Matrix Environmental

ODOUR MONITORING AT THE MILLTOWN COMPOST SITE, MILLTOWNMORE, FETHARD, CO. TIPPERARY. 2022 MONITORING W0270-02

For the Attention of:

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Prepared by:

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Ref: Odour Monitoring 2022

Executive Summary

Matrix Environmental was contracted by Milltown Composting to undertake ambient odour sampling and analysis at their facility at Milltown Mor, Fethard, County Tipperary. An Environmental Consultant subsequently visited the site on the 21st of June and the 22nd of October to conduct the monitoring events for 2022.

21st of June 2022 event:
OD1 was taken at Biofilter 1 and had an odour result of 111 ou_E/m^3.
OD2 was taken at Biofilter 2 and had an odour result of 71 ou_E/m^3

22nd of October 2022 event:
OD1 was taken at Biofilter 1 and had an odour result of 161 ou_E/m^3
OD2 was taken at Biofilter 2 and had an odour result of 60 ou_E/m^3

All the above results are within the licence limit of 750 ou_E/m^3.

The recorded levels reflect the on-site meteorological conditions during the sampling period.

This report is certified as accurate and representative of the sampling and associated analysis carried out.

1.0 INTRODUCTION

In compliance with the requirements of their waste licence (W0270-02) Milltown Compost Ltd are required to carry out ambient odour monitoring on a biannual basis and provides two emission points for monitoring – A 2-1 (Biofilter1) and A2-2 (Biofilter 2)

Matrix Environmental was commissioned to undertake the sampling and reporting. An Environmental Consultant subsequently visited the site on the 21st of June and the 22nd of October to conduct the monitoring events for 2022.

This report presents details of the sampling and analytical methodology carried out together with a broad interpretation of the results.

2.0 SCOPE

LICENCE W0270-02

Table 2.2 shows the scope of the monitoring survey: The scope outlined below was determined in conjunction with staff at the facility, Environmental Consultants within Matrix Environmental and with regards to Schedule B in the waste licence.

Table 2.2: Parameter - Location

Parameter	Locations
Odour	Biofilter Unit 1 (downwind corner of unit) OD 01
	Biofilter Unit 2 (downwind corner of unit) OD 02

3.0 METHODOLOGY

Odour Sampling and Olfactometry

Odour Sampling

Samples of gas of approximately 60 litres were collected via Teflon tubing into Nalophane® gas sampling bags by means of the "lung principle" method. Using this method, the sample bag is housed in a sealed car buoy that is evacuated using a small air pump. The volume of air removed from the car buoy is replaced by sample gas entering the bag, thus avoiding contamination of sample by pumps or meters. Sampling shall be carried out in accordance with the standard I. S. EN 13725:2003 entitled 'Air Quality – Determination of Odour Concentration by Dynamic Olfactometry'.

Dynamic Olfactometry

The samples were analysed by Dynamic Olfactometry. The instrument used will be an Olfactomat-e Olfactometer (Project Research Amsterdam) and the analytical procedures were in accordance with the I. S. EN 13725:2003 using a trained panel of assessors. The odour concentration of the sample is expressed in odour units per cubic metre of gas (ou_E/m^3). These values, sometimes referred to as "dilutions to threshold" are equivalent to the number of times the sample gas required dilution with odour free air to reach the panels odour threshold (i.e. the concentration at which there is a 50% probability of the panellists detecting the odour). The results are expressed in ou_E/m^3.

4.0 RESULTS

Table 4.1 Meteorological Conditions 21/6/22			
Parameter		**Parameter**	
Weather	Clear	Wind speed	11-12 km/hr
Temp	17-18ºC	Wind Direction	South Westerly
General Air Quality	Good	Bar Pressure	1010 mbar

Table 4.2: Odour Sampling Results 21/1/21	
Locations	**Results**
OD 01	111 ou_E/m^3
OD 02	71 ou_E/m^3

Table 4.3 Meteorological Conditions 22/10/22			
Parameter		**Parameter**	
Weather	Clear	Wind speed	18-20 km/hr
Temp	14ºC	Wind Direction	Southerly
General Air Quality	Good	Bar Pressure	999 mbar

Table 4.4 Odour Sampling Results 30/6/20	
Locations	**Results**
OD 01	161 ou_E/m^3
OD 02	60 ou_E/m^3

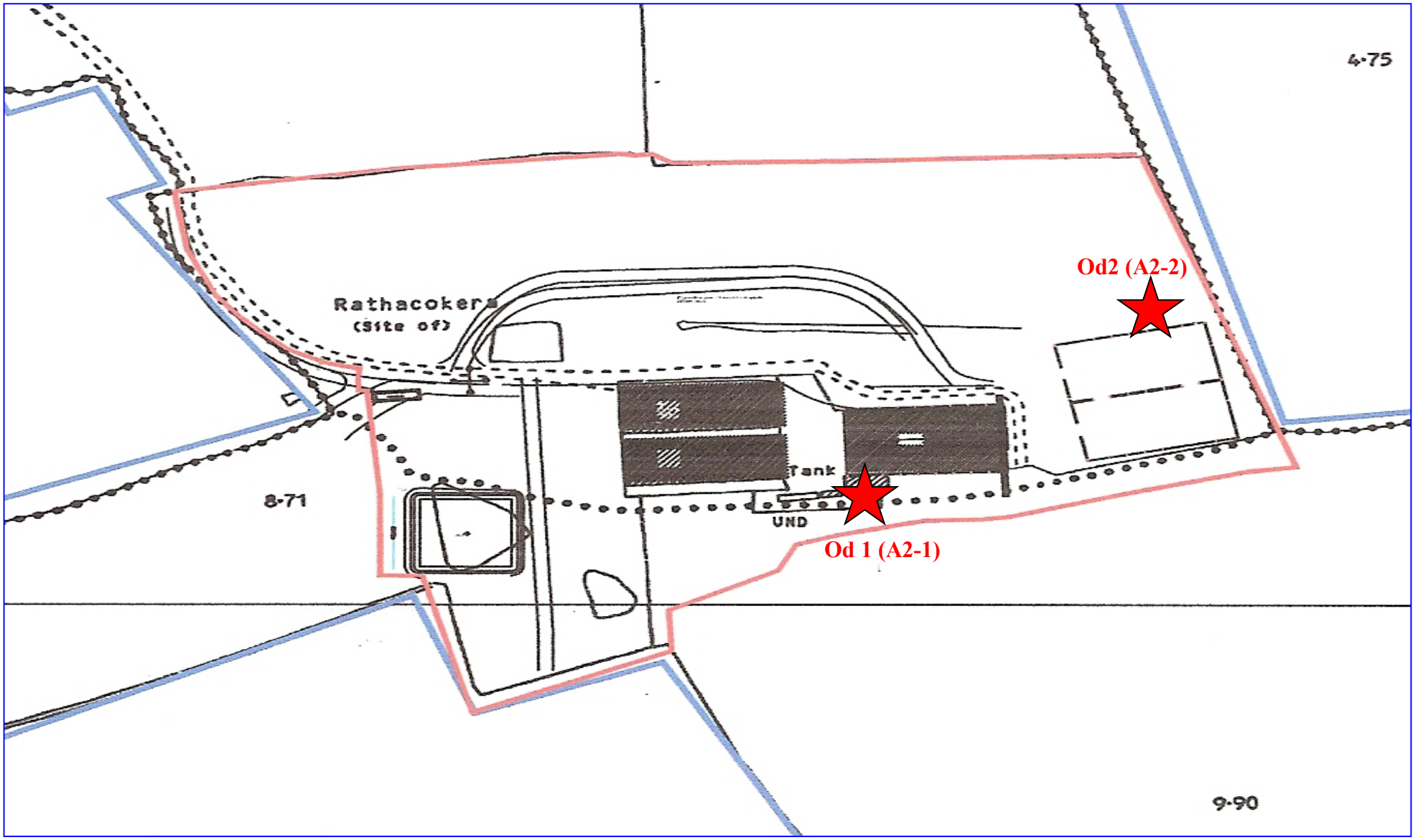
5.0 COMMENT

Odour sampling was carried out on a biannual basis during 2022 at the facility. The odour emissions from the two Biofilter units - Biofilter 1 (A 2-1) and Biofilter 2 (A2-2) were within the licence limit of 750ou_E/m3 for all monitoring events. On-site observations made during the monitoring event noted a distinct compost odour at the Biofilter units during each monitoring event.

The recorded odour levels represent the odour conditions in the vicinity of the facility and at the Biofilter units on the day of sampling and under the specific meteorological conditions of that day. Ambient odour is a combination of both natural and anthropogenic odour emissions.

Appendix 1

Sample Location Map


4·75
Od2 (A2-2)
Rathacokers
(Site of)
Tank
UND
8·71
Od 1 (A2-1)
9·90