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Submission on a Notified Resource Consent Application

Form 13

Sections 41D, 95A, 95B, 95C, 96, 127(3) and 234(4),
Resource Management Act 1991

This is a submission on:

APPLICANT'S NAME: Global Contracting Solutions Limited
LOCATION: 401 Racecourse Road, Te Awamutu

I am not* a trade competitor for the purposes of section 308B of the Resource Management Act 1991.

I am not directly affected by an effect of the subject matter of the submission that—
(a) adversely affects the environment; and
(b) does not relate to trade competition or the effects of trade competition.

The specific parts of the application that my submission relates to are:

ALL

My submission is: See attached submission

☐ We **Oppose** parts or all of **x**

I seek the following decision from the consent authority: Decline the application

I wish to be heard in support of my submission.

✶✶ I do wish to be heard in support of my submission
(this means that you will speak at the hearing)

You must tick one of the boxes above, otherwise it will be deemed that you do not wish to be heard and we will not advise you of the date of the hearing.

✶✶ I have served a copy of my submission on the applicant.
(this is required by section 96(6) (b) of the Resource Management Act 1991)

Submission to the Waipā District Council on Global Contracting Solutions applications for resource consent to build a waste incinerator at 401 Racecourse Road, Te Awamutu

Reference LU/0323/21

Submission of the Zero Waste Network Aotearoa

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1. Contact details & submission process

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Postal address: PO Box 18164, Glen Innes, Auckland 1072

- Our submission relates to the whole application to Waipā District Council
- We **oppose** this application. We want the Waipā District Council to **decline this application**.
- We would like to be heard in support of our submission.
- We intend to call expert evidence in support of our submission

2. The Zero Waste Network Aotearoa: Who we are

2.1 Founded in 2006, the Zero Waste Network is a national, not-for-profit umbrella organisation of 130+ members. Our members include community enterprises involved in the promotion or practical implementation of zero waste, waste minimisation, resource recovery/circular economy, environmental education, resource efficiency, resource conservation, local employment and local community development. We deliver resource recovery training to the sector, support community enterprise development, and advocate at the local and national level on issues like increasing the waste levy and mandatory product stewardship.

2.2 Our members are involved at the frontline of resource recovery and waste minimisation everyday. Collectively, our members employ 1400+ people, recover 64,000+ tonnes of material each year and feed $91+ million dollars back into local economies through our enterprises.

2.3 As an example, Xtreme Zero Waste, based in Raglan, is one of our members. Facing the closure of their landfill in 1998, the community began to research alternatives to landfilling. Xtreme opened in 2001, and immediately began diverting 70% of the community's waste from landfill. In 2022, Xtreme now diverts 78% of materials from landfill and employs 40 people. This has resulted in an economic benefit of $22-34 million for the local community.

2.4 The Zero Waste Network's mission is to:

- connect and empower a network of zero waste community enterprises across Aotearoa
- inform policy and procurement
- trial and deliver zero waste solutions

2.5 The Zero Waste Network is based in Auckland and Wellington with board members spread across Aotearoa. For more info: https://zerowaste.co.nz

3. Significance of the Te Awamutu application

3.1 New Zealand does not have any Municipal Solid Waste (MSW) incinerators nor any Waste-to-Energy facility of any type designed to process MSW. New Zealand does, however, have a history of incineration. Community concerns over the impact of dioxin contamination resulted in the closure of all existing incinerators (processing medical and airline waste) and replacement with steam sterilisation.

3.2 There was a proposed $223 million 'waste incineration for energy generation' development at the mothballed Meremere coal-fired power station, which would have caused large-scale dioxin pollution from burning waste and used coal as the feeder fuel. The Meremere community and others opposed this plant and it was never built (see "Plan junked for power plant fired by rubbish" in the *New Zealand Herald*.)

3.3 These community campaigns also gave rise to the New Zealand government signing the Stockholm Convention on Persistent Organic Pollutants and the subsequent national ban on hazardous waste incinerators, one of the country's largest sources of dioxins.

3.4 We are concerned that the company, Global Contracting Solutions (GCS), has exaggerated the benefits and downplayed the risks of their proposal. We consider several of their central environmental claims to be inaccurate and misleading.

3.5 In particular, GCS uses terms that are associated with being environmentally friendly, which the specifics of their technology and application do not back up. These false claims include that:

3.5.1 The facility will produce 'renewable' energy, despite the primary feedstocks being non-renewable fossil-based materials such as plastics which emit greenhouse gases when burned.

3.5.2 The planned combustion of tyres which would increase sulphur dioxide (SO_2) emissions to 4 times more than the emissions that have been modelled.

3.5.3 The facility will result in net savings of tens of thousands of tonnes of greenhouse gas emissions (GHG) when our modelling shows it will significantly increase GHG emissions.

3.5.4 That this facility is primarily a recycling facility when most of the material received will be burned.

3.5.5 That this is part of the development of a circular economy when incineration has been defined by the European Union as harmful to key environmental objectives such as the transition to circular economy, waste prevention and recycling

3.6 This use of 'greenwashing' may have led representatives of Waipā District Council, Waikato Regional Council, local iwi, members of the public and other stakeholders to support this proposal where they may otherwise not have, had they been provided fuller information and analysis of the proposal.

3.7 The Te Awamutu proposal represents the first of its kind in the country. The consistent message from well-researched investigations and government policy into MSW waste-to-energy in New Zealand do not recommend its adoption. More pointedly, this particular proposal combines the worst combination of factors: its location in a residential neighbourhood, in a flood zone, surrounded by schools and food businesses, in a community with a voluntary fire fighting force, with the need to truck in almost all of the waste "feedstock" from outside of the community and truck out the toxic byproducts, carcinogenic air emissions, massive CO2 emission and the list of major issues just goes on.

3.8 The proposal must be understood primarily as a hazardous facility that burns dirty carbon "wastes" for the production of extremely inefficient non-renewable energy. At the core of this proposal is a desire by the applicant to dispose of one of their major waste streams, shredder floc.

3.9 We strongly urge the Commissioners and Councils to apply the Precautionary Principle. The European Parliament notes, "The precautionary principle enables decision-makers to adopt precautionary measures when scientific evidence about an environmental or human health hazard is uncertain and the stakes are high."[1] In New Zealand, this principle has been most recently

[1] European Parliament. 2015. *The precautionary principle: Definitions, applications and governance* https://www.europarl.europa.eu/thinktank/en/document/EPRS_IDA(2015)573876

incorporated into s 10(4) of the Natural and Built Environment Act 2023 that states: "If information required [for decision-making] is uncertain or inadequate, a person exercising powers and performing functions and duties under this Act must favour—

(a) caution; and

(b) providing a level of protection for the natural environment and cultural heritage that is proportionate to the risks and effects involved.

3.10 The stakes could not be higher. This application must be declined.

We also urge the District Council to request the Minister for the Environment call the application in as a proposal of national significance under s 142(1) of the RMA. The Minister can exercise his or her discretion to call in a matter that has been notified by a local authority prior to 5 working days before the commencement of hearings (s 144). In our view, the application has more significant potential adverse environmental effects than the Waimate Waste to Energy proposal which has been called in and referred recently to the Environment Court. The present application has a greater potential for greenhouse gas emissions given that shredder floc, plastics and tyres will be part of the waste feedstock that is incinerated. The proposal is likely to engage:

a. the new national direction on industrial process heat (the National Policy Statement and National Environmental Standards)
b. the new provisions in the RMA regarding the effects on climate change of greenhouse gas emissions (the repeal of s104E is relevant to, and can be considered in a called-in application due to the transitional provisions in clause 29 of Schedule 12 (a point which was accepted by the EPA in its recommendation report on the Waimate proposal)
c. Regulation 7 of the NES for Air Quality which may operate as a statutory bar to the grant of consent, or at least Regulation 7(2)(b) which places strict standards on the burning of tyres
d. New Zealand's international obligations regarding the Stockholm Convention on Persistent Organic Pollutants and potentially the Basel Convention (at least in the application of definitions and Convention Annex waste, given the cross reference to the Convention in the NES for Air Quality).

4. Status of activity

4.1 A resource consent is required for this incinerator. It is considered a 'non-complying activity' under the Operative District Plan. Section 104 of the Resource Management Act sets out the gateway tests for non-complying activities:

> ***Section 104D - Particular restrictions for non-complying activities***
> *When dealing with non-complying activities, before granting an application a council must be satisfied that* ***either the adverse effects of the activity on the environment will be minor*** *(s104D(1)(a)), or* ***the proposed activity will not be contrary to the objectives and policies of a proposed plan and/or plan*** *(s104D(1)(b)).*

4.2 We submit that this application fails on both accounts.

We support the findings in the Reporting Officer's notification decision dated 27 September 2022 that the "adverse effects are likely to be more than minor". In addition, we note that:

> The onus is on the applicant to prove that the adverse effects of the activity on the environment will be minor. We submit that:
>
> - Adverse effects of the proposed activity are more than minor,
>   or, in the alternative,
> - The applicant has not provided enough information to satisfy the Council that they are minor.
>
> The onus is on the applicant to prove that the proposed activity will not be contrary to the objectives and policies of the Waipā Operative District Plan. We submit that:
>
> - The proposed activity is contrary to the objectives and policies of the Waipā Operative District Plan,
>   or, in the alternative,
> - The applicant cannot prove that the proposed activity will not be contrary to the objectives and policies of the Waipā Operative District Plan.

4.3 The general approach to S104(D)(1)(b) requires consideration of the objectives and policies of the plan as a whole.[2] Such an approach however necessitates identification of relevant specific

[2] Akaroa Civic Trust v Christchurch City Council [2010] NZEnvC 110 at [74].

policies and objectives and/or any "important set"[3] of policies and objectives and then to consider how they sit within the scheme of the plan.

4.4 To be "contrary to" is something more than to "contravene" but is not "restrictively defined".[4] It contemplates "being opposed in nature, different to, or opposite and also repugnant and antagonistic".[5] The bar is set through consideration of the planning context.

4.5 While noting that objectives and policies should be considered as a whole, *Akaroa* also contemplates that there may be instances where a single policy is so "very important and central to the proposal before the consent authority, it may be open to the consent authority to find the proposal is contrary to the objectives and policies under section 104D".[6] The more common approach is however to find a proposal contrary to an "important set" of relevant objectives and policies. *Queenstown Central Ltd*[7] is another example of where a certain set of provisions were considered so important to the proposal and to set a clear intention that to be contrary to them was to be contrary to the plan as a whole.

4.6 This application has been judged to be non-complying because

- an industrial activity is proposed within that part of the site zoned Residential,
- a minimum free board of 500mm is required whereas 300mm is proposed,
- some development is proposed within the High Risk Flood zone and
- the industrial component of the activity will not be connected to reticulated wastewater.

4.7 A number of other issues trigger the need for consent because they are Restricted Discretionary activities or Discretionary activities (pp 67-68 of the application lists these in full). Taken in isolation, one of these matters would be of concern; taken together, the totality of these clearly illustrates that this is the wrong place for this project including:

- Storage of hazardous substances & risk
- Excessive noise
- Scale of earthworks
- Activity not aligned with zoning of current land

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[3] Akaroa Civic Trust v Christchurch City Council [2010] NZEnvC 110 at [74].
[4] NZ Rail Ltd v Marlborough District Council [1993] 2 NZLR 641 (HC).
[5] NZ Rail Ltd v Marlborough District Council [1993] 2 NZLR 641 (HC); Tairua Marine Ltd v Waikato RC
[6] Akaroa Civic Trust v Christchurch City Council [2010] NZEnvC 110 at [74].
[7] Queenstown Central ltd v Queenstown Lakes District Council [2013] NZHC 817 at [37], [40]

- Furnace and stacks exceed height requirements
- Traffic loads & vehicle crossing
- Proximity to Mangapiko stream

We note that the Council can take into account other issues that it deems relevant.

4.8 Assessment of hazardous substances was conducted by a firm without the requisite expertise in that area in contravention of District Rules. This is detailed more fully under Sections 6.3.4 and 6.3.5.

4.9 The Applicant has failed to adequately assess the quantity of hazardous substances, diesel fuel in particular, to be stored on site. An accurate assessment would trigger the need for an additional resource consent. This is detailed more fully under Section 6.3.6.

4.10 We submit that this application does not meet the test for completeness under s 88(2)(b) of the RMA (and consequently Schedule 4 s1, s6(1)(c) and s7(1)(f)) but potentially also for adequacy under s92 of the RMA. The documentation provided by the company offers inadequate and incomplete information upon which to make an informed decision about granting consent. This proposal has many unanswered questions and unsubstantiated assumptions about its operations that cannot be relied upon for decision making. Under s 104(6) RMA a consent authority has jurisdiction to decline an application for resource consent on the basis that it has inadequate information to determine it.[8]

5. Adverse effects of this proposal on the environment

5.1 Water quality & health:

5.1.1 The Waipā District Plan specifically addresses the Health and well-being of the Waikato and Waipā Rivers:

> *Sec 7.2.20 Development within the Industrial Zone has the potential to adversely affect the health and well-being of the Waikato and Waipā Rivers. Careful consideration should be given to the following; (but not limited to) potential impacts of increased earthworks,*

[8] *R J Davidson Family Trust v Marlborough District Council* [2017] NZHC 52 (HC) [at 100 – 102].

impervious services, the provision of infrastructure, and the storage of hazardous substances within river catchments.

5.1.2 Two crucial documents guide decision making

5.1.2.1 The National Policy Statement for Freshwater Management (2020). The fundamental concept of the NPSFM is Te Mana o te Wai, which prioritises the health and well-being of water bodies and freshwater ecosystems above economic needs. Te Mana o te Wai is relevant to all freshwater management and provisions are included in the Waikato Regional Council to manage development and activities that have an adverse effect on the quality of freshwater.

5.1.2.2 Waikato river vision and strategy (of which the Waipā and all its tributaries are a part of.) In particular objectives (g) and (h):[9]

(g) The recognition and avoidance of **adverse cumulative effects**, and **potential cumulative effects**, of activities undertaken both on the Waikato River and within its catchments on the health and wellbeing of the Waikato River.

(h) The recognition that the Waikato River is degraded and should not be required to absorb further degradation as a result of human activities.

5.1.3 The five-year Maungatautari to Pirongia Ecological Corridor Project (June 2021 to June 2026) is midway through its efforts. The aim of this project is to link two of the region's most spectacular maunga, Maungatautari and Pirongia, via an ecological corridor between the waterways that flow from the two maunga – the Mangapiko and Ngāparierua streams and seeks to *ultimately improve water quality.*

5.1.4 "The Mangapiko stream in this location is classed both as a Significant Trout Fisheries and Trout Habitat and a Significant Indigenous Fisheries and Fish Habitat." (WRC notification decision p8). As such, an assessment against the National Policy Statement for Indigenous Biodiversity 2023 (NPSIB) is necessary. The NPSIB came into force on the 4th of August 2023.

[9]Waikato river vision and strategy.
https://waikatoregion.govt.nz/assets/WRC/Council/Policy-and-Plans/HR/S32/Part-A/Waikato-River-Authority-2012-Restoring-and-protecting-the-health-and-wellbeing-of-the-Waikato-River-vision-and-strategy.pdf

5.1.5 The lack of infrastructure will compromise the Mangapiko. The industrial component of the activity will not be connected to reticulated wastewater. As such, the proposal poses a real risk of dioxin and heavy metal contamination to the Mangapiko stream due to leakage, spills and flooding.

5.1.6 The applicant proposes to store wastewater from the washdown process (120m3/day) pumped to onsite storage tanks that provide a maximum of 5 days of backup storage before being removed to a managed waste facility. The estimated days of backup storage are based on an allowance of 5mm of water used over 50% of the inside building area. The water consumption and wastewater is based on company estimates, not on data from functioning plants with similar feedstock

5.1.7 The proposal also intends to channel an ash slurry through this wastewater system from the furnace grate. (see page 67 Sec 9.2.4 of the WRC application) This grate ash slurry (36.7m3/day) contains heavy metals and dioxins

5.1.8 The wastewater storage for both washdown water and ash slurry water should be considered hazardous substances storage

5.1.9 The applicant notes that areas that would be washed down are "highly contaminated internal building wash areas" (p57)

- The application does not include a list of the contaminates, nor the amounts or toxicity of contamination. It does not include any reference to relevant standards for this water or how it would be monitored.
- There is a note that "wastewater undergoes some treatment on site through screening and softening". However, there is no description of this process or components in the application.

5.1.10 There is no description of an overflow feature for this system or where this would be discharged.

5.1.11 The application does not include any description of how water storage beyond the 5 day capacity would be handled.

5.1.12 Pumping water out of the storage tanks into trucks on a 5x daily basis will involve leakages. Without knowledge of the composition of the water and its toxicity, its actual

impact cannot be assessed. A large water tanker can carry 30,000litres or 30m3. Based on the daily production of 156.7m3 of wastewater, a minimum of 5 large tankers per day would be required. The applicant notes only 4 per day.

5.1.13 Pump failure or inundation could result in the system being compromised including significant discharges to the Mangapiko. Such occurrences are not common, but certainly do occur as for example, the spill into Saltwater Creek in Canterbury by Daiken NZ in September 2023. In that instance, "the spill was toxic to fish and other aquatic life, and tuna and eels had been affected."[10]

5.1.14 The Government of the Northern Territory of Australia requires that the treated effluent, created by such processes as wet scrubbing or rapid quenching as part of any pollution control equipment, must comply with all NT EPA requirements. In particular the Stockholm Convention requirements for dioxins/furans, which stipulate a concentration less than 0.1 ng I-TEQ per litre, should be complied with (UNEP, 2007, p.65). [11]

5.1.15 The applicant has not provided any evidence of legitimate offtake agreements for the wastewater, casting doubt on their ability to appropriately store and dispose of it. The applicant claims that this wastewater would be purchased by its other company, Global Metal Solutions, as firefighting water or washdown water for its own facilities elsewhere (See Attachment 5, Final responses to Section 92A Waikato Regional Council). This is highly contaminated water that cannot be considered appropriate for these purposes. Such uses would significantly spread dioxin and heavy metal contamination into new and unrelated sites.

5.1.16 Roof, roading and grass areas: stormwater will impact the Mangapiko stream

5.1.17 These areas are all described in the proposal as 'low risk' (see Appendix M, Infrastructure Report, p 14) but it is unclear on what basis that conclusion is drawn.

5.1.18 The description of these areas as 'low risk' does not accord with international peer reviewed research (cited in full in the section on land contamination) which shows elevated levels of dioxin and heavy metals surrounding incinerator sites.

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[10] "Daiken NZ admits it caused wastewater spill into North Canterbury waterway" *Radio NZ*. 3 September 2023. https://www.rnz.co.nz/news/national/497187/daiken-nz-admits-it-caused-wastewater-spill-into-north-canterbury-waterway

[11] Northern Territory Environment Protection Agency. (2013) *Guideline for disposal of waste by incineration.* https://ntepa.nt.gov.au/__data/assets/pdf_file/0008/904328/draft_guideline_disposal_waste_incineration.pdf

5.1.19 There is no water quality treatment nor interceptor system proposed for the majority of the site (54.6% of the total area). Instead, stormwater that may be laden with contaminants will simply run off into the Mangapiko stream and elsewhere into the receiving environment.

5.1.20 The application includes no assessment of the risk of pollutants from these areas entering the stream under normal operating conditions, or the cumulative effects of these pollutants, or any effects occurring under "Other than normal operating conditions".

5.1.21 The proposed stormwater filtering systems, where used, do not address all pollutants of concern, and do not filter to an acceptable level. The Mangapiko will be required to absorb these contaminants. In a flood event, these filtering systems will be quickly overwhelmed.

5.1.22 It is not possible to provide any stormwater storage for the car parking areas, with the applicant noting, "because this would be below the 10 year flood level." (Infrastructure Assessment, Appendix M, p15)

5.1.23 Groundwater levels were also found to vary significantly throughout the site from between .5 and 2.8m. (p47 of the application). These could be contaminated by flooding, stormwater runoff or wastewater leakages/overflow.

5.1.24 The WRC Notification Report (p15) concludes, "there is insufficient information on the groundwater level, and that what is provided is sparse and inconsistent... I conclude that there is insufficient information to enable a determination to be made on the extent of the actual and potential effects on groundwater."

5.1.25 Due to the lack of complete information of the **actual** earthworks required, the impacts and effects on the River and environment, including groundwater, cannot be properly assessed, accounted for or mitigated. Throughout the *Site Suitability Assessment* (Appendix F) there is a repeated need for further investigation, assessment and design.

5.1.26 Flooding: The Waipā District Council notification assessment agreed with the WRC conclusion that it is "*not possible to reach a conclusion that the adverse effects are less than minor.*" [12]

[12] Waipā District Council. Notification Decision. P21.
https://www.waipadc.govt.nz/repository/libraries/id:26zgz4o7s1cxbyk7hfo7/hierarchy/our-services/planning-and-reso

5.1.27 The Mangapiko Stream has no flow gauge sites. There is no specific data on the Mangapiko.

5.1.28 The applicant notes, "the proposed results in an additional flood depth and spread of maximum 120mm in isolated areas and 2m width...*the effect is not considered significant.*" (p84, sec 6.2.10 of the Application). However, the Flooding assessment by Golovin makes **no indication** as to the significance or otherwise of the effects. (p20 of the report [Appendix M]).

5.1.29 The applicant notes that the proposed new structures would result in additional flooding in the Fonterra complex and in some residential houses: Nos. 331-467 Factory Road. (The Application, p50)

5.1.30 The proposed 300mm freeboard does not comply with the 500mm requirement, which may itself be inadequate to address future flooding. The proposal includes underground bunkers where waste will be stored, adding to the environmental risks as the minimum 500mm requirement is proposed not to be met. NZ guidance on freeboard notes:

> "There is significant uncertainty in the modelling processes due to natural processes such as the starting or antecedent moisture content of the ground and the actual pattern of the rainfall. Both of these can have a significant effect on the runoff and hence flooding potential. Uncertainty in model results is often not quantified...Technology errors can occur in modelling results due to inaccuracies in the LiDAR or other survey, the software that translates the ground levels to a surface or the modelling software that generates the flood height. Naturally, human errors in the modelling process can also be present...Given that ground elevation data is frequently taken from LiDAR surveys, the accuracy of the LiDAR survey is fundamental in the accuracy of the final output. LiDAR terrain data is often used with above-ground features stripped out, and in areas where this has occurred the interpolated ground elevations may be prone to error."[13]

urce-consents/Consent%20Applications%20of%20Interest/LU%200323%2021/Additional%20Documents/Global%20Contracting%20Solutions%20Notification%20Decision

[13] Ian R. McComb (Tasman District Council) and Mark Pennington (Tonkin+Taylor). Would you like freeboard with that? https://www.waternz.org.nz/Attachment?Action=Download&Attachment_id=2132. We note that the main argument of this paper is that freeboard levels vary greatly and that "one size fits all requirements" should not apply. However, the argument cuts both ways..

5. 2 Land contamination

5.2.1 This application does not address the land contamination inherent in its operations, and no consent for discharge to land has been filed. The Operative Plan Chapter 6 (Air) offers some guidance regarding discharges to air that result in subsequent discharges to land and water (see 6.1.10), but these rules are not appropriate for this scenario. The Operative Plan Chapter 5 (land and soil), Policy 2 gives primacy to avoiding adverse effects of discharges to land (see 5.2.3 of the Plan), but as no modelling or other data has been provided by the applicant, there can be no conclusions drawn nor have any mitigation measures been offered.

5.2.2 Independent Commissioners hearing an application for discharge to air for a waste-to-energy proposal in Feilding in 2022 required an evaluation of impacts to land be undertaken by the Council.

5.2.3 Significant peer reviewed research exists demonstrating land contamination from incinerator sites from the downwind air emissions.

5.2.3.1 Research conducted in 2022 by Zero Waste Europe[14] on land surrounding three waste incinerators shows high levels of dioxin contamination using 'biomarkers' in chicken eggs, pine needles and mosses. Most eggs of backyard chickens in the vicinity of the three incinerators exceed EU action limits for the bioassay DR CALUX (1) and the chemical GC-MS (2). The bioassay DR CALUX® (Dioxin Responsive Chemical Activated LUciferase gene eXpression) is a bioanalytical screening method used for quantification of dioxins/furans (PCDD/F) and dioxin-like PCBs (dl-PCBs). High quantities of per-and polyfluoroalkyl substances (PFASs) are found in mosses, pine needles and eggs of backyard chickens in all three areas around the waste incinerators by bioassay FITC-T4 measurements.

5.2.3.2 Other academic research indicates soil/land contamination of heavy metals from MSW incineration. Results from a study in Shanghai indicated that the relatively high contents of cadmium, lead, antimony, and zinc in the soils at 250 m and 750-1250 m away from the MSW incinerators were related to MSW incineration.[15] Another study of MSW

[14] Zero Waste Europe, Toxico Watch, Hnuti Duha, Ziedine Ekonomika, and Ecologists en Accion Spain. *The True Toxic Toll: Biomonitoring research on dioxins (PCDD/F and DL-PCB), PFAS and PAH 2022,* https://zerowasteeurope.eu/library/the-true-toxic-toll-biomonitoring-research-2022/

[15] Yang Li, Hua Zhang, Liming Shao, Xiaoli Zhou, Pinjing He. "Impact of municipal solid waste incineration on heavy metals in the surrounding soils by multivariate analysis and lead isotope analysis" *J Environ Sci* (China). 2019 Aug;82:47-56. doi: 10.1016/j.jes.2019.02.020. Epub 2019 Mar 1 https://pubmed.ncbi.nlm.nih.gov/31133269/

incinerator sites around China concluded that soils near incinerators had moderate potential ecological risk, especially with regard to Cadmium and Mercury contamination.[16] A 2018 case study in Northern China found, "the soils around the MSWI (Municipal Solid Waste Incinerator) were moderately polluted by Copper, Lead, Zinc and Mercury, and heavily polluted by Arsenic and Cadmium. MSWI had a significant influence on the distribution of soil heavy metals in different distances from MSWI."[17]

5.2.4 Stack height is a significant factor in air dispersion and thus land contamination.

5.2.4.1 Additional stack height would mean pollutants would be more widely dispersed on surrounding residential neighbourhoods as shown by *Brady in Appendix A - T Brady Air Sections Further Information August 2023.*

5.2.4.2 A current resource consent application for a waste-to-energy incinerator in Waimate has a proposed stack height of 75m. The UK Environment Agency Internal Guidance (draft) V0.5 November 2017 offers up a formula for determining appropriate stack height that meets their definition of "Best Available Technology" (BAT). This guidance is a simple cost-benefit ratio of private cost to human health impacts.

5.2.4.3 Stack height is limited in this proposal because the Applicant runs into another barrier: the airport approach zoning. The Applicant says, "all (policy overlays) are identified and assessed within this report," but no analysis has been included in the application that examines the relationship between stack height and this Airport policy overlay. It is not clear whether the Airport's designation is affected and whether the Airport has provided prior written approval under s 176(1)(b) of the RMA.

5.2.5 The incinerator proposes to burn 480 tonnes per day, yet nowhere in the application is there a clear indication of how much feedstock could be on site at any given time creating another pathway for land contamination.

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[16] Junxiao Wei 1, Huan Li 2, Jianguo Liu. "Heavy metal pollution in the soil around municipal solid waste incinerators and its health risks in China." *Environ Res* 2022 Jan; 203:111871. doi: 10.1016/j.envres.2021.111871. Epub 2021 Aug 11 https://pubmed.ncbi.nlm.nih.gov/34390720/

[17] Wenchao Ma, Lingyu Tai, Zhi Qiao, Lei Zhong, Zhen Wang, Kaixuan Fu, Guanyi Chen. "Contamination source apportionment and health risk assessment of heavy metals in soil around municipal solid waste incinerator: A case study in North China." *Sci Total Environ.* 2018 Aug 1;631-632:348-357. doi: 10.1016/j.scitotenv.2018.03.011. Epub 2018 Mar 16. https://pubmed.ncbi.nlm.nih.gov/29525714/

5.2.6 Waikato Regional Council's *Guidance for storage and stockpiling of end of life tyres for local government* is a leading source of information relevant to this proposal. Among other things, the proposal includes the burning of 30,000t/a of end-of-life tyres (ELT) as feedstock. This is roughly equivalent to more than 3.75 million tyres per year,[18] approximately 10,270 tyres/day. Stockpiling of tyres poses significant risks to communities, and as such, this *Guidance* says:

"Stockpiles of tyre dumps, regardless of their intended or eventual use (if any), should be prohibited from being within

- 250 metres of the coastal marine area
- **100 metres of any open water course, including a flood plain or wetland**
- **500 metres of any zoned residential area**
- **1000 metres of any school, hospital, marae or rest home**
- 100 metres from any substantive electrical infrastructure such as pylons or substations, rail lines or any other known ignition source, unless the risk posed by the ignition source is adequately mitigated through resource consent conditions

5.2.7 Additional considerations include the issue of land contamination from hazardous substances stored on site and waste streams (fly ash, bottom ash) resulting from the incineration process that may remain on site during "Other than normal operating conditions" or as a result of other unforeseen conditions.

5.2.8 The application is missing some key information regarding tyres. If tyres are intended to be stored for any period outside prior to incineration, the provisions of the National Environmental Standard (NES) for Storing Tyres Outdoors may apply. This NES is not addressed in the application documents. Further, although a matter for the regional council, we note that Regulation 7 of the NES for Air Quality prohibits the burning of tyres unless:
"(2) the tyres are burnt at industrial and trade premises that have -

(a) a resource consent for the discharge produced; and

[18] An equivalent passenger unit (EPU) is a standard passenger car tyre. The weight of an EPU for a new standard passenger car tyre is standardised as 9.5kg; and the weight of an EPU for an end-of-life standard passenger car tyre is standardised as 8 kg. See Tyre Stewardship Australia https://www.tyrestewardship.org.au/wp-content/uploads/2020/06/Scheme-Guidelines-EPU-Ratios.pdf

(b) emission control equipment that is designed and operated to minimise emissions of dioxins and other toxics from the process."

This regulation has not been assessed in the application and may in fact operate as a complete statutory bar to the proposal. This is because the definition of "industrial and trade premise" in the RMA includes "any premises used for the storage, transfer, treatment, or disposal of waste materials, or for other waste management purposes...". "Disposal" is defined in s 6 of the Waste Minimisation Act 2008 as including the incineration of waste, but not where energy is recovered from the incineration (s 6(3)).

In any event, even if a resource consent (discretionary status) could be obtained for the burning of tyres, the applicant has not provided sufficient information to satisfy Regulation 7(2)(b), i.e. that the plant will have emission control equipment that is designed and operated to minimise emissions of dioxins and other toxic substances from the process.

In addition, the application has not provided adequate information to discharge its evidential burden that the plant is not a "high temperature hazardous waste incinerator" as defined in the NES for Air Quality. "Hazardous waste" is defined for the purposes of the NES in relation to categories of waste, or characteristics of waste, as described in the Basel Convention. The applicant therefore needs to provide adequate information regarding its waste acceptance criteria to prove that it will not be accepting any 'restricted' Basel Convention waste at the facility. It has failed to provide this information and discharge this evidential requirement.

5.3 Soils, liquefaction and earthworks

5.3.1 The District Plan 7.2.20 says consideration must be given to "*potential impacts of increased earthworks to adversely affect the health and well-being of the Waikato and Waipā Rivers.*"

5.3.2 The District Plan 15.3.13.1 says "*To give effect to the directions and outcomes in the Waikato River Vision and Strategy and the Waipā River Accord, by ensuring that all development and subdivision shall include the following elements: (a) Low impact design for stormwater, drainage and* ***earthworks****;*" and further that (f) *Restricting locations of earthworks, building and wastewater systems within cultural landscapes.*

5.3.3 The size and scale of the planned earthworks are very large (The importation of 60,000m3 for preloading plus 60,000m3 for fill, and a total of 292,000m3 of earthworks). These earthworks cannot be considered "low impact".

5.3.4 Due to a lack of complete information of the **actual earthworks required**, the impacts and effects on the River and environment, including groundwater, cannot be properly assessed, accounted for or mitigated. Throughout the *Site Suitability Assessment* (Appendix F) there is a **repeated need** for further investigation, assessment and design. The Council cannot be satisfied that the effects are less than minor.

5.3.5 The majority of the site is subject to earthworks: "a cut to fill operation on the site covering approximately 7ha" (Appendix J: *Infrastructure and Earthworks Assessment Report*, p5)

5.3.6 The consolidation of compressible soil could take up to two years based on the thickness of the soft soil stratum. This long timeframe combined with the many uncertainties about the geotechnical hazards and problems means that proposed erosion and sediment controls are inadequate.

5.3.7 The Preliminary Geotechnical report indicates that

- The site is subject to a liquefaction hazard
- 'Risk to the site to general subsidence (from consolidation due to loading) is moderate to high." (Appendix F: *Site Suitability assessment*)
- Some areas will need 6m of fill to enable the building

5.3.8 The Waipā District Plan Sec 7.2.18 notes, "*The nature, location and scale of earthworks can have significant adverse visual effects and adversely effect adjoining properties by affecting stormwater overland flow paths and potentially causing flooding.*"

5.3.9 The impact of earthworks on surrounding properties has not been assessed.

5.3.10 The Waipā District Plan 15.3.8.1 notes, " *To maintain the values of the cultural landscapes identified in this Plan, the layout and design of development and subdivision should not result in buildings, earthworks and wastewater systems adversely affecting the cultural values of the landscape*"

5.3.11 The Infrastructure and Earthworks Assessment Report does not account for the truck movements to remove the preloaded earthworks.

6. The proposed activity will be contrary to the objectives and policies of the Waipā Operative District Plan

6.1 Current land designation

6.1.1 Contrary to the claims of the applicant, the site is totally unsuitable for a large scale waste incinerator. The current "Specialised Dairy Industrial Area" designation means that the land use is intended to ensure that any activity there was aligned with Fonterra's activities. The Waipā District Plan 7.1.6 notes:

> *"The existing dairy manufacturing sites at Te Awamutu and Hautapu are significant industries that are important to the local and regional economy. The food producing activities that are carried out on these sites are sensitive to other industrial activities. This Plan recognises the sensitive nature of these sites by incorporating specific provisions in the 'Specialised Dairy Industrial Area'."*

6.1.2 The activities at Fonterra are regarded by the Waipā plan not simply as locally or regionally important, but nationally significant (Sec 1.2.6. Waipā District Plan)

6.1.3 Waste incineration immediately adjacent to food production is not a compatible activity. Academic research into the impacts of contamination scares relating to Fonterra products notes, "any competitive advantage held by the New Zealand dairy industry is based on the perceived quality of its products...Fonterra's reputational standing has allowed it to expand globally and is the result of New Zealand's overall 'clean green' image and internationally recognised institutional frameworks."[19] Even the hint of dioxin, heavy metal or other contamination could have direct financial consequences for Fonterra's operations which would then have a flow on effect on jobs and the local economy.

[19] The Trade Impacts of a Food Scare: The Fonterra Contamination Incident, Katarina Stojkov, Ilan Noy and Yiğit Sağlam. Victoria University of Wellington

6.1.4 Waipā District Council has developed a *Growth Strategy* that identifies land designations for anticipated residential and industrial growth to the year 2050. Two areas are identified for industrial growth: at Bond Road and Paterangi Road. The first choice of the applicant was within this stated area. This did not eventuate because the seller didn't want a waste incinerator located there. Racecourse Road is a second choice for the company. The Strategy notes, "*While no new growth areas for industry are considered to be necessary beyond these two areas, it is important that additional non-industrial growth areas have consideration to the locations of industry so that the potential for reverse sensitivity effects can be minimised.*" The same can be said in reverse: *the addition of industrial growth areas have consideration for the location of existing or planned residential developments so that the potential for reverse sensitivity can be minimised.* We submit that building a waste incinerator on this site is inconsistent with the wider goals of the Waipā Growth Strategy, which is well orchestrated planning where consistent land uses are maintained.

6.1.5 The District Plan's (Section 7.3.1(c)) specific industrial purpose is that "*the Industrial Zone is developed in a manner that: Protects the ability for the Hautapu and Te Awamutu Dairy Manufacturing Sites to continue to operate and expand within their respective sites.*"

6.1.6 The applicant indicates that the "The impact of new structures is to increase the floodplain levels by about 120mm in isolated areas...Affected areas..include..the Fonterra factory complex." (*Application*, p53).

6.1.6 This submission has already outlined the peer reviewed evidence of land contamination by heavy metals and dioxin from proximity to waste incinerators.

6.1.7 The move from 'Specialised Dairy Industrial Area' to allowing a waste incinerator would be a significant and fundamental change in the intended land use, and would compromise the integrity of the zone's original purpose. It is contrary to the Waipā District Plan *Objective 1.3.1.8 To ensure that new development does not adversely affect the ongoing operation maintenance, upgrading and development of existing and planned regionally significant infrastructure and nationally significant infrastructure.*

6.2 Proximity of Residential housing

6.2.1 One of the objectives of the Waipā District Plan is "*To ensure that all future development and subdivision in the District contributes towards achieving the anticipated settlement pattern in*

the Future Proof Growth Strategy and Implementation Plan 2009 and the District Growth Strategy." (Policy - Settlement pattern 1.3.1.1

6.2.2 Further, the Residential chapter (2.1.4) of the Waipā plan says, "*The maintenance of the social and community function of the Residential Zone is important.* ***This function can be undermined by the location of non-residential activities in Residential Zones. This Plan makes clear provision for commercial and industrial activities within their respective zones.*** *The only exception in this zone is for some activities within listed heritage buildings. This exception has been specifically provided as an incentive to enable the adaptive re-use of listed Heritage Items.*" This is largely due to the proximity of large numbers of houses and future housing developments.

6.2.3 One of the objectives of the Waipā District Plan is "To enable activities that are consistent with the outcomes and probable actions in the Environment Strategy 2010 subject to the appropriate management of site specific adverse effects". (Policy - Implement Environment Strategy 2010 1.3.4.6).

6.2.4 The Applicant notes that the significant visual impact of this facility will largely fall on the surrounding residential neighbourhoods. Again, this is not a minor exception to the District Plan, but a height exceedance of nearly twice the rules, where it will dominate the community. By contrast to the Applicant's suggestion that the impact of the incinerator stacks would be "*mitigated when viewed against the furnace hall building, the Fonterra building and the existing Fonterra chimney stack..*", the community would be faced with a transformed landscape where an industrial look and feel dominates what is currently a residential neighbourhood. The notification decision from the Waipa District Council notes: "*Having carefully considered the issues associated with the scale and the proposed buildings, I have reached the view that the adverse effects in terms of landscape values and visual character are likely to be more than minor.*" [20]

6.2.5 Precincts in New South Wales

In 2022, due to a large number of waste-to-energy incinerator proposals in inappropriate locations in New South Wales, the State government passed the Protection of the Environment Operations (General) Amendment (Thermal Energy from Waste) Regulation

[20] Waipa District Council. Global Contracting Solutions Notification Decision. P18. https://www.waipadc.govt.nz/repository/libraries/id:26zgz4o7s1cxbyk7hfo7/hierarchy/our-services/planning-and-resource-consents/Consent%20Applications%20of%20Interest/LU%200323%2021/Additional%20Documents/Global%20Contracting%20Solutions%20Notification%20Decision

2022. The Regulation prohibits the thermal treatment of waste for energy recovery unless it is undertaken in one of three nominated precincts. The changes were undertaken to ensure that communities and industry have certainty around acceptable locations for energy from waste in NSW and that energy from waste infrastructure is situated in designated locations in NSW to ensure appropriate infrastructure is present. These precincts have all been developed as part of NSW's overall Environmental Policy Planning. Furthermore, all energy from waste proposals, regardless of location, are still required to comply with environmental and planning laws, including the Energy from Waste Policy Statement.

6.2.6 The anticipated increase in traffic and the nature of that traffic, in particular very large truck traffic transporting hazardous substances, is an unreasonable burden on the existing residential community in terms of health and amenity impacts. The traffic assessment also does not include any estimation of members of the public using the facilities (p46 of the Application). The Applicant claims that the residential zoning of the only entrance to the site is an anomaly, and should in fact be disregarded. By contrast, this significant increase in traffic coupled with the wider aims of the proposal turn what is an ordinary residential street into a highly industrialised area complete with imposing backdrop, continuous noise and a steady flow of heavy truck traffic.

6.3 Proposal is a hazardous facility with hazardous substances

6.3.1 The proposal will involve the storage and use of hazardous substances. It is therefore considered by definition a hazardous facility. The starting point is the Hazardous Facilities Screening Procedure (HFSP) referenced in s. 19 of the Operative Waipa District Plan (WDP).

6.3.2 The hazardous substance list in the Application appears to be incomplete compared to other similar proposals and the assumed quantities of (some of) the listed substances looks too low. The HFSP worksheet is incomplete and interpreted incorrectly (see MfE, Planning Guide for Hazardous Facilities, 2002).

6.3.3 It is more likely than not that the necessary storage and use of hazardous substances is a restricted discretionary activity rather than permitted in particular in respect of diesel. That would require a risk assessment in accordance with the 4th Schedule of the RMA and an assessment against criteria of the WDP. This also has implications on the assessment of the

frequency and scale of hazardous substance transport movements to the site. All this work needs to be carried out by a qualified and experienced practitioner.

6.3.4 Establishing the Activity Status of hazardous substances: Rule 19.4.2.2 of the WDP states that: "Calculation of the Effects Ratio (R) must be undertaken by a suitably qualified practitioner experienced, qualified and presently operating in the field of hazardous substances and facilities using the "Hazardous Facilities Screening Procedure"...".

6.3.5 The HFSP calculations were carried out by HD Geo, a contaminated land consultancy based in the upper North Island. Based on the information on the GH Geo website they do not appear to have the required expertise. Their website states: "What exactly do the team at HD Geo do? Two things: Geotechnical engineering and environmental management of contaminated land. That's it." There appears to be a discrepancy between the rule in the WDP and HD Geo's self-description.

6.3.6 Diesel storage & use

6.3.6.1 The Applicant has grossly underestimated the amount of diesel that will be needed, and that will need to be stored on site. The Applicant says, *"A relatively low amount of diesel will be needed on-site, for start-up and supplementary firing, and a small 5000L tank is proposed. The effects ratio of this quantity of diesel is 0.35, which is less than the permitted threshold of 1, and therefore permitted. "* (Sec 4.11 Hazardous Substances, p34). The evidence shows the Applicant has seriously underestimated diesel use, and as a result the need for fuel on site.

6.3.6.2 The HFSP assessment was reported by HD Geo in October 2021. It states in the Background section that the quantity of diesel is yet to be determined. On the next pages it explains: "We have assumed a 5,000 L maximum storage quantity for calculation purposes." On that basis, it establishes the activity status for the storage and use of hazardous substances as permitted.

6.3.6.3 The pre-notification supplementary includes a letter by HD Geo (August 2023) primarily addressing fly ash but confirming that a clear determination of the quantity of diesel required has still not been undertaken. On that basis the opinion is repeated that the proposal would be a permitted hazardous facility.

6.3.6.4 The Application/AEE states in s. 4.7: "It is expected that supplementary firing using the diesel burners will occur for only short periods as energy from diesel expended will outweigh energy obtained." The need for diesel incineration is determined by the combustion temperature which in turn is influenced by moisture content and calorific value of the feedstock, rather than whether energy expended will outweigh energy obtained. Section 4.10 leaves the field specifying the input rate per fuel line blank for diesel.

6.3.6.5 In 2022, the reference plant, the German Korbach incinerator, used 912,983m3 per year of natural gas primarily for start-up of the plant and maintaining the appropriate burn temperature.[21] This equates to approximately **853,912 litres of diesel.**[22] This plant is approximately half the size of the proposed Paewira facility. The Korbach plant also uses an additional **424,500 litres of additional fuel oil**[23] for its post combustion auxiliary boilers. This equates to approximately **1.35 million litres of diesel per year.**

6.3.6.6 The Paewira plant indicates such post-combustion auxiliary boilers would be required:

> *"Start-up combustion for pre-heating and combustion of initial refuse is provided by a diesel package burner that is switched off once combustion is self-supporting and the firebox attains the stable temperature of 850C. In limited instances where fuel load does not deliver required temperatures primary combustion will be supplemented by burners.* ***Auxiliary burners will also be installed*** *at the post combustion chamber inlet for stabilising flue gas temperatures above the minimum permitted values, in case of feedstock variability or low calorific value (drops below about 9 MJ kg-1) or partial load and ensures even delivery of steam to the electricity turbines."* (The Application, p.21)

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[21] Umweltdaten des Industriekraftwerks Korbach im Jahr 2022. https://www.mvv.de/fileadmin/user_upload/KW-Emissionswerte/jahres_emissionswerte/2022_Jahres-Emiwerte_IK_Korbach.pdf

[22] BP. Approximate conversion factors Statistical Review of World Energy. https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/energy-economics/statistical-review/bp-stats-review-2021-approximate-conversion-factors.pdf

[23] Umweltdaten des Industriekraftwerks Korbach im Jahr 2022. https://www.mvv.de/fileadmin/user_upload/KW-Emissionswerte/jahres_emissionswerte/2022_Jahres-Emiwerte_IK_Korbach.pdf

6.3.6.7 For 2021 Korbach reported the use of 1,442,832 m3 of natural gas (or about 1,200 tonnes of oil equivalent) and about 47 tonnes of heating oil. Apart from showing a high variability from year to year of operation in required auxiliary fuel, the data of a comparable existing facility indicates a far higher rate of hydrocarbon fuels necessary than assumed for the proposed facility.

6.3.6.8 A similar waste-to-energy proposal in Waimate burning 365,000 t/y estimates 100,000 litres of diesel storage is needed. Diesel is used primarily for cold start-up. The quantity used is around 62,790 L per start-up/shutdown cycle. The equivalent amount of diesel storage would be 45,000 litres (about 40T) at Paewira.

6.3.6.9 A resource consent for a restricted discretionary activity would be required for this quantity of diesel storage.

6.3.6.10 While NZ has no specific statutory controls for waste incinerators, EU Directive 2010/75/EU contains requirements to reduce some air discharges from incineration processes. Relevant to the use of auxiliary fuel it states in Chapter IV (Special Provisions for Waste Incineration), Article 50 Operating Conditions, Paragraph 2: "Waste incineration plants shall be designed, equipped, built and operated in such a way that the gas resulting from the incineration of waste is raised, after the last injection of combustion air, in a controlled and homogeneous fashion and even under the most unfavourable conditions, to a temperature of at least 850 °C for at least two seconds."

6.3.6.11 Paragraph 3 states: "Each combustion chamber of a waste incineration plant shall be equipped with at least one auxiliary burner. This burner shall be switched on automatically when the temperature of the combustion gases after the last injection of combustion air falls below the temperatures set out in paragraph 2. It shall also be used during plant start-up and shut-down operations in order to ensure that those temperatures are maintained at all times during these operations and as long as unburned waste is in the combustion chamber."

6.3.6.12 In that context sufficient fuel (diesel in this instance) is to be made available at all times to ensure the required temperature is maintained. It is further noted that the specified operational temperature for the Te Awamutu proposal (850 °C) is at the bare

minimum of requirements of the EU Directive.

6.3.6.13 Based on the information included in the consent application it appears that the applicant and their advisors do not have an accurate understanding how much diesel needs to be stored and used on site to support the proposed process at the required temperature.

6.3.7 Other hazardous substances

6.3.7.1 Both the AEE and the HD Geo report incorrectly state that diesel is the only relevant or 'regulated' or hazardous substance necessary for this proposal. Ammonium hydroxide, for example, listed in the Application/AEE document is classified as potentially flammable, corrosive and acutely toxic to aquatic life. The HD Geo report fails to even mention ammonium hydroxide and does not provide a Safety Data Sheet for it.

6.3.7.2 The facility proposed for Waimate (now called in by the Minister for the Environment) advises that it is intended to store and use significant quantities of sodium hydroxide and smaller quantities of sodium hypochlorite, hydrochloric acid and sulphuric acid. These substances appear to be used for the scrubbers/alkali washing and water treatment. The Korbach reference plant referred above lists in its 2021 and 2022 reports the use of 165 tonnes (for 2021)/150 tonnes (2022) of hydrochloric acid and about 74 tonnes (for 2021)/60 tonnes (2022) of sodium hydroxide respectively for 'water treatment'.

6.3.7.3 Please see Section 11 for hazardous wastewater and ash.

6.4 Noise, Odour & Dust

6.4.1 These three elements all have an impact on the surrounding environment that will be more than minor.

6.4.2 Reports from the reference facility in Germany on which emissions data is based, Korbach, reports loud noise: "*Korbach.* ***Once again, loud and widely audible noises*** *from the direction of the Continental plant startled many Korbach residents. This time, the cause was to be found in the area of the waste-to-energy plant. After completion of the routine autumn overhauls,*

there was an automatic protective shutdown of the substitute fuel boiler when it was restarted in the night from Tuesday to Wednesday, according to the operator MVV Energie. At around 4.30 a.m., a safety valve briefly responded, combined with a perceptible noise." [24]

6.4.3 The District Plan policy - *Maintaining low ambient noise environment 2.3.2.9 To ensure that noise emissions and vibration from all activities, including construction, are consistent with the low ambient noise environment anticipated in the Residential Zone* - is violated by a facility that will require very extensive and deep earthworks, involving a minimum of 6 months of fill being trucked in and out, deep piles, and which then operates heavy machinery 24 hrs/day, 7 days/week and includes significant increases in traffic on residential streets.

6.4.4. There is no specific local meteorological data available for the site, meaning it is difficult to ascertain accurate estimates about the impacts of noise, odour and dust.

6.4.5 The applicant expects that the planned residential development (at the old Racecourse) would need to be set-back so that it is less impacted by this proposal, meaning this proposed incinerator would compromise the ability of that site to be developed. The planned residential development is on land already zoned for such development, this proposal is not.

6.4.6 Clean air is central to a healthy, sustainable environment. Clean air is not just about protecting people's health from pollutants, such as fine particles and carbon monoxide. It is also about protecting people from offensive smells that can affect their daily activities and wellbeing. Offensive odour is a significant cause of public complaints to councils and is typically a difficult environmental issue to assess and manage.[25]

6.4.7 The application provides almost no information about where the majority of the 166,000 tonnes of feedstock will come from. Some 78,880 tonnes/year (roughly 216 tonnes/day) of Mixed Solid Waste (MSW) is proposed feedstock. In Waipā, 50.2% of MSW is organic waste (36.5% food waste) and another 12.3% of waste is nappies and sanitary items: a whopping

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[24] Wieder sorgt ein Sicherheitsventil für laute Geräusche in Korbach.2016. https://www.hna.de/lokales/frankenberg/wieder-sorgt-sicherheitsventil-laute-geraeusche-korbach-6838191.html

[25] Ministry for the Environment. 2003. *Good Practice Guide for Assessing and Managing Odour in New Zealand.* https://olores.mma.gob.cl/wp-content/uploads/2019/03/Good-Practice-Guide-for-Assessing-and-Managing-Odour-in-New-Zealand.pdf

62.5% of local MSW is likely to be odourous.[26]

6.4.8 The *Air Quality Assessment* (Appendix L, Sec 3.11)) allocates one paragraph of information about odour and is utterly inadequate in addressing the impact of this on the surrounding community.

6.4.9 Depending on the severity of the odour event, one single occurrence may be sufficient to deem that a significant adverse effect has occurred.

6.4.10 Fugitive odorous discharges from receiving waste have not been assessed. These may be a significant contributor to cumulative effects.

6.4.11 The applicant says, "most of the raw material will be pre-sorted to eliminate putrescible materials and will have no odour. Additional checks will be made...and loads..rejected if necessary." It is unclear where this material is from in the first place and where it will go after sorting. There are no clear contracts with waste providers to determine the content of the waste. There is no odour evaluation. The community and environment will be subject to the odour of the materials that come in and out, irrespective of whether they are accepted or not.

6.4.12 The application says, "Dumping will only occur when the access door is closed," as a means of odour, noise and dust control. However, there are an anticipated 26 truck movements per hour at the facility (*Application*, p46), meaning one approximately every 2.5 minutes. This does not include any public dumping at the facility. It is unclear if it is even feasible to ensure that the doors are always closed when dumping occurs given the anticipated arrival of loads.

6.4.13 The applicant claims that there will be no odour from the stacks due to the temperature. (Air Quality Assessment, Appendix L, Sec 3.11). However, during periods of start-up and less than optimal fuel mix, temperatures will be lower and variable, with regular opportunities for adverse odour impacts over a wide area of the community.

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[26] Waipā District Council. 2023. *Waipā Waste Minimisation and Management Plan - Final - March 2023-2029* p12. https://www.waipadc.govt.nz/repository/libraries/id:26zgz4o7s1cxbyk7hfo7/hierarchy/our-council/haveyoursay/Waste%20minimisation/Waipa%CC%84%20Waste%20Minimisation%20and%20Management%20Plan%20-%20Final%20-%20March%202023

6.4.14 Discharge of toxic particulate matter via overloaded skip bin receptacle for baghouse residual ash that contains heavy metals and dioxin: *"Dust is discharged from the baghouse hopper to a covered skip via a rotary valve and shute that exits inside the skip so that there is no significant dust. Overfilling of the skip is possible but daily inspections will* ***minimise it****."* (3.10.4 Cyclone and Bagfilter dust collection). The most dangerous fly ash must be more than "minimised" by a vague description of a daily inspection. There should be absolute clarity about how much matter is produced, and "overfilling" should be prohibited and subject to rigorous compliance.

7. Risk: Fire, explosions and floods

7.1 Fire and Explosion

The consent authority must have regard to any potential effects of allowing the activity. The risk of fire and explosion at the proposed Te Awamutu incinerator are significant. Due to the location of this particular site, these risks cannot be adequately mitigated by any method. These risks, to both human safety and environmental health, are unacceptable, and are exacerbated as the Applicant specifically proposes having extensive public facilities on site. There is significant guidance and literature both locally and internationally on the risks of fire and explosion at waste facilities, and specifically at incinerators.

7.1.1 The Government of Victoria notes: "Major combustible and recyclable waste materials fires at waste and resource recovery facilities can take days to control and have resulted in evacuations of local communities, long-term health impacts, and first aid and hospital treatments. They can also cause short and long-term environmental harm."[27]

7.1.2 The Queensland Government has developed *Prevention of fires in waste stockpiles.*[28] These guidelines note:

- "Stockpiling of combustible waste is inherent in waste operations. Waste fires, when they occur, are a threat to the environment and human health. The consequences of fire at a waste facility include:

[27] *Management and storage of combustible recyclable and waste materials – guideline.* EPA Victoria. Publication 1667.3 July 2021

[28] *Guideline – Prevention of fires in waste stockpiles.* ESR/2020/5409. Last Reviewed 02/12/2020. Department of Environment and Science. Queensland Government.

- Environmental harm via:
  - Release of contaminants into the air including smoke, asbestos and particulate matter.
  - Release of run-off of firewater, combustion products and firefighting chemicals that may impact ground and surface waters.
  - Impact upon human health caused by the toxic nature of smoke and contaminants released into the environment by the fire
  - Significant costs associated with the clean-up following a fire
  - Compliance actions for offences under relevant legislation..."

7.1.3 Waikato Regional Council's *Guidance for storage and stockpiling of end of life tyres for local government* is a leading source of information relevant to consideration of fire and explosion risks in this proposal. Among other things, the proposal includes the burning of 30,000t/a of end-of-life tyres (ELT) as feedstock. This is roughly equivalent to more than 3.75 million tyres per year,[29] approximately 10,270 tyres/day. Stockpiling of tyres poses significant risks to communities, and as such, this *Guidance* says:

> "Stockpiles of tyre dumps, regardless of their intended or eventual use (if any), should be prohibited from being within
>
> - 250 metres of the coastal marine area
> - **100 metres of any open water course, including a flood plain or wetland**
> - **500 metres of any zoned residential area**
> - **1000 metres of any school, hospital, marae or rest home**

[29] An equivalent passenger unit (EPU) is a standard passenger car tyre. The weight of an EPU for a new standard passenger car tyre is standardised as 9.5kg; and the weight of an EPU for an end-of-life standard passenger car tyre is standardised as 8 kg. See Tyre Stewardship Australia https://www.tyrestewardship.org.au/wp-content/uploads/2020/06/Scheme-Guidelines-EPU-Ratios.pdf

- 100 metres from any substantive electrical infrastructure such as pylons or substations, rail lines or any other known ignition source, unless the risk posed by the ignition source is adequately mitigated through resource consent conditions

7.1.4 The number of waste fires from small lithium batteries in rubbish has been on the rise in New Zealand. Hamilton and Auckland[30] have both recorded significant damage to trucks as a result of batteries. While some fires occur because of compression in the truck, lithium batteries can spontaneously combust in the absence of compression. Fire and Emergency NZ says lithium-ion battery devices such as smartphones, laptops and vapes can be dangerous and should be dealt with carefully: "An Auckland home was recently set alight by the spontaneous combustion of a lithium-ion battery from a drill that was under a workbench. The accident was one of 35 sparked by this type of battery in 2022."[31]

7.1.5 On February 12, 2023, a massive fire broke out at the Miami-Dade County Resources Recovery Facility (Doral incinerator) and burned continuously for nearly three weeks, resulting in dangerous smoke conditions made worse by the presence of known and unknown pollutants in the air. The operator, Covanta, reported that the fire was caused by "refuse-derived fuel," or processed waste, catching fire on the conveyor belt at the rubbish processing part of the facility, which then set the facility's large garbage pit ablaze. According to Miami-Dade Fire Rescue, "a mechanical or electrical event" on or adjacent to the "tail of [a] conveyor" was the probable cause of the fire, "with no exact ignition source... determined." What followed was a 4-alarm fire that caused the roof of the trash storage area to collapse, the walls on the south and east side of the facility to cave in, and the collapse of the garbage pit. Because of the collapse, emergency demolition of the waste receiving area and pit were required so that firefighting operations could continue. The fire burned for almost three weeks and was finally placed under control on March 2, 2023. Air

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[30] See Radio NZ. *Warning issued after two rubbish fires in as many weeks caused by lithium batteries in Hamilton.* https://www.rnz.co.nz/news/national/497919/warning-issued-after-two-rubbish-fires-in-as-many-weeks-caused-by-lithium-batteries-in-hamilton and Our Auckland. 2022. *Batteries put in household recycling or rubbish key cause of truck fires* https://ourauckland.aucklandcouncil.govt.nz/news/2022/12/batteries-put-in-household-recycling-or-rubbish-key-cause-of-truck-fires/

[31] Radio NZ. 2022. *Warning after lithium battery spontaneously combusts, causes house fire.* https://www.newshub.co.nz/home/technology/2022/08/warning-after-lithium-battery-spontaneously-combusts-causes-house-fire.html

quality requirements were significantly breached, and land and water contamination has been documented.[32]

7.1.6 The Bureau for Analysis of Industrial Risks and Pollutions of France. The database records 39 incinerator "accidents" since 2004. While some of these facilities are not analogous to this proposal most have similar componentry and risk profiles including many cautionary stories:

- **Explosion and fire in an incineration plant:** A blockage in the waste loading hopper led to the shutdown of the waste supply and the formation of CO in the furnace. After the necessary conditions were met, the restart sequence was launched. However, the pre-ventilation designed to reduce the CO level was insufficient due to the malfunction of one of the two temperature sensors to which it was slaved (temperature indicated was higher than the actual temperature). The auxiliary burners started in hazardous areas leading to a CO explosion that threw incandescent waste into the pit, which was the point where the fire started. (2014)
- **Fire at a municipal waste sorting and incineration plant:** A fire broke out at around 2:30am in a 2000m² sorting building at a waste processing facility. The facility, commissioned in 2010, sits on an isolated 18 hectare plot in an industrial port area. Driven by the wind, the flames spread in a matter of minutes to an 8000m² compost storage and ripening area (4000 tonnes of compost). Incandescent cinders, drawn into the fans used to keep the buildings at negative pressure, caused the fire to spread to the air handler and deodoriser (biofilters along 3000m²). In less than one hour, the fire spread to a 5000m² sorting area containing plastics. The flames then progressed to the conveyor belts, which ran through firewalls, and to the glulam frames surrounding them. At around 6:30am, pieces of the burning frame fell into two pits filled with municipal waste (surface area: 27,000m³; depth: 20m), igniting the waste. A total of 140 firefighters and 40 vehicles were called to the scene. The extent of the facilities to be saved (biogas digesters, incinerator), the debris from partially collapsed structures, the

[32] Dominique Burkhardt, Emma Rimmer, and Bala Sivaraman. 2023. *The Doral Incinerator Fire.* Earthjustice. https://earthjustice.org/wp-content/uploads/2023/05/20230531_doral-incinerator-fire-report3.pdf

weather conditions and the thick, persistent smoke made fighting the blaze particularly difficult.(2013) (Full report: French Ministry of Sustainable Development. F*ire at a waste treatment plant covering nearly 18,000 m2 2 November 2013 Fos-sur-Mer (Bouches-du-Rhône) France)*

- The proposed building height significantly exceeds the Waipā District Plan Rule 7.4.2.6 of 20m height. Including the stacks, the overall proposed height is 38m. This increase in height would add additional complexity to dealing with fire, explosion or other emergencies.

7.1.7 Availability and training of firefighters in Te Awamutu

Te Awamutu Volunteer Fire Brigade is a volunteer station that means all members of the brigade dedicate their own time in order to serve the community. In January 2023, the Te Awamutu Brigade dealt with 28 callouts. The closest career firefighters (e.g. 24-hr rostered) are based in Hamilton.

7.2 Flooding risk

7.2.1 There is no risk assessment of flooding of the facility included in this application. The *Floodplain Assessment* undertaken by Golovin is an assessment of the impact of the development of the site on potential flooding. It does not consider the risks associated with flooding of the incinerator itself, the associated storage and processing activities or the surrounding area once the facility becomes operational.

7.2.2 Potential risks include contamination of the surrounding properties, land, stream and groundwater with feedstock, ash and hazardous substances.

7.2.3 Advice from the Ministry for the Environment to Local Government says:
A sound risk assessment process is fundamental to ensuring climate change is appropriately factored into the planning and decision-making processes:
rate the level of consequences of a flood (from insignificant to catastrophic)

- rate the likelihood of a specific flood event occurring (rare to almost certain)

- assign a risk level, given both the consequences and likelihood (low to extreme)
- analyse the results to compare how your risk profile might change with climate change.[33]

7.2.4 Extreme severe weather events resulting in widespread catastrophic flooding in Auckland, Coromandel and the East Coast in 2023 illustrate that existing climate change models, including flooding assessments, are at best limited and conservative in their estimates of impacts.

8. Human Health

8. 1 No human health assessment has been undertaken for this project. It is therefore not possible to determine what the effects, and the severity of those effects, are. Furthermore, any human health assessment must be based on a credible assessment of hazardous substances, risks and emissions. This proposal has significant deficiencies and arguable conclusions with respect to the data and modelling provided.

8.2 The New South Wales government framework around waste-to-energy require a human health impact statement as part of an waste-to-energy proposal:
"Applicants are required to prepare and submit a detailed Human Health Risk Assessment (HHRA). The HHRA must be undertaken in accordance with the Guidelines for assessing human health risks from environmental hazards (enHealth, 2012). The HHRA is reviewed by technical experts in NSW Government agencies. Independent external experts may also be engaged to assess complex proposals such as EFW plants."[34]

8.3 A recent systematic review of human health studies of waste-to-energy incinerators published in the *Australian and New Zealand Journal of Public Health* concludes:
"This review shows contamination of food and ingestion of pollutants is a significant risk pathway for both nearby and distant residents...Because most studies in this review examined only a small subset of potential exposure and disease pathways, together with the low quality, it is likely that our review

[33] Ministry for the Environment. *Preparing for Future Flooding: A Guide for Local Government. Part 3. Assessing flood risk.* https://environment.govt.nz/publications/preparing-for-future-flooding-a-guide-for-local-government-in-new-zealand/part-three-assessing-flood-risk/
[34] Government of New South Wales. 2012. *Guide to the NSW Energy from Waste framework.* p7 https://www.epa.nsw.gov.au/-/media/epa/corporate-site/resources/waste/21p3147-energy-from-waste-framework.pdf

has 'under-discovered' the full health-effects picture...This systematic review highlights significant risks associated with waste incineration as a form of waste management...There is some suggestion that newer incinerator technologies with robust maintenance schedules may be less harmful, but diseases from exposures tend to manifest only after many years of cumulative exposure, so it is premature to conclude that these newer technologies improve safety."[35]

8.4 Air Pollution

8.4.1 This proposal claims that its emissions are within the NESAQ limits. Those findings are not consistent with the proposed feedstocks, supplementary fuel and peer reviewed research. The health implications for exposure to PM10, PM2.5, acid gases and dioxins/furans are well understood.

8.4.2 A number of emissions with severe human health impacts are not modelled at all including polycyclic aromatic hydrocarbons (PAHs): "One of the concerns about the disposal of tire waste at the flue gas-component concentrations emitted is the amount of polycyclic aromatic hydrocarbons (PAHs) formed and the resulting environmental damage. Many PAHs are widely referred to as carcinogens, mutagens, and teratogens and thus pose a significant danger to human health and the well-being of humans."[36]

8.4.3 Based on improved scientific understanding, the 2021 WHO air quality guidelines are more stringent for most critical air pollutants and reflect the overwhelming evidence of the impacts to human health, even at low levels. They set a more stringent threshold for air pollutants than the NESAQ, which themselves are based on the old 2005 WHO air quality guidelines.[37]

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[35] Peter W. Tait, James Brew, Angelina Che, Adam Costanzo, Andrew Danyluk, Meg Davis, Ahmed Khalaf, Kathryn McMahon, Alastair Watson, Kirsten Rowcliff, Devin Bowles, "The health impacts of waste incineration: a systematic review", *Australian and New Zealand Journal of Public Health*, Volume 44, Issue 1, 2020, Pages 40-48, ISSN 1326-0200, https://doi.org/10.1111/1753-6405.12939.

[36] Dóra Mentes, Csenge Emese Tóth, Gábor Nagy, Gábor Muránszky, Csaba Póliska, "Investigation of gaseous and solid pollutants emitted from waste tire combustion at different temperatures," *Waste Management*, Volume 149, 2022, Pages 302-312, ISSN 0956-053X, https://doi.org/10.1016/j.wasman.2022.06.027.

[37] Ministry for the Environment. 2021.. *Updated environmental data on New Zealand's air quality released today* https://environment.govt.nz/news/updated-environmental-data-on-new-zealands-air-quality-released-today/

8.4.4 Air pollution does significant harm to many New Zealanders, including children. There were 32 premature deaths in the Waipā District due to air pollution (PM2.5 and NO2) (among people aged 30+ years) in 2016.[38]

8.4.5 Other pathways for exposure including ingestion must be considered in respect to human health.

8.5 Cumulative effects

8.5.1 Cumulative effect is an important way through which pollutants affect public health, yet the ability to measure impact over time is severely compromised in New Zealand because of the lack of baseline data. This is evidenced by the lack of local data for Te Awamutu.

8.5.2 The Ministry for the Environment's study, *Our Air*, reveals:
"The lack of comprehensive air-quality monitoring coverage means there is also only limited data about the state and impact of air pollutants on natural ecosystems and biodiversity in New Zealand. In addition, current monitoring is limited to outdoor air quality information, yet New Zealanders spend up to 90 percent of their time indoors. Finally, better data are needed on key air emission sources including hazardous industry emissions, such as benzene, methyl bromide, dioxins, and heavy metals. New Zealand is the only country in the OECD (Organisation for Economic Co-operation and Development) without a pollutant release and tracking register."[39]

8.6 Climate change and health impacts

8.6.1 This incinerator would be a net contributor to climate change. The Applicant argues that they are not subject to an assessment of the impacts of their contribution to overall GHG emissions.

8.6.2 Climate change is often understood primarily in terms of global temperature rise and environmental issues like drought, heat and flooding. Climate change is also having dramatic human health impacts on infectious diseases, access to safe food, water and sanitation, the abundance of allergens, the behaviour and spread of viruses, and accelerating respiratory and pulmonary disease.

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[38] Environmental Health Intelligence New Zealand. *Health effects of air pollution.* https://www.ehinz.ac.nz/indicators/air-quality/health-effects-of-air-pollution/
[39] Ministry for the Environment. 2021. *Towards a better understanding of our air.* https://environment.govt.nz/publications/our-air-2021/

8.6.3 Climate change is a stress multiplier, putting pressure on vulnerable systems, populations, and regions. As such, a human health assessment of this proposal must include an analysis of the contribution of additional carbon dioxide and other GHGs to the atmosphere.

9. Climate change & ETS requirements

9.1 The Applicant's claim that this facility will result in net savings of tens of thousands of tonnes of greenhouse gas emissions is completely wrong. 400 tonnes per day of refuse derived waste will contain 113 tonnes of carbon per day. When burned that carbon would emit 413 tonnes of CO_2 per day or 151,000 tonnes per year. If instead that waste is landfilled, then most of the carbon would remain underground. Assuming conservatively that

- 10% of the carbon in the waste is putrescible material that is subject to anaerobic digestion in the landfill.
- Landfill gas is 50:50 to CH_4:CO_2.
- Landfill gas capture and incineration is 50% efficient.
- The global warming potential of methane is 25.

The landfill gas emissions would contribute 46,000 tonnes of CO_2-equivalent per year

Therefore burning 400 tonnes per day of waste would emit over 100, 000 tonnes per year of greenhouse gas emissions MORE than if that waste was landfilled. This does not include the diesel burned.

9.2 The GHG report commissioned by the Applicant is also wrong[40] to say that waste-to-energy facilities are not included in the Emissions Trading Scheme. They are defined as **Stationary Energy and Industrial Processes,** and guided by *Regulations 2009: 21–26* which state:[41]

As part of the New Zealand Emissions Trading Scheme (NZ ETS), stationary energy participants are required to monitor and report on their greenhouse gas emissions from 1 January 2010. The details of these reporting obligations are set out in the Climate Change (Stationary Energy and Industrial

[40] Formative. *GCS Waste to energy plant: greenhouse gas profile. Appendix N to the original Application* pp 34-35 (appended to this submission)
[41] Climate Change (Stationary Energy and Industrial Processes) Regulations 2009: 21–26 https://environment.govt.nz/assets/Publications/Files/seip-reporting-waste-combustion.pdf

Processes) Regulations 2009 (SEIP Regulations). ***Persons who combust used or waste oil, used tyres, or waste to generate electricity or industrial heat are required to participate in the NZ ETS.***

9.3 The *Waikato Regional Policy Statement, EIT-O1 – Energy* directs that, "Energy use is managed, and electricity generation and transmission is operated, maintained, developed and upgraded, in a way that: reduces reliance on fossil fuels over time." [42] The proposed incinerator, along with combusting waste predominantly of fossil fuel origin, will use significant quantities of diesel fuel running contrary to the express directives as well as the overall thrust of the Regional Policy Statement.

9.4 As noted under Section 5.12 the application is deficient of National Environmental Standard requirements for an emissions plan under the National Environmental Standards for Greenhouse Gas Emissions from Industrial Process Heat) Regulations 2023 (NESIH)

9.5 The applicant's Greenhouse Gas Emissions report was included with this original application, however that has been excised from the current application. It is attached for your reference. In that report, the Applicant claims a range of offsets, most if not all of which cannot be claimed. It similarly fails to account for the Applicant's stated claim of removing putrescible materials from MSW feedstock inputs. When viewed critically, CO2 emissions from this proposal are on par with coal.

9.6 In countries like NZ that already have a high proportion of renewable energy generation, and because Waste to energy incinerators only contribute to 'base load' electricity demand, rather than 'peak load' (because they must operate continuously - i.e. they cannot fire-up or shut-down quickly to address a energy production shortfall), WtE will only increase the carbon intensity of the electricity grid.

9.7 Most assessments of the climate impact of WtE technologies only consider 'production-based' emissions (i.e. those produced by the facility itself) and do not account for 'consumption-based' or 'embodied' emissions (i.e. full lifecycle emissions of materials and

[42] Waikato Regional Policy Statement. 2022. Part 3, 2 of 2, Energy, Infrastructure and Transport Objectives. P.1 of 5. https://www.waikatoregion.govt.nz/assets/WRC/Council/Policy-and-Plans/RPS-Regional-Policy-Statement/RPS2022-Part-3-Domains-and-Topics-2-of-2.pdf

products that become waste), which have been estimated to account for nearly half of all global emissions.

10. Feedstock supply

10.1 Granting of consent must be done on the basis that the proposal is credible: that it will operate in the way stated in the application subject to any conditions. However, the company has failed to provide any evidence that it can operate in the way stated in the application because there is no evidence for suppliers for its feedstock beyond its own operations (as Global Metal Solutions).

10.2 The application includes mention of tyres throughout, however it is nowhere stated where the tyres would come from. At present, Waste Management Ltd (WML) has a long term contract with Golden Bay Cement to provide tyre derived fuel (TDF) which takes approximately half of all NZ's tyres. WML has a tyre shredder, and a collection network that extends to the South Island.[43] Given that Global Contracting Solutions is proposing to rely on the other half of the entire country's tyre supply there is a total absence of any credible plan to obtain this feedstock. There is even local competition for used tyres. Cambridge-based Treadlite reuses tyres as horse arena flooring, playground matting, artificial sports fields, mats and gym flooring. The company has an existing collection programme including a South Island representative.

10.3 Given that the Applicant proposes to use half of all the end-of-life tyres each year, the lack of information about how these tyres are going to be collected, how they are processed and where they are going to be stored (beyond a vague reference to a 400m3 shed for materials) is a serious absence. Whangarei's Golden Bay Cement has a resource consent to burn 130 tonnes/day of tyres (approximately 16,000 tyres), about a third more than the 96 tonnes/day proposed at Paewira. This is delivered as 50mm chipped TDF from suppliers in Auckland. Approximately 15,000 m3 of outdoor storage for TDF is provided in 4m high, 12m wide windrows of varying lengths (up to 1000 tonnes/each - approximately one 7 day week supply) that is constantly replenished to ensure adequate feedstock. This storage area is complemented by a working pile area where the TDF is moved into the kiln.

[43] Case Study: Tyre Recycling
https://www.wastemanagement.co.nz/news-and-media/Case-Study-Tyre-Recycling/

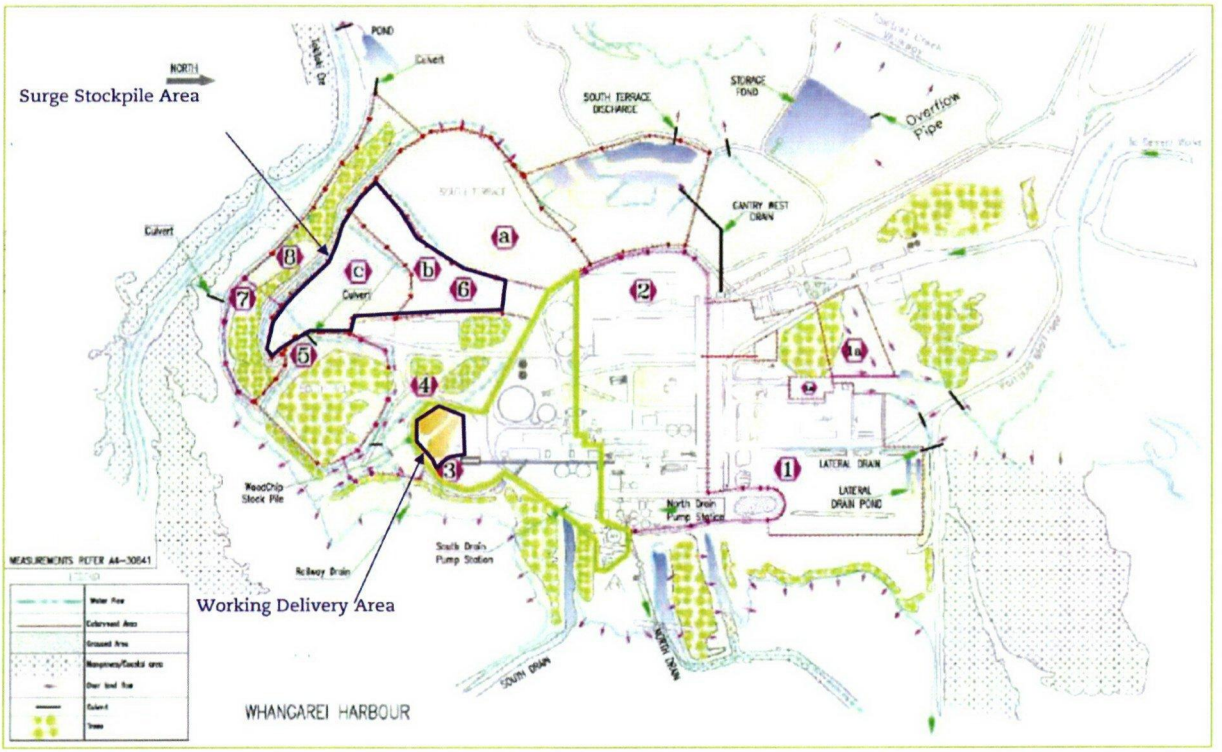

Image: Whangarei's Golden Bay Cement Kiln with Tyre-Derived Fuel storage in purple. Source: Golden Bay Cement Resource Consent Application APP.005059.29.01 to Northland Regional Council.

10.4 The Applicant states that "there will be occasions where deliveries from consolidation sites where flock, baled waste, tyres, processed C&I and other inorganic waste stocks may be stored outside for short periods of time. This may occur during breakdown, service periods, re-commissioning periods." (*Sec 7.1, Response to Requests for Information under Sec 92A, dated 8 July 2022*). There is no indication what "short periods of time" means. The storage of tyres outdoors is subject to a National Standard and a resource consent may be needed for this activity. Moreover, outdoor storage of other waste may give rise to odour and dust that has not been adequately assessed.

10.5 The source for mixed solid waste (MSW) is equally lacking in any detail whatsoever. The BERL report included in the Applicant's proposal says: *"Two large companies, Waste Management and EnviroNZ (also known as EnviroWaste), dominate the New Zealand waste sector. These two companies control the majority of New Zealand's waste either through direct contracts with private customers, or through waste service contracts with local authorities. The sector has a number of smaller participants, and some local authority operated services, but there is no direct central control*

of the New Zealand waste stream. Any future large scale WtE facility ***will need to work with these companies*** *to source the waste volumes required. Complicating any move to WtE will be the heavy influence these companies have. They are unlikely to support a move to WtE, given the investments they have made or will be making in new or expanded landfills. The parent companies of these waste companies operate WtE facilities in other countries, and have, to date, not expressed interest in doing so in New Zealand."*

10.6 There are no such contracts in place, no expressions of interest from large waste suppliers. The only credible source of feedstock is the Applicant's own company, Global Metal Solutions, for the floc, and even for that, no evidence of its access to the stated volume is provided in the application.

10.7 More confusingly, in response to the Sec 92A questions to WRC, the Applicant refers to the use of "commercial and industrial waste" (*Sec 7.1, Response to Requests for Information under Sec 92A, dated 8 July 2022*). No where in the application is there reference to C&I waste beyond this mention, and nowhere is that term defined.

10.8 Shredder floc, another intended feedstock, is a by-product of the metal shredding process and usually includes materials derived from the mechanical shredding of white goods and other metallic products, not just from the shredding of vehicles. It comprises mainly non-ferrous material and could include rubber, glass, plastic, PCBs, lead, other heavy metals (hexavalent chromium, cadmium and mercury), oils and automotive fluids.[44] Shredder floc is defined as a hazardous substance in some jurisdictions. It is difficult to determine emissions profiles and risk issues without a more thoroughgoing investigation of the composition of floc.

10.9 Plastic is another intended feedstock that raises serious concerns. It is commonly assumed that incineration can permanently eliminate plastic waste. However, unburned material still exists in the bottom ash that is a solid residue from incinerators. Peer reviewed research of bottom ash in 12 mass burn incinerators, one bottom ash disposal centre and four fluidised bed incinerators showed that bottom ash was a neglected microplastics source.[45]

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[44] Report on the implementation of the NSW Extended Producer Responsibility Priority Statement 2004 https://www.epa.nsw.gov.au/~/media/EPA/Corporate%20Site/resources/waste/050250-epr-expert.ashx

[45] Zhan Yang, Fan Lü, Hua Zhang, Wei Wang, Liming Shao, Jianfeng Ye, Pinjing He, Is incineration the terminator of plastics and microplastics?, *Journal of Hazardous Materials*, Volume 401, 2021, 123429, ISSN 0304-3894, https://doi.org/10.1016/j.jhazmat.2020.123429

Similarly, the particular mix of plastics may have a significant effect on the emissions of dioxin as Polyvinyl chloride (PVC) is the world's third-most widely produced synthetic polymer of plastic. Globally, about 40 million tons of PVC are produced each year.

10.10 One significant concern that arises from the lack of credible feedstock supplies is that easily recoverable materials will be instead directed to keep the incinerator burning, which would contradict the applicant's claim in its s 92 response that the incinerator would complement, rather than compete, with reuse and recycling options.

10.11 An additional concern is that material that poses significantly different risks to the environment and human health (e.g. hazardous material streams) would be used if other "approved" feedstocks are not available. Hazardous waste incinerators are banned in New Zealand.

11. Hazardous byproducts: wastewater & ash

11.1 The application's lack of detail and dubious evidence for offtake agreements for its waste byproducts raises concerns about the potential inadequate storage and handling of these hazardous substances onsite, as well as their potential to be sent to facilities with inadequate controls for disposal, treatment and use.

11.2 On pages 33-34 of the application report, the proposal indicates that the wastewater and ash byproducts (apart from fly ash) will be sent to landfill, or "for processing and disposal offsite". WRC requested further information on evidence of legitimate offtake agreements and for details of contaminants likely to be contained in the wastewater in its S92(1) Request for Further Information. The applicant's responses to relevant questions (25, 26, 39, 43, 44) fail to give confidence that the proposal has adequate arrangements in place.

11.3 The applicant's response to Q25, "Please provide details of contaminants that will be/are likely to be in the wastewater from the recycling building", is severely lacking in detail.

11.4 The applicant directs WRC to a table describing the makeup of the wastewater from the recycling process on page 20 of Appendix J - Infrastructure and Earthworks Assessment Report. This table is a summary of water inputs (demand) and outputs (waste), and provides

few details on the full list of potential contaminants that may be present in the wastewater. It is important to note that a proportion of the wastewater contains ash from the wet de-asher unit, which is likely to contain a wide array of contaminants including heavy metals, dissolved salts such as Cl^- and SO_4^{2-},[46] and a range of other persistent organic pollutants.[47]

11. 5 Directly above this table (pp. 19-20) in Appendix J states : "The wastewater from the recycling building is wastewater that is not considered suitable for the existing Waipa treatment facility. The waste discharge will be removed from the site in sealed trucks and disposed of at a managed waste facility." This raises serious questions about where the applicant will send this contaminated water and how it will be used (see below), and if the applicant cannot find an appropriate disposal facility, how/where this will be handled and stored safely before it can be treated appropriately or sent to an appropriate disposal facility.

11.6 The applicant's response to Q26, "Please provide evidence of consultation with a managed waste facility that they will accept the wastewater from the Paewira Plant recycling building", is dubious.

11.7 The applicant refers WRC to Attachment 5 - a letter from Global Metal Solutions (GMS), the sister company to the applicant Global Contracting Solutions, a provider of some feedstock for the incinerator, and whose website is listed on the Paewira promotional website, including under 'contact info'. The letter is entitled 'Expression of Interest to Purchase Paewira Wastewater', and presents as if GMS is a disinterested/disconnected party willing to take the wastewater "for our washdown and fire-fighting needs". Not only is there no evidence that GMS is an appropriate disposal facility for the contaminated wastewater, but the proposed use of the wastewater for "washdown and fire-fighting needs" would likely result in adverse environmental effects from inappropriate use and control of this heavily contaminated wastewater.

11.8 The applicant's response to Q39, "Please provide evidence of consultation with a suitably licensed landfill owner/operator that ash and other non-recyclable material will be accepted by the landfill", does not provide such evidence.

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[46] Hu et al. 2021. 'The fate of heavy metals and salts during the wet treatment of municipal solid waste incineration bottom ash.' *Waste Management*, Vol. 121, pp. 33-41. https://doi.org/10.1016/j.wasman.2020.11.049

[47] Rollinson 2022. *Toxic Fallout: Waste Incinerator Bottom Ash in a Circular Economy.* Zero Waste Europe and GAIA. https://zerowasteeurope.eu/wp-content/uploads/2022/01/zwe_Jan2022_toxic_fallout_research_report.pdf

11.9 The applicant directs WRC to Attachment 7, an assessment of the proposal against Waipā District Council's 2017-2023 Waste Management and Minimisation Plan. Only a single paragraph in this assessment mentions ash byproducts, as follows:

> 11.9.1 "What is then left at the end of the process is 23 tonnes of fly ash. Recent conversations with companies in the building and construction industry have indicated that there is a demand for fly ash. It is used as an input to concrete tilt slab panels - to achieve Green Star-ratings requires 15% fly ash content as a substitute for cement. We are aware that the Ministry of Education will stipulate that all newly constructed schools, of which 150 are planned, are required to achieve Green Star 6 ratings. This cannot be achieved without fly-ash content tilt slabs. The industry is already struggling to achieve supply due to a lack of fly ash."

11.10 This assessment does not:

> 11.10.1 Distinguish between different types of ash (e.g. grate ash, boiler ash and fly ash) and how they will be managed differently as detailed in pages 33-34 of the application document (i.e. that all ash except fly ash will disposed of to landfill)
>
> 11.10.2 Provide any discussion of where and by whom the ashes (except fly ash) will be landfilled, or any evidence of licensed landfill owners/operators who would be willing to accept them
>
> 11.10.3 Recognise critical distinctions between fly ash produced by coal-powered industrial processes (e.g. power plants and boilers) and waste incinerator fly ash, the latter of which contains a far greater quantity of toxic chemical residues and is unsuitable for use in construction/cement/concrete products without significant and expensive treatment processes, which are not proposed by the applicant.
>
> 11.10.4 This lack of process detail is reflected in the application report, which proposes that fly ash (2 out of 23 tonnes of total ash produced per day by the incinerator) "will be used for low grade concrete such as barriers" (p. 20).
>
> 11.10.5 Fly ash is currently classified as hazardous waste in Europe; "thus, it is not admitted by the applicable regulations... Municipal solid waste incineration fly ash (MSWI FA) also contains high concentrations of chloride. This reduces the capacity of the cement to solidify heavy metals [38] and can lead to critical problems in the

cement [39], such as lower compressive strength and durability [40] or aggravation of the corrosion affecting metal bars inserted in concrete" (p. 2).[48]

11.10.6 An additional assessment of fly ash as a hazardous substance is provided by external consultants in 92(1) supplementary information ('APP F - Hazardous Substances Review - update - HDGeo'). This assesses fly ash as a 'Generic Solid', rather than assessing the actual risks of waste incinerator fly ash. The consultants state that "values given to the 'Generic Solid' are very conservative and likely overestimate the actual risk from fly ash", but do not provide any discussion, evidence or justification for the appropriateness of these generic values, including whether incinerator fly ash may contain substances of high concern, or whether they also recognise the significant differences between coal-power derived fly ash and incinerator fly ash.

11.10.7 Fly ash is likely to be within relevant hazard criteria, although the actual composition of fly ash depends on the input and process details. The Waipa District Council apparently asked to include fly ash in the assessment. This was undertaken by HD Geo in their August 2023 response. It was disputed by HD Geo that fly ash should be included as it is "not listed as a regulated hazardous substance in the Hazardous Substances and New Organisms Act 1996". Apart from the fact that the HSNO Act does not individually list substances, the RMA definition differs from the HSNO definition of a hazardous substance insofar as it includes but is not limited to those.

12. Waste Minimisation

12. 1 Waipā's Waste Profile & Strategic Approach to Waste Minimisation

Waipā has developed a relatively proactive approach to waste minimisation compared to many other (particularly small) TAs across Aotearoa New Zealand. This includes an 18-year Waipā Waste Strategy which has many parallels with MfE's new national Waste Strategy, such as an emphasis on increasing resource recovery, repair, reuse, and recycling activities, shifting

[48] Marieta et al. 2023. 'Municipal Solid Waste Incineration Fly Ash: From Waste to Cement Manufacturing Resource.' *Materials (Basel)*, 16(6): 2538. https://doi.org/10.3390%2Fma16062538

towards a circular economy, and "moving away from a 'disposable' economy" (p.11).[49] The Strategy has a vision of "Building zero waste and sustainable communities" and activities to achieve the goals of the Waipā Waste Strategy have and will be included in the Long-Term (10-year) and Annual Plans.

12.2 The Waipā Waste Strategy also includes a section discussing the alignment of the Strategy with a Tāngata Whenua worldview. It raises high level questions relevant to this application which we have covered at length in this submission, such as whether an incinerator supports managing waste according to the waste hierarchy, whether the proposed site is appropriate, and whether there are adequate safeguards against the potential for environmental pollution. This section includes ensuring:

- "the full life cycle of waste from generation to assimilation/disposal is considered in developing waste management strategies
- we manage waste according to the waste hierarchy
- we promote the concept of a 'no waste' society
- waste management facilities are to be sited, designed, constructed, operated, and managed to best avoid adverse environmental impacts
- we will take steps to reduce opportunities for the release of environmentally persistent hazardous chemicals, or hazardous chemicals that could bioaccumulate to a level to have chronic toxic effects on environment" (p. 10).

12. 3 More recently, a Waste Assessment for Waipā was completed in 2022 to inform the development of the District's new Waste Minimisation and Management Plan (2023-2029), which found that in 2020/21 Waipā generated approximately 27,000 tonnes of general waste (kerbside collections and transfer stations) which went to landfills (p. 12).[50] The Waste Assessment reported several notable findings that raise questions on this application, including:

- 50.2% of household rubbish in Waipā was organic material, with 72% of this being food. The applicant has stated that putrescible waste will be removed from the

[49] Waipā District Council (2017). *Waipa Waste Strategy 2017-2035.* https://www.waipadc.govt.nz/repository/libraries/id:26zgz4o7s1cxbyk7hfo7/hierarchy/our-council/documentsandpublications/wastemanagement/documents/Waste%20Strategy%202017-2035%20Waipa%20District%20Council.pdf

[50] Waipā District Council. 2023. *Waipā Waste Minimisation and Management Plan* 2023-2029. https://www.waipadc.govt.nz/repository/libraries/id:26zgz4o7s1cxbyk7hfo7/hierarchy/our-council/haveyoursay/Waste%20minimisation/Waipa%CC%84%20Waste%20Minimisation%20and%20Management%20Plan%20-%20Final%20-%20March%202023

feedstock for the incinerator, meaning that the proposal will not only require thorough sorting processes to remove this high volume of material in household waste, but may have a substantially reduced quantity of MSW as feedstock

- While total waste disposed of in Waipā increased by around 5000 tonnes since the last assessment, the per capita rate remained unchanged, bucking the national trend of increases. It is likely that waste minimisation activities are starting to have an effect in Waipā
- These trends will likely continue: "Total waste volumes in Waipā are not expected to increase significantly over the period of the next Waste Management and Minimisation Plan" (p. 40).[51]

12.4 The Waste Assessment notably also included a section discussing the implications of a waste-to-energy facility such as the proposed incinerator being built in the region (pp. 28-30). This commentary makes some similar points as we have in this submission, including the uncertainty of feedstock supply, and the doubt around alignment with local and central government environmental goals and strategies.

12.5 In sum, these trends outline that the application is not a good fit for the future transitions in the waste and resource recovery sector in Waipā (and nationally) towards a circular approach, and that almost all of the material for this facility will need to be imported from outside of the district. This is not a proposal for the benefit of the Waipā or Te Awamutu community.

13. Circular Economy

13.1 This incinerator proposal undermines rather than supports the shift to a low carbon, low waste circular economy. Incineration of mixed solid waste is not compatible with the national, regional and local shift towards a low waste, low emissions circular economy. Incineration is a waste disposal activity just like landfill. Focusing on disposal technologies keeps us stuck on the linear take-make-waste pathway. Investing in and supporting the development of waste disposal options soaks up the capex and opex budgets that could be used to put in place real solutions that reduce, reuse, recycle and compost products and materials.

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[51] Waipā District Council (2022). *Waipā DIstrict Council: Waste Assessment 2022.* https://www.waipadc.govt.nz/repository/libraries/id:26zgz4o7s1cxbyk7hfo7/hierarchy/our-council/documentsandpublications/wastemanagement/documents/Waipa%20Waste%20Assessment%202022.pdf

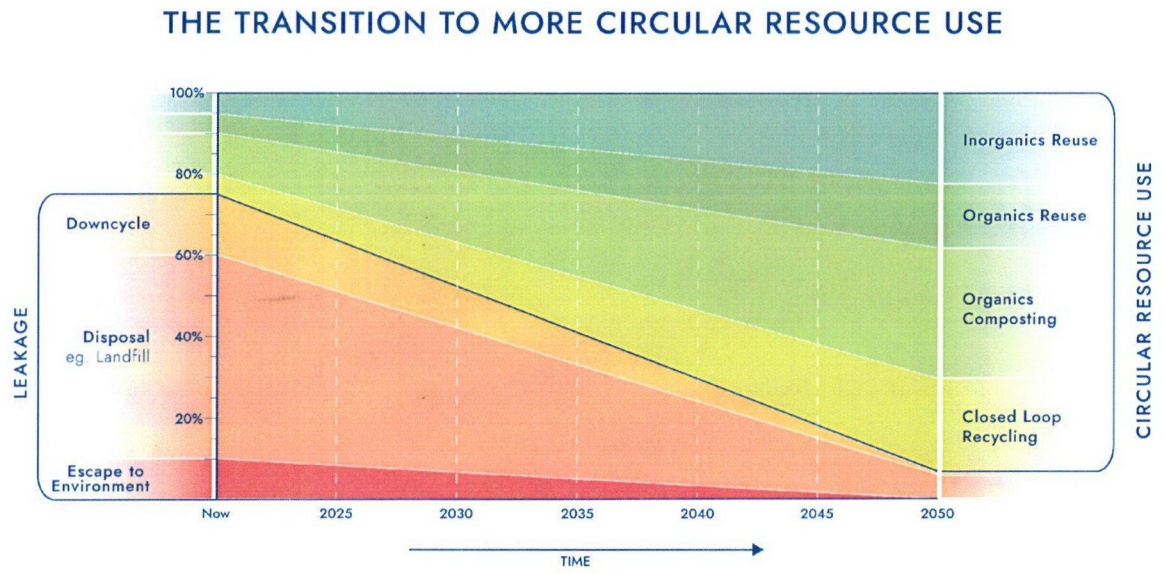
13.2 Waste-to-Energy technologies do not address the continued production of waste - whether waste is disposed of in landfill or via waste-to-energy, they are both ambulances at the bottom of the cliff. In fact, Waste-to-Energy projects consistently derail efforts to reduce waste generation by locking-in the linear economic system of production, consumption and disposal of finite resources. Zero waste strategies require continuous effort and progress to reduce waste *generation* (not just waste *disposal*) to as close to zero as possible, regardless of whether 'zero' is literally achieved.

13.3 Misses the key circular economy drivers

13.3.1 Changing the way we think about production and consumption will increase resilience and reduce waste and emissions. The new circular economy lens focuses at the top of the waste hierarchy to;

1. Reduce the amount of raw materials coming into the economy in the first place.
2. Limit the amount of material leaking out of the economy as waste and emissions.

13.3.2 The goal is to minimise the amount of new raw material and fossil fuel drawn in, which minimises the ecosystem damage and biodiversity loss caused by extraction and pollution. The goal of a circular economy is to keep products and materials in circulation for longer so that we do not need to extract large quantities of raw materials to feed our economies.



Zero Waste Network Stock Image 2021

13.3.3 This type of framework is useful when considering tricky issues like this incineration proposal. It is a Waste-to-Energy disposal technology so it is a form of 'leakage' like landfilling. It does not add value in a circular economy as it is just a shift in disposal mode rather than a move up the waste hierarchy towards more sustainable low waste, low emissions solutions.

13.3.4 Waste-to-Energy is part of the old extractive, linear economy story. As fossil fueled transport slips out of fashion, plastics manufacturing is becoming the next big thing. It comes accompanied by plastic waste and pollution that escapes into the environment. Waste-to-energy proposals follow as recycling options for many single-use plastic packaging are limited. The trouble is that creating fuel out of plastics made from fossil fuels is just a different way of creating GHG emissions from the same raw materials.

13.3.5 Incineration does not align with the strategic direction outlined in the 2023 Te rautaki para | NZ Waste strategy which clearly states that disposal infrastructure includes waste to energy plants, incineration facilities and landfills[52]. The section on Goal 6: Recovering Value states that "*Pyrolysis, incineration or gasification of municipal solid waste is unlikely to align with our circular economy goals, due to their negative effects on the climate,*

[52] Ministry for the Environment Te Rautaki Para Waste Strategy March 2023
https://environment.govt.nz/assets/publications/Te-rautaki-para-Waste-strategy.pdf

dependency on continued linear waste generation, and likelihood of causing hazardous discharge."

14. Economic impact

14.1 GCS likes to sell this proposal as an economic winner that will create jobs, earn revenue and not unreasonably harm the environment. But the economic benefits they claim are tiny compared to a similar investment in genuine zero waste infrastructure in terms of job creation[53] and economic activity.[54] Critically, there are potentially additional negative economic impacts (such as existing businesses leaving the community or choosing not to locate there as a result of the incinerator) and of course, the environmental impacts are much greater.

14.2 By contrast, the region is already endowed with the country's premier zero waste initiative, Xtreme Zero Waste, in Whaingaroa/Raglan. With 40+ employees, millions in turnover and a 78% diversion rate of materials from landfill, it represents an alternative, real-life opportunity for the people of Te Awamutu.

14.3 The Paewira facility is compared with a waste-to-energy incinerator in Korbach, Germany for the purpose of air assessment. This facility uses about half of the feedstock. It employs 15 people in total, with 10 of these doing shift work.

14.4 This proposal makes a number of claims that do not withstand scrutiny. The company's economic assessment says that, "There will also be efficiency gains from better handling of waste, which benefits businesses and the community (cheaper disposal) and local government (reduced need for new landfills). There are also expected to be benefits in terms of energy generated by the plant, which will enable the network to operate more efficiently." Neither of these is demonstrably true. There is no clear analysis of the cost of disposal that includes, for example, the requirement for ETS credits. There is no cost comparison with other forms of disposal nor an analysis of how Central government waste initiatives will impact waste volumes and consequently, the need for new landfills or how the likely application of the waste levy to material disposed of using incineration would affect the economics.

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[53] RREUSE. 2015. Briefing on job creation potential in the re-use sector. https://rreuse.org/wp-content/uploads/Final-briefing-on-reuse-jobs-website-2.pdf
[54] GAIA. 2021. *The High Cost of Waste Incineration.* https://www.no-burn.org/wp-content/uploads/The-High-Cost-of-Waste-Incineration-March-30.pdf

14.5 The European Union has excluded waste-to-energy incineration from a list of economic activities considered 'sustainable economic development, i.e. those that can make a substantial contribution to climate change mitigation and which do no significant harm to other environmental objectives such as transition to a circular economy, waste prevention and recycling. This list of sustainable finance activities is included in the report 'EU Taxonomy', which is a key part of the EU Action Plan on Sustainable Finance, and will become the basis for development of new regulatory frameworks for the financial sector.[55]

14.6 The NZ Ministry for the Environment has been clear that waste-to-energy facilities involving household waste are not likely to be eligible for waste minimisation funding.

14.7 Lock-in effect: The country's largest waste company, Waste Management Ltd. owns waste-to-energy incinerators overseas. Yet, they have not done this in New Zealand, and there is a reason for this. Their statement is worth quoting this in full:

> *In New Zealand, the Government has not supported widespread investment in WtE as the community benefits above are not as evident.*
>
> *In particular, to deliver adequate return on the investment in WtE plants, a guaranteed specific volume of continual waste (often including potentially recyclable materials) is needed for efficient operation of the plant – without that ongoing volume over several decades, the WtE plant will not be financially or operationally sustainable. This is generally called the "feed the beast" effect, and it does not support New Zealand's goals as stated in the Waste Minimisation Act, namely to "encourage waste minimisation and a decrease in waste disposal".*
>
> *In Waste Management's experience, our investigations globally, including in Australia, China, and across Europe, indicate the costs associated with WtE are significantly higher than current methods of waste disposal to landfill. As such, were WtE to be of consideration, it would need government intervention (that is, government protection for these facilities) as there is in European and other countries, to make it a viable proposition for commercial investment.*

[55] Zero Waste Europe. *Waste-to-Energy is not Sustainable Business, the EU says. Policy Briefing* September 2019. https://zerowasteeurope.eu/wp-content/uploads/2019/09/zero_waste_europe_policy_briefing_sustainable_finance_en.pdf

Were the New Zealand government interested in this approach, Waste Management would leverage the significant experience of our parent company, which owns and operates several WtE plants in China. These plants service large populations of around 10 million people within one city. In these cities, government regulation stops alternative, potentially cheaper, disposal solutions being built and government subsidies make the WtE disposal costs affordable for the community.

14.8 As seen in a number of countries including Sweden, Denmark, the UK, Germany, the Netherlands, South Korea, and mainland China, municipalities have struggled with over-investments in waste-to-energy plants and unused capacity of the infrastructure (also called "plant overcapacity").[56]

15. Cultural Impacts

15.1 Mana Whenua have indicated that they have a number of outstanding concerns regarding this project.

15.2 The Waipā District Council Notification Decision says, "*It difficult to come to a clear position on the cultural values of the site and any potential impacts given that a Cultural Impact assessment has not been completed and the response from Waikato Tainui is ambiguous.*"

15.3 Waikato-Tainui have indicated that they would like a Cultural Impact Assessment conducted as part of the application process. (*Sec 92A Responses to Waikato Regional Council, email from Alana Mako, Waikato-Tainui*).

15.4 An application of this magnitude should have a full cultural impact assessment conducted, and ideally this should have been conducted prior to the acceptance of the application for

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[56] You, Ke. (2015, June). Joint Use of the Municipal Waste Incineration Infrastructure in Seoul. *Seoul Solution.* https://seoulsolution.kr/sites/default/files/policy/2%EA%B6%8C_11_Environment_Joint%20Use%20of%20the%20Municipal%20Waste%20Incineration%20Infrastructure%20in%20Seoul.pdf
Shapiro-Bengtsen, S., Andersen, F., Münster, M., & Zou, L. (2020, July). "Municipal Solid Waste Available to the Chinese Energy Sector – Provincial Projections to 2050." *Waste Management: Volume 112.* https://doi.org/10.1016/j.wasman.2020.05.014
Shapiro-Bengtsen, S. (2020, August). "Is China Building More Waste Incinerators Than it Needs?." *China Dialogue.* https://chinadialogue.net/en/pollution/is-china-building-more-waste-incinerators-than-it-needs/
United Kingdom without Incineration. (2017). *Part of the Bin the Burners Briefing Series: Incineration Overcapacity* https://ukwin.org.uk/btb/BtB_Incineration_Overcapacity.pdf
Sora, M. (2013, January). Incineration Overcapacity and Waste Shipping in Europe: the End of the Proximity Principle?. Fundacio ENT & Global Alliance for Incinerator Alternatives. https://www.no-burn.org/wp-content/uploads/Overcapacity_report_2013.pdf

processing. Full, prior and informed consent is essential. Mana Whenua should be afforded appropriate independent expertise to understand the full range of potential cultural impacts.

16. Conclusions

16.1 This application does not meet the test for completeness under s 88(2)(b) of the RMA (and consequently Schedule 4 s1, s6(1)(c) and s7(1)(f)) but potentially also for adequacy under s 92 of the RMA. The documentation provided by the company offers inadequate and incomplete information upon which to make an informed decision about granting consent. This proposal has many unanswered questions and unsubstantiated assumptions about its operations that cannot be relied upon for decision making.

16.2 Taken as a whole or in its constituent parts, this proposal is deeply problematic. While the applicant and its contractors argue that all hurdles can be overcome and that all effects are minor or less than minor, the evidence either does not support those conclusions or there is ambiguity about what work and inputs are actually required.

16.3 Given the profoundly inappropriate location of this proposal coupled with the multiple non-complying portions and discretionary activities, the community of Te Awamutu cannot be expected to take on what is novel technology for New Zealand. This proposal is contrary to the Operative Waipā District Plan, both in general and specific terms.

16.4 As importantly, this proposal has very long term negative implications in terms of waste minimisation, human and environmental health. The proposal will not promote the sustainable management of natural and physical resources nor contribute to New Zealand's waste minimisation goals which promote waste minimisation and a decrease in waste disposal in order to protect the environment from harm. In addition, the proposal will significantly increase New Zealand's greenhouse gas emissions contrary to the net-zero goals in the Climate Change Response Act and New Zealand's emissions reductions plan and international obligations.

16.5 We urge the Commissioners to probe deeply into all possible impacts of this proposal. When a fulsome investigation is complete, it will be obvious that the only conclusion can be to decline this application.

16.6 We appreciate the opportunity to submit on this proposal. We look forward to the public hearings on this in due course. Please feel free to contact us should you have any questions regarding our submission in the interim.

I do request*, pursuant to section 100A of the Act, that you delegate your functions, powers, and duties to hear and decide the application to one or more hearings commissioners who are not members of the local authority.

Signature of submitter: _____
(or person authorised to sign on behalf of submitter) (A signature is not required if you make your submission by electronic means.)

Date: 12/10/2023 Contact person: Valerie Morse
(name and designation, if applicant)

Postal address: _____
kiaora@zerowaste.co.nz

(or alternative method of service under section 352 of the Act):

Notes to submitter

If you are making a submission to the Environmental Protection Authority, you should use form 16B.
The closing date for serving submissions on the consent authority is the 20th working day after the date on which public or limited notification is given. If the application is subject to limited notification, the consent authority may adopt an earlier closing date for submissions once the consent authority receives responses from all affected persons.
If you are a trade competitor, your right to make a submission may be limited by the trade competition provisions in Part 11A of the Resource Management Act 1991.
You must serve a copy of your submission on the applicant as soon as reasonably practicable after you have served your submission on the consent authority.
If you make your submission in hard copy please deliver to Waipa District Council, 101 Bank Street, Te Awamutu or 23 Wilson Street, Cambridge or post to Private Bag 2402, Te Awamutu 3840
If you make your submission by electronic means, a signature is not required. Electronic submissions on resource consent applications must be directed to submissions@waipadc.govt.nz.
If you make a request under section 100A of the Resource Management Act 1991, you must do so in writing no later than 5 working days after the close of submissions and you may be liable to meet or contribute to the costs of the hearings commissioner or commissioners. You may not make a request under section 100A of the Resource Management Act 1991 in relation to an application for a coastal permit to carry out an activity that a regional coastal plan describes as a restricted coastal activity.
Please note that your submission (or part of your submission) may be struck out if the authority is satisfied that at least one of the following applies to the submission (or part of the submission):

- it is frivolous or vexatious:
- it discloses no reasonable or relevant case:
- it would be an abuse of the hearing process to allow the submission (or the part) to be taken further:
- it contains offensive language:
- it is supported only by material that purports to be independent expert evidence, but has been prepared by a person who is not independent or who does not have sufficient specialised knowledge or skill to give expert advice on the matter.

Privacy information
The information you have provided on this form is required so that your submission can be processed under the RMA. The information will be stored on a public register and held by the Council, and may also be made available to the public on the Council's website. In addition, any on-going communications between you and Council will be held at Council's offices and may also be accessed upon request by a third party. Access to this information is administered in accordance with the Local Government Official Information and Meetings Act 1987 and the Privacy Act 1993. If you have any concerns about this, please discuss with a Council Planner prior to lodging your submission.