

Adaptive Management Plan – Progress Report 2

4 August 2020

Christchurch City Council facilities located at Metro Place, Bromley

Overview

The Council owns two resource recovery facilities in Bromley, the Organics Processing Plant (OPP) operated under contract by Living Earth, and the Metro Place transfer station operated by EcoCentral. In response to Environment Canterbury's Bromley Odour Project findings, the Council is working closely with its contractors to develop and implement the Adaptive Management Plan (AMP) to mitigate odour at these two facilities.

The objectives of the plan are to:

1. Understand the sources of odour at each site.
2. Reduce adverse environmental impacts from both Council-owned facilities.
3. Address community concerns and keep the community informed of key milestones and activities.

This is the second Progress Report of the Plan.

To view the first report, visit www.ccc.govt.nz/bromleyodour

Organics Processing Plant

Living Earth has focused its efforts on a programme of work to identify and adjust its processes to mitigate odour from the plant.

Misters

Living Earth has been using misters for a number of years as a tool to mitigate odour from the plant. Four additional larger misters have been brought in and are now in use. The team are currently evaluating the efficacy of these new misters, with the option to install further fixed misters if considered necessary.

Compost 'recipe'

Living Earth has conducted trials on the compost 'recipe' and adjusted the process to assess whether if there is an impact on the odour profile of the product. Changes include:

- Altering the 'ingredients' that are added to the kerbside organics input
- Adjusting the rate of temperature changes during different composting phases
- Lowering the temperature at specific composting phases
- Altering the pH of the compost at different composting phases.

The trials have shown that changes in the process can have a significant impact on the stability and odour profile of the compost produced. They selected a preferred blend on 27 July incorporating ten changes to the 'recipe'. It will take about 12 weeks for all of the compost from the old blend to completely cycle through the composting process and move off-site, leaving the new blend in the windrows.

The new compost 'recipe' has a different odour profile to the old blend, and by the end of October we'll have a good understanding about whether this change will change the characteristics and reduce the odour to an acceptable level.

Monitoring

We continue to monitor the odour onsite with electronic noses and we're working with our supplier to obtain further units. Work is also underway to characterise the different gases released during the composting process.

Independent review

The Organics Processing Plant's Environmental Management Plan (EMP) is being independently reviewed. We anticipate this work will be completed by the end of August.

Redevelopment options

Living Earth is sourcing a screening machine that allows large organic material to be processed a second time. This is material that hasn't fully broken down through the initial composting process. They expect to have this installed and operating in about five weeks' time.

We've commissioned a feasibility study to determine whether increasing the aeration of the composting tunnels would improve how the plant operates, allowing more material to be processed inside the facility. This study is expected to be completed by the end of September

The Council will continue to consider all options for the longer term including more significant process changes, further infrastructure investment, alternative technologies and relocating the composting plant.

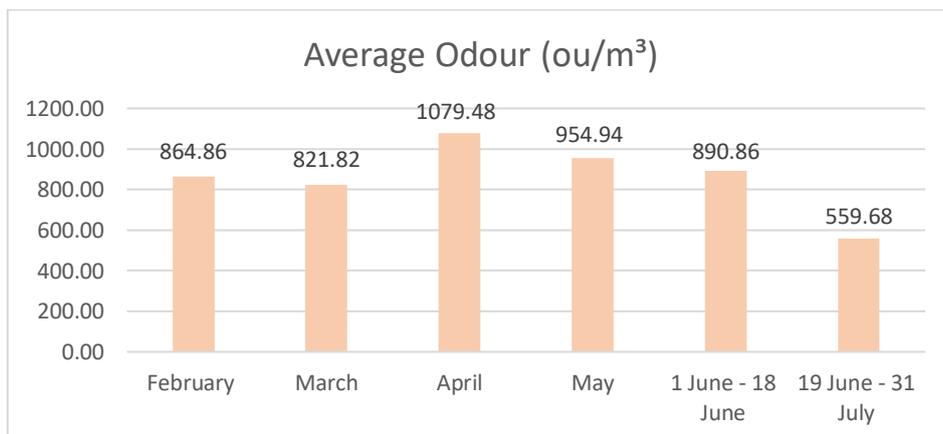
Transfer station

EcoCentral operate the EcoDrop transfer station and recycling centre at Metro Place, Bromley.

Operational changes

EcoCentral has continued to practice good on-site 'housekeeping', clearing odourous waste into sealed containers quickly and ensuring all waste is cleared each evening. EcoCentral has also been completing daily off-site odour assessments.

The data gathered suggests that operational changes have had a significant impact on odour levels coming from the site. An electronic nose is located above the pit at the transfer station. This records odour at the source within the building. The graph below shows the average odour units detected by the electronic nose over time. On 19 June, when the 'housekeeping' changes took effect, a nearly 40 per cent decline in the average odour units was detected, when compared to previous months' results.



This indicates the changes have had a significant impact on odour levels at the source.

Independent Review

Pattle Delamore Partners Ltd (PDP) has completed an independent review of the transfer station's odour management processes. This included a site visit as well as reviewing operational plans. PDP's review found that, with the operational changes made as part of the Adaptive Management Plan, the site is demonstrating good operational practices. PDP's review did not recommend making any significant investment in additional controls at this stage.

The review's key recommendations are:

- Prepare a standalone odour management plan
- Continue field odour observations
- Review electronic nose technology, data and calibrations
- Thoroughly clean the pit at least weekly.

EcoCentral has committed to adopting these recommendations and is engaging PDP to write the odour management plan.

Communications

Community updates

The community have been kept informed via our regular e-newsletter. We also have a dedicated webpage that is kept up-to-date with the latest developments. You can find this at ccc.govt.nz/BromleyOdour

Video

Our communications team have also been working hard to put together a video to show how the facilities operate and visually show the changes being made at our facilities to mitigate odour.

Next steps

Living Earth

- Continue to cycle the new compost blend through the plant
- Procure the new screen, install and include in operations
- Receive and set-up electronic noses from Envirosuite
- Confirm whether additional fixed misters are required
- Receive and consider independent review of the Environmental Management Plan
- Further explore long-term options.

EcoCentral

- Continue to practice good 'housekeeping' changes
- Adopt recommendations provided by PDP.

Communications

- Continue to update community via e-newsletters
- Release video.