Report to the Hearing Committee on a notified resource consent application

Summary of application

Activity:	To discharge contaminants to air associated with the operation of a steel and aluminium can manufacturing plant, which includes coating processes.
File Reference:	WGN190198
Applicant:	NCI Packaging (NZ) Limited
Consent Sought:	**Operative Regional Plans** **[36059]: Discretionary activity** Discharge permit to discharge contaminants to air associated with the operation of a steel and aluminium can manufacturing plant, which includes coating processes. **Proposed Natural Resources Plan** **[36059]: Discretionary activity** Discharge permit to discharge contaminants to air associated with the operation of a steel and aluminium can manufacturing plant, which includes coating processes.
Location:	60-66 Montgomery Crescent, Clouston Park, Upper Hutt
Map Reference:	At or about map reference NZTM 1775130.5445749
Legal Description:	Lot 1 DP 30717, Lot 1 DP 28552 and Lots 11, 12, 13, 14 and 16 DP 30232

Recommendation: I recommend that the above consents be granted subject to conditions for the reasons outlined in this report.

Report prepared by:	Rubie McLintock	Resource Advisor, Environmental Regulation	
Report peer reviewed by:	Claire McKevitt	Senior Resource Advisor, Environmental Regulation	
Report approved by:	Stephen Thawley	Acting Manager, Environmental Regulation	

Qualifications of reporting officer

My name is Rubie Alice McLintock and I have been employed at Greater Wellington Regional Council (GWRC) since January 2021. In this role, I am responsible for processing resource consent applications and monitoring compliance across the various activities under the jurisdiction of GWRC. I have a Masters of Science majoring in Environmental Science from the University of Canterbury and a Bachelor of Science majoring in Geography and Environmental Studies from Victoria University of Wellington. I also worked at the Canterbury Regional Council (CRC) for three years as a Consent Planner before joining GWRC. In my role at the CRC, I processed many resource consents for air discharges and have been involved in the notified consent process, of notable mention, I was involved in a hearing for a quarry extension in December 2020. In total, I have approximately three and a half years of experience relating to resource management.

Contents

Application WGN190198 by NCI Packaging (New Zealand) Limited

1. Purpose

This report provides an analysis of the resource management issues in respect of a resource consent application made by NCI Packaging (New Zealand) Limited ('the applicant' or 'NCI'). This report will provide the Hearing Committee with information and advice related to:

a) The background of the application;

b) A description of the proposed activity;;

c) A description of the location and receiving environment;

d) An outline of the relevant legal and planning provisions;

e) Details of the notification process and submissions received;

f) Comments on the assessment of environmental effects provided;

g) Details of national and regional provisions relevant to the applicant and the proposal's consistency with these provisions;

h) Recommendations concerning the matters specified in Part 2 of the RMA; and

i) Recommendations on the decision to be made by the decision-maker.

This report draws on technical advice provided by Mr Jeff Bluett, Technical Director – Air Quality at Pattle Delamore Partners Limited (PDP). Conclusions and recommendations made in his report are referenced in this report. Mr Bluett's report is attached in Appendix 1 and should be read in conjunction with this report.

The assessment and recommendations contained in this report are not binding on the Hearing Committee. This report has been prepared without knowledge of the content of any evidence or submissions that will be made at the hearing; consequently, it cannot be assumed that the Hearing Committee hearing the application will reach the same conclusions as those provided in this report.

2. Background

2.1 Overview

NCI has applied under consent application WGN190198 [36059] to GWRC to discharge contaminants to air associated with the operation of a steel and aluminium can manufacturing plant, which includes coating processes, at 60-

66 Montgomery Crescent, Clouston Park, Upper Hutt. This consent seeks to renew the activities authorised in WGN110219 [30888].

2.2 Resource consent process

There have been various amendments to the application since lodgement. An overview of the resource consent process is described below:

- NCI lodged the resource consent application on 4 February 2019. Mr Rhys Kevern, Technical and Compliance Manager of NCI prepared the application and associated Assessment of Environmental Effects (AEE)[1] to support the application. The AEE was supported by a separate dispersion modelling report[2];

- GWRC engaged Mr Bluett of PDP to undertake a technical review of the application. Mr Bluett issued GWRC a memorandum[3] that detailed further information required to understand the proposal. Following this, GWRC issued NCI with a request for further information (RFI) under s92(1) of the RMA on 20 May 2019;

- NCI provided a letter[4] in response to the RFI on 28 June 2019. This response included a summary of the application, CALPUFF output files, and the appendices of the air discharge files;

- GWRC engaged PDP to review the response to the RFI. The review of this was detailed in a PDP memorandum - NCI Discharge to Air: Technical Review of Assessment of Environmental Effects[5];

- Following the receipt of the PDP memorandum, GWRC limited notified the resource consent application on 12 August 2019[6]. In total seven submissions were received. Following the submission period, GWRC facilitated two pre-hearing meetings[7] on 21 October 2019 and 29 January 2020 to discuss the application with the applicant, submitters, and GWRC staff;

- Following the pre-hearing meetings and based on odour complaints received, GWRC recommended that NCI should investigate whether there were any other odour mitigation techniques that could be utilised on site. NCI undertook a review into this and described the outcomes of this in a report[8]. PDP[9] reviewed this report and considered that the list of potential

[1] Assessment of Environmental Effects of Air Discharges from NCI Packaging Can Manufacturing Facility, Rhys Kevern, NCI. 31 January 2019.
[2] Air Dispersion Modelling Assessment, NCI Packaging. Jacobs February 2019. Report number IZ119600-RPT-1. And NCI Packaging (NZ) Limited, Upper Hutt Air Discharge Monitoring, November/December 2018, Issue II. Source Testing New Zealand Limited. 31 January 2019.
[3] Review: NCI Packaging Can Manufacturing Plan – Assessment of Environmental Effects for Discharges of Contaminants to Air. PDP. 16 May 2019.
[4] Further Information Response, Air Discharge Permit WGN190198 (NCI June 2019).
[5] NCI Discharge to Air: Technical Review of Assessment of Environmental Effects. PDP 1 August 2019.
[6] Details of the notification of this consent application are in Section 7.1 of this report.
[7] Details of the pre-hearing meetings are in discussed in Section 7.6 of this report and appended in Appendix 3.
[8] Review of Odour Control Techniques, Rhys Kevern, NCI, 18 June 2020.
[9] NCI review of odour mitigation techniques - PDP review. Email Jeff Bluett (PDP) to Claire McKevitt (GWRC) 13 August 2020.

mitigation measures was accurately described and supported the biofilter trial that NCI proposed;

- In July 2020, Tonkin and Taylor (T+T) reviewed the odour issues[10] at the site for the applicant. T+T recommended a programme of odour field observations, the implementation of a biofilter trial and a sensitivity analysis of odour dispersion for differing stack heights using air dispersion modelling.

- In January 2021, T+T provided a letter[11] to update GWRC on the outcomes of the three action items from T+T's July 2020 review. Mr Bluett reviewed this letter and provided comments[12] to GWRC on these three action items.

- NCI, T+T and Mr Bluett met by teleconference on 8 April 2021 to discuss Mr Bluett's review of the T+T 2021 letter. T + T recorded the outcomes of that meeting in a letter[13]. Following that letter, Mr Bluett informed GWRC[14] that the issues associated with his initial review of T+T's report had been resolved.

I undertook a site visit on 11 March 2021 with Mr Bluett and Mr Shane Filtcroft, Plant Manager of the NCI site in Upper Hutt. Mr Bluett and I also familiarised ourselves with the surrounding neighbourhood.

2.3 Site history and previous resource consent

NCI have operated a steel and aluminium can manufacturing, which includes coating processes, in Upper Hutt for over ten years. In 2006, NCI acquired 'Impact Manufacturing' and transferred machinery and processes from a Lower Hutt site to the NCI site. Based on the officers' report for WGN110219[15], it is understood NCI undertook a due diligence study in 2006 which found that a resource consent to authorise the discharge of contaminants to air was not required.

In early 2010, in response to odour complaints received by GWRC from residential areas, particularly Mountbatten Grove and Fergusson Drive, GWRC undertook an investigation into odour sources in the area. Investigations into the odour source(s) were unable to identify the source of the odour. However, as part of the investigative process, GWRC identified that production rates from the NCI site had increased relative to 2006. Consequently, NCI were required to obtain a resource consent, as they no longer complied with the conditions of Rule 13 and 15 of the Regional Air Quality Management Plan (RAQMP).

Following this, NCI applied for a resource consent to authorise the discharge of contaminants to air from the onsite activities in January 2011. A hearing panel

[10] NCI Packaging, Upper Hutt, Review of odour issues. Jenny Simpson, T&T, 17 July 2020.
[11] NCI Packaging, Upper Hutt – Summary of further odour investigations and recommendations, Jenny Simpson T&T 27 January 2021.
[12] NCI Discharge to Air: Technical Review of Odour Investigations and Mitigation Recommendations, PDP 17 March 2021
[13] NCI Packaging, Upper Hutt – response to questions raised in PDP technical review. Jenny Simpson T&T 28 April 2021.
[14] Email WGN190198 - T+T Review, Jeff Bluett (PDP) to Rubie McLintock (GWRC) 08 May 2021.
[15] Section 2.2 (Page 1) of Officers Report for WGN110219

granted resource consent WGN110219 on 2 August 2013 for a duration of six years, expiring 2 August 2019. NCI applied to renew their air discharge permit on 4 February 2019. In accordance with s124 of the Resource Management Act (RMA) 1991, NCI have continued to operate in accordance with resource consent WGN110219, following its expiration.

2.4 Compliance history and response to odour

The following section provides an overview of the compliance and complaint history for the site under resource consent WGN110219 and GWRC responses to odour notifications.

2.4.1 Compliance with WGN110219

The compliance rating for WGN110219 since 2013 is visible in Table 1. The annual period is defined as between 1 July and 30 June.

Table 1: Compliance history for WGN110219

Annual Period	Compliance Rating
2013/2014	**Technical non-compliance (Minor non-compliance)** • The Adaptive Management Odour Plan (AMOP) submitted as required under Condition 5 did not meet the required standard; • Failed to submit the Operations and Maintenance Manual (OMM) by the required date (Condition 13); and • Failed to submit the annual report on the required date as required by condition 24.
2014/2015	**Technical non-compliance (Minor non-compliance)** • Condition 5 was not complied with which related to the submission of the AMOP.
2015/2016	**Full compliance.**
2017/2018	**Minor non-compliance** • Failure to review the communication plan on a six monthly basis; • Annual report was received one week late; and • Consent holder needed to provide a technical review of the AMOP.
2018/2019	**Minor non-compliance** • Not all technical reports in response to odour complaints had been consistently received throughout the year as required by Condition 9; • Failure to maintain a full record of odour complaints as required by Condition 21/22; • Failure to review the communications plan on a six monthly basis as required by Condition 23; and • Submission of the annual report one week late.
2019/2020	**Full compliance**
2020/2021	*The compliance report for this period has not been completed.*

2.4.2 GWRC response to odour notifications and complaints

As noted in Section 2.2 of this report, GWRC has received odour complaints from neighbouring residences near NCI. GWRC enforcement officers have found it difficult to confirm that NCI is the source of a particular odour. This is because the duration of odour events can be short and sporadic, meaning that the odour has usually dissipated by the time a GWRC enforcement officer arrives to the location of the complaint. The site is also surrounded by other industrial activities that are potential sources of odour; creating uncertainty as to the source of odour.

The complaints received by GWRC are attached in Appendix 2 of this report. Between 2016 and June 2021 GWRC has received 102 odour complaints. The complainants have described the odour as chemical-like, offensive, solvent and potent.

On 21 November 2017, a GWRC enforcement officer assessed and determined the odour from the site as 'offensive and/or objectionable'. This constituted a breach of the consent conditions and therefore, the Resource Management Act 1991 (RMA). In their assessment, the officer noted that the odour caused a tingling of the nose afterwards, and they did not want to be outside in the odour for long periods, even though the odour was intermittent. GWRC served NCI with abatement notice A889 on 6 December 2017 for the discharge of offensive and objectionable odour. NCI appealed the notice to the Environment Court on 18 January 2018 on the basis that GWRC had incorrectly identified NCI as the source, and that the odour was not offensive or objectionable. GWRC cancelled the abatement notice in March 2018.

In the response to the RFI, NCI provided details for 23 individual complaints[16] received between 2016 and 2019 and details of the mitigation and corrective action taken. On multiple occasions, the investigation notes from NCI state that they suspect the odour is from an alternative source. On two occasions, the NCI investigation notes state that they detected a weak paint odour.

2.4.3 GWRC Odour Trial

At the first pre-hearing meeting[17] held on 21 October 2019, GWRC acknowledged the difficulty in responding to odour complaints due to delays in getting to the site and because there are potentially other sources in the area.

In response to this, Mrs Claire McKevitt, Senior Resource Advisor at GWRC, based herself at the GWRC Upper Hutt depot, which neighbours the NCI site and the properties on Mountbatten Grove from 2 to 12 December 2019. The purpose of this trial was two-fold. The first was for the residents experiencing offensive odour to be able to contact Mrs McKevitt directly, and she would be able to assess the odour immediately without the usual travel delays faced by

[16] As shown in Table 8-3 of the RFI response.
[17] This is discussed further in Section 7.6.1 of this report and appended in Appendix 3.

the duty enforcement officer. The second purpose of the trial was to identify and investigate other potential odour sources.

During the first week of the trial, there was a storm and no odour complaints were received. At least four odour complaints were received during the second week. Mrs McKevitt noted that on 10 December 2019 when assessing the odour from Mountbatten Grove (the location of a complaint), the solvent odour can be described as three bursts of odour within a 30-second period, ranging in intensity from weak through to three strong bursts. Throughout that assessment, which would have lasted for up to 30 minutes in total, Mrs McKevitt experienced an additional two odour events, each lasting for approximately 30 seconds, similar to the first event. Based on the relatively short duration of odour experienced, the odour was not considered to breach the threshold of the consented limit, which is 'offensive and objectionable odour'.

Following this, Mrs McKevitt walked around the properties of the neighbouring industrial sites, and although other odours were detected, they were not the same as the odour experienced at Mountbatten Grove. Subsequently, Mrs McKevitt went to the NCI site, and walked around the exterior of the factory. It is noted that the factory's external roller doors were open, and the odour she and her colleague experienced as they walked past the roller doors was the same as what was experienced at Mountbatten Grove.

Due to a spate of odour complaints in January 2020[18], multiple GWRC enforcement officers have been out to respond to the odour complaints and assess the odour. Typically, within a ten-minute odour assessment, if odour is experienced, it is often experienced as three to four bursts which last for up to 15 seconds, ranging in intensity from weak to very strong. Due to the relatively short durations of the odour each time, GWRC have not confirmed the odour to be a breach of the consent conditions since 2017.

3. Description of activities

The applicant proposes to discharge contaminants to air associated with a steel and aluminium can manufacturing plant. Refer to Section 3 (Page 6 to 8) of the AEE.

There are three main operations carried out at the NCI plant. These are:

- Forming steel paint cans;
- Drawing aluminium cans; and
- Printing and lacquer application.

Previously, there were two production lines for the drawing and lacquering of aluminium cans; however only Line 2 now operates for aluminium cans. The

[18] 21 odour complaints were received in January 2020

stack from Line 1 is now used for the forming of tin cans, and the internal lacquer coating of the aluminium cans.

Once cans are formed, printed and lacquered, the cans are packaged and despatched. Cans are not filled with products on the NCI site.

3.1 Forming steel paint cans

There are two tinplate assembly lines on site. One for assembling 1 and 2 litre cans, and the second for assembling 4 and 5 litre cans.

Cans are made from coated tin plated steel sheet metals which are formed into cylinders and then welded. A circular end is double seamed onto one end of the cylinder and either a top or ring is double seamed on the other end.

Once the cylinder is formed, a solvent-based resin (acrylic with a small amount of epoxy) is sprayed on the inside of the weld area. This lacquer is dried/cured using a gas-fired curing oven. This discharges via the Line 1 Main stack.

3.2 Drawing aluminium cans

The process of manufacturing aluminium cans consists of striking a lubricated disc of aluminium with enough force to plasticise it, whereby the aluminium is forced up the sides of a die to produce a one-ended cylinder (tube). The top of the can is trimmed and for some products, the sides are brushed to create a distinct texture.

A wet scrubber is used to collect aluminium dust from the brushing operation. To allow the coating to be applied at later stages, the drawing lubricant is washed off in the wash plant and the can dried. A natural gas-fired burner heats the washing plant and there is a separate stack for discharging water vapour. The cans are then printed and lacquered, as described in Section 3.3 of this report.

3.3 Printing and lacquer application

3.3.1 Process description

Dried aluminium cans are sprayed with an internal coating of solvent-based lacquer to form a barrier between the can and the contents when filled. Following this, a solvent based external basecoat, print and external lacquer is applied by rollers. At each stage, the coatings are dried in an oven prior to the next coat.

NCI previously had two coating and printing lines; now only Line 2 is used. Line 2 internal lacquer emissions and emissions from the tinplate sidestripe ovens, are discharged from the main ventilation stack of Line 1. This stack extends 25 m above ground level.

Emissions from the curing ovens and coating and lacquering processes of Line 2 are collected by one main extraction fan and ducting system. These are discharged via a stack which terminates at 25 m above ground level. Line 2 only uses electricity to heat and maintain the temperature of the ovens.

3.3.2 Products used

In the RFI response, the applicant provided a full list of lacquers, basecoats and varnish[19] used in their production process for a three-year period (2016 to 2018). The most commonly used products are:

- PPG3046-006B White Base Coat;
- PPG3603-801A Colourless Gloss Varnish;
- PPG7407-310A/27K Coating Internal Lacquer; and
- PPG8460 PAM (A24.7K+B1.3K) Coating Internal Lacquer.

Many of the products used on site are comprised of solvent-based volatile organic compounds (VOCs).

The RFI response also details the production rates for the various cans produced on site. The maximum production rate is 100 cans per minute. The applicant notes that the maximum paint used per hour, based on a large can, with dimensions of 53 x 180-200mm would be 6.0 litres of internal lacquer, 6.6 litres of base coat and 3.0 litres of varnish.

3.4 Discharge points

Table 2 summarise the main activities undertaken on site and the associated discharge points. Figure 1[20] shows the location of the discharge points from the site, including those described in Table 2. Figure 1 also details the location of the space heater stacks and engineering welding bay stack.

Table 2: Processing steps undertaken at the NCI site and the associated discharge points

Process	Discharge Point
Forming Steel Paint Cans	
Lacquer stripe application	AAe Int Lacquer/Sidestripe oven stack (Line 1 Main Stack (25m above ground level)
Forming Aluminium Cans	
Trim and Brush (Can finishing)	Wet Scrubber stack
Can wash, rinse and dry	L2 Washplant stack

[19] As shown on Table 5-1 (Page 7) of the RFI response
[20] Figure 3-2 of the applicants AEE

Printing Aluminium Cans	
Internal lacquer coating	AAe Int Lacquer/Sidestripe oven stack (Line 1 Main Stack)
Curing Oven	Line 2 main stack (25m above ground level)
Base coat applicator	Line 2 main stack (25m above ground level)
Coating curing oven	Line 2 main stack (25m above ground level)
Print application	Line 2 main stack (25m above ground level)
Print curing oven	Line 2 main stack (25m above ground level)
Over vanish application	Line 2 main stack (25m above ground level)
Over varnish curing oven	Line 2 main stack (25m above ground level)

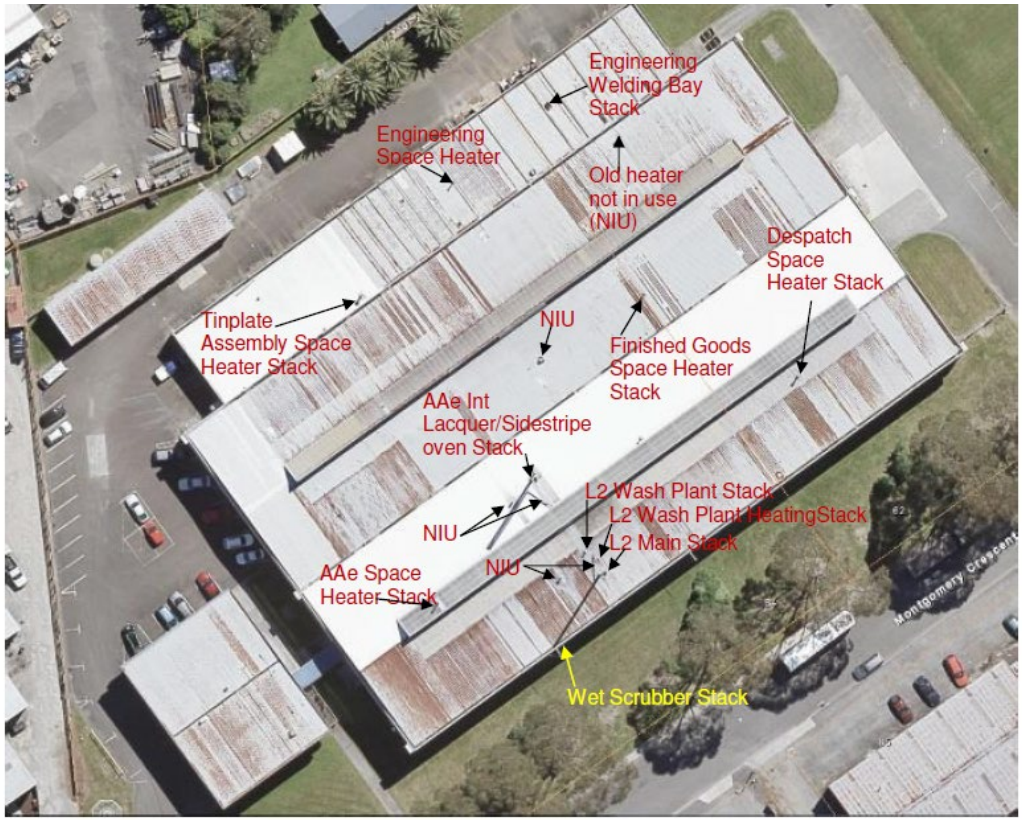


Figure 1: Location of the various discharge points from the site

3.5 Combustion emissions

The NCI factory has five natural gas-fired space heaters used on the site during winter. These have a maximum combined energy output of 380 kilowatts and discharge via shorter stacks on the roof of the building. The location of these are shown on Figure 1. The main contaminant from burning natural gas is nitrogen dioxide (NO_2) but carbon monoxide (CO) can also be generated. The remaining curing ovens are electrically heated.

3.6 Mitigation and odour control techniques

At present, the discharge from the site discharges via two stacks each with a height of 25 metres above ground level.

As part of this resource consent application process and based on the pre-hearing meeting discussions[21], the applicant has undertaken investigations to understand the sources of odour at the site and the potential effectiveness of other odour mitigation tools. Subsequently, the applicant has proposed a staged approach to odour mitigation.

Stage 1 involves the installation of a biofilter device to treat the emissions from the basecoat process (basecoat application, basecoat oven, conveyor inlet and basecoat curing oven outlet). In the proposed conditions of consent provided by Mr Kavern on 29 June 2021, the applicant has outlined the parameters[22] that the biofilter should be designed in accordance with.

The applicant proposes to undertake field odour investigations[23] within 12 months following the installation of the biofilter. Following this, a review[24] based on the FIDOL factors (frequency, intensity, duration, offensiveness and location) is proposed and this will assess whether additional mitigation is required based on the effectiveness of the biofilter.

If needed, based on the outcome of the FIDOL review, the applicant proposes to[25]:

- Increase the height of the internal lacquer/assembly stack by 2 m (to 27 m);
- Modify the extraction system and biofilter to treat additional sources from the coating processes; or
- Implement an alternative method, where it can be demonstrated to be as effective as the two options above.

It is proposed to integrate the staged approach and the protocols for odour field investigations into the site's Adaptive Management Odour Plan (AMOP) and conditions of consent. The AMOP is to ensure the applicant has both proactive and reactive management procedures and practices in place to ensure that the discharge from the site is not offensive or objectionable as outlined in Condition 4 of the draft conditions provided on 29 June 2021.

3.7 Duration

The applicant has requested a consent duration of 20 years.

[21] Information relating to the pre-hearing meetings of this resource consent is available in Section 7.6 of this report and Appendix 3.
[22] Condition 13 of the Draft Conditions received from Mr Kevern of NCI 29 June 2021.
[23] Condition 18 of the Draft Conditions received from Mr Kevern of NCI 29 June 2021.
[24] Condition 19 of the Draft Conditions received from Mr Kavern of NCI 29 June 2021.
[25] Condition 19 of the Draft Conditions received from Mr Kavern of NCI 29 June 2021.

4. Location and receiving environment

The NCI site is located at 60-66 Montgomery Crescent, Clouston Park, Upper Hutt, legally described as Lot 1 DP 30717, Lot 1 DP 28552 and Lots 11, 12, 13, 14 and 16 DP 30232, as shown on Figure 2.

Figure 2: Location of NCI and surrounding environment

4.1 Surrounding environment

Commercial and industrial activities surround the site to the east, south and west. This area is zoned as 'Business Industrial Area' in the Upper Hutt District Plan. The only other active discharge permit authorising the discharge of contaminants to air is the Resene Paints Limited site located 200 m to the west of the NCI site. Resene Paints also discharge industrial solvents to air, with VOCs as the primary contaminant.

Based on a review of aerial imagery and knowledge of the surrounding area, there are other businesses within 250m of the site, that have a stack which discharges to air as a permitted activity. This includes Wedgelock Equipment (manufacture tractor machinery), Amazin Wood (manufacture NZ giftware), Customs Bodyshop (spray-painting vehicles), and Robertson Engineering (manufacture farming equipment). During the odour investigation in 2019 discussed in Section 2.4.3 of this report, Ms McKevitt inspected the surrounding businesses and noted that from her experience, the odour from NCI has different characteristics than these sites.

Residential zoned land is located to the north of the site along Mountbatten Grove and Fergusson Drive. Several residences on Mountbatten Grove are located adjacent to the NCI site boundary, as shown on Figure 2.

4.2 Topography and meteorological information

The topography of the site and surrounding land is relatively flat. The land rises steeply to the east and south of the site (approximately 200 metres from the site) which forms a ridgeline. Kingsley Heights, as shown on Figure 2, is a residential subdivision that lies approximately 250 metres to the south and south-west of the site and is elevated on this ridgeline above the NCI site.

The local topography and nearby buildings may influence the local wind patterns at the site. The applicant has provided a windrose detailing the meteorological conditions experienced at the site in 2016 and 2017, as shown on Figure 3. The meteorological data was collected from the onsite monitoring mast at NCI. In summary, the windrose shows:

- Winds at the site are variable;
- The predominant winds are from the west-northwest and east-southeast;
- Calm winds are reported 1.27% of the time; and
- Average wind speeds are 2.15 m/s.

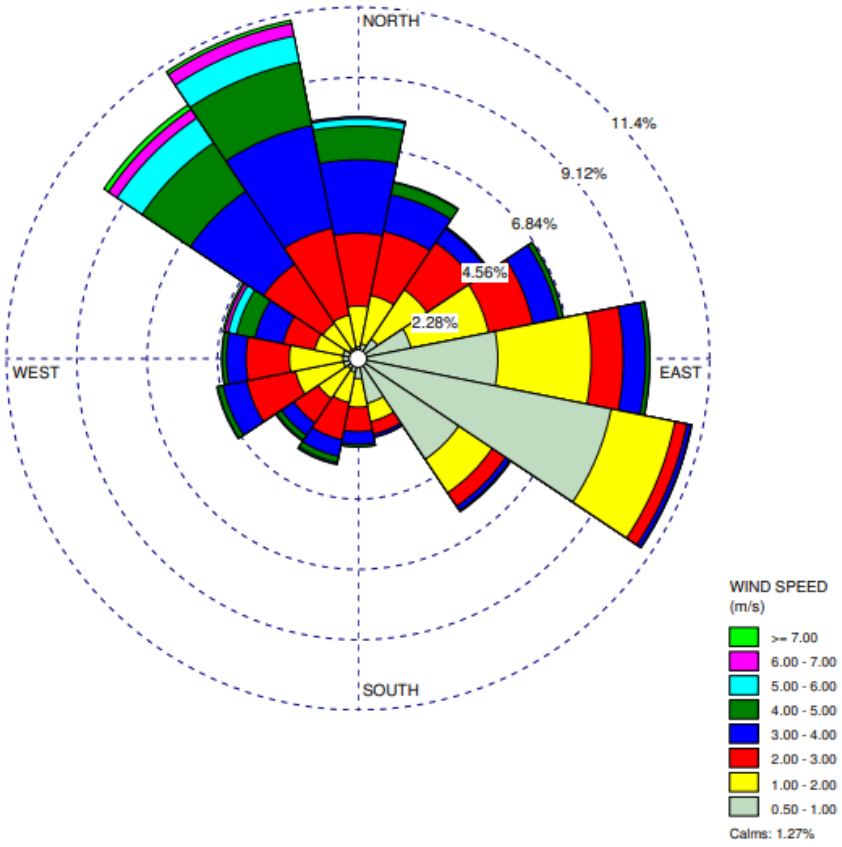


Figure 3: NCI Wind rose 2016 to 2017

4.3 Regionally Significant Areas

I note that the NCI site is not listed in Schedule B – Ngā Taonga Nui a Kiwa or Schedule C – Sites with significant mana whenua values of the Proposed Natural Resources Plan (PNRP).

The site is located in the Upper Hutt Airshed, this is not considered a 'gazetted airshed' as per the Resource Management (National Environmental Standard for Air Quality) Regulations 2004 (NESAQ).

5. Statutory reasons for requiring resource consents

5.1 Resource Management Act 1991

Section 15(1) of the Resource Management Act 1991 (RMA) states that:

(1) No person may discharge any—

(a) Contaminant or water into water; or

(b) Contaminant onto or into land in circumstances which may result in that contaminant (or any other contaminant emanating as a result of natural processes from that contaminant) entering water; or […]

(c) Contaminant from any industrial or trade premises into air; or

(d) Contaminant from any industrial or trade premises onto or into land—

unless the discharge is expressly allowed by a national environmental standard or other regulations, a rule in a regional plan as well as a rule in a proposed regional plan for the same region (if there is one), or a resource consent. […]

The discharges of contaminants from the industrial or trade premise into air are not authorised by a National Environmental Standard. Therefore, a resource consent (discharge permit) is required if the discharges contravene a regional rule.

5.2 Regional Plans

5.2.1 Regional Air Quality Management Plan

The Regional Air Quality Management Plan (RAQMP) applies to discharges to air in the Wellington Region. The plan became operative on 8 May 2000 and Plan Change 1 to the RAQMP was made operative on 1 September 2003.

Rule 1 to Rule 22 of the RAQMP provides for various activities to occur as permitted activities. Relevant to this application include:

- Rule 15 authorises the discharge of contaminants to air from coating activities as a permitted activity provided the conditions are met. The spray application of coating materials exceeds 30 litres per day. As such, the activity is not captured by this rule.

- Rule 6 relates to the discharge of contaminants into air in connection with any combustion processes involving heating appliances with a combined generation capacity of 2 megawatt or less. The space heaters have a combined output of 380 kilowatts. The stacks are not designed in a way that ensures the uninterrupted vertical discharge of vapours; therefore, Condition (iv) is not complied with.

- Rule 22 provides for specific miscellaneous processes that have not been captured by Rule 1 to 21 of the plan. The applicant considers this rule will be complied with. I agree with this.

As the activity does not meet (Rule 6) and is not captured by the permitted activity rules (Rule 15) as discussed above, the discharge of contaminants to air from the steel can and aluminium can plant, which includes coating processes, is a **discretionary activity** pursuant to **Rule 23** of the RAQMP.

5.2.2 Proposed Natural Resources Plan

The operative regional plans are currently under review. A new single integrated plan is proposed to replace the existing regional plans for coast, air quality, freshwater, discharges to land and soil. The PNRP was publicly notified by the Council on 31 July 2015. All rules in the PNRP have immediate legal effect from the date of notification under section 86B(3) of the Act.

The Council's decision on the PNRP was publicly notified on 31 July 2019. The provisions of the PNRP as notified on 31 July 2015 have been superseded by the decisions version of the PNRP.

However, under section 88A of the Act, the activity status of a proposal is determined on the date the application is filed. As the application was lodged after 31 July 2015 but before 31 July 2019, the PNRP (notified version) is relevant to determining the resource consents required and the relevant activity status. This is in addition to any consents required under the operative plans.

The provisions of the PNRP (decisions version) will however be relevant for the substantive assessment of the proposal, specifically consideration of relevant objectives and policies under section 104(1)(b) of the Act.

Rule R1 to R40 of the PNRP provides for various activities to occur as permitted. Relevant to this application include:

- Rule 7 relates to the discharge of contaminants into air from a large-scale generator not exceeding 5 megawatts from the combustion of natural gas or liquefied petroleum gas and is a permitted activity provided the conditions be met. The applicant notes that condition (c) and (d) cannot be complied with. I agree with this.

- Rule R16 relates to the discharge of contaminants into air from printing processes. The applicant considers the activity complies with this rule. I agree with this.

- Rule R19 authorises the discharge of contaminants into air from windows, doors and vents as a result of the ventilation of buildings. The applicant notes that there may be small amounts of hazardous air pollutants discharged from the building. Therefore, may not meet the permitted activity criteria.

As the activity does not meet the permitted activity rule requirements (Rule 7 and Rule 19) and as the main coating processes are not provided for in a permitted activity rule. As such, the proposed activity is considered a **discretionary activity** pursuant to **Rule 41** of the PNRP.

5.3 Overall activity status

Overall, the activity must be assessed as a **discretionary activity** under the operative RAQMP and a **discretionary activity** under the PNRP.

6. Other consents and approvals required

The applicant does not require any other resource consent or approvals from GWRC.

7. Notification and submissions

7.1 Notification

The applicant requested that the application be limited notified. However, in accordance with s95E of the RMA, a consent authority determines the decision regarding affected persons. On receipt of the final technical review by Mr Bluett, it was agreed that limited notification of the application was appropriate because the adverse effects of odour from the discharges to air from the NCI site, may at times be minor or more than minor on neighbouring properties. The decision to limited notify the application was made on 3 August 2019 and the affected parties were served notice on 12 August 2019.

Taking into consideration odour complaints alleged to be from the applicants site, and the difference in odour sensitivities of industrial and residential properties, the application was limited notified to 66 parties including:

- Residential properties within 250 metres of the stack of the NCI factory. In instances where a property was partially located in this area, the property was notified;

- Industrial properties within 100 metres of the stack of the NCI factory. In instances where a property was partially located in this area, the property was notified;

- Regional Public Health (RPH), Upper Hutt City Council (UHCC) and Ngāti Toa Rangātira.

7.2 Submissions

At the close of submissions, six submissions had been received. One submission was received after the close of submissions.

A total of seven submissions were received. One submission was received in support of the proposal and four submissions were received in opposition. Two neutral submissions were received and one of these submitters sought that appropriate conditions be imposed if consent is granted.

A summary of all submissions received and the issues raised is attached as Appendix 4 to this report.

7.3 Late submissions

As identified in Section 7.2 of this report one late submission was received.

Under section 37(1)(b) of the Act, a consent authority may waive a requirement to comply with a time limit for the service of documents (eg, submissions). In making such a waiver, the consent authority is required by section 37A(1) of the Act to take into account:

a) The interests of any person who, in its opinion, may be directly affected by the waiver;

b) The interests of the community in achieving adequate assessment of the effects of any proposal, policy statement or plan;

c) Its duty under section 21 to avoid unreasonable delay.

The late submission was hand delivered to the GWRC offices on 16 September 2019. The submission period closed on 12 September 2019. The late submission was accepted under section 37(1)(b) of the RMA.

7.4 Issues raised by submissions

In the following discussion I have summarised the matters raised by the submitters that are consistent with the functions of Regional Councils under the RMA[26].

7.4.1 Issues raised by submissions in support

One submitter was in support of the application, with no issues raised.

[26] In accordance with Section 30 of the RMA

7.4.2 Issues raised by submissions of conditional support or neutral submissions

Two neutral submissions were received. One submitter was neutral to the application and seeks that the consent is granted. This submitter noted that '*we smell more from woodfires than we do the factory'*.

The RPH is neutral to the grant of the consent. However, if granted RPH seek that any conditions imposed are appropriate to protect the health of local communities. The RPH submission focused on odour and VOCs. In summary the submission states:

- Odour effects – the discharge of odour has the potential to affect people's lives and well-being and can lead to indirect health effects. RPH have sought conditions that require the applicant to implement an odour management plan including complaints reporting, source identification and investigation procedure.

- VOCs – RPH acknowledge that the modelled ground level concentrations of VOCs are less than the relevant assessment criteria. RPH request that conditions are imposed that require the operation of the discharge in general accordance with the consent application and the dispersion modelling assessment. RPH also request that a condition is imposed stating that there shall be no discharges to air that are noxious, dangerous or objectionable beyond the boundary of the site.

7.5 Issues raised by submissions in opposition

Four submitters opposed the application and requested that the application be declined; one submitter noted that they request decline until there is clean air and no odour and another submitter noted that they would not want the consent to be granted as the issues from the original application have not been resolved. In summary, the submitters have stated:

- Grey bloom and pigment type black stain visible on walls of house.

- Experience solvent, acidic and offensive type odour from the site. One submitter noted that the duration of odour events could be five minutes.

- One submitter noted that there has been an improvement in the odour from the site following the increase in the stack heights on site[27].

- Consider that the discharge affects health, soil and property.

- One submitter noted experiencing tingling of skin on face, nausea, headaches and when the odour is overpowering, the submitter experiences burning around the mouth, blocked nose and difficulty going outside due to distress.

[27] In Section 5.2.2 of the Officers Report for WGN110219, it is noted that the stacks were extended on 26 April 2013.

- One submitter noted that family member has been diagnosed with cancer, and consider NCI factory may have contributed to this.

- One submitter had concern about the discharge of VOCs to air and stated that all damaging emissions need to be filtered out of the discharge.

7.6 Pre Hearing meetings

7.6.1 First pre-hearing meeting

Following the closure of the submission period, a pre-hearing meeting was held on 21 October 2019. A record of this is contained in Appendix 3 of this report. This pre-hearing meeting discussed odour, alternative options for odour management, residue on houses/fruit/soil, potential health effects and odour notification and responses. The following action items were agreed:

- Residue/deposits on neighbouring houses need to be linked to source.

- GWRC to check incident notification system and review site-specific odour response for NCI.

- Residents are willing to trial a text/notification system for reporting odour and encouraged to keep reporting incidents at time of occurrence.

- Further investigation needed to identify and assess other potential sources of odour in the area.

- Further discussion required regarding proposed consent conditions, especially regarding emissions testing and investigating alternative mitigation options.

7.6.2 Second pre-hearing meeting

A second pre-hearing meeting was held on 29 January 2020. At this meeting, the action points from the first pre-hearing meeting were discussed including NCI's investigation/report on odour, odour notifications, discussion on the odour experienced (whether exposure was acute or chronic) and potential conditions of consent. It is also noted that Mr Bluett advised GWRC that the residue/deposits on neighbouring houses was unlikely to be linked to NCI's operations. At the conclusion of this meeting, the submitters expressed that they still wished to be heard at a hearing.

7.6.3 Supplementary information provided

Following the two pre-hearing meetings and the large number of odour complaints received in January 2020 (21 complaints), GWRC requested that NCI investigate whether there were any other odour mitigation tools that could be used on site. GWRC was informed in May 2020 that NCI had engaged consultants T+T to assess the application and to investigate additional mitigation options. The following documents have been provided in response to this:

1. *'Review of Odour Control Techniques'* by Mr Kevern of NCI, dated 18 June 2020.

   This report reviews odour control techniques that could be implemented onsite. The report recommended four potential options based on the gas flow and VOC concentrations including increased dispersion, biofiltration, regenerative adsorption and incineration. The report states "*biofiltration of the specific solvent based odour at NCI needs to be trialled to verify it will treat those types of compounds as biofiltration is better suited to natural compounds*".

2. '*NCI Packaging, Upper Hutt – Review of odour issues'* by Ms Jenny Simpson, Technical Director – Environmental Engineering at T+T, dated 17 July 2020.

   This report sought to review the effects of odour emissions from the site and potential odour control techniques. Further, this report also made recommendations on work that could be undertaken to better understand the effects of the discharge and/or options to improve odour management.

   This report indicated that NCI were undertaking a biofilter trial on-site and stated that "*there would be a benefit in waiting until the results of the biofilter trial are known, as this may increase the level of certainty about proposed additional odour mitigation and the need to rely on an adaptive management approach*".

3. '*NCI Packaging, Upper Hutt – Summary of further odour investigations and recommendations'* by Ms Simpson of T+T, dated 27 January 2021.

   This report outlines the key findings of the additional investigations undertaken and the implications for further improvements in off-site odour effects. The report also details odour field investigations undertaken and odour emissions monitoring.

   Biofilter trial

   Section 3 of this report details the biofilter trial undertaken on site. In conclusion, the T+T report states:

   "*The trial demonstrated that a biofilter designed in accordance with recommended criteria can effectively control the types of odours generated at the site. The required size of the biofilter is proportional to the airflow rate that needs to be treated, to ensure that there is an adequate residence time. There are varying gas steams, with differing levels of odour, that contribute to the two stack emission sources. Given the relationship between air flow rate and biofilter capital cost, it is sensible to investigate whether an appropriate reduction in odour emissions could be achieved by targeting the high-odour sources, rather than attempt to treat the entire discharge volume".*

Field odour investigations

This report provided the results of a short-term programme of odour field investigations undertaken by NCI over 17 days between 10 August and 8 September 2020. A detailed set of results from the odour field observations is presented in Appendix A of the T+T report. Mr Bluett considered "*that the method used to undertake the odour field observations as appropriate and the person engaged is suitably experienced to provide field odour observations*".

Mr Bluett has stated:

"T+T's evaluation of the odour observation data indicates that solvent type odours are likely to be occurring at sufficient intensity, frequency and duration to constitute an odour nuisance particularly around the end of Mountbatten Grove (adjacent to the NCI site). Analysis of the wind data at the times odour was observed indicates that NCI was the likely source of the odour for three of the four odour observations. T+T considered that odour from the fourth event was likely from a business on Montgomery Crescent.

While it is not explicitly stated in the T+T report, it is clear to me that the findings from the odour observation programme support the need for NCI to further explore odour mitigation options".[28]

Odour Emissions Monitoring

NCI commissioned odour emission monitoring to measure the odour discharge rates from the Line 2 Main Stack (aerosol cans) and the Assembly Stack (tinplate cans). The odour emission monitoring results, as reported by T+T, suggest that the Assembly Stack discharges slightly more odour than the Line 2 Main Stack.

The odour emissions from the individual sources, which contribute to the Line 2 Main Stack discharges, were also tested to identify the predominant odour source/s. The basecoat application, and curing were identified as the predominant odour sources (72% of total odour emissions from Line 2 Main stack). Mr Bluett has stated:

"I understand that NCI are planning to capture the high odour emission sources and divert these to the biofilter, with the remaining sources going up the stack. As such, I consider the odour emission monitoring provided useful information for NCI's odour mitigation planning as it clearly identifies the key sources for odour treatment that would contribute to reduced impacts offsite".[29]

[28] Section 7 (Page 8/9) of Mr Bluett's Report
[29] Section 8 (Page 9) of Mr Bluett's Report

Mitigation

This report proposes a staged approach to mitigation on site as noted in Section 3.6 of this report and further discussed in the AEE in Section 9.3.5.

It is noted that Mr Bluett questioned the effectiveness of the biofilter device on site and raised several issues in this regard. Ms Simpson responded to these matters in a letter titled '*NCI Packaging, Upper Hutt – Response to questions raised in PDP technical review*', dated 28 April 2021.

Following receipt of this letter it was reviewed by Mr Bluett and he was satisfied with the information provided, concluding that the two-stage mitigation plan being proposed will, in all likelihood, provide the level of odour emission reduction required to ensure that odour effects will fall to an acceptable level in the area surrounding the plant. The advice from Mr Bluett is discussed in full in Section 9 of this report.

8. Matters for consideration

Prior to making a recommendation on whether an application should be granted or refused, Section 104 of the RMA specifies what must be considered when determining an application.

8.1 Statutory criteria

The matters to which a consent authority shall have regard when considering applications for resource consents and submissions are set out in section 104(1) of the Act as follows:

> *When considering an application for resource consent and any submissions received, the consent authority must, subject to Part 2, have regard to –*
>
> *(a) any actual and potential effects on the environment of allowing the activity; and*
>
> *(ab) any measure proposed or agreed to by the applicant for the purpose of ensuring positive effects on the environment to offset or compensate for any adverse effects on the environment that will or may result from allowing the activity; and*
>
> *(b) any relevant provisions of –*
>
> *i. a national policy statement,*
>
> *ii. other regulations,*
>
> *iii. a national policy statement*
>
> *iv. a New Zealand coastal policy statement,*
>
> *v. a regional policy statement or proposed regional policy statement; and*
>
> *vi. a plan or proposed plan; and*
>
> *(c) any other matters the consent authority considers relevant and reasonably necessary to determine the application.*

The provisions of s 104 are all "subject" to Part II, which means that the purpose and principles of the Act are paramount.

8.2 Planning instruments and other matters

The following planning instruments and documents are relevant to this application:

National

- Resource Management (National Environmental Standards for Air Quality) Regulations 2004 (NESAQ)

Regional

- The Regional Policy Statement for the Wellington Region 2013 (RPS)
- The Proposed Natural Resources Plan 2015 (PNRP)

The actual and potential effects on the environment of allowing the activities are addressed in Section 9 of this report.

In regards to Section 104 (ab), I consider that the mitigation proposed by the applicant is not an 'offset'. However, I acknowledge that the mitigation proposed will likely minimise the potential effects on the environment, as discussed in Section 9 of this report.

The relevant provisions of the NESAQ, RPS and PNRP are discussed in Section 10 of this report.

In accordance with Section 104(1)(c), the consent authority can consider any other matter relevant and reasonably necessary to determine the application. There are no relevant matters that should be given regard to in accordance with s104(1)(c) of the RMA.

9. Assessment of actual and potential effects 104(1)(a)

9.1 Overview

Section 104(1)(a) states that the consent authority must, subject to Part 2, have regard to the actual and potential effects of allowing an activity. The applicant has provided an assessment of the actual and potential effects in Section 6 to 9 of the AEE.

In auditing the applicant's assessment of actual and potential adverse effects of the proposed activity, I have relied upon the expertise of Mr Bluett. My audit of the applicant's assessment is structured as follows:

- Assessment methodology;
- Actual and potential effects of odour;
- Actual and potential health effects; and

- Actual and potential effects on Tangata whenua.

9.2 Assessment methodology

The applicant utilised both quantitative (modelling) and qualitative (complaints analysis) assessment tools to understand the potential and actual effects of the discharge of contaminants and odour into air from the NCI site.

To assess the ground level concentrations (GLCs) of VOCs, odour and combustion products[30] the applicant has utilised the non-steady state dispersion model called 'CALPUFF'. Section 7 of the AEE describes the inputs into the model. Mr Bluett's evidence states:

"The dispersion model chosen for the project (CALPUFF) and the applicant's configuration and running of the model matches my expectations of accepted good practice. The manufacturing process emissions data used as input to the model was sourced from the stack testing programme and I consider this good quality data".[31]

Further to this, Mr Bluett's evidence states that he has reviewed the applicants modelling files and results data for the different contaminants. Specifically, he checked the meteorological data, dispersion model configuration files, dispersion model result files and results analysis spreadsheets. Mr Bluett has confirmed that his checks "*confirmed that the model had been configured accurately to represent the site's emission sources and that the results presented in the report reflected those contained in the results files*".[32]

The applicant has compared the likely concentration of contaminants against various guidelines. In regards to the guidelines and assessment criteria used by the applicant, Mr Bluett has stated:

"*My review confirms the applicant has compared the modelled GLCs of odour against the correct assessment criteria sourced from New Zealand's air quality standards, guidelines and relevant good practice guidance. The assessment criteria used for the VOCs were sourced from overseas regulatory bodies. I concur with this approach and the hierarchy of sources used by the applicant to identify relevant assessment criteria*".[33]

The impact of odour emissions from the site were also assessed through undertaking a detailed analysis of the odour complaints made to GWRC about NCI's operations between January 2016 and April 2019. Mr Bluett considered this assessment was undertaken in a way that is consistent with the Ministry for the Environment's (MfE) 'Good Practice Guide on Assessing and Managing Odour[34]' (GPG) and highlighted that this approach added value to the AEE.

[30] Modelling of the combustion products is detailed within the RFI response
[31] Section 5 (Page 6) of Mr Bluett's Report
[32] Section 5 (Page 7) of Mr Bluett's Report
[33] Section 5 (Page 7) of Mr Bluett's Report
[34] Ministry for the Environment (2016) *Good Practice Guide for Assessing and Managing Odour*

9.3 Potential and actual nuisance effects of odour

9.3.1 Overview

The discharge of contaminants and odour into air from the site has the potential to cause adverse effects on people's lives and well-being. The MfE GPG details that odour is complex and perceptions of, and sensitivity to, odour can vary significantly between individuals. Therefore, the effects are variable. Effects caused by odour may include nausea, headaches, stress, difficulty breathing and frustration. These effects can reduce the quality of life for those exposed to the odour. Odours can also be associated with direct health effects including eye and nose irritation (eg, exposure to ammonia).

The MfE GPG also provides information on acute and chronic odour effects. It describes that based on the different combination of FIDOL factors, offensive and objectionable effects may be caused by:

- High-intensity and/or highly unpleasant odours occurring infrequently or for short periods (a few minutes to an hour) (**acute**); and/or
- Low-intensity and/or moderately unpleasant odours occurring frequently or continuously over a long period (**chronic**).

Acute odours typically arise from abnormal or upset conditions such as process malfunctioning, or infrequent activities. Acute odour discharges are usually from highly variable and/or uncontrolled discharges. Chronic odour discharges are normally continuous or semi-continuous emissions arising from normal operatives. Cumulatively, these low-level odours can result in adverse effects although no single odour event could be considered to be 'offensive or objectionable'.

9.3.2 Sensitivity of receiving environment

A description of the receiving environment has been provided in Section 4 of this report and this describes that the surrounding land-uses include residential and business/industrial uses. The MfE GPG provides guidance on the sensitivity of different land-uses and the recommended odour modelling guideline. This information provides context for assessing modelling results and determining whether odour is likely to cause an adverse effect.

Table 3: Sensitivity of different land-uses and recommended odour modelling guidelines

Land-use	Sensitivity	Odour Units
Residential	High	2 OU/m^3 (worst-case impacts during neutral to stable conditions)
Light industrial	Moderate	5 OU/m^3
Heavy industrial	Low	5-10 OU/m^3

Mr Bluett has concluded that the receiving environment is of moderate (industrial area) to high (residential) sensitivity. I agree with this assessment.

9.3.3 Assessment of effects

The applicant modelled the predicted 99.5 percentile 1-hour average concentrations of odour. The highest predicted maximum GLC at the surrounding industrial sites was 3.8 OU/m^3, which is less than the moderate sensitivity category as shown in Table 3. The maximum GLC at a residential site was 2.6 OU/m^3, which exceeds the recommended odour modelling guideline as shown in Table 3. The applicant notes that the area of exceedance is relatively small and is restricted to an area of around 10 metres beyond the boundary to the residential zone. An Isopeth diagram of the highest predicted GLC of odour is shown on Figure 4.

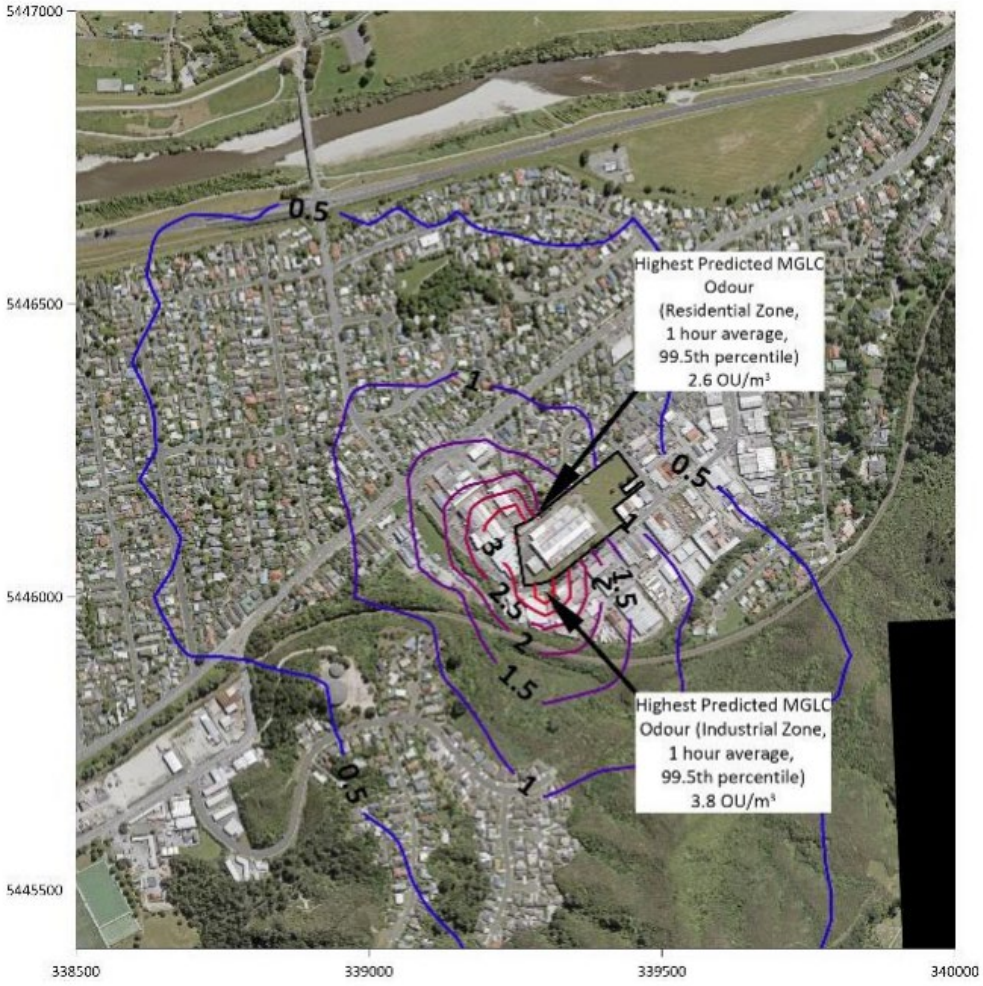


Figure 4: Highest predicted maximum GLCs of odour, 1-hour average (99.5th percentile)[35]

[35] Figure 8-1 of Assessment of Environmental Effects of Air Discharges from NCI Packaging Can Manufacturing Facility, Rhys Kevern, NCI. 31 January 2019.

Mr Bluett has reviewed this assessment and concluded that the "*the discharge of odour on occasions may cause effects than are minor or more than minor*".[36] I agree with this conclusion and note that at times, the discharge may be at a level that is considered unacceptable. Therefore, as indicated by Mr Bluett, it is important that the applicant has an effective odour mitigation strategy in place.

9.3.4 Cumulative effects

The applicant has not explicitly addressed cumulative effects in their assessment. Mr Bluett has noted that cumulative effects can occur when:

- *"A site discharge causes repeated incidents at a particular location;*
- *When added to the background air, a site discharge exceeds assessment guidelines; or*
- *The discharges from two or more sites causes repeated incidents at a particular location".*[37]

Mr Bluett considers that based on the complaint history and observations made by GWRC staff that there is a cumulative effect occurring in the residential area next to the site (Mountbatten Grove). Mr Bluett stated:

"Given the complaint history and odour observations made by GWRC staff I conclude there is a cumulative odour effect occurring in the residential area adjacent to the plant. In my opinion this cumulative effect is most likely being caused be either repeated impacts from NCI or the odour generated by multiple sources causing repeated incidents at a particular location. This situation highlights the importance of odour mitigation at the NCI plant and the importance of identifying and mitigating other significant odour sources in the area".[38]

As previously discussed in this report, there is one other active discharge permit authorising the discharge of contaminants to air. There is a variety of other industries near the site, and the potential odour from these sites is likely to have a different characterisation than that from the NCI site. In addition, there have been many complaints received regarding the NCI site; however, I acknowledge that it has been difficult to attribute the complaints to NCI due to difficulties that have been described previously in this report. Nonetheless, I concur with the conclusions of Mr Bluett and agree that there is the potential for cumulative effects on neighbouring residences. Therefore, as noted by Mr Bluett, it is essential that the application has appropriate mitigation in place to minimise the potential for cumulative effects.

[36] Section 5 (Page 8) of Mr Bluett's Report
[37] Section 6 (Page 8) of Mr Bluett's Report
[38] Section 6 (Page 8) of Mr Bluett's Report

9.3.5 Mitigation

Based on the above discussion, the actual and potential effects of odour and the cumulative effects may occasionally be at a level that is unacceptable in the absence of mitigation. Therefore, it is critical that any mitigation proposed reduces the effects to an acceptable level.

NCI have proposed the following staged approach to mitigation:

- Stage 1a: Install a biofilter to treat odour emissions from the aerosol can basecoat processes.

If required, based on the outcomes of the FIDOL review and an assessment of the effectiveness of the biofilter, the applicant has proposed the following as additional mitigation:

- Stage 1b: Increase the capacity of biofilter to treat odour emissions from other relatively large odour sources on the Line 2 Main Stack production chain; and

- Stage 2: If needed, increase the heights of the Line 2 Main Stack and/or the Assembly Stack to 27 metres.

The predicted outcomes of the implementation of Stage 1a and Stage 2 are visible in Table 4. As shown, the implementation of the mitigation is likely to reduce odour to a level below the relevant guideline value and thus at an acceptable level.

Table 4: Pro rata estimate of reductions in mglc from staged improvements[39]

Emission source	Predicted mglc (OU/m^3)		
	Current situation	Stage 1 Installation of biofilter to treat basecoat process emissions	Stage 2 Increase Internal Lacquer/Assembly Stack
Line 2 Main Stack mglc contribution	1.3	0.4	0.4
Internal Lacquer/Assembly Stack mglc contribution	1.3	1.3	0.8
Total predicted mglc	2.6	1.7	1.2
Odour modelling assessment criterion (OU/m^3)	2		

The T+T report also shows the potential effect of increasing the stack height on residences at elevated levels (to the south-west of the site). The modelling does not indicate any potential for increased odour impacts at elevated receptors to the southwest of the site.

Mr Bluett supports the inclusion of these mitigation methods within the recommended conditions and AMOP and considered that it "*will be a key part*

[39] Table 5.1 of T+T Report, NCI Packaging, Upper Hutt – Summary of further odour investigations and recommendations (27 January 2021)

of implementing an effective odour mitigation system and monitoring its' on-going performance".[40]

Mr Bluett concluded that:

"*The proposed two stage approach to odour will certainly reduce the frequency, intensity and duration of adverse odour effects that currently occur in the area around the site, especially at the end of Mountbatten Grove. Given the current impacts as indicated by the complaint record, and considering the results of NCI and GWRC odour observation campaigns, on balance I consider that the odour effects caused by NCI are likely to fall to an acceptable level once the proposed staged mitigation has been implemented*".[41]

I agree with the comments of Mr Bluett and consider that the mitigation is likely to be effective at minimising and mitigating the discharge of odour from the site. As emphasised by Mr Bluett, the effects are expected to be at an acceptable level once the proposed staged mitigation approach has been implemented. Therefore, I acknowledge that there may be instances where the effects of odour are at an unacceptable level prior to the additional mitigation being installed.

The applicant provided GWRC with a revised set of draft conditions on 29 June 2021. These conditions provided an overview of the staged approach to mitigation and specify:

- That the biofilter must be installed within six months of the commencement of this resource consent. Condition 13 of the applicants proposed conditions also defines the parameters that the biofilter shall be designed in accordance with;

- The biofilter parameters that are required to be monitored (Condition 14);

- The requirement for field odour inspections along the northern boundary of the site (Condition 15) and to undertake a programme of field odour investigations (Condition 16);

- The requirement to undertake a review of the odour performance of the biofilter (Condition 17); and

- A requirement for a FIDOL review of the studies undertaken in this consent and any other relevant information related to odour management. The outcomes of this review defines whether the applicant needs to implement other mitigation on site (Condition 18).

I agree with the overall intent of the majority of the conditions. I highlight the key recommendations I have made regarding these conditions below. Appendix

[40] Section 9 (Page 10) of Mr Bluett's Report
[41] Section 9 (Page 10) of Mr Bluett's Report

6 provides a summary of all changes recommended to the applicants proposed conditions.

I do not agree with the proposed conditions of consent defining the design parameters of the biofilter. This is because the applicant also proposes (if required) to increase the capacity of the biofilter to treat odour emissions from other odour sources. I consider insufficient information has been provided to justify the specifications of the biofilter. Therefore, I recommend that the specifications of the biofilter are included in the AMOP for review and approval by GWRC. GWRC will engage a technical expert to advise them on whether the biofilter is designed to provide an appropriate level of mitigation. The applicant may wish to provide further information on where these design parameters have been derived from in their evidence. If this information is provided, it may be appropriate to include the parameters as conditions of consent (if granted).

I have recommended amendments to the conditions proposed by the applicant that inform when the applicant is required to review the effectiveness of the biofilter, undertake a FIDOL review and install additional mitigation. The majority of these changes are not considered substantial and are summarised in Appendix 6. Based on the conditions proposed by the applicant, I understand the general intent of the review process. However, the applicant may wish to provide further explanation on how this review process will work in their evidence.

The applicant has proposed timeframes for each step within the recommended conditions, including:

- Installing the biofilter within six months of commencement of the consent;
- Undertaking a review of the effectiveness of the biofilter after six months but within 12 months of its installation;
- Making recommendations to GWRC within 14 months of installing the biofilter as to whether additional mitigation is required; and
- Installing any further mitigation within four months upon the determination additional mitigation is required.

I consider that including timeframes within the conditions of consent is critical to minimise the occasions where the odour discharged from the site may be unacceptable. However, I note that the timeframe specified above equates to approximately two years. Therefore, there may be occasions over a two-year period where the odour discharged from the site is unacceptable (if the mitigation is not effective). On this basis, I consider the applicant may want to provide further information in their evidence to demonstrate why these timeframes are appropriate. Nonetheless, to minimise the period in which the discharge of odour from the site may be unacceptable, I have proposed the following timeframes:

- Installing the biofilter within four months of commencement of the consent;

- Undertaking a review of the effectiveness of the biofilter after six months but within nine months of its installation;

- Make recommendations to GWRC within ten months (one month following the review of the effectiveness) of installing the biofilter as to whether additional mitigation is required; and

- Installing any further mitigation within three months upon the determination additional mitigation is required.

In total, the period I have recommended equates to 17 months, which is approximately six months less than the period proposed by the applicant. If the applicant adopts these timeframes, I consider that it will reduce the instances where odour may be at an unacceptable level. However, I acknowledge that these timeframes may require adjustment based on evidence presented by the applicant.

Based on the outcomes of the review, the applicant has proposed the following as the additional mitigation that could be implemented (Condition 19):

a. *Increase the discharge height of the Aluminium Aerosol main stack and/or the Internal Lacquer/Sidestripe stack to at least 27 m above ground level; or*
b. *Modify the extraction system and biofilter to treat additional sources from the coating processes; or*
c. *Implement an alternative method that this would at least as effective at mitigating odour effects as (a) or (b). Any alternative method shall be to the satisfaction of the Manager.*

I agree with the applicant that option (a) and (b) should be included as conditions of consent. Regarding clause (c), there is the potential that an alternative mitigation method would be outside of scope of this resource consent, and as such may not be appropriate to include. Therefore, I agree with the applicant that the method should be to the satisfaction of the manager. I have also included a note that a change of consent conditions pursuant to section 127 of the RMA may be required relative to what is proposed.

I have recommended a condition requiring that the applicant should review any other mitigation installed within eight months of its installation. This review will confirm whether the mitigation on site is effective, or whether the applicant needs to explore other mitigation.

9.3.6 Adaptive Management Odour Plan 'AMOP'

Under resource consent WGN110219, the applicant was required to implement an 'AMOP'. The purpose of this as stated in the previous consent conditions was "*to ensure the consent holder has management procedures and practices*

to both proactively and reactively meet Condition 3[42] *at all times. The management plan must outline what measures the consent holder will undertake to prevent and/or respond to any breaches of condition 3 and/or notifications of odour occurring beyond the site boundary*".

In the conditions received on 29 June 2021, the applicant has proposed conditions relating to the AMOP. It is understood that the AMOP will outline the staged approach to mitigation and incorporate requirements for field odour observations.

Mr Bluett states:

"*To ensure NCI's current and proposed mitigation measures and monitoring programmes will be effective and/or to flag to NCI when these might need to be updated, I recommend NCI be required to review and enhance their Adaptive Management Odour Plan (AMOP) and Operations and Maintenance Manual (OMM) to meet current good practice and to detail the proposed additional staged mitigation measures*".[43]

I agree with the above comments of Mr Bluett and agree that the applicant should be required to submit and adhere to an AMOP. The AMOP is to ensure the applicant has management procedures and practices to proactively and reactively avoid and minimise the discharge of contaminants and odour beyond the site boundary and to provide detail as to how the conditions of consent will be complied with (if granted). The AMOP is to include details on the following:

- Mitigation measures that will be used to mitigate and minimise odour;
- Procedures for incident notification to GWRC;
- Procedures for responding to complaints;
- Procedures for undertaking on-site and off-site odour investigations;
- Staff training protocols; and
- Procedures for amending the AMOP.

I have recommended a condition requiring the applicant to submit an AMOP within three months of commencement of the resource consent (if granted). I consider this will be sufficient time for the applicant to update their existing AMOP to ensure it gives effect to the staged approach to mitigation and that it incorporates the processes for field odour observations. I have also been prescriptive when describing what should be included in the AMOP on the basis

[42] Condition 3 states '*there shall be no discharges to air that are noxious, dangerous, offensive or objectionable at or beyond the legal boundary of the site property from which the consent holder operates, as determined by an enforcement officer of the Wellington Regional Council*'.
[43] Section 10 (Page 10/11) of Mr Bluett's Report

that a draft AMOP incorporating the proposed changes has not been provided by the applicant.

I have also recommended that the AMOP should be reviewed as follows:

- In the event of offsite identification of an offensive or objectionable odour that is confirmed to be from NCI. This is to ensure that the AMOP is fit for purpose;
- Following the review of the effectiveness of the biofilter and the implementation of any other mitigation. This will ensure it is updated to reflect any changes in on site mitigation;
- Annually. This review is to ensure that the AMOP is updated on a regular basis if required; or
- Within another timeframe to the satisfaction of the Manager. If the on-site odour mitigation tools are effective, it would be reasonable for the frequency of the reviews undertaken to reduce.

The applicant has proposed that a technical review of the AMOP shall be undertaken by the 'the consent holder' on an annual basis and any changes to the existing emissions reduction or treatment equipment will be reviewed by an independent technical expert. I consider this is appropriate.

Provided the recommended conditions are adopted and adhered to, I am confident that the AMOP will be an effective tool to respond to odour complaints/notifications, and minimise and mitigate the potential and actual effects of odour.

9.3.7 Other conditions

The following section provides an overview of other conditions that relate to mitigating odour, if required, it also highlights any areas of disagreement between the conditions proposed by the applicant and those I have recommended. A copy of the conditions I have recommended is attached in Appendix 5 to this report. Appendix 6 summarises the recommended changes to the conditions proposed by the applicant.

Offensive and objectionable discharges

The applicant has proposed a condition relating to the determination of whether a discharge is offensive or objectionable relative to the FIDOL methodology.

I do not agree with this approach as the FIDOL methodology is only one method that can be used when determining whether a discharge is offensive or objectionable. By referencing the FIDOL method, GWRC as compliance regulators are limited to using only the method that is currently best practice, but may not be in the future. The current methodology used by GWRC to

determine whether a discharge is 'offensive or objectionable' includes consideration of the FIDOL factors. The methodology involves an officer going to multiple locations surrounding a site, including the location of the complainant. At each location, the officer undertakes an assessment over a 10 minute period where the intensity and characteristics of the odour is noted down every 10 seconds. The observations are recorded in a data sheet as well as the weather conditions at the time. I consider that the condition should be worded as follows:

"*There shall be no discharges to air that are noxious, dangerous, offensive or objectionable at or beyond the legal boundary of the site from which the Consent Holder operates, as determined by a Wellington Regional Council Officer*".

Operations and Maintenance Manual

The applicant has proposed to include an 'Operations and Maintenance Manual' (OMM). I agree with this recommendation. Mr Bluett recommended that the OMM be reviewed to ensure it meets current good practice and to detail the proposed additional staged mitigation measures. I have recommended that the applicant shall submit this to GWRC within three months of the commencement of this resource consent. The applicant considers it should be reviewed as required. I agree with this. I also recommend that it should be reviewed following the review of the effectiveness of the biofilter or any other mitigation.

Closure of external doors

I recommend a condition is included requiring that the external doors of the factory to be shut during any odour generating or potential odour generating activities. It is unclear as to whether odour is actually increased by the doors being open (fugitive emissions) or not, nonetheless, there is at least a perceived issue that fugitive emissions are an odour source. The applicant may wish to provide information on the practicality of this.

Community liaison group and communications plan

I have recommended that the applicant shall maintain a communications plan[44], which will detail how it will liaise with the community, including a dedicated telephone number for neighbours to contact the applicant at all times. I have also included that this should detail the requirements of a community liaison group.

The establishment of a community liaison group can be an effective tool to develop relationships and establish trust with their neighbours. I consider that

[44] I note that the applicant was required to maintain a communications plan under resource consent WGN110219.

there are key opportunities where it may be valuable to have a community liaison group, including:

- Reporting on the findings of the odour field investigations; and
- If required, annual meetings to discuss whether the applicant is going to implement any further mitigation.

I note that if the mitigation proposed by the applicant is effective and the number of odour complaints reduces, the need for a community liaison group may reduce. Therefore, I have recommended that the community liaison group be held at the following frequencies:

- Within two months following completion of the odour field investigations;
- On at least one occasion in an annual period; or
- Within another timeframe to the satisfaction of the Manager.

I also note that the value of a community liaison group may diminish overtime, and notably if the mitigation proposed is as effective at mitigating odour as proposed. Therefore, I have also recommended that the timeframe for such a meeting can be at the discretion of the GWRC Manager.

9.3.8 Submissions

Three of the four submissions in opposition to the proposal highlight the odour/effects that have been experienced by submitters. I consider that these submissions reiterate the importance of the applicant implementing other mitigation on site. As previously discussed, once the staged mitigation has been implemented it is likely that the potential effects of odour will be at an acceptable level. Therefore, provided the recommended conditions are adhered to, I consider that the concerns of the submitters have been adequately incorporated.

9.3.9 Conclusion

Based on the above discussion, the applicant may wish to provide information on where the biofilter parameters were derived from, the review process and the practicality of having external doors shut.

There is a potential for odour on occasions to be at an unacceptable level prior to the installation of the biofilter. If the biofilter is effective, this is likely to be for a short period no more than six months from the commencement of the consent (if granted). If the biofilter is not effective, there may be instances over a period of two years (approximately) where the discharge may be unacceptable. Therefore, the applicant may wish to provide further information to demonstrate that the timeline outlined is appropriate. Nonetheless, I have recommended a timeline that the applicant may wish to adopt which would reduce the number of instances and the period in which

discharges may be unacceptable. However, I acknowledge this could be further refined based on evidence presented by the applicant.

I conclude:

- That at times, the potential and actual effects from the discharge of odour and the potential cumulative effects may be at an unacceptable level prior to the implementation of mitigation. Therefore, it is critical that the installation of mitigation and additional mitigation (if required) occurs as soon as practicable;

- That the potential and actual effects from the discharge of odour and the potential cumulative effects that may arise will be mitigated to an acceptable level following the implementation of mitigation on site and as such, the effects are likely to be less than minor.

9.4 Potential and actual health effects

The discharge of contaminants into air has the potential to result in adverse effects on human health dependent on the concentration of these contaminants (VOCs and combustion emissions).

9.4.1 Volatile Organic Compounds (VOCs)

The applicant undertook modelling to quantify the predicted 99.9% percentile 1-hour average and maximum predicted annual average concentrations of the VOCs. The dispersion model predictions are all below the relevant ambient air criteria used in this assessment. Figure 8-2 and 8-3 of the applicants AEE show isopeth diagrams for total petroleum hydrocarbons (TPHs) as 1-hour and annual averages. These show that the highest concentrations of contaminants are predicted to occur in the industrial area to the south of the NCI site and rapidly decrease with distance from the site boundaries. The applicant also notes that concentrations in the residential areas are significantly less.

The applicant also notes that there are low concentrations of VOCs inside the factory and these were assessed within a photoionisation detector (PID). The applicant concluded the ambient VOC concentration within the whole building will be less than the specific measurements around the equipment (which are already low) due to dilution through the building volume.

Mr Bluett reviewed this and stated "*maximum modelled GLCs of VOC are less than 20 % of the relevant assessment criterion and therefore any adverse effects will be less than minor*".[45]

9.4.2 Combustion emissions

The applicant also undertook modelling to quantify the maximum predicted off-site concentrations from combustion emissions as shown on Table 5.

[45] Section 5 (Page 7) of Mr Bluett's Report

Table 5: Maximum predicted off-site combustion gas concentrations[46]

Contaminant	Maximum Predicted Off-Site Concentration (µg/m³)			Air Quality Criteria (µg/m³)
	Site Contribution	Background Concentration	Total	
NO_2 1-hr Average	40	13	53	200
NO_2 24-hr Average	20	13	33	100
CO 1-hr Average	1,400	320	1,720	30,000
CO 8-hr Average	750	360	1,110	10,000

In summary, Table 5 shows that all concentrations are below the relevant guideline values.

Mr Bluett has stated:

"Given the type and quantity of combustion gases generated on site and the method of discharge into the environment, the applicant considers these as having a less than minor impact and are not considered in any further detail in the AEE. I agree with the applicant's conclusions on this contaminant source".[47]

9.4.3 Conditions

To ensure that the effects are less than minor and the activity is occurring as proposed, I recommend that the following should be included as conditions of consent (if granted):

- That records and details of production information, including amounts and types of coating materials used on the aluminium aerosol line and steel can line per annum are maintained;
- The OMM shall specify the maintenance of extraction equipment and the gas-fired space heaters;
- That the point of discharge from the Line 2 Main Stack and Internal lacquer/assembly stack are no less than 25 m above ground level;
- Conditions requiring an emissions testing programme, if required; and
- That no part of the aluminium aerosol can and steel can manufacturing process is operated without the associated extraction being fully operational and functioning efficiently.

9.4.4 Submissions

Two of the four submissions in opposition to the applicant list health effects as a key reason for making their submission. Mr Bluett has noted:

[46] Table 6-1 from Section 6 (Page 11) of Further Information Response, Air Discharge Permit WGN190198 (NCI June 2019).
[47] Section 2 (Page 5) of Mr Bluett's Report

"*The applicant has assessed the potential health impacts of the VOC's discharged from the site by following accepted good practice assessment methods and good quality input data. The comparison of the predicted ground level concentrations and the relevant health assessment criteria indicated that adverse health impacts were predicted to be less than minor. While sympathising with concerns expressed in these two submissions I concur with the applicants conclusion from their health impact assessment*".[48]

I agree with Mr Bluett and consider that provided the applicant undertakes the activity as proposed and subject to the recommended conditions, that health effects are unlikely.

9.4.5 Summary

In conclusion, Mr Bluett has concluded that the potential effects from the discharge of VOCs and combustion products will be less than minor. I agree with this conclusion if the recommended conditions are adopted and adhered to.

9.5 Potential effects on Tangata Whenua values

The proposed activity may adversely affect Ngāti Toa Rangatira cultural values through affecting the mauri of air. Air is a taonga and part of the traditional Kaitiakitanga for Māori. I note that the application was notified to Ngāti Toa Rangatira and no submission was received.

Nonetheless, based on the discussion in the above sections, it is considered that provided that the recommended conditions are adopted and subsequently adhered to, that the potential effect on air quality from odour, combustion products and VOCs is likely to be at an acceptable level. Therefore, I consider that there is unlikely to be a significant effect on the values of tangata whenua.

9.6 Other submitter concerns

9.6.1 Discolouration of external walls and houses

Two of the four submissions in opposition to the application noted discolouration of external walls on houses as a reason for making their submission. Adverse effects experienced by the submitters include a grey bloom and stained the walls. I have not observed the stains in person.

Mr Bluett has also not observed the stains in person, however, Mr Bluett has noted that he has seen photographs of the impacts, and has stated:

"*The description "grey growth" suggests something biological like a mould or a lichen. Given the processes NCI undertake and the contaminants discharged in my opinion it is highly unlikely that the NCI emissions would result in a biological growth on any surface. I understand the area has a grit like texture and is very difficult to remove. This suggests to me the "growth" is more likely to be chemical in nature rather than biological. From the photos it looks to me like*

[48] Section 11 (Page 11) of Mr Bluett's Report

the particles have pitted into the paint and this would explain why they are hard to remove. I consider either hot particles have hit the walls and melted into the surface of the paint or a chemically reactive particle has hit the wall reacted with the paint and stuck.

The effects I observed in the photos do not align with my understanding of the potential impacts from the discharge of VOCs from the NCI plant".[49]

I adopt the conclusion of Mr Bluett in this regard.

9.7 Summary

In summary, I consider that adverse effects from the proposed activity can be appropriately managed and mitigated through consent conditions.

10. Objective and policies of the relevant planning instruments 104(1)(b)

Section 104(1)(b) of the RMA requires the decision maker to have regard to the relevant provisions of the following documents:

a. A national environmental standard;

b. Other regulations;

c. A national policy statement;

d. A New Zealand coastal policy statement;

e. A regional policy statement or proposed regional policy statement; and

f. A plan or proposed plan.

The following section provides an assessment of the relevant provisions of:

- NESAQ;
- The Regional Policy Statement; and
- The PNRP.

10.1 National planning instruments

In accordance with Section 44A(7) and (8) of the RMA, every consent authority must observe and enforce a National Environmental Standard to the extent to which their powers enable them to do so.

The NESAQ are regulations made under the RMA, which came into effect on 8 October 2004. The NESAQ aims to set a guaranteed minimum level of human health protection by addressing emissions into air from a range of

[49] Section 11 (Page 12) of Mr Bluett's Report.

contaminants including particulate matter, carbon monoxide, oxides of nitrogen, volatile organic compounds, sulphur dioxide and greenhouse gas emissions from landfills.

Regulation 13 of the NESAQ sets ambient air quality standards for contaminants in Schedule 1. I note that the discharge to air associated with the space heaters will include nitrogen dioxide and carbon monoxide, which are contaminants listed in Schedule 1. I consider that the discharge of these contaminants to air is unlikely to breach the ambient air quality standards in Schedule 1. This is supported by the discussion in Section 9 of this report.

Regulation 20 of the NESAQ is also relevant to this application. Regulation 20(1) of the NESAQ states:

"A consent authority must decline an application for a resource consent to discharge carbon monoxide into air if the discharge to be expressly allowed by the resource consent –

(a) is likely, at any time, to cause the concentration of that gas in the airshed to breach its ambient air quality standard; and

(b) is likely to be a principal source of that gas in the airshed."

The discharge from the space heaters will contain carbon monoxide. However, it is unlikely to breach the associated ambient air quality standard, nor will it be a principal source of gas in the airshed.

Regulation 20(2) of the NESAQ states:

"A consent authority must decline an application for a resource consent to discharge oxides of nitrogen or volatile organic compounds into air if the discharge to be expressly allowed by the resource consent –

(a) is likely, at any time, to cause the concentration of nitrogen dioxide or ozone in the airshed to breach its ambient air quality standard; and

(b) is likely to be a principal source of oxides of nitrogen or volatile organic compounds in the airshed".

In regards to Regulation 20(2)(a), the discharge of nitrogen dioxide is unlikely to breach the ambient air quality standards. Further to this, the discharge from the proposed activity will contain VOCs, however, it is unlikely to be the principal source of contaminants in the airshed.

10.2 Regional planning instruments

The relevant regional planning instruments are the Regional Policy Statement (RPS) and the PNRP for the Wellington region. I note that all of the appeals associated with the 'Air Quality' chapter in the PNRP have been resolved. Therefore, I highlight that regardless of when resource consent was lodged, if by the time that resource consent application is processed there is only one

applicable rule, a parallel planning assessment is no longer required. Instead, only one planning assessment is required that considers all relevant objectives and policies. As such, the PNRP is the only regional plan relevant to the substantive assessment under s104(b)(f) of the RMA.

10.2.1 Regional Policy Statement (RPS)

The RPS outlines the resource management issues of significance to the region and provides a framework for managing the natural and physical resources of the region in a sustainable manner. Further to this, the RPS identifies objectives, policies and methods, which are designed to achieve integrated management of the natural and physical resources of the whole region.

Chapter 3.1 of the RPS relates to air quality and dictates the objectives and policies relevant to air quality within the Wellington Region. **Objective 1** of the RPS states:

> *"Discharges of odour, smoke and dust to air do not adversely affect amenity values and people's well-being".*

The submitters have stated that they have experienced odour from the NCI site. Therefore, I consider that the existing discharge may adversely affect people's well-being and amenity values. As discussed in Section 9 of this report, there may be times over a two-year period where the discharge from the site is unacceptable and may affect amenity values and people's well-being; this would be prior to the installation of the biofilter and other mitigation (if required). However, once the mitigation has been installed, it is likely the proposal will be consistent with the above. In the conditions of consent, I have recommended that the timeframes for the applicant to install the biofilter, review the effectiveness of the biofilter and install additional mitigation be reduced. I consider this is important to ensure that well-being and amenity values are impacted for the shortest timeframe possible. Irrespective, provided the recommended conditions are adopted, I consider that the proposal is generally consistent with the above.

Section 4.1 of the RPS provides further details about the policies relating to air quality. However, these policies relate to district plans and regional plans, and as such, is not relevant to this resource consent application.

In addition to the provisions relating to air quality, Section 3.10 and 4.2 of the RPS defines objectives and policies relevant to resource management and tangata whenua. Of relevance to this application include:

> *"Objective 26 Mauri is sustained, particularly in relation to coastal and fresh waters.*
>
> *"Policy 48: Principles of the Treaty of Waitangi – consideration*".
>
> *"Policy 49: Recognising and providing for matters of significance to tangata whenua – consideration."*

Iwi were notified of the application and did not make a submission on the application. Nonetheless, air is a taonga and therefore, it is important to assess whether the mauri will be sustained. Provided the recommended conditions are adopted, the potential effect on air quality from odour and contaminants will be at an acceptable level. In addition, there are no sites of cultural significance near to the site. Therefore, I consider that the proposal is consistent with the above objective and policies.

In summary, I conclude that the proposal is generally consistent with the overall intent of the RPS.

10.2.2 Proposed Natural Resources Plan

Objective O3, O15 and Policy P19 relate to tangata whenua and ensuring that their values are appropriately protected and provided for. These state:

> *Objective O3: Mauri particularly the mauri of fresh and coastal waters is sustained and, where it has been depleted, natural resources and processes are enhanced to replenish mauri.*
>
> *Objective O15: Kaitiakitanga is recognised and mana whenua actively participate in planning and decision-making in relation to the use, development and protection of natural and physical resources.*
>
> *Policy P19: The cultural relationship of Māori with air, land and water shall be recognised and the adverse effects on this relationship and their values shall be minimised*

As noted above, air is a taonga and to diminish air quality could be considered a breach of kaitiakitanga. Iwi were notified of the application and did not make a submission on the application. I consider that based on the assessment of the actual and potential effects on the environment and as there are no sites of significance to tangata whenua in proximity to the site, that mauri of the air will be safeguarded once the mitigation has been implemented and their cultural relationship with air has been recognised. Therefore, I consider that the proposal is consistent with the above provisions.

Objective O39 and Policy P52 of the PNRP relate to ambient air quality, and they state:

> *Objective O39: Ambient air quality is maintained or improved to the acceptable category or better in Schedule L1 (ambient air).*
>
> *Policy P52: Ambient air quality shall be managed to protect human health and safety by:*

a. *maintaining the acceptable category or better identified in Schedule L1 (ambient air) for the specific contaminants, and*

b. *improving unacceptable or poor ambient air quality to at least the acceptable category or better identified in Schedule L1 (ambient air), and*

c. *managing the discharge of other contaminants so that the adverse effects on human health, including cumulative adverse effects, are minimised.*

Schedule L1 relates to regional ambient air quality targets. The Schedule L1 sets five categories for the Wellington region including, action, alert, acceptable, good and excellent. A description of these is shown on Table 6.

Table 6: Environmental Performance Indicator Categories

Schedule L1: Regional ambient air quality targets		
Category	**Measured value**	**Comment**
Action	Exceeds the NAAQG value	Exceedances of the NAAQG are a cause for concern and warrant action if they occur on a regular basis.
Alert	Between 66% and 100% of the NAAQG value	This is a warning level, which can lead to exceedances if trends are not curbed.
Acceptable	Between 33% and 66% of the NAAQG value	This is a broad category, where maximum values might be of concern in some locations, but are generally at a level that does not warrant action.
Good	Between 10% and 33% of the NAAQG value	Peak measurements in this range are unlikely to affect air quality.
Excellent	Less than 10% of the NAAQG value	Values are of little concern. If maximum values are less than a tenth of the guideline, average values are likely to be much less.

Based on the modelling undertaken, the concentration of contaminants from combustion products associated with the gas-fired heaters falls between the acceptable and good categories as outlined in Schedule L1. Therefore, the proposal will maintain the ambient air quality. I note that the cumulative concentration of contaminants (background concentrations and the NCI discharge) also sits between the 'acceptable' and 'good' contaminant concentrations. Schedule L1 does not provide concentrations of VOCs that are relevant to this discharge. Nonetheless, as previously discussed, the discharge of VOCs from the site will be at concentrations that are a maximum of 20% of the applicable guideline value. Therefore, I conclude that the proposal is consistent with the above.

Objective O40, Policy P58 and Policy P59 relate to industrial discharges and seek to ensure that human health, property and the environment are protected from adverse effects of point source discharges. These state:

> *Objective O40: Human health, property, and the environment are protected from the adverse effects of point source discharges of air pollutants.*

Policy P58: Industrial point source discharges and fugitive emissions into air will be minimised by using good management practices.

Policy P59: The significant adverse effects from industrial point source discharges of hazardous air pollutants beyond the boundary of the property where the discharge is occurring, including any noxious or dangerous effects on human health or the environment, shall be avoided.

Based on the mitigation proposed and provided the applicant adheres to the recommended conditions, I consider the proposal is likely to be consistent with the above. The discharge of contaminants (VOCs and combustion products) via the stacks (point-source discharges) and odour (via the biofilter or stacks) have the potential to result in adverse effects. In regards to VOCs, I note that the likely concentration of contaminants were modelled and this showed that contaminant concentrations were at levels that would not be adverse to human health. Mr Bluett agreed with this conclusion. The OMM will ensure that all devices and equipment on-site are regularly maintained to ensure that they are operating as intended, and in accordance with good management practices. I note that to date, there have been no issues with NCI's current extraction system.

Further to the above and as previously discussed, neighbouring residences consider that they have experienced odour as a result of the NCI site and this has adversely impacted their well-being and as such, their health. Therefore, residences have not necessarily been protected from the adverse effects from discharges. The applicant has proposed additional mitigation including a biofilter and increasing the height of the stack if necessary (based on investigations). The applicant considers that this will effectively reduce odour to an acceptable level. Mr Bluett was confident that the combination of mitigation proposed will likely be effective at reducing odour from the site. I note that the applicant proposes to implement the biofilter within six months of the resource consent being granted and if needed, proposes to implement any other mitigation in approximately 18 months following this. Therefore, there may be a short period where human health is not entirely protected from the potential adverse effects associated with the experience of odour including prior to the installation or the biofilter or prior to the installation of other mitigation if the biofilter is not as effective as anticipated. I have recommended that the timeframes for undertaking these actions are reduced to minimise the instances where the discharge of odour may be unacceptable. Therefore, I conclude the proposal is generally consistent with Objective O40 in this instance.

In summary, I conclude that the proposal is generally consistent with the intent of the PNRP once the mitigation tools have been installed on site. However, I acknowledge that there is likely a period prior to this in which the proposal is not entirely consistent with the PNRP.

11. Part 2 of the Act

Consideration of an application under section 104 of the Act is subject to Part 2. “Subject to” gives primacy to Part 2 and is an overriding guide when applying the provisions of the Act.

Part 2 of the Act sets out the purpose of the Act, which is to promote the sustainable management of natural and physical resources, and in sections 6, 7 and 8 sets out matters that consent authorities should consider when exercising their functions under the Act.

11.1 Section 6 – Matters of National Importance

In exercising its powers and functions under the Act, the Greater Wellington Regional Council (GWRC) is required to recognise and provide for the matters of national importance listed in section 6 of the Act. I do not consider that there are any matters in Section 6 that are relevant to this application.

11.2 Section 7 – Other Matters

The other matters to which GWRC must have particular regard in relation to managing the use, development, and protection of natural and physical resources are listed in section 7 of the Act. Of importance to this application are:

(a) kaitiakitanga;

(aa) the ethic of stewardship;

The Act defines kaitiakitanga as the exercise of guardianship by the tangata whenua of an area in accordance with tikanga Māori in relation to natural and physical resources, and includes the ethic of stewardship. It is distinguishable from "the ethic of stewardship" in that it applies only to the exercise of guardianship by the tangata whenua of an area. Ngāti Toa Rangatira were notified of the application. I note that they did not make a submission. Nonetheless, I consider that kaitiakitanga and the ethic of stewardship has been given effect to.

(c) the maintenance and enhancement of amenity values; and

‘Amenity values’ is defined under section 2 of the Act as “those natural and physical qualities or characteristics of an area that contribute to people’s appreciation of its pleasantness, aesthetic coherence, and cultural and recreational attributes”.

The proposed mitigation measures, seek to minimise odour discharged from the site, and it is considered this will enhance the amenity values of the surrounding area, that are appreciated by the neighbouring residences. However, I also acknowledge that prior to effective mitigation being installed, there may be a period where amenity values are not enhanced.

(f) maintenance and enhancement of the quality of the environment.

The proposed mitigation seeks to mitigate and minimise the odour discharged from the site and therefore, will enhance the quality of the environment. Further to this, the discharge of contaminants are all within the applicable guidelines and therefore, are not at concentrations that would be adverse to human health or the environment.

Based on the discussions throughout this report, I consider that the above has been had particular regard to. Provided the recommended conditions are adopted by the applicant, the quality of the environment will be maintained.

11.3 Section 8 – Principles of the Treaty of Waitangi

Section 8 of the Act requires GWRC to take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi) when considering applications for resource consent. The Waitangi Tribunal and Courts continue to establish the principles of the Treaty of Waitangi and it is recognised that the principles are continuing to evolve. The two key principles that are of relevance to this application are active protection of Mäori interests and consultation.

The principle of active protection has been described as a "guarantee to Maori to continue a relationship with resources that was as much about their use as about their conservation" *NZ Cooperative Dairy Company Limited v Commerce Commission* (1991). In the context of this application, active protection must be taken into account when considering the tangata whenua relationship with their ancestral land, water, waahi tapu and other taonga.

The general requirements of 'consultation' have been well established by the judiciary and Courts both within and outside the Act. Consultation should facilitate tangata whenua understanding of the effects of a proposal on their relationship with the area in question to a point where the applicant can consider how those effects might be avoided, remedied or mitigated. GWRC requires this kind of information to be able to assess how the Council can meet its statutory responsibilities.

Ngāti Toa Rangatira were notified of the application and did not make a submission. Based on the discussions in Section 9 of this report, there is unlikely to be any significant effects on air quality, provided the applicant adopts and adheres to the recommended conditions. Therefore, I consider that the principles of the Treaty of Waitangi (Te Tiriti o Waitangi) have been taken into account.

11.4 Section 5 – Purpose and Principles

Section 5 defines "sustainable management" as:

"managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enable people and communities to

provide for their social, economic, and cultural wellbeing and for their health and safety while-

(a) sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and

(b) safeguarding the life-supporting capacity of air, water, soil and ecosystems; and

(c) avoiding, remedying, or mitigating any adverse effects of activities on the environment."

The purpose is then achieved by recognising and providing for the Matters of National Importance in Section 6, having particular regard to the Other Matters in Section 7, and by taking into account the principles of Treaty of Waitangi (Section 8). I have considered the objectives and policies of the relevant documents in Section 104(1)(b) above. I consider these were appropriately prepared to give effect to section 5 and thus Part 2 of the RMA.

11.5 Summary

Having had appropriate consideration of the matters in Part 2, I am of the opinion that, subject to the applicant adopting the recommended conditions, the proposal will achieve the purpose of the RMA.

12. Consideration of application (Section 104)

The application has been considered in accordance with Section 104(1) of the RMA, as discussed in Section 9, 10 and 11 of this report.

12.1 Determination of Applications for Discretionary Activities (Section 104B)

Section 104B of the RMA relates to the determination of applications for discretionary activities and states:

After considering an application for a resource consent for a discretionary activity, a consent authority:

(a) May grant or refuse the application; and

(b) If it grants the application, may impose conditions under section 108 of the RMA.

I have considered Section 104B(a) and (b) of the RMA in the 'Recommendation' section below.

12.2 Matters relating to the grant of discharge permits

In addition to the matters in Section 104(1), Section 105(1) also requires decision makers to have regard to the following matters for applications that would contravene Section 15 or Section 15B of the RMA:

a) The nature of the discharge and the sensitivity of the receiving environment to adverse effects;

b) The applicant's reasons for the proposed choice; and

c) Any possible alternative methods of discharge, including discharge into any other receiving environment.

Regarding the above matters, the applicant has stated:

- Site - the site is established and therefore, there are limited alternatives to the processes on site. The location is fixed as the company has significant capital investment in the site, so there are not alternatives to the use of the site.

- Energy alternatives – natural gas is the predominant fuel source used on site. Any alternative fuel source is likely to produce higher emissions.

- Emissions control – The assessment provided on emissions controls was provided prior to the adoption of alternative mitigation by NCI. The applicant has proposed the implementation of a biofilter, and if needed, increase the height of the stack.

I consider that the proposed activity is generally appropriately located, noting that it is located within an industrial zone. In addition to this, when considering the nature of the discharge I note that the applicant has proposed mitigation to reduce the odour being discharged from the onsite activities. In regards to whether there are any other alternative methods of discharge, the alternative would be not undertaking the activity and based on the applicants comments this is not practicable. As such, I consider the applicant has had regard to Section 105.

13. Conclusions

A substantive decision on a resource consent is made under the provisions that apply at the time the decision is made. In this instance, the relevant provisions are contained within the PNRP, and the RAQMP is considered to be inoperative.

In conclusion, I consider that the proposal is generally consistent with the overall intent of the NESAQ, RPS and the PNRP. In addition, the effects have been assessed to be less than minor and acceptable, once the mitigation has been implemented on site.

14. Recommendation

Overall, in making my recommendation on this application I have considered the actual and potential effects on the environment arising as a result of the proposal, the concerns raised by submitters and the mitigation measures proposed by the applicant. I have also considered Part 2 of the Act, sections

104, 105, and 108 of the Act, the NESAQ and the relevant objectives and policies of the RPS and PNRP.

Therefore, I recommend pursuant to Sections 104, 104B, 105, 108 and subject to Part 2 of the RMA that the application of NCI Packaging (NZ) Limited should be granted, subject to adoption of the recommended conditions.

Section 108 of the RMA enables the consent authority to impose conditions subject to those restrictions specified in Section 108 and Section 108AA.

If the decision maker considers that this application could be granted subject to mitigation and adopting the recommended conditions, I recommend conditions, as specified in Appendix 5 be imposed. I anticipate discussion of these and that they could be modified depending on clarification provided by the applicant or other parties during the hearing.

15. Duration of consent

Section 123 of the RMA details the possible durations of resource consent. The applicant has sought a duration of 20 years.

Section 123(d) of the Act states:

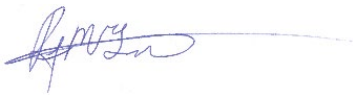
> *"(d) the period for which any other resource consent is granted is the period (not exceeding 35 years from the date of granting) specified in the consent and, if no such period is specified, is 5 years from the date of commencement of the consent under section 116".*

I consider that a duration of 20 years is appropriate for the proposed activity for the following reasons:

- There is a significant capital investment in the mitigation to be implemented on site. This mitigation is also designed to minimise potential adverse effects and as such, I consider a duration of 20 years appropriate for this reason; and

- It is considered that a duration of 20 years is not inconsistent with the RMA's purpose of sustainable management.

Report prepared by:



Rubie McLintock
Resource Advisor, Environmental Regulation

Recommendation approved by:

Stephen Thawley
Acting Manager, Environmental Regulation

Appendix 1: Addendum to Section 42A Officer's Report – Mr Jeff Bluett, Technical Director – Air Quality

Report of Jeff Bluett

1. Introduction

1.1. Qualifications and Experience

My name is Jeffrey George Bluett. I hold the qualifications of a Bachelor of Science (University of Otago) and a Master of Science degree (First Class Honours) in Environmental Science (Lincoln University), specialising in air pollution modelling.

I am employed as a Technical Director: Air Quality by Pattle Delamore Partners Limited (PDP), an engineering and environmental consulting firm. I have been employed by PDP since April 2019 and have over 24 years of experience in the field of air quality matters, which includes Council and Environment Court experience. I have previously worked for Environment Canterbury (3 years), NIWA (12 years) and Golder Associates (7 years) in air quality technical roles.

I am a life member of the Clean Air Society of Australia and New Zealand (CASANZ). Within CASANZ, I currently hold or have held the following positions: Society Vice President (2019 to present), New Zealand Branch President (2018 to 2019), Society Council Member (2014 to present), New Zealand Branch Secretary (2014-18), and Transport Special Interest Group deputy chair (2009 to 2014). I was awarded CASANZ's distinguished service medal in 2013.

I have authored, or co-authored, approximately 100 reports and peer reviewed papers in respect of transport, industrial, domestic and agricultural emissions to air. In relation to assessing the impacts of industrial activities, my recent projects have included:

- Reviews of resource consent applications from industrial sites for Canterbury Regional Council including:
    - Prime Pine – health, dust and odour impacts from a timber processing plant;
    - Advantage Plastics – health and odour impacts from a plastics manufacturing plant; and
    - Sims Metals – Discharge of dust and odour from a metal recycling facility.
- Review of resource consent applications from industrial sites for Greater Wellington Regional Council including:

- NUENZ – health and odour impacts from the manufacture of nitrile fibres;
- Resene – odour and health impacts of manufacturing paints; and
- Higgins - odour and health impacts of manufacturing asphalt.

- Turners and Growers - assessing health and odour impacts of a fruit and flower fumigation facility;
- NZ Comfort Group - assessing health and odour impacts of a foam manufacturing plant; and
- Environment Southland - assessing health impacts from the combustion of used oil.

1.2 Expert Witness Code of Conduct

While this is a Council hearing, I acknowledge that I have read and agree to comply with the Environment Court's Code of Conduct for Expert Witnesses, contained in the Environment Court Practice Note 2014. My qualifications as an expert are set out above. Other than where I state that I am relying on the advice of another person, I confirm that the issues addressed in this statement of evidence are within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

1.3 Background and Involvement with the Application

NCI Packaging (NZ) Limited (NCI) manufactures and prints aluminium and steel cans in a plant located at 60-66 Montgomery Crescent, Upper Hutt. These processes result in the discharge of volatile organic compounds (VOCs) and odour to air. NCI has applied to Greater Wellington Regional Council (GWRC) under the application WGN190198 to renew an existing discharge to air permit that expires on 2 August 2019 (GWRC consent number WGN110219). While working for Golder Associates in 2011 I was engaged by GWRC to assist with the review of the technical aspects of existing consent WGN110219 and presented evidence at that hearing.

NCI submitted the AEE[1] to GWRC on 4 February 2019. The AEE was supported by a separate dispersion modelling report[2]. GWRC has engaged PDP to undertake a technical review of the assessment of environment effects submitted as part of NCI's resource consent application. I undertook Stage 1 of the review of these reports for the purpose of advising GWRC on the completeness of the application and if further information was required. Following the Stage 1 review of the AEE and modelling reports, PDP issued

[1] Assessment of Environmental Effects of Air Discharges from NCI Packaging Can Manufacturing Facility, Rhys Kevern, NCI. 31 January 2019.
[2] Air Dispersion Modelling Assessment, NCI Packaging. Jacobs February 2019. Report number IZ119600-RPT-1. And NCI Packaging (NZ) Limited, Upper Hutt Air Discharge Monitoring, November/December 2018, Issue II. Source Testing New Zealand Limited. 31 January 2019.

GWRC a memorandum that detailed further information (as per section 92(1) of the Act (RMA)) required to allow PDP to complete Stage 2 of the AEE review. In response to the RFI NCI provided a letter[3] which contained answers to the questions posed, a summary of the application (for the purposes of consultation), CALPUFF output files and the appendices of the air discharge monitoring report. The outcomes of the Stage 2 review and a recommendation on the notification of the application are detailed in a PDP memorandum – NCI Discharge to Air: Technical Review of Assessment of Environmental Effects[4] (August 2019).

Following a number of odour complaints in early 2020, NCI meet with GWRC and it was agreed that NCI would review their odour control measures. The outcomes of this NCI review were detailed in the NCI report – Review of Odour Control Techniques[5]. I reviewed that report[6] and concluded that NCI had provided a comprehensive list of potential mitigation measures and that the advantages and dis-advantages of each method had been accurately described. I supported the biofilter trial proposed by NCI.

In July 2020, Tonkin and Taylor (T+T) reviewed the odour issues[7] at the NCI Upper Hutt packaging plant and recommended the following:

- A programme of odour field observations be undertaken to better characterise the effects of the emission from the site and identify other possible sources;
- Implementing a biofilter trial and evaluating its effectiveness; and
- Undertaking a sensitivity analysis of odour dispersion for differing stack heights using air dispersion modelling.

In January 2021, T&T provided a letter[8], to update GWRC on the outcomes of the three action items from T+T's July 2020 review. I reviewed this letter and provided my comments[9] to GWRC on T&T's reporting of odour field observations, biofilter trial, odour monitoring and further modelling to evaluate stack height. NCI, T&T and myself meet by teleconference on 8 April 2021 to discuss my review of the T&T 2021 letter. The outcomes of that meeting were recorded by T&T in a letter[10]. Following that letter, I informed GWRC[11] that NCI, T&T and myself had satisfactorily resolved the issues discussed.

[3] Further Information Response, Air Discharge Permit WGN190198 (NCI June 2019).
[4] NCI DISCHARGE TO AIR: TECHNICAL REVIEW OF ASSESSMENT OF ENVIRONMENTAL EFFECTS. PDP 1 August 2019.
[5] Review of Odour Control Techniques, Rhys Kevern, NCI, 18 June 2020.
[6] NCI review of odour mitigation techniques - PDP review. Email Jeff Bluett (PDP) to Claire McKevitt (GWRC) 13 August 2020.
[7] NCI Packaging, Upper Hutt, Review of odour issues. Jenny Simpson, T&T, 17 July 2020.
[8] NCI Packaging, Upper Hutt – Summary of further odour investigations and recommendations, Jenny Simpson T&T 27 January 2021.
[9] NCI DISCHARGE TO AIR: TECHNICAL REVIEW OF ODOUR INVESTIGATIONS AND MITIGATION RECOMMENDATIONS, PDP 17 March 2021.
[10] NCI Packaging, Upper Hutt – response to questions raised in PDP technical review. Jenny Simpson T&T 28 April 2021.
[11] Email WGN190198 - T+T Review, Jeff Bluett (PDP) to Rubie McLintock (GWRC) 08 May 2021.

I accompanied GWRC on visits to the site to become familiar with NCI site processes, emissions, mitigation processes and the surrounding environment on two occasions for the current application:

- 18 June 2019; and
- 11 March 2021.

1.4 Purpose And Scope of Evidence

The purpose of my evidence is to address the applicant's assessment of health and odour impacts of the activity being undertaken on the site. Specifically, my evidence addresses:

- The processes on the site, and type and quantity of contaminants discharged from the site (Section 2);
- The potential adverse effects of the contaminants (Section 3);
- The receiving environment (Section 4);
- Plant discharges - assessment of effects on the environment (Section 5);
- Cumulative assessment of effects on the environment (Section 6);
- Odour field monitoring (Section 7);
- Odour emissions monitoring (Section 8);
- Odour mitigation (Section 9);
- The Adaptive management odour plan (Section 10);
- The submissions which raise air quality and health impact issues (Section 11);
- Proposed conditions of consent (Section 12); and
- Summary of key findings (Section 13).

2. Process and type and quantity of contaminants discharged

NCI manufactures and prints aluminium and steel cans in a plant located at 60-66 Montgomery Crescent, Upper Hutt. These processes result in the discharge of volatile organic compounds (VOCs) and odour to air.

The three manufacturing processes undertaken on site are; drawing aluminium cans, printing and lacquer application, and forming steel paint cans. The site's manufacturing processes are described in Section 3 of the Air Discharge AEE[1].

The key types of contaminants discharged from the manufacturing processes have been identified by NCI in Section 5 of the Air Discharge AEE[1], which are volatile organic compounds (VOCs) from the printing and lacquering of aluminium can surfaces. The type and quantity of VOC's discharged from the printing and lacquering of the aluminium cans varies with the inks and lacquers used.

NCI engaged Source Testing New Zealand to undertake a stack testing monitoring programme to quantify the emissions of VOCs and odour[12]. This testing provided very good quality contaminant and exhaust flow information for the products most frequently used in the plant's processes. The emissions from the less frequently used products were estimated using a mass balance approach based on chemical composition as detailed in the relevant Material Safety Data Sheets (MSDS). The emission and exhaust flow data were then used to configure the air dispersion model used for the assessment.

The two key discharge VOC discharge points from the site are the Line 2 Main Stack (25 m high) and the Internal Lacquer/Assembly Stack (25 m high).

I have reviewed the applicant's emission rate measurements and calculations. My checks confirmed that the information presented in the AEE represents the site's emission sources accurately.

In summary, I conclude the applicant has provided a comprehensive and robust description of the processes undertaken, the type and amount of contaminant discharged into air from the site, and the method of discharge. NCI's descriptions are consistent with observations made on my site visits.

In addition to the two key discharge points, the site operates four LPG fired heaters (total heat output 380 kW) which provided heat for the factory and discharge combustion gases into stacks located on the factory roof. Given the type and quantity of combustion gases generated on site and the method of discharge into the environment, the applicant considers these as having a less than minor impact and are not considered in any further detail in the AEE. I agree with the applicant's conclusions on this contaminant source.

3. Potential adverse effects of contaminants discharged into air

The applicant has correctly identified the two key potential adverse effects of the VOC contaminants discharged from the site as:

- Human health impacts; and
- Odour amenity impacts.

[12] NCI Packaging (NZ) Limited, Upper Hutt. Air Discharge monitoring, November/December 2018 (Issue II). January 2019.

4. Receiving environment

The applicant describes the land use categories (light industrial and residential) and topography of the land that surrounds the plant in Section 2.1 of the AEE and notes that the land-use to the northwest of the site along Mountbatten Grove is more sensitive being residential. The site visit confirmed the applicant's description of the receiving environment. I conclude that the receiving environment is of moderate (industrial area) to high (residential area) sensitivity to the discharge of contaminants discharged from the plant.

Historically there have been a number of complaints made by the neighbouring residents regarding the odour discharged from the NCI plant. I understand the number of odour complaints has reduced in recent years. A total of 102 complaints have been made to GWRC over the period 2016 to 2021. The last odour complaints I am aware of occurred in January 2020. NCI undertook an analysis of wind direction at the time of complaints and identified a number of events when the factory was upwind of the complainant and therefore concluded the site could have potentially been the source of the odour.

I understand Claire McKevitt (GWRC) spent a significant amount of time (2 weeks) out in the area doing odour observations each day in December 2019. During these odour observations Ms McKevitt did not detect any significant solvent odours and did not experience any incidents of concern. Ms McKevitt was the GWRC responding officer for an odour complaint made on 16 January 2020 (complaint number 15750). Ms McKevitt's odour observations are detailed in a file note[13] in which she identifies NCI as the source of the odour and she experienced odour which ranged in strength from weak to strong.

NCI acknowledge the sensitivity of the receiving environment and potential impact of odour discharged from the site and requested that the application be processed using the limited notification pathway (Section 12 of the AEE). NCI requested that the limited notification include Montgomery Crescent and Mountbatten Grove. GWRC made the decision to limited notify the application on 3 August 2019.

5. Plant Discharges - Assessment of Effects on the Environment

The applicant used air dispersion modelling to assess the ground level concentrations (GLCs) of VOCs and odour from the manufacturing processes. The dispersion model chosen for the project (CALPUFF) and the applicant's configuration and running of the model matches my expectations of accepted good practice. The manufacturing process emissions data used as input to the model was sourced from the stack testing programme and I consider this good quality data. I have reviewed the applicant's modelling files and results data for VOCs, odour and combustion and I checked the following aspects of the assessment:

[13] NCI Odour responses for 16 January 2020. FILE NUMBER WGN110219/02 and WGN190198/01. Claire McKevitt 16 January 2020.

- Meteorological data;
- Dispersion model configuration files;
- Dispersion model results files; and
- Results analysis spreadsheets.

My checks confirmed that the model had been configured accurately to represent the site's emission sources and that the results presented in the report reflected those contained in the results files. My review confirms the applicant has compared the modelled GLCs of odour against the correct assessment criteria sourced from New Zealand's air quality standards, guidelines and relevant good practice guidance. The assessment criteria used for the VOCs were sourced from overseas regulatory bodies. I concur with this approach and the hierarchy of sources used by the applicant to identify relevant assessment criteria.

The impact of odour emissions from the site was also assessed by the applicant by undertaking a detailed analysis of the odour complaints made to GWRC about NCI's operations between January 2016 and April 2019. The complaints were considered alongside the onsite wind data recorded at the time of the complaints and NCI attempted to identify the most likely cause of the odour incident and any mitigation actions that may have been taken.

I note that the use of the odour complaints to assess the impact of odour emissions was undertaken in a way that is consistent with the recommendations provided in the Ministry for the Environment's (MfE) Good Practice Guide on Assessing and Managing Odour (2016). I consider the complaints analysis added significant value to the AEE and provided key information upon which my conclusions are based.

In summary, I conclude that potential effects of the discharged of contaminants to air from the NCI site have been appropriately considered and described by the applicant. The key conclusions of the applicant's assessment are that:

- Maximum modelled GLCs of VOC are less than 20% of the relevant assessment criterion and therefore any adverse effects will be less than minor;
- Maximum modelled GLC's of odour exceed MfE's recommended odour-modelling guideline value for highly sensitive receptors (2 OU/m^3) in a small area of the residential houses located to the north of the site;
- On some occasions when odour complaints have been made the NCI site was upwind of the location of the complainant.

My review of the information supplied by the applicant leads us to concur with the conclusions drawn in the AEE. In summary I conclude that the health effects of the discharge of VOCs and combustion products will be less than minor, while the discharge of odour on occasions may cause effects than are minor or more than minor.

This finding highlights the importance of NCI having an upgraded and effective odour monitoring and mitigation strategy.

6. Cumulative Assessment of Effects on the Environment

Cumulative effects can occur when:

- A site discharge causes repeated incidents at a particular location;
- When added to the background air, a site discharge exceeds assessment guidelines; or
- The discharges from two or more sites causes repeated incidents at a particular location.

The applicant did not specifically assess cumulative impacts (site, nearby sources and background contaminants). However, given the nature of the discharges from the site, the way in which the site discharges were assessed and the activities undertaken in the surrounding area, I do not consider an assessment of cumulative effects would change the conclusions reached by the applicant.

Given the complaint history and odour observations made by GWRC staff I conclude there is a cumulative odour effect occurring in the residential area adjacent to the plant. In my opinion this cumulative effect is most likely being caused be either repeated impacts from NCI or the odour generated by multiple sources causing repeated incidents at a particular location. This situation highlights the importance of odour mitigation at the NCI plant and the importance of identifying and mitigating other significant odour sources in the area.

7. Odour Field Monitoring

NCI commissioned a short-term programme of odour field observations, which was undertaken over 17 days between 10 August to 8 September 2020. A detailed set of results from the odour field observations is presented in Appendix A of the T+T report. I consider that the method used to undertake the odour field observations as appropriate, and the person engaged is suitably experienced to provide field odour observations.

T+T's evaluation of the odour observation data indicates that solvent type odours are likely to be occurring at sufficient intensity, frequency and duration to constitute an odour nuisance particularly around the end of Mountbatten Grove (adjacent to the NCI site). Analysis of the wind data at the times odour

was observed indicates that NCI was the likely source of the odour for three of the four odour observations. T+T considered that odour from the fourth event was likely from a business on Montgomery Crescent.

While it is not explicitly stated in the T+T report, it is clear to me that the findings from the odour observation programme support the need for NCI to further explore odour mitigation options.

8. Odour Emissions Monitoring

NCI commissioned odour emission monitoring in December 2018 to measure odour discharge rates from the Line 2 Main Stack (aerosol cans) and the Assembly Stack (tinplate cans). The odour emission monitoring results, as reported by T+T, suggest that the Assembly Stack discharges slightly more odour than the Line 2 Main Stack.

The odour emissions from the individual sources, which contribute to the Line 2 Main Stack discharges, were also tested to identify the predominant odour source(s). The basecoat application, and curing were identified as the predominant odour sources (72% of total odour emissions from Line 2 Main stack). I understand that NCI are planning to capture the high odour emission sources and divert these to the biofilter, with the remaining sources going up the stack. As such, I consider the odour emission monitoring provided useful information for NCI's odour mitigation planning as it clearly identifies the key sources for odour treatment that would contribute to reduced impacts offsite.

9. Odour Mitigation

NCI has invested significant time and effort into investigating odour mitigation options for the site as evidenced by the following reports:

- Review of Odour Control Techniques. Rhys Kevern, NCI 18 June 2020;
- NCI Packaging, Upper Hutt, Review of Odour issues. Jenny Simpson, T+T, 17 July 2020;
- Odour Field Observations, Rhys Kevern, NCI 8 October 2020;
- Supplementary air dispersion modelling, Jacobs 19 August 2020; and
- NCI Packaging, Upper Hutt – Summary of further odour investigations and recommendations. Jenny Simpson, T+T, 27 January 2021.

I have reviewed each of these documents for GWRC. Having done this, I conclude that NCI has provided an accurate and helpful description of all practical odour mitigation options for the site and their advantages and disadvantages. Based on the information provided in the above reports, T+T has recommended a staged approach to further odour mitigation at NCI as follows:

- Stage 1a: Install a biofilter to treat odour emissions from the aerosol can basecoat processes;

- Stage 1b: Increase the capacity of biofilter to treat odour emissions from other relatively large odour sources on the Line 2 Main Stack production chain; and

- Stage 2: If needed, increase the heights of the Line 2 Main Stack and/or the Assembly Stack to 27 metres.

T+T suggests this staged approach to odour mitigation can be integrated into the site's Adaptive Management Odour Plan (AMOP) and/or incorporated into consent conditions. I support this approach and in fact think it will be a key part of implementing an effective odour mitigation system and monitoring on-going performance.

In summary, I conclude the proposed two stage approach to odour will certainly reduce the frequency, intensity and duration of adverse odour effects that currently occur in the area around the site, especially at the end of Mountbatten Grove. Given the current impacts as indicated by the complaint record, and considering the results of NCI and GWRC odour observation campaigns, on balance I consider that the odour effects caused by NCI are likely to fall to an acceptable level once the proposed staged mitigation has been implemented.

10. Adaptive Management Odour Plan

NCI have an Adaptive Management Odour Plan (AMOP)[14] which was written to meet the requirements of condition 5 of their current consent. The AMOP sets out the actions NCI will take to manage odour from the plant. The AMOP covers the following issues:

- Procedures for incident notification;

- Contact details and on site responsibilities;

- Procedures for investigating any odour complaints;

- Procedures for undertaking odour assessments;

- Procedures for initiating actions to reduce discharges to air; and

- Development or review of the AMOP.

To ensure NCI's current and proposed mitigation measures and monitoring programmes will be effective and/or to flag to NCI when these might need to be updated, I recommend NCI be required to review and enhance their Adaptive Management Odour Plan (AMOP) and Operations and Maintenance

[14] Adaptive Odour Management Plan -Version 9. NCI July 2018.

Manual (OMM) to meet current good practice and to detail the proposed additional staged mitigation measures.

11. Submissions

A total of seven submissions were made on the application, one in support, two neutral and four in opposition. I have reviewed the submissions made and address the key issues raised by submitters in the following sections.

Odour

Three of the four submissions in opposition to the applicant list odour as a key reason for making their submission. Adverse effects experienced by the submitters include long term offensive and objection solvent smell which at times limits their ability to be outside their homes.

These submissions add to the weight of the importance of additional odour mitigation measures being implemented by NCI. As discussed in Section 9 of my evidence I consider that the odour effects caused by NCI are likely to fall to an acceptable level once the proposed stage mitigation has been implemented.

Health effects

Two of the four submissions in opposition to the applicant list health effects as a key reason for making their submission.

The applicant has assessed the potential health impacts of the VOC's discharged from the site by following accepted good practice assessment methods and good quality input data. The comparison of the predicted ground level concentrations and the relevant health assessment criteria indicated that adverse health impacts were predicted to be less than minor. While sympathising with concerns expressed in these two submissions, I concur with the applicant's conclusion from their health impact assessment.

Complaint numbers

One submission notes that neighbours have complained (about odour) without logging an incident with the council. In my experience this is a common issue associated with odour (and dust) impacts. For this reason, the number of complaints is only one of a number of factors that is considered when assessing the impacts of a particular activity. The number of complaints may not provide a complete record of the adverse impacts. However, when this is considered alongside odour observations, odour emission measurements and dispersion modelling results as has been done for this assessment, a useful assessment is developed which in this case has been used to identify the need for additional mitigation.

Consent conditions

One submitter requested to see consent conditions to manage the odour effects and the discharge of VOCs. I understand that a set of draft consent conditions will be tabled at the hearing and submitters will have the opportunity to comment on these. My comments on, and recommendations for, consent conditions are detailed in Section 12 of my evidence.

Discolouration of external walls on houses

Two of the four submissions in opposition to the applicant noted discolouration of external walls on houses as a reason for making their submission. Two submitters have observed a grey bloom on and staining of the walls of their houses which they have attributed to the discharges of air contaminants from NCI.

I have not observed the stains in person, but have I looked at photographs of the impacts which were sent to me by GWRC staff in November 2019 following a meeting between GWRC and the submitters. Having looked at photographs I made the following comments to GWRC. The description *"grey growth"* suggests something biological like a mould or a lichen. Given the processes NCI undertake and the contaminants discharged in my opinion it is highly unlikely that the NCI emissions would result in a biological growth on any surface. I understand the area has a grit like texture and is very difficult to remove. This suggests to me the "growth" is more likely to be chemical in nature rather than biological. From the photos it looks to me like the particles have pitted into the paint and this would explain why they are hard to remove. I consider either hot particles have hit the walls and melted into the surface of the paint or a chemically reactive particle has hit the wall reacted with the paint and stuck.

The effects I observed in the photos do not align with my understanding of the potential impacts from the discharge of VOCs from the NCI plant.

12. Proposed conditions of consent

NCI submitted a proposed set of consent conditions to GWRC on 29 June 2021. GWRC staff and I reviewed the proposed set of consent conditions and have agreed upon and suggested a number of amendments. The key issues addressed in our amendments were:

- Timeline for the design, build, commission and testing of the proposed biofilter;
- Timeline for the review of biofilter effectiveness and the assessment of the need for, and implementation of any additional odour mitigation required;
- The inclusion of biofilter operational details within the consent conditions and/or AMOP;

- An expansion of the operational and management issues to be covered in the AMOP;

- The requirement for NCI to form and run a community liaison group;

- The duration of odour monitoring to be undertaken for the purposes of assessing the effectiveness of the biofilter;

- The requirement for the odour assessments associated with the proposed biofilter) to be undertaken by an independent suitably qualified and experienced person; and

- Requiring that any additional odour emission mitigation implemented (beyond the biofilter) be subject to an assessment of effectiveness.

The amended set of proposed set of consent conditions are attached to Ms McLintock's s42a report as Appendix 5.

13. Summary of key findings

The purpose of my evidence was to address the applicant's assessment of health and odour impacts of the activity being undertaken on the site. The key findings contained in my evidence are:

- The applicant has provided a comprehensive and robust description of the processes undertaken, the type and amount of contaminant discharged into air from the site, and the method of discharge;

- The two key potential adverse effects of the VOC contaminants discharged from the site are human health impacts and odour amenity impacts);

- NCI acknowledge the sensitivity of the receiving environment and potential impact of odour discharged from the site;

- The health effects of the discharge of VOCs and combustion products will be less than minor, while the discharge of odour on occasions may cause effects than are minor or more than minor.

- In my opinion a cumulative odour effect is occurring in the area and most likely being caused be either repeated impacts from NCI or the odour generated by multiple sources causing repeated incidents at a particular location.

- T+T's evaluation of the odour observation data indicates that solvent type odours are likely to be occurring at sufficient intensity, frequency and duration to constitute an odour nuisance particularly around the end of Mountbatten Grove (adjacent to the NCI site).

- I consider the odour emission monitoring undertaken by NCI has provided useful information for NCI's odour mitigation planning as it clearly identifies the key sources for odour treatment that would contribute to reduced impacts offsite.

- I conclude the proposed two stage approach to odour will certainly reduce the frequency, intensity and duration of adverse odour effects that currently occur in the area around the site. I consider that the odour effects caused by NCI are likely to fall to an acceptable level once the proposed staged mitigation has been implemented.

- I have reviewed the submissions made on the application and have addressed the key issues raised by submitter. None of the issues raised in the submissions have changed my findings and/or recommendations on this application.

- GWRC staff and I reviewed NCI's proposed set of consent conditions and have agreed upon and suggested a number of amendments.

Jeff Bluett

9 July 2021

Appendix 2: Record of Complaints received by GWRC between 2016 and 2021

2016: total 7		2017: total 26		2018: total 16		2019: total 8		2020: total 43		2021: total 2	
Incident ID	**Date**	**Incident ID**	**Date**	**Incident ID**	**Date**	**Incident ID**	**Date**	**Incident ID**	**Date**	**Incident ID**	**Date**
3232	26-Apr-16	7944	21-Dec-17	11645	6-Dec-18	15445	12-Dec-19	18361	1-Dec-20	19347	1-Apr-21
3230	26-Apr-16	7943	21-Dec-17	11520	26-Nov-18	14995	23-Oct-19	18064	22-Oct-20	18876	5-Feb-21
3124	5-Apr-16	7931	20-Dec-17	11175	31-Oct-18	14787	3-Oct-19	18018	14-Oct-20		
2742	28-Jan-16	7930	20-Dec-17	9935	12-Jun-18	12965	3-Apr-19	17502	12-Aug-20		
2703	28-Jan-16	7897	18-Dec-17	9683	14-May-18	12209	29-Jan-19	16734	12-May-20		
2698	27-Jan-16	7888	18-Dec-17	9540	2-May-18	12076	17-Jan-19	16637	28-Apr-20		
2695	27-Jan-16	7786	7-Dec-17	9533	2-May-18	12060	16-Jan-19	16425	17-Mar-20		
		7678	30-Nov-17	9532	2-May-18	12031	14-Jan-19	16362	11-Mar-20		
		7559	21-Nov-17	9531	2-May-18			16358	11-Mar-20		
		7495	15-Nov-17	9475	26-Apr-18			16356	11-Mar-20		
		7489	15-Nov-17	9271	10-Apr-18			16354	11-Mar-20		
		7483	14-Nov-17	8658	22-Feb-18			16352	11-Mar-20		
		7482	14-Nov-17	8487	9-Feb-18			16319	9-Mar-20		
		7480	14-Nov-17	8306	29-Jan-18			16286	5-Mar-20		
		7479	14-Nov-17	8285	26-Jan-18			16285	5-Mar-20		
		7471	14-Nov-17	8130	15-Jan-18			16291	5-Mar-20		
		7462	13-Nov-17					16282	5-Mar-20		
		7449	13-Nov-17					16189	24-Feb-20		
		6829	12-Sep-17					16091	14-Feb-20		
		6480	3-Aug-17					16060	12-Feb-20		
		6476	3-Aug-17					16046	11-Feb-20		
		6440	28-Jul-17					16025	10-Feb-20		
		5146	27-Mar-17					15883	28-Jan-20		
		4880	15-Mar-17					15814	21-Jan-20		
		4746	8-Mar-17					15756	16-Jan-20		
		4640	20-Feb-17					15755	16-Jan-20		
								15753	16-Jan-20		
								15751	16-Jan-20		
								15720	15-Jan-20		
								15736	15-Jan-20		

								15734	15-Jan-20		
								15733	15-Jan-20		
								15728	15-Jan-20		
								15719	15-Jan-20		
								15692	14-Jan-20		
								15707	14-Jan-20		
								15681	13-Jan-20		
								15680	13-Jan-20		
								15678	13-Jan-20		
								15632	8-Jan-20		
								15620	7-Jan-20		
								15615	7-Jan-20		
								15613	7-Jan-20		

Appendix 3: Pre-hearing Meeting Record

File No: WGN190198 [36059]
4 November 2019

Minutes from the Pre-Hearing Meeting for NCI Packaging NZ Ltd's application for a discharge to air permit relating to the production and coating of aluminium aerosol cans and tin plated steel cans

Held: 21 October 2019 at 6:30pm
Location: NCI lunch room, 62/66 Montgomery Cres, Clouston Park, Upper Hutt 5018
Attendees: Rhys Kevern (Technical & Compliance Manager) and Shane Flitcroft (Plant Manager), NCI; Jude Chittock, Claire Baldwin (processing officer), Rachael Boisen Round and Josh Martin, GWRC; Jill McKenzie, Regional Public Health (Submitter); Ann Devlin (Submitter); Glenys Check (Submitter); Trevor & Dianne Messer (Submitter); Dorothy Pink and Nicola Ratahi (Mountbatten Grove residents).

1. Introduction

Rachael opened the meeting by explaining the meeting as an informal discussion of which the main purpose was to have a chance to talk through the issues. Shane explained the emergency procedures and location of facilities.

Attendees went around the circle to introduce themselves. GW and NCI staff explained their position in the organisation and responsibilities with the consent. Submitters and other attendees introduced their matters of concern and issues they would like resolved.

2. Summary of the discussion of issues

Odour

Residents all reported a strong odour which they were sure came from NCI. Solvent-type smell which has been ongoing for 12 years. Residents often unable to go outside and forced to close windows. Only noticed odour on weekdays – Shane confirmed the maximum operating hours were 6am to 11pm week days only, but often 6am-6pm normal.

No regular consistency to odour events. Residents agreed that is problematic when wind is still or light and low cloud conditions, noted that the wind swirls against hills to south also. Residents said the odour duration has changed over time - mostly comes in short bursts <10mins, rather than all day like it used to.

Residents agreed that they have noticed an improvement in the odour following NCI's extension of the stack height (around the time of the last resource consent application). Nicola noted that she thought the stack height extension wasn't a good idea as the emissions were now just spread over a bigger area. Shane also confirmed that, around the

same time as the stack extension, NCI reconfigured the plant to running one line (reduced from two lines) due to operational requirements.

History – Ann stated she and Dorothy have lived on Mountbatten Grove for 46 years. The residential area was originally built for employees of the match-making factory that occupied the NCI site. Therefore it wasn't a historical town-planning issue that resulted in residential areas so close to industrial plants. Ann said there was never any problems with odour until NCI moved into the site 12 years ago.

Group discussion around the cumulative effects of other potential odour sources in this location. NCI doesn't accept that they are directly responsible for the odour, despite resident's insistence that NCI is the cause. Several organisations in the surrounding area discharging similar emissions (some as a permitted activity) e.g. Resene, Wedgelock plus smaller car painting/body shops etc.

Alternative options for odour management

Residents consider that NCI is not testing their emissions enough. Analysis from current test not trusted by residents as odour has been ongoing for 12 years despite changes to stack height.

We discussed whether the emissions can be tested to identify specific molecules that might cause odour. Rhys explained the bag testing procedure and that it is difficult to predict odour levels by monitoring a group of different individual chemicals as each individual chemical has a different odour threshold (the lowest concentration where someone can smell it).

Discussed other alternatives e.g. afterburner which Rhys said wouldn't be efficient for the small amount of emissions from the plant. He explained further that the afterburner option (as explained in the application) costs up to $50,000/year in gas to run it, literally burns the extracted air before discharge into air, and wasn't positive that it would make any difference to odour.

Shane explained that NCI undertook half-hourly quality control check of the ovens and the coating amounts was highly controlled to ensure only the very minimum amount is used.

Jill raised whether fugitive emissions could potentially be adding to the odour problem e.g. roller doors being opened. Rhys didn't think so as the extraction systems on the machines reduce the concentrations of solvent vapours inside the building and if this low level did escape the door it would get further diluted before reaching the neighbours. Rhys said he thought changes in the level of emissions were unlikely throughout the day due to the constant manner of the coating/curing processes i.e. once the line has been switched on, it continues at a constant level all day, without changes.

Residue on houses/fruit/soil

Grey bloom/dust particles staining residential properties adjacent to the boundary fence with NCI (i.e. Trevor & Dianne; Ann stated she didn't have this problem on her house). Stains are hard to remove, even with water blasting. Glenys stated she had someone from NCI (Mike?) bring a chemist to her house in 2012 after she complained about this residue to NCI.

Discussion about whether this residue could come from NCI – Rhys said no as their emissions are gases only, not particulate matter. Residents also concerned about these particles being on fruit trees and in their soil.

Suggestion for a vegetative buffer along the northern boundary of NCI to form a buffer to houses. Ann raised that there might be a potential issue with the roots disturbing fence foundations. NCI were not sure if this would make any difference and Rhys said even if it was planted it would take several years to establish. To be confirmed/discussed further.

Potential health effects

Glenys' son-in-law who worked in her garden and painted her house (over a period of approximately 9 months) became ill with cancer and tests showed lung damage, no evidence that it was linked to NCI's discharge, inconclusive. Also history of breast cancer and thyroid issues among attendees.

Discussed the workers' health and safety within NCI; Shane stated no problems due to extraction of air from plant.

Claire pointed out that Volatile Organic Compounds (VOCs) in the emissions testing supplied with the application were well below the guidelines used in NZ. Some discussion regarding whether relevant to use US guidelines; Claire explained we only use the US guidelines when there are no relevant guidelines provided by NZ Ministry of Health or Ministry for the Environment.

Odour notification and response

Residents felt that reporting odour to GWRC made no difference and doesn't lead to any solutions. Discussion around the challenges and limitations to GW's odour response procedures, especially regarding the short burst duration of strong odour and delay in getting the notification through from GWRC call centre.

Residents encouraged to call the GWRC environment hotline as soon as they smell a strong smell. GWRC explained that if no notifications are received, issues remain unknown and can't be recorded. NCI staff have admitted to smelling odour in the past. Suggestion that GWRC investigate other sources of odour also – Claire confirmed this had been done, but was open to looking into it again.

3. Agreed actions:

- Residue/deposits on neighbouring houses need to be linked back to source. Claire to follow up re: possibility for binding of gases with particulate matter from background sources (e.g. woodburners); whether can test this to confirm source. Claire to check fence between factory and residential houses to see if deposits are visible. Agreed that Claire, Rhys and Shane would visit Trevor and Dianne's house the next morning to see residue.

- GW to check current incident notification system and review the site-specific odour response protocol for NCI. Claire to test all incidents like this make it to the GW duty officer.

- Residents are willing to trial a text/notification system for reporting odour and encouraged to keep reporting incidents at the time of occurrence.

- Further investigation needed to identify and assess other potential sources of odour (suggestion of proactive monitoring by GWRC).

- Further discussion required regarding proposed consent conditions, especially regarding emissions testing, investigating alternatives.

4. Next steps

Rhys asked the submitters whether they still want to be heard at a hearing or whether they wanted to see draft consent conditions. Rachael explained that we also have the option of gathering the additional information that has been requested or raised tonight, and could possibly hold another meeting to discuss at a later date. Ann agreed that addressing the questions and actions first would be preferred. Jill confirmed that RPH would want to see the draft conditions.

GWRC and NCI thanked everyone for their attendance and closed the meeting at 8:30pm.

File No: WGN190198 [36059]
31 January 2020

Minutes from the second Pre-Hearing Meeting for NCI Packaging NZ Ltd's application for a discharge to air permit relating to the production and coating of aluminium aerosol cans and tin plated steel cans

Held: 29 January 2020 at 6:00pm
Location: NCI lunch room, 62/66 Montgomery Cres, Clouston Park, Upper Hutt 5018
Attendees: Rhys Kevern (Technical & Compliance Manager) and Shane Flitcroft (Plant Manager), NCI; Kirsty van Reenen, Claire McKevitt (processing officer), and Rachael Boisen Round, GWRC; Jill McKenzie, Regional Public Health (Submitter); Ann Devlin (Submitter); Dorothy Pink and Nicola Ratahi (Mountbatten Grove residents).

1. Introduction

Attendees introduced themselves.

2. Actions from pre-hearing meeting #1

Claire provided a summary of the actions agreed to and completed since the first hearing meeting (also provided by email on 4 November 2020);

- The residue/deposits on neighbouring houses was investigated and a technical response provided by Jeff Bluet (for GWRC). Jeff advised that it was unlikely that the residue/deposits were linked to NCI's operations.

- GWRC undertook a review of their incident notification system and advised that all fake calls through to the 0800 hotline during the review period were recorded and passed on to the duty officer.

Claire also provided a summary of the other matters addressed by Jeff Bluet in his memo dated 26 November 2019 (attached). Nicola and Dorothy requested they be included in all correspondence as they had not received the PDP memo.

Action: GWRC to include Dorothy Pink, Nicola Ratahi, Glenys Check and Trevor and Dianne Messer in any further correspondence about the application.

3. Discussion points

General discussion about:

1. NCI's investigation/report on January 2020 odour
2. January 2020 odour notifications and Claire's findings
3. Discussion on the odour experienced "chronic" vs "acute" odour and what this means
4. Potential conditions of consent

Claire explained that due to the high number of **odour notifications received in January**, GWRC requested NCI to provide a report on the weather conditions and NCI operations at the time of each odour notification. Rhys briefly discussed his report. Rhys noted that it is hard for them to investigate when NCI receive a notification hours after the odour has occurred. Rhys said there can be periods of months where there is no odour complaints and he didn't think the odour was **chronic** (in reference to Ministry for the Environment (2016) Good Practice Guide for Assessing and Managing Odour). Claire noted that the report demonstrated that NCI's report showed that about 50% of the odours were from NCI.

Rhys explained that in their application they applied to not include a condition of consent requiring a **technology review** for odour. However if they were going to be required to undertake that again, that it would be best to be completed after 10 years (with a consent duration of 20 years). Technology didn't change very quickly so Rhys considered this timeframe appropriate. The previous technology review looked only at mitigation options for odour. No options were considered appropriate to implement as a result of the previous review.

Claire provided a summary of GWRC's investigations during January. The duty officers experienced bursts of odour. Claire asked the residents whether their **experience of the odour** was similar:

- Nicola explained her experience of the odour from NCI and said that sometimes the odour can come in bursts and sometimes it can be a weaker smell for longer period.

- Ann explained her experience of the odour events during January 2020. She rang GWRC's 0800 number multiple times. It comes in bursts lasting about 6 – 10 minutes. She can't stay in the garden and work through it. Ann said another 10 years is too long to put up with the smell from NCI. People don't want to sell their homes and if they do it changes the dynamic of the street (due to homes becoming rental properties). The prices of homes could drop. Ann also noted that she thought there several months in 2019 where notifications to the 0800 number were not getting logged by GWRC.

- Dorothy said her experience of the odour was similar to Nicola and Ann's. On the 7 and 13 January 2020 she rated the odour 8 out of 10.

Jill was asked whether RPH were concerned about the **health effects** from the discharge. Jill explained that she is confident that the discharge is not having physical health effects as the concentration of contaminants in the emissions are so much lower than the accepted guideline values. She acknowledged that there can be physiological effects from odour. RPH's consultant reviewed the model during the last consent process and any deficiencies identified were addressed by NCI. Jill acknowledged that different people have different experiences/responses to the same odour, but that she was comfortable there were no direct health impacts regarding the level of chemicals.

There was a general discussion about **possible mitigation measures**, in particular the use of an afterburner. Rhys and Shane explained that while it was likely to reduce odour this was not an option for the applicant due to the cost of running the afterburner.

Planting a row of trees along the property boundary was accepted as an option that was unlikely to mitigate odour to any degree as the discharge is from a stack (not at ground level) and the trees would take a long time to grow to a height that formed any kind of barrier.

Increasing the stack height was discussed. It was acknowledged that this could result in displacing odour and have effects on the residents in Kingsley Heights. Rhys confirmed that modelling the effects from an increase in the stack height could be undertaken.

Using water-based coating (instead of solvent-based) may be an option but were still in the process of being developed by NCI's international supplier. It was also not known whether using water-based coatings would still create an odour.

The use of scrubbers or a biofilter were also discussed but Rhys explained that these were not known to be good for mitigating odour.

4. Agreed actions and next steps

Rachael explained that the options from here are:

- For the submitters to withdraw their wish to be heard if they were in a position to do so. She explained that draft conditions could be provided to the applicant and submitters for considering. The consent would not go to a hearing if Ann and RPH withdrew their wish to be heard.

- Go to a hearing

Ann explained that her concerns would be addressed if there was no odour from NCI. She also wanted the consent to go to a hearing so someone independent of the people in the room would make the decision on the application.

Rhys and Shane explained that there will never be no odour from NCI even if they implemented further mitigation measures. Rhys asked what the timeframe would be for going to a hearing. Kirsty explained that GW would put together a timeline and provide the applicant and submitters with a copy, it would likely be a couple of months before a hearing could be held.

Action: GWRC to prepare a timeline with the dates for exchanging information and evidence and a potential date for a hearing and provide this to the applicant and submitters.

GWRC and NCI thanked everyone for their attendance and closed the meeting at 8:00pm.

Appendix 4: Summary of Submissions Received on Resource Consent Application WGN190198

	Support/neutral/oppose application	To be heard in support/ neutral/opposition of application	Summary of submission
1	**Neutral** Requests Grant	**No**	• Hardly any odour
2	**Support**	**No**	
3	**Oppose** Requests decline	**Yes**	• Offensive & objectionable odour – solvent smell • Long term resident that is effected by the odour since the site was located there. • Personally experienced health effects, and limits submitters ability to be outside their home at times. • Application downplays level of odour – NCI packaging staff have admitted to smelling odour • Neighbours have complained without logging an incident • Concerned by effect on soil and human health – would like this to be tested.
4	**Oppose** Requests decline	**No**	• Concern about the discharge of VOCs to air – needs 100% of damaging emissions filtered out
5	**Neutral** Provided the imposition of adequate conditions related to the control of the	**Yes** - will not be prepared to consider presenting a joint case with others. The submitter is willing to consider participation in any	• Wish to see consent conditions to manage odour effects and the discharge of VOC's.

	emission of odour and volatile organic compounds	pre-hearing conferences, or mediation.	
6	**Oppose** Requests decline (until there is clean air and no odour)	**No**	• Offensive & objectionable odour – solvent • Grey bloom from factory has stained the houses back wall and clothes line • Family member have had been diagnosed with cancer - potential that the NCI discharge may have contributed.
7	**Oppose** Requests decline	**No**	• Offensive & objectionable odour – Acidic/chemical • Long term resident affected by odour over the last 7 years. • Caused stain on house • Experienced health problems

Appendix 5: Recommended conditions of consent for WGN190198

Recommended Conditions of Resource Consent WGN190198 [36059]

Interpretation

Annual period: for the purpose of this consent, annual period refers to the period 1 May to 30 April inclusive.

Manager means the Manager, Environmental Regulation, Greater Wellington Regional Council.

Wellington Regional Council Officer means any Enforcement, Compliance or Duty Officer, Environmental Regulation, Greater Wellington Regional Council.

Notification or notice means email of notification to notifications@gw.govt.nz,. Please include the consent reference number (WGN190198) and the name and phone number of a contact person responsible for the proposed works.

General conditions

1. The location, design, implementation and operation of the plant and associated discharge shall be in general accordance with the consent application and its associated plans and documents lodged on 4 February 2019, and further information including:

    - Air Dispersion Modelling Assessment, NCI Packaging. Jacobs February 2019. Report number IZ119600-RPT-1 and NCI Packaging (NZ) Limited, Upper Hutt Air Discharge Monitoring, November/December 2018, Issue II. Source Testing New Zealand Limited. 31 January 2019;
    - Further Information Response, Air Discharge Permit, dated 28 June 2019;
    - Review of Odour Control Techniques, NCI, 18 June 2020;
    - NCI Packaging, Upper Hutt, Review of odour issues. T&T, 17 July 2020; and
    - NCI Packaging, Upper Hutt – Summary of further odour investigations and recommendations, T&T dated 27 January 2021; and NCI Packaging, Upper Hutt – Responses to questions raised in PDP Technical review, T&T, dated 28 April 2021.

    Where there may be contradictions or inconsistencies between the application and further information provided by the Consent Holder, the most recent information applies. In addition, where there may be inconsistencies between information provided by the Consent Holder and conditions of this consent, the conditions apply.

    Note: Any change from the location, design concepts and parameters, implementation and/or operation may require a new resource consent or a change of consent conditions pursuant to section 127 of the Resource Management Act 1991.

2. The Consent Holder shall ensure that a copy of this consent and all documents and plans referred to in this consent, are kept on site at all times and presented to any Wellington Regional Council Officer on request.

3. There shall be no discharges to air that are noxious, dangerous, offensive or objectionable at or beyond the legal boundary of the site from which the Consent Holder operates, as determined by a Wellington Regional Council Officer.

Note: *For the purpose of this consent, the boundary of the property from which the Consent Holder operates is the outer perimeter of the land bearing the legal descriptions of Lot 1 DP 30717, Lot 1 DP 28552 and Lots 11-14 & 16 DP 30232.*

Adaptive Management Odour Plan

4. The Consent Holder shall prepare, submit and implement an Adaptive Management Odour Plan (AMOP). The AMOP shall be submitted to the Manager for approval within three months of the commencement of this resource consent. The purpose of the AMOP is to ensure the consent holder has management procedures and practices available to avoid and minimise the discharge of contaminants and odour beyond the site boundary and to provide detail as to how the conditions of consent will be complied with. This management plan shall provide:

    a. A description of the content and purpose of the AMOP;
    b. A description of all on-site activities and sources of odour onsite;
    c. Contact details of the person on site nominated to supervise the implementation of and adherence to the AMOP during plant operating hours;
    d. Systems for training employees to make them aware of the requirements of the AMOP;
    e. The proactive and reactive management practices and procedures that will be used to prevent and/or respond to any breaches of Condition 3 and notifications of odour occurring beyond the site boundary;
    f. A description of the design and maintenance parameters of the biofilter required in accordance with Condition 14;
    g. A description of the methods to be used in the staged approach to odour mitigation;
    h. A description of the criteria that will be used to determine when additional mitigation shall be implemented on the site;
    i. A description of meteorological monitoring requirements and methodology, including the location and calibration of monitoring equipment, in accordance with Condition 25;
    j. Procedures for investigating and responding to any odour complaints received including:
        i. Timeframes for initiating investigations and responding to complainants;
        ii. Procedures for the review of meteorological and production conditions during complaints to assess whether there is any correlation between these conditions and the likelihood of NCI being the source of the Complaint; and
        iii. On-site responsibilities during odour complaints;
    k. Procedures for incident notification to GWRC in accordance with Condition 32;
    l. Procedures for undertaking on-site and off-site odour assessments, including those required in accordance with Condition 17 to 18;
    m. Procedures for determining if emissions monitoring is required and procedures for undertaking emissions monitoring in accordance with Condition 23 and 24;
    n. Procedures for amending the AMOP following onsite identification of odour and to ensure it is fit for purpose, including submission of an amended AMOP to the Manager.

5. The Consent Holder shall undertake all onsite activities in accordance with the approved AMOP, and all other conditions of this consent. In the event of any inconsistencies between the conditions of consent and the provisions of the AMOP, the conditions of the consent shall apply.

Technical reviews of the AMOP

6. The Consent Holder shall review the AMOP. The review shall::
    a) Be undertaken:
        i. In the event of the determination of an ‘offensive or objectionable’ odour;
        ii. Following the review of the effectiveness of the biofilter in accordance with Condition 20 and 21, and the review of the other mitigation, if required, in accordance with Condition 22;

iii. At least once in a 12 month period; or
iv. Within another timeframe to the satisfaction of the manager.

b) Include:
   i. Details regarding the complaints received and any incidents on site, including the frequency of these;
   ii. A summary of the results from the on-site and off-site odour assessments, including those required in accordance with Condition 17 and 18;
   iii. An evaluation of the effectiveness of the AMOP in preventing, reducing and/or responding to complaints and incidents; and
   iv. An evaluation of and any recommendations to:
      a. The plant operating procedures and practices;
      b. The odour mitigation tools used on site and recommendations on whether further mitigation is required;
      c. Changes to emission reduction/treatment equipment, including proposals for further equipment; and
      d. Timeframes for the selection, approval, procurement, installation and commissioning of the specified equipment.

Where new, or changes to existing emission reduction or treatment equipment are proposed following the review of the AMOP, the Consent Holder shall have the proposed changes reviewed by a suitably experienced environmental practitioner, with specific experience and expertise in industrial odour discharges. This technical review shall be provided to the Manager within one month of being completed.

Amendments to the Approved AMOP

7. Any amendments to the AMOP shall be submitted to the Manager for approval. Once approved, the amended AMOP shall become the operative AMOP and the plant shall be operated in accordance with the approved AMOP at all times.

   Note: The approval of the AMOP by the Manager in no way implies that the measures as specified in the AMOP ensures that the Consent Holder will meet Condition 3. The approval is a technical approval only and in no way absolves the Consent Holder from their responsibilities to manage the discharges to meet Condition 3 at all times, or does the approval authorise any breach(es) of Condition 3 of this consent.

Operations and Maintenance Manual

8. The Consent Holder shall prepare and submit an Operation and Maintenance Manual (OMM) for the site. The OMM shall be submitted to the Manager within three months of the commencement of this consent for approval. The OMM shall include:
   a) A description of the contents and purpose of the OMM;
   b) A summary of the plant purpose, location, layout, and manufacturing equipment with specific reference to contaminant discharge, extraction and treatment equipment, discharge stacks and processes;
   c) Responsibilities and contact details of key personnel;
   d) Systems for training employees to make them aware of the requirements of the OMM;
   e) Operation, inspection and maintenance of the manufacturing equipment, including the extraction and treatment equipment and gas-fired space heaters;
   f) Procedures adopted to ensure that the extraction equipment is fully functional before manufacturing commences;
   g) Procedures adopted to ensure that the plant complies with the conditions of this consent at all times;
   h) Contingency plans in the case of accidents and emergencies, such as spills, fires, and incidents where the discharge of excessive contaminants to air was unavoidable; and

i) Any other issues considered important, including:
   - Details of the general operation and maintenance of all emissions control equipment (including the associated ducting for this equipment);
   - Staff training on the process requirements, use of emissions control equipment, and emergency response; and
   - Details of how the building envelope is maintained to minimise the potential for fugitive emissions.

9. The Consent Holder shall undertake all onsite activities in accordance with the approved OMM, and all other conditions of this consent. In the event of any inconsistencies between the conditions of consent and the provisions of the OMM, the conditions of the consent shall apply.

10. The consent holder shall review and update the OMM:
    a. Following the review of the effectiveness of the biofilter in accordance with Condition 20 and 21 and the review of the other mitigation, if required, in accordance with Condition 22; and
    b. As necessary based on day-to-day experience.

    Any amendments to the OMM shall be submitted to the Manager for approval. Once approved, the amended OMM shall become the operative OMM and the plant shall be operated in accordance with the approved OMM at all times.

Emission Control Equipment

11. The Consent Holder shall ensure that no part of the aluminium aerosol can and steel can manufacturing process is operated without the associated extraction being fully operational and functioning efficiently.

12. The Consent Holder shall ensure that the ventilation system draws adequate negative pressure to ensure the effective capture of contaminants from the aluminium aerosol can and steel can manufacturing process and all other areas from which air is extracted to minimise fugitive emissions.

13. The point of discharge from the Line 2 Main Stack and the Internal Lacquer/Assembly Stack shall terminate at a point no less than 25 metres above ground level and have an exit velocity of at least 14 m/s. The discharge shall be directly vertically into air and not be impeded by any obstruction above the stack.

14. The Consent Holder shall install a Biofilter capable of treating the basecoat application process and curing oven emissions of the Aluminium Aerosol Can Line within four months of granting this consent. The Biofilter shall be:

    a. Designed, built, operated and maintained to effectively treat the odour to ensure compliance with Condition 3; and
    b. The design, operation and maintenance paramaters shall be included in the AMOP.

15. The Consent holder shall measure and record the following biofilter parameters:
    a. The air pressure of the biofilter inlet duct compared to atmospheric pressure by pressure gauge or U-tube manometer and the pH and moisture content of the biofilter media via a handheld soil tester on a monthly basis;
    b. Odour characteristic of the air discharged from the biofilter on the downwind edge of the biofilter on a weekly basis;
    c. The humidity and temperature of the air entering the biofilter on a continuous basis; and

d. Observations of the air distribution through the biofilter media on a yearly basis to assess whether it is evenly distributed including the methodology used.

The Consent Holder shall maintain a record of all measurements taken in accordance with Condition 15. This record shall be provided to a Wellington Regional Council Officer on request.

16. The consent holder shall ensure that the external factory doors are closed during any potential or actual odour generating activities.

Note. Potential and actual odour generating activities are defined in the AMOP.

Field Odour Observations

17. The Consent Holder shall undertake field odour inspections at least once a week along the northern boundary of the site, adjacent to the residential area of Mountbatten Grove. The field observations shall be:
    a. Undertaken by a person not routinely involved in solvent based coating operations;
    b. Conducted in general accordance with the methodology detailed by the Good Practice Guide for Assessing and Managing Odour (Ministry for the Environment, 2016) and the AMOP;
    c. Recorded on a field sheet; and
    d. Undertaken for the period required to assess the effectiveness of the biofilter and any other mitigation, in accordance with Condition 20, 21 and 22.

    The Consent Holder shall maintain a record of the field sheets and provide these to the Manager on request. The Consent Holder shall provide a summary of the field odour inspections in the annual report, required in accordance with Condition 33 of this resource consent.

18. After a period of six months, but less than 9 months, of the installation of the Biofilter in accordance with Condition 14, the Consent Holder shall commission a programme of independent field odour observations to be undertaken. The observations shall be undertaken:
    a. In general accordance with the methodology used in the August to September 2020 survey described in the report titled, NCI Packaging, Upper Hutt – Summary of further odour investigations and recommendations, dated 27 January 2021;
    b. On at least 17 days over a 4-week period;
    c. At a minimum of seven locations around the NCI site locality when the plant is operating at normal production rates;
    d. By an independent person who is not regularly exposed to solvent based coating operations who has been trained in the assessment of ambient odours by a suitably qualified person; and
    e. In general accordance with the methodology outlined in the Good Practice Guide for Assessing and Managing Odour (Ministry for the Environment, 2016) and the AMOP.

    Advice Note. The independent person undertaking the odour observations should not be an employee of NCI Packaging (New Zealand) Limited.

19. The results of the field odour observation programme required by Condition 18 shall be reported to the Manager, within 4 weeks of its completion. The report shall include:
    a. The date, time, duration, meteorological conditions and location of each odour observation;
    b. For each odour observation:
        i. Whether it constituted an “odour hour”;
        ii. The average and maximum odour intensity; and
        iii. The character of any odours identified.

c. Where possible, identification of the actual or likely source (or sources), of any odours identified;
d. Whether any events occurred that could be correlated with complaints made either to the Consent Holder or to the Wellington Regional Council.

Note. Odour hour is defined as six or more 10-second periods of recognisable odour as determined within the 10-minute observation period

Assessing the Odour Mitigation Performance of the Biofilter

20. After a period of six months, but less than nine months of the installation and operation of the biofilter, the Consent Holder shall commission a review of the odour control performance of the biofilter and provide this report to the Manager. The purpose of the review is to demonstrate whether the biofilter is adequate to ensure compliance with Condition 3. The review shall include:
    a. Evaluation of the biofilter operational parameters monitored in accordance with Condition 15;
    b. Characterisation of the normal operating range for pressure drop and bed pH and trigger values to be incorporated into the AMOP to identify the optimal performance;
    c. Consideration of the observations of residual odour above the biofilter as required by Condition 15, field odour observations undertaken in accordance with Condition 17, and the independent odour assessments undertaken in accordance with Condition 18;
    d. Any recommended improvements to the biofilter design and/or operation to optimise odour removal in the biofilter; and
    e. The results of this review shall be provided to the Manager, within four weeks of its completion.

21. Within ten months of the installation of the biofilter, the Consent Holder shall assess whether the current odour control is adequate to ensure compliance with Condition 3 and provide this report to the Manager. The assessment shall consider the information provided in accordance with Condition 15 and 17 to 20 of this resource consent and any other relevant information related to odour management. An independent suitably qualified environmental practitioner with specific experience and expertise in industrial odour discharges shall undertake this assessment. If this assessment determines that further odour management is required, the Consent Holder shall implement at least one of the following additional odour control/mitigation measures:

    a. Modify the extraction system and biofilter to treat additional odour sources from the coating processes; or
    b. Increase the discharge height of the Aluminium Aerosol main stack and/or the Internal Lacquer/Sidestripe stack to at least 27 m above ground level; or
    c. Implement an alternative method that this would at least as effective at mitigating odour effects as (a) or (b). Any alternative method shall be to the satisfaction of the Manager.

    The Consent Holder shall notify the Council in writing of the proposed timing for implementation of an additional odour mitigation measure(s), which shall be as soon as practicable, but no more than three months from the time of the determination of the need for further odour mitigation is identified. This shall be undertaken to the satisfaction of the Manager.

    Note: Any change from the location, design concepts and parameters, implementation and/or operation may require a new resource consent or a change of consent conditions pursuant to section 127 of the Resource Management Act 1991.

22. Within eight months of the installation of any additional mitigation required in accordance with Condition 21, the Consent Holder shall undertake an assessment to determine whether the current

odour control is adequate to ensure compliance with Condition 3 and provide this report to the Manager. The assessment shall consider the information provided in accordance with Condition 17 of this resource consent and any other relevant information related to odour management. An independent suitably qualified environmental practitioner with specific experience and expertise in industrial odour discharges shall undertake this assessment.

Emission Monitoring

23. If requested by the Manager, the Consent Holder shall conduct an emissions testing programme for odour or Volatile Organic Compounds likely to be discharged from the plant, within two months of the written request. The report shall include the results of the emission test, including all relevant plant operating parameters and conditions, and all calculations and assumptions. The report shall contain data analysis and interpretation by a suitably qualified and experienced person and shall be to the satisfaction of the Manager.

    Note: The Manager, will consult with the Consent Holder prior to such a request for any additional emissions testing programme(s).

24. All sampling techniques employed in respect of the conditions of this consent shall be to stack testing industry standards such as USEPA testing methods. All analyses shall be performed by an International Accreditation New Zealand (IANZ) registered laboratory or otherwise as specifically approved by the Manager.

On-site meteorological station

25. The Consent Holder shall operate and maintain at least one meteorological station on the site. This shall be:
    a. Compliant with Australian/New Zealand Standard AS/NZS 3580.1.1:2016 Methods for sampling and analysis of ambient air Part 1.1: Guide to siting air monitoring equipment;
    b. Installed, operated, calibrated and maintained in accordance with the manufacturer's instructions.
    c. Situated in a location that is representative of site and sensitive receptor (residential) conditions
    d. Capable of recording the wind speed and direction in an appropriate format.

    The meteorological data shall be logged and available in real-time via a website or other user accessible interface. The Wellington Regional Council shall be given access to the real-time data upon request.

26. The Consent Holder shall maintain records of the installation, operation, calibration and maintenance of the meteorological station and these records shalll be provided to GWRC upon request.

Community Liaison Group

27. The Consent Holder shall establish a Community Liaison Group in accordance with the following requirements:
    a. The purpose of the CLG shall be:
        i. To engage on an on-going and regular basis about matters associated with the on-site operations;
        ii. To promote the flow of information between the local community and the consent holder as to, wherever possible, address any issues that may arise; and

iii. To discuss the results of monitoring and any matters that may arise as a result of the monitoring;

b. The CLG shall comprise of representatives of the consent holder, representatives of the Wellington Regional Council and any residential or industrial properties located within 250 metres of the site;
c. The Consent Holder shall invite the members of the CLG at least 15 working days prior to the meeting. This invitation shall include the time, date and venue of the proposed meeting;
d. The meetings shall occur:
    i. Within two months following completion of the assessment required in accordance with Condition 22; and
    ii. On at least one occasion in an annual period; or
    iii. Within another timeframe to the satisfaction of the manager;
e. The consent holder shall maintain a record of the meetings of the community liaison group.

Note: In the event that it is not possible to establish a CLG or convene meetings through lack of interest or participation from the local community, then such failure to do so will not be deemed a breach of these conditions. Should the local community wish to re-establish meetings after a period of inactivity then the conditions above shall continue to apply.

28. The consent holder shall maintain a communications plan, which sets out how it will liaise with the local community. This plan shall include but not be limited to:
    a. Communications with the Community Liaison Group;
    b. A dedicated telephone number (hotline) for neighbours to contact the consent holder during day shift hours; and
    c. A dedicated telephone number for neighbours to contact the consent holder after 4 pm.

Complaints

29. The Consent Holder shall respond to complaints in accordance with the protocol specified in the AMOP when a complaint has been received from the complainant or the Wellington Regional Council.

30. The Consent Holder shall maintain a record of any complaints received for the duration of this consent. This record shall include:
    a. Identification of the nature of the complaint;
    b. The name and address of the notifier where provided;
    c. The date and time that the notification was received;
    d. Weather conditions at the time of the complaint;
    e. Whether or not the NCI site was operating at the time of the complaint;
    f. The most likely cause of the incident; and
    g. Any mitigation measures adopted or maintenance undertaken by the consent holder to address the complaint, including the timing of that remedial action.

    This record shall be made available to any Wellington Regional Council officer on request.

31. The consent holder shall notify the Manager of any complaints received relating to the exercise of this consent within 24 hours of being received by the permit holder.

    Note: The Wellington Regional Council will notify the Consent Holder as soon as practical about any odour notifications received that are attributed to the Consent Holder.

32. In the event of any incident that has or could have resulted in a condition or conditions of this consent being contravened, the consent holder shall:

    a. Notify the Manager as soon as possible within 24-hours of the consent holder becoming aware of the incident;
    b. Provide an incident report to the Manager within five working days. The written report shall describe reasons for the incident and measures taken to mitigate the effects of the incident and prevent a recurrence; and
    c. Specify what changes, if any, will be made to operating procedures, site practices and the AMOP to prevent/reduce the potential for similar odour events in the future if relevant

    Note: The Greater Wellington Regional Council may also investigate any incidents to determine if a breach of this consent or the Resource Management Act 1991 has occurred and may also undertake enforcement action depending on the circumstances.

Annual Report

33. The Consent Holder shall submit an **Annual Report** to the Manager, by **31 May each year**. The report shall be to the satisfaction of the Manager, and shall contain:

    a. Details of significant maintenance or upgrade items where relevant to the discharge of contaminants or treatment of emissions;
    b. Details of production information, including amounts and types of coating materials on the aluminium aerosol line and steel can line used per annum;
    c. Any technical reviews undertaken relating to the AMOP;
    d. Details and records of monitoring and maintenance of the biofilter device in accordance with Condition 15 and a description of any actions taken to rectify any associated with its operation;
    e. Details and findings of the odour observations undertaken in accordance with Condition 17 to 19;
    f. Details and findings of the assessment of the odour reduction performance of the biofilter and any other mitigation; and
    g. Details and records of the CLG meeting required in accordance with Condition 27;
    h. Complaints received and actions implemented by the Consent Holder to minimise effects (if any);
        - A review of all odour complaints and any patterns as to when they occur in relation to weather conditions, the number of lines working, raw products in use. Comparison of odour complaints received in that year vs previous years and comment on if there are any influencing operations within NCI that may be influencing the number of odour complaints.
        - Any proposals to change works at the NCI plant in response to the review of the odour complaints.
        - Comment as to whether the odour complaints received suggest NCI is causing a chronic adverse odour effect
    i. Details of any incidents on site including the reasons for the incident and measures taken to prevent a reoccurrence;
    j. Any other information considered relevant.

Review Condition

34. The Greater Wellington Regional Council may review any or all conditions of this consent by giving notice of its intention to do so pursuant to section 128 of the Resource Management Act 1991, at

any time within three months of the 30 June each year for the duration of this consent for the following purpose:

a. To review the adequacy of any report and/or monitoring requirements, and if necessary, amend these requirements outlined in this consent, or
b. To deal with any adverse effects on the environment that may arise from the exercise of this consent; and which are appropriate to deal with at a later stage;
c. To enable consistency with any relevant Regional Plans or any National Environmental Standards or Regulations, or
d. To adopt the best practicable option to remove or reduce any adverse effect on the environment.

The review of conditions shall allow for the deletion or amendment of conditions of this consent; and the addition of such new conditions as are shown to be necessary to avoid, remedy or mitigate any significant adverse effects on the environment.

Notes:

a. A resource management charge, set in accordance with section 36(2) of the Resource Management Act 1991 shall be paid to the Wellington Regional Council for the carrying out of its functions in relation to the administration, monitoring, and supervision of resource consents and for the carrying out of its functions under section 35 (duty to gather information, monitor, and keep records) of the Act.

b. The Wellington Regional Council shall be entitled to recover from the consent holder the costs of any review, calculated in accordance with and limited to the Wellington Regional Council's scale of charges in force and applicable at that time pursuant to section 36 of the Resource Management Act 1991.

Appendix 6: Comparison of Conditions of Consent

Applicant's proposed conditions	GWRC Recommended Conditions
General note for emailing notifications to Greater Wellington Regional Council (GWRC) *Any report or notifications can be emailed to notifications@gw.govt.nz. Please include the consent reference WGN190198 in the subject line, and the name and phone number of a contact person responsible for the discharge.*	I recommend that there is an interpretation section at the start of the consent (if granted). This will simplify the consent and avoid repetition of defining terms within the consent. ***Interpretation*** ***Annual period:*** *for the purpose of this consent, annual period refers to the period 1 May to 30 April inclusive.* ***Manager*** *means the Manager, Environmental Regulation, Greater Wellington Regional Council.* ***Wellington Regional Council Officer*** *means any Enforcement, Compliance or Duty Officer, Environmental Regulation, Greater Wellington Regional Council.* ***Notification or notice*** *means email of notification to notifications@gw.govt.nz. Please include the consent reference number (WGN190198) and the name and phone number of a contact person responsible for the proposed works.*
General Conditions	**General Conditions**
1. The location, design, implementation and operation of the discharge shall be in general accordance with the consent application and its associated plans and documents lodged with the Greater Wellington Regional Council on [date], and further information received on: • *Where there are contradictions or inconsistencies between the application and further information provided by the Consent Holder, the most recent information applies. In addition, where there may be inconsistencies between information provided by the Consent Holder and conditions of this consent, the conditions apply.* *Note: Any change from the location, design concepts and parameters, implementation and/or operation may require a new resource consent or*	I recommend this condition be amended to refer to the 'operation of the plant and associated discharge'. I have also included reference to the further information that the activity should occur in accordance with. I recommend: 1. *The location, design, implementation and operation of the plant and associated discharge shall be in general accordance with the consent application and its associated plans and documents lodged on 4 February 2019, and further information including:* • *Air Dispersion Modelling Assessment, NCI Packaging. Jacobs February 2019. Report number IZ119600-RPT-1 and NCI Packaging (NZ) Limited, Upper Hutt Air Discharge Monitoring, November/December 2018, Issue II. Source Testing New Zealand Limited. 31 January 2019;* • *Further Information Response, Air Discharge Permit, dated 28 June 2019;*

a change of consent conditions pursuant to section 127 of the Resource Management Act 1991.	• *Review of Odour Control Techniques, NCI, 18 June 2020;* • *NCI Packaging, Upper Hutt, Review of odour issues. T&T, 17 July 2020; and* • *NCI Packaging, Upper Hutt – Summary of further odour investigations and recommendations, T&T dated 27 January 2021; and NCI Packaging, Upper Hutt – Responses to questions raised in PDP Technical review, T&T, dated 28 April 2021.* *Where there may be contradictions or inconsistencies between the application and further information provided by the Consent Holder, the most recent information applies. In addition, where there may be inconsistencies between information provided by the Consent Holder and conditions of this consent, the conditions apply.* *Note: Any change from the location, design concepts and parameters, implementation and/or operation may require a new resource consent or a change of consent conditions pursuant to section 127 of the Resource Management Act 1991.*
2. The Consent Holder shall ensure that a copy of this consent and all documents and plans referred to in this consent, are kept on site at all times and presented to any Greater Wellington Regional Council enforcement officer on request.	I have amended the wording of this condition to align with the 'interpretation' section above. I recommend: 2. *The Consent Holder shall ensure that a copy of this consent and all documents and plans referred to in this consent, are kept on site at all times and presented to any Wellington Regional Council Officer on request.*
3. There shall be no discharges to air that are noxious, dangerous, offensive or objectionable at or beyond the legal boundary of the site property from which the Consent Holder operates, as determined by an enforcement officer of the Greater Wellington Regional Council using the FIDOL[50] methodology. *Note: For the purposes of this consent, the boundary of the property from which the Consent Holder operates is the outer perimeter of the land bearing the legal description Lot 1 DP 30717, Lot 1 DP 28552 and Lots 11-14 & 16 DP 30232.*	I recommend that reference to the 'FIDOL methodology' should be deleted. In Section 9.3.7 of my officers report I have described that GWRC undertakes assessments to determine whether a discharge is offensive or objectionable in accordance with the FIDOL factors. However, by referencing the FIDOL method, GWRC are limited to only using this method that is currently best practice, but may not be in the future. I recommend the following: 3. *There shall be no discharges to air that are noxious, dangerous, offensive or objectionable at or beyond the legal boundary of the site from which the Consent Holder operates, as determined by a Wellington Regional Council Officer.*

[50] Frequency, intensity, duration, offensiveness, location

	Note: *For the purpose of this consent, the boundary of the property from which the Consent Holder operates is the outer perimeter of the land bearing the legal descriptions of Lot 1 DP 30717, Lot 1 DP 28552 and Lots 11-14 & 16 DP 30232.*
Adaptive Management Odour Plan	**Adaptive Management Odour Plan**
4. The Consent Holder shall maintain an Adaptive Management Odour Plan (AMOP) to ensure the Consent Holder has management procedures and practices to both proactively and reactively meet condition 3 at all times. This management plan must outline what measures the Consent Holder will undertake to prevent and/or respond to any breaches of condition 3 and/or notifications of odour occurring beyond the site boundary as well as the following: a) Procedures for incident notification to GWRC (Environmental Hotline 24-hour number: 0800 496 734) in accordance with condition 26. b) Contact details of the person on site with the responsibility and authority to implement the provisions of the AMOP during plant operating hours. c) Procedures for investigating any odour complaints received including: i. Timeframes for initiating investigations ii. Timeframes for responding to complainants iii. How to review on-site meteorological data. d) Procedures for undertaking both on-site and off-site odour assessments, including training procedures for staff. e) Procedures for initiating actions that have the potential to reduce discharges to air, including proactive odour control measures. f) Procedures for the review of meteorological and production conditions during complaints to assess whether there is any correlation between these conditions and the likelihood of NCI being the source of the Complaint. g) On-site responsibilities during odour complaints.	I consider that the AMOP should be provided to the Manager within three months of commencement of this resource consent to ensure that it has been updated to reflect the amendments to be made on site. I have also included additional information that should be contained within the AMOP. I recommend: *4. The Consent Holder shall prepare, submit and implement an Adaptive Management Odour Plan (AMOP). The AMOP shall be submitted to the Manager for approval within three months of the commencement of this resource consent. The purpose of the AMOP is to ensure the consent holder has management procedures and practices available to avoid and minimise the discharge of contaminants and odour beyond the site boundary and to provide detail as to how the conditions of consent will be complied with. This management plan shall outline:* a. A description of the content and purpose of the AMOP; b. A description of all on-site activities and sources of odour onsite; c. Contact details of the person on site nominated to supervise the implementation of and adherence to the AMOP during plant operating hours; d. Systems for training employees to make them aware of the requirements of the AMOP; e. The proactive and reactive management practices and procedures that will be used to prevent and/or respond to any breaches of Condition 3 and notifications of odour occurring beyond the site boundary; f. A description of the design and maintenance parameters of the biofilter required in accordance with Condition 14; g. A description of the methods to be used in the staged approach to odour mitigation; h. A description of the criteria that will be used to determine when additional mitigation shall be implemented on the site; i. A description of meteorological monitoring requirements and methodology, including the location and calibration of monitoring equipment, in accordance with Condition 25; j. Procedures for investigating and responding to any odour complaints received including: i. Timeframes for initiating investigations and responding to complainants; ii. Procedures for the review of meteorological and production conditions during complaints to assess whether there is any correlation between these conditions and the likelihood of NCI being the source of the Complaint; and

h) Procedures for modification of the AMOP following onsite identification of odour, including submission of an updated AMOP to Greater Wellington Regional Council. *Note: It is the specific intent of this condition that the AMOP will function in the background at all times, and when specified "trigger conditions" occur, actions prescribed in the AMOP shall be initiated by the specified responsible person.*	iii. On-site responsibilities during odour complaints; k. Procedures for incident notification to GWRC in accordance with Condition 32; l. Procedures for undertaking on-site and off-site odour assessments, including those required in accordance with Condition 17 to 18; m. Procedures for determining if emissions monitoring is required and procedures for undertaking emissions monitoring in accordance with Condition 23 and 24; n. Procedures for amending the AMOP following onsite identification of odour and to ensure it is fit for purpose, including submission of an amended AMOP to the Manager.
	I have recommended a condition requiring that that all activities are undertaken in accordance with the AMOP as follows: *5. The Consent Holder shall undertake all onsite activities in accordance with the approved AMOP, and all other conditions of this consent. In the event of any inconsistencies between the conditions of consent and the provisions of the AMOP, the conditions of the consent shall apply.*
Annual technical reviews of the AMOP	**Technical Reviews of the AMOP**
5. If the AMOP has not been otherwise reviewed during the previous 12 months as a result of a review required by condition 4(h), the Consent Holder shall undertake a technical review of the AMOP and submit it to the Manager, Environmental Regulation, Greater Wellington Regional Council by **31 July 2021 and every year thereafter.** The AMOP Review shall include but not be limited to: a) Frequency of incidents of Offensive and/or Objectionable odour events that have occurred (if any) b) Effectiveness of the AMOP in preventing, reducing and/or responding to incidents; and c) A technical process review/evaluation and the requirement for changes to: a. The plant operating procedures and practices; additional procedures and practices recommended, b. Changes to emission reduction/treatment equipment, including proposals for further equipment; and	I have recommended that the AMOP should be reviewed following different steps that will be undertaken during the duration of this resource consent as described in Section 9.3.6 of the officers report. I have also expanded the details that the AMOP technical review shall cover; it is not considered that these changes are significant. I recommend the following: *6. The Consent Holder shall review the AMOP. The review shall:* a) Be undertaken: i. In the event of the determination of an 'offensive or objectionable' odour; ii. Following the review of the effectiveness of the biofilter in accordance with Condition (20) and (21), and the review of the other mitigation, if required, in accordance with Condition (22); iii. At least once in a 12 month period; or iv. Within another timeframe to the satisfaction of the manager. b) Include: a. Details regarding the complaints received and any incidents on site, including the frequency of these;

c. Timeframes for the selection, approval, procurement, installation and commissioning of the specified equipment. Where new, or changes to existing emission reduction or treatment equipment are proposed following an internal review, the Consent Holder shall have the proposed changes reviewed by an independent technical expert, with specific experience and expertise in industrial odour discharges.	b. A summary of the results from the on-site and off-site odour assessments, including those required in accordance with Condition 17 and 18; c. An evaluation of the effectiveness of the AMOP in preventing, reducing and/or responding to complaints and incidents; and d. An evaluation of and any recommendations to: a. The plant operating procedures and practices; b. The odour mitigation tools used on site and recommendations on whether further mitigation is required; c. Changes to emission reduction/treatment equipment, including proposals for further equipment; and d. Timeframes for the selection, approval, procurement, installation and commissioning of the specified equipment. *Where new, or changes to existing emission reduction or treatment equipment are proposed following the review of the AMOP, the Consent Holder shall have the proposed changes reviewed by a suitably experienced environmental practitioner, with specific experience and expertise in industrial odour discharges. This technical review shall be provided to the Manager within one month of being completed.*
Amendments to the Approved AMOP	**Amendments to the Approved AMOP**
6. Any proposed amendments or additions to the approved AMOP shall be submitted to the Manager Environmental Regulation of the Greater Wellington Regional Council for approval. Once approved the revised AMOP shall become the operative AMOP and the plant shall be operated in accordance with the approved version of the AMOP at all times. *Note: The approval of the AMOP by the Manager, Environmental Regulation, Greater Wellington Regional Council in no way implies that the measures as specified in the AMOP ensures that the Consent Holder will meet condition 3. The approval is a technical approval only and in no way absolves the Consent Holder from their responsibilities to manage the discharges to meet condition 3 at all times, or does the approval authorise any breach(es) of condition 3 of this consent.*	I suggest this condition is re-worded to ensure it aligns with the interpretation section of this consent. I recommend: *7. Any amendments to the AMOP shall be submitted to the Manager for approval. Once approved, the amended AMOP shall become the operative AMOP and the plant shall be operated in accordance with the approved AMOP at all times.* *Note: The approval of the AMOP by the Manager in no way implies that the measures as specified in the AMOP ensures that the Consent Holder will meet Condition 3. The approval is a technical approval only and in no way absolves the Consent Holder from their responsibilities to manage the discharges to meet Condition 3 at all times, or does the approval authorise any breach(es) of Condition 3 of this consent.*

Operations and Maintenance Manual	Operations and Maintenance Manual
7. The Consent Holder shall maintain an Operation & Maintenance Manual (OMM) which shall include but not be limited to the following matters in order to minimise the discharge of contaminants: a) A summary of the plant purpose, location, layout, and manufacturing equipment with specific reference to contaminant discharge, extraction and treatment equipment, discharge stacks and processes, including responsibilities and contact details of key personnel b) Operation, inspection and maintenance of the manufacturing equipment, including the extraction and treatment equipment c) Procedures adopted to ensure that the extraction equipment is fully functional before manufacturing commences d) Procedures adopted to ensure that the plant complies with the conditions of this consent at all times e) Contingency plans in the case of accidents and emergencies, such as spills, fires, and incidents where the discharge of excessive contaminants to air was unavoidable; and f) Any other issues considered important, including: • Details of the general operation and maintenance of all emissions control equipment (including the associated ducting for this equipment) • Staff training on the process requirements, use of emissions control equipment, and emergency response • Details of how the building envelope is maintained to minimise the potential for fugitive emissions The Consent Holder shall ensure that the OMM is consistent with the conditions of this consent, and shall be updated as required, with a copy forwarded to the Manager, Environmental Regulation, Greater Wellington Regional Council within one month of any update. Any amendments to the OMM shall be approved by the Manager, Environmental Regulation, Greater Wellington Regional Council.	*I have recommended additional matters should be included within the OMM. This includes a description of the purpose of the OMM, responsibilities of on-site personnel and systems for training. I have also recommended that the maintenance of the gas-fired heaters is included. I suggest:* *8. The Consent Holder shall prepare and submit an Operation and Maintenance Manual (OMM) for the site. The OMM shall be submitted to the Manager within three months of the commencement of this consent for approval. The OMM shall include:* *a) A description of the contents and purpose of the OMM;* *b) A summary of the plant purpose, location, layout, and manufacturing equipment with specific reference to contaminant discharge, extraction and treatment equipment, discharge stacks and processes;* *c) Responsibilities and contact details of key personnel;* *d) Systems for training employees to make them aware of the requirements of the OMM;* *e) Operation, inspection and maintenance of the manufacturing equipment, including the extraction and treatment equipment and gas-fired space heaters;* *f) Procedures adopted to ensure that the extraction equipment is fully functional before manufacturing commences;* *g) Procedures adopted to ensure that the plant complies with the conditions of this consent at all times;* *h) Contingency plans in the case of accidents and emergencies, such as spills, fires, and incidents where the discharge of excessive contaminants to air was unavoidable; and* *i) Any other issues considered important, including:* • *Details of the general operation and maintenance of all emissions control equipment (including the associated ducting for this equipment);* • *Staff training on the process requirements, use of emissions control equipment, and emergency response; and* • *Details of how the building envelope is maintained to minimise the potential for fugitive emissions.*

8. The Consent Holder shall, at all times, operate, maintain, supervise and control all processes and equipment on site to ensure compliance with the approved OMM required by condition 7 and pursuant to condition 3 and all other conditions of this consent.	I suggest this condition is worded as follows: 9. *The Consent Holder shall undertake all onsite activities in accordance with the approved OMM, and all other conditions of this consent. In the event of any inconsistencies between the conditions of consent and the provisions of the OMM, the conditions of the consent shall apply.*
	I recommend that the OMM should be reviewed during different milestones of the consent (including the review of the effectiveness of the biofilter) and based on day-to-day operations. I recommended: 10. *The consent holder shall review and update the OMM:* a. *Following the review of the effectiveness of the biofilter in accordance with Condition 20 and 21 and the review of the other mitigation, if required, in accordance with Condition 22; and* b. *As necessary based on day-to-day experience.* *Any amendments to the OMM shall be submitted to the Manager for approval. Once approved, the amended OMM shall become the operative OMM and the plant shall be operated in accordance with the approved OMM at all times.*
Emission Control Equipment	**Emissions Control Equipment**
9. The Consent Holder shall ensure that no part of the aluminium aerosol can manufacturing process is operated without the associated extraction being fully operational and functioning efficiently.	I suggest this condition also refers to 'steel can manufacturing'. I suggest: 11. *The Consent Holder shall ensure that no part of the aluminium aerosol can and steel can manufacturing process is operated without the associated extraction being fully operational and functioning efficiently.*
10. The Consent Holder shall ensure that the ventilation system shall draw adequate negative pressure to ensure the effective capture of contaminants from the aluminium aerosol can manufacturing process and all other areas from which air is extracted to ensure that fugitive emissions are minimised.	I have amended this condition to include reference to 'steel can manufacturing'. I propose: 12. *The Consent Holder shall ensure that the ventilation system draws adequate negative pressure to ensure the effective capture of contaminants from the aluminium aerosol can and steel can manufacturing process and all other areas from which air is extracted to minimise fugitive emissions.*
11. The point of discharge from the Line 2 Main Stack and the Internal Lacquer/Assembly Stack shall terminate at a point no less than 25 metres above ground level and have an exit velocity of at least 14 m/s.	I agree with the intent of this condition, but consider the wording could be altered. I propose: 13. *The point of discharge from the Line 2 Main Stack and the Internal Lacquer/Assembly Stack shall terminate at a point no less than 25 metres above ground level and have an exit velocity of at least*

The stacks shall be designed and operated to ensure uninterrupted vertical discharge of process emissions.	*14 m/s. The discharge shall be directly vertically into air and not be impeded by any obstruction above the stack.*
12. The Consent Holder shall install a Biofilter to treat the basecoat application process and curing oven emissions of the Aluminium Aerosol Can Line within 6 months of granting this consent.	I have recommended that the parameters of the biofilter are included within the AMOP rather than the conditions of consent. This is to ensure that the design of the biofilter can be amended if necessary. I have discussed this in Section 9.3.5 of my report. Therefore, I suggest condition 12 and 13 of the applicants proposed conditions be combined and worded as follows: *14. The Consent Holder shall install a Biofilter capable of treating the basecoat application process and curing oven emissions of the Aluminium Aerosol Can Line within four months of granting this consent. The Biofilter shall be:* *a. Designed, built, operated and maintained to effectively treat the odour to ensure compliance with Condition 3; and* b. *The design, operation and maintenance paramaters shall be included in the AMOP.*
13. The Biofilter shall be operated and maintained to ensure the following parameters are complied with: (a) The biofilter shall be designed to have an empty bed residence time of 90 s, a bed depth of 1.1 m and a minimum media volume of 26.5 m^3. (b) a maximum air loading rate of 45 m^3/hr of air per m^3 of media (c) a maximum fine bark or soil content of 10% v/v. (d) the inlet air to the biofilter shall be: 1. ≤35ºC for more than 95% of the time 2. ≤40ºC for more than 99% of the time 3. A maximum inlet temperature of 45ºC (e) A moisture content between 50 and 65 % w/w, except during and following periods of high precipitation (up to three days) (f) the flow of air through the biofilter bed shall be evenly distributed throughout and across the bed.	My recommendations on this condition are explained above.

14. The Consent holder shall measure and record the following biofilter parameters: a) The air pressure of the biofilter inlet duct compared to atmospheric pressure by pressure gauge or U-tube manometer and the pH and moisture content of the biofilter media via a handheld soil tester on a monthly basis. b) Odour characteristic of the air discharged from the biofilter on the downwind edge of the biofilter on a weekly basis. c) The humidity and temperature of the air entering the biofilter on a continuous basis. d) Observations of the air distribution through the biofilter media on a yearly basis to assess whether it is evenly distributed including the methodology used. The records shall be kept for a minimum of 12 months and provided to the Greater Wellington Regional Council on request.	I agree with this proposed condition and adopt the condition proposed by the applicant. *15. The Consent holder shall measure and record the following biofilter parameters:* *a. The air pressure of the biofilter inlet duct compared to atmospheric pressure by pressure gauge or U-tube manometer and the pH and moisture content of the biofilter media via a handheld soil tester on a monthly basis;* *b. Odour characteristic of the air discharged from the biofilter on the downwind edge of the biofilter on a weekly basis;* *c. The humidity and temperature of the air entering the biofilter on a continuous basis; and* *d. Observations of the air distribution through the biofilter media on a yearly basis to assess whether it is evenly distributed including the methodology used.* The Consent Holder shall maintain a record of all measurements taken in accordance with Condition 15. This record shall be provided to a Wellington Regional Council Officer on request.
	I have inserted a new condition requiring the consent holder to ensure that the external factory doors are closed during any potential or actual odour generating activities. This is discussed in Section 9.3.7 of ym report, I recommend: *16. The consent holder shall ensure that the external factory doors are closed during any potential or actual odour generating activities.* *Note. Potential and actual odour generating activities are defined in the AMOP.*
	I recommend the insertion of a new heading as follows: ***Field Odour Observations***
15. The Consent Holder shall undertake regular field odour inspections along the northern boundary of the site, adjacent to the residential area of Mountbatten Grove. The field observations shall: (a) Be carried out at least weekly by a person not routinely involved in solvent based coating operations; and	I generally agree with the intent of the condition proposed by the applicant. I recommend that the applicant is required to record the result of the field observations and provide these to GWRC on request. I have also recommended that these field observations are only undertaken for the period required to assess the effectiveness of the biofilter and other mitigation (if required). I propose:

(b) Be conducted in general accordance with the methodology detailed by the Good Practice Guide for Assessing and Managing Odour (Ministry for the Environment, 2016) i.e. FIDOL and be detailed in the AMOP.	*17. The Consent Holder shall undertake field odour inspections at least once a week along the northern boundary of the site, adjacent to the residential area of Mountbatten Grove. The field observations shall be:* *a. Undertaken by a person not routinely involved in solvent based coating operations;* *b. Conducted in general accordance with the methodology detailed by the Good Practice Guide for Assessing and Managing Odour (Ministry for the Environment, 2016) and the AMOP;* *c. Recorded on a field sheet; and* *d. Undertaken for the period required to assess the effectiveness of the biofilter and any other mitigation, in accordance with Condition 20, 21 and 22.* *The Consent Holder shall maintain a record of the field sheets and provide these to the Manager on request. The Consent Holder shall provide a summary of the field odour inspections in the annual report, required in accordance with Condition 33 of this resource consent.*
16. After a period of 6 months (but no more than 12 months) operation of the Biofilter required by Condition 12, the Consent Holder shall arrange for a programme of independent field odour observations to be undertaken. The observations shall: (a) Be carried out on at least 17 days over a 4-week period at at least 7 locations around the NCI site locality when the plant is operating at normal production rates, in a similar fashion to the August to September 2020 survey; (b) Be undertaken by a person who is not regularly exposed to solvent based coating operations who has been trained in the assessment of ambient odours by a suitably qualified person; and (c) Be conducted in general accordance with the methodology outlined in the Good Practice Guide for Assessing and Managing Odour (Ministry for the Environment, 2016) and detailed in the AMOP.	I agree with the overall intent of this condition. I have proposed a shorter timeframe to minimise the period of time in which the mitigation may not be adequate. This is also described in Section 9.3.5 of my officers report. I have proposed: *18. After a period of six months, but less than 9 months, of the installation of the Biofilter in accordance with Condition 15, the Consent Holder shall commission a programme of independent field odour observations to be undertaken. The observations shall be undertaken:* *a. In general accordance with the methodology used in the August to September 2020 survey described in the report titled, NCI Packaging, Upper Hutt – Summary of further odour investigations and recommendations, dated 27 January 2021;* *b. On at least 17 days over a 4-week period;* *c. At a minimum of seven locations around the NCI site locality when the plant is operating at normal production rates;* *d. By an independent person who is not regularly exposed to solvent based coating operations who has been trained in the assessment of ambient odours by a suitably qualified person; and* *e. In general accordance with the methodology outlined in the Good Practice Guide for Assessing and Managing Odour (Ministry for the Environment, 2016) and the AMOP.*

	Advice Note. The independent person undertaking the odour observations should not be an employee of NCI Packaging (New Zealand) Limited.
17. The results of the field odour observation programme required by Condition 16 shall be reported to the Manager, Environmental Regulation, Greater Wellington Regional Council within 6 weeks of its completion. The report shall include: (a) The date, time and location of each odour observation; (b) For each odour observation: i. whether it constituted an "odour hour" (i.e. six or more 10 second periods of recognisable odour determined within the 10-minute observation period) ii. the average and maximum odour intensity; iii. The character of any odours identified (c) Where possible, identification of the actual or likely source (or sources), of any odours identified; (d). Whether any events occurred that could be correlated with complaints made either to the Consent Holder or to Greater Wellington Regional Council.	I agree with the overall intent of this condition. However, I have reduced the timeframe in which the report shall be provided to the manager for the reasons described in Section 9.3.5 of my report. I have proposed some minor amendments to the condition too, I propose: *19. The results of the field odour observation programme required by Condition 18 shall be reported to the Manager, within 4 weeks of its completion. The report shall include:* *a. The date, time, duration, meteorological conditions and location of each odour observation;* *b. For each odour observation:* *i. Whether it constituted an "odour hour";* *ii. The average and maximum odour intensity; and* *iii. The character of any odours identified.* *c. Where possible, identification of the actual or likely source (or sources), of any odours identified;* *d. Whether any events occurred that could be correlated with complaints made either to the Consent Holder or to the Wellington Regional Council.* *Note. Odour hour is defined as six or more 10-second periods of recognisable odour as determined within the 10-minute observation period*
	I propose a new heading is inserted as follows: ***Assessing the Odour Mitigation Performance of the Biofilter***
18. After a period of 6 months (but no more than 12 months) operation of the biofilter required by Condition 12, the Consent Holder shall undertake a review of the odour performance of the biofilter and provide this report to the Manager, Environmental Regulation, Greater Wellington Regional Council. The review shall include: (a) Evaluation of the biofilter operational parameters monitored in accordance with Condition 14.	As discussed in Section 9.3.5 of my report, I recommend reducing the period in which the effectiveness of the biofilter is assessed. I propose: *20. After a period of six months, but less than nine months of the installation and operation of the biofilter, the Consent Holder shall commission a review of the odour control performance of the biofilter and provide this report to the Manager. The purpose of the review is to demonstrate whether the biofilter is adequate to ensure compliance with Condition 3. The review shall include:* *a. Evaluation of the biofilter operational parameters monitored in accordance with Condition 15;*

(b) Characterisation of the normal operating range for pressure drop and bed pH and trigger values to be incorporated into the AMOP to identify the optimal performance. (c) Consideration of the observations of residual odour above the biofilter and field odour observations undertaken in accordance with Condition 16. (d) any recommended improvements to the biofilter design and/or operation to optimise odour removal in the biofilter.	*b. Characterisation of the normal operating range for pressure drop and bed pH and trigger values to be incorporated into the AMOP to identify the optimal performance;* *c. Consideration of the observations of residual odour above the biofilter as required by Condition 15, field odour observations undertaken in accordance with Condition 17, and the independent odour assessments undertaken in accordance with Condition 18;* *d. Any recommended improvements to the biofilter design and/or operation to optimise odour removal in the biofilter; and* *e. The results of this review shall be provided to the Manager, within four weeks of its completion.*
19 The Consent Holder shall have a FIDOL review of the studies undertaken in this consent, and any other relevant information related to odour management on site within 14 months operation of the biofilter required by Condition 12. This review shall be undertaken by an independent technical expert with specific experience and expertise in industrial odour discharges to determine whether the current odour control is adequate to ensure compliance with Condition 3 and provide this report to the Manager, Environmental Regulation, Greater Wellington Regional Council. If this review determines that further odour management is required, the Consent Holder shall implement at least one of the following additional odour control/mitigation measures: (a) Increase the discharge height of the Aluminium Aerosol main stack and/or the Internal Lacquer/Sidestripe stack to at least 27 m above ground level; or (b) Modify the extraction system and biofilter to treat additional sources from the coating processes; or (c) Implement an alternative method, where it can be demonstrated to the Manager, Environmental Regulation, Greater Wellington Regional Council, that this would at least as effective at mitigating odour effects as (a) or (b). The Consent Holder shall notify the Council in writing of the proposed timing for implementation of an additional odour mitigation measure(s), which shall be as soon as practicable, but no more than 4 months from	I agree with the overall intent of the condition, however, I recommend the period for undertaking the review and informing GWRC of whether additional mitigation is required is reduced as discussed in Section 9.3.5. I propose: 21. Within ten months of the installation of the biofilter, the Consent Holder shall assess whether the current odour control is adequate to ensure compliance with Condition 3 and provide this report to the Manager. The assessment shall consider the information provided in accordance with Condition 15 and 17 to 20 of this resource consent and any other relevant information related to odour management. An independent suitably qualified environmental practitioner with specific experience and expertise in industrial odour discharges shall undertake this assessment. If this assessment determines that further odour management is required, the Consent Holder shall implement at least one of the following additional odour control/mitigation measures: a. Modify the extraction system and biofilter to treat additional odour sources from the coating processes; or b. Increase the discharge height of the Aluminium Aerosol main stack and/or the Internal Lacquer/Sidestripe stack to at least 27 m above ground level; or c. Implement an alternative method that this would at least as effective at mitigating odour effects as (a) or (b). Any alternative method shall be to the satisfaction of the Manager. The Consent Holder shall notify the Council in writing of the proposed timing for implementation of an additional odour mitigation measure(s), which shall be as soon as practicable, but no more than three months from the time of the determination of the need for further odour mitigation is identified. This shall be undertaken to the satisfaction of the Manager.

the time of the determination of the need for further odour mitigation is identified.	*Note: Any change from the location, design concepts and parameters, implementation and/or operation may require a new resource consent or a change of consent conditions pursuant to section 127 of the Resource Management Act 1991.*
	I have recommended a new condition is inserted. This condition specifies that any other mitigation installed shall be reviewed within 10 months of its installation to ensure that it is effective. I propose: 22. *Within eight months of the installation of any additional mitigation required in accordance with Condition 21, the Consent Holder shall undertake an assessment to determine whether the current odour control is adequate to ensure compliance with Condition 3 and provide this report to the Manager. The assessment shall consider the information provided in accordance with Condition 17 of this resource consent and any other relevant information related to odour management. An independent suitably qualified environmental practitioner with specific experience and expertise in industrial odour discharges shall undertake this assessment.*
Emission Monitoring	**Emissions Monitoring**
20. There will be no routine emission monitoring requirement for this consent. However, **on written request** by the Manager, Environmental Regulation, Greater Wellington Regional Council, **the Consent Holder shall conduct an emissions testing programme for odour or Volatile Organic Compounds likely to be discharged from the plant, within two months of the written request.** The emissions testing programme and report shall be to the satisfaction of the Manager, Environmental Regulation, Greater Wellington Regional Council. *Note: The Manager, Environmental Regulation, Greater Wellington Regional Council, will consult with the Consent Holder prior to such a request for any additional emissions testing programme(s).*	I agree with the intent of this condition but propose the following wording: 23. *If requested by the Manager, the Consent Holder shall conduct an emissions testing programme for odour or Volatile Organic Compounds likely to be discharged from the plant, within two months of the written request. The report shall include the results of the emission test, including all relevant plant operating parameters and conditions, and all calculations and assumptions. The report shall contain data analysis and interpretation by a suitably qualified and experienced person and shall be to the satisfaction of the Manager.* *Note: The Manager, will consult with the Consent Holder prior to such a request for any additional emissions testing programme(s).*
21. All sampling techniques employed in respect of the conditions of this consent shall be to stack testing industry standards such as USEPA testing methods. All analyses shall be performed by an International Accreditation New Zealand (IANZ) registered laboratory or otherwise as	I agree with the condition proposed by the applicant, this states: 24. *All sampling techniques employed in respect of the conditions of this consent shall be to stack testing industry standards such as USEPA testing methods. All analyses shall be performed by*

specifically approved by the Manager, Environmental Regulation, Greater Wellington Regional Council.	*an International Accreditation New Zealand (IANZ) registered laboratory or otherwise as specifically approved by the Manager.*
On-site meteorological station	**On-site Meteorological station**
22. The Consent Holder shall operate and maintain at least one meteorological station on the site, compliant with the New Zealand Standards listed below. The meteorological station(s) shall be situated in a location that is representative of site and sensitive receptor (residential) conditions. This weather station shall record the wind speed and direction in an appropriate format. The data shall be logged and available in real-time via a website or other user accessible interface. Greater Wellington Regional Council shall be given access to the real-time data upon request. *Note: There are two New Zealand Standards relevant to the meteorological site. Australian/New Zealand Standard AS/NZS 3580.1.1:2007 Methods for sampling and analysis of ambient air Part 1.1: Guide to siting air monitoring equipment,* *Australian Standard AS 2923:1987 Measurement of horizontal wind provides guidance on the measurement of wind speed and direction.*	I have updated the guideline that should be referred to in this condition. I have also made some minor amendments; however, the overall intent remains the same. I propose: *25. The Consent Holder shall operate and maintain at least one meteorological station on the site. This shall be:* *a. Compliant with Australian/New Zealand Standard AS/NZS 3580.1.1:2016 Methods for sampling and analysis of ambient air Part 1.1: Guide to siting air monitoring equipment;* *b. Installed, operated, calibrated and maintained in accordance with the manufacturer's instructions.* *c. Situated in a location that is representative of site and sensitive receptor (residential) conditions* *d. Capable of recording the wind speed and direction in an appropriate format.* *The meteorological data shall be logged and available in real-time via a website or other user accessible interface. The Wellington Regional Council shall be given access to the real-time data upon request.*
	I have recommended a condition requiring the applicant to maintain records of the installation, operation, calibration and maintenance of the meteorological station. I recommend: *26. The Consent Holder shall maintain records of the installation, operation, calibration and maintenance of the meteorological station and these records shalll be provided to GWRC upon request.*
	I recommend a new heading should be inserted as follows: ***Community Liaison Group***
	I have proposed a condition requiring a community liaison group. The reasons for this are outlined in Section 9.3.7 of this report. I propose:

	27. *The Consent Holder shall establish a Community Liaison Group in accordance with the following requirements:* a. *The purpose of the CLG shall be:* i. *To engage on an on-going and regular basis about matters associated with the on-site operations;* ii. *To promote the flow of information between the local community and the consent holder as to, wherever possible, address any issues that may arise; and* iii. *To discuss the results of monitoring and any matters that may arise as a result of the monitoring;* b. *The CLG shall comprise of representatives of the consent holder, representatives of the Wellington Regional Council and any residential or industrial properties located within 250 metres of the site;* c. *The Consent Holder shall invite the members of the CLG at least 15 working days prior to the meeting. This invitation shall include the time, date and venue of the proposed meeting;* d. *The meetings shall occur:* i. *Within two months following completion of the assessment required in accordance with Condition 22; and* ii. *On at least one occasion in an annual period; or* iii. *Within another timeframe to the satisfaction of the manager;* e. *The consent holder shall maintain a record of the meetings of the community liaison group.* *Note: In the event that it is not possible to establish a CLG or convene meetings through lack of interest or participation from the local community, then such failure to do so will not be deemed a breach of these conditions. Should the local community wish to re-establish meetings after a period of inactivity then the conditions above shall continue to apply.*
	I have recommended that the applicant should include a communications plan which sets out how the applicant shall liaise with the community as described in Section 9.3.7 of this report. I note the applicant was required to do this under resource consent WGN110219. I recommend:

	28. *The consent holder shall maintain a communications plan, which sets out how it will liaise with the local community. This plan shall include but not be limited to:* *a. Communications with the Community Liaison Group;* *b. A dedicated telephone number (hotline) for neighbours to contact the consent holder during day shift hours; and* *c. A dedicated telephone number for neighbours to contact the consent holder after 4 pm.*
Complaints Response	**Complaints Response**
23. The Consent Holder shall initiate the specified actions detailed in the AMOP related to complaint response following receipt of a notification or complaint regarding odour discharged from the site (either received by GWRC or the Consent Holder directly); or Following formal notification by telephone, electronically or in person by a GWRC Enforcement Officer that an odour discharge from the site has been confirmed Offensive and/or Objectionable using the FIDOL assessment technique.	I agree with the intent of this condition, however, I propose the following wording: 29. *The Consent Holder shall respond to complaints in accordance with the protocol specified in the AMOP when a complaint has been received from the complainant or the Wellington Regional Council.*
24. The Consent Holder shall maintain a record of any complaints received alleging adverse effects from or related to the discharge the subject of this consent. This record shall include: a. The name and address of the notifier (if provided) b. The date and time that the notification was received c. Details of the alleged incident d. Weather conditions at the time of the incident e. The most likely cause of the incident, and f. Any measures taken to mitigate/remedy the cause of the incident and address the complaint **A copy of this record shall be sent to the Manager, Environmental Regulation, Greater Wellington Regional Council as soon as possible, or at the latest the close of business the next working day.**	I have amended this condition to simplify it. The overall intent of the condition is unchanged. I recommend: 30. *The Consent Holder shall maintain a record of any complaints received for the duration of this consent. This record shall include:* *a) Identification of the nature of the complaint;* *b) The name and address of the notifier where provided;* *c) The date and time that the notification was received;* *d) Weather conditions at the time of the complaint;* *e) Whether or not the NCI site was operating at the time of the complaint;* *f) The most likely cause of the incident; and* *g) Any mitigation measures adopted or maintenance undertaken by the consent holder to address the complaint, including the timing of that remedial action.* This record shall be made available to any Wellington Regional Council officer on request.

This record shall be maintained for the duration of this consent and made available to the any enforcement officer of the Greater Wellington Regional Council, on request. *Note 1: The Greater Wellington Regional Council will notify the Consent Holder as soon as possible about any odour notifications received that are attributed to the Consent Holder.* *Note 2: Incidents involving odour are reported under condition 24 of this consent. The intent of this condition is to capture any other environmental incidents that may occur.* 25. Following receipt of a notification or complaint alleging the Consent Holder to be the source of of-site odour nuisance, or on written request by the Manager, Environmental Regulation, Greater Wellington Regional Council, the Consent Holder shall advise the source/reason for the odour discharge if the odour was determined to be likely to be from the Consent Holder's operations. The report shall: a) Address the issues detailed in the request; b) Be submitted to Greater Wellington Regional Council within the timeframe specified; c) Outline what measures were implemented and within what timeframes, and the effectiveness of the measures in mitigating the odour effects; and d) Specify what changes, if any, will be made to operating procedures, site practices and the AMOP to prevent/reduce the potential for similar odour events in the future if relevant.	I also recommend that the notification to the Manager should be included as a new condition. I have proposed that the following is included as Condition 31: 31. The consent holder shall notify the Manager of any complaints received relating to the exercise of this consent within 24 hours of being received by the permit holder. *Note: The Wellington Regional Council will notify the Consent Holder as soon as practical about any odour notifications received that are attributed to the Consent Holder.*
Incident Reporting	I have recommended that this sub-heading is deleted.
26. Any incident related to the Consent Holder's activities that may result in adverse effects on the environment beyond the boundary of the Consent Holders site shall **be notified to the Manager, Environmental Regulation, Greater Wellington Regional Council as soon as possible, or at the latest the close of business the next working day**. A written report shall be submitted to the Greater Wellington Regional Council within five working days with reasons for the incident, and	I agree with the intent of this condition but consider it should be worded as follows: *32. In the event of any incident that has or could have resulted in a condition or conditions of this consent being contravened, the consent holder shall:* *a. Notify the Manager as soon as possible within 24-hours of the consent holder becoming aware of the incident;*

measures taken to mitigate the effects of the incident and prevent a recurrence. *Note: The Greater Wellington Regional Council may also investigate any incidents to determine if a breach of this consent or the Resource Management Act 1991 has occurred and may also undertake enforcement action depending on the circumstances.*	*b. Provide an incident report to the Manager within five working days. The written report shall describe reasons for the incident and measures taken to mitigate the effects of the incident and prevent a recurrence; and* *c. Specify what changes, if any, will be made to operating procedures, site practices and the AMOP to prevent/reduce the potential for similar odour events in the future if relevant* *Note: The Greater Wellington Regional Council may also investigate any incidents to determine if a breach of this consent or the Resource Management Act 1991 has occurred and may also undertake enforcement action depending on the circumstances.*
Reporting Conditions	I recommend the wording of this sub-heading is amended to: **Annual Report**
27. The Consent Holder shall submit an **Annual Report** to the Manager, Environmental Regulation, Greater Wellington Regional Council by **31 July each year** for the period 1 July - 30 June inclusive. The report shall be to the satisfaction of the Manager, Environmental Regulation, Greater Wellington Regional Council, and shall contain, but not be limited to: a. Details of significant maintenance or upgrade items where relevant to the discharge of contaminants or treatment of emissions, b. Any technical reviews undertaken relating to the AMOP, c. Complaints received and actions implemented by the Consent Holder to minimise effects (if any), d. Details of production information, including amounts of coating materials on the Aluminium Aerosol Line used per annum, and e. Any other information considered relevant	I have recommended that the applicant reports on additional items based on the information provided in accordance with other conditions of this consent (if granted). I recommend: *33. The Consent Holder shall submit an **Annual Report** to the Manager, by **31 May each year**. The report shall be to the satisfaction of the Manager, and shall contain:* *a. Details of significant maintenance or upgrade items where relevant to the discharge of contaminants or treatment of emissions;* *b. Details of production information, including amounts and types of coating materials on the aluminium aerosol line and steel can line used per annum;* *c. Any technical reviews undertaken relating to the AMOP;* *d. Details and records of monitoring and maintenance of the biofilter device in accordance with Condition 15 and a description of any actions taken to rectify any associated with its operation;* *e. Details and findings of the odour observations undertaken in accordance with Condition 17 to 19;* *f. Details and findings of the assessment of the odour reduction performance of the biofilter and any other mitigation; and* *g. Details and records of the CLG meeting required in accordance with Condition 27;* *h. Complaints received and actions implemented by the Consent Holder to minimise effects (if any);* *o A review of all odour complaints and any patterns as to when they occur in relation to weather conditions, the number of lines working, raw products in*

	use. Comparison of odour complaints received in that year vs previous years and comment on if there are any influencing operations within NCI that may be influencing the number of odour complaints. ○ *Any proposals to change works at the NCI plant in response to the review of the odour complaints.* ○ *Comment as to whether the odour complaints received suggest NCI is causing a chronic adverse odour effect* *i. Details of any incidents on site including the reasons for the incident and measures taken to prevent a reoccurrence;* *j. Any other information considered relevant.*
Review Condition	**Review Condition**
28. The Greater Wellington Regional Council may review any or all conditions of this consent by giving notice of its intention to do so pursuant to section 128 of the Resource Management Act 1991, at any time within three months of the 30 June each year for the duration of this consent for the following purpose: a. To review the adequacy of any report and/or monitoring requirements, and if necessary, amend these requirements outlined in this consent, or b. To deal with any adverse effects on the environment that may arise from the exercise of this consent; and which are appropriate to deal with at a later stage, or c. To enable consistency with any relevant Regional Plans or any National Environmental Standards or Regulations, or d. To adopt the best practicable option to remove or reduce any adverse effect on the environment. The review of conditions shall allow for the deletion or amendment of conditions of this consent; and the addition of such new conditions as are shown to be necessary to avoid, remedy or mitigate any significant adverse effects on the environment.	I agree with the proposed review condition, and have included: *34. The Wellington Regional Council may review any or all conditions of this consent by giving notice of its intention to do so pursuant to section 128 of the Resource Management Act 1991, at any time within three months of the 30 June each year for the duration of this consent for the following purpose:* *a) To review the adequacy of any report and/or monitoring requirements, and if necessary, amend these requirements outlined in this consent, or* *b) To deal with any adverse effects on the environment that may arise from the exercise of this consent; and which are appropriate to deal with at a later stage;* *c) To enable consistency with any relevant Regional Plans or any National Environmental Standards or Regulations, or* *d) To adopt the best practicable option to remove or reduce any adverse effect on the environment.* *The review of conditions shall allow for the deletion or amendment of conditions of this consent; and the addition of such new conditions as are shown to be necessary to avoid, remedy or mitigate any significant adverse effects on the environment.*

Notes	Notes
a) A resource management charge, set in accordance with section 36(2) of the Resource Management Act 1991 shall be paid to the Greater Wellington Regional Council for the carrying out of its functions in relation to the administration, monitoring, and supervision of resource consents and for the carrying out of its functions under section 35 (duty to gather information, monitor, and keep records) of the Act. b) The Greater Wellington Regional Council shall be entitled to recover from the Consent Holder the costs of any review, calculated in accordance with and limited to the Greater Wellington Regional Council's scale of charges in force and applicable at that time pursuant to section 36 of the Resource Management Act 1991.	I agree with the inclusion of the notes as below: a. *A resource management charge, set in accordance with section 36(2) of the Resource Management Act 1991 shall be paid to the Wellington Regional Council for the carrying out of its functions in relation to the administration, monitoring, and supervision of resource consents and for the carrying out of its functions under section 35 (duty to gather information, monitor, and keep records) of the Act.* b. *The Wellington Regional Council shall be entitled to recover from the consent holder the costs of any review, calculated in accordance with and limited to the Wellington Regional Council's scale of charges in force and applicable at that time pursuant to section 36 of the Resource Management Act 1991.*