C&D Waste – trialling a pathway when you don't have infrastructure

Waste MINZ Conference 2026

▲ Pukeariki / Belmont Trig

21 May 2026

Andred Saker - Senior Advisor, Resource Recovery, Hutt City Council

andred.saker@huttcity.govt.nz

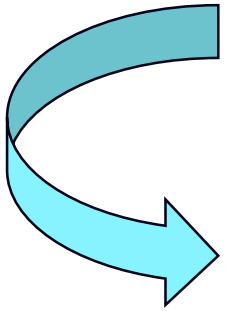
Background

- Hutt City Council owns Silverstream Landfill
- 5 year rolling average: 154, 314 tpa
- The challenge: we're bursting at the seams!

Currently modelling suggests closure in 2050, but it could be sooner…

Setting the scene

- **In 2014: BRANZ identified that up to 50% of all waste generated in NZ came from C&D sources**
- **In 2022: A SWAP revealed that C&D waste is approximately 22% of waste disposed of at the active tip face**



In 2026: MfE announced that C&D waste accounts for almost 70% of general waste

C&D waste portion of general waste stream to Landfill	Estimated annual tonnage of C&D waste
50%	77, 227
40%	61, 781.6
30%	46, 336.2
20%	30, 890.8
10%	15, 445.4

Introduction

“The project was a project management triumph”

This presentation will not solve your C&D issues, but instead, will share the rich learnings taken from the project…

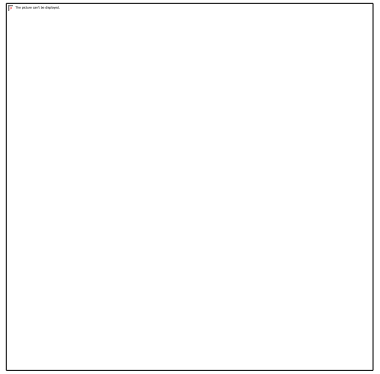
Source: DKL Projects (NZ) Ltd

STAGE 1: Everyone loves a field trip

- **STATUS QUO: what C&D waste diversion options are currently available in the Wellington Region?**
- **BARRIERS: what issues are preventing the diversion of C&D waste in the Wellington Region?**

Concrete recycling at Kiwi Point Quarry, Ngauranga, Wellington

STAGE 1: Key Learnings



Securing End Markets are the KEY!!!

For effective diversion, C&D waste needs to be:

- **Processed, then**
- **Consigned to <u>end markets</u>, either OEM or reuse/recycle agents**

STAGE 2: Scoping out the pathway

Defining the project in terms of: Objectives, Constraints, Assumptions, Benefits, Costs, **Options**, Risks, Deliverables, Project Team & Project Management methodology.

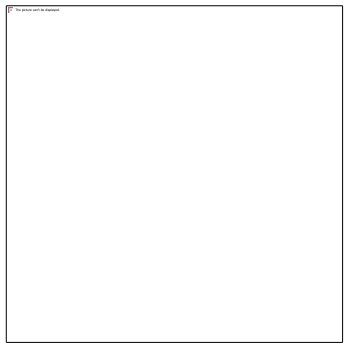
STAGE 2: Haulage options

TWO OPTIONS for haulage between Silverstream Landfill and the Central Environmental MRF (Fielding) (1.) Road only, & (2.) Road + Rail

	DTCC Study	Quote
CE by Rail	$42.48 (long haul) $43.32 (short haul)	$48.57
CE by Road	$25.79 (long haul) $95.58 (short haul)	$46.00

Source: Domestic Transport Costs and Charges (DTCC) Study – motor vehicle operating costs, working paper C5, prepared by Richard Paling Consulting in association with Ian Wallis Associates Ltd, Wellington:

STAGE 2: Key Learnings



- False assumptions
- Resource consent
- ASBESTOS!!!

Asbestos in C&D waste loads = Massive H&S and operational risk

- **Landfill resource availability**
- **Project loads will be broadly representative of all C&D waste**

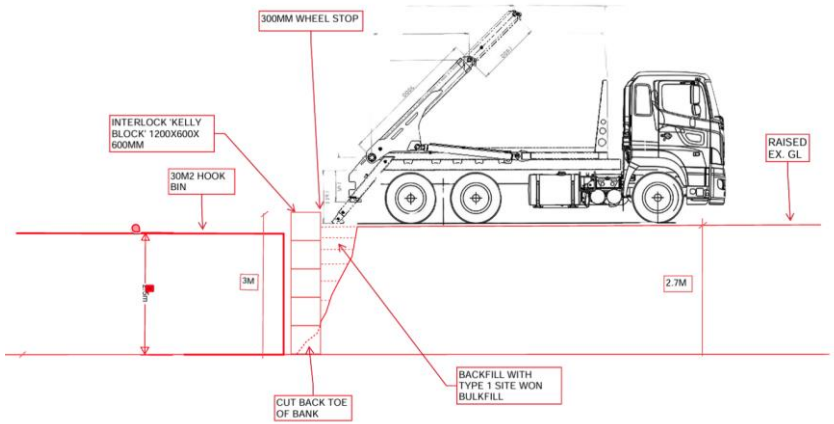
All putrescible waste needs to be covered overnight

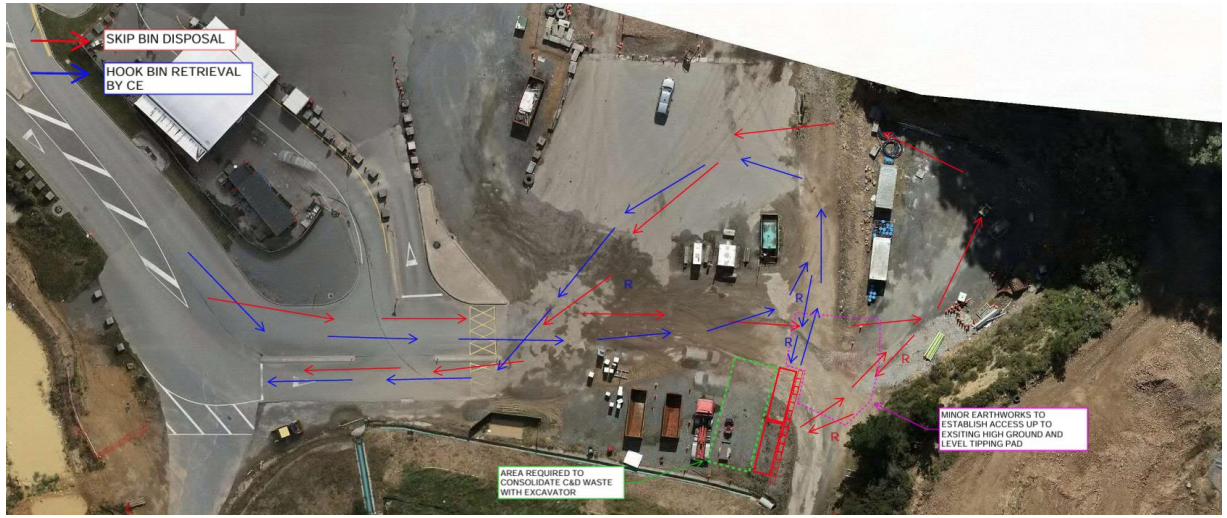
Risk of organic contamination in the project loads

STAGE 3: Let's get this show on the road (1)

Infrastructure Development

Option 1: Ramp Configuration Adjacent to the Transfer Station





STAGE 3: Let's get this show on the road (2)

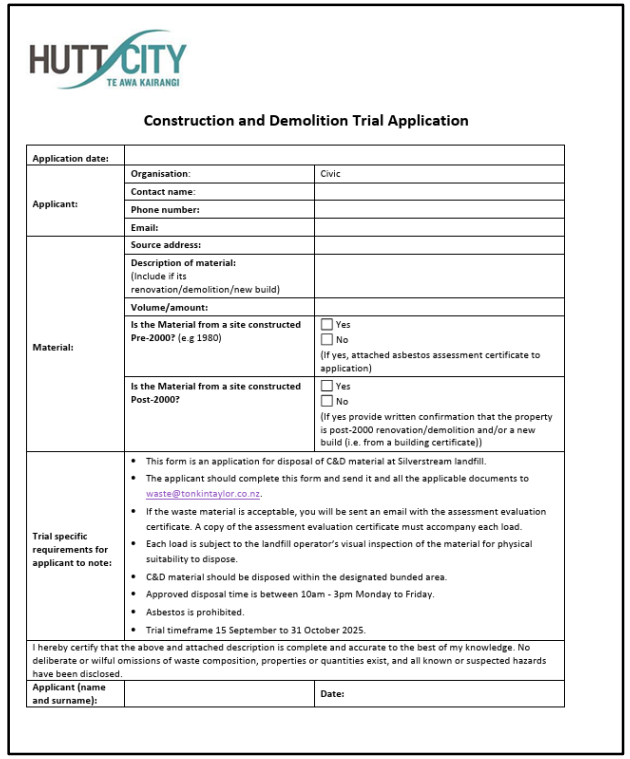
Infrastructure Development

Option 2: Bund at the Active Tip Face

STAGE 3: Let's get this show on the road (3)

Development of Business Rules

- **Convey roles and responsibilities**
- **Provide 3rd party assurance that project loads would be asbestos free**



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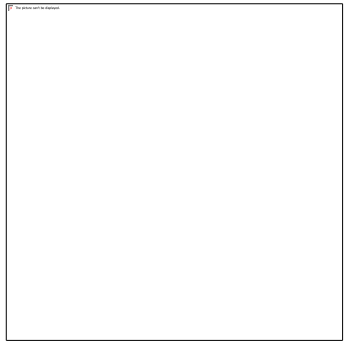
Construction and Demolition Trial Application

Application date:		
Applicant:	**Organisation:**	Civic
	Contact name:	
	Phone number:	
	Email:	
Material:	**Source address:**	
	Description of material: (Include if its renovation/demolition/new build)	
	Volume/amount:	
	Is the Material from a site constructed Pre-2000? (e.g 1980)	☐ Yes ☐ No (If yes, attached asbestos assessment certificate to application)
	Is the Material from a site constructed Post-2000?	☐ Yes ☐ No (If yes provide written confirmation that the property is post-2000 renovation/demolition and/or a new build (i.e. from a building certificate))
Trial specific requirements for applicant to note:	• This form is an application for disposal of C&D material at Silverstream landfill. • The applicant should complete this form and send it and all the applicable documents to waste@tonkintaylor.co.nz. • If the waste material is acceptable, you will be sent an email with the assessment evaluation certificate. A copy of the assessment evaluation certificate must accompany each load. • Each load is subject to the landfill operator's visual inspection of the material for physical suitability to dispose. • C&D material should be disposed within the designated bunded area. • Approved disposal time is between 10am - 3pm Monday to Friday. • Asbestos is prohibited. • Trial timeframe 15 September to 31 October 2025.	
I hereby certify that the above and attached description is complete and accurate to the best of my knowledge. No deliberate or wilful omissions of waste composition, properties or quantities exist, and all known or suspected hazards have been disclosed.		
Applicant (name and surname):		**Date:**

STAGE 3: Key Learnings



Infrastructure considerations

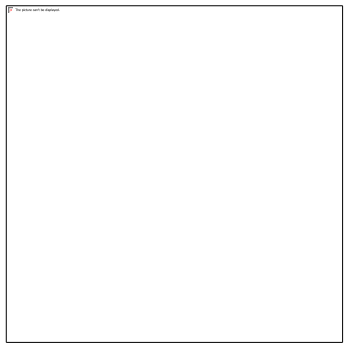
- **Safety – trucks working at elevation**
- **Interference – landfill operations**
- **Traffic – layout & segregation**
- **Machinery – proximity and road crossings**
- **Area – access and space for trucks to manoeuvre**
- **Cost – redesign of bund reduced build cost by c. $15k**

STAGE 4: The operational stage

The bund was operational between 15 September 2025 and 03 December 2025

Source: https://macpactor.com/products/compax-system/

STAGE 4: Key Learnings



- Trial run
- Business rules
- Bund design

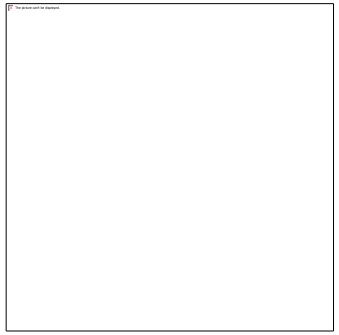
- **A trial run would have been preferable**
- **The declaration process needs to align with business needs**
- **The bund design was effective for the project size**

STAGE 5: The results

Nine skip bins (8010 kg) of C&D waste delivered

One hook bin of C&D waste transported to Central Environmental

55% diverted
45% landfilled



- **23 Lessons learnt**
- **Final Report: 31 pages on 1 hook bin!**

So, was the project a success?

Project Objectives:

- To transport a small-scale volume/tonnage of mixed C&D waste from Silverstream to Central Environmental…
- To identify and understand strengths, weaknesses, opportunities and threats to the diversion pathway…
- To verify that C&D waste from the Wellington region can be legitimately diverted from landfill…
- To identify potential long-term cost sharing arrangements between Hutt City Council, Central Environmental and Civic [WasteCo] to enable future diversion

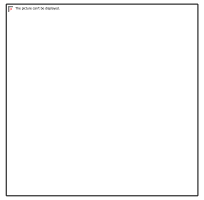
Next Steps

Enhanced project incorporating all the lessons learnt to assess the long-term viability of a commercial BAU diversion operation

- **Research: Education approach and smaller bins for constrained sites**
- **Bund Location: Semi-permanent site that supports a large bund area**
- **Licencing System: for approved C&D waste suppliers**
- **Monitoring Regime: a "3-strikes" approach for contamination**
- **Waste Declaration Process: using an aggregated or time specific approach that can still track individual project loads to the bund.**

Let's not forget the elephant…

Hauling C&D waste 150 km is not financially viable when landfilling is cheaper, quicker and more convenient.



A commercial BAU operation with sorted loads would have a shortfall of $272 per tonne.

- **Investigate processing options to make haulage to Central Environmental more efficient**
- **Identify other resource flows for backloading trucks to subsidise haulage costs**
- **Investigate using the waste levy to subsidise the shortfall for a commercial BAU operation**

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Pātai/ Questions

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21 May 2026

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