

Adaptative Management Plan Report 1 June – 30 June 2020

On 19 May 2020, Environment Canterbury and Christchurch City (CCC) agreed to an Adaptive Management Plan to address long standing odour issues in Bromley.

As part of the plan, regular monthly reviews on progress on monitoring and odour mitigation are to occur on 7 July, 4 August and 8 September 2020. This first report covers the reporting period from 1 June to 30 June 2020.

The CCC has been provided with weekly summaries of site assessments each Friday by email. These summaries are available to key CCC staff. This report does not include notifications of odour given directly to CCC, as required by CRC080301.1 condition 29.

This is the first month where the AMP has been implemented and it is anticipated that a drop off in the number of complaints and substantiated events will occur over months two and three as mitigation measures are implemented.

While this report focuses on the odours detected from Living Earth and EcoDrop, we have included (for completeness) a single substantiated odour from another source. It is important to note this site had a significantly different odour than those noted at Living Earth and EcoDrop and was on a different wind trajectory.

We have not provided a comparison between data collected during the pilot and the month of June 2020 but have provided a comparison between the months of May 2020 and June 2020. Future reports will add the data from July 2020 and August 2020 for monthly comparison over the three- month mitigation trial period.

Summary of findings:

Comparison of reports of odour

Most reports of odour received were via the Smelt It app. Phone calls accounted for about 12% of odour reports with Snap Send Solve representing a very small number. This is detailed further in the report.

Location of substantiated sites

	May 2020	June 2020
Living Earth	2	6
EcoDrop	1	2

Most substantiated instances where odour was detected beyond the property boundary were from Living Earth.

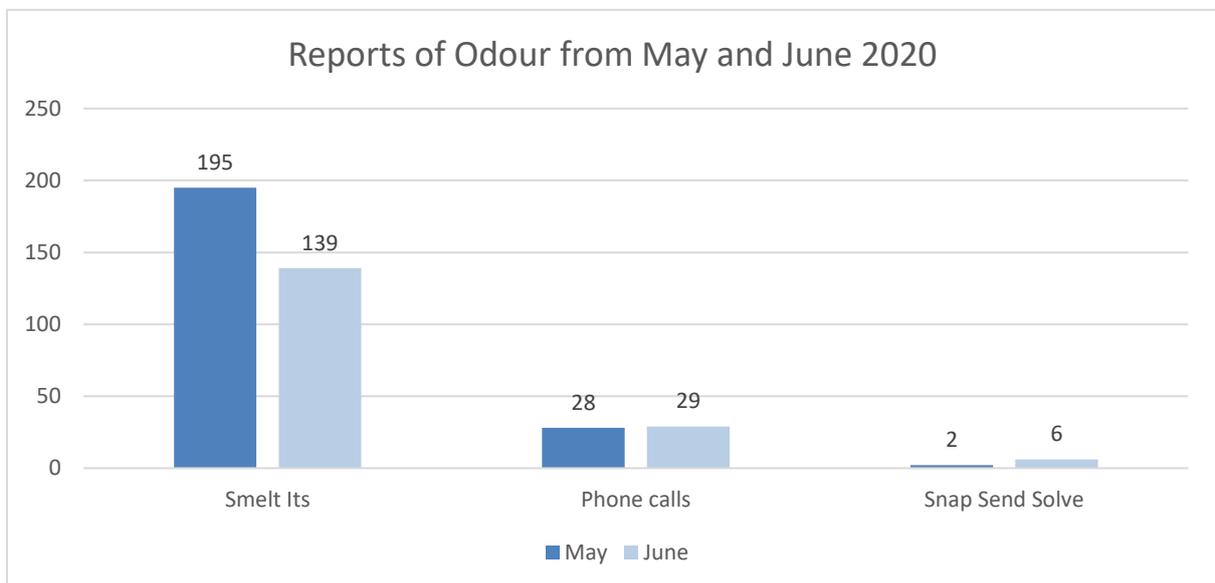
Highest amenity impact odour type

The highest reported amenity type for June as reported by Smelt It submitters was Rubbish followed by Meaty-Rancid and Faecal – Sickening. During May these three remained at about the same levels.

We have hypothesised, and as mentioned to CCC previously, that when Rubbish and Compost combine, this creates a chronic combination which could explain these odour types. More research and analysis is required to confirm this hypothesis and is detailed further in the report.

1. Summary of reports of odour for May and June 2020:

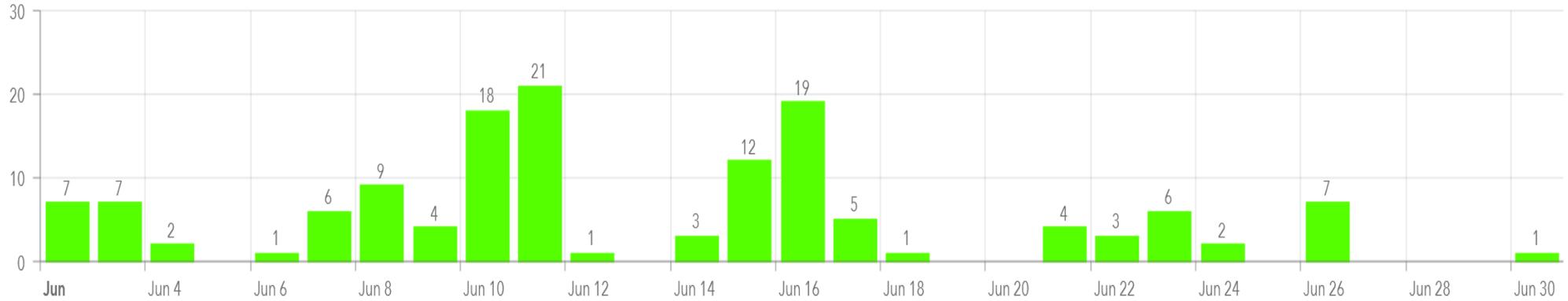
	May 2020	June 2020
Smelt Its	195	139
Phone calls	28	29
Snap Send Solve	2	6
Total	225	174



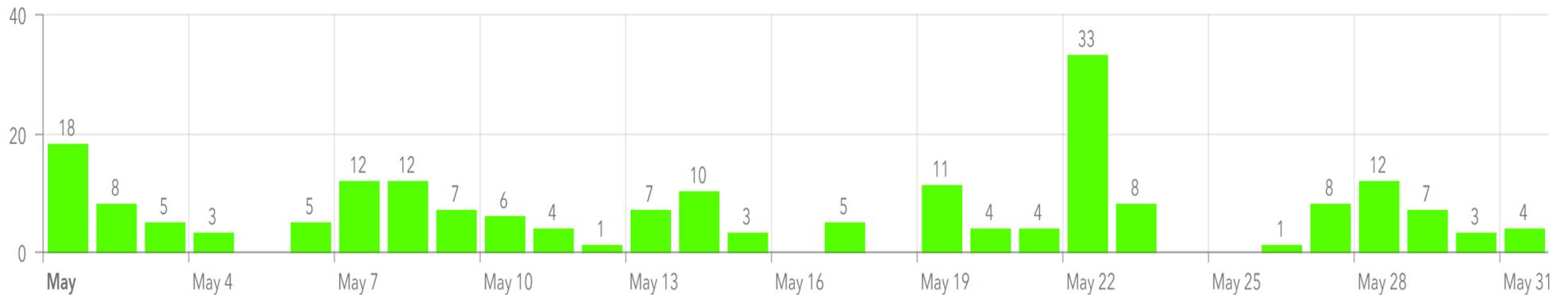
2. Smelt it reports per day

The following graphs show how many Smelt Its were received per day over the month of May and June 2020

139 Smelt Its in June 2020



195 Smelt Its in May 2020



3. Total Pollution Events (PEs) June 2020: 42

Unable to attend, outside normal operating hours: 12

Common reasons for not attending includes the notification being received after hours and /or staff were not able to attend.

4. Total Pollution Events (PEs) May 2020: 45

Unable to attend, outside normal operating hours: 36

Mostly related to the Covid lockdown when staff could not attend.

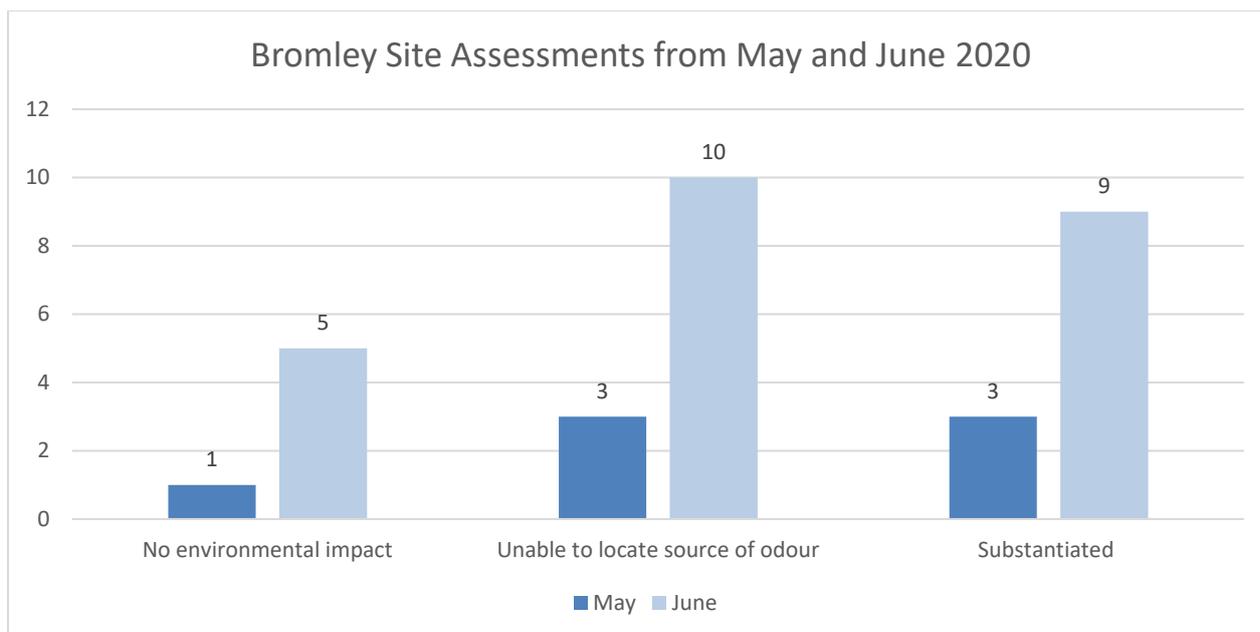
5. Assessments by warranted officers in Bromley in May and June 2020:

	May 2020	June 2020
No environmental impact	1	5
Unable to locate source of odour	3	10
Substantiated	3	9
Total	7	24

*No environmental impact: The odour was not considered offensive or objectionable and/or complied with regional rules or a resource consent.

*Unable to locate source of odour: Staff detected an odour but could substantiate the odour source.

*Substantiated: A warranted officer confirmed the source of the odour and that it was offensive and objectionable beyond the boundary of the site, by completing an odour assessment (including a 360 appraisal) and a site visit in accordance with Ministry for the Environments guidelines.



6. Independent Odour Assessor:

The Independent Odour Assessor's report has been attached to the email containing this report (because of its size).

In summary, Odour assessments were carried out on 5 days (25-29 June). Figure 11 in the report (on page 21) shows the percentages of odour characters in each of the sectors. It is clear from these results that in the predominant North and North-easterly winds the odours are classified as compost (mostly) and some rubbish odour. Other odours are identified on different winds.

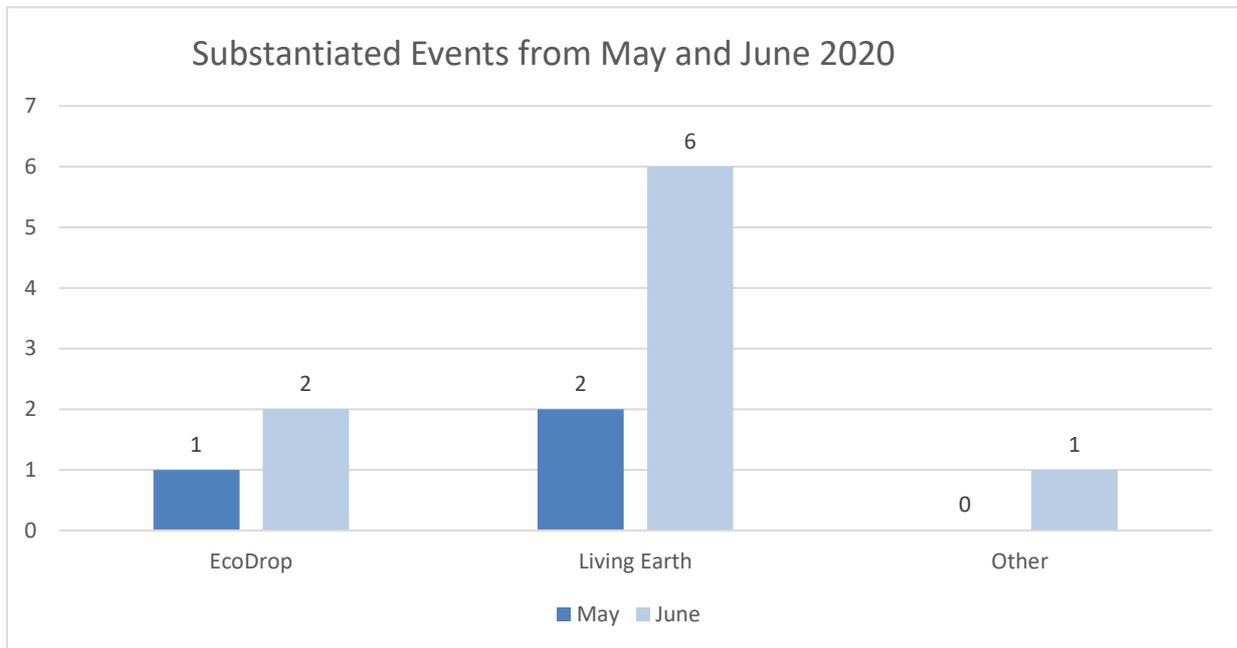
These results support the reports from the community and direct observations by ECan officers.

7. Summary of substantiated reports where a Notice of Non-Compliance notice was issued May and June 2020:

	May 2020	June 2020
EcoDrop	1	2
Living Earth	2	6
Other Sites	0	1
Total	3	9

*A Notice of Non-compliance is issued to a site when a warranted officer confirmed the source of the odour and that it was offensive and objectionable beyond the boundary of the

site, by completing an odour assessment (including a 360 appraisal) and site visit in accordance with Ministry for the Environments guidelines. For the next two months the Notice of Non-Compliance form has been modified to be an Adaptive Management Plan Notification.



8. Amenity Impact

The graphs below depict Smelt It submissions by odour type reported (in line with Ministry for the Environment guidelines) and the most reported odour types. The amenity impact is explained below:

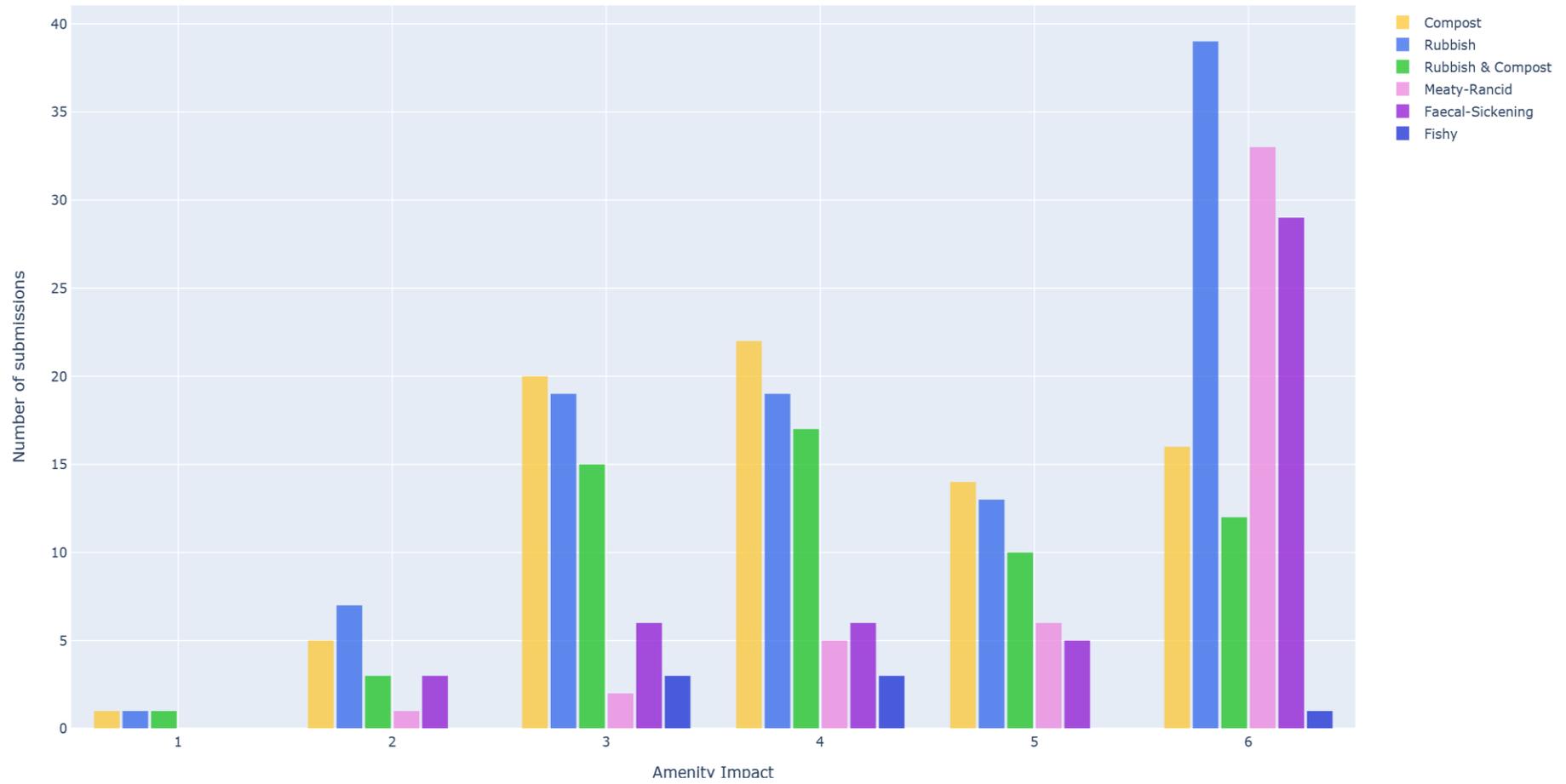
Smelt-it Odour impact scale



0	I haven't noticed any smell.
1	I noticed a faint smell outside, I wonder what that is?
2	I noticed a smell outside but it doesn't really change what I do.
3	I can't use my outside areas, if I keep the windows closed it's OK inside.
4	I can smell the odour inside my house.
5	I can't use my house for certain activities because of the smell.
6	I don't want to be at home because of the odour.

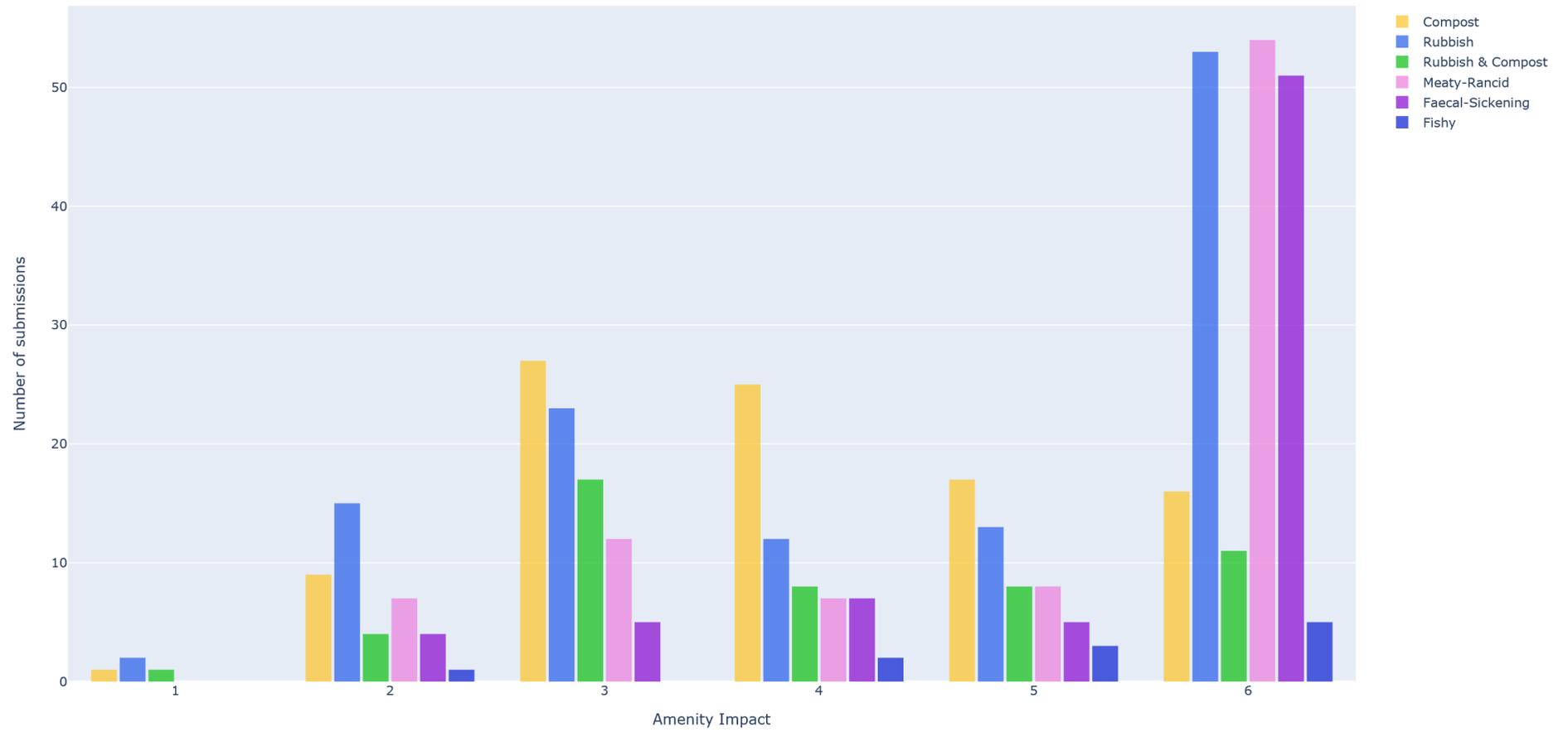
Amenity Impact June 2020

Amenity Impact by Odour Type



Amenity Impact May 2020

Amenity Impact by Odour Type



9. BackTrack Plumes

The following images depict the plumes modelled for each Smelt It reported in May and June 2020. As soon as a Smelt It is received, Environment Canterbury's BackTrack modelling software, generates a plume based on wind speed and direction to model a likely trajectory.

The image below depicts the number of times a plume model has intersected a 50m square grid. The yellow area shows the Living Earth and EcoDrop property boundary. **Please note** plumes are only shown where 7 or more plumes intersect a 50m area. Our next report will depict all plumes.

While we received less Smelt Its in May and June than during the pilot period, and therefore less plumes to model, we substantiated more reports of odour as our warranted officers were in the field proactively monitoring the Bromley area for odour discharges and were able to corroborate information from the public.

June show less plumes through Living Earth and EcoDrop as there were less plumes intersecting a 50m area coupled with less Smelt It reports for June. The officers were also in the field in June

Plumes May 2020



Plumes June 2020



For comparison, the below image shows the total number of plumes for the Bromley Odour period and show 5 weeks of plumes in one image.

