

# MANCO MATTERS

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## The Grim Legacy of "Agent Orange"

Serious Dioxin contamination in Vietnam originates from the armed conflict over the period 1961 - 1971, when herbicides, mainly Agent Orange, were used to defoliate terrestrial forests and mangroves, to clear perimeters of military installations, and to destroy crops. Today the grim legacy continues with ongoing third generation child deformity.

At Ho Chi Minh City's largest maternity hospital, more than two thirds of the patients are affected by the impact of Agent Orange.

Code-named "Operation Ranch Hand" the American military programme involved the spraying of over 80 million litres of herbicides into the Vietnam environment. "Agent Orange" was sprayed by cargo aircraft, helicopters, trucks and troops carrying backpack sprayers.

During the armed conflict, military installations throughout Vietnam (Danang, Bien Hoa and Phu Cat) served as bulk storage and supply facilities for Agent Orange. The soil dioxin concentration at these airports (where large quantities of herbicides were stored, spilled and handled) is classified as highly contaminated hotspots with elevated levels of dioxins.



Estimates classify the volume of dioxin contaminated soils at three hotspots to be in excess of 234,780 tonnes that require remediation. Through a series of internationally funded programmes, together with coordination from Vietnam agencies, steps are finally being taken to remediate these contaminated hotspots, a legacy of the armed conflict.



The highest and most complex dioxin residue levels in Vietnam have been measured at Bien Hoa Airport. The project "Environmental Remediation of Dioxin Contaminated Hotspots in Vietnam" funded by the Global Environment Facility (GEF) through the United Nations Development Programme (UNDP) aims to pilot a unique ball milling process known as Mechano-Chemical Destruction or "MCD Technology" through the treatment of 100 tonnes of highly contaminated soil at the Bien Hoa airbase.

Through an international tender, Environmental Decontamination Ltd has been awarded the GEF funded project to remediate the dioxin contaminated soils at the Bien Hoa military airport. EDL expects operations in Vietnam to commence in May 2012 for a period of four months utilising its patented four drum cascading reactor and ancillary plant at the Bien Hoa airbase.

In Vietnam, the project is being implemented by the Office of Committee 33, with coordination between the Ministry of Natural Resources and the Environment (MONRE), the Ministry of Defence, the GEF coordinator and UNDP. Considered to be a stepping stone for initiating and cooperating with other projects, the piloting of the MCD Technology will apply internationally proven techniques to treat and rehabilitate the dioxin hotspot areas.



ENVIRONMENTAL DECONTAMINATION LTD





# How the Vietnam MCD plant will work

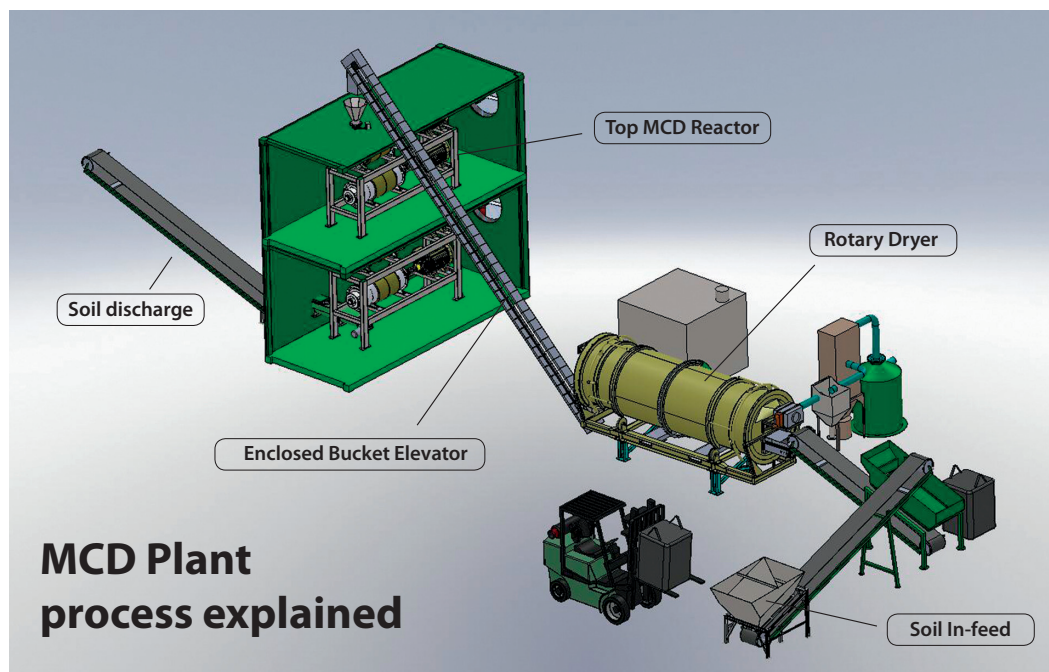
The proposed MCD plant being used in Vietnam will incorporate four EDL patented MCD reactor drums. This unique technology is based on each rotary MCD reactor, mounted in a vertical bank cascading the contaminated soil down to the next drum. Operating at high RPM's, the reactor drums containing special hard

wearing cast rotors, make continuous contact with thousands of stainless steel balls, in turn creating an environment of continuous and repetitive collisions. The chemicals of concern in the soil (and in the case in Vietnam where the dioxins are present) when exposed to the mechano chemical environment break down into

carbon and inorganic halides.

The Vietnam plant will consist of a soil in-feed vibrating screen to remove any oversize (that will also be crushed and treated); a rotary dryer using an indirect hot water heater dries the soil prior to being fed into the top MCD reactor drum via an enclosed bucket elevator.

On discharge after treatment, the soil exits the final MCD drum into a rotary pug mill where it is reconstituted using water sprays. The entire plant is fully encapsulated after the vibratory screen and comprehensive air quality equipment is installed to ensure there are no non-compliant gaseous or dust discharges during the process.



## Kerbside to Furnace with "Cutting Edge" Innovation

Dunedin and Wellington cities, through the innovative thinking of EnviroWaste Services, have introduced a unique concept of kerbside glass collection. With considerable pre planning and extensive R&D, EnviroWaste working in conjunction with Manco's design team have a kerbside to glass recovery that sets new standards in productivity and minimal low cross contamination. Using three dedicated bottom dump removable pods, each pod is allocated to a specific glass colour: green, brown and clear. To achieve this separation from kerbside collection is where Manco's new GL300 Glass Collector takes central stage.

Providing a flat sorting bench the operator has the ability to sort the lower volumes of glass direct into a segregated bin, or discharge the higher volumes by opening colour separate drawers located on top of the bin.

Once "loaded" the operator selects discharge and the GL300 raises and discharges via an interface divider into the corresponding colour pod. This operation occurs during the vehicle's transfer to the next kerbside collection. The pods are sized to expected ratios and once full, the vehicle returns to the main transfer point where a forklift unloads each pod and discharges into the corresponding line haul container transferring the furnace ready product to the glass manufacturer.





# Christchurch challenges Ward Demolition

All New Zealanders, and in particular Cantabrians, will forever remember the tragic day, 22nd February 2011, when the most violent of numerous earthquakes struck.

Long time Manco valued clients, Ward Demolition, are today proving to be a key player in the city's rebuilding programme.

From the outset, Ward Demolition's skilled team with their extensive range of specialised equipment, have been involved in numerous aspects from the immediate search and rescue effort of assisting USAR, to the surgical demolition of The Grand Chancellor, the building considered by many to be the most dangerous in the world.

Managing Director Peter Ward, who has over 25 years experience on some of New Zealand's most difficult demolition projects, is utilising all his knowledge and expertise to ensure projects are completed as planned with a zero tolerance on health and safety.

The full arsenal of Ward's specialist demolition equipment is being utilised including 3 High Reach Excavators with reaches up to 40m, two 50 tonne Cranes, a XR400S Crusher, and supporting excavators ranging from 1.5 tonne to 65 tonnes.

Manco's renowned heavy duty 20 tonne capacity "Huka" rear container loaders are on constant demand hauling hundreds and hundreds of tonnes of demolition product to the recycling and landfill sites.



The most prominent demolition, The Grand Chancellor Hotel, is a 12 000 tonne concrete structure that has buckled and twisted from the stress of over 10 000 earthquakes. Working as the prime sub contractor to Fletcher Construction, Ward Demolition are using "precision demolition" techniques deconstructing the building floor by floor, until it is at a point where the high reach excavators can reach it to complete the demolition. Ward's mission statement is, "to maintain a safe and effective demolition and achieve over a 90% recycle ratio"

This high rate of recycling was also maintained at the Old Nurses Home, Hagley Hostel, where Ward Demolition surgically deconstructed a large 6 storey structure. Comprising of 3 wings and a centralised communal area, this building was deconstructed next to a live hospital where dust, noise and ground vibration were all highly sensitive factors.

**WARD**  
DEMOLITION



# Going Greener

With a growing population Palmerston North is estimated to have over 82,000 people. The Palmerston North City Council is committed to helping the environment and minimising the amount of waste disposed to landfill. By 2015 the Council is aiming to divert 75% of the waste that is currently sent to the landfill and cleanfill each year by providing the community with more sustainable waste management options such as recycling.

The fortnightly kerbside collections of recyclables using new Manco SL85 automated side loaders and 120 and 240 litre Sulo Talbot MGB recycling bins and crates for glass, started in July 2010.

The comingled recyclables after collection are discharged at the city's new facility where sorting is undertaken on a automated line which includes bale production of paper and sorted plastics ready for transport to the downstream acceptance facilities.

The recycling collection vehicles are leased to Palmerston North City Council based on a seven year full maintenance contract. By implementing a strict preventative maintenance system, Manco Environmental provides continuous availability along with a back up unit in case of an emergency, so the kerbside collection is not affected.



## Beautiful Mackenzie Country

**T**his backdrop speaks a thousand words. However the best way to describe the Mackenzie Country District is beautiful, unspoiled, and clean. It is a perfect representation of New Zealand's South Island and frequented by tourists year round from all corners of the earth.

The district is named after New Zealand's most famous outlaw James Mackenzie and his dog Friday. He was finally captured in 1855 and after a number of escapes and recaptures, he was finally released in 1856 and never seen again, disappearing into the back country he so loved.

Although local population in the Mackenzie District is far from large, the need for a well implemented refuse/recycling collection system is a high priority to preserve this picturesque landscape.

The solution comes with the new Manco

LEV Combi truck. With its multi combination collection capability of general and recyclable waste, recycling and glass, this unique unit provides a practical and resourceful solution in one of the world's most beautiful natural habitats.





# Specialist Vehicles give Special Service

**E**nviroWaste Services' ability to find new creative solutions to waste and recycling problems is setting them apart from many of their competitors.

Both Wellington and Dunedin represent the most hilly, and windy streets in New Zealand.

Faced with such terrain in both cities, EnviroWaste senior management configured a selection of specialised vehicles that can provide the required level of productivity needed when responding to a highly competitive tender process.

Both councils' unconditional mandate was effective waste stream separation, accumulating in significant and on-going waste reduction to the landfill.

Working with Manco's design team, Envirowaste management selected a range of vehicles from low entry single man operation, to automated side loaders, rear packers and front loaders.

Within each vehicle selected, body volumes and design, along with ancillary equipment was carefully calculated to ensure both terrain restrictions and productivity could be achieved. Such a combination along with separate kerbside glass collection vehicles shows the level of prior research, planning and strategic decision making that such contracts now necessitate in today's collection environment. With a zero tolerance philosophy on health & safety this modern fleet is now providing to both cities, what can only be described as a true "Special Service".



Manco Front Loader



Manco GVC Glass Collection Vehicle



Manco Rear Packer



Manco LEV Side Loader



Manco SL85 Side Loader



## AUCKLAND'S BIG WIRE UP

The electrification of Auckland's \$600m DART (Developing Auckland's Rail Transport) rail system is set to offer a surely effective edge to commuting and freight.

The DART project spanning from Swanson in the west through Papakura in the south will ultimately provide a state of the art rail electrification network. A major contractor to the projects rollout is the HILOR Joint Venture between New Zealand's Hawkins Infrastructure and Australia's Laing O'Rourke Construction, known for their expertise in this area. As proven when you cross the ditch and experience electrified rail transport in cities such as Sydney and Melbourne, by late 2013 Aucklanders and travellers to the City of Sails will equally enjoy a frequent and efficient environmentally friendly metro rail travel.

During this vital construction phase, Manco Rail's unique and specialised equipment range is playing an essential role. From the initial excavation and concrete phase in conjunction with key sub contractor Contract Landscapes, the equipment has involved 18 tonne rail excavators, rail crane and utility vehicles including a specialised rapid deployment truck trailer rail rig with a 30 tonne low bed capacity deployed for speedy concrete truck site transfer. Following mast foundation completion, Manco's multi purpose mast erection and wiring cranes combine with the unique and well proven 500kg scissor platform. Operating without



stabilisers and having a travel mode from the platform, these units excel in productivity gains, as construction enters the wire tensioning and alignment phase.

In addition to the contractors specialised plant, the project is complimented by KiwiRail's recently purchased Manco 1250 Rail Transporter, a multifunctional unit with 12 metres of clear deck facilitated with a 40 tonne radio controlled articulated boom crane.

Manco continues its thirty year involvement in the rail construction and maintenance industry with plant operating throughout Australia and Asia.







# MANCO RAIL

STAYING ON TRACK....STAYING AHEAD



## 5500 Scissor Platform

The five R's have been used to describe the new Manco Rail offset scissor platform. Ridged, Reliable, Rugged, and Resourceful... This 500 kg SWL workhorse offers a five meter long, two meter wide, offset platform, providing a working distance of four and a half metres from centre of track with a platform working height up to five and a half meters. Designed to operate with four men with tools, this platform provides an extremely stable

working base, for under bridge and tunnel work, in addition to its normal wiring duties. Platform

operation allows track travel in creep mode, and interfaced with fail safe brakes eliminates in cab operator requirement. Without the need for stationary stabilisation, production can be maintained without interruptions. The 5500 Scissor Series is a rail operator's preference over conventional mass produced platforms.





# Service and Solutions

**25** years from being a one man band Terry Donnelly and his XA falcon ute has grown the company to a staff now exceeding 150 of dedicated and focused individuals supported by a large modern fleet of specialised equipment. With a positive culture built on a "service and solutions" attitude throughout New Zealand, CLL are recognised today as industry leaders with advanced skills in projects such as:

- Rope access landslip stabilisation using soil nails, anchors and micro piles.
- Restricted access, driven and drilled piling and combining various dewatering techniques.
- Temporary retention solutions for deep holes and high cuts.

An example of CLL expertise can be seen with their novel civil engineering approach to stabilising a significant length cut within a short Christmas access period, for the new Auckland rail electrification project. Setting up two quick hitch anchor drilling rigs on 30 tonne excavators, CLL drilled over 200 quantity 9 deep x 150mm diameter bore holes up to heights of 8m to anchor and soil nail the unstable cut zone,

which also incorporated the construction of a palisade wall to protect neighbouring properties.

CLL's ever enthusiastic and longtime Special Projects Chief Don Iggulden under took the demands of the project. Working in 18 hour shifts, Don's team completed holes from start to finish in under 20 minutes, with the use of specially modified drag bits and 800cfm compressors to remove the tailings out of the holes.

Staff following the drill crews quickly installed the bars and grout completing the demanding project in record time. This may all sound like a rather typical civil engineering stabilising day's work, but throw in continuous rain, rope access teams involvement to roll out rock fall prevention mesh and a couple of unidentified ongoing landslides and you will appreciate the quality and efficiency of these professionals.

Manco's engineers enjoy working with CLL with their demanding equipment design and delivery requirements as unique solutions can always provide improved productivity and profitability.





# Manco and Perkins Sign Collaboration Agreement



The globally renowned container & wheelie bin lifter manufacturer Perkins Manufacturing has signed an exclusive Australasian distribution agreement with Manco Environmental. Based in Illinois USA this 39 year old engineering company has been an industrial pioneer in the design and manufacturing of refuse and recycling lifters.

Complimenting Manco's latest automated SL85 Side loader, the Perkins range is unparalleled with its extensive range of lifters for every application, from heavy duty patented "Tuck away" rear loader lifters through to a comprehensive range of side mounted lifters for low entry single man operators.

The Perkins range is particularly suitable for continuous daily operation where longevity and robust construction are essential ingredients in Perkins design and manufacturing success story.

Holding over 20 global patents, the company's innovation has included such items as the first actuator powered lifters, "sweeping arc" motion to grab carts and bins, breakaway faceplates, and tuck away mountings.

Today's range also extends to stand alone (or alone) lifting devices for stationary applications, and maximum height lifting devices from ground level into open top bodies or containers.

Manco's Australasian sales team are excited with the Manco-Perkins combination. Manco will also offer the Perkins lifters to all body and stationary bin manufacturers and existing unit contractors.

Using Perkins lifters with their low pressure, low flow systems, you save on fuel working the units at idle without the need for high engine RPM's. Perkins' design philosophy is based on increased payloads by using Perkins light weight bin lifters, small and compact.

Reduced maintenance costs by using Perkins devices with our mechanical design (no complex electrical & sensor systems).

Perkins is an ISO 9001 Certified Company.



# MANCO





# Smart Environmental flexes its fleet in the Coromandel



**G**old Fever struck the Coromandel Peninsula during the late 1800's and many of its towns owe their existence to this precious metal. The Coromandel boasts stunning scenery and beautiful white sandy beaches making it the holiday destination of choice for locals and international tourists.

Smart Environmental are long standing Manco valued clients with a fleet of specialised vehicles in difficult terrain areas such as the Coromandel Peninsula. Smart Environmental have been collecting refuse and recycling for Thames Coromandel District Council for a number of years. Each year the company faces the considerable challenge of flexing its fleet and resources to cater for the large influx of visitors to the region. The population around the peninsula grows significantly every year over the Christmas/New Year period as much as 10 times the standard volumes.

The collections fleet management, need to deal with changes in vehicle numbers, difficult roading systems, one way bridges and statutory holiday issues. To take on this challenge the team at Smart Environmental increases its capacity significantly by bringing in resources from its national fleet from around the country.



Smart's multi segregated co-mingled recyclable LEV as used in the Coromandel

The existing fleet in the area is increased by 8 trucks during the New Year peak.

Existing and additional staff hours are boosted to over a 1000 hours per week to cater for the increased work load.

With significant input from Smart Environmental, the Thames Coromandel District Council, in conjunction with Matamata-Piako and Hauraki Plains Councils, have recently completed a comprehensive waste minimisation plan that will shortly be introduced into the region.

Smart's present recyclable separation and glass sorting initiatives played a key part in the minimisation strategies with practical applications well tested.



## Pioneer Waste Management

AUSTRALIA PTY LIMITED

**B**ased at Taren Point in New South Wales, Pioneer Waste Management has been "Taking the Bite out of Waste Costs" for 20 years.

Running a fleet of front loaders, rear packers, and hook trucks as well as operating a Waste & Recycling facility, Pioneer endeavours to sort and recycle as much as possible before the remains are transferred to landfill.

Pioneer Managing Director Noel Mancuso was impressed with the performance of the Manco FL280HD and given it was "taking the bite out of Pioneer costs", Noel ordered the new 28m3 unit on

the latest Euro 5 FVZ1400 Isuzu cab and chassis. Featuring Manco's latest in cab technology, the ergonomic joystick interfaces with a "real time" display, giving the operator a host of information throughout the loading and packing cycle.



The new Manco FL280HD all set for Pioneer





# Age Stops No Rail Machine!



On the 18<sup>th</sup> July 1985 in the days of Queensland's controversial Sir John Bjelke-Petersen, Manco's [very young engineers] Ross Williams and Bryan Black were

delivering a model 1050 Lowbed Transporter to Citra Constructions for the ambitious Central Queensland coal fields to Mackay rail electrification.

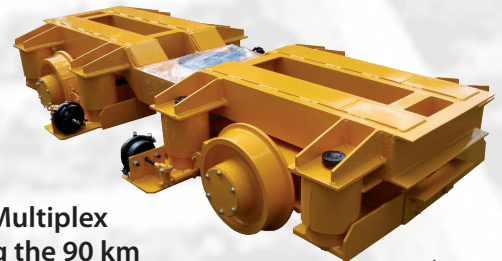
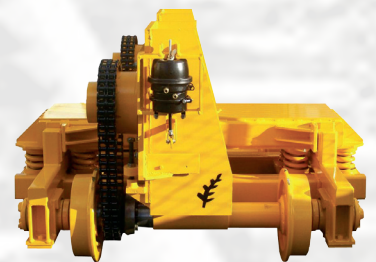
Now some 27 years later and following an "adoption" to a new family the two much older engineers have been reunited with their old iron mate!

Under the watchful eyes of Select Plant, a division of Laing O'Rourke Construction Australia, the old girl [or elderly gentleman], has undertaken major heart and limb surgery and returned from an extended pension back into a young modern workforce to show off his/her capabilities. With a fully refurbished drive and non drive bogie assemblies completed at Manco's workshops and a full power train and track compliance work over by Select Plant's mechanical engineering team at their Maitland NSW facilities, the smart "new" unit has been relocated to mid Western Australia to fulfill a major rail construction role as the prime mover for Select Plant's Flash Butt Welder.

The AUD\$500 million Mid West Rail Joint Venture, comprising Brookfield Multiplex Engineering NRW and Laing O'Rourke, were recently successful in winning the 90 km Mullewa to Tilley rail upgrade. This JV has been contracted to perform all civil engineering and rail works which will involve not only an upgrade of the existing facilities between Mullewa and Geraldton but also the construction of a new dual gauge line between Morawa and Mullewa. Brookfield Rail as rail managers play a crucial role in developing and supporting the vital mining projects in the region with such facilities providing cost effective access to interstate and global markets. Manco Rail has enjoyed playing a tiny role in this process through its association with Laing O'Rourke.



**LAING O'ROURKE**





# Major Infrastructure Boost for NSW

Genesis Zerowaste is located at Eastern Creek in Western Sydney and is the site of the former Fitzpatrick hard rock quarry. This site is owned and operated by Dial-A-Dump Industries, one of the state's leading waste management companies.

NSW Premier and Minister for Western Sydney, Barry O'Farrell, launched the facility in the presence of more than 500 guests from Sydney construction, building, waste management,

and banking and investment industries. "This is a significant investment for NSW and for Western Sydney. I love the jobs this project will create for the region," Mr O'Farrell said. "The facility serves an important need – it will support construction and building in Sydney for at least the next twenty years."

"I commend the company for bringing one of the most innovative facilities of its kind in Western Sydney," CEO of Dial-A-Dump Industries, Ian Malouf, said: "Creating this facility has taken seven years of perseverance, \$300 million of investment and a passion to make a difference. Our group has been at the forefront of waste management and recycling for over twenty years. Through our Alexandria Landfill we have evolved our waste management system so that they present no



harm to the environment and the amenity and infrastructure of the local community is preserved."

"We are really proud of this facility. It leaves others of its type in the shade. Genesis sets the benchmark in the southern hemisphere for sustainable waste management."



## DIAL A DUMP Hooks Up

Dial-A-Dump Industries is one of the New South Wales leading waste management service providers. Established by Managing Director Ian Malouf in 1984, it provides innovative waste solutions for the building and construction needs of households through to the largest construction sites.

Dial-A-Dump have used the Manco RL2000 Hook Lift since the 1980's and currently operate nine units with a further two units on order.

Equipment Manager Paul Wilcockson swears by the Manco Huka. "Having been in the waste industry for over 20 years, I have used and maintained nearly every brand of hook lifts available. In my experience, none compare with the Manco RL200 unit for raw strength, durability and whole cost."



## EnviroServ and the African Problems

EnviroServ Waste Management (Pty) Ltd is the largest private waste management company on the African continent and is focused on providing innovative and sustainable waste management solutions. Although based in South Africa, EnviroServ has established operations in Mozambique, Angola, Namibia, Botswana, Zambia, Lesotho, DRC, Qatar, and Swaziland.

There exists a significant opportunity for EnviroServ to become involved in all aspects of Contaminated Land management, from the initial desktop assessment of activities that may have resulted in land being potentially viewed as contaminated, to the physical sampling of contaminated land and detailed chemical assessment of the level of contamination, to the final remediation of such contaminated land. EnviroServ views EDL with its patented Mechano-Chemical Destruction (MCD) technology as the perfect partner to maximise these opportunities.

EnviroServ Waste Management has acquired a pilot plant from EDL to prove the technology in African conditions and prove the feasibility of the technology.



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