lean posed a complicated demolition for the Ward team, with crews working from the top down floor by floor, until the high reach demo excavators could commence their task.

Ask Peter Ward, and he will confirm that for every project there are considerable safety and environmental risks that must be carefully thought out and managed. From vibration limitations for the Sky City Conference Centre next door to TV One's operational studio, to time limitations to complete the demolition of the South, West and East stands for the refurbishment for the Rugby World Cup at Eden Park.

Health and Safety of the workers is at the forefront of Ward Demolitions considerations when implementing new systems in the workplace. Working through the confined space issues with Manco, the Ward team have introduced multiple 600

litre wheelie bins loading with site loading into a Manco's "Orbit" rapid transfer system. Designed for heavy duty C&D recyclables the "Orbit" interfaces with Wards large Huka bins located away from the highly restricted access site. This has helped to reduce the impact of injury and manual handling issues by being able to load larger amounts of material into easily accessible bins with the diggers on site, rather than the workers loading the material themselves. This reduces manual labour and greatly increases productivity with more material being able to be loaded and transported."

“ This “shuttle” system also significantly reduces the long lead times with Auckland’s infrastructure issues, and enables Wards big Kenworths with their 50m³ bodies to haul outside the peak hour congestion. ”

Peter Ward Managing Director and owner of Ward Demolition



Auger Side Loader For Metallic Sweeping

In July 2019, Waipā District Council entered into a new kerbside recycling contract with one of Manco's long time partners, Metallic Sweeping Limited, as the primary contractor.

The Waipa district encompasses an area of just on 1500 square kilometres and includes the busy towns of Te Awamutu and Cambridge within its municipality. Managing Director Clive Peter was looking for frontline vehicles with reliability and points of difference for the new energised recycling contract.

One of the key units in the frontline fleet is a Manco glass collection side-loader which utilises an auger compactor instead of the conventional paddle or pendulum type packers often used in the industry.

The auger has conical flighting which compacts and breaks down the material being compacted, prior to it entering the compaction body.

Further compaction results from the auger pushing against the material in the body. Overall this results in higher compaction densities compared with paddle or pendulum packers

The Auger compactors pre-crushing ability assists in obtaining the required cullet sizing to be suitable for processing at OI's recycling facilities. The Auger reduces the number of moving parts normally associated with side-loader compactors and is far more resilient to the extremely abrasive nature of the glass/silica product as it is crushed and compacted.

Manco is also looking to utilise the auger compaction system in future builds including LEV side-loaders for the upcoming Auckland Council refuse & recycling collections.



Envirofert's Manco Composter

Envirofert operates one of the largest composting facilities in New Zealand, collecting the majority of Auckland's food/green waste and processing it into a renewable sellable compost blend.

To process this waste Envirofert utilised the Manco Ecogreen Composter, whose 20m³ receiving hopper has a process rate of 50 tonnes an hour. The unit is also equipped with a 5-meter conveyer and self-loading crane, allowing it to be operated by one user. In addition to this, the Manco Composter offers a legal road speed capability of 90kph, so it can be trailered to the required site with ease. Manco Ecogreen Models can be customised and supplied as either stationary or road certified, diesel/electric drive, and have various receiving hopper and conveyor sizes.



Combined Initiatives Solve Freedom Camping Issues

Councils across New Zealand have had longstanding issues with freedom campers and their waste disposal. With the Mackenzie region's picturesque landscapes making it a hotspot for tourists, the District Council has been at the forefront of innovative ways to combat this problem.

Manco has worked closely with Mackenzie District Council in a combined initiative to provide custom-built 'Pay to Use Compactors' for the region.

Firstly, the Mini Mobile Compactor at Twizel township was supplied with a 'Paywave' payment system – so users can simply tap their card on the terminal to unlock the rotating infeed drum and dispose of their waste with ease. It ensures visitors to the freedom camping area absorb the cost to use the unit, rather than local ratepayers. The Mini Mobile Compactor can be powered by standard single-phase or solar power supply, and its 3.5m³ body allows for 1,400kgs of compacted waste, with a rotating 60 litre infeed hopper and gantry truck pick-up points.

In addition, Mackenzie District Council have installed two Manco 'Solar Powered Pendulum Packers' at Lake Tekapo and Twizel. These coin operated units allow users to insert a coin to unlock the side load infeed hopper and dispose of their waste. They are equipped with 7m³ bodies, allowing for 3,000kgs of compacted waste.

Both of these initiatives offer a solution for councils who have struggled with overflowing bins in freedom camping areas, or who require a public waste disposal solution other than kerbside collection. They also reduce maintenance frequencies for contractors – essential in high usage areas during peak season.





The tomato is loved by many New Zealanders – it forms the basis of many recipes, be they fresh or tinned.

But what happens to the tomato by-product waste??



Over the past year, research has been undertaken into the commercial viability of diverting a large amount of green waste contaminated with inorganic plastic and string from landfill, and use it to produce pulp for bio degradable packaging.

The project embodies the circular economy by injecting the pulp into the manufacturing circuit, where it's given new life as sustainable packaging such as punnets and boxes. A new, innovative process, successfully trialled in Europe, makes it possible to convert the stems and leaves of green waste into a valuable pulp to produce packaging – created in a complex process using the latest technology, which blends tomato leaf and vine waste.

A problem worth solving...

At the end of every Tomato harvest there is a large amount of organic waste produced that is contaminated with plastic and metal pieces. Without separation this has to be disposed of direct to landfill. This is an ever increasing cost to growers.

Growers spoken to have indicated their support for the project as it assists with not only high land fill costs but also their environmental sustainability.

Manco Environmental will be involved in producing plant to assist with the separation and pulping process. The durability of tomato fibre allows products to be recycled numerous times – even more than conventional packaging – and, at the end of its life cycle, the packaging is readily compostable.

"The words 'compostable' and 'biodegradable' are frequently misused," says Lisa from BinX, "and there are many faux

compostable products in the marketplace. If you look into much of the perceived environmentally friendly packaging, you'll discover a large proportion is sourced off shore, with the bulk coming out of China.

Our packaging will be diverting waste that's currently being sent to landfill, removing the need for 10,000,000 plus plastic trays. Best of all, it won't be derived from non-

renewable resources and will be manufactured right here in New Zealand – not shipped in from around the world, reducing our carbon footprint."

For more information please contact lisa@binx.nz



Ellerslie Event Centre Leads The Way For World Environment Day

Ellerslie Event Centre (EEC) led by example for World Environment Day on June 5, celebrating the 30,000+ kilos of food waste it has diverted from landfill over the past three years – equivalent to the weight of six elephants!

The Event Centre is believed to be the first catering organisation in New Zealand to install a digester – a product that uses aerobic digestion to divert waste from its commercial compactor into clear water which has no environmental impact when it goes into the sewer.

The 'Manco-BioHitech Eco-Safe 4' digests meat, grains, seafood, dairy, bread, pastries – pretty much everything. When producing food on the scale that EEC does, composting isn't an option. If it weren't for the digester, the Centre's food waste products would ultimately end up in landfill, producing methane emissions which are harmful to the environment.

According to the United Nations Framework Convention on Climate Change, New Zealand has the second highest waste emissions per capita of developed countries. Each year, New Zealanders throw away the equivalent weight of 271 jumbo jets of food while, globally, 30% of food is wasted and thrown out across the supply chain – contributing to eight percent of total global greenhouse gas emissions.

Fittingly, the theme for World Environment Day 2019 was Air Pollution. Governments, industry, communities and individuals were urged to come together to explore renewable energy and green technologies, with the aim of improving air quality in cities and regions across the world.

EEC's Executive General Manager of Hospitality and Events, Craig Fenwick, says sustainability is important to their business.

"We are constantly looking at ways in which we can improve things for the betterment of the environment. Prior to installing the digester, we could only estimate the volumes of food waste that were being produced here. Now that we know we have prevented 30,000kg of waste products going to landfill, it's something we can feel proud of."

The digester allows EEC to monitor and reduce the overall waste it produces. Its dashboard provides the weight status of the food waste and the corresponding equivalent value of the reduced carbon foot print.

"The digester has played a big role in allowing us to continue to improve. It has enabled us to see which of our events are producing the largest volumes of waste. As a result, we've been able to make tweaks to our menus to help ensure that our waste is being further minimised. "Having food waste going into the digester instead of bins has also diminished offensive bin odours – helping eliminate the chance of pests being present around our premises."



"...we have prevented 30,000kg of waste products going to landfill, it's something we can feel proud of."

Same Day, Same Truck for Northland Waste

Blue bins for glass recycling are being delivered to every household in Whangarei District Council for kerbside recycling. This is Whangarei District Council's latest bid to have one of the most honest and efficient recycling systems in the country, contracted through long standing Manco Customer, Northland Waste.



“ We make sure that what we collect in Whangarei really is recycled.”

Council's Solid Waste Engineer David Lindsay

“For a system to have integrity it has to do what it says it does. We only collect recycling that we know can be recycled. To achieve that we take extra special care in the way we do things.”

“In fact, because Whangarei's glass is so clean, always the right type and is sorted by colour, it is in very high demand by recyclers.”

“Some Councils struggle to achieve this because they are collecting huge amount of mixed up recycling. We are more efficient here because of the hand sorting by our teams, and these bins will make it even easier for us to recycle more.”

“The trick to this is to keep the streams of different recycling materials separate from each other, and the most successful way to do this starts with people separating the different types of recycling at home.”

“Our people then do another sort at the kerb, and we have an excellent series of products at the end of the process, said David Lindsay.

The Manco Recycling truck pictured certainly does it all! With optimized ratios in the trough allowing for kerbside collection of colour sorted glass, cardboard, plastic & cans lifting into the 30m³ body. Disposal is also a breeze with hydraulically operated ejection doors allowing the operator to carefully select the type of waste to be disposed of when at the transfer station.



NSW Councils Leading Glass Recycling Initiatives – New Zealand, Take Note!

The Southern Sydney Regional Organisation of Councils (SSROC) is setting itself a goal to recycle 45 million glass bottles each year to leverage purchasing power to drive a circular economy.

The 11 member councils signed a Memorandum of Understanding (MoU) that sets out how they will work together to develop a framework for regional procurement of recycled material to drive investment in regional infrastructure.

The councils include Bayside, Burwood, Canada Bay, Canterbury Bankstown, City of Sydney, Georges River, Inner West, Randwick. With the Council of Australian Governments (COAG) set to ban the export of recyclable materials, there is a greater need to develop domestic markets for these materials.

Mayor of Burwood Council and SSROC president John Faker said the signing of the MoU is a significant step towards solving the recycling crisis.

“We know how important recycling is to the community, which is why our councils are taking the lead to ensure our recyclables are put to good use and kept out of landfill. This is a win-win for everyone.” Mayor of Burwood Council and SSROC president John Faker said.

SSROC general manager Namoi Dougall said the move, in collaboration with key players in industry, government and academia, will create sufficient demand to influence market development beyond what councils can do alone.

“Not only will it allow councils to procure safe, affordable, and high-quality materials, but this model can be rolled out across the Sydney metropolitan area and indeed the entire state.”

Minister for Environment Matt Kean said all levels of government and industry must work together and embrace initiatives like this one to tackle waste in NSW.

Councils will first focus on introducing more recycled content in road-making materials, including glass and reclaimed asphalt pavement. SSROC demand for recycled glass in civil works is about 10,000 tonnes per year.

Minister Matt Kean, in announcing the initiative commented, “The NSW government is also releasing a comprehensive plastics plan at the end of the year to holistically address plastic waste and pollution entering our environment. We look forward to working closely with councils and industry so that together we safeguard the future of NSW.”

This has enabled this innovative process to be done in a safe and cost-effective way.

The next phase of this project will investigate applications for a range of other recycled materials, such as plastic, tyre crumb, and textiles.



Manco has been a strong advocate in the development of specifically prepared glass powder being less than 65 Micron as a substitute for cement at ratios up to 25%. Manco has carried out extensive pilot and small scale plant production with product having been successfully tested with various municipalities and the likes of Sydney Water as a glass composite mortar based liner for large interceptor & sewer pipes. As a result of this work, Manco is establishing a full scale 30 tonnes per hour plant which will be commissioned in early 2021. The NSW Government's Department of Planning, Industry and Environment (DPIE) has provided a \$900,000.00 Grant to assist in the construction of this innovative plant.

Electric Vehicles for an Environmentally Friendly Waste Collection

The new to market Manco Alke' Electric Utility Vehicles are certainly a valid answer for those councils, contractors and other organizations that aim for eco-sustainability in their operations.

Manco has taken such action to adopt such waste collection systems heavily investing in electric vehicle technology for refuse collection over the past few years to help such organizations reduce their carbon footprint with the adoption of Electric Vehicles in their day to day operations.

The Agile Manco Alke Electric Utility Vehicles have great application for urban areas such as city centres, airports, railway stations, parks, kerbside collection, parks/ reserves and industrial areas whereby access is limited (for larger collection vehicles) and foot traffic is high.



The unit pictured can be customized for a maximum autonomy of 150km in range (under 8 hours charge) with a bin lift system for collection of 120, 240 and 360 litres in size.

In addition to this the body has a high tipping 90-degree tipping system (pictured) allowing the vehicle to tip into other larger compaction body's and/or bins for maximum collection efficiencies.

In addition, the units are heavily customizable to meet any applications and requirements with such add-ons as tool boxes, pressure washer systems, body configurations/sizes and battery types.



Manco To The Rescue!

Manco recently supplied two new rescue vehicles to Coromandel's leading Surf Life Saving Club, Whangamata, as they celebrate seventy years of fine public service.

Regarded as one of New Zealand's finest beaches with a world class 'left break bar', Whangamata's ocean beach is actually two independent surf beaches blending in with three of nature's best offshore islands.

The Surf Life Saving Club is the central headquarters for a large team of rescue patrol life guards and their equipment, and boasts modern facilities including full first aid capability, four large gear areas, IRB and Call Our Squad area, a 40 bed carpeted sleeping quarters, two large lounges and a commercial kitchen.

On top of this, an independent annex serves as the centre for an extensive Junior Surf program, with over 200 youngsters participating each season.

With a population that grows from 10,000 to over 40,000 during peak summer periods, combined with often unforgiving surf, the club's patrols need rapid response capability over the 2.5 kilometre beach patrol zone.

Manco was pleased to come to the rescue, providing the club with two new Yamaha Viking Surf Rescue vehicles. Equipped with Manco designed quick release rescue boards, resuscitation pack, general first aid kits and defibrillators, the vehicles have proven to be a highly successful rescue tool.



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