

Mahurangi East Residents and Ratepayers Association



Waste Management's proposed Landfill at 1232 State Highway 1 Wellsford: a case for rail transport of Auckland's bulk waste.

Summary:

This paper sets out the Mahurangi East Residents and Ratepayers Association (MERRA)'s stance on Waste Management's proposal to establish a future Auckland landfill on land recently purchased beyond the Dome Valley south of Wellsford.

MERRA does not support the proposal to establish such a facility in such a sensitive and beautiful area. However we know from past cases that such projects are driven by powerful needs and interests. They can be both difficult and expensive to stop.

Accordingly MERRA argues, assuming all other objections, standards and conditions are satisfied, that consent for landfill operations at the Dome Valley should specifically protect the Auckland-Wellsford roading network from hundreds of extra heavy traffic movements daily.

We argue that any eventual consents ***should include a requirement that bulk waste is transported by rail from Auckland utilising the existing but grossly under-used Auckland to Whangarei rail line that passes within 2 kilometres of the proposed landfill site.***

We believe that the environmental, safety, social and financial costs of adding an extra 300+ heavy vehicles and 150+ other vehicle movements daily to the 71 km stretch of SH1 north from Auckland City to Warkworth and the Dome Valley (already notorious for its high accident rate) are simply unacceptable.

Waste Management's own Managing Director Tom Nickels, concerned at the effect of increasing traffic congestion on his operation, recently urged the Government to do something that "*will have a genuine impact on congestion*". (NZ Herald 16 May 2018).

This proposal offers all stakeholders the chance to make just such a meaningful and positive impact.

We outline our case below.

Introduction:

MERRA mainly represents residents and ratepayers of Scotts Landing, a peninsular central to the Mahurangi Harbour in the Rodney Ward of Auckland City.

Our residents rely heavily on State Highway One (North of Auckland) as their key transport connection. It is more than just a societal connection. It also provides access to Auckland amenities funded by their rates and connects them to critical infrastructure such as hospitals and airports.

MERRA notes Waste Management's purchase of land in the Dome Valley and its stated intention that this land become the site of a major landfill to replace Redvale from c2028.

Favouring other options:

MERRA supports any technological and sustainability measures that will minimise future landfill demand. Examples include improved recycling, less wasteful building practices, composting and zero packaging/refundable deposit schemes. It is our hope that such initiatives will be incentivised to extend Redvale's lifespan and ultimately remove the need for new landfill sites.

However as the Dome Valley landfill consent applications are imminent, MERRA adds its call to those demanding that environmental and amenity concerns are addressed to the highest standard through that process. Consent applications are now planned for early 2019.

A bottom line:

In the event that suitable landfill-site controls and mitigations are attainable, MERRA's overriding concern will remain: that is bulk waste transportation by road and its associated adverse environmental, safety, maintenance and amenity impacts.

The prospect of an extra 300+ heavy vehicle and 150+ light vehicle trips daily on the 71 kilometre stretch of SH1 from Auckland to the Dome Valley to dump Auckland's waste is unacceptable.

Collectively these 450 vehicles, if diesel, would burn close to 20,000 litres (almost 17 tonnes) of diesel fuel per trip with associated CO₂ and carbon emissions. Waste Management has committed to electrifying its total fleet (target 20 vehicles by 2020). It is an admirable goal. However it there will be hundreds of other trips by other contractors in diesel fuelled vehicles.

However, regardless of whether they are diesel or electric, these vehicles will all add to existing congestion and safety risks on the new gateway Auckland to Warkworth motorway and more worryingly on "one of New Zealand's deadliest roads"; the Dome Valley section of SH1 for which a replacement has recently been deferred indefinitely.

Over the proposed 5am to 10pm day (all year, 7 days) 450 return trips would mean an average of 54 vehicles entering or exiting the landfill every hour. Assuming an (unlikely) even spread across the day that is almost a vehicle a minute two thirds of which will be heavy trucks. Potentially without counting the lighter vehicles, this means a 66% increase in the 1000 trucks a day currently passing through the Dome Valley!



Figure 1: The Dome Valley is demonstrably "one of New Zealand's deadliest roads" with 17 fatalities and 42 serious injuries recorded between 2005 and 2016.. The proposed huge increase in heavy traffic is untenable. Image: Stuff.co.nz., Statistics Rodney Times, Dec 20, 2018.

Added to this would be the increased heavy traffic damage to road surfaces, increased noise and vibration for residents near the highway, and the inevitable road-surface pollution long evident at Redvale/Coatesville from dirty truck tires and content seepage from their cargo.

Our strong contention is that road transport of waste from Auckland to the Dome Valley is unacceptable for the above environmental, safety, cost and amenity reasons.

It is also unnecessary given the waste-by-rail alternative that is available.

MERRA's position is that the bulk transport of Auckland's waste to any future landfill in the Dome Valley should be via rail NOT road.

MERRA's Case in More Detail:

A cornerstone of our case is that the much under-used **Auckland to Whangarei railway line passes within 2km** of the proposed landfill site (2.8km via Wayby Station Road). Strangely all discussion papers we have sighted appear to ignore this fact and concentrate solely on the volumes and the impacts of road transport.

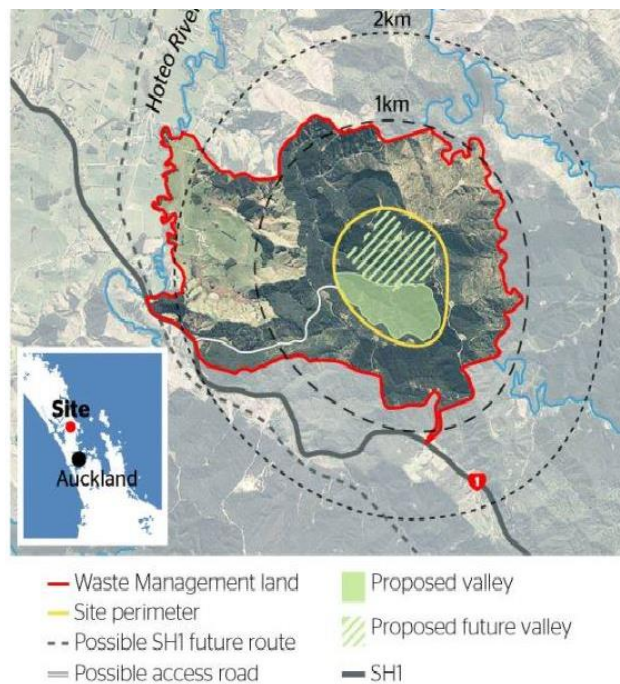


Figure 2: The map of the Waste Management's proposed landfill site (NZ Herald).



Figure 3: Google Maps screenshot showing rail line and the distance to the main entrance of Waste Management's site by road. The straight-line distance is exactly 2km. The proposed alignment of the Warkworth to Te Hana motorway (currently deferred) shows a major interchange on the section of Wayby Valley Rd showing to the top centre of the map.

We envisage the creation of truck-to-rail compacting transfer stations close to the waste source (metropolitan Auckland, eg. South and West).

For reasons of cost and standardisation we propose the use of standard shipping containers (adapted to be top loading and self-closing) and a load-from-above hopper system incorporating a 2 into 1 compactor similar to a giant wool press¹.

At the landfill site the construction of a short spur rail line (or unload/shuttle setup) to the proposed Dome Valley site would complete the picture. To optimise the setup, it would be sensible to design the spur line as an initial yet integral part of the Wellsford interchange which the just-released alignment plans for the Warkworth to Te Hana motorway show located at Wayby Valley Road. This is (almost too conveniently) adjacent to the landfill site (See Fig. 3 above). The prospect protecting SH1 from such a massive increase in heavy traffic must provide NZTA/Government a healthy incentive to facilitate a rail crossing in the interchange design. It must also offer increased road user safety at a time when any gains are drastically needed.

The total package would enhance the environmental, cost and amenity credentials of any future landfill consent application.

The prospect ticks the boxes critical to ultra-cost-effective rail transport. Crucially it offers fixed load and unload locations, a standardised bulk cargo, and flexible travel times.

Waste-by-rail train through the urban AT Metro network area could be scheduled to avoid peak commuter times and (similar to current freight movement through Auckland) possibly favour night operations.

Alignment with local and national policy priorities:

¹ We can provide sketch concept drawings of how self-closing containers and a compatible compactor might be set up. We also note that 'standard containers' 300mm shorter than export containers and will fit through existing rail tunnels in advance of the proposed rail line upgrade.

There is certainly good fit with Auckland Transport's [Auckland Regional Land Transport Plan 2018-2028](#) that highlights the severe impact on the freight industry of extended travel times and poor reliability. It seeks to optimise the efficient movement of goods and services despite heavily increasing traffic.

MERRA argues that removing over 300 heavy vehicle and 150 lighter daily long-haul vehicle movements from the Auckland roading network in favour of rail would be a significant and very symbolic step in the right direction.

It would certainly help shift the balance which currently sees over 87% of Auckland's freight movement occurring on already congested roads. (See: <https://at.govt.nz/media/1977374/rntp-consultation-single-pages-small.pdf>)

There is also good alignment with the Government's regional development initiative for Northland and current work to "investigate upgrading and expanding" the Auckland to Whangarei rail line and add access to Northport/Marsden Point.

(see: <https://www.stuff.co.nz/business/104411430/kiwirail-welcomes-northland-rail-pledge> and <https://www.greaterauckland.org.nz/2017/11/29/northland-rail-2/>.)

An 8-10 year lead-time also means that a waste-by-rail transport option could be factored into the Government's regional development case for the Auckland to Whangarei rail upgrade. This could radically improve cost-benefit figures and enable potential upgrades and extensions (such as the short spur line) to be planned for within workable timeframes.

A waste-by-rail option would also significantly increase revenue for Government-owned Kiwirail on the Northern Line.

Currently used by only 10 return freight trains weekly, the line is break-even financially with maintenance minimised and upgrades on hold. (See: <https://www.greaterauckland.org.nz/2018/03/09/northland-rail-part-2-marsden-point-line/>).

There is potential for significant synergy with local, regional and national goals in MERRA's proposal for waste-by-rail. It offers a multiple win option not only for Kiwi Rail, the Northern Rail upgrade/Northport and NZTA's maintenance budget but also in road safety, travel times, and the environment.

Experience elsewhere:

Rail transport of waste to landfill is used successfully around the world in comparable centres. London and Seattle are but two examples where this approach has enjoyed long-term success.

In line with experience elsewhere, UK analysts conclude that...

Rail offers cost effective waste transportation to local authorities faced with looming Government environmental and recycling targets. Across the country, local authorities and specialist contractors endorse rail as the safest and most environmentally friendly method of transporting large volumes of waste whether municipal, contaminated land remediation or industrial and commercial waste. As roads become more crowded and environmental regulations tighten, transport by rail makes even more sense.

(See: <http://www.freightonrail.org.uk/CaseStudyWasteByRail.htm>)

Closer to home a detailed case study in Christchurch New Zealand (2011) reported the following benefits of transporting waste by rail over road.

- **Economic: Rail offers reduced operating costs**
- **Energy Consumption: Rail uses over 50% less energy (fuel) than road**
- **Emissions: Rail produced 10% to 20% the levels of road**
- **Accident risk: Rail is less than 0.5% of the equivalent of road**
- **Noise & Vibration: Rail would reduce noise & vibration (improve life quality)**
- **Congestion: 1 train carries the payload of 50 truck and trailer units**

While this Christchurch study very narrowly endorsed the status-quo (road transport that was already operating full distance) this was skewed by specific local factors. These included multiple pick up locations/distances, a need for triple-handling due to an 8km road trip from rail head to landfill and projected **weekly** volumes less than the current **daily** waste volumes in Auckland.

MERRA contends that more stringent recent planning/environmental controls, the proximity of rail and landfill site (c 2km distance from rail line to Waste Management's property boundary) and over 500% higher waste volumes would clearly tip the balance in favour of rail should this study be replicated for the Auckland-Dome Valley proposal. We believe the vastly increased transport distance for the proposed site would be a pivotal factor on its own.

See: [Transport Of Solid Waste - Road Transport Versus Rail Transport- Case Study Christchurch](https://researcharchive.lincoln.ac.nz/bitstream/handle/10182/4415/transport_solid_waste.pdf?sequence=1), Jean-Paul H. M. Thull
(https://researcharchive.lincoln.ac.nz/bitstream/handle/10182/4415/transport_solid_waste.pdf?sequence=1)

International and local evidence strongly suggests that a waste-by-rail transport requirement would deliver economic and environmental benefits while enhancing community safety and amenity.

Conclusion:

MERRA sees this issue as a litmus test of Auckland Council's environmental credentials.

It will also test the level of respect Council holds for its own planning principles, Rodney Ward residents and other users of the roading network.

It delivers on Waste Management's own Managing Director's recent calls for initiatives that "*will have a genuine impact on congestion*".

We challenge our Council and Government (including NZTA and Kiwirail) to work with industry in supporting and delivering on MERRA's proposal and the significant environmental, financial and community benefits it offers.

We conclude as follows:

MERRA contends strongly that any future Dome Valley landfill consents should include a requirement that bulk waste is transported by rail from Auckland utilising the currently under-used Auckland to Whangarei rail line that passes through metropolitan Auckland to within 2 kilometres of the landfill site.

Mahurangi East Residents and Ratepayers Association Committee: December 2018.

www.scottslanding.org