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# Getting on board the circular economy

**PRODUCT  
STEWARDSHIP:**  
*maximising true  
sustainability  
benefits*

four

PLUS

Spotlight on  
Mana Recovery

Para Kore: zero  
waste on marae

**THE AUT  
EXPERIENCE:**  
minimal waste  
through optimal  
design

JULY 2014  
ISSUE 151  
\$9.00



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- Delivering programme which will promote Love NZ to the public through branding on recycling bins, promotional materials, communications etc.

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- Delivering programme which will promote Love NZ to the public through branding on recycling bins, promotional materials, communications etc.

For more information  
please email Donna at  
[donna.glassforum@xtra.co.nz](mailto:donna.glassforum@xtra.co.nz)

PUBLIC PLACE  
RECYCLING  
SCHEME



## ON THE COVER

The innovative Sir Paul Reeves Building at the AUT campus in Auckland

Photo: Simon Devitt



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WasteMINZ is the authoritative voice on waste and resource recovery in New Zealand, and seeks to achieve ongoing and positive development of our industry.

WasteMINZ publishes Revolve magazine five times a year, it plays a vital role in ensuring our members are up-to-date with the latest in industry news, policy and legislative changes as well as innovations and advances.

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## FROM PAUL'S DESK

**Talk to me**  
+64 9 476 7172

Paul Evans, CEO, WasteMINZ  
[paul@wasteminz.org.nz](mailto:paul@wasteminz.org.nz)

Product stewardship well and truly seems to be the topic du jour. In this issue there are two great articles which touch on the subject. On Page 20 John Gertsakis' article "The Product Stewardship 2.0 Imperative" contends that product stewardship schemes shouldn't just be simplistic end-of-pipe solutions, while on page 16 Louisa Palmer similarly argues that the move to a circular economy will necessitate a closed loop approach to materials management.

Product stewardship (or extended producer responsibility) certainly isn't a new concept; however when it comes to putting it into action, shifting our thinking about the way we make things and manage them at end-of-life is long overdue if we are to have a truly sustainable future.

New Zealand has made some excellent progress with regard to voluntary schemes; those organisations involved must be

commended for their proactive action and foresight. However, while there are some very successful schemes in place, others face the very real challenge of non-participation, causing, in many cases, the progressive few to be loaded with unfair burdens.

So it is with great pleasure that we see some positive action from the Minister for the Environment with the release of the discussion document: Priority waste streams for product stewardship intervention.

Although I personally agree with many who would like to see more happening at a somewhat swifter pace, I think we need to appreciate this opportunity for what it is. For the very first time since the introduction of the Waste Minimisation Act, senior cabinet ministers have been engaging with the concept of product stewardship, and not only is it being seen as a waste minimisation tool, but also as part of a broader

economic growth agenda. This is a hugely positive step.

The consultation on this discussion document closed on 2 July and I trust you took the opportunity to engage and provide feedback. The path ahead is unlikely to be rapid, not much is when it comes to regulation. However, this gives us the opportunity to get the details right, so when priority products are declared and schemes put in place, they'll actually work and not be besieged by the problems of many overseas schemes.

If we get this right it's truly the opportunity to embed the concept of product stewardship in New Zealand society.

## HOW TO CONTACT YOUR BOARD MEMBERS



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## YOUR BOARD

Simonne Eldridge  
[seldridge@tonkin.co.nz](mailto:seldridge@tonkin.co.nz)

WasteMINZ is a membership-based organisation and for us to be successful we must:

1. Provide high value to our diverse members
2. Make a positive impact on the development of our sector by actively working in areas important to our members.

You may notice that the common theme here is you, our members. The desire for WasteMINZ to be a positive reflection of our membership and an organisation that you can be proud of is front of mind for our Board. With the diversity of our membership, this is no easy task, but certainly not something we shy away from.

With this in mind, I would like to draw your attention to recent work we have been doing in these areas.

Over the past few years the Board has placed a very strong focus on WasteMINZ as a financially sustainable organisation. We have

been around for 25 years and see no end in sight ☺. Through a commercial focus, our team has delivered some excellent results, and rightly, this success should be passed on to you. Even though the organisation faces rising costs in a number of areas, the Board has committed to holding membership and registration fees for WasteMINZ events at their current level for the new financial year.

I am pleased to say this is the third year in a row where we have held fees static. I wish the same could be said for my power bill!

When it comes to working in areas important to you, the only way for us to know is to ask...and this is precisely what we have done through the recent member survey. We asked for your feedback on a range of topics, to put us in the best stead for the future. The survey will help us to better understand your current perceptions of WasteMINZ as well as determining your

future needs and exploring your thoughts on governance, along with the potential for establishing a membership Code of Conduct.

I would like to thank all of you who participated in this survey. We will be using the results to guide the Board's future areas of focus to ensure that WasteMINZ remains relevant for our industry.

On a personal note I have really enjoyed the past twelve months on the Board, since I last had the opportunity to share with you in Revolve. I have particularly enjoyed talking with members at our members' functions and at the Roundup in Queenstown. The diversity of our membership never ceases to amaze me and it is a constant reminder to reflect this diversity in the governance decisions we make. I have learnt so much from these conversations and look forward to many more.



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# News Bites



## AWARD WINNING AUTHOR at WasteMINZ Conference

WasteMINZ is delighted to announce that critically acclaimed American author Adam Minter will be a keynote speaker at the WasteMINZ Conference in October 2014. Adam's first book "Junkyard Planet: Travels in the Billion-Dollar Trash Trade" is a best-selling insider's account of the hidden world of globalised recycling, from the US to China and points in between.

Adam has covered the global recycling industry for more than a decade. In 2002, he began a series of ground breaking investigative pieces on China's emerging recycling industries. Since then, he has been cited, quoted, and interviewed on recycling and waste by a wide range of international media. He regularly speaks to groups about the global waste and recycling trade including a 2014 invited lecture to the Royal Geographic Society in London.

Don't miss the chance to hear Adam Minter. Register online for the WasteMINZ Conference at [www.wasteminz.org.nz](http://www.wasteminz.org.nz).

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## Save the date CRN Hui

4 – 6 November  
at Tapu Te Ranga Marae,  
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### Who should come?

- Anyone involved in community recycling, waste minimisation or social enterprise
- Environmental educators and sustainability groups.
- Commercial businesses interested in waste minimisation
- Council staff working with community recyclers or in waste minimisation

For more information  
[www.communityrecyclers.org.nz/hui](http://www.communityrecyclers.org.nz/hui)

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#### INDIVIDUAL

Bruce Le Gros

Dr Miranda Mirosa

#### STUDENT

Christian Reynolds

## MOVERS & SHAKERS



### DR MIRANDA MIROSA

Miranda is a Lecturer in Consumer Food Science at the University of Otago. Her research aims to understand why people eat what they do, why they don't eat what they don't, and how we might best impact upon these choices to encourage people to choose quality, healthy and environmentally sustainable foods. These projects include work on eating offal and reducing food waste. She can be contacted on [miranda.mirosa@otago.ac.nz](mailto:miranda.mirosa@otago.ac.nz)



### JAMES SMITH

James has recently joined TES-AMM New Zealand as a Business Development Executive to drive E-waste Recycling and the Remarketing of IT Assets. Prior to this position James worked in the IT industry for a number of years in Sales and Marketing roles at both Ingram Micro and IBM. James joined TES-AMM with the goal of expanding their presence in the NZ market, enabling more organisations to achieve a higher environmental standard of IT operation at a financially sustainable cost.

Please reach out to James on [james.smith@tes-amm.com](mailto:james.smith@tes-amm.com) or 021 670 773.

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# Major keynotes already secured are:



## Adam Minter

Author of the bestselling Junkyard Planet (USA)

Adam has covered the global recycling industry for more than a decade. In 2002, he began a series of ground breaking investigative pieces on China's emerging recycling industries. Since then, he has been cited, quoted, and interviewed on recycling and waste by a wide range of international media. He regularly speaks to groups about the global waste and recycling trade including a 2014 invited lecture to the Royal Geographic Society in London.



## Dr Ganesh Nana

Ganesh is Chief Economist at BERL (Business and Economic Research Limited) - a privately owned, independent economic research consultancy.

Ganesh has 30 years of experience in the field of economics since first working as a researcher at Victoria University and joining BERL in 1983.

Despite his passion for numbers, Ganesh believes economics is about people; their jobs, incomes, opportunities and futures. He strongly believes robust economic analysis is critical to ensuring informed choices and policy decisions are made.



## Dr Dominic Hogg

Chairman and Founder of Eunomia Research and Consulting (UK)

Dominic has an honours degree in Physics (University of Oxford), a masters degree in Development Economics (University of Wales, Swansea) and a PhD in Economics (University of Cambridge).

He leads Eunomia's policy and strategy work, and has been involved in the assessment of waste systems and technologies for many years. He has enormous experience of assessment methods as applied to waste management technologies and has also been involved in a number of leading edge policy projects involving market based instruments for environmental policy within the waste sector.



## George Adams

Chairman of the Independent Forestry Safety Review

George is a business leader with over twenty years' experience in New Zealand, Europe and Africa. He was Managing Director of Coca-Cola Amatil NZ and the Chair of the New Zealand Food and Grocery Council.

George is a member of the Business Leaders' Health and Safety Forum and chairs the Leadership Development Programme Working Group which is aimed at improving CEOs' leadership of workplace health and safety. At the 2013 Safeguard New Zealand Workplace Health and Safety Awards George was awarded the Business Leaders' Health and Safety Forum Leader of the Year.



## Dale Williams

Three term Mayor of Otorohanga and former leader of the Mayors' Taskforce for Jobs

Dale has a truly inspirational story, of how he turned Otorohanga around after local businesses started leaving and the tragedy of teen suicides spurred him into action. A certified motorcycle engineer by trade, Dale has first-hand experience launching and growing successful motorcycle dealerships and training young people through apprenticeship programs. Passionate about helping young people achieve the best career outcomes for their personal circumstances, Dale is an advocate of non-academic vocational pathways, realising that not all young people are suited to tertiary education.

**Plus many more to be announced shortly!**

# Ministry for the Environment

[www.mfe.govt.nz](http://www.mfe.govt.nz)

## Product stewardship on Government's waste agenda

The Government is looking at ways to better manage some waste streams, in particular those that pose the greatest risk of harm to the environment.

Under the Waste Minimisation Act 2008 (WMA), product stewardship recognises that anyone who produces a product that has the potential to create environmental harm has a role to play in limiting that product's environmental effects throughout its life cycle. This could include, for example, reducing the levels of toxic substances used in new products or making them easier to collect and recycle.

Since passing the WMA six years ago, the Government has encouraged voluntary product stewardship efforts as a first priority. Over this time, 11 voluntary product stewardship schemes have been accredited. They are diverting up to 34,000 tonnes of waste annually from landfill for recycling or safe destruction.

While this represents a good start, this only equates to approximately 1.4 percent of the total amount of waste disposed to levied facilities each year. The Government believes there is

an opportunity to do more on waste minimisation and resource efficiency and that the time has come to consider potential mandatory approaches for selected waste streams.

### DISCUSSION DOCUMENT

A discussion document '*Priority waste streams for product stewardship intervention*' was released in May. It asked whether four product waste streams — electronic and electrical equipment; tyres; agrochemicals and farm plastics; and refrigerants and other synthetic greenhouse gases — are the right waste streams to be the focus of potential Government intervention. It also asked whether any of the four products should be declared priority products under the WMA, requiring a product stewardship scheme to be developed and accredited.

The focus of the discussion document on which waste

streams should be considered was important, as there are a range of waste streams that have the potential for improved recovery and reuse. Identifying which should be a focus is critical before moving forward.

The information gained from this consultation process will not only test the analysis we have done to date, it will also test and increase our understanding of the problem that sits behind the current management of these wastes. We need to ensure that any interventions proposed are both efficient and effective and deal with the real issues associated with the management of these wastes, instead of just being a response to the symptoms. Mandatory product stewardship is just one of a number of intervention options available to Government to help improve the management of these wastes, and understanding the problem is key to assessing which, if any, is the most appropriate intervention.

This doesn't mean that these products are the only ones that can be considered for Government intervention or declaration as priority products. No decisions have been made and strong cases for alternatives will be considered. The submissions process is designed to test whether they are the right products to focus on and whether priority product status is the best way forward for managing them.

## WHY DID WE PROPOSE THESE FOUR WASTE STREAMS?

The four proposed products were identified using a set of criteria to assess which wastes are priorities.

The criteria covered:

- the relative risk of harm the waste poses to the environment,
- the resource efficiency opportunities available through improved management of that waste,
- whether voluntary product stewardship efforts have been sufficient to date,
- industry readiness for improved management,
- the extent to which the waste product can be connected to existing producers and manufacturers.

In terms of the effectiveness of voluntary schemes, participants in existing schemes, or those interested in setting up a scheme for the identified waste streams, have indicated that intervention is needed to ensure full participation and a level playing field.

For example, refrigerants or agrochemicals industries already operate their own voluntary accredited product stewardship schemes, but have faced problems securing the support of all industry players. This has meant the financial burden of schemes being carried by

some, but not all, of the industry – a challenge in a competitive market with tight profit margins.

The discussion document is available on our website [www.mfe.govt.nz](http://www.mfe.govt.nz), and provides more detail on the criteria used and the assessment of each waste stream against them.

## WHERE NEXT FOR PRODUCT STEWARDSHIP?

The public consultation period closed on 2 July, and the Ministry for the Environment is currently analysing all submissions received. This will inform advice to the Minister, and to Cabinet, who will decide on the next steps.

Under the WMA, the Minister for the Environment must first be satisfied that, either, the product will, or may, cause significant environmental harm when it becomes waste, or that there will be significant benefits from the reduction, recycling, recovery or treatment of the product.

Additionally, the Minister must be satisfied that the product can be effectively managed under a product stewardship scheme, ensure that the public has had an opportunity to comment on the proposal, consider the effectiveness of any relevant voluntary product stewardship schemes, and obtain and consider the advice of the Waste Advisory Board.

These criteria all have to be met before the Minister can declare any product a priority product under the WMA, and the Government wants the decision process to be deliberate, well-informed and transparent.

Final decisions on regulations or product stewardship scheme design will not be made solely as a result of this consultation. If the Government decides to pursue potential intervention in

the management of one or more waste streams, next steps will be to consider a range of options in detail. This is likely to include product stewardship models, including those recommended by industry working groups, and other forms of intervention. This process would include close analysis of short-term and long-term economic, environmental and social costs and benefits.

This is also likely to include further consultation with affected parties on the detail of potential intervention options for priority waste streams. Only after that would the Government consider what interventions, if any, to propose.

The Ministry has been very pleased with the level of engagement in the recent consultation process and the information that has been received in submissions will be invaluable to inform future policy development. Outside of this and future potential formal consultation processes, the Ministry will continue to talk to industry and stakeholders, collecting information to inform decision making.

If you have new information on product stewardship, or you have a question you would like to discuss, you can contact the Ministry's Waste and Resources team on 0800 0800 499 or [waste@mfe.govt.nz](mailto:waste@mfe.govt.nz).



# AUT



**A**UT University received its charter as a university on 1 January 2000, literally becoming the first university of the 21st century. The intervening 14 years have been challenging for the institution. There was an immediate need to develop a new research ethos to match existing teaching capability. This in turn required new infrastructure, to deliver new teaching, on new programmes with new and emerging research themes. All of this taking place in an environment where expectations, investments and capabilities of universities around the world are ever expanding. In effect AUT was (and is) establishing benchmark capability against an ever moving target. A challenge indeed!

## A COMMITMENT TO SUSTAINABILITY

From the client perspective, our responsibility to both students and wider societal stakeholders is huge. A responsibility that we actively accept. This responsibility established AUT University's commitment to sustainability in all our operations. As we have developed we have taken on ever larger projects, learning from them and improving our processes. Not only do we want to build the right infrastructure, we want to do it the right way. With this ethos in mind it was a short step to actively embrace waste minimisation and waste reduction as critical elements to achieving built asset sustainability.

# 21st Century University & 21st Century attitude

By Dr John Tookey, Professor in Construction Management, AUT

A major step up arose from the development of the new Sir Paul Reeves Building in St Paul Street on our city centre campus. This project was to establish a teaching and research facility particularly for communication studies and the creative technologies arena. As such, it was designed to incorporate TV studios, a radio station, and motion capture/green screen studios as well as more traditional teaching spaces. Right from the beginning of the project it was clear that an active role by the client body (in this instance AUT's Estates Department) was required to monitor construction waste minimisation efforts on the project. This was clearly defined in briefs to consultants at the start of the project and became a key monitoring requirement throughout.

## ENVIRONMENTALLY SUSTAINABLE DESIGN

Jasmax and Beca collaborated on a Green Star specification, which is now an industry standard. However, at the start of the project the Green star rating tools had not been fully developed for assessing academic buildings. Thus a 'whole building' environmental engineering approach was undertaken. As part of this, eleven key goals were identified which included one specifically focussed on reducing waste, emissions, pollution and resources. An added complication was the presence of asbestos

in several areas, which required specialised management.

These goals set the scene for the development of the Sir Paul Reeves Building, with waste reduction and minimisation efforts permeating every aspect. The initial phase was the demolition of two existing buildings (WK and WJ).

## SO WHAT HAPPENED TO THE DEMOLITION MATERIALS?

TYPE OF MATERIAL AND DISPOSAL LOCATION	TONNES
Asbestos contaminated debris/waste	206.78
Demolition concrete rubble for land erosion protection at Puketutu	750
Demolition concrete rubble recycled at Meremere	1790
Demolition concrete rubble disposed at Swanson Cleanfill	150
Staff refuse disposed at Redvale	3
Steel recycled as scrap at Meremere	149
Non ferrous recycled as scrap to Meremere	6
Asbestos contaminated waste water/sludge by Chemwaste	4.72
<b>TOTAL</b>	<b>3059.5</b>

**RECYCLED PERCENTAGE :  
88%**

continued on page 14



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This was a great start, but we know we can do better in the future. The project team identified a range of methods by which a higher level of recycling will be achieved on future projects.

1. On-selling of interior fixtures and fittings as early as possible,
2. Earlier engagement with the demolition contractor to review methodology,
3. Dedicating an area for on-site waste sorting, where possible,
4. On site grinding and crushing to reduce truck loading inefficiencies,
5. Appointing a recycling champion from the client and contractor to regularly evaluate progress and introduce improvements,
6. Provide incentives to contractor(s) to recycle as much as possible,
7. And lastly; if asbestos is suspected there can never be enough testing. Prompt isolation will save time and resource later.

## DESIGNING FOR WASTE REDUCTION

But dealing with the demolition of buildings is all after the fact. The reality is that true waste reduction starts with designing buildings in order to reduce waste resulting

from the construction process. In developing the Sir Paul Reeves Building, this wisdom was adopted wholeheartedly. In fact, to achieve the project's tight budget, a highly efficient building structure was an absolute necessity.

Waste minimisation thus became a key mechanism to control costs. For example, individual elements were reviewed to ensure any decorative features had another function to help minimise materials use. As a result a range of elegant design innovations were made. Some were relatively straightforward, for example concrete was left exposed around the lift core as an architectural detail. Others were more visionary, such as the baffle ceiling designed to simultaneously serve as a smoke extraction system, mechanical return air path, acoustic absorber and light diffuser.

This approach meant that the various disciplines had to be highly coordinated. For example using castellated beams for services reduced the size of services zones and thus the overall building height. While on the exterior the architectural detail of the concrete fins and precast tower panels were factory made (to reduce waste) and also act as sunshades to reduce HVAC load in the building.

Further, HVAC and Life Safety systems were combined where possible, using common systems such as air-conditioning for smoke control and extraction. By adopting this principle the need for dual systems, with their associated costs and space, was avoided.

## WASTE MINIMISATION DURING CONSTRUCTION

The Sir Paul Reeves Building is constructed on a tight city site with restrictions on vehicle movements and operations times. This led to a range of challenges to be addressed by the main contractor (Fletcher Building) throughout the project. Unfortunately the site footprint was too compact to permit sorting space for recycling on site. As a result the main contractor engaged a waste management contractor to provide off site sorting. The performance achieved by the contractor was good: regular monthly reports showed overall 78 percent of construction waste either reused or recycled.

The main contractor also ensured that all sub-contractors were aware of the recycling and waste minimisation policy from the tender stage onwards, an understanding that was further reinforced during worker site inductions.

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## WHAT WOULD HAVE BEEN DONE DIFFERENTLY?

As with all AUT projects, the Sir Paul Reeves Building became a valuable organisational learning opportunity. Key areas for improved performance included:

- More physical monitoring by the main contractor, for example the appointment of a waste champion on site to keep tabs on and fine any culprits would have helped tremendously. Similarly recognising and rewarding good waste minimisation practise is something that we would like to see in the future.
- There is the need to visually communicate the project's ongoing recycling achievements, such as having a site board on entrance to the project.
- The site layout could have been optimised to better encourage sorting on site, which would have visually reinforced the waste minimisation policy. This could have been further reinforced by ensuring that recycling bins for lunch waste were available in all rest areas (only done in main contractor's sheds but found to be effective).
- In the future, building information modelling (BIM) is seen as providing the potential to improve waste performance, in order to deliver best practice design integration. Through thorough coordination, abortive work, rework and variations can be avoided.
- There is a need to identify waste streams early in future projects. Thereafter specific bins will be introduced to separate and manage that waste stream appropriately. This includes introduction of recycling bins for

general subcontractor 'smoko' waste at one end, through to specific gypsum board recycling bins at the other.

- Following the success of the Sir Paul Reeves Building scheme, waste reduction and waste minimisation is likely to be incorporated into future tender evaluation as a critical non-price attribute. In this regard we believe a minimum 70 percent of all demolition and construction waste on site can be recycled or reused. In order to improve reuse we believe that the main contractor will early on, need to work closely with AUT to facilitate on-selling of waste items such as light fittings, carpet tiles, furniture and ceiling tiles. Research has shown that there are often buyers for these items, such as in the recent case of Auckland Council's ASB Tower refurbishment.
- From a design perspective, in the future we would expect to design building dimensions to correspond with standard material sizes and production lot volumes, particularly for timber since this is often treated and thus waste is of significant concern. AUT would expect to work very closely with its design team and selected materials suppliers to ensure designs are optimised for waste minimisation. Similarly working closely with the main contractor to ensure storage facilities on site are available would minimise damage to materials during handling.
- Finally to avoid, where possible, the use of temporary support systems (which are often discarded at the completion of projects), whilst also designing bolted (rather than welded) steel structures facilitating ultimate disassembly.

## WHAT NEXT FOR THE 21ST CENTURY CAMPUS DEVELOPMENT?

At the time of writing new engineering programmes are being developed in Construction and Architectural Engineering. These new programmes, along with other organic growth, will need to be provided for. Thus AUT is developing new infrastructure to meet these needs. The lessons of the Sir Paul Reeves Building will be rolled forward into this new project – along with other campus developments. Currently we are looking at achieving 100 percent recycling of a multi-storey car park, which will be cleared to create the space for the new development and then recycled almost entirely on the AUT South campus in Manukau. And that is just the start! The Sir Paul Reeves Building was a benchmark; we are now raising the bar dramatically.

Our intention is to create a building of which we are proud, with minimal waste through optimal design. The building will on completion be used to educate the next generation of professional engineers that will see our efforts at waste reduction as the first steps towards a sustainable future. 



Professor John Tookey has a PhD in Industrial Engineering from the University of Bradford, UK. He has been in New Zealand since 2006 and is Professor in Construction Management, School of Engineering, AUT. He has extensive experience across research, teaching and administrative leadership, plus active linkages with industry and its professional bodies. Currently he has projects investigating construction logistics practices as well as establishing the economic value of Zero Waste in construction.



# The circular economy: it's time we got on board

By Louisa Palmer, Director, Waste Connections

Here in New Zealand it feels like we are still doing our best to shove waste over a 'metaphorical cliff', while the world is rapidly changing around us. Globally the circular economy, the new way to manage resources and materials is gaining significant momentum.



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## THE CIRCULAR ECONOMY CONCEPT

The idea behind the circular economy is not new and there is significant overlap with concepts such as 'cradle-to-cradle' design as well as with industrial ecology, both of which have been around for decades; but it is only now that these ideas are starting to become truly mainstream.

To develop greater understanding at a global level the concept was promoted at the World Economic Forum held in Davos this year, and, supported by a massive collaborative effort led by the Ellen MacArthur Foundation, culminated in the release of the report "Towards the Circular Economy: Accelerating the scale-up across global supply chains<sup>1</sup>".

The Circular Economy is described as a generic term for an economy that is regenerative by design. Materials flows are of two types, biological materials, designed to re-enter the biosphere, and, technical materials designed to circulate with minimal loss of quality, whereby just like nature, waste becomes food.

It is a shift from the dominant mode of making things, where we dig up resources to manufacture goods and then discard them when we are finished, often throwing away valuable resources.

<sup>1</sup> <http://reports.weforum.org/toward-the-circular-economy-accelerating-the-scale-up-across-global-supply-chains/>

In a circular economy, products are designed to last longer, or can be repaired or upgraded so they can be resold or reused. Materials can be used in remanufacture and components can be reused over and over again.

### CONCEPT VISIBILITY

With a burgeoning population the issue of resources has become so imperative for some that a group of over 60 Conservative MP's in the UK released a major report entitled 'Sweating our Assets'- *Productivity and Efficiency Across the UK Economy*. The report supported landfill bans commenting:

*"The UK spends £1 billion a year in landfill costs just to dispose of plastics, wood, textiles and food – and in the process destroys these valuable commodities. If a landfill ban was introduced just on these products and materials, £1 billion worth of costs would be avoided and a further '£2.5 billion [of] value' would be recovered."*

Project Mainstream<sup>2</sup> is an open source website for organisations. It is supported by the cooperation of forward thinking individuals from around the globe, who seek to accelerate the transition towards a circular economy worldwide. They comment:

*"As finite resources become increasingly scarce, the price*

<sup>2</sup> <http://www.projectmainstream.org/>

*of new materials will have more and more effect on the business bottom line. Businesses that are able to innovate their processes to take back what they sell and keep their materials in closed loops are able to turn material scarcity into a significant competitive advantage.”<sup>3</sup>*

## THE LINK TO WASTE MANAGEMENT

One may well ask “what does the circular economy have to do with waste management?”

In my mind, the answer would appear to be very clear. Not only do we need new design in manufacturing, we will also need new systems in waste management, including collection and treatment. Companies may well wish to retain ‘ownership’ of their products to keep materials in a closed loop as resources become scarcer.

3 <http://www.projectmainstream.org/about-circular-economy/>

The key to this will be retaining the quality of materials. Even if the components cannot be directly reused, with good product design and an appropriate recovery system, materials will be able to be extracted and recycled without significant degradation of its quality. So, the time will come when we will be unable to collect wastes as a mixed up scrambled mess which we consign to disposal, but instead we will need to return materials and products with the same regard we had when we first purchased them.

With a global food crisis looming the Ellen MacArthur Foundation estimates that the UK could save £676 million per year in landfill costs just by keeping the food out of landfills, something some in New Zealand are currently exploring.

Let's face it, eating our food, or if unsold distributing it to others such as Kaibosh<sup>4</sup> in Wellington, an organisation who rescues food

4 <http://www.kaibosh.org.nz/>

from retailers and redistributes it to community organisations that work with people in need, is often the best and most appropriate option.

Redistribution such as this avoids landfill and also ensures the water, soil and other inputs required to produce the food are not lost. Tesco in the UK is selling ugly or misshapen vegetables that would have otherwise been discarded. The water alone that is saved selling these vegetables makes this a valuable exercise. And I am sure that ugly vegetables taste just as great as the good looking ones.

## DISRUPTIVE INNOVATORS

The looming threat of resource scarcity means that right now we have products coming to market designed by disruptive innovators that consider the concept of the circular economy, such as Phoneblok<sup>5</sup>, an independent

5 <https://phonebloks.com/en>

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organisation that has designed a smart-phone that can be customised or upgraded very easily. They did so with the purpose of encouraging the development and production of other products that produce less electronic waste.

Other examples include Wikipearl<sup>6</sup> who have developed a bite-sized morsel of food that is wrapped in a plastic-free packaging that protects the food. The packaging is also edible and biodegradable and was inspired by nature itself. The packaging can be used for foods like ice cream, cheese and frozen yoghurt. Vegetables, cocktails, soups and even water are being paired with different, nutritional and tasty packaging to form controlled portions, which can be held in the hand without degrading. Given we can now consume the packaging there will be no waste left to collect, or even to compost!

6 <http://www.wikipearl.com/#wikipearl>

Finally, the concept of ownership is set to change. Unlike today's buy-and-consume economy, in a circular economy durable products are leased, rented or shared wherever possible. If products are sold, incentives are put in place to ensure the return and thereafter reuse or remanufacture. This is product stewardship enacted.

Caterpillar already operate a remanufacturing division and report handling more than 70,000 tonnes of recovered parts in 2010 up from 45,000 tonnes in 2005. They also have better control of their supply chain while reducing green-house emissions and environmental impact.

## THE CHALLENGE FOR NEW ZEALAND

We live in a changing world and this change is accelerating rapidly. Given the momentum gathering internationally, it does seem that

while the rest of the world is responding in a multitude of ways we seem to be asleep at the wheel.

In New Zealand, we must become leaders and embrace the new way of thinking and acting before we get left behind. Our waste industry also needs to embrace this concept and help industry shift towards a circular model by redesigning how we collect materials and products in this new world. 



Louisa has worked in the waste sector for 25 years including with central and local government, corporate companies and the community sector in New Zealand and the Pacific Islands. Her experience includes concept design, developing feasibility studies and business plans through to final implementation.



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# THE PRODUCT STEWARDSHIP 2.0 IMPERATIVE

By John Gertsakis, Chief Sustainability Officer, Infoactiv



## LOOKING FOR A GLASS GRANT?

The Forum is committed to ensuring that as much waste container glass as possible is diverted from landfill and put to an effective use.

It recognises that this can only be achieved if there is input into the critical areas of infrastructure, education of the community and co-operation with local commercial recyclers and local authorities.

In some locations it may be necessary to utilise recovered glass locally or upgrade infrastructure to improve glass quality and/or the tonnages recycled.

Councils and community groups are invited to apply for funding to assist glass recycling projects. Refer to the Forum's website for the application form and the criteria for grants.

Funding projects to date include:

- Infrastructure to collect quality glass for remanufacture into new containers
- Support infrastructure to collect glass at community events
- Trials of glass as a substitute for sand in golf courses/sports fields
- Engineering report on glass in building slab construction
- The separation at source bin for single collections with glass separate
- Modification of MD4 specifications to allow glass in road construction

Funding project guide: *Making a Difference in the Community* is available on request



GET IN TOUCH WITH

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## LIFE CYCLE BENEFITS SHOULD DRIVE PRODUCT STEWARDSHIP PROGRAMS

Many product stewardship programs across the globe are in danger of becoming simplistic end-of-pipe solutions that are overly focused on collecting waste and relatively primitive materials recovery. New Zealand, Australia, Europe and North America included.

The need to re-calibrate the definition and application of product stewardship is a priority, as is the need to seriously consider waste avoidance outcomes well ahead of end-of-life recycling. At Infoactiv we call this step-change imperative Product Stewardship 2.0 as we work with our customers and partners to maximise true sustainability benefits.

While the terms product stewardship and extended producer responsibility (EPR) are often used interchangeably, the theory tells us that there are differences, some widely accepted, while others concocted on the basis of regional or ideological grounds.

When Professor Thomas Lindhqvist from Sweden's Lund University first coined the term EPR in 1990, his intent showed a clarity of purpose:

"Extended Producer Responsibility is an environmental protection strategy to reach an environmental objective of a decreased total environmental impact from a product, by making the manufacturer of the product responsible for the entire life-cycle of the product and especially for the take-back, recycling and final disposal of the product. Extended Producer Responsibility is implemented through administrative, economic and informative instruments. The composition of these instruments determines the precise form of the Extended Producer Responsibility."

Lindhqvist's definition remains intact as does its integrity of purpose, however its interpretation and implementation have suffered dramatically in many instances, as product stewardship and EPR schemes devolve into unsophisticated waste management initiatives part funded by producers and part funded by the public purse. Many local councils, and their residents and small businesses,

are economically fleeced as they continue to subsidise schemes that manufacturers are purportedly funding.

What ever happened to the cost-shifting objective associated with product stewardship and EPR, and ensuring that producers pay for externalities rather than local councils and their communities?

Furthermore, what independent evidence can we review, which shows product stewardship effectively ensures information feedback to the product development process to help create more benign, low impact products and product systems?

It is fair to say that useful examples can be found of where product stewardship programs have indeed informed new product development, especially in the commercial furniture, and the auto and packaging industries, however local councils and public funds are still drawn on to partly cover the cost of 'industry-funded' schemes. Many critics will convincingly argue that cost-shifting from local government, to producers, retailers and consumers, has yet to fully mature, especially in relation to more complex manufactured goods such as electrical and electronic equipment, batteries, lighting and vehicles.

In many ways the rhetoric and partial implementation of product stewardship programs has become an end in itself rather than one of several sophisticated approaches in the 'sustainable development' toolbox. Procrastinating governments and some industry sectors have much to answer for in denying their communities of life cycle oriented product stewardship solutions.

Lindhqvist's theory remains seductive, relevant and timely, however much can be done to achieve improved outcomes in reality. Whether we call it EPR or product stewardship, there are

glaring gaps in its implementation.

The imperatives are clear: equitable cost-sharing, greater retailer involvement, more direct feedback loops for improved design, and coherent internalisation of all externalities. We can all do much to advance the performance of product stewardship schemes, and to achieve significant socio-environmental benefit.

## BEYOND SIMPLISTIC WASTE MANAGEMENT RESPONSES

Let's remember the importance of sustainable product design, eco-innovation and the need to push the boundaries of cleaner production like they've never been pushed before. The principles exist, the tools are known and the metrics can be devised.

What central governments and producers must do, is deliver on the intent of product stewardship through intelligent policy reforms where voluntary initiatives fail or languish. This means appropriately targeting relevant stages of the product life cycle to intervene with necessary environmental improvement measures. Such actions must also recognise and respond to consumer sentiment in a genuine and truly collaborative way. The days of governments assuming an unassailable role as singular policy arbiter are coming to an end, especially when they demonstrate a process-bound mode of operation that consistently fails to deliver.

From design and cleaner production, through to greener supply chains and improved community education, it is vital that producers work collaboratively with retailers, government, the waste management industry and researchers to meet consumer expectations, which maximise environmental quality. The use-by date of inferior waste management programs has passed;

the time for Product Stewardship 2.0 has clearly arrived.

In many ways, brands, original equipment manufacturers (OEM) and producers are best placed to design and drive holistic product stewardship solutions. Government need to intervene only if voluntary initiatives fail, or if common messaging and community education is lagging. Above all, elected representatives and policy makers are well placed to work more openly and inclusively with all stakeholders and move with haste.

At a time when countries across the Asia Pacific region are drafting and enacting product stewardship laws for e-waste and other products, the absence of any tangible progress on EPR solutions for electronics in New Zealand remains deeply puzzling.

Open debate, good science, commercial acumen and community input are all essential if we are to achieve a sustainable future that goes beyond collecting and recycling materials. Let's talk about the journey ahead and how we can ensure that product stewardship programs deliver noteworthy outcomes that give credence to a circular economy. This means creating solutions that are ecologically necessary, commercially responsible and socially desirable. 



John is currently Chief Sustainability Officer with Infoactiv, a specialist product stewardship implementation business working for ICT OEMs and brands across the Asia Pacific region. He works on a range of issues including EPR strategy, product stewardship operations for electronics and batteries, government relations and environmental communications. John is also a member of the Australian Government's Product Stewardship Advisory Group, which provides advice on materials, industries and waste streams for potential product stewardship action under the Commonwealth's Product Stewardship Act.

# SULO Talbot has distributed over **one million bins** to over 20 councils

Distributing a new fleet of bins in any district is no simple task.

Planning for a bin delivery begins months ahead of the actual roll-out, and usually prior to the tender for supply being released.

An assembly and distribution starts with bin manufacture, where each bin is marked with a unique serial number, or in recent times, an RFID tag or laser barcode. A residential database is then uploaded to a management system. Using GPS and manual data collected from the service area, distribution runs are scheduled to ensure every property in the council-supplied database is allocated a new bin.

Rules are set over the treatment of stolen bins, vacant properties, vanity addresses, residents refusing bins, difficult to access properties and deliveries to invalids.

Assembly occurs in the field where a fully trained team deliver new bins according to a planned delivery schedule. Individual bins are registered to properties throughout the schedule. Once the distribution is complete an updated database that identifies each bin and its location is returned to the council.

A stage-gate approach ensures critical data is captured and minimises the opportunity for data errors. Exceptions are recorded, reported and managed on a daily basis.

To facilitate the distribution process SULO Talbot utilise a purpose built web-based management information system, capable of scheduling and tracking the distribution at every stage. The system allows for stock management, run creation, real-time tracking of deliveries, daily progress reporting and accurately linking a bin serial number to a residential property address.

A New Zealand based manufacturing facility has enabled SULO Talbot to provide both bin supply and distribution services in a 'just-in-time' nature. This can become a critical factor during periods when the world is faced with economic conditions that often affect raw material supply and shipping conditions. Often a limited time for delivery of a project and geographical disparity between production sites and distribution sites can present challenges that are more easily overcome by local supplier.



We have just completed delivering 8000 bins in Central Otago and we received this letter from one of the part-time staff:

Hello

I was helping deliver the bins in Central Otago, I was with Allied work force at the time. It went real well, I started as a temp then all of a sudden I got offered a full-time job truck driving which is my dream job.

A huge thank you to SULO Talbot for making my dream come true and letting me show AllWaste that I am a great driver.

Without SULO Talbot I would still be a temp for a while and no dream job.

A note to anybody looking at anything to do with SULO Talbot my advice to you would be go for it they make dreams reality.

Thanks for my dream job.

David Perry

# PARA KORE: ZERO WASTE ON MARAE

By Jacqui Forbes, Para Kore Project Manager

The goal of the innovative Para Kore (zero waste) programme is to make skip bins, or the burning and burying of rubbish out the back of the marae, a thing of the past. Para Kore supports marae to work towards zero waste. The opportunity, says Para Kore project manager Jacqui Forbes, is that about 80 percent of waste from a marae could be either recycled or composted.

## ORIGINS OF PROGRAMME

Para Kore sprung out of a series of meetings between Waikato Regional Council, Whaingaroa's Xtreme Zero Waste and iwi in 2008. Since 2009 Para Kore has been actively pursuing its goal of all marae in Aotearoa working towards zero waste by 2020.

Using Māori whakapapa, which recognises individuals as descending from Ranginui and Papatūānuku, the programme helps Māori place themselves back into the natural world around them, says Forbes. "Being Māori means that you are related to the sky and to the earth, to the waters, to the insects and to the forest. We are a part of the ecosystem family and the planet."

Originally piloted on three marae in Waikato, Para Kore has since provided waste minimisation education, services and support to over 50 marae from north of Auckland to the top of the South Island. At least another 70 marae are expected to take part in Para Kore over the next three years, from Tāmaki, Waikato, Bay of Plenty, the East Coast (Ngāti Porou) and Taranaki. Jacqui says, "marae are really enthusiastic about the programme. They embrace its environmental values and it saves them money too. We're seeing situations where marae now put out a couple of bags for collection following a major hui,



◀ Leleina Tolovae, standing next to one of the Hungry Bins at Pikitū Marae

whereas in the past there would have been whole ute-loads of rubbish going to the dump every day".

## CHANGES AND OUTCOMES

The aim, says Forbes, is to normalise zero waste behaviours within Māori society, so that we move closer to the ultimate goal of a zero waste Aotearoa, and ultimately fulfill our kaitiaki responsibilities.

Pikitū marae, of Raukawa, located between Putaruru and Tokoroa, is diverting around 80 percent of their waste from landfill. Their waste going to landfill now is predominantly plastic packaging, after they have sorted and separated out food waste, dirty paper, recyclables, clean paper and cardboard for either recycling or worm farm composting.

Glad wrap was used extensively in the past and the marae has eliminated this. Hundreds of new tea towels have had elastic sewn into them and these are now used instead of glad wrap over food bowls and containers. New containers have been purchased as food bowls and this enables lids to be used instead of glad wrap.

Food waste is sent down the road to local pig farmers, which results in free pork for the marae. Five Hungry Bin worm farms are in place at the marae and these are used to process dirty paper, tea bags, old tea towels and some food scraps.

Ruthana Begbie of Pikitū marae said, "It takes time to change behaviours in the kitchen, and some are more onboard than others, but if we look back we can see that our systems are becoming normalised, and it's now putting the milk bottle in the rubbish bin that is unusual. The whānau are doing things differently and I put that down to having the Para Kore programme in

place with its signage, bins and on-going education and support."

The programme has been running for five years, and Forbes says that the lessons learnt have allowed Para Kore to be adapted for other contexts including churches, trusts, businesses, educational institutions and community centres. It's the regular checking in and long-term support that is key to the programme, admits Forbes. "When we set up Para Kore we knew that the fly-by-night visit to create sustainability doesn't work. We've always been determined to stay for the long term." With continued support through annual check-ins and on-going education Para Kore is seeing results as marae and Māori communities make zero waste part of their everyday lives. 

## GLOSSARY

Para Kore | Zero Waste  
Whaingaroa | Raglan  
Ranginui | Sky father  
Papatuanuku | Earth mother  
Whakapapa | geneology  
Tamaki | Auckland



Jacqui Forbes is Project Manager of Para Kore, and co-Manager at Xtreme Zero Waste. Jacqui loves being a part of turning waste into resources. For more information please contact Jacqui Forbes on [Jacqui@parakore.maori.nz](mailto:Jacqui@parakore.maori.nz).



Sophie Barclay, freelance journalist.



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By Paul Evans, CEO, WasteMINZ

**A**t the WasteMINZ Roundup held in Queenstown in April, an entire stream was dedicated to the role of the community sector and the social enterprise proposition. One of the keynote speakers, Mark Daniels from Social Traders in Australia, defined social enterprise as: "Social enterprises use the power of the market place to solve the most pressing societal problems. They are businesses that exist primarily to benefit the public and the community, rather than their shareholders and owners. Social enterprises are commercially viable businesses with a purpose of generating social impact"

In the waste and resource recovery sector there are a number of highly successful and entrepreneurial social enterprises (predominantly members of the Community Recycling Network), so we thought it was about time we profiled some of them, starting with the Mana Recovery Trust.

Mana Recovery Trust, originally known as Mana Community Enterprises, is a non-profit organisation based in Porirua. The Trust was established in 1996 to provide vocational rehabilitation programmes to people with mental health needs, after the closure of the long-stay wards at Porirua Psychiatric Hospital.

After identifying that there was great difficulty, for the people that the Trust supports, to move beyond their rehabilitation programmes into paid employment, Mana Recovery developed a range of small business initiatives in partnership with the Porirua City Council and local businesses, focused around sustainability. Through these initiatives, Mana Recovery offer services that assist their trainees to develop socially, gain employment skills and work

ethics, build confidence and provides them with the opportunity to reintegrate back into the community.

Today Mana Recovery has extended the concept of community care far beyond the original activity programme. Up to 100 people per day participate in a variety of training programmes and Mana Recovery now employs more than 25 people with mental health needs in full or part time positions within the organisation.

Providing meaningful community services through business initiatives that increase employment opportunities for trainees and also benefit the environment seems a real recipe for success. With the partnering and support of the local council, businesses and the community, they are paving the way to a more sustainable future.

## PARTNERSHIPS ARE ESSENTIAL

Mana Recovery has built strong relationships with a wide range of community and commercial organisations. This includes:

- Working with the Ministry of Social Development, providing training and finding employment for long term beneficiaries.
- Working with the local commercial sector to provide business recycling solutions. Examples include their services to Whittaker's chocolate, where Trust employees separate ingredient bags by hand, so both the plastic and cardboard components can be recycled.
- The Trust has also closely partnered with Porirua City Council (PCC) to manage the local recycling centre "Trash Palace" and to provide inorganic collection services.

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Mana Recovery's excellence in providing these services has been consistently recognised both locally and nationally for their community based business model.

#### Awards Include

- Capital & Coast DHB Quality and Innovation Awards – Winner, Healthy Workplace Category
- Wellington Gold Awards 2013 – Team Gold Finalist
- Wellington Gold Awards 2012 – Winner, Green Gold Category
- TrustPower National Community Awards 2012 – Representing Greater Wellington Region as Supreme Winner 2011 Wellington Airport Community Awards
- Wellington Airport Community Awards – 2010, 2011
- Wellington Gold Awards May 2012 – Winner Green Gold Category
- Westpac Business Awards of Excellence 2010, 2011, 2012 – Winner Community Category and finalist 2013
- Sustainable 60 Awards November 2012 – Runner Up Medium Business Category & Finalist Community Category
- Chief Executive Elizabeth Meacle was also a finalist for Wellingtonian of the Year Environment category, in recognition of her environmental work and leadership at Mana Recovery.

## DIVERSITY IS THE KEY

Mana Recovery is an incredibly diverse operation, running nine small businesses across three sites, all with a focus on sustainability. The waste and resource recovery businesses include:

- **Trash Palace:** Located at Spicer Landfill, it sells a treasure trove of recycled goods that the public drop off. Each week hundreds

of bargain hunters visit the Trash Palace shop.

- **E-Waste Metal Recycling Facility:** Collects electronic and metal waste recovering valuable metals and usable parts. It also repairs electrical appliances for resale. The facility was part of the Government's TV Takeback scheme, with 3,809 TVs dismantled and recycled.
- **Inorganic Collection Service:** Offers Porirua residents two free collections of inorganic materials each year. This service not only provides a means for residents to send their reusable/recyclable material to Trash Palace but a way to remove rubbish from their homes, reducing illegal dumping in Porirua.
- **Business Recycling:** Collects paper and plastics from local businesses, and manually sorts and bales the products to send to local recycling companies. For example, they sell plastic to Second Life Plastics in Otaki who make it into cable cover, pipes, buckets, mats and more. Some of the key businesses the Trust works with include The Warehouse, Whittaker's and Commonsense Organics.
- **Events Recycling:** Offers local councils and businesses event and market day recycling services, including waste diversion reporting.

It's fair to say that the success of Mana Recovery has largely been possible due to its diverse businesses, which ensure that commercial risks are mitigated.

## IT'S A BUSINESS

"People often have a misconception about charities" says Mana Recovery Chief Executive, Elizabeth Meacle. "Yes, we are here for environmental and social good but we have to be financially sustainable, we are a

business, so we run it like one. We bring a real rigour to our business, budgets are well forecasted and operations are structured so they make a small surplus each year".

This approach allows the organisation to continue to grow, as well as being able to survive in difficult economic times. Cash flow is updated twice a week and shared with the management team which allows the business units to see how they are tracking and to respond accordingly.

## CHALLENGES AHEAD

The diversity of business and the spreading of risk are coming to the fore. The most significant challenge facing the Trust is the loss of a significant amount of DHB funding later this year (approximately 22 percent of Mana Recovery's income).

In response the Trust put in place a plan to secure other government and business contracts, meaning they could reduce redundancies and the effect on operations. As a result they were awarded a new contract by the Ministry of Social Development to provide skills for industry training.

Another challenge is the need to relocate their Oranga business recycling unit. A new site has been identified and they are working to make this a reality.

Despite a challenging time ahead, Mana Recovery has its eye well and truly on the future. They are currently reviewing their strategic plan with support from PriceWaterhouseCoopers (through Volunteer Wellington).

Mana Recovery is an organisation which has wholeheartedly embraced commercial realities and most definitely meets the definition of social enterprise. ☺



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1

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2

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4

New products are manufactured from the processed formerly waste product



3

Full liners are collected from farms and baled at Plasback recycling centres

**Recycling plastic has many commercial and environmental benefits.**

Plasback significantly reduces farm landfill and minimises environmental damage by ensuring that the resource is recycled.

**Sustainable plastic use into the future is assured.**

Chris Hartshorne  
**> 03 338 2400**

**[www.plasback.co.nz](http://www.plasback.co.nz)**



## SECTOR GROUPS

Nic Quilty  
Sector Projects Manager  
[nic@wasteminz.org.nz](mailto:nic@wasteminz.org.nz)

### BEHAVIOUR CHANGE

Research into understanding New Zealand food waste is well underway. Auckland Council and councils in the Wellington region have conducted bin audits to identify how much avoidable food waste is being thrown away and how much this is costing families. This has generated significant media interest. New Plymouth, Waipa, Selwyn and councils in the Canterbury region will be conducting similar audits later this year. The results will be aggregated to provide national figures on food waste.

Auckland Council and the Nelson Environment Centre are undertaking some qualitative research with households, which is well underway. Once the research has been completed, the results known and recommended changes incorporated, another group of councils will also conduct this household diary research. Auckland Council and the Nelson Environment Centre are leading the project and the project is being funded by Auckland Council, Nelson City Council and Tasman District Council.

A national online survey has been commissioned, which will survey 1,000 households around New Zealand and explore their attitudes and behaviours to food waste. Over 45 councils throughout New Zealand are contributing to this project, which will provide a benchmark for

understanding and measuring food waste in New Zealand.

A technical working group has been set up to progress the standardisation of the colours of mobile waste and recycling containers. The main focus of the project is to ratify the choice of red for rubbish, yellow for mixed recycling, and agree on the most suitable colours for food waste, organic waste, co-mingled glass and polystyrene.

### CONTAMINATED LAND MANAGEMENT

Factsheets have been published and are available to download from [www.wasteminz.org.nz](http://www.wasteminz.org.nz). The four factsheets provide guidance to anyone considering buying or selling a property, undertaking earth works or changing land use on a property that is potentially contaminated.

A CEnvP Board member from the Environment Institute of Australia and New Zealand (EIANZ) met with CRC Care in April to discuss WasteMINZ/EIANZ's and CRC Care's proposed accreditation schemes, and EIANZ proposed that the two schemes could be merged. Branding, administration and the technical differences in the two schemes were discussed and a document was developed, setting out the merits of merging the two schemes, for the management team

at EIANZ. Discussions are continuing with CRC Care.

The new steering committee met on 22 May. Their main agenda item was the contaminated land stream at the conference and a workshop (information on this will be circulated in early July). They also finalised their workplan and discussed progress on the proposed accreditation scheme and factsheets. James Corbett gave an update on the items that were discussed at the recent Regional Waste & Contaminated Land Officers Forum.

### HEALTH & SAFETY

The updated Health and Safety Guidelines: for the Solid Waste and Resource Recovery Sector – parts one, two, three and four have now been published and are available at [www.wasteminz.org.nz](http://www.wasteminz.org.nz). The guidelines include additional modules addressing bag, bin and crate collections, materials recovery facilities, resource recovery parks and refuse transfer stations. Consultation closed on part five of the guidelines (Landfills) on 16 June and the working group met on 30 June to review feedback.

A new steering committee for the sector group has been elected. Congratulations to Mike Collins, Smart Environmental; Wendi Croft, AECOM New Zealand Ltd; Greg Dearsly, First 4 Safety Ltd;

Warwick Jaine, Auckland Council; Alec McNeil, Marlborough District Council; Karen Murray, SULO Talbot Ltd; Charles Smith, Onyx Group Ltd – Veolia; Guy Smith, Transpacific Industries Group (NZ) Ltd and Robyn Vallom, EnviroWaste Services Ltd.

The advisors on the steering committee are Colin Jessup, New Zealand Transport Agency and Judy Buchanan, Accident Compensation Corporation. Our thanks to the previous steering committee for all the time and effort they put into their roles.

## LANDFILL & RESIDUAL WASTE

All sections of the draft Technical Guidelines for Disposal to Land have undergone a peer review and professional technical edit, and feedback has been incorporated. The project team met on 11 June to discuss the revised drafts and make key decisions around the items raised.

## LIQUID & HAZARDOUS WASTE OPERATORS

The Liquid and Hazardous Waste Operators Certification Council met on 13 May. Agenda items included the Ministry for the Environment's review of WasteTRACK, setting

priorities for 2014 and the upcoming Certification Council elections. The elections process was brought forward this year to commence on 30 June, as the Certification Council and WasteMINZ felt that the current timing of elections was not ideal.

If you are a code compliant operator and would like to make a difference to your sector, please make sure you nominate yourself (or have someone nominate you) and, most importantly, make sure you vote after the candidates have been announced.

## ORGANIC MATERIALS

A workshop on Legionella was held for compost manufacturers in June. An overview was provided of the organism and the disease and was followed by discussions on bag labelling and health warnings.

A combined WasteMINZ and Nursery and Garden Industry Association working group has been set up to review the voluntary bag labelling standards.

A new work stream for the group is an investigation into Clopyralid residues in compost. Clopyralid is a selective herbicide used for the control of broadleaf weeds, such as thistles and clovers. ERMA restricted access to Clopyralid in urban and domestic markets in 2006, with

labelling specifying that it could only be applied by an approved handler. Research will be undertaken to determine whether this partial ban has been effective.

## TA FORUM

The new TA Forum steering committee met for the first time in May. The steering committee will provide leadership around facilitating a clear and cohesive voice for the local government sector in relation to waste issues, in order to influence and shape the future direction of the waste industry. Their first task has been to coordinate a submission on behalf of the wider TA forum on priority waste streams for product stewardship. ☐



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## DO YOU HAVE COUNCIL NEWS TO SHARE?

These are your pages – email Jenny at [jenny@wasteminz.org.nz](mailto:jenny@wasteminz.org.nz)

## UPPER HUTT

Wellington region councils are involved in a joint project on household food waste. Waste from 300 households from around the region will be sorted to determine exactly how much edible food is being thrown away and how much it costs. UK research in 2007 found that households on average were throwing away four kilos of edible food per week, which is roughly equivalent to eight meals. This avoidable food waste translates into an estimated NZ\$1,377 per year for an average household with children.

Roderick Boys of Upper Hutt City Council, who is coordinating the food waste investigation on behalf of the region's councils, says the project will help Wellingtonians understand the extent of the problem. "In New Zealand we don't know exactly how much food is being thrown away by households and how much of it is avoidable," he says. "This project will calculate how much food waste there is and what it is costing us. It will also help to identify ways in which families can reduce it." The food waste data from the Wellington region will also be combined with similar investigations taking place in Auckland and other parts of the country to form a national dataset.

One of the solutions adopted in England was to launch the 'Love Food Hate Waste' campaign, which enabled families on average to reduce their food waste by NZ\$255 per year. The campaign involved simple strategies families could use to reduce their food waste including reusing leftovers, buying only what you need and knowing how to store food correctly.

*Upper Hutt City Council media release*

## CENTRAL OTAGO



Central Otago District Council has recently awarded an eight-year refuse collection contract to AllWaste, who will deliver the new fortnightly refuse collection service being introduced across the district from July. Tenders were sought for both a weekly and fortnightly refuse collection.

According to Infrastructure Services Manager Jon Kingsford "We had the same contract for 14 years, so it was well beyond its 'use by date' and we knew that the market had changed. We anticipated continuation of a weekly refuse collection would come at significant extra cost to ratepayers and this was confirmed through the tender process. Continuing with a weekly service would have meant an increase of around 74 percent in collection costs."

In addition to a changing market, the growth in Central Otago was also an issue, as the council was at capacity in terms of servicing all the properties receiving a refuse collection service in their district in a one week timeframe. By moving to a fortnightly service, Central Otago District Council avoided an increase in the refuse collection rate. "Staying with a weekly bin collection would have resulted in

an increase in this rate from \$231 to around \$295". In the short term the modest savings made from moving to a fortnightly collection will be offset by the additional cost of managing the anticipated increase of recyclable material.

To promote the changeover and reach all age groups, Central Otago District Council has been embracing new technology with videos on YouTube and posts on Facebook, in addition to workshops and promotional pamphlets.

*Central Otago District Council media release*

## AUCKLAND

A trial of Auckland Council's planned new organics collection service by North Shore households is off to a promising start. Almost five tonnes of material has been taken to composting facilities instead of going to landfills, after participants separated their food scraps from their normal rubbish and put it out for the first kerbside collection. Approximately half of the 2000 households in the trial put out their kerbside bins, coming close to the target of 60 percent participation.

Residents in pockets of Takapuna, Milford, Forrest Hill and Northcote, which represent low, middle and high income suburbs, are in the three-month trial. To take part, they are using two specially-provided bins: a small kitchen caddy with compostable liners for kitchen food scraps, and a larger bin for transferring the full liners into, for collection at kerbside. The quality of material placed in the bins was high, which showed people understood what to put in. This included bones, shells and general food waste, along with organic matter such as paper towels, tea bags and indoor cut flowers.

*Auckland Council media release*

## ASHBURTON

In June, Ashburton District Council's service delivery committee adopted a recommendation to further investigate options for rubbish and recycling collection, including the possible introduction of a wheelie bin service. The decision follows council's recent kerbside collection survey, which found a majority of residents are interested in a change to the way waste and recycling is collected in the district. However, the findings were not conclusive. While 46 percent of survey respondents preferred a three bin wheelie system, with an organics collection and a separate crate for glass, only 53 percent of respondents were prepared to pay increased rates for an organics collection.

Consideration will also need to be given to the impact on rates of any move away from the current bag system which generates income in excess of \$600,000 a year. Under a wheelie bin option this would need to be rated for. Andrew Guthrie, Assets Manager, says the next step for council is to investigate the various options and come up with a solution that best meets community expectations, council's waste minimisation requirements and ratepayer affordability.

A preferred option for full consultation with the community will be presented in August.

*Ashburton District Council media release*



## DUNEDIN

Dozens of bicycles donated to a recycling project in Christchurch since the earthquakes are to be sent south for use in the South Dunedin Community Bike Library Project. The 70 bicycles are surplus to the needs of the ICEcycle (Inner City East) project, which restores them and then offers them free to low-income individuals and households.

The ICEcycle programme in Christchurch, which has been running since 2009, has given away 616 bicycles so far, but is getting more bicycles donated than it can deal with. Many are donated by people cleaning out houses, sheds and garages before leaving quake-affected homes.

Dunedin City Council Safe and Sustainable Travel coordinator Charlotte Flaherty says "Those bikes that can be readily repaired will be fixed up by the Dunedin Training Centre, as part of their trade skills training programme. Those that cannot be repaired will be dismantled for parts through the Department of Corrections Probation Services."

Mrs Flaherty says "Once the bikes are ready for the road they will become an integral part of the bike library project. This is a pilot project, due to start in mid-late 2015, which will enable people to borrow bikes, locks and helmets at no charge."

*Dunedin City Council website*

# Visy Recycling Education Centre



*Learning about the environment and how we can all play our part in protecting and improving it is now an established part of the school curricula.*

*At Visy Recycling we provide educational tours not only for school groups but also for community groups and businesses to learn more about what happens to their recycling once it leaves the kerbside.*

*Tours are run Tuesday, Wednesday and Thursday at our Onehunga Material Recovery Facility (MRF) bookings are essential.*

Please contact  
Meredith Graham  
Education & Marketing Manager  
for more information.  
Ph (09) 975 2003

# EVENTS

## 20-22 JULY

### LGNZ 2014

Rutherford Hotel, Nelson

[www.conference.co.nz/lgnz14](http://www.conference.co.nz/lgnz14)

## 23-24 JULY

### NATIONAL ENERGY FROM WASTE SYMPOSIUM

Mantra Lorne, Victoria

[www.wmaa.com.au/conf/crer2014/home.html](http://www.wmaa.com.au/conf/crer2014/home.html)

## 26-28 AUGUST

### WASTECON

Grapevine, Texas, Dallas

<https://swana.org/Exhibit/WASTECON.aspx>

## 3-5 SEPTEMBER

### BUILDING A BETTER NEW ZEALAND

Auckland

[www.buildingabetternewzealand.co.nz](http://www.buildingabetternewzealand.co.nz)

## 3-5 SEPTEMBER

### PROJECT MANAGEMENT CONFERENCE

Christchurch

[www.pminzconference.com](http://pminzconference.com)

## 6-11 SEPTEMBER

### ISWA WORLD CONGRESS

Sao Paulo, Brazil

<http://iswa2014.org/important-dates/>

## 17-19 SEPTEMBER

### ENVIRO 14

Adelaide Convention Centre

[www.enviroconvention.com.au/2014/p\\_cfp.html](http://www.enviroconvention.com.au/2014/p_cfp.html)

## 22-26 SEPTEMBER

### ISWA STUDY TOUR: COLLECTION, SORTING AND RECYCLING

Austria

[www.iswa.org/fileadmin/galleries/Study%20Tours/2014\\_Stud%20Tour%20Collection/ISWA\\_ST\\_Collection\\_Sorting\\_Recycling\\_1.pdf](http://www.iswa.org/fileadmin/galleries/Study%20Tours/2014_Stud%20Tour%20Collection/ISWA_ST_Collection_Sorting_Recycling_1.pdf)

## 20-23 OCTOBER

### WASTEMINZ CONFERENCE & EXPO

Wellington

[www.wasteminz.org.nz/news-events/events](http://www.wasteminz.org.nz/news-events/events)

## 4-5 NOVEMBER

### CRN HUI

Tapu Te Ranga Marae, Island Bay, Wellington

[www.communityrecyclers.org.nz/hui](http://www.communityrecyclers.org.nz/hui)

## 10-12 NOVEMBER

### UNESCO WORLD CONFERENCE ON EDUCATION FOR SUSTAINABLE DEVELOPMENT

Aichi-Nagoya, Japan

[www.unesco.org/new/en/unesco/events/major-events](http://www.unesco.org/new/en/unesco/events/major-events)

## 10-14 NOVEMBER

### 7TH INTERNATIONAL CONGRESS ON ENVIRONMENTAL GEOTECHNICS

*Lessons, Learnings & Challenges*

Melbourne Convention and Exhibition Centre, Melbourne

[www.7iceg2014.com](http://www.7iceg2014.com)

## 11-13 NOVEMBER

### TOTAL FOOD 2014

Norwich Research Park, Norwich, UK

[www.ifr.ac.uk/totalfood2014](http://www.ifr.ac.uk/totalfood2014)

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# WasteMINZ MEMBERS

## GOLD



3R Group Ltd  
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Auckland Council  
[www.aucklandcouncil.govt.nz](http://www.aucklandcouncil.govt.nz)



Earthcare Environmental Ltd  
[www.earthcarenz.co.nz](http://www.earthcarenz.co.nz)



EnviroWaste Services Ltd  
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Golder Associates (NZ) Ltd  
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[www.smartenvironmental.co.nz](http://www.smartenvironmental.co.nz)



SULO Talbot Ltd  
[www.sulo-talbot.co.nz](http://www.sulo-talbot.co.nz)



Tonkin & Taylor Ltd  
[www.tonkin.co.nz](http://www.tonkin.co.nz)



Waste Management NZ Ltd  
[www.wastemanagement.co.nz](http://www.wastemanagement.co.nz)

## SILVER

Advance Personnel Services  
[www.adstaff.co.nz](http://www.adstaff.co.nz)

CarTakeBack  
[www.scrapcarrecycling.co.nz](http://www.scrapcarrecycling.co.nz)

City Care Ltd  
[www.citycare.co.nz](http://www.citycare.co.nz)

Foodstuffs NZ  
[www.foodstuffsnz.co.nz](http://www.foodstuffsnz.co.nz)

fullcircle recycling  
[www.fullcircle.org.nz](http://www.fullcircle.org.nz)

GHD Ltd  
[www.ghd.com](http://www.ghd.com)

Glass Packaging Forum  
[www.glassforum.org.nz](http://www.glassforum.org.nz)

Hiway Environmental Ltd  
[www.hiways.co.nz](http://www.hiways.co.nz)

Jacobs New Zealand Ltd  
[www.globalskm.com](http://www.globalskm.com)

Maccaferri NZ Ltd  
[www.maccaferri.co.nz](http://www.maccaferri.co.nz)

Manco Environmental Ltd  
[www.manco.co.nz](http://www.manco.co.nz)

Metalman NZ Ltd  
[www.metalmann.co.nz](http://www.metalmann.co.nz)

MWH Global  
[www.mwhglobal.co.nz](http://www.mwhglobal.co.nz)

Omarunui Landfill  
[www.hastingsdc.govt.nz](http://www.hastingsdc.govt.nz)

Onyx Group Ltd  
[www.onyxgroup.co.nz](http://www.onyxgroup.co.nz)

Plasback  
[www.plasback.co.nz](http://www.plasback.co.nz)

Rubbish Direct Ltd  
[www.rubbishdirect.co.nz](http://www.rubbishdirect.co.nz)

Sims Recycling Solutions  
[www.apac.simsrecycling.com](http://www.apac.simsrecycling.com)

URS New Zealand Ltd  
[www.urscorp.co.nz](http://www.urscorp.co.nz)

Viking Containment  
[www.containment.co.nz](http://www.containment.co.nz)

Visy Recycling NZ Ltd  
[www.visy.co.nz](http://www.visy.co.nz)

WasteNet Southland  
[www.wastenet.org.nz](http://www.wastenet.org.nz)

A FREE nationwide service to collect and safely dispose of Polychlorinated Biphenyls (PCBs) is offered by Transpacific Technical Services (NZ) Ltd (TTS)



There are significant quantities of PCBs still remaining in New Zealand, despite legislation being in place since 2004 prohibiting their use or storage.

This promotion is focused mainly on the disposal of small PCB containing capacitors, typically found in older style fluorescent lighting ballasts.

TTS is offering this service for **FREE**, enabling you to off-set the cost of having your lights checked and upgraded. Further savings can be made with modern energy efficient lighting.

Transformers and other items of electrical equipment containing PCBs are also eligible.

# 'FREE' PCB DISPOSAL!

Call **0800 PCB WASTE**

## Conditions of this promotion are:

- PCBs must be removed from lighting systems or fittings and rendered safe, prior to TTS accepting possession.
- This promotion is limited to the collection and disposal of 12 tonnes (maximum packaged weight) of PCB waste.
- This PCB elimination and disposal promotion expires March 2015.
- All applicants under this promotion must register with TTS. To register phone Carolyn Armstrong on **0800 PCB WASTE**.
- Acceptance approvals will be issued by TTS prior to pick-up.
- Any applicant currently on EPA's PCB register must disclose this status.
- Free collection and disposal will be applied on a first come first served basis.
- TTS will assist applicants with information on identifying PCBs and on any requirements concerning PCB storage, handling, registration, transport and disposal.
- TTS retains sole discretion as to whether or not to accept PCB waste and is not obligated to accept waste it considers outside the promotion's objectives.

TTS is able to provide more information to help identify suspect capacitors and ballasts in PCBs. Further information on PCBs is available on the websites below;

1. Safe Management of PCBs Code of Practice publication is on the MOH website: <http://www.moh.govt.nz>
2. Phasing out Small PCB Holdings is on ERMA website: <http://www.ermanz.govt.nz>

This promotion is made possible by a grant from the Government's Waste Minimisation Fund, managed by the Ministry for the Environment.

TTS also acknowledges Tredi NZ Ltd as its PCB offshore disposal agent and promotion partner.