

# New Plymouth District Council

## Crematorium

Monitoring Programme

Annual Report

2023/24

Technical Report 2024-55





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### **Annual Report**

### **2023/24**

### **Technical Report 2024-55**

Taranaki Regional Council  
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## Executive summary

The New Plymouth District Council (NPDC) operates Taranaki Crematorium located on State Highway 3 at 629 Junction Road, New Plymouth (the Site). The Site is within the Waiwhakaiho catchment and the Te Atiawa rohe.

This report for the period from July 2023 to June 2024 outlines the monitoring programme implemented by Taranaki Regional Council (the Council) to assess NPDC's environmental performance and compliance with its air discharge consent during the period under review. This report also assesses the environmental effects arising from the discharge of contaminants to air from the cremators.

**During the monitoring period NPDC demonstrated a high level of environmental performance and high level of administrative performance.**

NPDC holds one resource consent which authorises the discharge of contaminants to air from two natural gas-fired cremators. The consent includes 22 conditions which impose monitoring and management measures to minimise the discharge of contaminants to air. The conditions also control ambient air quality limits to avoid significant adverse human health effects which may result from the activity.

This year Council's monitoring programme consisted of two compliance monitoring inspections which inspected the management controls in place and observed discharges from the stack while cremation was occurring.

This year the crematorium carried out 475 cremations overall, six more than the previous year. There were 37 in the Elecfurn cremator, and 438 in the Austeng Joule cremator.

For reference, in the 2023/24 year, consent holders were found to achieve a high level of environmental performance and compliance for 864 (89%) of the 967 consents monitored through the Taranaki tailored monitoring programmes, while for another 75 (8%) of the consents a good level of environmental performance and compliance was achieved. A further 26 (3%) of consents monitored required improvement in their performance, while the remaining two (<1%) achieved a rating of poor.

In terms of overall environmental and compliance performance by the consent holder over the last several years, this report shows that the consent holder's performance remains at a high level.

This report recommends that the 2024/25 monitoring programme remains largely the same as for the 2023/24 year.



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# 1. Introduction

## 1.1 Compliance monitoring programme reports and the Resource Management Act 1991

### 1.1.1 Introduction

This report for the 2023/24 monitoring period details the results of compliance monitoring of the Taranaki Crematorium by Taranaki Regional Council (the Council). It discusses the findings of the overall monitoring programme implemented by the Council to assess New Plymouth Districts Council's (NPDC) compliance with its air discharge consent. NPDC holds an air discharge consent for the discharges of contaminants to air from cremation.

The Council began monitoring the Taranaki Crematorium in 1998 and this is the 27<sup>th</sup> annual report to be prepared by the Council to report on the monitoring of the crematorium air discharges and their potential and actual effects on air quality.

### 1.1.2 Structure of this report

Section 1 of this report sets out general information about:

- consent compliance monitoring under the *Resource Management Act 1991* (RMA) and the Council's obligations;
- the Council's approach to monitoring sites through annual programmes;
- the resource consents held by NPDC in relation to the crematorium;
- the nature of the monitoring programme in place for the period under review; and
- a description of the activities and operations conducted at the crematorium site.

Section 2 presents the results of monitoring during the period under review, including scientific and technical data.

Section 3 discusses the results, their interpretations, and their significance for the environment.

Section 4 presents recommendations to be implemented in the 2024/25 monitoring year.

A glossary of common abbreviations and scientific terms, and a bibliography, are presented at the end of the report.

### 1.1.3 The Resource Management Act 1991 and monitoring

The RMA regulates environmental 'effects' which are defined as positive or adverse, temporary or permanent, past, present or future, or cumulative. Effects may arise in relation to:

- a. the neighbourhood or the wider community around an activity, and may include cultural, social-economic and health effects;
- b. physical effects on the locality, including landscape, amenity and visual effects;
- c. ecosystems, including effects on plants, animals, or habitats, whether aquatic or terrestrial;
- d. natural and physical resources of special significance (for example recreational, cultural, or aesthetic); and
- e. risks to the neighbourhood or environment.

In drafting and reviewing conditions of discharge consents and in implementing monitoring programmes the Council is recognising the comprehensive meaning of 'effects' in as much as is appropriate for each activity. Monitoring programmes are not only based on existing consent conditions but also on the obligations of the RMA to assess the effects of the exercise of consents. In accordance with Section 35 of the RMA, the Council undertakes compliance monitoring for consents and rules in regional plans, and maintains an overview of the performance of resource users and consent holders. Compliance monitoring, including both activity and impact monitoring, enables the Council to continually re-evaluate its approach and that of consent holders to resource management and, ultimately, through the refinement of methods and considered responsible resource utilisation, to move closer to achieving sustainable development of the region's resources.

### **1.1.4 Evaluation of environmental performance**

In addition discussing the details of the performance and extent of compliance by the consent holder, this report also assigns a rating to the Company's environmental and administrative performance during the period under review. The rating categories are high, good, improvement required and poor for both environmental and administrative performance. The interpretations for these ratings are found in Appendix II.

For reference, in the 2023/24 year, consent holders were found to achieve a high level of environmental performance and compliance for 864 (89%) of a total of 967 consents monitored through the Taranaki tailored monitoring programmes, while for another 75 (8%) of the consents a good level of environmental performance and compliance was achieved. A further 26 (3%) of consents monitored required improvement in their performance, while the remaining two (<1%) achieved a rating of poor.<sup>1</sup>

## **1.2 Process description and location**

The Taranaki Crematorium has been operating at the Site near State Highway 3 (Figure 1) since 1961. It was the only crematorium in the Taranaki region until March 2009 when W Abraham Ltd Crematorium commenced operations at Bell Block.

The site is located in a rural-industrial environment approximately 5km from New Plymouth and services the Taranaki region. To the north of the site is the New Plymouth Water Treatment Plant, and to the east is plantation forestry. The nearest receptors sensitive to air quality are residential dwellings on the opposite side of State Highway 3. The nearest dwelling is at 628 Junction Rd approximately 160m to the southwest of the cremator stacks.

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<sup>1</sup> The Council has used these compliance grading criteria for more than 20 years. They align closely with the 4 compliance grades in the MfE Best Practice Guidelines for Compliance, Monitoring and Enforcement, 2018

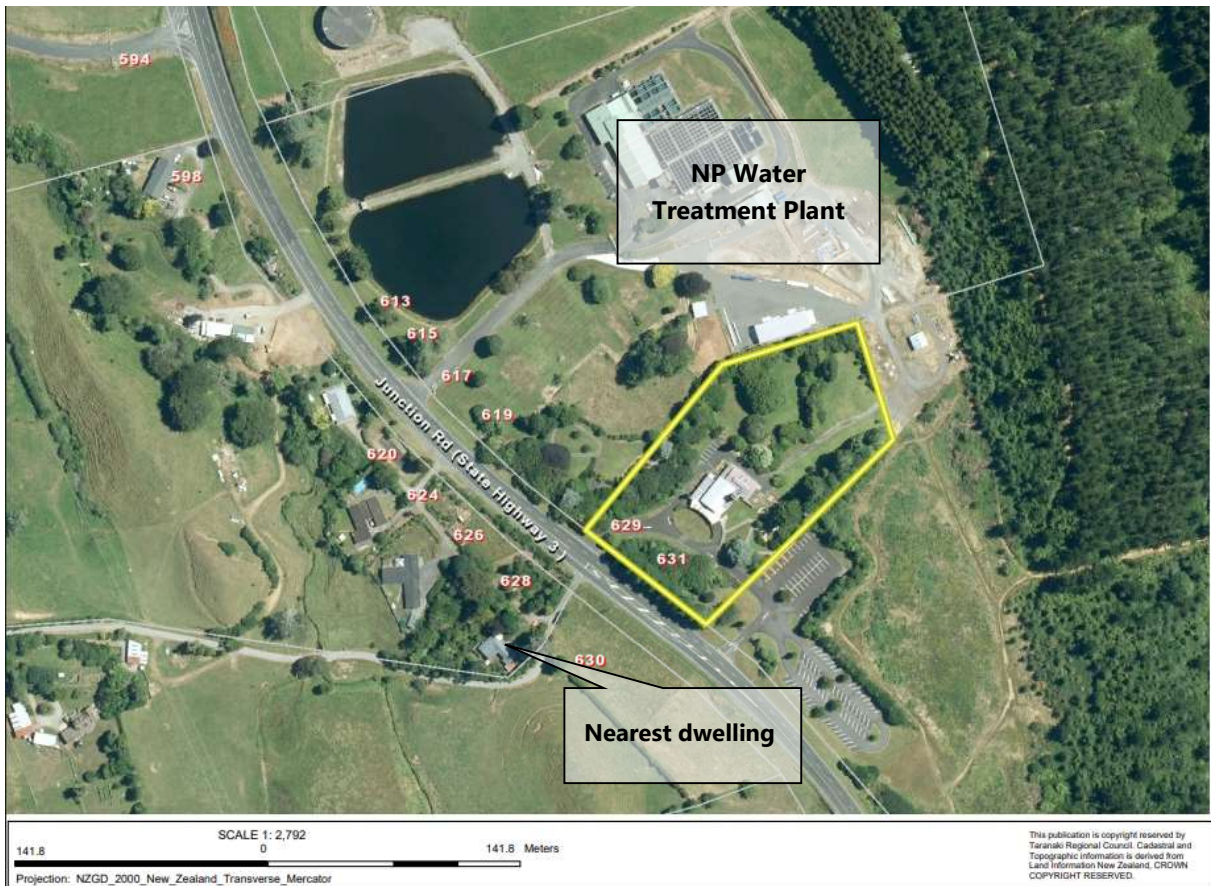


Figure 1 Aerial photo of the Site with the boundary outlined in yellow

The number of cremations conducted at the Taranaki Crematorium has steadily increased in the last 10 years from 334 in 2012-2013 to 475 this monitoring year (Figure 2). There were 6 more cremations than the previous monitoring year. With each cremation taking approximately 1.5 hours, the cremators discharged combustion contaminants to air for 712.5 hours, not including start up processes.

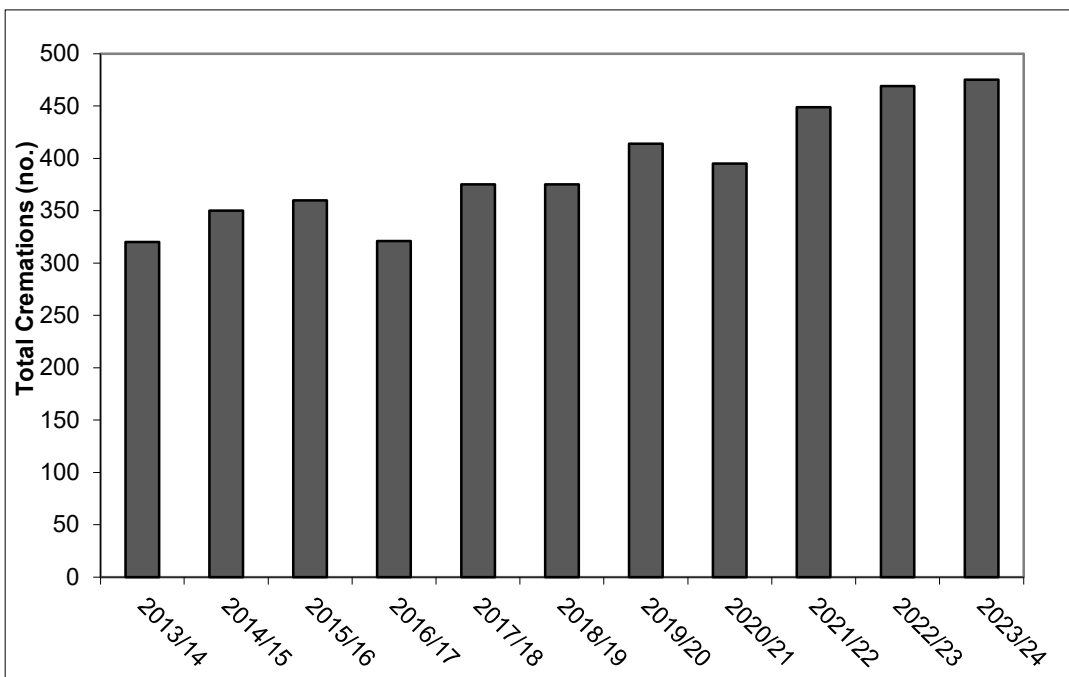


Figure 2 Number of cremations per year at Taranaki Crematorium July 2013 to June 2024

## 1.2.1 Cremators

Taranaki Crematorium has operated two gas-fired cremators since the current resource consent was issued in 2015. An Elecfurn HH-2500 installed in 2005 and continues to be used. In 2018 NPDC was issued an abatement notice as a result of excessive smoke discharges from the other cremator in use at the time. During October and November 2022 this cremator was decommissioned and removed, and an Austeng Joule (the Austeng) cremator was installed and commissioned. The manufacturer considers this model to be more fuel efficient than the previous cremator, thereby reducing the overall site emissions. Unlike the Elecfurn cremator, the Austeng does not have an opacity meter to monitor the discharge for smoke. Overall the Joule is likely to be cleaner burning due to its modern and more efficient design.

## 1.3 Resource consents

NPDC holds one resource consent for the discharge of contaminants to air and the details are summarised in Table 1 below. Summaries of the consent conditions are set out in Section 3.2 of this report.

Table 1 Summary of the air discharge consent held by NPDC

Consent number	Purpose	Granted	Review	Expires
<i>Air discharge consent</i>				
5205-2	To discharge emissions into the air from the operation of a crematorium	12 May 2015	June 2026	1 June 2032

## 1.4 Monitoring programme

### 1.4.1 Introduction

Section 35 of the RMA imposes obligations on the Council to gather information, monitor and conduct research on the exercise of resource consents within the Taranaki region. The Council is also required to assess the effects arising from the exercising of these consents and report on them.

The Council may, therefore, make and record measurements of physical and chemical parameters, take samples for analysis, carry out surveys and inspections, conduct investigations and seek information from consent holders.

The monitoring programme for the crematorium consisted of two primary components.

### 1.4.2 Programme liaison and management

There is generally a significant investment of time and resources by the Council in:

- ongoing liaison with resource consent holders over consent conditions and their interpretation and application;
- discussion over monitoring requirements;
- preparation for any consent reviews, renewals or new consent applications;
- advice on the Council's environmental management strategies and content of regional plans; and
- consultation on associated matters.

### 1.4.3 Site inspections

The crematorium was visited on two occasions during the 2023/24 period and the inspections focused on cremator operation electronic monitoring. Performance parameters, including temperatures at key points in

the cremator, and oxygen concentration, are displayed on a monitor in the office or on the cremator itself. The measurements on the displays were observed and compared against the relevant consent conditions.

During both inspections observations of the cremator stacks were made from the carpark in order to assess odour, particulate, and visible emissions from. Records and data collected by NPDC were obtained or provided so that the operational and internal monitoring requirements of the consent could be reviewed by the Council.

## 2. Results

### 2.1 Inspections

The compliance monitoring inspections were conducted on 19 March 2024 and 5 June 2024.

#### 19 March 2024

The staff advised that the Elecurn cremator has not been used since 3 November 2023 because the gas vaporiser malfunctions when the cremators are run concurrently. The cremators are inspected, maintained and calibrated annually and monitored remotely. A cremation in the Austeng Joule cremator commenced at 11:00. The casket was untreated plywood, no fittings. When it was introduced to the Joule cremator the secondary chamber temperature was at 790°C and O<sub>2</sub> was 11%. It dropped to 760°C after the introduction, but the temperature climbed soon after. The officer observed the stack emissions for about 15 minutes, no visible smoke was observed, only heat haze.

#### 5 June 2024

The second inspection of the monitoring year also followed up on a potential non-compliance with the operating temperature of the secondary chamber in the Joule cremator. The secondary chamber operates at a high temperature to incinerate contaminants discharged during the cremation process. The casket didn't have any prohibited material on the outside. The secondary chamber reached the minimum required temperature before the casket was inserted.

In July 2023 NPDC provided a report detailing the number of cremations per cremator, and the maintenance undertaken each cremator. In October 2023 the Elecurn cremator was inspected due for a fault which prevented start up. The fault was thought to be a low gas pressure switch which was replaced however, the fault was later found to be a blocked high gas pressure switch on the afterburner. The cremator returned to full operation after the maintenance work.

In November 2023 the Company discovered that the vapouriser solenoid on the gas supply had failed which prevented sufficient gas flow to operate both cremators concurrently. Due to ongoing contract issues with the supplier the site is only able to operate the Joule cremator. A replacement solenoid is scheduled to be installed in mid-September which will enable both cremators to be used.

The Joule cremator was not serviced during this monitoring year but is scheduled for servicing in October 2024.

### 2.2 Incidents, investigations, and interventions

The monitoring programme for the year was based on what was considered to be an appropriate level of monitoring, review of data, and liaison with the consent holder. During the year matters may arise which require additional activity by the Council, for example provision of advice and information, or investigation of potential or actual causes of non-compliance or failure to maintain good practices. A pro-active approach, that in the first instance avoids issues occurring, is favoured.

For all significant compliance issues, as well as complaints from the public, the Council records these in a database. The database includes events where the individual/organisation concerned has notified the Council. Details of any investigation and corrective action taken are recorded for non-compliant events.

Complaints from the public may be associated with a particular site. If there is potentially an issue of legal liability the Council must be able to prove by investigation that the individual/organisation is the source of the incident (or that the complaint cannot be validated).

During the 2023/24 reporting period no air quality complaints were received from the public by NPDC or the Council.

During the inspection on 19 March 2024 the temperature of the secondary chamber (afterburner) appeared to be less than the consent limit of 850°C when the casket was inserted, as discussed in the inspections section. This was initially recorded as a non-compliance and Council requested further information from the operator. The operator sought advice from the manufacturer who provided an explanation of the computer-controlled temperature system. In brief, the manufacturer confirmed that the secondary chamber does reach 850°C at the commencement of the cremation as per the consent conditions. The observation was amended to compliant.

## 3. Discussion

### 3.1 Discussion of site and environmental performance

During the 2023/24 monitoring period there were 475 cremations, an increase of 6 compared to the previous monitoring year. With each cremation taking approximately 1.5 hours the cremators discharged combustion contaminants to air for 712.5 hours.

The inspections conducted during the year determined that the site was operating in full compliance with the conditions of the air discharge consent.

The combustion gases generated during a cremation pass through a secondary chamber which is maintained at 850°C and 6% oxygen. Under these conditions the combustion gases and solids are incinerated into their constituent parts thereby reducing the hazardous air pollutants (HAPs) exiting the stacks. The temperature and oxygen are computer-controlled to maintain optimal conditions.

The discharge of HAPs from the cremator stacks, in combination with background levels, are likely to be low, and unlikely to approach the relevant human health-based standards and guidelines at any location where people may be exposed.

No complaints were received during the monitoring period about adverse amenity effects from discharges of odour, smoke or particulate matter,, although visible smoke can be seen from the road occasionally. Adverse amenity effects are not likely to occur at a frequency or intensity which could be considered offensive or objectionable at any location where people may be affected.

### 3.2 Evaluation of performance

A tabular summary of NPDC's compliance record for the year under review is set out in Table 2 below.

Table 2 Summary of performance for consent 5205-2

Purpose: To discharge emissions to air during operation of a crematorium		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Adopt best practicable option to minimise adverse effects	Inspection and liaison with consent holder	Yes
2. Exercise in accordance with application	Inspection and liaison with consent holder	Yes
3. Approval prior to alterations to plant or processes	Inspection and liaison with consent holder	Yes
4. Notification to Council prior to maintenance	Inspection and liaison with consent holder	Yes
5. Cremator operated and maintained to prevent smoke, fumes during charging	Inspection and liaison with consent holder Self-notification - smoke emitted from the Elecurn cremator although Consent conditions were not breached	Yes
6. Duct work leak proofed	Inspection	Yes
7. Stack and duct insulation	Inspection	Yes
8. Steps to reduce and minimise combustion of certain materials	Liaison with consent holder	Yes
9. Limit on minimum temperature and time in secondary chamber	Continuous monitoring by consent holder	Yes
10. Minimum stack height	Inspection	Yes



Purpose: To discharge emissions to air during operation of a crematorium		
Condition requirement	Means of monitoring during period under review	Compliance achieved?
11. Limit on minimum temperature in secondary chamber at charging	Continuous monitoring by consent holder	Yes
12. Limit on opacity Elecfern cremator	Monitoring by consent holder and inspection by Council	Yes
13. Limit on opacity Newton cremator	Monitoring by consent holder and inspection by Council	Yes
14. Continuously record outlet temperature of gases	Continuous monitoring by consent holder	Yes
15. Maintain a maintenance / calibration schedule	Liaison with consent holder	Yes
16. Limits on emission components	Monitoring by Council and NPDC (if required)	Yes
17. Limits on emission components	Monitoring by Council and NPDC (if required)	Yes
18. No offensive odour beyond boundary	Inspection	Yes
19. No offensive odour beyond boundary	Inspection	Yes
20. Commissioning source emission tests	As requested by Council (if required)	N/A
21. Provision of monitoring results	Liaison with consent holder	Yes
22. Optional review provision	Next review 2026	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		<b>High</b>
Overall assessment of administrative performance in respect of this consent		<b>High</b>

N/A = not applicable

Table 3 Evaluation of environmental performance over time

Year	Consent numbers	High	Good	Improvement req	Poor
2019/20	5205-2	-	1	-	-
2020/21	5205-2	1	-	-	-
2021/22	5205-2	1	-	-	-
2022/23	5205-2	1	-	-	-
2023/24	5205-2	1	-	-	x

During the year, NPDC demonstrated a high level of environmental performance and a high level of administrative performance with the resource consents as defined in Appendix II.

### 3.3 Recommendations from the 2022/23 Annual Report

In the 2022/23 Annual Report, it was recommended:

1. THAT monitoring of the Taranaki Crematorium site, stack emissions and the required documentation for the 2023/24 year shall continue in 2022/23.
2. THAT the frequency of site inspections shall reduce from four times per year to two.
3. THAT should there be issues with environmental or administrative performance in 2023/24 the monitoring may be adjusted to reflect any additional investigation or intervention as necessary.

The recommendations were adopted and implemented.

### 3.4 Alterations to monitoring programmes for 2024/25

In designing and implementing the monitoring programmes for air discharges in the region, the Council has taken into account:

- the extent of information already made available through monitoring or other means to date;
- its relevance under the RMA;
- the Council's obligations to monitor consented activities and their effects under the RMA;
- the record of administrative and environmental performances of the consent holder; and
- reporting to the regional community.

The Council also takes into account the scope of assessments required at the time of renewal of consents, and the need to maintain a sound understanding of industrial processes within Taranaki exercising resource consents.

It is proposed that for 2024/25 the inspections of the site, inspections of documentation, and observations of stack emission continue.

It should be noted that the proposed programme represents a reasonable and risk-based level of monitoring for the site in question. The Council reserves the right to subsequently adjust the programme from that initially prepared, should the need arise if potential or actual non-compliance is determined at any time during 2024/25.

## 4. Recommendations

1. THAT monitoring of the Taranaki Crematorium site, stack emissions and the required documentation for the 2023/24 year shall continue in 2024/25.
2. THAT should there be issues with environmental or administrative performance in 2023/24 the monitoring may be adjusted to reflect any additional investigation or intervention as necessary.

## Glossary of common terms and abbreviations

The following abbreviations and terms may be used within this report:

Incident	An event that is alleged or is found to have occurred that may have actual or potential environmental consequences or may involve non-compliance with a consent or rule in a regional plan. Registration of an incident by the Council does not automatically mean such an outcome had actually occurred.
Investigation	Action taken by Council to establish what were the circumstances/events surrounding an incident including any allegations of an incident.
Incident Register	The Incident Register contains a list of events recorded by the Council on the basis that they may have the potential or actual environmental consequences that may represent a breach of a consent or provision in a Regional Plan.
Resource consent	Refer Section 87 of the RMA. Resource consents include land use consents (refer Sections 9 and 13 of the RMA), coastal consents (Sections 12, 14 and 15), water consents (Section 14) and discharge consents (Section 15).
RMA	<i>Resource Management Act 1991</i> and including all subsequent amendments.

For further information on analytical methods, contact a manager within the Environment Quality Department.

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## Appendix I

### Resource consents held by New Plymouth District Council

(For a copy of the signed resource consent  
please contact the TRC Consents department)

## **Air discharge permits**

Section 15(1)(c) of the RMA stipulates that no person may discharge any contaminant from any industrial or trade premises into air, unless the activity is expressly allowed for by a resource consent, a rule in a regional plan, or by national regulations. Resource consents authorising discharges to air are issued by the Council under Section 87(e) of the RMA.



**Discharge Permit**  
**Pursuant to the Resource Management Act 1991**  
**a resource consent is hereby granted by the**  
**Taranaki Regional Council**

Name of Consent Holder: New Plymouth District Council

Decision Date (Change): 28 November 2022

Commencement Date (Change): 28 November 2022 (Granted Date: 12 May 2015)

**Conditions of Consent**

Consent Granted: To discharge emissions into the air from the operation of a crematorium

Expiry Date: 1 June 2032

Review Date(s): June 2026

Site Location: 629 Junction Road, New Plymouth

Grid Reference (NZTM) 1696418E-5669150N

*For General, Standard and Special conditions  
pertaining to this consent please see reverse side of this document*

### General condition

- a. The consent holder shall pay to the Taranaki Regional Council all the administration, monitoring and supervision costs of this consent, fixed in accordance with section 36 of the Resource Management Act 1991.

### Special conditions

1. The consent holder shall at all times adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to prevent or minimise any actual or likely adverse effects on the environment arising from discharges to air from the site.
2. The exercise of this consent shall be undertaken in general accordance with the information provided in support of the original application for this consent and with any subsequent application to change consent conditions. Where there is conflict between applications the later application shall prevail, and where there is conflict between an application and consent conditions the conditions shall prevail.
3. Prior to undertaking any alterations to the plant, process, or operations, which may significantly change the nature or quantity or concentration of contaminants emitted from the site, the consent holder shall consult with the Chief Executive, Taranaki Regional Council, and shall obtain any necessary approvals under the Resource Management Act 1991 and any amendments.
4. The consent holder shall notify the Chief Executive, Taranaki Regional Council, at least 2 working days before any maintenance that may affect or include the calibration, monitoring, or process control of the cremators. Notification shall include the consent number and a brief description of the work to be done, and be emailed to [worknotification@trc.govt.nz](mailto:worknotification@trc.govt.nz).
5. The consent holder shall at all times operate, maintain, supervise, monitor and control all processes so that emissions authorised by this consent are maintained at a practicable minimum.
6. The cremators and all duct work shall be maintained leak proof and gas tight to prevent the discharge of gases from the duct work or cremator, other than through the stack.
7. The stack flue and duct work leading to the stack shall be adequately insulated to avoid, as far as practicable, the condensation of liquids or the formation of soot smuts.
8. The consent holder shall take all reasonable steps to reduce and minimise the quantity of materials (such as PVC, metals, and other materials listed in the guidelines published by the Australasian Cemeteries and Crematoria Association (May 2004): *Contents of coffins delivered for cremation*) combusted within the cremator.
9. The cremators shall be interlocked so as to prevent the introduction of a coffin to the primary chamber unless the temperature in the secondary combustion zone exceeds 650°C for the Elecfurn cremator and 850°C for the Austeng Joule cremator.
10. The minimum stack height for the discharge of exhaust emissions from the cremators shall be eight metres above ground level.
11. The incineration of the waste gases in the secondary chamber for both cremators shall be undertaken such that waste gases are held at a minimum temperature of 850°C for a minimum period of 2 seconds.

## Consent 5205-2.1

12. In any one cremation cycle of the Elecfern cremator, not more than two one-minute averages of the opacity readings shall exceed 20% obscuration or Ringelmann Scale 1.
13. During a cremation cycle of the Austeng Joule cremator, the oxygen content in the flue gas shall remain above 6% and the flue gas opacity shall not exceed Ringelmann Scale 1.
14. The consent holder shall continuously record the temperature of gases within or at the outlet of the secondary chamber.
15. The consent holder shall maintain the schedule of maintenance and calibration of each unit including but not limited to its controlling, recording, and monitoring equipment and systems.
16. The consent holder shall control all emissions of carbon monoxide, nitrogen dioxide, fine particles (PM<sub>10</sub>) and sulphur dioxide to the atmosphere from the site, in order that the maximum ground level concentration of any of these contaminants arising from the exercise of this consent measured under ambient conditions does not exceed the relevant ambient air quality standard as set out in the Resource Management (National Environmental Standards for Air Quality Regulations, 2004) at or beyond the boundary of the property.
17. The consent holder shall control all emissions to the atmosphere from the site of contaminants other than those expressly provided for under special condition 16, in order that they do not individually or in combination with other contaminants cause a hazardous, noxious, dangerous, offensive or objectionable effect at or beyond the boundary of the property.
18. The discharges authorised by this consent shall not give rise to an odour at or beyond the boundary of the site that is offensive or objectionable.
19. For the purposes of special conditions 17 and 18, without restriction, an odour shall be deemed to be offensive or objectionable if:
  - a. it is held to be so in the opinion of an enforcement officer of the Taranaki Regional Council, having regard to the duration, frequency, intensity and nature of the odour; and/or
  - b. an officer of the Taranaki Regional Council observes that an odour is noticeable, and either it lasts longer than ten (10) minutes continuously, or it occurs frequently during a single period of more than one (1) hour; and/or
  - c. no less than three individuals from at least two different properties, each declare in writing that an objectionable or offensive odour was detected beyond the boundary of the site, provided the Taranaki Regional Council is satisfied that the declarations are not vexatious and that the objectionable or offensive odour was emitted from the site at the frequency and duration specified in (b). Each declaration shall be signed and dated and include:
    - i. the individuals' names and addresses;
    - ii. the date and time the objectionable or offensive odour was detected;
    - iii. details of the duration, frequency, intensity and nature of the odour that cause it to be considered offensive or objectionable;
    - iv. the location of the individual when it was detected; and
    - v. the prevailing weather conditions during the event.

20. At the written request of the Chief Executive, Taranaki Regional Council, the consent holder shall undertake emission test on discharges from the cremator. This emission testing shall:
- a. be undertaken for all pollutants that are requested to be tested in writing by the Chief Executive, Taranaki Regional Council, for the volumetric flow of combustion gases, and for the oxygen concentration at the exit of the secondary chambers and at the test ports;
  - a. for each sample, be conducted over a complete cremation cycle, commencing as soon typical operating conditions have achieved, ending once calcining is complete, and over a period of at least one hour; and
  - b. comprise not less than three separate samples for each type of emission test undertaken, and shall have the concentration results corrected to 0 (zero) degrees Celsius, 1 (one) atmosphere pressure and on a dry gas basis.
21. The consent holder shall provide to the Chief Executive, Taranaki Regional Council, upon request, all monitoring (including results of all tests, relevant operating parameters, raw data, all calculations, assumptions and an interpretation of the results), and calibration and process control data whether generated and held by an operator, any automated process control systems or any agent of the consent holder.
22. The Taranaki Regional Council may review any or all of the conditions of this consent by giving notice of review during the month of June 2020 and/or June 2026 for the purpose of:
- a) adding, amending or deleting any limit on discharge or ambient concentrations of any contaminant or contaminants; and/or
  - b) requiring the consent holder to adopt the best practicable option to remove or reduce any adverse effect on the environment caused by any discharge to the environment; and/or
  - c) requiring the consent holder to calibrate and/or maintain any monitoring and/or recording device to monitor combustion conditions or environmental performance of the cremator including but not limited to devices for the measurement and/or recording of oxygen and/or carbon monoxide within the secondary combustion chamber and/or exhaust stack; and/or
  - d) ensuring that the conditions are adequate to deal with any adverse effects of the discharge on the environment arising from the exercise of this consent which were not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Signed at Stratford on 28 November 2022

For and on behalf of  
Taranaki Regional Council



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A D McLay  
**Director - Resource Management**

## Appendix II

Categories used to evaluate environmental and administrative performance

## Categories used to evaluate environmental and administrative performance

Environmental performance is concerned with actual or likely effects on the receiving environment from the activities during the monitoring year. Administrative performance is concerned with the Company's approach to demonstrating consent compliance in site operations and management including the timely provision of information to Council (such as contingency plans and water take data) in accordance with consent conditions.

Events that were beyond the control of the consent holder and unforeseeable (that is a defence under the provisions of the RMA can be established) may be excluded with regard to the performance rating applied. For example loss of data due to a flood destroying deployed field equipment.

The categories used by the Council for this monitoring period, and their interpretation, are as follows:

### Environmental Performance

**High:** No or inconsequential (short-term duration, less than minor in severity) breaches of consent or regional plan parameters resulting from the activity; no adverse effects of significance noted or likely in the receiving environment. The Council did not record any verified unauthorised incidents involving environmental impacts and was not obliged to issue any abatement notices or infringement notices in relation to such impacts.

**Good:** Likely or actual adverse effects of activities on the receiving environment were negligible or minor at most. There were some such issues noted during monitoring, from self-reports, or during investigations of incidents reported to the Council by a third party but these items were not critical, and follow-up inspections showed they have been dealt with. These minor issues were resolved positively, co-operatively, and quickly. The Council was not obliged to issue any abatement notices or infringement notices in relation to the minor non-compliant effects however, abatement notices may have been issued to mitigate an identified potential for an environmental effect to occur.

For example:

- High suspended solid values recorded in discharge samples however, the discharge was to land or to receiving waters that were in high flow at the time;
- Strong odour beyond boundary but no residential properties or other recipient nearby.

**Improvement required:** Likely or actual adverse effects of activities on the receiving environment were more than minor, but not substantial. There were some issues noted during monitoring, from self-reports, or during investigations of incidents reported to the Council by a third party. Cumulative adverse effects of a persistent minor non-compliant activity could elevate a minor issue to this level. Abatement notices and infringement notices may have been issued in respect of effects.

**Poor:** Likely or actual adverse effects of activities on the receiving environment were significant. There were some items noted during monitoring, from self-reports, or during investigations of incidents reported to the Council by a third party. Cumulative adverse effects of a persistent moderate non-compliant activity could elevate an 'improvement required' issue to this level. Typically there were grounds for either a prosecution or an infringement notice in respect of effects.

### Administrative performance

**High:** The administrative requirements of the resource consents were met, or any failure to do this had trivial consequences and were addressed promptly and co-operatively.

**Good:** Perhaps some administrative requirements of the resource consents were not met at a particular time however, this was addressed without repeated interventions from the Council staff. Alternatively adequate reason was provided for matters such as the no or late provision of information, interpretation of 'best practical option' for avoiding potential effects, etc.

**Improvement required:** Repeated interventions to meet the administrative requirements of the resource consents were made by Council staff. These matters took some time to resolve, or remained unresolved at the end of the period under review. The Council may have issued an abatement notice to attain compliance.

**Poor:** Material failings to meet the administrative requirements of the resource consents. Significant intervention by the Council was required. Typically there were grounds for an infringement notice.

