



Silver Fern Farms
Head Office
283 Princes Street
PO Box 941, Dunedin 9054
New Zealand

TEL: +64 3 379 6900
FAX: +64 3 344 1656
www.silverfernfarms.com

Canterbury Landscape Supplies Hearing Panel
Via: Alison Cooper
Consents Hearings Officer
Environment Canterbury
PO Box 345
Christchurch 8140

alison.cooper@ecan.govt.nz
hearings@ecan.govt.nz

16 March 2018

Dear Alison

**Re: Request for further information – Canterbury Landscape Supplies (CLS)
consent hearing CRC175344 / CRC175345 Composting activity.**

This letter is in response to the request for further information ('RFI') at the hearing dated 8th March 2018 where Silver Fern Farms submitted in support of granting the consent to Canterbury Landscape Supplies.

The questions raised from the hearing panel related to matters regarding the material Silver Fern Farms Belfast supply Canterbury Landscape Supplies for composting into Bioblend™ (Silver Fern Farms designed compost brand / blend) rather than the merits of the submission itself.

As discussed at the hearing, and for the avoidance of doubt, whilst the material Silver Fern Farms Belfast supply to Canterbury Landscape Supplies is generally referred to as "Paunch", is only because that is the predominant item in the material being supplied:

- Pressed screened paunch grass – this stream consists of screenings from the primary treatment rotating screen on the wastewater inflow to the wastewater treatment plant. The screenings predominantly contain paunch grass carried in the wastewater stream from the processing room following evisceration of the stomach. The screenings pass through a screw press, to assist dewatering,



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prior to being mixed with pressed biosolids material and loaded into a truck in a combined state for delivery to Canterbury Landscape Supplies.

- Pressed biosolids – this stream contains several solids collection phases from the wastewater treatment operation. All solids collected enter a belt press to dewater prior to being mixed with pressed screened paunch grass material and loaded into a truck in a combined state for delivery to Canterbury Landscape Supplies.

We respond to each of the questions raised in turn below.

1. What is the total volume of material Silver Fern Farms Belfast operation supplies to Canterbury Landscape Supplies?

Given Canterbury Landscape Supplies provide the transportation of material from Silver Fern Farms Belfast to their composting operation, Silver Fern Farms has had to rely on data provided from the weighing of the trucks in transit.

From the start of March 2017 to end of February 2018 Silver Fern Farms Belfast supplied a total of 3,456 tonnes of material for composting to Canterbury Landscape Supplies.

This amount will vary significantly from year-to-year depending on the quality of the farmers' season and the markets available. As outlined during Silver Fern Farms submission at the hearing, the estimated amount of material that may be available for composting by Canterbury Landscape Supplies could be up to 8,000 tonne per year.

2. What is the average number of truck movements taking the material to Canterbury Landscape Supplies from Silver Fern Farms Belfast operation?

From start of March 2017 to end of February 2018 there was a total of 221 truck movements from Silver Fern Farms Belfast operation to Canterbury Landscape Supplies. The truck movements vary day-to-day from truck only one day, to truck and trailer the following day.

Over the same period:

- The average number of truck movements per month was 18; ranging from 3 to 27.
- The average weight of each delivery was 16 tonnes of material; ranging from 4 tonne to 36 tonne.

The material coming off the wastewater treatment plant (pressed paunch screenings or pressed biosolids) for delivery to Canterbury Landscape Supplies is variable during the processing season, and as such the truck movements' variability largely reflects variability in processing and what the availability of feed for the animals prior has been.

3. What is the proportional mix of 'paunch grass' screenings versus 'bio-solids' from the wastewater treatment?

The individual streams that make up the 'paunch' mix are not independently weighed, Canterbury Landscape Supplies trucks' are weighed at a local weigh-station following the combined material being loaded by front-end loader.

Front-end loader bucket volumes provides a rough estimate of the proportional mix.

- 'Paunch grass' screenings post screw press – approx. 67% (volume)
- Bio-solids post belt press – approx. 33% (volume)

The solids material coming off the wastewater treatment plant is largely contingent on the throughput of the processing plant at that time, and what the animals have been feeding upon prior to receipt; this is seasonally variable.

When Silver Fern Farms Belfast composting operation was operational, there was no need to dewater the 'paunch grass' screenings and the blend ratio was even more predominantly 'paunch grass'. Hence why the mixed material for composting is generally referred to as 'Paunch'.

However, this has changed somewhat since detuning the wastewater treatment plant for connection to Christchurch City Council trade waste network, and following installation of the screw press to remove water in the paunch grass screenings prior to transportation.

This proportional mix can change from time-to-time depending on a number of variables as highlighted earlier, but also on the level of wastewater treatment required to meet trade waste requirements. During high processing periods, more wastewater treatment may be required; this would vary the bio-solids proportion.

4. What is the percent moisture of 'paunch grass' screenings versus bio-solids from the wastewater treatment?

In August 2017 one-off indicative samples were taken for operational purposes to confirm the efficiency of the dewatering activities.

- 'Paunch grass' screenings post screw press – approx. 72% moisture (w/w)
- Bio-solids post belt press – approx. 65% moisture (w/w)

Note, the moisture levels are likely to be variable depending on the season. The material coming off the wastewater treatment plant, and the resultant moisture of the compostable material streams, is largely contingent on the throughput of the processing plant at that time, and what the animals have been feeding upon prior to receipt; this is seasonally variable.

5. What does the 'paunch grass' screenings versus bio-solids from the wastewater treatment actually look like?

On the 9th March 2018, Silver Fern Farms presented a video and photos of the wastewater treatment process to the hearing. These outlined the two solids streams coming from the wastewater treatment operation prior to combination for transportation.

I trust that the information provided in this RFI helps the hearing panel to better understand the Silver Fern Farms contribution to the Canterbury Landscape Supplies compost operation and their manufacture and resultant marketing of Bioblend™.

If you have any further enquires relating to this matter please don't hesitate to make contact.

Yours sincerely,



Daryn Jemmett
Group Environmental Manager