Notes to myself for verbal presentation 7 March 2018 at 10.45

1) Introduction of me and our experience with the stench not being able to be identified until CLS consent became notified allowing us to narrow down the likely source. No odour problem prior to CLS operation.

2) Engineers operating outside their scope of expertise (engineers are not scientists)
   - microbiology
   - Wind flow and bluff bodies

3) There are errors and contradictory opinions offered by the consultants which preclude any confidence in stability, viability and acceptability of this venture. Annoys me immensely when applicants and their supporting engineers quote compliance with standards when in reality there is absolutely no supporting evidence whatsoever.

4) Of concern is that BECA have not acted independently because in referring to their report:

   "This report has been prepared by Beca for CLS. Beca has relied upon the information provided by CLS in completing this document. Unless otherwise stated, Beca has not sought to independently verify the information provided." [ANALOGY WITH POLICE COMPLAINTS AUTORITY]

Windflow

Michelle Dyer, Pru Harword and Philip Wylie (and ECAN inspectors) all refer to the inability to identify the source of smell or confirm its intensity thereby deflect the problem from CLS to unreasonable sensitive receptors. Many of CLS experts claim that odour was only present after notification. Mr Wylie hinted at a conspiracy theory etc etc [explain our situation]

We all noticed odour but were tolerant too in the case it was of a transient nature only.

Wind is not laminar flow: significant instability and variability associated with localised perturbations. Wind shear, turbulence and eddy currents, vortices, hot air rises. Airport wind direction is irrelevant to the site. Inspections on site are futile: also the location will appear to shift every few minutes – example of smoke.

Gaseous and Particulate Polyamines in Air will either fall to ground level if transported by heavier gases such SO_2 or CO_2 or methane or will rise to about 20+ m if riding on thermal updrafts from the

composting process in air. Coloured smoke grenades may be useful in identifying vertex flow characteristics.

Finally, the smell is only one factor: Airborne pathogens don't smell yet are far more hazardous. The CLS consultants are silent on this matter.

Helen Mongillo Hydrologist Sephira Environmental (geological engineer)

"*Managing ground water risks can be achieved*" is of itself an admission that there are risks and that that they do in fact need managing – this contradict CLS statement that:

"ground is not permeable thereby protecting the ground water from the intrusion of contaminants ".

Any localised ponding subsides because the water does eventually enter the ground! To assert that contaminants will not enter the ground is silly. That's why composting plants have concrete floors.

17) *States that site water will (**is likely to**) migrate downwards thru the vadose zone into the shallow groundwater downgradient into domestic water supply and stock water to be intercepted by wells 1.4 to 2.4 km away*. – this is surely a potential health issue given that it is acknowledged (22) that it may at times be above MAV. Although she is referring primarily to N_2, any other contaminants will be likewise transported.

22) *The ground water has already impacted from other area land use activities [RED Zone]*

I*f* the water quality is already compromised, why is it deemed acceptable to add more loading as indicated in 17 above? The site is relatively free draining contrary to the assertion that it is low permeability although I concede that a compacted upper soil horizon from heavy machinery may have locally altered this.

48) The whole N_2 management stratagem is pivotal upon the assertion that sawdust, bark fines and compost itself have "*substantive absorptive capacity*". If this is so then why does the Michelle Dyer in her BECA report refer to tanker trucks pumping excess surface water since Oct 2017?

The experts are not really on the same page here.

41) Various experts have referenced the “very rare” 50 year storms which would be problematic to the CLS site but because of their infrequency, we should not worry. I point out the futility of this perspective by reminding Helen et al that there have been 13, 1 in 50 year rain events in the last in the last 50 years and 3 x 1 in a 100 year rain events (2 of which were on consecutive years) in recent history according to NIWA principal meteorology scientist Dr Mike Revell.

We can expect more extreme weather events and it would appear that the proposed operation is not robust to such events as it is clear that containment will compromised.

52) Reference to ground water monitoring indicates a reduction in testing rigour over 2 years. I would suggest conditions of consent should require ongoing rigorous testing for the entire duration of the consent and that testing should be more than chemical. Particularly since CLS have provided no evidence of rigorous and robust monitoring of their final product (will refer to this later).

Philip Wylie Director CLS

9) Refers to community engagement and cites meetings held on 9th Nov, 23 Nov, 7 Dec; We have never received notification from CLS of these meetings.

11) Employing 4 staff hardly counts as an enhancing employment in the area.

14) The choice of the site is driven by economics and expediency. These are at the expense of the community. Other sites are “*uneconomical, logistically prohibitive or too close to residential neighbours”.* We are residential neighbours and clearly don’t count for some reason. If they can’t do it properly then don’t do it at all !!!!!!!!!!!

56) He cites 1*90 houses in Bromley and 3 here*? Don’t those “3” matter? They have an immutable right to clean air and water. Since when does a healthy residential environment require high density housing? NOTE: More like 20 dwellings west of the bridge and god knows how many east of the bridge.

15) “*Few rural dwellings*.” CLS have not factored the traffic density and population density in this area. (2000+ residents)

26) How can a company engaging in an activity which has NZS standards associated with it and which involves earthworks not realise that consent is required? It beggars belief that they did not know exactly what they were doing!

29) Reference to “not considered offensive” is ridiculous. “offensive to whom”? people who do not live in the plume of stench seem to consistently classify the effect “not being offensive”.

34) *Reviewing processes* to meet NZS4454 in August 2017 means that CLS were not compliant with NZS4454 prior to that date which contradicts their resource consent declaration espousing that they were fully compliant. There is still no rigorous testing and so they are still simply guessing. The is no QC or QA and not a single lab test for the final product has been produced as evidence as required by NZS4454.

39) “*Overall, the composting is carried out in accordance with NZS 4454.”* Again, this is a bold and totally outrageous statement made in the absence of evidence. CLS declared this to be so prior to 2017 and was subsequently shown to be a false statement. What confidence do we have now that they are on top of this? Claiming compliance and demonstrating compliance are two different things entirely. CF the dam and ICOLD.

42) “admission of odour release” effectively reaffirms that odour will be an ongoing issue (as it must be for an open air largely unmonitored operation. There are biosensors, gas sensors and general composting process instrumentation which would facilitate real time status data collection. This data when recorded on Shewart Charts with rigorous QC process monitoring would allow pre-emptive management of toxic discharges and unstable decomposition.

Barry Loe Resource Management Consultant

No comment

Michelle Dyer - Beca

20h) "*No major odour*". Again she is not factoring air flow perturbations. Try living here!

Would any of these experts buy a property in this area?

21) **Already addressed in Helen's submission.** The use of pumping trucks since Oct 2017 to remove water raises 2 issues. What happens to the pumped water and other documents state that all water is absorbed and held on site by the bark, sawdust and compost itself. This is a significant inconsistency in evidence presented by the consultants.

43 and 46, 51) *Odour report statistics*. These figures are all explainable as previously stated.

This Beca report is misleading as it tries to discredit the complainants odour observations as being "**impossible to attribute to CLS"** and "**at odds with airport wind directions"** etc and thereby by inference invalid, whereas her colleague Pru Harwood correctly offers an explanation (see below).

Pru Harwood - Beca

Section 19 says it all…. ***This is a critical statement of uncertainty!!!***

19) (a) "The Methods which were not able to be used for this assessment were:

Dispersion modelling of the discharges for predicting ambient concentrations of odour and dust beyond the site boundary. This technique was not appropriate for this site as reliable emission rate data for dust and odour was not available for the activities carried out and because of ***the variable nature of the site operations and the discharges****.*

(b) Community consultation and odour annoyance surveys were not able to be carried out prior to the preparation of the assessment Because of time constraints.

This statement seems to contradict her declaration (8) that she has carried out numerous odour surveys? Has she or hasn't she?

24) *"In a residential area, an acceptable odour and dust threshold is likely to be much lower than would be expected in a rural or industrial area*". This is an unsubstantiated and rather silly statement. ChCh city smells of car fumes and smog for much of the year. Our country air is clean and pure (or at least it was!). People come to our property (a business) for outdoor equestrian activities in clean air!

26f) States that Ms Dyer found odours detectable beyond the site boundary but did not find them offensive or objectionable – try living here.

Maybe we are all more sensitive precisely because the air is so pure here? What is wrong with that? Why are we being punished for living rurally?

57, 58) Ms Harwood is commenting on matters (micro biologicals) which are not part of her sphere of expertise and are odds with her declaration for her presentation and at odds with IPENZ code of ethics. The exact mechanism of legionella transport is very complicated and requires expert input. I assert that this entire section is thus inadmissible and informed analysis be carried out by an expert in that field.

67) Ms Harwood correctly confirms that there were offensive and objectionable discharges from the site and that CLS has *"reduced the risk…"*. That said, it also raises serious concerns:

This statement gives little comfort given that the plant was "already compliant with NZS4454" according to CLS. Mr Wylie espouses his long association with this very old company and so there should be no excuse whatsoever for systemic failure and yet they not only failed to notice and mitigate putrid compost on their site but thence proceeded to deliver it as a finished product to a commercial client. This confirms in a very public forum that they are not able to operate to industry best practice let alone NZS4454. There is absolutely no excuse for this double failure and the ability of CLS to run the plant in a sustainably stable manner remains highly questionable.

A natural corollary is:

QUESTION:

Is the presence of this plant going to be on our LIM. If so then there is clearly a significant enduring risk to residents and all the assurances offered by CLS and their consultants are of little value.

Quality control and Assurance:

There is no documented evidence of this in the applicant's submission. Are they even aware of these fundamental principles? It would appear, based on the evidence provided (or more critically, the evidence NOT provided), that CLS is an old-fashioned company, processing compost in a minimalistic old-fashioned way in the absence of modern business quality control methodologies. Why have BECA not suggested these as essential (and indeed minimum) compliance tools? The company is thus doomed to making the same mistakes over and over. Evidence to date clearly shows the company to be **reactive and not proactive** – a consequence of no QC and QA!

The NZS4454 standard specifically states that: Any producer claiming compliance with the standard MUST ensure that such compliance is capable of being verified. I do not see a mechanism by which this can occur with CLS as no evidence has been provided in any supplied documentation to date.

According to the NZS4454 standard, every delivered batch of compost must have had the following tests performed:

DETERMINATION OF pH, ELECTRICAL CONDUCTIVITY, AND AMMONIUM, NITRATE AND SOLUBLE PHOSPHORUS CONTENT

DETERMINATION OF CARBON AND NITROGEN CONTENT

DETERMINATION OF NITROGEN DRAWDOWN INDEX

DETERMINATION OF TOTAL PHOSPHORUS, BORON, CALCIUM, MAGNESIUM AND SODIUM CONTENT

DETERMINATION OF WETTABILITY

FULL BIOASSAY

PARTICLE SIZE GRADING

TOTAL CARBONATE CONTENT

DETERMINATION OF MOISTURE CONTENT AND LEVEL OF VISIBLE CONTAMINATION

MEASUREMENT OF VOLUME OF PACKAGED PRODUCT

DETERMINATION BY SELF HEATING THAT A PRODUCT IS SUFFICIENTLY COMPOSTED

There is no evidence that any of these requirements are being met by the applicant in accordance with NZS4454. The supplied Hills Lab test is for leachate and not finished product and is thus not directly relevant to the standard.

Even The Standard refers to QC and QA as follows:

SUPPLIER'S QUALITY MANAGEMENT SYSTEM

Where the manufacturer or supplier can demonstrate an audited and registered quality management system complying with the requirements of the appropriate Australian, New Zealand or international Standard for a supplier's quality management system or systems, this may provide the necessary confidence that the specified requirements will be met. The quality assurance requirements need to be agreed between the customer and supplier and should include a quality or inspection and test plan to ensure product conformity. Information on establishing a quality management system is set out in AS/NZS ISO 9001 and AS/NZS ISO 9004. S5 OTHER MEANS OF ASSESSMENT If the above methods are considered inappropriate, determination of compliance with the requirements of this Standard may be assessed from the results of testing coupled with the manufacturer's guarantee of product conformance. Irrespective of acceptable quality levels (AQLs) or test frequencies, the responsibility remains with the manufacturer or supplier to supply products that conform to the full requirements of the Standard.

CLS have provided no evidence in this and are thus non-compliant.

In summary:

We, the immediate residents and indeed greater residents of this box-canyon area are being potentially exposed to pollutant's and hazards only a daily basis. A weak smell could be associated with a high concentration of deadly pathogens, organisms and general nasties. Certainly, CLS cannot refute this statement with any evidential certitude. We all simply do not know!

We are all entitled to clean air.

The location of this enterprise is an inappropriate use of good farmland and is of a nature that it could be placed anywhere. It adds nothing to this community. There are plenty of scrappy 100% rural sites that could be used if they so choose.

I assert that there is sufficient doubt (based on solid evidence to date) as to the ability of The Applicant to remain compliant that I formally request the Commissioners to decline resource consent OR impose significant, enduring and measurable requirements on their operation for the duration of the consent period.