



CASE STUDY / HE AKORANGA AROTAHI:

Digitisation project saves more than 2,360 metres of plastic going to landfill

Nā te mahi whakamamatitanga i kore ngā mita 2,360 o te kirihou i porowhiu ai i te ruapara

Whakatāne District Council has developed a process for packaging and sending physical files to storage that eliminates the use of plastic wrap, and exclusively uses reusable materials. More than 2,360 metres of plastic have been saved as a result.

Background

He tirohanga whakamuri

In 2017, a digitisation project was initiated to convert 27,474 Whakatāne District Council hard-copy property files to digital versions. The property files include important information for business and residential properties, such as building and resource consents, leases, and water and sewerage connections. The digital files will be available online when the project is completed in 2021. This case study focuses on the outgoing pallets sent to Auckland for long-term storage, and does not include those sent to Wellington for scanning.

The opportunity

Te whaiwāhitanga

The first stage of the project involved packaging the property files into boxes and sending them to a scanning facility in Wellington. When these scanned files were returned, Council staff compared the physical and digital files, to ensure the property information was placed against the correct address. Staff then sent the completed property files on pallets, each containing 32 boxes, to Auckland for long-term storage.



Figure 1: Old (left) and new (right) pallet wrapping method.

At the start of the programme, staff members wrapped each pallet in multiple layers of plastic pallet wrap to secure the boxes. This is standard practice for many industries when sending pallets.

Plastic production has a negative impact on the environment; and soft plastics, such as plastic wrap and bags, are rarely recycled because they tend to clog recycling machines. Specialised soft plastics recycling equipment is very expensive and therefore, it is often cheaper to make new plastic wrap using virgin materials. Additionally, plastic wrap is most commonly made from Polyvinylidene Chloride (PCV). According to the World Health Organization¹, PCV releases the toxic chemical dioxin when in landfill or is incinerated.

Whakatāne District Council was using approximately 112.5 metres of plastic wrap per pallet.

Further information

The solution

Te whakataunga

Council's Quality Assurance team quickly recognised this system used a considerable amount of plastic, and sought to find a more environmentally-friendly solution for the pallets, aligned with the Council's Climate Change Principles. The Principles state that the Council will act now to reduce its carbon footprint, care for and protect the environment, think and act long-term, and be part of the solution, working in collaboration with others to address climate change.

As a result, the Council developed a new method for packaging the physical files and pallets to send to Auckland, which eliminated the need for any plastic wrap and exclusively used reusable materials. The new process included staff securing boxes onto pallets with one tarpaulin to provide weather protection, one heavy-duty trailer net for support, and four five-metre tie-downs. When the pallet was received by the long-term storage facility, the 'eco-pallet' materials were returned to Council in a recycled box, which was flattened and sent back with the next pallet for reuse. 'Eco-pallet' materials were returned well before they were needed to send the next pallet.

The results

Ngā hua

Over the past few years, Whakatāne District Council has sent a total of 52 pallets to Auckland for long-term storage. Of these 52, 31 were sent using the plastic wrap method. This equates to 9,337.5 metres, or 85 lengths of Eden Park Stadium², of plastic pallet wrap used. For the 21 pallets that were sent using the new eco-pallet method, an estimated 2,362.5 metres of plastic, or 21 times the length of Eden Park Stadium², was saved. Imagine how much plastic wrap could have been saved from landfill if the eco-pallet concept was adopted earlier in the process!



Figure 2: Whakatāne District Council's Quality Assurance team (Anna Glibbery, Sara Elliot, Roslyn Moore, and Lee Siegle)

Council's Quality Assurance team reports they found it easier to wrap the pallet using the eco-supplies, which saved staff time. It was also noted that the pallet was significantly more secure than the plastic-wrapped versions. The courier service and the long-term storage provider were more than willing to trial the new way of pallet transfer.

Council intends to share this new process to inspire other organisations to reevaluate traditional methods of sending pallets, and potentially create a new industry 'normal'. Overall costs could further reduce if organisations reused the eco-pallet supplies to return other goods, like a boomerang bag, creating a circular economy.

The recent single-use plastic bag ban and the declining use of cling wrap in the home have had positive impacts on the environment. Now is the time to reassess business practices to identify where further single-use plastic alternatives can be implemented. In the meantime, the Whakatāne District Council team will continue to use the eco-pallet method, and celebrate its success.

¹ World Health Organisation, Environmental Health Criteria 2015, Vinyl Chloride

² Estimated based on the length of Eden Park Stadium being 109.78m

OUR CLIMATE CHANGE PRINCIPLES | NGĀ MĀTĀPONO HURINGA ĀHUARANGI



We will act now
Ka mahi mātou ināianei



We will care for and protect the environment
Ka manaaki, ka tiaki mātou i te taiao



We will acknowledge those most affected
Ka mihi mātou ki a rātou kua pā mārika i ngā take Huringa Āhuarangi



We will think and act long term
Ka whakaaro pae tawhiti, ka mahi pae tawhiti mātou



We will build capacity to recover from difficulties
Ka whakakaha mātou i a tātou



We will be part of the solution
Ka āwhina mātou ki te whakatika i ngā raru



We will learn
Ka ako mātou

For more information on our Climate Change Principles and projects, head to whakatane.govt.nz/climate-change