



# memorandum



TO Christchurch City Council

FROM

DATE

15 July 2026

RE Living Earth Odour Monitoring: 1<sup>st</sup> – 30<sup>th</sup> June 2026 Summary

## 1.0 Background

Living Earth Limited (Living Earth) operates an organics processing plant and composting facility located at 40 Metro Place, Bromley, Christchurch (the LE Site). Living Earth's air discharges are subject to the conditions attached to air discharge consent CRC080301.1 ("the consent") from Canterbury Regional Council (CRC) to discharge contaminants (odour and dust) to air.

Specifically, Condition 27 of the consent states that:

*"The discharges to air shall not cause odour or dust which is offensive or objectionable beyond the boundary of the site on which this consent is exercised."*

While Living Earth operates the composting facility, Christchurch City Council (CCC) holds the consent.

Pattle Delamore Partners Limited (PDP) has been providing assistance to CCC and Living Earth regarding the assessment and management of odour effects from the site. This has included regular odour scouting. The objectives of the odour scouting are to:

- ✧ Correlate the intensity and characters of observed odour (where possible) to:
  - Odour sources in the Bromley area.
  - Specific activities and/or sources on the LE Site.
  - Meteorological conditions.
  - Time of day.
- ✧ Undertake FIDOL assessments to determine if offensive or objectionable odours are present beyond the site boundary.
- ✧ Corroborate the content of community (i.e., Smelt-It) complaints.

This letter provides a summary of PDP's observations of off-site odour scouting for the period between 1<sup>st</sup> and 30<sup>th</sup> June 2026. The stockpiles of the outdoor material, namely the unscreened compost, oversize stockpiles and screened fines have been cleared from the site since the 12<sup>th</sup> of January 2024.

## 2.0 Summary of Methodology

Odour observations are made by PDP odour scouts. To ensure consistency between scouts, PDP ensures the following:

1. Scouts periodically undertake parallel odour assessments with each other in the field.
2. Scouts periodically visit the LE Site and familiarise themselves with the character of the odour from the various onsite sources.
3. Scouts undergo nose calibration via direct dilution olfactometry according to the requirements of AS/NZS 4323.3:2001 Section 9.7.2.

During an assessment, scouts walk at a comfortable pace through the area downwind of the LE Site, making note of odours detected. PDP has defined a series of observation points in the area where the scout makes more detailed observations, shown in Figure 1. The exact route and observation points visited in an assessment depend on the meteorological conditions (wind speed and direction) and the odour (if any) detected by the scout on the route.

Sites H and M are immediately downwind of the site, located along Dyers Road with sites G and F. Sites I, J, K, and N are located in the heavy industrial zone. Sites A, C, B, D, P, and R are located in the residential zone around Bayswater Reserve. Sites E, L, O, and Q are located roughly along the residential-industrial boundary. In assessments, Sites E, O, D and Q are in the residential zone, while Site L is in the general industrial zone.



Figure 1: Odour Observation Locations

In key areas where odour is detected, or at known sensitive areas, a full 10-minute odour observation is taken. Where 10-minute observations are taken at a site, a FIDOL assessment is completed by the scout and a determination made as to whether the odour is offensive or objectionable.

Determinations made are necessarily the opinion of the odour scout at that time to the conditions they encounter. They are based upon observations in the field but may also include consideration of wider factors such as meteorological conditions and patterns of site activity when considering the potential for offensive or objectionable odour over longer time periods.

Each scout makes their determination with reference to other determinations made, both within PDP, and more widely amongst the air quality profession.

Summaries for each odour scout are included in Section 3.0. Detailed analysis of specific observations is included, where necessary. Results of all 10-minute odour observations, summarised by observation location, are appended to this memorandum. This memorandum presents the results of the odour scouting undertaken. This report does not analyse odour trends across time.

Due to a change in meteorological data availability since October 2024, wind speed, wind direction and temperature data from the Bromley AWS is not as readily available post-scouting. Retrospective windspeed and wind direction data will not be reported for this monitoring window.

## 2.1 FIDOL Analysis

As per Ministry for the Environment's Good Practice Guide for Assessing and Managing Odour (MfE GPG), odours were assessed against the FIDOL factors to determine if they were offensive or objectionable. The FIDOL factors are:

- ✧ Frequency;
- ✧ Intensity;
- ✧ Duration;
- ✧ Offensiveness/Character<sup>1</sup>; and
- ✧ Location.

Odour intensity is reported on a scale of (0-6) as per the MfE's GPG Odour. PDP applies the following descriptions to each odour intensity to ensure consistency between scouts:

- |                      |                                                                                                                      |
|----------------------|----------------------------------------------------------------------------------------------------------------------|
| 0. No Odour:         | No odour.                                                                                                            |
| 1. Very Weak:        | Odour detectable but character not recognisable.                                                                     |
| 2. Weak:             | Odour detectable and barely recognisable.                                                                            |
| 3. Distinct:         | Odour readily recognisable.                                                                                          |
| 4. Strong:           | Odour is strong but not causing discomfort to assessor.                                                              |
| 5. Very Strong:      | The odour causes some discomfort; assessor can remain in area but will consider leaving/altering breathing patterns. |
| 6. Extremely Strong: | The odour causes assessor to feel nauseous or compelled to leave the area.                                           |

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<sup>1</sup> "It is preferable to refer to the character of an odour, rather than its 'offensiveness' to avoid confusion between the inherent characteristics of an odour (i.e., whether it is pleasant or unpleasant) and whether there is an 'objectionable or offensive' effect occurring as a result of exposure to odour." (MfE GPG Odour)

When determining whether odour is having an offensive or objectionable effect, odour scouts make their determination with respect to the FIDOL factors. No regulatory standard exists for the specific combination of FIDOL factors that do or do not constitute an offensive or objectionable odour. However, as a broad litmus test when making determinations at the Living Earth site, PDP scouts consider intermittently distinct (3) or continuous weak (2) odours of a negative hedonic tone (such as compost) to be offensive or objectionable in a residential zone.

Within a heavy industrial zone, there is a lower expectation of amenity as it pertains to odour.

Based on PDP's understanding, this approach is generally consistent with that used by other air quality professionals.

### 3.0 Results Summary

Result summaries for each odour scout are reported below. Results of all 10-minute odour observations, summarised by observation location, are appended to this memorandum.

Scouts were present in the Bromley area on the:

- ✧ 4<sup>th</sup> June 2026;
- ✧ 11<sup>th</sup> June 2026;
- ✧ 16<sup>th</sup> June 2026;
- ✧ 19<sup>th</sup> June 2026;
- ✧ 22<sup>nd</sup> June 2026 and
- ✧ 24<sup>th</sup> June 2026.

### 3.1 4<sup>th</sup> June 2026

██████ was the PDP odour scout. The scout was present for approximately 50 minutes. The scout started near Site D and then walked along the boundary of the industrial area towards Site H and M. The scout then walked through the industrial area to return to Site D and ended the scout at Site P. North-easterly winds were forecast on the day however winds shifted more easterly and became calmer around halfway through the scout. The objective was to undertake odour monitoring in the area downwind of the LE Site. The odour scout route (yellow dots) and key scouting locations are shown in **Figure 2**.



**Figure 2: 4<sup>th</sup> June 2026 - Odour Scout Route**

Results from the odour scout are shown below. Entries within **Table 1** that are highlighted blue denote locations within a residential zone, purple denotes locations within an industrial zone.

| Table 1: 4 <sup>th</sup> June 2026 - Odour Scouting Summary |       |                                                             |
|-------------------------------------------------------------|-------|-------------------------------------------------------------|
| Site                                                        | Time  | Observations                                                |
| D                                                           | 13:24 | Intermittent weak (2) solvent odour detected.               |
| E                                                           | 13:30 | Intermittent weak (2) oceanic odour detected.               |
| F                                                           | 13:35 | No odour (0) detected.                                      |
| G                                                           | 13:40 | No odour (0) detected.                                      |
| H                                                           | 13:42 | No odour (0) detected.                                      |
| H-M                                                         | 13:46 | Intermittent weak (2) compost odour detected.               |
| M                                                           | 13:48 | Weak (2) compost odour detected.                            |
| H                                                           | 13:52 | Intermittent weak (2) compost odour detected.               |
| I                                                           | 13:56 | Very weak (1) odour of an indeterminate character detected. |
| J                                                           | 14:00 | Weak (2) solvent odour detected.                            |
| K                                                           | 14:03 | Weak (2) to Distinct (3) rubbish odour detected.            |
| L                                                           | 14:07 | Weak (2) solvent odour detected.                            |
| D                                                           | 14:13 | No odour (0) detected.                                      |

Some weak (2) compost odour was detected at the eastern boundary of the industrial area at site H.

No compost odour was detected in the residential area.

The compost odour detected was determined not to be offensive or objectionable.

### 3.2 11<sup>th</sup> June 2026

██████ was the PDP odour scout. The scout was present for approximately 50 minutes. The scout started in the residential area on Bayswater Crescent heading past Sites P and E, before walking along the boundary of the industrial area towards Site H, before heading through the industrial area to Site D. North-easterly winds were forecast. The objective was to undertake odour monitoring in the area downwind of the LE Site. The odour scout route (yellow dots) and key scouting locations are shown in Figure 3.



Figure 3: 11<sup>th</sup> June 2026 - Odour Scout Route

Results from the odour scout are shown below. Entries within **Table 2** that are highlighted blue denote locations within a residential zone and purple denotes locations within an industrial zone.

| Table 2: 11 <sup>th</sup> June 2026 - Odour Scouting Summary |       |                                                                                                                                                                                                                                                                                                                                                                   |
|--------------------------------------------------------------|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Site                                                         | Time  | Observations                                                                                                                                                                                                                                                                                                                                                      |
| P                                                            | 09:52 | No odour (0) detected.                                                                                                                                                                                                                                                                                                                                            |
| E                                                            | 09:55 | No odour (0) detected.                                                                                                                                                                                                                                                                                                                                            |
| Lolly Shop                                                   | 09:56 | Weak (2) compost odour detected.                                                                                                                                                                                                                                                                                                                                  |
| F                                                            | 9:59  | Very weak (1) odour of an indeterminate character detected.                                                                                                                                                                                                                                                                                                       |
| G                                                            | 10:03 | Weak (2) compost odour detected.                                                                                                                                                                                                                                                                                                                                  |
| H                                                            | 10:06 | Intermittent weak (2) compost odour detected.                                                                                                                                                                                                                                                                                                                     |
| H                                                            | 10:10 | <b>FIDOL assessment completed.</b><br><br>No odour (0) was detected 25% of the time. Very weak (1) odours of an indeterminate character were detected 50% of the time. Weak (2) compost odour was detected 22% of the time. Weak (2) solvent odour was detected 3% of the time.<br><br><b>The odour was determined to be neither offensive nor objectionable.</b> |
| I                                                            | 10:24 | Very weak (1) odour of an indeterminate character detected.                                                                                                                                                                                                                                                                                                       |
| J                                                            | 10:27 | Weak (2) faecal odour detected.                                                                                                                                                                                                                                                                                                                                   |
| InterGroup                                                   | 10:30 | Distinct (3) sharp rubbish odour detected.                                                                                                                                                                                                                                                                                                                        |
| K                                                            | 10:35 | No odour (0) detected.                                                                                                                                                                                                                                                                                                                                            |
| L                                                            | 10:39 | No odour (0) detected.                                                                                                                                                                                                                                                                                                                                            |
| D                                                            | 10:41 | No odour (0) detected.                                                                                                                                                                                                                                                                                                                                            |

Some weak (2) compost odour was detected at the eastern boundary of the industrial area at sites G and H. This odour was intermittent, and during a 10-minute observation at site H it occurred only 22% of the time.

No compost odour was detected in the residential area.

The compost odour detected was not determined to be offensive or objectionable.

### 3.3 16<sup>th</sup> June 2026

██████ was the PDP odour scout. The scout was present for approximately 1 hour 20 minutes. The scout started in the residential area by Site D, heading to site L on the way to Site E, before walking along the boundary of the industrial area towards Site M. The scout then took a few observations between Sites G and H before moving through the industrial area. Following this a number of observations were made in the residential area at Sites O, D and P. North-easterly winds were forecast. The objective was to undertake odour monitoring in the area downwind of the LE Site. The odour scout route (yellow dots) and key scouting locations are shown in **Figure 4**.



**Figure 4: 16<sup>th</sup> June 2026 - Odour Scout Route**

Results from the odour scout are shown below. Entries within **Table 3** that are highlighted blue denote locations within a residential zone and purple denotes locations within an industrial zone.

**Table 3: 16<sup>th</sup> June 2026 - Odour Scouting Summary**

| Site | Time  | Observations                                                                                                                                                                                                                                                                                                                                                             |
|------|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| D    | 14:17 | Intermittent weak (2) solvent odour detected.                                                                                                                                                                                                                                                                                                                            |
| L    | 14:19 | Weak (2) solvent odour detected.                                                                                                                                                                                                                                                                                                                                         |
| E    | 14:23 | No odour (0) detected.                                                                                                                                                                                                                                                                                                                                                   |
| F    | 14:27 | No odour (0) detected.                                                                                                                                                                                                                                                                                                                                                   |
| F-G  | 14:28 | Intermittent weak (2) compost odour detected.                                                                                                                                                                                                                                                                                                                            |
| G    | 14:30 | Very weak (1) odour of an indeterminate character detected.                                                                                                                                                                                                                                                                                                              |
| H    | 14:32 | Distinct (3) compost odour detected.                                                                                                                                                                                                                                                                                                                                     |
| M    | 14:36 | Very weak (1) odour of an indeterminate character detected.                                                                                                                                                                                                                                                                                                              |
| H    | 14:41 | Weak (2) compost odour detected.                                                                                                                                                                                                                                                                                                                                         |
| H    | 14:50 | <p><b>FIDOL assessment completed.</b></p> <p>No odour (0) was detected 27% of the time. Very weak (1) odours of an indeterminate character were detected 40% of the time. Weak (2) compost odour was detected 32% of the time. Weak (2) solvent odour was detected 2% of the time.</p> <p><b>The odour was determined to be neither offensive nor objectionable.</b></p> |
| H-G  | 14:56 | Distinct (3) compost odour detected.                                                                                                                                                                                                                                                                                                                                     |
| G    | 14:59 | Weak (2) compost odour detected.                                                                                                                                                                                                                                                                                                                                         |
| H    | 15:01 | Weak (2) compost odour detected.                                                                                                                                                                                                                                                                                                                                         |
| I    | 15:05 | No odour (0) detected.                                                                                                                                                                                                                                                                                                                                                   |
| N    | 15:06 | Weak (2) compost odour detected.                                                                                                                                                                                                                                                                                                                                         |
| J    | 15:11 | No odour (0) detected.                                                                                                                                                                                                                                                                                                                                                   |
| K    | 15:14 | Weak (2) rubbish odour detected.                                                                                                                                                                                                                                                                                                                                         |
| K-L  | 15:16 | Weak (2) compost odour detected.                                                                                                                                                                                                                                                                                                                                         |
| L    | 15:19 | Very weak (1) odour of an indeterminate character detected.                                                                                                                                                                                                                                                                                                              |
| D    | 15:20 | No odour (0) detected.                                                                                                                                                                                                                                                                                                                                                   |
| P    | 15:23 | Very weak (1) odour of an indeterminate character detected.                                                                                                                                                                                                                                                                                                              |
| O    | 15:27 | Very weak (1) odour of an indeterminate character detected.                                                                                                                                                                                                                                                                                                              |
| D-P  | 15:30 | Weak (2) compost odour detected.                                                                                                                                                                                                                                                                                                                                         |
| P    | 15:33 | <p><b>FIDOL assessment completed.</b></p> <p>No odour (0) was detected 87% of the time. Very weak (1) odours of an indeterminate character were detected 13% of the time.</p> <p><b>The odour was determined to be neither offensive nor objectionable.</b></p>                                                                                                          |

**Table 3: 16<sup>th</sup> June 2026 - Odour Scouting Summary**

| Site | Time  | Observations                                                                                                                                                                                                                                                                                                                                                      |
|------|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| D    | 15:44 | <b>FIDOL assessment completed.</b><br><br>No odour (0) was detected 18% of the time. Very weak (1) odours of an indeterminate character were detected 57% of the time. Weak (2) compost odour was detected 23% of the time. Weak (2) solvent odour was detected 2% of the time.<br><br><b>The odour was determined to be neither offensive nor objectionable.</b> |

Some weak (2) to distinct (3) compost odour was detected at the eastern boundary of the industrial area at sites H and G. This odour was intermittent with weak (2) compost odour occurring 32% of the time during a 10-minute FIDOL assessment at site H and only one observation of distinct (3) compost odour when walking between sites G and H.

This compost odour was traced downwind through the industrial area, with observations of weak (2) compost at Site N, and between Sites K and L.

At Site D in the residential area no compost odour was observed on the first two passes of the area and during a 10-minute observation later in the scout weak (2) compost was observed only 23% of the time.

At Sites P and O in the residential area only very weak odours of an indeterminate character were observed.

The compost odour experienced on this day may be attributable to a biofilter maintenance occurring at the Living Earth site from 15th June for approximately two weeks. While the odour was more of a compost like odour rather than biofilter like odour it is possible that the maintenance led to a slight increase in release of less filtered compost odour.

The compost odour detected was not deemed to be offensive or objectionable.

### 3.1 19<sup>th</sup> June 2026

██████ was the PDP odour scout. The scout was present for approximately 1 hour 40 minutes. The scout started in the residential area on Bayswater crescent, stopping at Sites D and O for 10-minute FIDOL observations as well as walking by Site Q. Following this the scout headed past Site E and walked the eastern boundary of the industrial area returning to Site O via the same route. North-easterly winds were forecast however winds began to shift to the east around 12:25 during the scout. The objective was to undertake odour monitoring in the area downwind of the LE Site. The odour scout route (yellow dots) and key scouting locations are shown in **Figure 5**.



**Figure 5: 19<sup>th</sup> June 2026 - Odour Scout Route**

Results from the odour scout are shown below. Entries within **Table 4** that are highlighted blue denote locations within a residential zone and purple denotes locations within an industrial zone.

Table 4: 19<sup>th</sup> June 2026 - Odour Scouting Summary

| Site           | Time  | Observations                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Bayswater Cres | 11:20 | Intermittent distinct (3) compost odour detected.                                                                                                                                                                                                                                                                                                                                                                         |
| D              | 11:23 | Weak (2) compost odour detected.                                                                                                                                                                                                                                                                                                                                                                                          |
| D              | 11:25 | <b>FIDOL assessment completed.</b><br><br>No odour (0) was detected 17% of the time. Very weak (1) odours of an indeterminate character were detected 57% of the time. Weak (2) compost odour was detected 27% of the time.<br><br><b>The odour was determined to be neither offensive nor objectionable.</b>                                                                                                             |
| O              | 11:40 | Very intermittent distinct (3) compost odour detected.                                                                                                                                                                                                                                                                                                                                                                    |
| O              | 11:43 | <b>FIDOL assessment completed.</b><br><br>No odour (0) was detected 32% of the time. Very weak (1) odours of an indeterminate character were detected 57% of the time. Weak (2) compost odour was detected 5% of the time. Weak (2) solvent odour was detected 5% of the time. Distinct (3) vehicle fumes were detected 2% of the time.<br><br><b>The odour was determined to be neither offensive nor objectionable.</b> |
| Q              | 11:58 | Intermittent very weak (1) odour of an indeterminate character detected.                                                                                                                                                                                                                                                                                                                                                  |
| O              | 12:03 | No odour (0) detected.                                                                                                                                                                                                                                                                                                                                                                                                    |
| D              | 12:06 | No odour (0) detected.                                                                                                                                                                                                                                                                                                                                                                                                    |
| E              | 12:11 | Intermittent distinct (3) vehicle fume odour and weak (2) cut grass odour detected.                                                                                                                                                                                                                                                                                                                                       |
| F              | 12:17 | Intermittent distinct (3) vehicle fume odour detected.                                                                                                                                                                                                                                                                                                                                                                    |
| G              | 12:20 | Intermittent distinct (3) vehicle fume odour detected.                                                                                                                                                                                                                                                                                                                                                                    |
| H              | 12:22 | No odour (0) detected.                                                                                                                                                                                                                                                                                                                                                                                                    |
| H-M            | 12:26 | Intermittent weak (2) compost/bark odour detected.                                                                                                                                                                                                                                                                                                                                                                        |
| M              | 12:28 | Intermittent distinct (3) compost odour detected.                                                                                                                                                                                                                                                                                                                                                                         |
| H              | 12:36 | No odour (0) detected.                                                                                                                                                                                                                                                                                                                                                                                                    |
| G              | 12:43 | No odour (0) detected.                                                                                                                                                                                                                                                                                                                                                                                                    |
| F              | 12:46 | Intermittent weak (2) cut grass odour detected.                                                                                                                                                                                                                                                                                                                                                                           |
| E              | 12:50 | No odour (0) detected.                                                                                                                                                                                                                                                                                                                                                                                                    |
| D              | 12:54 | Intermittent weak (2) solvent odour detected.                                                                                                                                                                                                                                                                                                                                                                             |
| O              | 12:56 | Very weak (1) odour of an indeterminate character detected.                                                                                                                                                                                                                                                                                                                                                               |
| Bayswater Cres | 13:00 | Intermittent weak (2) solvent odour detected.                                                                                                                                                                                                                                                                                                                                                                             |

Some intermittent weak (2) compost odour observed in residential area at Sites O and D. During 10-minute FIDOL assessments this occurred less than 5% of the time at Site O and 27% of the time at Site D. A short observation of distinct (3) compost was also observed in the residential area by Bayswater Cres and site O. The distinct odour in the residential area was of two very short durations (~5 seconds) across a reasonable time in the area indicating very high infrequency. The scout did not consider the effect of this localised observation to constitute an offensive or objectionable effect.

When the scout attempted to trace the compost odour back to living earth the wind direction shifted more easterly and compost odour was observed more to the west of the site, by Site M.

The compost odour experienced on this day may be attributable to a biofilter maintenance occurring at the Living Earth site from 15th June for approximately two weeks. While the odour was more of a compost like odour rather than biofilter like odour it is possible that the maintenance led to a slight increase in release of less filtered compost odour. The compost odour detected was not deemed to be offensive or objectionable.

### 3.1 22<sup>nd</sup> June 2026

██████████ and ██████████ were the PDP odour scouts. The scouts were present for approximately one hour. The scouts started in the residential area on St Johns Street, stopping at Sites C, B and D on the way to Sites O and Q. Returning to the east via Sites O, D, and P and on to Site E. Following this the scouts walked eastern boundary of the industrial area to Site H returning to Site O via the industrial area. Finally stopping to perform simultaneous 10-minute observations at Site O. North-easterly winds were forecast however the wind shifted more easterly at around 13:37 during the scout. The objective was to undertake odour monitoring in the area downwind of the LE Site. The odour scout route (yellow dots) and key scouting locations are shown in **Figure 6**.



**Figure 6: 22<sup>nd</sup> June 2026 - Odour Scout Route**

Results from the odour scout are shown below. Entries within **Table 5** that are highlighted blue denote locations within a residential zone and purple denotes locations within an industrial zone.

| Table 5: 22 <sup>nd</sup> June 2026 - Odour Scouting Summary |       |                                                                                                                                                                                                                                                                                                              |
|--------------------------------------------------------------|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Site                                                         | Time  | Observations                                                                                                                                                                                                                                                                                                 |
| C                                                            | 13:15 | Intermittent very weak (1) indeterminate to weak (2) rubbish odour detected.                                                                                                                                                                                                                                 |
| B                                                            | 13:19 | No odour (0) detected.                                                                                                                                                                                                                                                                                       |
| D                                                            | 13:21 | No odour (0) detected.                                                                                                                                                                                                                                                                                       |
| O                                                            | 13:24 | Very weak (1) odour of an indeterminate character detected.                                                                                                                                                                                                                                                  |
| Q                                                            | 13:27 | Weak (2) solvent odour detected.                                                                                                                                                                                                                                                                             |
| O                                                            | 13:30 | Weak (2) solvent odour detected.                                                                                                                                                                                                                                                                             |
| D                                                            | 13:32 | No odour (0) detected.                                                                                                                                                                                                                                                                                       |
| P                                                            | 13:34 | No odour (0) detected.                                                                                                                                                                                                                                                                                       |
| E                                                            | 13:37 | No odour (0) detected.                                                                                                                                                                                                                                                                                       |
| E-F                                                          |       | Intermittent very weak (1) indeterminate to weak (2) faecal odour detected.                                                                                                                                                                                                                                  |
| F                                                            | 13:42 | No odour (0) detected.                                                                                                                                                                                                                                                                                       |
| G                                                            | 13:44 | No odour (0) detected.                                                                                                                                                                                                                                                                                       |
| H                                                            | 13:45 | Weak (2) to distinct (3) compost odour detected.                                                                                                                                                                                                                                                             |
| I                                                            | 13:50 | Very weak (1) odour of an indeterminate character detected.                                                                                                                                                                                                                                                  |
| J                                                            | 13:53 | Very weak (1) odour of an indeterminate character detected.                                                                                                                                                                                                                                                  |
| K                                                            | 13:57 | No odour (0) detected.                                                                                                                                                                                                                                                                                       |
| L                                                            | 14:02 | Distinct (3) solvent odour detected.                                                                                                                                                                                                                                                                         |
| O                                                            | 14:10 | <b>FIDOL assessment completed.</b><br><br>No odour (0) was detected 67% of the time. Very weak (1) odours of an indeterminate character were detected 27% of the time. Weak (2) solvent odour was detected 6% of the time.<br><br><b>The odour was determined to be neither offensive nor objectionable.</b> |

No compost odour was detected in the residential area.

Some intermittent weak (2) to distinct (3) compost odour was detected in the industrial area at Site H.

No other compost odour was detected through the rest of the scout, including in the industrial area.

The compost odour experienced on this day may be attributable to a biofilter maintenance occurring at the Living Earth site from 15th June for approximately two weeks. While the odour was more of a compost like odour rather than biofilter like odour it is possible that the maintenance led to a slight increase in release of less filtered compost odour.

The compost odour detected was not deemed to be offensive or objectionable.

### 3.1 24<sup>th</sup> June 2026

██████ was the PDP odour scout. The scout was present for approximately 35 minutes. The scout started in the residential area at Site E, then walked the eastern boundary of the industrial area before walking through the industrial area to Sites L and D. A fine morning with north-easterly winds was forecast, however drizzle began approximately halfway through the scout. The objective was to undertake odour monitoring in the area downwind of the LE Site. The odour scout route (yellow dots) and key scouting locations are shown in **Figure 7**.



**Figure 7: 24<sup>th</sup> June 2026 - Odour Scout Route**

Results from the odour scout are shown below. Entries within **Table 6** that are highlighted blue denote locations within a residential zone and purple denotes locations within an industrial zone.

**Table 6: 24<sup>th</sup> June 2026 - Odour Scouting Summary**

| Site | Time | Observations                                                |
|------|------|-------------------------------------------------------------|
| E    | 9:11 | Very weak (1) odour of an indeterminate character detected. |
| F    | 9:15 | No odour (0) detected.                                      |
| G    | 9:18 | No odour (0) detected.                                      |
| H    | 9:20 | No odour (0) detected.                                      |
| M    | 9:24 | No odour (0) detected.                                      |
| H    | 9:27 | No odour (0) detected.                                      |
| I    | 9:31 | Very weak (1) odour of an indeterminate character detected. |
| J    | 9:35 | No odour (0) detected.                                      |
| K    | 9:38 | No odour (0) detected.                                      |
| L    | 9:43 | No odour (0) detected.                                      |
| D    | 9:45 | No odour (0) detected.                                      |

Only very weak (1) odour was observed during this scout. Thus, no offensive or objectionable odours were present. This lack of odour may be partly attributable to the dampening effect of the drizzle in the second half of the scout.

## 4.0 Summary

PDP undertook odour scouting on six occasions between the 1<sup>st</sup> of June 2026 and the 30<sup>th</sup> of June 2026. This included two morning, three afternoon and one midday scout. Biofilter maintenance was planned to take place at the Living Earth site from the 15<sup>th</sup> June for approximately two weeks.

Typically, PDP considers that intermittent distinct (3) or continuous weak (2) odours of a negative hedonic tone (such as compost) are offensive or objectionable in a residential zone. Based on PDP's observations:

- ∴ 4<sup>th</sup> June 2026
  - No compost odour was detected in the residential area.
  - Some weak (2) compost odour was detected at the eastern boundary of the industrial area at Site H.
  - The compost odour was not offensive or objectionable.
- ∴ 11<sup>th</sup> June 2026
  - Morning scout.
  - No compost odour was detected in the residential area.
  - Some compost odour was detected in the industrial area at site H and G. A 10-minute FIDOL assessment at Site H observed weak (2) compost odours 22% of the time.
  - The compost odour was not offensive or objectionable.
- ∴ 16<sup>th</sup> June 2026
  - Some compost odour was detected in the residential area at Site D. A 10-minute FIDOL assessment at this location observed weak (2) compost odours 23% of the time.
  - Compost odour had been traced through the industrial area from near the LE Site with some distinct compost odour observed between Sites H and G. As this compost odour was intermittent at both locations it was not determined to be offensive or objectionable.
- ∴ 19<sup>th</sup> June 2026
  - Some weak (2) compost odour observed in residential area. During 10-minute FIDOL assessments this occurred less than 5% of the time at Site O and 27% of the time at Site D. Two short (~5 seconds) observations of distinct (3) compost were also observed in the residential area. The distinct odour in the residential area was of very short duration across a reasonable time in the area indicating very high infrequency. The scout did not consider the effect of this localised observation to constitute an offensive or objectionable effect.
  - In the industrial area weak compost odour was only observed by Site M to the WNW of the Site.
  - The wind direction appeared to shift more easterly during the scout.
  - The compost odour was determined to be neither offensive nor objectionable.
- ∴ 22<sup>nd</sup> June 2026
  - No compost odour was detected in the residential area.
  - In the industrial area some intermittent weak (2) to distinct (3) compost odour was detected at Site H.
  - The compost odour was determined to be neither offensive nor objectionable.
- ∴ 24<sup>th</sup> June 2026
  - Morning scout.
  - Drizzle occurred during the second half of the scout which had not been forecast.
  - Only very weak (1) odour of an indeterminate character was experienced in both the residential and industrial areas during this scout.

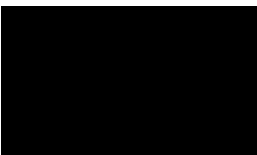
## 5.0 Limitations

This memorandum has been prepared by Pattle Delamore Partners Limited (PDP) on the basis of information provided by Christchurch City Council and Living Earth. PDP has not independently verified the provided information and has relied upon it being accurate and sufficient for use by PDP in preparing the memorandum. PDP accepts no responsibility for errors or omissions in, or the currency or sufficiency of, the provided information.

This memorandum has been prepared by PDP on the specific instructions of Christchurch City Council for the limited purposes described in the memorandum. PDP accepts no liability if the memorandum is used for a different purpose or if it is used or relied on by any other person. Any such use or reliance will be solely at their own risk.

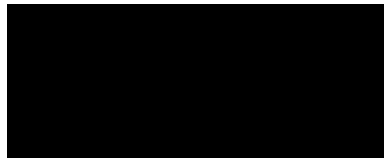
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Prepared by



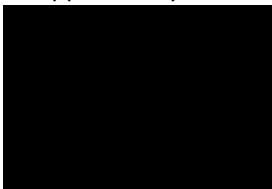
Air Quality Scientist

Reviewed by



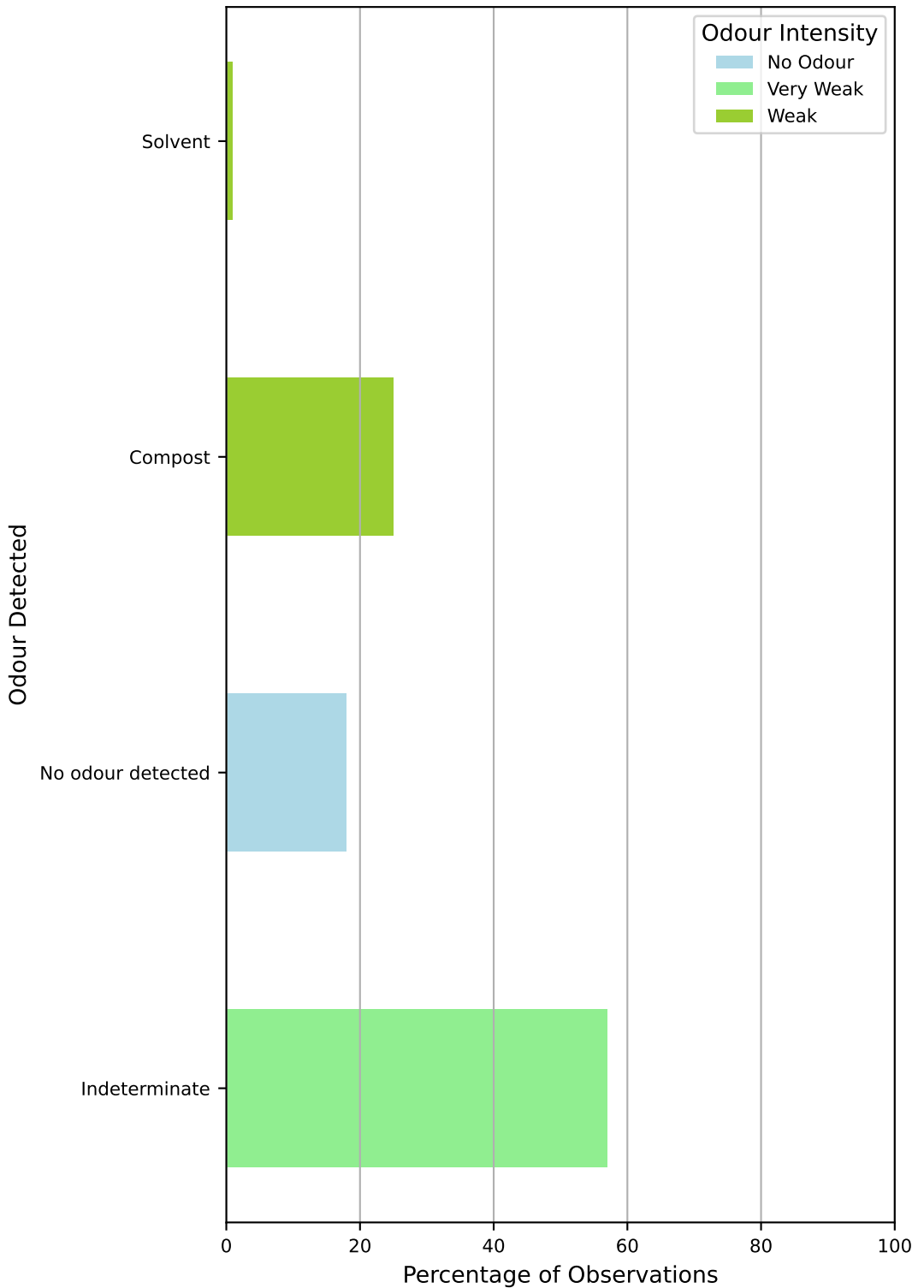
Service Leader - Air Quality

Approved by

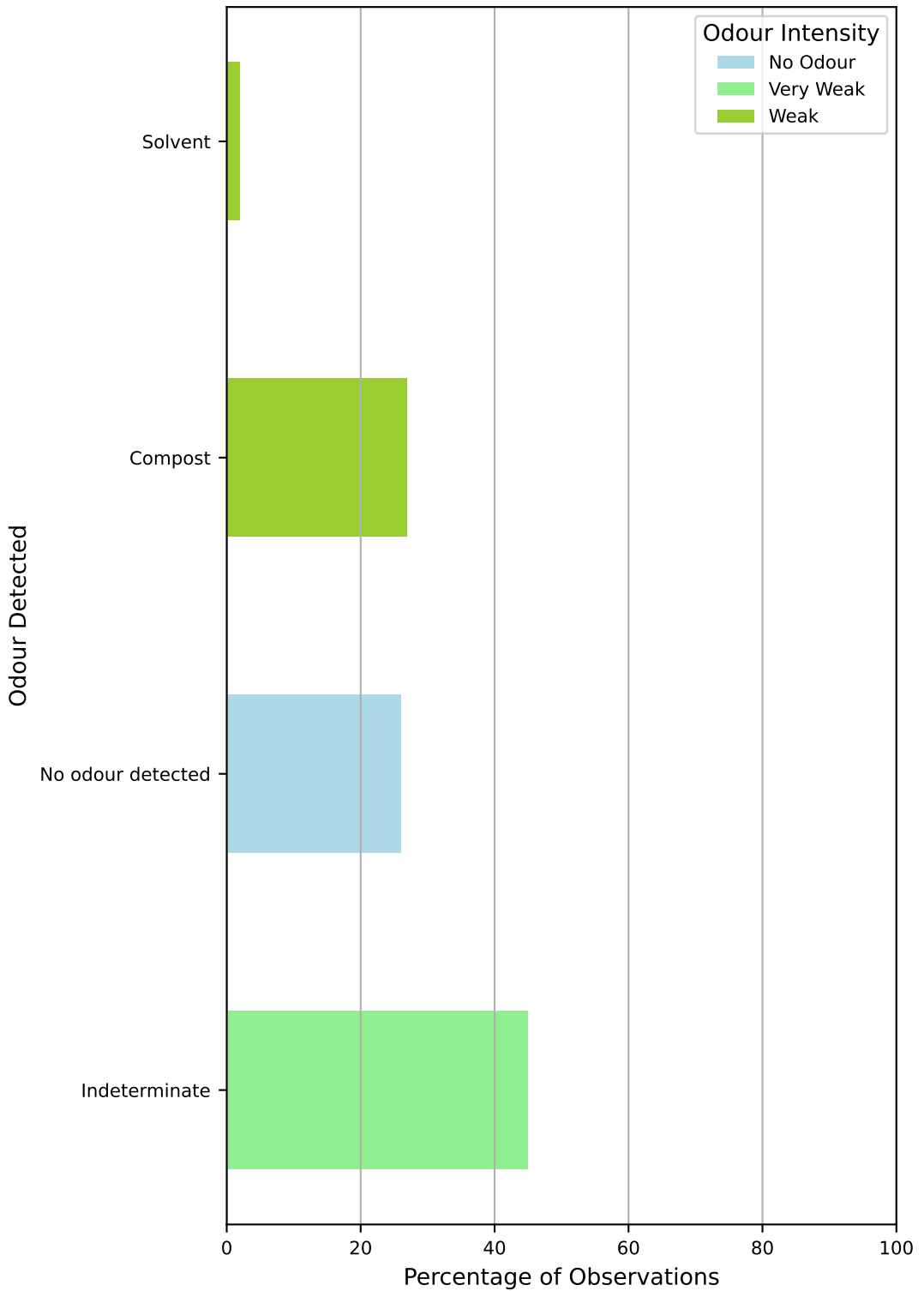


Group Director- Water Infrastructure

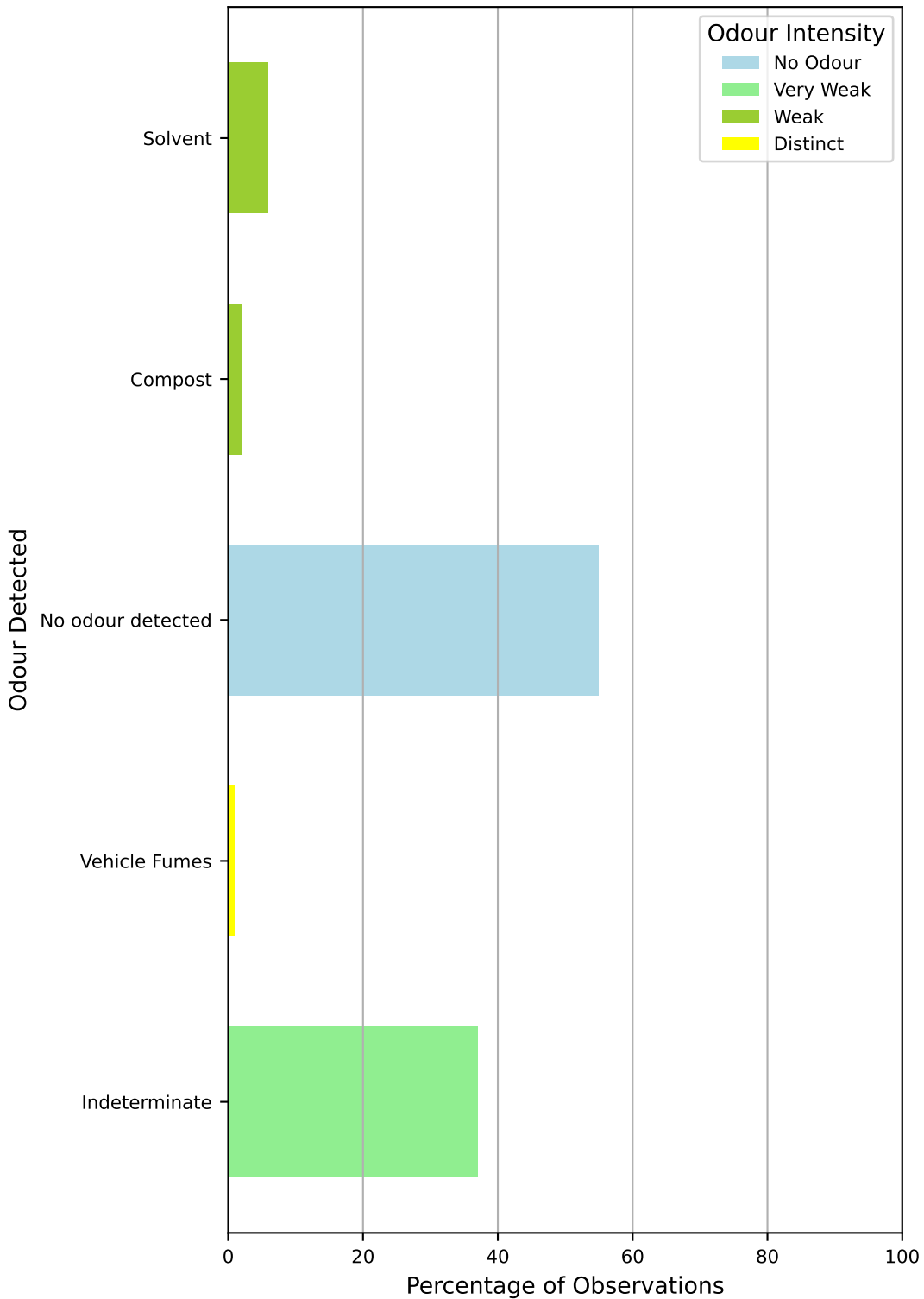
# Site D



# Site H



# Site O



Site P

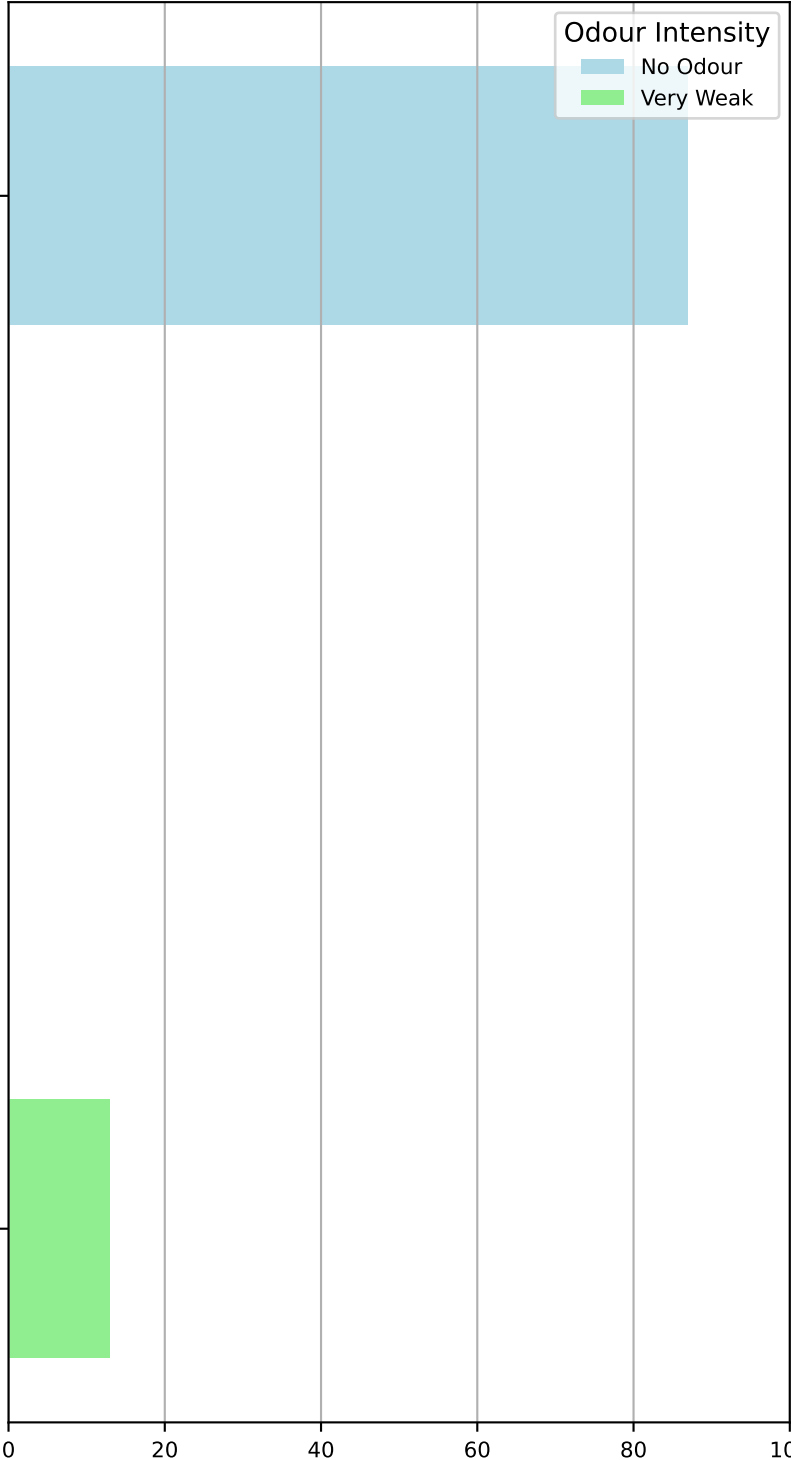
Odour Detected

No odour detected

Indeterminate

Odour Intensity

- No Odour
- Very Weak



Percentage of Observations