

1 added @ Hearing
30.10.15

under: the Resource Management Act 1991

in the matter of: the proposed Canterbury Air Regional Plan

and: **Gelita NZ Limited**
Submitter 63201
Further Submitter 103493

Statement of evidence of Gary Neil Monk

Dated: 30 October 2015

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**CHAPMAN
TRIPP** 

STATEMENT OF EVIDENCE OF GARY NEIL MONK

- 1 My full name is Gary Neil Monk. I am the General Manager at Gelita (NZ) Limited (*Gelita*) and I am based at Gelita's Woolston site (*the site*).
- 2 I hold a Bachelor of Science with 1st class honours (majoring in Chemistry) from the University of Canterbury.
- 3 I have worked for Gelita and its predecessors (Leiner-Davis Gelatine and Davis Gelatine) at the site since 1989. My roles at Gelita have included Process Technologist (2 years), Technical Manager (12 years), Production Manager (4 years), Plant Manager (7 years) and most recently General Manager (around 1 year). In my current role as General Manager, I am responsible for the day to day operations of Gelita's New Zealand business. As a brief overview, this entails overseeing:
 - 3.1 Raw materials wet processing operations which prepare 11,500 tons per annum for extraction in the Food processing part of the plant.
 - 3.2 Edible/Pharmaceutical grade Gelatine Extraction, concentration, chilling and drying plant which processes 1700 tons of gelatine per annum.
 - 3.3 Dry powder milling, blending & bulk packaging operation that processes 1800 tons per annum.
 - 3.4 Proprietary Halal consumer packing operation that packs 140 tons per annum.
 - 3.5 Drum Drying, milling & packing operation that makes 60 tons per annum of specialty cold water soluble gelatines and 40 tons per annum finely milled specialty products.
 - 3.6 Technical gelatine department making 50 tons per annum of dry and prepared glues.
 - 3.7 A Fat processing department that processes 100 tons beef-skin fat annually.
 - 3.8 Quality control/assurance /compliance Laboratory carrying out specialised chemical/physical & microbiological testing.
 - 3.9 Engineering/maintenance department carrying out maintenance and capital improvement projects.
 - 3.10 Administration/Sales & Distribution department sending out product locally 30% and 70% exported.

GELITA - BACKGROUND

- 4 Gelita is part of the global Gelita business owned by Gelita AG, based in Eberbach, Germany. Gelita AG is the world's leading supplier of collagen proteins for the food, health and nutrition, and pharmaceutical industries, and for numerous technical applications.
- 5 Gelita is New Zealand's largest and sole producer of gelatine producing a range of edible and commercial gelatine products derived from bovine raw materials, for use in the New Zealand and overseas markets.
- 6 Gelita has an edible market share of more than 90% in New Zealand, and over 70% of its production is exported to Australia, the Pacific Basin countries, South America and the Middle East.
- 7 Gelita's site is located at 135 to 145 Connal Street in Woolston and covers an area of 3.14 hectares. The site has a long history of industrial use having first been taken over by the Davis family in 1909 from an existing glue manufacturer who had been in existence since 1855.
- 8 Edible gelatine was first produced on the site in 1913. Gelita acquired the site in 2002 from then owner Goodman Fielder.

CURRENT USE OF THE SITE

- 9 As an overview, key features of Gelita's operation today are that it:
 - 9.1 Uses bovine raw-material consisting of face pieces and hide off-cuts which would otherwise have to be disposed as waste by the New Zealand meat industry;
 - 9.2 Produces 1,600 to 1,750 tonnes of gelatine per year, mainly Type B edible gelatine and gelatine hydrolysate for the clarification of wine and fruit juices and some pharmaceutical and specialty gelatines;
 - 9.3 Sells gelatine products worth \$18 million per annum of which 70% is exported, mainly to Australia, the Asia Pacific area and the Middle East. Exports associated with the Woolston site typically earn New Zealand around \$12.5 million in foreign exchange each year; and
 - 9.4 Is profitable, operates 24 hours per day 7 days per week, directly employing on average approximately 60 people and produces 90% of the edible gelatine and 10% of the Pharmaceutical gelatine consumed in New Zealand.
- 10 The processes currently associated with manufacturing gelatine are:

- 10.1 Collection of fresh beef-skin raw materials from all of New Zealand's meat processing plants for transport to consolidation sites for preservation or direct to the Gelita Woolston site for immediate processing.
- 10.2 Identification, weighing and cutting of material prior to transfer into processing.
- 10.3 Treatment of material in alkaline chemicals for hair removal and alkaline hydrolysis of collagen over 20-50 day period.
- 10.4 Transfer to acidulation area for further washing and treatment of material in acid chemicals for further purification and acid hydrolysis of collagen over 4 day period.
- 10.5 Final washing of acid treated material in preparation for transfer to extraction vessels in the food processing part of the operation.
- 10.6 The purified and hydrolysed beef skin material is then warm water extracted over the next 24 hours.
- 10.7 The water/gelatine extract then undergoes a series of filtering and concentration steps before it is chiller extruded at concentration of 30-40%.
- 10.8 The chilled gelatine concentrate is then air dried at 30 - 55°C before final milling, sieving and grading.
- 10.9 Graded powdered gelatine products are then all analysed and microbiologically tested in our laboratories before being formulated into blends of finished products.
- 10.10 Finished gelatine products then either go into storage for direct sales or into our proprietary, specialty or technical gelatine departments for further processing into other specialised products.
- 11 **Annexure 1** to my evidence contains a site plan of Gelita's site.

INVESTMENT IN THE SITE

- 12 The Christchurch earthquakes caused significant damage to Gelita's site infrastructure and buildings, with an estimated repair bill of \$18-20 million. Taking into account that damage, after the earthquakes Gelita's total physical capital invested on the site was approximately \$25 million.

- 13 The snow events in August 2011 then resulted in further damage to the site. The cost of repairing that damage was estimated to be around \$1.8 million.
- 14 This damage, as well as a more general aging of site infrastructure, has exacerbated discharge of odour issues from the site to the point where it was recognised as a pressing issue for the local community and Gelita.
- 15 Gelita is in the process of investing in the operation and has budget approval for \$5 million investment over the next three years ('stage 1') to ensure environmental compliance and for technology changes. The latter will allow us to develop pharmaceutical grade gelatine and supply the local pharmaceutical market which has grown rapidly to 3000 tons per annum. Our strategy is to export less and grow our supply of this newly developing market which is currently supplied from overseas.
- 16 The investment included a notified application for a resource consent variation (discussed later in my evidence). A copy of the final consent is included as **Annexure 2**.

REVERSE SENSITIVITY EFFECTS

- 17 As outlined above, gelatine manufacture inherently involves activities such as the storage and processing of fresh bovine materials that would otherwise be discarded.
- 18 These materials have the potential to create odour effects for nearby sensitive receivers.
- 19 Gelita has recognised these issues over many years and has continuously improved its environmental performance in order to try and keep pace with changing expectations.
- 20 However, the impacts of the earthquakes and subsequent snowfall set Gelita back substantially in terms of the management of environmental effects - ultimately resulting in the site receiving infringement abatement notices from Environment Canterbury.
- 21 This included Gelita being served an infringement notice and fined for 3 breaches of its air discharge permit (CRC921759) (in March 2013) which were deemed to have occurred on 13, 27 and 28 January 2013 - and a subsequent abatement notice under section 322 of the Resource Management Act 1991. Additional fines were imposed in early 2014.

Site Zoning and surrounding Land Uses

- 22 Under the operative Christchurch City Plan, the Woolston site is zoned Business B5 which recognises that the site, and broader areas, is used by heavy industries.
- 23 The proposed Christchurch Replacement District Plan has also zoned the site as Industrial Heavy.
- 24 Despite these zonings, odour issues have been significantly exacerbated through new land use activities (mixed use residential at Thackers Quay and retail in the Tannery/Brewery developments) which are sensitive to the effects of odour produced by the Gelita site. These activities have established in close proximity to the Gelita site but are still within industrial zones.
- 25 The concerns around odour became particularly apparent during Gelita's variation of consent process, in which it sought a three year 'break' (ultimately confirmed as a 2 year break) from complying with the requirement not to discharge offensive odours beyond its boundary (CRC921759). The purpose of this variation was to allow Gelita to repair the damage to its site sustained during the earthquakes and snow fall without being at risk of prosecution.
- 26 Key opponents to the resource consent application process, and Gelita's operations as a whole, include a number of businesses of a non-industrial nature which have established within the Industrial zone at Woolston. These businesses have higher expectations than those businesses that would traditionally (normally) be located in a heavy industrial zone.
- 27 Once such development has established, the potential for it to creep further and further into the zone grows which continues to undermine the feasibility of the zone for existing heavy and industrial type businesses, and potential future industrial uses which should be accommodated within the zone. Such development creates uncertainty for industry, particularly for future investment, unnecessarily increases capital and operational costs and undermines the regulatory planning process.
- 28 Already concerned with reverse sensitivity effects arising from such development, Gelita along with other industry representatives have discussed their concerns regarding the establishment of non-industrial sensitive development in the Woolston Industrial area with Christchurch City Council on numerous occasions. These meetings clearly identified the Woolston / Bromley industrial areas as being important to the city because of the existing embedded infrastructure which would be incredibly expensive to re-establish in new areas.

- 29 The final zoning provisions for the Gelita site and wider surrounds is currently being worked through as a part of the wider District Plan review process and this is extending and exacerbating the uncertainty experienced by Gelita AG in determining future investment in NZ against other attractive opportunities in a Global company.

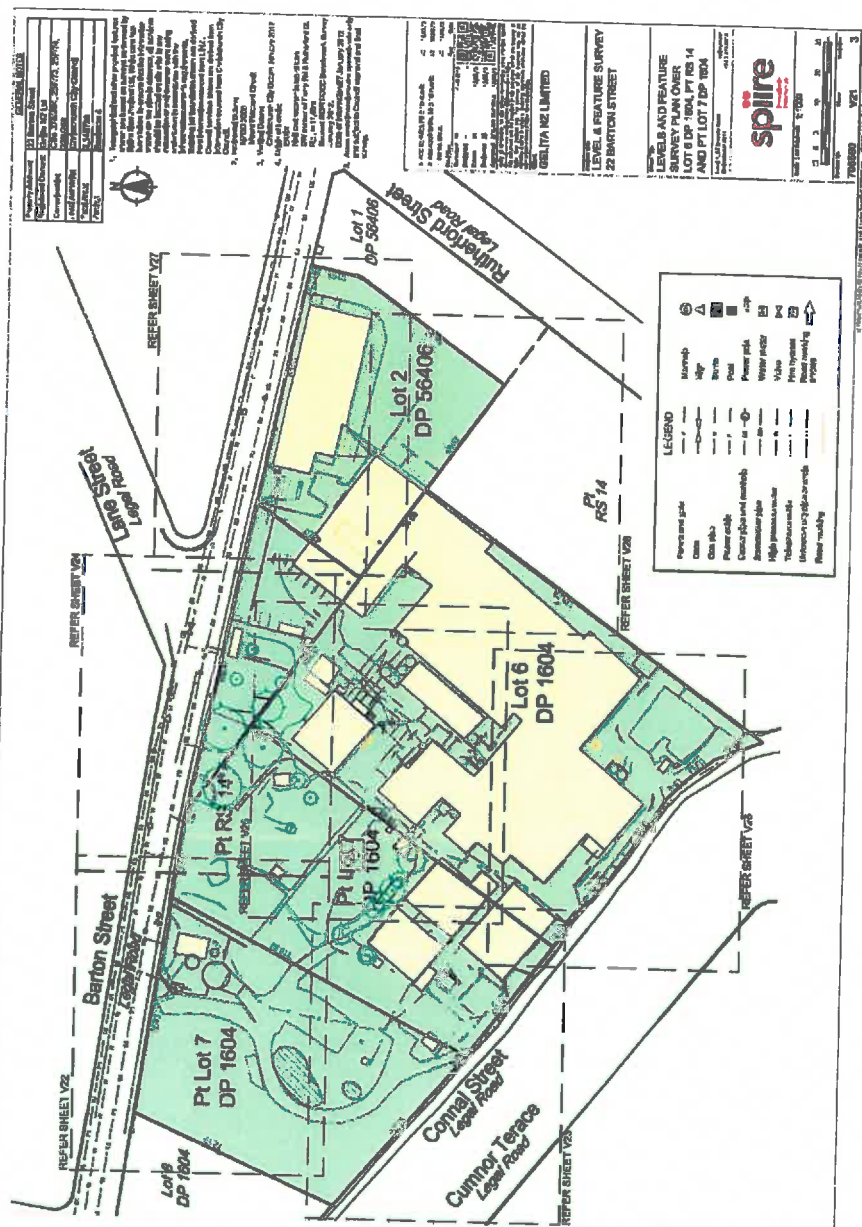
FUTURE INVESTMENT IN NEW ZEALAND

- 30 From an overseas investors point of view the increased level of uncertainty created around the District plan and now the proposed Canterbury Air Regional Plan has made it exceedingly difficult for Gelita to secure the funding it needs to enable it to keep the operation viable from both an economic and environmental perspective.
- 31 The failure of the proposed Canterbury Air Regional Plan to appropriately provide for industrial activities or understand the concept of reverse sensitivity, are particularly concerning.
- 32 With the increased uncertainty for investors we risk losing a great opportunity to add considerable further value to over 150,000 tons of fresh bone raw material currently going into lower value meat and bone meal products that could potentially be further processed at the Gelita site into higher value (up to 10 times) edible and pharmaceutical gelatines.
- 33 Now after 5 different proposals presented to the Gelita AG Management team and supervisory board we have tacit approval for implementation of new technology that will solve the environmental issues. This is at material risk should the proposed Canterbury Air Regional Plan (particularly Policies 6.7 and 6.8) be made operative as is.
- 34 Issues around the planning framework applying to Gelita (both with CCC and the Regional Council) have severely distracted and damaged the company's financial performance and strategic focus in terms of recovering from the earthquakes and improving in a tough export environment.
- 35 It would be impossible to re-establish this sort of industry and operation in New Zealand once it is lost from our shores. Loss of environmental services provided by Gelita (diversion from landfill), employment, and foreign exchange would have far reaching effects on NZ's economy.

Dated: 30 October 2015

Gary Neil Monk

ANENXURE 1: GELITA SITE PLAN



1 September 2015

Gelita NZ Limited
Attn To: Gary Monk
PO Box 19542
Woolston
Christchurch 8241



Customer Services
P. 03 353 9007 or 0800 324 636

PO Box 345
Christchurch 8140

P. 03 365 3828
F. 03 365 3194
E. ecinfo@ecan.govt.nz
www.ecan.govt.nz

Dear Sir/Madam

NOTICE OF RESOURCE CONSENT DECISION

RECORDNO: CRC144081
RECORD HOLDER: Gelita NZ Limited

Please find enclosed the final resource consent documents for your retention, following the decision on the appeal from the Environment Court.

A resource consent document is an important legal document. Please study the document to ensure you understand: what activity is authorised, and the obligations of a consent holder to comply with any conditions.

You can find online information about your consent document at <http://ecan.govt.nz/publications/General/YourConsentDocumentBooklet09.pdf> and also information regarding the monitoring of your consent at <http://ecan.govt.nz/publications/General/monitoring-your-consent-booklet.pdf>. These booklets contain important information about your consent and answers some commonly asked questions about what will happen next in the life of your resource consent. There is an Annual Compliance Monitoring Charge associated with every consent. For details of this, please refer to page 10 of the "Monitoring Your Consent" booklet.

Charges, set in accordance with section 36 of the Resource Management Act 1991, shall be paid to the 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 of the Act.

Thank you for helping us make Canterbury a great place to live.

Our Ref: CRC144081
Your Ref:
Contact: Customer Services

For all queries please contact our Customer Services Section by telephoning 03) 353 9007, 0800 ECINFO (0800 324 636), or email ecinfo@ecan.govt.nz quoting the CRC number above.

Yours sincerely

A handwritten signature in black ink, appearing to be 'J. S.', written over a horizontal line.

CONSENTS PLANNING SECTION

CC Address:

Golder Associates (NZ) Limited, Christchurch
Attn To: Kevin Bligh
PO Box 2281
Christchurch 8140

RESOURCE CONSENT CRC144081

Pursuant to Section 104 of the Resource Management Act 1991

The Canterbury Regional Council (known as Environment Canterbury)

GRANTS TO:	Gelita NZ Limited
A DISCHARGE PERMIT:	To discharge contaminants into air.
CHANGE TAKES EFFECT DATE:	25 Aug 2015
EXPIRY DATE:	16 Jun 2029
LOCATION:	135-145 Connal Street, WOOLSTON

SUBJECT TO THE FOLLOWING CONDITIONS:

- 1 All non-cured raw materials shall be introduced into the first stage of the manufacturing process, (as defined in the application), or treated and preserved with salt, within 24 hours of their arrival on the site.
- 2 Solid waste materials from the effluent plant shall be removed from the site on a daily basis during the months of October to April, inclusive.
- 3 There shall be no visible emissions of dust or particulates from filter flues, vents, windows or doors of any building or apparatus, in which gelatine is being crushed or bagged.
- 4 From the 1st of December 1994, a bio-filter shall be installed and as far as practicable all air exiting the buildings in which the hide is stored, cut or treated in alkali conditioning tanks, shall be passed through the bio-filter media before being discharged into the air.
- 5 Following installation of the biofilter, there shall be no offensive odour, in the opinion of an Enforcement Officer of the Canterbury Regional Council, and as identified as originating from the biofilter or any other process carried out by the consent holder, beyond the property boundary of the site.

5a).

For a period of 24 months from the date of commencement of this consent Condition (5) shall not apply provided that the consent holder:

- i. Manages the operation of the site in accordance with the Best Practicable Option (BPO) having regard to the progressive improvements being undertaken;
- ii. Implements all the measures set out in Conditions (6A), (6B), (6C), (6D) and (6E) of this consent in accordance with the timeframes specified; and

- iii. After 15 months, demonstrates a substantial and validated reduction in the frequency and intensity of off-site offensive odours to the satisfaction of the Manager Compliance and Enforcement Canterbury Regional Council (the Manager).

For the avoidance of doubt, this condition does not authorise any offensive or objectionable odour attributable to activities under Condition (1) in relation to raw materials.

5b). For the purposes of Condition (5A)(iii), a 'substantial and validated' reduction in the frequency and intensity of off-site offensive odours shall be demonstrated through analysis of the data collected under the Odour Management Plan established by Condition (6C) over the 15 month period from the date of commencement of this consent. The results shall be validated by the peer review of a suitably qualified and experienced independent air quality expert.

6 6a.

- a. Within a period of 12 months from the date of commencement of this consent, the consent holder shall complete full enclosure of the acidulation building and undertake the necessary process changes for maintaining a safe working environment and an effective negative pressure differential.
- b. An effective negative pressure differential will be a consistent measurement of less than -7 Pa (negative 7 Pascal) as measured in accordance with Condition (6B)(d) of this consent during calm conditions (less than 1 metre per second (m/s) wind speed).

Advice Note:

Differential pressure is a measure of the pressure difference between the air pressure in a process room and the outside air. A negative differential pressure indicates that the air pressure in the process room is lower than that of ambient air and therefore air is being drawn through the treatment system. A baseline reading should be measured at times when external wind speed is less than one metre per second (1 m/s).

6b. To demonstrate progress towards the milestone stated in Condition (6A)(a), the consent holder shall undertake engineering and other modifications in accordance with the timeframes noted below:

- a. Within one month from the date of commencement of this consent, the consent holder shall provide written confirmation to the Manager Compliance and Monitoring Canterbury Regional Council that sufficient funding has been approved and made available by the consent holder's Head Office in Germany to implement the works necessary to achieve compliance with this consent.

- b. Within two months from the date of commencement of this consent, the consent holder shall provide written evidence confirming:
- i. The placing of orders and target delivery dates for major equipment items associated with the change to a sulphuric acid based process and caustic soda ion exchange technology to enable the acidulation building to be enclosed and a safe working environment maintained;
 - ii. The engagement of suitably qualified consulting engineer(s) for the design and contract documentation of associated civil, mechanical, electrical and other necessary work; and
 - iii. A detailed critical path programme (GANTT Chart) to demonstrate the design, construction and commissioning periods for equipment and buildings to meet the 12 month timeframe for complete enclosure of the acidulation building required under Condition (6A).
- c. As soon as practicable, but not later than twelve months from the date of commencement of this consent, the consent holder shall achieve, and thereafter maintain, an effective negative differential pressure system in each the:
- i. raw material building;
 - ii. tumbler building;
 - iii. lime pits building; and
 - iv. screws buildings.

In addition as soon as practicable but not later than 6 months from the date of commencement of this consent the consent holder shall install point source extraction or fogging equipment at applicable location(s) in the raw material building for the purpose of avoiding odour emanating from that building;

and

In the period 1 December 2015 to 28 February 2016 the amount of unchilled material that can be stored on the site at any time shall not exceed 250 tonnes of preserved material.

- d. Within three months from the date of commencement of this consent, the consent holder shall install and operate instruments capable of accurately measuring the differential air pressure between the inside of the factory and the outside air:
- i. The instruments shall have an operational resolution better than, or equal to, 2 Pascal.
 - ii. Install differential pressure measurement points and tubing at locations within the raw materials, tumbler, lime pits and screws buildings and in due course (but within 12 months) the acidulation building, such that a fair estimation of the differential air pressure between the inside of each building and the outside air can be measured.

- iii. Once Condition (6B)(d)(ii) has been actioned, undertake daily measurements and recording of wind speeds and building pressure drops at the designated locations within each building between the hours of 7.00 am and 8.00 am. Also undertake repeat measurements over three consecutive month periods that record at least three pressure drop values for each building during light (2 to 3 m/s) and moderate wind conditions (4 to 6 m/s).
 - iv. All data recorded under Condition (6B)(d)(iii) shall be made available to the Canterbury Regional Council on request.
 - v. The differential pressure measurements shall be undertaken by a suitably trained person.
 - vi. At no less than six monthly intervals, the consent holder shall obtain written confirmation from a suitably qualified organisation that the instrument used to measure the differential pressure is validated by comparisons to measurements produced by another calibrated differential pressure measuring instrument.
- e. Within three months from the date of commencement of this consent, the consent holder shall develop a formal procedure for ensuring the quality of incoming raw material as part of ongoing improvement in the management of raw materials and processes. This procedure shall identify trigger points for the implementation of remedial actions or for disposal off-site and record as a minimum:
- i. A summary of the age and condition of raw materials received during the reporting period;
 - ii. A record of the age, source and condition of substandard raw materials received and the action taken;
 - iii. A summary of material deemed unusable/not suitable for processing and disposed of elsewhere including source and off-site curing process;
 - iv. Time in storage of any untreated materials held in store and details of any treatments applied while in storage; and
 - v. Average quantity and time in storage of raw skins during the report period.
- f.
- i. Within six months from the date of commencement of this consent, the consent holder shall provide a written report to the Canterbury Regional Council with evidence of progress towards full enclosure of the acidulation building against the critical path programme referred to in Condition (6B)(b)(iii) including confirmation of the delivery status of major plant items and award of a construction contract(s) for associated work.
 - ii. The report shall also identify, with an implementation timeframe, the next steps to be undertaken in terms of Point Source Treatment Initiatives to further improve odour control in months 13-24 following the date of commencement of this consent for

- i. Potential new technologies to neutralise odour in the Raw Materials area
 - ii. Alkaline and acid process wash process development to minimize hydrogen sulphide odours
 - iii. Direct air extraction and treatment from the acid process vessels during filling and draining [acidulation]
 - iv. Acidulation drain, waste solids collection area
 - v. Sulphide aeration pit
 - vi. Liming to acidulation transfer screws
 - vii. Lime pits covering and aeration installation; and
 - viii. Scraper pit and waste disposal skip.
- g. Within 11 months from the date of commencement of this consent, the consent holder shall provide written confirmation to the Manager Compliance and Monitoring Canterbury Regional Council of the satisfactory commissioning of all equipment necessary to enable a safe working environment and effective negative pressure to be maintained such that full enclosure of the acidulation building can be implemented in accordance with Condition (6A)(a).

6C.

- a. Within one month of the date of commencement of this consent, the consent holder shall provide the Canterbury Regional Council with an Odour Management Plan for certification and to enable modifications to be required if requested.

For the purposes of this consent, "Certification" means that the OMP contains all information specified in Condition (6C)(d).

- b. The purpose of the Odour Management Plan is to achieve the best practicable option with respect to odour management and to set out how odours will be managed and measured to determine the level of improvement over time and to demonstrate compliance with the conditions of this consent

- c. The Odour Management Plan will require the consent holder to undertake regular monitoring of odour in ambient air in the vicinity of the site including the requirement for an Odour Monitoring Regime (OMR) in accordance with Condition 6 (D) and shall set out:

- i. The frequency of monitoring and methods to be used, which shall be agreed in consultation with the Canterbury Regional Council; and
 - ii. The training for monitoring which shall be agreed in consultation with the Canterbury Regional Council.

d. In accordance with the Odour Management Plan, the consent holder will accurately record all monitoring, management and operational procedures, methodologies and contingency plans required to comply with the conditions of this consent. The Odour Management Plan shall include, but not be limited to, the following:

- i. inspection, maintenance, monitoring and recording of emissions control equipment (bio-filters and all ducting, pipework, fans and associated equipment);
- ii. maintenance and monitoring of building integrity;
- iii. process equipment inspection, maintenance, monitoring and recording;
- iv. procedures for responding to process contingencies;
- v. housekeeping and management procedures;
- vi. ambient odour monitoring and training for the odour monitors;
- vii. OMR in accordance with Condition (6D);
- viii. complaints investigation, monitoring and reporting including steps to be undertaken when an offsite offensive odour is detected during ambient odour monitoring;
- ix. details of Community Liaison Group meetings: notification, protocols and procedures; and
- x. the identification of staff and contractor responsibilities.

e. The Odour Management Plan shall be reviewed at least once every twelve months in consultation with the Canterbury Regional Council. Any proposed changes to the Odour Management Plan shall be submitted to the Manager at least 10 working days before any changes are implemented. The Odour Management Plan may be amended at any time. Any amendments shall be:

- i. Only for the purpose of improving the efficacy of Odour Management Plan control measures and shall not result in reduced air quality; and
- ii. Consistent with the conditions of this resource consent; and
- iii. Submitted in writing to the Canterbury Regional Council, prior to any amendment being implemented.

6D.

a. Within three months of the date of commencement of this consent, the consent holder shall establish an Odour Monitoring Regime. The Odour Monitoring Regime will comprise two elements:

- i. Odour diaries compiled by community members; and

ii. Consent holder odour assessment.

B. Odour Diaries (Community members): Odour diary panel members are to be identified/established in three houses to the west-southwest and another three houses to the east-northeast, in close proximity to the consent holder site to record observations of odour. Procedures are to be in accordance with the 'Good Practice Guide for Assessing & Managing Odour in New Zealand, Ministry for the Environment, Air Quality Report 36' (MfE, 2003), or revisions agreed in consultation with the Canterbury Regional Council. Odour diary panelists shall be trained to help ensure their rating of odour intensity is as per the 'VDI standard method' (Ministry for the Environment, 2003).

c. Downwind Odour Assessments (consent holder personnel): The consent holder is to utilise employees to undertake daily ambient odour assessments at the eight cardinal compass points surrounding the application site at pre-defined locations opposite the nearest residential dwellings (preferably at least one occupied by an odour diary panel member). The odour assessors are to be assessed for odour detection sensitivity and trained for rating odour as per the 'VDI standard method' (Ministry for the Environment, 2003).

d. The consent holder shall obtain meteorological data from the Canterbury Regional Council met-station in Woolston to provide wind speed and direction data for each event of offensive odour that was recorded by an odour diary panellist or consent holder personnel. The wind information and status of the tumblers, lime pits, screws and acidulation drums are to be confirmed for each recorded offensive odour event.

e. Recording and Reporting: An 'Access Data base' or similar programme is to be used to record information obtained from the Odour Monitoring Regime and report the percentage hours of offensive odour, frequency, character, intensity for each location occupied by an odour panellist as well as VDI assessment data from consent holder odour assessors. This information is to be submitted to the Canterbury Regional Council as part of the reporting required under Condition 6F.

Advice Note:

General

The odour monitoring programme will use a mix of local residents who are rewarded in some way for completing an odour diary outside of their house. This information would complement the consent holder's own odour monitoring via regular downwind assessments of odour at pre-defined locations. For the diary programme the locations would ideally be in line with the most prevalent easterly and southerly wind frequencies. Meteorological data from the Canterbury Regional Council met-station at Woolston would provide wind speed and direction data for each offensive odour event recorded.

The odour panel members would be identified/established via consultation with the Community Liaison Group and offered some reward for their contribution of time and effort. For example, a supermarket food voucher after three month periods. Odour panel members would be assessed to ensure they have not got an impaired ability to sense odours. The methodology for assessment of odour panel members should be discussed with the Canterbury Regional Council as there is no olfactometer service currently

available in Canterbury to undertake "nose calibrations".

For the consent holder's personnel, it would be preferred that the assessment be carried out by an employee that is not involved in the processing of the hides to gelatine. This is to prevent the assessor being desensitised. It would be desirable if a regular assessment is carried out with a Canterbury Regional Council Compliance and Monitoring officer to calibrate the assessment of odour effects.

6E. Within three months of the date of commencement of this consent, the consent holder will establish a Community Liaison Group to facilitate communication and dialogue between the consent holder, Canterbury Regional Council and the local community on effects on the community arising from plant operations, in particular matters relating to offensive odour. The consent holder shall ensure:

a. The Community Liaison Group remains in place for at least the duration of the period specified in Condition (5A);

b. The Community Liaison Group comprises of two consent holder representatives and at least six local persons of whom at least three should be residential property occupiers in the local Woolston community in close proximity to the site. The composition of the Community Liaison Group may be varied in consultation with the Canterbury Regional Council;

c. An Officer of the Canterbury Regional Council and a Health Protection Officer Community & Public Health are invited to be a participant in any community communication meetings/Community Liaison Group meeting and/or consultation meeting by providing at least five working day notice;

d. The Community Liaison Group meets at least every three months, with the purpose of the meeting being to consider the following, but not be restricted to, matters:

i. any odour emissions or other air quality nuisance issues associated with the site;

ii. the performance of emission control equipment;

iii. any upcoming or completed upgrade works; and

iv. any recommendations to the consent holder for changes to, or amendments of, the Odour Management Plan; and

e. Minutes of Community Liaison Group meetings are kept and distributed to all meeting attendees within one month of the date of the meeting. Copies of Community Liaison Group meeting minutes shall be held, and made available for public viewing, at the consent holder's reception office.

6F. Starting three months from the date of commencement of this consent, and thereafter quarterly before the last day of June, September, December and March in each year between June 2015 and June 2017, and thereafter annually the consent holder shall provide the Canterbury Regional Council with a report that includes the following:

- a. Details of progress against the schedule of the works outlined in this consent, including explanations as to why any of the completion dates were not achieved.
- b. Description of any proposed or actual process or plant modifications, in addition to those described in this consent that could affect odour discharges and effects beyond the site boundary.
- c. An assessment of odour impacts during the reporting period, including but not limited to:
 - i. a summary of odour impacts during the period, and methods used to assess them;
 - ii. the extent of adverse odour impacts, reasons for them and measures taken in response; and
 - iii. any odour management improvements applied as a result of complaints and the reasons for them.
- d. Raw materials management report including but not limited to:
 - i. A record of the age, source and condition of substandard raw materials received and the action taken;
 - ii. Time in storage of any untreated materials held in store and details of any treatments applied while in storage;
 - iii. Average time in storage of raw skins during the report period;
 - iv. A summary of the age and condition of raw materials received during the reporting period; and
 - v. A summary of material deemed unusable/not suitable for processing and disposed of elsewhere including source and off-site curing process.
- e. A summary of the daily measured negative differential air pressure including graphs as appropriate, for the raw materials, tumbler, lime pits, screws and acidulation buildings and the outside air. The summary should include maximum, minimum and average values, and include details for wind conditions at the time of measurement.
- f. Date and time of any odour complaints received by the consent holder during the report period, including details of investigations into the complaint and any remedial action taken in response to complaints received during the report period.

g. Following the completion of the June reports in 2015, 2016 and 2017 as required by this Condition, the consent holder and the Canterbury Regional Council shall agree upon a suitably qualified person to review the quarterly reports for the previous 12 month period. This review shall identify areas within the Odour Management Plan that may need amending for the following 12 month period or the need for additional odour control measures to those specified in this consent.

The consent holder shall advise the Canterbury Regional Council in writing of any actions taken in response to these recommendations no later than the 30 June each year. The costs of this review shall be paid by the consent holder.

- 7 The consent holder shall submit to the Canterbury Regional Council three months after the installation of the bio-filter, a Site Management Plan detailing;(i) the procedures and maintenance necessary to ensure the constant operation of the biofilter,(ii) the monitoring required to assess the efficiency and effectiveness of the biofilter in removing odorous compounds from discharges to air associated with hide storage, hide cutting and hide treatment in alkali conditioning tanks,(iii) any remedial action which should be carried out, to prevent or minimise the discharge of odorous compounds into the air, in the event of mechanical failure of any apparatus involved with the biofilter, or in the event of a power cut.
- 8 The sulphur content of a representative sample of coal shall not exceed 0.5% by weight.
- 9 The sulphur content of a representative sample of the light fuel oil shall not exceed 2% by weight.
- 10 The opacity of smoke emissions from the boiler shall be less than 20% except;(i) in the case of a cold start for a period not exceeding 30 minutes in the first hour of operation, and;(ii) thereafter a period not exceeding a total of four minutes each succeeding hour of operation.
- 11 The height of the boiler stack shall not be below 27m above ground level.
- 12
 - a. Following consultation with the consent holder, the Canterbury Regional Council may annually, on the last working day of June 2016, 2017 and 2018, serve notice of its intention to review the conditions of this consent for the purposes of addressing any non-compliance with the items in Conditions (5A), (5B) and (6A) – (6F) of this consent. These reviews should include consideration of which conditions should be ongoing beyond the 24 month period for implementation as set out in Condition (5A).
- 13 Charges, set in accordance with section 36(2) of the Resource Management Act 1991, shall be paid to the 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 of the Act.

Issued at Christchurch on 1 September 2015

Canterbury Regional Council