

IN THE MATTER

of the Resource Management  
Act 1991

AND

IN THE MATTER

of an application by  
Envirowaste Technical  
Services Limited for resource  
consent CRC103130 to  
discharge contaminants to air  
from waste processing.

## **DECISION OF THE CANTERBURY REGIONAL COUNCIL**

**Hearing Commissioner**

John Graham Iseli

**Date of Hearing**

28<sup>th</sup> September 2011

**Site Location**

10 Barton Street, Woolston, Christchurch

**Appearances**

**Applicant:**

Ms J Caunter, legal counsel  
Mr W Plummer, Envirowaste Technical Services Ltd  
Mr M Cox, Envirowaste Technical Services Ltd  
Mr M McCauley, air quality consultant  
Ms J Todd, planning consultant

**Submitters:**

Mr L Smith  
Mr B Luscombe

**S42A Reporting Officer:**

Mr N Whitaker

### **Decision Summary**

Consent to discharge contaminants to air is granted for a term of 20 years, subject to conditions. These conditions include additional mitigation, monitoring of contaminant concentrations at the site boundary, and allowance for review of consent conditions under specified circumstances on an annual basis.

### **The Application**

Envirowaste Technical Services Limited (Envirowaste) processes waste materials at an existing site at 10 Barton Street, Woolston. Discharges to air from this site have been authorised by consent CRC992087.1 that was granted in October 2000 for a term of 10 years.

The discharge of contaminants to air from re-refining of waste oil, a diesel-fired heater, processing of rags and spray cans containing solvents and treatment of various industrial wastes requires resource consent. Envirowaste has therefore applied for consent to continue to discharge from the Barton Street site. A consent term of 25 years is sought.

### **Notification and the Hearing**

The application was notified in the Christchurch Press on 17<sup>th</sup> November 2010 and notice was served on owners of premises within 200m of the site, and six other interested parties. The application was notified as follows:

*“CRC103130 – to discharge contaminants into air (including odorous compounds) from the re-refining of waste oil, a 104kW diesel oil-fired heater, evaporation of solvents from rags containing solvents and spray cans, treatment of various industrial wastes (including grease trap, timber treatment and electroplating wastes) at 10 Barton Street, Woolston, at or about map reference NZMS 260 M35:842-392.*

*The applicant has requested a consent with duration of 25 years to replace existing consent CRC992087.1 due to expire on 17 October 2010.”*

Fifteen submissions were received within the 20 working day period specified in the Resource Management Act 1991 (the Act). Two submissions are in support of the application and thirteen submissions are opposed. Eight submitters requested to be heard.

The hearing was held on 28<sup>th</sup> September 2011 at the Lincoln Events Centre.

### **Site Visit**

I undertook a site visit the 29<sup>th</sup> of September 2011, following the hearing. This visit included an examination of the Envirowaste site and the neighbouring area.

### **Procedural Matters**

The hearing was adjourned on 28<sup>th</sup> September, pending my site visit. Having undertaken that visit and reviewed all the information provided during the course of the hearing, I have determined that no additional information is required in order to reach a decision. Consequently the hearing was closed on 4<sup>th</sup> October 2011.

### **The Applicant's Evidence**

Ms Caunter, counsel for Envirowaste, provided legal submissions. She explained that the application concerns the renewal of an existing consent and that the site is zoned Business 5 (General Industrial) in the Christchurch City Plan. She considered that the permitted baseline, provided by Section 104(2) of the Act, is relevant to this application. Ms Caunter stated that the B5 zone is intended for heavy industrial activity and the level of amenity expected to be found within the zone is consistent with such activity. Residential development is discouraged. She submitted that occupiers of units at Thackers Quay, also zoned B5, should expect a level of amenity appropriate to that zone.

Ms Caunter discussed the significance of the Barton Street facility to Envirowaste's national business. She explained that the business provides cost-effective waste disposal for local businesses, servicing over 1000 businesses in the wider Canterbury region. Ms Caunter noted that the economic benefits are relevant to assessment of the application under Part 2 of the Act.

Turning to the issue of reverse sensitivity, Ms Caunter submitted that the nearby sensitive mixed land use (Thackers Quay) should not be elevated to a level that is not supported by the planning documents. She noted that the relevant planning documents state clearly that this land is intended for industrial use, and residential activity is not encouraged or welcomed. Ms Caunter submitted that the relevant rules providing for limited residential occupation in this zone are intended to protect industry, and to avoid residential occupation putting pressure on industry. Ms Caunter referred to the decision of the Planning Tribunal (now the Environment Court) in *Medical Officer of Health v Canterbury Regional Council* in 1995. In that case, concerning discharges to air from the Ravensdown fertiliser plant in Hornby, the Court found

that persons living in or coming to the areas adjacent to industrial zoning cannot expect an environment free from odour from the plant at all times without condition or qualification.

Ms Caunter also discussed the compliance record of the Envirowaste plant, in relation to air discharges. She stated that the apparent rise in complaints since consultation regarding the application commenced represents a typical pattern of behaviour in these circumstances. She noted that few complaints have been verified as relating to discharges from the Envirowaste site and that other nearby operators (such as Gelita) cause similar discharges. Ms Caunter submitted that incidents that have occurred at the Envirowaste site (and related complaints) do not justify the application being declined or the site being enclosed.

Ms Caunter reiterated that the applicant seeks a consent duration of 25 years and discussed relevant case law. In particular, she referred to the *Nqati Ranqi Trust and ors v Genesis Power Limited and Manawatu-Wanganui Regional Council* case heard by the Court of Appeal in 2009. Ms Caunter submitted that a similar factual situation applies to this application, whereby the effects are well understood. She noted that the *Genesis* decision found that effects can be controlled through a review condition and this method is preferable to imposing a short consent duration. Ms Caunter stated that the Environment Court took a similar approach in *PVL Proteins v Auckland Regional Council*, relating to the duration of consent authorising discharges to air from a rendering plant.

With regard to the matters relating to consent duration raised in the Natural Resources Regional Plan (NRRP), Ms Caunter stated that there have been no complaints made relating to discharges to air from the existing site that have warranted any enforcement steps being taken by Environment Canterbury or the Christchurch City Council. Therefore she considered that limiting consent duration based on concerns regarding non-compliance is not appropriate. Ms Caunter considered that other factors, including the level of knowledge regarding the affected environment, the use of technology to assist in mitigation, costs and benefits to the community, investment by the consent holder in an existing activity, and guidance from case law are all important aspects to be considered when setting an appropriate duration. She stated that any concerns regarding compliance can be addressed through a review condition, including a specific best practicable option (BPO) clause.

Mr Plummer, General Manager of the Technical Services Division of Envirowaste, gave evidence concerning operations at the site and compliance matters. He stated that the plant had successfully operated at the Barton Street site for the past 12 years. Mr Plummer explained that since the September 2010 earthquake Envirowaste has spent \$400,000 on seismic repair and improvement works. He reiterated that that an infringement notice or abatement notice had not been issued relating to discharges to air from the site in the past 10

years.

Mr Plummer discussed the potential use of alternative sites for the Envirowaste business. He explained there would be significant structural and cost issues associated with shifting to another site in a less sensitive receiving environment. The Barton Street site is leased. Mr Plummer stated that Envirowaste would be prepared to invest in the site, particularly in terms of mitigation, but only if a relatively long-term consent is granted.

Referring to Mr Whitaker's comments regarding enclosure of the operation, Mr Plummer estimated that full enclosure of the grease trap waste (GTW) pits would cost in the order of \$355,000, with a further \$50,000 for a biofilter. He estimated that total enclosure and treatment of discharges to air from the site would cost in the order of \$1,000,000. Mr Plummer considered that total enclosure, at substantial expense, would not necessarily relate to compliance with consent conditions regarding odour.

Mr Cox, Branch Manager at the Envirowaste site, gave evidence regarding plant operations and complaint response. Mr Cox discussed the Standard Operating Procedures (SOPs) implemented at the site and considered that these are very robust relative to others in the waste management industry. He noted that the waste treatment methods had been reviewed by Dr Michael Gray of Chemsafety Limited and were found to be generally appropriate.

Mr Cox stated that there have been 53 complaints relevant to Envirowaste and former operator ChemWaste in relation to discharges to air from the Barton Street site from 2000 to 2011. During the past four years of Envirowaste ownership, 13 complaints were registered with Environment Canterbury (including 10 following the commencement of community consultation in February 2010). Mr Cox considered that since Envirowaste purchased the business four years ago, only one complaint is likely to have been caused by discharges to air from the site.

Mr Cox explained that a wind sock had been erected at the site to assist in determining wind conditions at the time of certain procedures (such as addition of lime) with potential to cause off-site effects. He also confirmed that Envirowaste intends to pave the site (at a cost of approximately \$100,000) to minimise dust from vehicle movements, provided consent is granted with sufficient duration to justify the expense on a leasehold site. Mr Cox considered that additional mitigation proposed, including erecting wind cloth around the GTW pits and applying lime in a slurry matrix, would have a positive impact on dust control.

Mr McCauley, a senior environmental consultant, gave evidence summarising the processes

occurring on the site and assessing the environmental effects of the discharges to air. He explained that processing of organic waste in the pits, particularly GTW, has potential to discharge odour and dust. He stated that an upper consent limit of 520 tonnes/year GTW processed on-site is requested by Envirowaste, noting that approximately 450 tonnes GTW was processed in the 2009-2010 financial year.

With regard to the receiving environment, Mr McCauley noted that the sensitivity to discharges to air has increased substantially since the time of the last consent application in 1998. He stated that the closest dwellings on land zoned for residential use are approximately 90m to the northwest of the site, across the Heathcote River. He accepted that the Thackers Quay properties, zoned B5, are very close to the site and are exposed to discharges from Envirowaste and neighbouring industries during certain meteorological conditions. Mr McCauley notes that other industries located nearby within the B5 industrial zone also discharge odours and other contaminants to air, including Gelita, Skellerup Industries, Independent Fisheries and Industrial Oils.

Turning to the effects of the discharges from Envirowaste, Mr McCauley assessed the potential for both health effects and localised nuisance effects. He examined complaint records and considered that under normal operation, discharges are not predicted to cause odour or dust to the extent that these cause an objectionable or offensive effect beyond the site boundary. Mr McCauley accepted that some limited nuisance effects may occur at properties directly opposite the site from time to time. While more substantial discharges may occur under abnormal operating conditions, he considered that such effects could be avoided by careful management of site processes using appropriate operating procedures.

Mr McCauley stated that the quantity of organic material, particularly GTW, processed at the Envirowaste site is substantially less than in the past. He stated that additional mitigation may be necessary if large volumes of GTW were handled, and therefore proposed a limit of 520 tonnes per year. Mr McCauley explained that solvent-bearing rags are turned into the sludge pile as soon as possible after the batch is receipted, providing stabilisation to minimise the discharge of hydrocarbon solvents to air. Overall, he assessed the effects of volatile organic compounds discharged from the site as minor.

In relation to dust discharges from the site, Mr McCauley explained that there is potential for dried hazardous or toxic materials to be discharged beyond the site boundary, if dust controls are not adequate. He therefore recommended that working areas of the site be kept as clean as possible and that relevant areas be dampened with water as necessary. In addition to sealing of the site, Mr McCauley also noted that dust mitigation is achieved by restriction of on-site vehicle speeds to a maximum of 5km per hour. Further, he considered that additional

mitigation could be achieved by raising the waste bay walls, for example using netting or shade cloth.

Mr McCauley also discussed the effects of discharges from refining of used oil. He considered that the BPO to minimise discharges from this source is proposed, being a simple biofilter system that would be installed if the refining operation re-commences at the site. With regard to the small diesel oil-fired heater, Mr McCauley confirmed that the emission stack would be raised to comply with Rule AQL16 of the NRRP. He considered that any adverse effects caused by this discharge would be less than minor.

Mr McCauley examined the level of mitigation proposed by Envirowaste. Given the quantity of GTW now processed at the site and the degree of predicted effect, he considered that the enclosure of the waste bays and biofiltration of the discharge would not represent the BPO. However he considered that paving key areas of the site and raising the waste bay walls would be consistent with BPO for the Barton Street operation.

Responding to submissions, Mr McCauley assessed potential health effects caused by discharges from the site as negligible, provided treatment processes are operated properly and upset conditions do not occur. He noted that good process and site management is necessary to ensure this outcome. In relation to odour effects, he found that off-site odour is not detected sufficiently frequently or at such a level that it would be considered offensive or objectionable. Mr McCauley proposed consent conditions relating to dust control, additional to those recommended by Mr Whitaker.

Mr McCauley considered that complaint records and responses relevant to the site do not suggest a history of non-compliance, as indicated by the lack of any enforcement action taken by the consent authority. He therefore did not agree with Mr Whitaker's reasoning for a 5-year consent term and considered that a duration in the order of 25 years would be more appropriate. Finally, Mr McCauley discussed various changes he proposed to the consent conditions recommended by Mr Whitaker. In response to questions, he agreed that installation of an on-site anemometer recording wind speed and direction would provide useful information to assist with site management and compliance monitoring.

Ms Todd, a resource management consultant, provided evidence regarding planning matters. She reiterated that both the Envirowaste site and the Thackers Quay development are in the B5 Zone in the Christchurch City Plan. Ms Todd stated that the City Plan confines residential occupation in Thackers Quay to on-site management and security. She considered that the level of effect anticipated for the Thackers Quay area by the City Plan is that anticipated for a general industrial zone, rather than a residential or light commercial zone as stated in

submissions.

Ms Todd considered that the proposed activity is consistent with policies in both the proposed and operative Canterbury Regional Policy Statement (RPS). She noted that Policy 5 of the RPS has particular relevance, providing guidance on the location of sensitive activities in relation to discharges to air. She considered that the issue of “reverse sensitivity” is relevant, given that the Envirowaste site was established prior to the Thackers Quay development. Ms Todd considered that the encroachment of new development, such as residential units, in close proximity to the site is contrary to Policy 5 of the RPS. She stated that the level of effect predicted for the Thackers Quay area is consistent with that anticipated for an industrial zone.

In relation to the Proposed RPS, Ms Todd stated that Policy 14.3.5 requires the discharges from the Envirowaste site to be managed in accordance with the best practicable option (BPO) to ensure that effects beyond the property boundary are prevented or minimised. Based on the evidence of Mr McCauley and the consent conditions proposed, she submitted that the BPO is being adopted and therefore the activity is consistent with this policy.

Ms Todd also examined the objectives and policies of the Natural Resources Regional Plan (NRRP). She considered that the activity is consistent with the relevant objectives and policies. Ms Todd noted that there are objectives and policies in the NRRP which seek to avoid the reverse sensitivity issues that have arisen as a result of residential units establishing at Thackers Quay in close proximity to the site.

Turning to the National Environmental Standards for Air Quality (NES), Ms Todd stated that there are NES regulations relevant to the discharge of PM<sub>10</sub> and volatile organic compounds (VOCs) from the site. Based on the evidence of Mr McCauley, she considered that there are no restrictions in the NES (including the 2011 amendments) that would prevent granting of consent in this case.

Ms Todd considered, based on guidance in Section 1.3.5 of the NRRP, that granting consent for a duration of 25 years would be appropriate. She stated that the certainty of a longer term would enable the consent holder to invest in additional mitigation measures, such as sealing of roadways at the site.

### **Submissions**

Mr Smith lives at 22 Thackers Quay, opposite the Envirowaste site. He stated that the Thackers Quay development was constructed three to six years ago primarily for

owners/operators of small businesses who wished to live and operate their business from the same site, or for residences requiring generous storage facilities. He considered that existing businesses in the development are of a light nature and that the majority of units are in fact totally residential. Mr Smith also noted that the residential areas of Marshall Street and Cumnor Terrace are approximately 100m to the west of the site, with other residential areas being approximately 300m to the east and 270m to the north.

Mr Smith expressed concern that many complaints to Environment Canterbury regarding discharges to air from the Envirowaste site had not been followed up or recorded correctly. He noted that a detected odour had often dissipated by the time Environment Canterbury officers arrived in response to a complaint. Mr Smith considered that pro-active monitoring should be undertaken by Environment Canterbury, rather than simply responding to complaints from neighbouring residents.

Mr Smith stated that local residents are concerned about adverse health risks associated with ingestion of gases and fumes discharged from the treatment processes at Envirowaste. He stated that these discharges can cause an irritating cough and in some cases watering eyes.

In relation to the sensitivity of the local neighbourhood to discharges, Mr Smith stated that Woolston is enjoying a resurgence of residential and associated use, including various residential/storage type developments such as Thackers Quay. He noted that a popular restaurant and bar, The Brewery, had recently been established approximately 200m from the Envirowaste site.

Mr Smith considered that the condition of the existing consent, requiring no offensive or objectionable odour or particulate matter beyond the property boundary, cannot be met by Envirowaste. He stated that the worst odours are chemical by nature and are sufficiently strong to require people to retreat indoors. Of particular concern are discharges occurring outside normal working hours.

Mr Smith stated that, while odours from the site can be offensive, his primary concern is for the health and safety of local residents. He examined the various treatment processes undertaken by Envirowaste and considered that there is significant risk associated with procedural errors or accidents. Mr Smith noted past incidents, including a spill and a fire at the Envirowaste site. He considered that heavy metals discharged from the site have potential to cause long-term health effects.

Mr Smith requested that consent to continue to discharge to air from the Envirowaste site be refused. He considered that, even with an enclosed and filtered operation, the risk of adverse

effects due to accidents, errors or natural hazards is not acceptable to local residents. Mr Smith submitted that Envirowaste should be required to relocate to a more isolated site within one year.

Mr Luscombe resides in Thackers Quay, in the unit closest to the Envirowaste site. He stated that he has similar experiences and concerns to those expressed by Mr Smith. He noted that a primary concern is failure to comply with the conditions of the existing resource consent. Mr Luscombe considered that if Envirowaste was able to comply with the conditions of consent, reverse sensitivity would not be a significant issue.

A submission was tabled on behalf of Mr Peters of 6 Thackers Quay, who was unable to attend the hearing due to illness. The submission raises similar concerns to those addressed by Mr Smith. In particular, Mr Peters noted the sensitivity of the receiving environment and the potential for further residential development in the local area due to possible changes to the City Plan in the future. He also provided photographs of an oily film on car windows, which he attributed to discharges from the Envirowaste site.

#### **Section 42A Report**

The Officer's Report prepared by Mr Whitaker had been distributed to the parties prior to the hearing. His audit raised concerns in relation to several aspects of the application. These concerns included poorly quantified discharges of ammonia from wastewater treatment, odour from processing of GTW, effects of hydrocarbon emissions from stabilisation of solvent-laden rags, the effectiveness of proposed filtration for waste oil re-refining, diesel-fired heater stack height, and the ability to contain lime dust and dust containing hazardous contaminants.

Mr Whitaker consequently recommended a number of changes and additional mitigation measures to be applied, should consent be granted. He considered that the conditions of the current consent are not sufficient and are unlikely to have been met at all times, particularly in relation to objectionable and offensive odour beyond the site boundary. He recommended enclosure of processes generating ammonia, the GTW and sludge stabilisation area, and lime storage, with extraction of contaminants via a biofilter. He also recommended improved dispersal of residual vapours from waste oil re-refining. Mr Whitaker regarded these additional measures as likely to be necessary in order to meet the BPO.

Mr Whitaker recommended that, should consent be granted, the duration be limited to not more than 5 years at the level of mitigation proposed by the applicant. The primary reason given for this brief recommended consent term was the record of complaints, indicating non-

compliance with conditions of the existing consent. Mr Whitaker considered that a short consent term would encourage the applicant to ensure compliance with the conditions of any new consent. He recommended a suite of conditions to be attached to any consent, if granted.

### **Statutory Framework and Status of the Activity**

Both Ms Todd and Mr Whitaker consider that the application is to be considered as a discretionary activity. I accept that assessment.

### **Principal Issues, Evaluation and Findings of Fact**

#### Effects of Discharges from Stabilisation of Organic Wastes

The processing of organic waste, particularly GTW, is expected to be the primary source of odour from the Envirowaste site. The evidence is that the volume of GTW now processed at the site is relatively small and that complaints likely to be related to odours from this source are infrequent. It is accepted that organic waste processing is likely to cause odour beyond the site boundary on occasion. However Mr McCauley concluded that the frequency and extent of such odour is likely to result in adverse effects that are no more than minor, taking into account the nature of the immediate receiving environment and the limited volume of GTW processed. I accept that conclusion.

Provided the volume of GTW processed is limited to less than 520 tonnes per year, I find that treatment of this waste in the bays is consistent with the BPO. Residents in the units of nearby Thackers Quay, within the Business 5 Zone, are likely to experience some degree of odour at times from this source. However the evidence indicates that this would not be to the extent that the odour becomes objectionable or offensive. It is reasonable that residents at Thackers Quay, who are permitted to occupy units in the B5 Zone under limited circumstances, should expect a level of amenity that is appropriate to that zone. That level of amenity does not mean no odour at all times.

I have considered the option of covering the organic waste bays and treating the discharge via a biofilter. The evidence is that the expense associated with such treatment is substantial. Given the proposed limit to the volume of GTW processed, I consider that this level of mitigation is not necessary to ensure that adverse effects are acceptable.

### Effects of Discharges from Industrial Wastewater Treatment, Including Ammonia

Envirowaste treats various industrial wastewaters in open pits and enclosed treatment tanks at the site. The handling of the wastes is managed according to SOPs. Environment Canterbury engaged Dr Michael Gray of Chemsafety to review the treatment processes, with particular reference to the potential for chemical emissions, as discussed in Mr Whitaker's report. Dr Gray concluded that the procedures adopted are typical and appropriate for industrial wastewater treatment. He noted that some level of odour would be anticipated for any industrial waste treatment facility. Dr Gray also concluded that it is important that staff are appropriately trained and managed, and good SOPs followed.

The primary area of uncertainty relating to discharges from this source concerns the discharge of ammonia from the treatment of ammonium waste in open pits. Theoretical calculations indicate the potential for ammonia to be detectable beyond the site boundary under certain weather conditions when dispersion is poor. While the initial calculations suggest that off-site effects are not likely to be significant, I accept Dr Gray's suggestion that it would be appropriate to undertake initial air monitoring for ammonia as a condition of any consent in order to confirm this conclusion. A condition will therefore be imposed that requires monitoring of ammonia at the property boundary, based on a monitoring procedure developed by a suitably qualified air quality professional. Furthermore, a specific review clause will allow the treatment of ammonia waste to be reviewed based on the results of that monitoring.

Subject to compliance with a comprehensive set of conditions, including the monitoring described above and a regularly updated site management plan, I find that any adverse effects of discharges from wastewater treatment at the site are likely to be acceptable.

### Effects of Discharges from Batching of Chemicals

A variety of chemicals are stored (batched) in containers before shipping from the site. SOPs are in place to prevent mixing of incompatible chemicals. Provided these SOPs are followed and the site is well managed, I accept the evidence that any adverse effects of discharges from this source will be minor.

### Effects Caused by Stabilisation of Solvent-Laden Rags

The treatment of solvent-laden rags (up to 800kg at any one time) has potential to cause odour beyond the property boundary. The most significant emissions, in terms of potential

off-site impacts, are expected to occur during the period when the sealed drums are opened and the rags are removed. I agree with Mr Whitaker that, in order to minimise adverse effects, this process should not be carried out under calm or near calm conditions when dispersion is limited.

I find that any adverse effects of associated hydrocarbon solvent emissions are likely to be acceptable, provided mixing of rags with sludge occurs rapidly at times when wind speed (measured on-site) is at least 3m/s and the wind does not blow towards Thackers Quay. A condition is imposed accordingly. I consider there is some uncertainty associated with the assessment of off-site solvent effects and find that it is appropriate to undertake initial air monitoring for solvents as a condition of any consent in order to confirm the assessment. A condition will therefore be imposed that requires monitoring of hydrocarbon solvents at the property boundary. In addition, a specific review clause will allow the treatment of solvent-laden rags to be reviewed based on the results of that monitoring.

#### Effects of Discharges from Can-Puncturing

The applicant proposes to install a purpose-built sealed can puncturer to facilitate the emptying of spray cans at the site. This system would incorporate a two-stage droplet and activated carbon filter to treat discharges of solvents and other contaminants from this source. I find that the proposed mitigation is appropriate and accept the evidence that any effects of discharges from this source are likely to be minor.

#### Effects of Oil Re-Refining Discharges

A resumption of re-refining of used oil at the site would result in the discharge of lighter oil fractions, with potential for deposition at neighbouring properties. Submitters have identified this as a specific issue in the past, although the source of oil droplets was not confirmed with certainty. Envirowaste now proposes to enclose the process and treat emissions in a bark biofilter.

Mr Whitaker has expressed some reservations regarding the effectiveness of the proposed biofilter, and Mr McCauley confirmed that his firm had not designed such a filter to treat hydrocarbon discharges previously. However there is sufficient evidence to indicate that the proposed treatment is likely to be sufficient to prevent off-site effects, provided the biofilter media is monitored and replaced regularly in the event that clogging occurs. I consider that a specific review clause relating to this emission source is appropriate, in the event that monitoring indicates the ongoing degree of treatment is not consistent with that assessed by the applicant.

### Effects of Discharges from the Diesel Oil-Fired Heater

The applicant proposes to increase the height of the emission stack serving the 104kW diesel-fired heater to 7m above ground level. This will improve dispersion of primary contaminants, notable PM<sub>10</sub> and NO<sub>2</sub>. Having regard to the scale of the discharge and the evidence of Mr McCauley and Mr Whitaker, I am satisfied that any adverse effects of emissions from the diesel-fired heater will be less than minor.

### Effects of Dust Emissions, Including Dust Containing Hazardous Contaminants

Dust control is important at the Envirowaste site because waste sludges can contain hazardous air pollutants, particularly heavy metals. Mitigation in this regard mitigation has not been optimal at the site, and it is appropriate that improved dust control measures be implemented if the activity is to continue at the existing location.

Envirowaste has proposed to seal the remaining areas of the site subject to vehicle traffic and to limit on-site vehicle speeds to less than 5km per hour. These measures will certainly assist in the control of dust emissions from the site. In addition, I find that it would be necessary to enclose the sludge bays and lime storage area with wind cloth (or similar material) on three sides and overhead to minimise wind entrainment of dust during dry and windy conditions. This measure, combined with application of water as required, is considered to be necessary to prevent any significant adverse effects of dust emissions beyond the site boundary. Conditions will also require that dust control measures be included and regularly updated in the site management plan.

### Mitigation, Monitoring and Conditions of Consent

Some discussion regarding appropriate mitigation measures and conditions of consent, if granted, occurred at the hearing. My findings regarding specific matters raised, additional to those already discussed, are as follows.

#### *Total Containment and Treatment of Discharges*

Additional mitigation measures have been proposed by the applicant during the course of the hearing, and further mitigation will also be required by the conditions of consent. Taking into account these factors, I consider that the discharges would be consistent with the BPO. I find that total containment and treatment of all discharges from the site, at a cost in the order of \$1,000,000, is not necessary to ensure that adverse effects are acceptable.

#### *Emission Stack from Waste Oil Re-Refining*

I have decided that specific provision to install such an emission stack, should adverse effects be identified, is not appropriate. The conditions will include a specific review clause relevant to the oil re-refining discharge. Should the biofilter alone prove to be insufficient, consent conditions may be reviewed to improve mitigation. Ducting the discharge to an emission stack would not be the only option to reduce off-site effects.

#### *Management Plan*

The management plan conditions proposed by Mr Whitaker and accepted by Mr McCauley are somewhat lacking in specificity. Given the importance of good site management and SOPs in this case, I have imposed a more explicit condition relating to the requirements of the management plan.

#### *Dust Management*

Additional conditions relating to dust management, particularly lime and dust containing hazardous contaminants, were proposed by Mr McCauley at the hearing. These are generally accepted as appropriate and have been imposed, along with the additional requirements relating to containment of the waste bays with wind cloth and sealing of the site.

#### *Meteorological Monitoring*

As discussed earlier, on-site meteorological monitoring and data logging is considered to be valuable in this case. This information would be useful when responding to any complaints, when undertaking ambient monitoring for solvents and ammonia, and when restricting activities (such as opening drums of solvent-laden rags) during certain wind conditions.

#### Consent Duration

The applicant has requested a 25-year term of consent. Mr Whitaker has suggested that a consent duration of not more than 5 years is appropriate, based on the level of mitigation proposed in the application. Considerable additional mitigation and monitoring will be required by the conditions of consent, including containment of the waste bays on three sides and overhead with wind cloth, sealing of site accessways, meteorological monitoring, and ambient monitoring of ammonia and solvents.

In reaching a decision on consent duration, I have taken into account case law and the guidance provided in Section 1.3.5 of the NRRP. The potential for further significant change to the sensitivity of the receiving environment in this area is limited. I am not satisfied, based on the evidence, that there is a history of consistent non-compliance with the conditions of the existing consent. Envirowaste has significant investment in this site and I consider that

the certainty of a medium to longer term would allow further investment in additional mitigation, including significant expense associated with enclosing the waste bays with wind cloth and sealing the site. I have therefore decided that a 20 year term of consent is appropriate. Consent will be subject to a specific review condition that would allow any significant adverse effects to be addressed on an annual basis, should they arise during the term of consent.

### **The Regional Policy Statement and Natural Resources Regional Plan**

Provided the applicant complies with the conditions of consent imposed, I find that the activity would not be contrary to the objectives and policies of the NRRP and the RPS, including the proposed RPS. I consider that the additional mitigation measures proposed by the applicant, and required by conditions of consent, are sufficient to ensure that the BPO is achieved in this case. I am satisfied that the site could be managed, based on additional mitigation, to prevent objectionable or offensive odour or dust beyond the boundary.

### **National Environmental Standards**

With regard to the NES for Air Quality, I accept the analysis of Ms Todd that the NES would not prevent consent from being granted in this case. The discharge of PM<sub>10</sub> from the diesel-fired heater is assessed as minor and would not significantly increase the concentration of PM<sub>10</sub> in the airshed. The discharges from the site are not expected to be a principal source of volatile organic compounds (VOCs) or to cause the concentration of ozone in the airshed to breach the relevant air quality standard.

### **Part 2 of the Act**

I conclude that any adverse effects of the proposed discharge, subject to the conditions imposed, can be controlled to the extent that they are acceptable in relation to the purpose and principles of the Act (Part 2). With regard to section 7 of the Act, I consider that mitigation measures are proposed (and required by additional conditions) that would enable amenity values and the quality of the environment to be adequately maintained.

In reaching this decision I have taken into account the concerns expressed by submitters, and in particular the close proximity of the Thackers Quay units to the discharge. The comprehensive conditions imposed are expected to result in a substantial reduction in adverse effects experienced previously in the Thackers Quay area. However both the Envirowaste site and Thackers Quay are located within the Business 5 Zone that caters for heavy industry. Therefore residents that are permitted to live in the units for on-site

management and security purposes should expect a level of amenity that is appropriate for an industrial zone. Odour is likely to be experienced on occasion due to discharges from Envirowaste (and indeed other neighbouring industries), but will be controlled via conditions of consent to prevent objectionable or offensive effects.

### **Decision**

I consider that the proposed activity, subject to conditions, can be undertaken in a manner that is consistent with the Act's purpose of sustainable management of natural and physical resources. Having considered all the evidence and the submissions together with the statutory documents and other matters I am required to consider under the Resource Management Act 1991, I determine that consent CRC103130 is granted for a term of 20 years, subject to the following conditions.

#### **CRC103130**

**Duration:** 20 years.

- (1) The discharge shall be only contaminants and odour from an industrial waste treatment plant at 10 Barton Street, Woolston at map reference NZMG M36: 8407-3914 as shown on plan CRC103130A which forms part of this consent.
- (2) The site activities producing the discharge shall be carried out in accordance with a Site Management Plan (SMP). The SMP and any revisions shall include all measures necessary to achieve compliance with the conditions of this consent. The SMP shall include, but not be limited to:
  - (i) A description of the discharge sources and associated treatment processes on site;
  - (ii) The methods to be used for controlling discharges at each source;
  - (iii) Dust control measures for the site;
  - (iv) Reference to Standard Operating Procedures (SOPs) for all processes resulting in discharges to air;
  - (v) A description of monitoring requirements;
  - (vi) Details of steps to be taken to correct any non-compliances identified;
  - (vii) A system of training for employees and contractors to make them aware of the requirements of the SMP; and
  - (viii) Identification of staff responsible for implementing and reviewing the DMP.
- (3) The SMP shall be provided to the Canterbury Regional Council (attention: Resource Consents Enforcement Manager) within three months of the commencement of this consent. )

- (4) The SMP shall be reviewed on an annual basis and the most recent version shall be supplied to the Canterbury Regional Council as soon as practicable following amendment.
- (5) The discharge shall not cause an odour, particulate matter or the deposition of any other material which is offensive or objectionable beyond the boundary of the property on which this consent is exercised.
- (6) Waste acceptance procedures shall be used to ensure that only wastes suitable for treatment and would ensure compliance with condition (5) are allowed to enter the treatment process.
- (7) Records shall be kept of the types, amounts and dates of receipt for all wastes that enter the site. These records shall be provided to the Canterbury Regional Council on request.
- (8) The maximum speed of vehicles operating within the site boundary shall be five kilometres per hour.
- (9) There shall be no treatment of pesticides, herbicides, fungicides or liquid industrial solvents at the site. Such materials shall be batched, stored or transported from the site.
- (10) All processes shall be operated using the emission control methods and mechanisms intended to be used under the resource consent for the process at the intended level of operation, or using alternative methods and mechanisms which provide an equivalent or better degree of emission control.

***Waste Oil Re-Refining***

- (11) The treatment of waste oil shall only be from the heating of lubrication and hydraulic oils to a temperature of not more than 85 degrees Celsius.
- (12) The treatment shall be fully enclosed and only vented to air via soil/bark filters in accordance with plan CRC103130B which forms part of this consent.
- (13) The treatment plant shall be operated to maintain a headspace pressure of not more than negative 10 Pascals.
- (14) The loading rate of the soil/bark filter shall not exceed 35 cubic metres per hour per cubic metre of soil/bark medium.
- (15) The treatment system shall be fitted with appropriate gauges to indicate flow rate and pressure drop.
- (16) The soil/bark filter shall be maintained in such a way as to effectively reduce odours so condition (5) is met. This shall include but not be limited to:

- (a) Maintaining satisfactory moisture levels in the filter, typically greater than 30 percent.
  - (b) Minimum and maximum temperatures in the filter, typically in the range of 20 to 40 degrees Celsius.
  - (c) Maintaining an appropriate pH range of between four and eight.
  - (d) Maintaining an appropriate back pressure range, but not exceeding 150 millimetre water gauge.
  - (e) Ensuring that cracks or holes in the filter media or along the walls do not cause short-circuiting of the gases being treated through the bed.
  - (f) Replace the filter media at an appropriate time, determined when any of the above operating parameters, odour levels or airflow backpressure are unable to be maintained within their operating limits.
- (17) The holder of this consent shall monitor and record in a filter maintenance log, the following parameters at the frequency indicated.

<b>Parameter</b>	<b>Frequency</b>
Moisture level	Fortnightly
Temperature	Daily
pH	Fortnightly
Odour	Daily observation
Cracks or holes	Weekly observation
Back pressure	Weekly

**Waste Oil Heater**

- (18) The waste oil heater shall be diesel oil-fired and burn not more than twelve kilograms of diesel per hour.
- (19) The discharge into air shall occur via a chimney stack at a height of not less than seven metres above ground level and at least three metres above the ridge line of the roof of any building, land or other substantial structure within a distance of five times the height of that building, land or structure.

- (20) The discharge shall be directed vertically into the air and shall not be impeded by any obstruction above the stack which decreases the vertical efflux velocity, below that which would occur in the absence of such obstruction.
- (21) The opacity of emissions from the diesel oil-fired heater shall not be darker than the Ringelmann Shade 1 as described in New Zealand Standard 5201:1973, except for a period not exceeding two minutes in each hour of operation.
- (22) The diesel oil-fired heater shall be maintained at least once every year by a person competent in the maintenance of diesel combustion appliances. The maintenance shall include: ash removal and; adjustment if necessary of the fuel to air ratio to ensure compliance with Condition (21). Maintenance reports shall be prepared and copies provided to the Canterbury Regional Council on request.

#### ***Waste Rag Disposal***

- (23) A maximum of 800 kilograms of rags containing solvent residues shall be mixed into a sludge pile at any one time. A maximum of four tonnes of rags shall be mixed into any one sludge pile.
- (24) The rags shall be held on site in sealed containers until they are treated.
- (25) (a) Immediately on opening of the sealed containers, the rags shall be incorporated into waste sludge being processed in the waste bays.  
  
(b) The sealed rag containers shall not be opened at any time when the wind speed, measured in accordance with Condition 37, is less three metres per second (five minute average) or when southerly winds would blow the discharge towards Thackers Quay.

#### ***Spray Can and Paint Residues***

- (26) Aerosol spray canisters shall only be punctured within a sealed vessel from which discharges to air are filtered via carbon filter or similar treatment to remove droplets and odorous gases.
- (27) Liquid paint residues shall only be stored in sealed containers.

#### ***Organic Waste***

- (28) A maximum of 520 tonnes of grease trap waste shall be processed in any 12-month period.
- (29) No fish waste or septic tank waste shall be accepted for treatment.
- (30) The pH of organic waste in the filter bays shall be measured at least once during every day that waste is held in the bays. Lime shall be added to this waste to ensure the pH is greater than 12. A record shall be kept of the daily pH measurements and the

quantity of lime added each day. This record shall be provided to the Canterbury Regional Council on request.

- (31) The dewatered sludge shall be disposed of to a facility approved to receive such material.

**Dust Control**

- (32) Lime handling shall be undertaken to ensure that no discharges of lime dust occur that are detectable beyond the consent holder's property boundary.
- (33) The site shall be managed so that dust containing hazardous contaminants derived from site processes does not become airborne and transported beyond the site boundary. Management practices shall include, but not be limited to:
- (a) Regular sweeping of operational surfaces;
  - (b) Dampening of operational surfaces and waste bays with water;
  - (c) Managing operations to ensure that spills do not occur, to the maximum extent practicable; and
  - (d) Mixing sludge in bays that are enclosed on three sides and overhead by wind cloth or similar in accordance with Condition 34.
- (34) The waste bays used for mixing of sludge, grease trap waste and solvent laden rags shall be enclosed on three sides and overhead by wind cloth or similar material to minimise entrainment of dust by wind action. These enclosure works shall be completed within six months of the date of commencement of this consent.
- (35) Unpaved surfaces within the site that are subject to vehicle traffic shall be paved to minimise dust discharges. These paving works shall be completed within 12 months of the date of commencement of this consent.
- (36) The site shall be managed to ensure that general dust, including wood shavings and dust from any unsealed areas, does not create an objectionable or offensive effect beyond the site boundary. Management practices shall include, but not be limited to:
- (a) Dampening of stockpiles and any unsealed surfaces during dry and windy conditions;
  - (b) The use of physical barriers to minimise wind entrainment;
  - (c) Having regard to wind conditions, recorded in accordance with Condition 37, so that dusty materials are not handled at times when there is a risk of dust being transported beyond the site boundary.

**Meteorological Station**

- (37) (a) At all times after three months from the commencement of this consent, wind speed and wind direction shall be measured by an anemometer established on the site.
- (b) The anemometer shall be installed at a height of at least five metres above ground level at a location free from any obstruction that has potential to significantly affect wind flow.
- (c) Wind speed resolution of measurement shall be not more than 0.1 metres per second and wind speed accuracy of measurement shall be at least within +/-0.2 metres per second.
- (d) The anemometer shall be established, located and operated to the satisfaction of the Canterbury Regional Council.
- (e) Wind speed and direction shall be continuously recorded with an averaging time for each parameter of not more than five minutes.
- (f) These data shall be:
- (i) recorded using an electronic data logging system; and
  - (ii) provided to the Canterbury Regional Council upon request.

**Complaints**

- (38) The consent holder shall maintain a record of all complaints relating to odour or particulate matter and shall include:
- (a) the location where the odour or particulate matter was detected by the complainant;
  - (b) the date and time when the odour or particulate matter was detected;
  - (c) a description of the wind speed and wind direction when the odour or particulate matter was detected by the complainant;
  - (d) the most likely cause of the odour or particulate matter detected; and
  - (e) any corrective action undertaken by the consent holder to avoid, remedy, or mitigate the odour or particulate matter detected by the complainant.
- This record shall be provided to the Canterbury Regional Council on request.
- (39) The consent holder shall maintain a record of all odour events that are observed by the consent holder to cause discernible odours beyond the site boundary.

**Air Quality Monitoring**

- (40) (a) Within six months of the date of commencement of this consent, ambient air quality monitoring of ammonia and hydrocarbon solvents shall be undertaken at the

consent holder's property boundary. Monitoring of ammonia concentrations shall occur on at least three separate occasions when wastes containing ammonium compounds are being treated, for a period of at least one hour on each occasion. Monitoring of all hydrocarbon solvents known to be present in rags treated at that time shall occur on at least three separate occasions when solvent-laden rags are removed from sealed containers and added to the waste pits, for a period of at least one hour on each occasion. All monitoring shall occur at the site boundary at a location downwind of the emission source. Monitoring and analysis shall be undertaken by a suitably qualified and experienced independent party in accordance with currently accepted practices. The monitoring programme shall be designed to occur at times when worst-case contaminant concentrations are expected to be detected. Monitoring results shall be provided to the Canterbury Regional Council within one month of completion of the monitoring programme.

(b) A detailed monitoring methodology designed to comply with Condition 40(a) shall be prepared by a suitably qualified and experienced air quality practitioner. This monitoring methodology shall be submitted to the Canterbury Regional Council for approval within one month of the date of commencement of this consent.

#### **Administration**

- (41) The Canterbury Regional Council may, once per year, on any of the last five working days of May or November, serve notice of its intention to review the conditions of this consent for the purposes of:
- (a) dealing with any adverse effect on the environment which may arise from the exercise of this consent and which it is appropriate to deal with at a later stage; or
  - (b) requiring the adoption of the best practicable option to remove or reduce any adverse effect on the environment, including the containment and treatment at source of any discharges causing significant adverse effects; or
  - (c) requiring additional monitoring and/or mitigation of any discharges where monitoring indicates potential for the discharges to cause any non-compliance with consent conditions, or any breach of ambient air quality guidelines based on health protection, beyond the consent holder's property boundary; or
  - (d) requiring additional mitigation of the waste oil re-refining discharge where that discharge has been found to cause oil droplets or petroleum hydrocarbons to be detected beyond the site boundary; or
  - (d) modifying or extending any of the monitoring requirements of this consent.
- (42) The lapsing date for the purposes of Section 125 shall be 30 September June 2016.

A handwritten signature in black ink, appearing to read "John Iseli". The signature is written in a cursive style with a large initial "J" and a distinct "Iseli" following.

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John G Iseli, Commissioner

Dated this 26<sup>th</sup> day of October 2011

# ATTACHMENT 1



## CRC103130A Applicant's Site



