



Environmental Protection Agency

Office of Environmental Enforcement (OEE)

**Air Guidance Note 5 (AG5)
Odour Impact Assessment Guidance for
EPA Licensed Sites**



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The original version of this guidance note was prepared and published by the EPA in 2010. This document is a revision of that original that has been prepared to reflect the changes in regulatory and monitoring practice that have occurred in the interim. The table below list the main amendments to the original.

Version No.	Date	Amendment
2	Feb 2019	Updated pre-visit preparation and site odour assessment preparation.
2	Feb 2019	Updated references to IPC, IE and waste facilities.
2	Feb 2019	New FAQ section
2	Feb 2019	Inclusion of reference to Odour Emissions Guidance Note AG9
2	Feb 2019	Amendments made to odour investigation field record sheet.
3	Dec 2021	Amendments to Section 3.2 Participants and Section 3.3 Odour Assessment Preparation

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Preface

The Office of Environmental Enforcement (OEE) is one of the five offices in the Environmental Protection Agency (EPA). The OEE's functions include the regulation of activities licensed under the EPA and Waste Management Acts. It is the policy of the OEE to provide information and advice, via published guidance, to those it regulates, to secure environmental improvements while ensuring value for money.

This Odour Impact Assessment Guidance for EPA Licensed Sites (AG5) is one of a series of guidance notes that the OEE has planned on the general theme of air pollution monitoring.

Other documents in this series are:

- AG1 Guidance Note on Site Safety Requirements for Air Emissions Monitoring;
- AG2 Air Emissions Monitoring Guidance Note;
- AG2 Index of Preferred Methods;
- AG3 Air Guidance Note on the Implementation of I.S. EN 14181;
- AG4 Air Dispersion Modelling;
- AG5 Odour Impact Assessment Guidance Note for EPA Licensed Sites;
- AG6 Surface VOC Emissions Monitoring on Landfill Facilities;
- AG7 Guidance Note on Landfill Flare and Engine Management and Monitoring;
- AG8 Air Guidance Note for In-house Air Monitoring Teams;
- AG 9 Odour Emissions Guidance;
- AG 10 Guidance Note on EPA requirements for calculation of flue gas volume flow rate from energy consumption using Annex E of ISO EN 16911-1;
- AG11 Guidance Note on monitoring of Stack Gas Emissions from Medium Combustion Plants;
- AG12 Alternative monitoring when continuous emission monitoring systems are off-line.

This guidance note is intended for use by holders of EPA licences (licensees), and consultants. The Agency advises licensees to have regard to this guidance when outsourcing any work relating to odour monitoring, in particular field assessments of odour impact.

Throughout the guidance note there are examples given of licence conditions which are typical of those found in Irish IPC, IE and waste licences. In reality, licence conditions can vary somewhat from one licence to the next, so reference should be made to the current licence document for the site-specific licence condition.

This guidance note will be the subject of periodic review and amendment. The most recent version of this note is available on the Agency's website: <http://www.epa.ie/> if you have any particular queries regarding this document please contact OEE Air Thematic team at AirThematic@epa.ie.

1. Introduction

This procedure offers a consistent and systematic approach to the assessment of odours on and in the local area of facilities and installations that are licensed by the Agency. It is intended for use by licensees to assess their state of compliance with odour related licence conditions and to investigate odour complaints received. Its aim is to achieve consistency in the manner in which licensees' representatives makes odour observations and reports on odour assessment.

The procedure described in this guidance document (Section 3) will cover the following topics:

- Odour assessment preparation,
- The assessment of odour through field observations,
- The recording of findings.

2. Background

The common licence conditions used for the control of odours include:

“The licensee shall ensure that all operations on-site shall be carried out in a manner such that air emissions and/or odours do not result in significant impairment of, or significant interference with amenities or the environment beyond the site boundary”,

and/or

“The licensee shall ensure that [...] odours do not give rise to nuisance at the facility or in the immediate area of the facility. Any method used by the licensee to control any such nuisance shall not cause environmental pollution”.

Failure to comply with a condition of an EPA licence is an offence under the EPA and Waste Management Acts (for IPC, IE and waste licences respectively). Under these legislative documents, odour nuisance = pollution.

By using this procedure, licensees can gain information regarding compliance with relevant licence conditions. However, it is possible that those generating odours and those being impacted, nuisance, or annoyed by them will not share opinions on the extent of the problem. The findings of odour investigators working on behalf of a licensee may differ with the experiences of complainants. Notwithstanding this, this procedure provides the basis for a consistent and systematic approach to odour assessment and reporting.

This guidance document describes a method of odour assessment through sniff testing at suitable locations in the local area of a facility or installation. Sniff testing is the use of the human nose to assess odour, and is the most common form of odour monitoring. The odour investigator goes to a chosen location and stops and smells the air there for a period of time (See Section 3). The results of sniff tests may be used to support the evidence of nuisance complaints by members of the public.

In some licence conditions it is mandatory to carry out daily inspections:

“The licensee shall, on a daily basis or as required by the Agency, shall inspect the installation and its immediate surrounds for nuisances caused by vermin, birds, flies, mud, dust and odours. The odour impact assessment shall be done in accordance with EPA Guidance AG5. The licensee shall maintain a record of all nuisance inspections.”

The EPA guidance document Odour Emissions Guidance Note (AG9) provides methodologies for the development of odour management plans, abatement strategies and test programmes at industrial and waste facilities. It discusses the range of methods to reduce odour,

minimisation techniques of odours that cannot be abated, and an odour management plan template to assist licensees with odour issues.

2.1 Odour

For the purposes of this guidance, odour is the property of a substance that activates the human sense of smell. The human olfactory system is a sensory system used for the detection of odours. It is highly sensitive and as such is capable of detecting extremely low concentrations (fractions of a part per billion) of a wide range of odorous chemicals.

2.2 Odour Impacts

Odour sensing olfactory cells are linked to areas of the brain that control emotions and memory processes. Offensive odours can therefore have impacts on the health and well-being of humans, especially if one is subjected to the odour for extended periods of time. At sufficiently high concentrations odorous compounds may have a direct effect on human health. Also, an individual's health may suffer indirectly due to stress associated with odour impact.

People that have complained to the Agency about nuisance odours from IPC, IE or waste facilities have described how their quality of life has deteriorated as a result of experiencing an odour. Complainants have described the following scenarios that have occurred entirely due to nuisance odours:

- Vomiting,
- Headaches,
- Nausea,
- Stress, anxiety, frustration,
- Having to leave home and stay with family/friends or incur the expense of a hotel,
- Unable to open windows during summertime,
- Unwilling to host guests due to embarrassment,
- Keeping children indoors during summer holidays,
- Unable to enjoy the garden for occasions (such as barbeques or birthday parties),
- Unable to hang laundry out to dry,
- Children unable to sleep due to odour in bedrooms,
- An additional discomfort for housebound, infirm or elderly people.

For many complainants, it is not only when they are subjected to odour that they are affected. Complainants can experience ongoing anxiety and stress due to the potential for reoccurrence of odour at any time. This can happen to people when they are frequently subjected to nuisance odours.

The majority of complaints that the Agency receives regarding licensed IE, IPC and waste sites relate to nuisance odours.

2.3 Odour Sensitivity

Due to the complex nature of odour perception by the human olfactory system, levels of sensitivity to odour within a population will vary. Consequently, the perceived offensiveness of an odour will vary from person to person. In addition, the context in which the odour occurs will affect the nuisance value of the odour. For example, an odour detected during a special occasion or during a period of illness may cause more nuisance than the same odour detected on another day. See section 3.8 of this document for guidance on sensitivity amongst odour investigators.

2.4 Measurement

Analytical

Unlike certain airborne pollutants, odour in ambient air cannot be measured by conventional chemical analyses. Odours are in most cases a complex cocktail of various substances that have intricate synergistic effects upon each other. The measurement of individual compounds in ambient air will therefore not provide useful information on the character of an odour within that air. Such techniques involving the use of instrumentation and/or analytical methods to identify and quantify specific odorous compounds may not provide any real insight into the intensity or offensiveness of odours in human terms. The threshold concentration, for example, of many odorants is often well below their analytical detection limit and hence many odours may be deemed to be causing nuisance, although the compounds responsible for the odours are not being detected by chemical techniques. Furthermore, interactions between mixtures of odorants may lead to synergistic or antagonistic effects, leading to difficulties in linking analytical and sensory measurements for impact assessment purposes.

Dynamic olfactometry

As the objective of this guidance is to assess licence compliance *beyond the site boundary and in the immediate area of the facility/installation*, determination of odour concentration by dynamic olfactometry as prescribed in EN 13725:2003 is not considered by the Agency to be a suitable assessment approach.

Representative sampling for olfactometry analysis of air may be suitable for point source emissions or at times ambient assessments *on* a site (i.e. within a site's boundary), but sampling air beyond a site boundary for olfactometry purposes is highly unlikely to be representative of odour impact. Also, the sampling and analytical requirements as prescribed in EN 13725:2003 may be considered unsuitable for frequent and routine odour assessments. For these reasons, it is not considered a suitable assessment approach in the context of this guidance note's objective.

Sniff testing

Due to the unsuitability of the above measurement approaches, this procedure describes a sniff testing approach to odour assessment. This requires a human assessor to use their own sense of smell to assess odours by means of a sensory technique referred to as sniff testing.

2.5 Limitations

The credibility of licensee odour monitoring, i.e. self-assessment, may be questioned for a number of reasons:

Perceived Self-interest Bias: The public may perceive an inherent bias on the part of the licensee in undertaking this form of self-assessment odour monitoring. Therefore, the Agency will continue to undertake odour assessments at licensees' facilities and installations. The

Agency is not bound to accept any findings that a licensee arrives at following the use of this procedure.

Odour Adaption: This is a common and entirely normal desensitisation to certain odours that may affect individuals. Staff working at a site will get used to, and therefore adapt to, specific odours from the site. This adaption means that even if they try to assess the site objectively, they may not be able to do so. Individuals may not be aware that they have adapted to a particular smell because they will continue to respond normally to other odours. The manner in which adaption occurs varies amongst odours. It may take less than a second or it may take weeks to occur depending on the odour. It is not permanent, and a person will begin to recover when they are no longer exposed to that particular smell, or when they are exposed to reduced levels of it. The adaption/recovery process/cycle slows with time.

Due to the odour adaption possibility of site staff, licensees may consider the use of external contractors/consultants or the use of office staff or other offsite staff who have not recently been working on the site to carry out odour assessments.

Local residents' odour adaption experience will vary from that of on-site workers. Due to odour dispersion, local residents are unlikely to be subjected to the same concentration of odour as staff at a site, therefore adaption by the resident to an odour generated at a facility will not affect them in the same way as staff are affected. Licensee staff are generally more likely to adapt to odour, due to exposure to greater odour concentrations over more constant time periods.

Odour Fatigue: This differs from odour adaption in that it is believed to be exclusively associated with exposure to hydrogen sulphide (H₂S). H₂S causes rapid paralysis of nerves in the nose at concentrations of around 150 mg/Nm³. This results in a complete, but temporary loss of smell (WHO, 2017). To put this value in context, the World Health Organisation's (WHO) air quality guideline for H₂S is 150 µg/Nm³ for an average concentration over 24 hours. This is a human health parameter, and does not consider odour annoyance. To avoid odour annoyance, a 30-minute average ambient air concentration not exceeding 7 µg/Nm³ is recommended (WHO, 2017).

Hours of Operation: Many sites are not staffed during the late evening and night-time, when local residents are more likely to be in/at their homes or at their property in some manner. Compounding this is the fact that dispersion conditions can be especially poor at night. The licensee may consider the use of external contractors/consultants or an on-call staff member to provide availability to respond to odour issues.

Additional limitations include:

- The difficulty for odour investigators to witness odour incidents (especially peaks) that are short-lived or that may be infrequent, short and unpredictable.
- Peaks in odour nuisance may be due to changing dispersion conditions (wind direction/strength, turbulence) or variable, sporadic and unpredictable emissions.
- Emissions from elevated sources (stacks, chimneys, etc.) may travel further than anticipated and may not reach ground level until beyond the assessment location at which the odour investigator undertakes the sniff test.
- Sources of odour may be difficult to identify, especially if a facility neighbours other potential sources. Additionally, it can be difficult to exactly locate the source within a particular facility (large facility/diffuse sources etc.).

3. Assessment Procedure

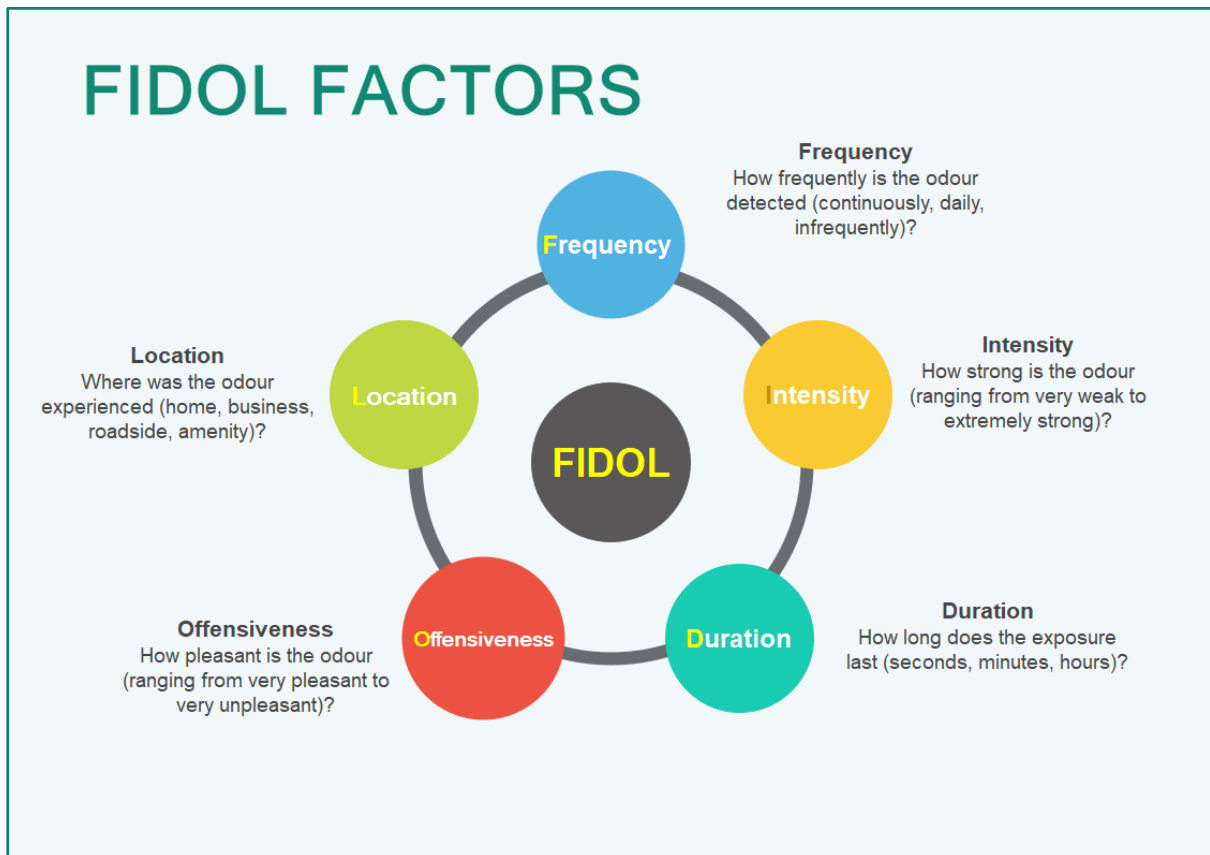
To carry out the assessment, the odour investigator uses his/her own sense of smell to assess whether odours are present or not at a number of locations. The odour investigator records

his/her assessment by selecting what are, in his/her opinion, the most accurate descriptors from those listed in the Odour Investigation Record Sheet (Annex A).

Odour impact assessments should be carried out routinely, *and* in response to specific complaints, *and* in response to weather conditions likely to lead to adverse odour at sensitive receptors. As a result, the locations of the individual observations are likely to vary with each assessment (see example of possible sequence for assessment, page 11).

3.1 Odour Perception (FIDOL)

There are five elements that are commonly regarded as combining to cause the odour nuisance experience, they are: Frequency, Intensity, Duration, Offensiveness, and Location. These elements are represented by the acronym FIDOL.



The function of the odour investigator's odour assessment is to assess the intensity and offensiveness of the odour, and to record the location where their observations were made. Where the presence of odour has been established, complaints by members of the public may provide evidence of frequency and duration.

If the licensee undertakes regular odour assessments at the same locations over a period of time, they may gain some insight into the frequency and duration parameters, but they are still unlikely to have as much awareness as a local resident who is more frequently at that location, e.g. at their home.

3.2 Participants

An odour assessment will ordinarily be conducted by one odour investigator. Having one odour investigator is sufficient to comply with the needs of this guidance document. If an odour assessment is carried out by two or more people, then the following should be considered:

- A. Make "side by side" assessments. In such cases, there should be no discussion about their results until the assessment is completed. Each odour investigator completes their own *Field Record Sheet* (Annex A).
- B. Alternatively one odour investigator may visit the suspected source of the odour, while a colleague conducts the assessment in the local area. Thus, the timing of process events may be linked to the off-site perception of odour.
- C. Compare data to identify those whose odour perceptions are outside the norm (i.e. particularly sensitive or less sensitive).
- D. A joint assessment may be carried out for training purposes.

3.3 Odour Assessment Preparation

The odour investigator must be in a fit condition and adhere to the following rules:

- If he/she has a cold, sore throat, sinus trouble etc. he/she should not carry out the assessment,
- The odour investigator should not smoke or consume strongly flavoured food or drink, including coffee, for at least half an hour before the assessment is carried out,
- The consumption of confectionery or soft drinks should be avoided immediately before and during the assessment,
- Scented toiletries, such as perfume/aftershave should not be applied immediately before or during an assessment,
- The vehicle used during the assessment should not contain any deodorisers or air fresheners.

The odour investigator should consider the purpose of the odour survey and:

- Have regard to the weather forecast for the area, including wind strength and direction, barometric pressure, rainfall, temperature and humidity. Useful websites that can provide forecast information include:
 - <http://www.met.ie/>
 - <https://www.yr.no/place/Ireland/>
 - <https://www.windfinder.com>
- Observe the location of on-site meteorological stations, or windsocks, to ensure they are appropriately located, so as to provide a reasonable indication of the prevailing wind direction, and not be significantly influenced by local structures/trees or other obstacles,
- Have regard to the recent complaints pattern including if complaints occur at certain times of the day, and the types of odours expected to be coming from the site,
- Have regard to the odour history of the site,
- Be aware of current activities on-site.

The following documents should be brought on the field assessment:

- The *Odour Investigation Field Record Sheet*,

- A scaled map of the area on which the location of odour assessment locations can be marked. The map should show a compass directional with N, S, E, and W clearly marked. It must be dated and referred to in the Odour Investigation Field Record Sheet.

The following equipment may be employed to assist in the field assessment:

- The EPA licence for the facility being assessed,
- A windsock, if located on the licensed site,
- Wind directional instrument (flags),
- A smartphone with maps app to determine exact distances from the observation point to the facility,
- Compass.

3.4 Field Assessment of Odours

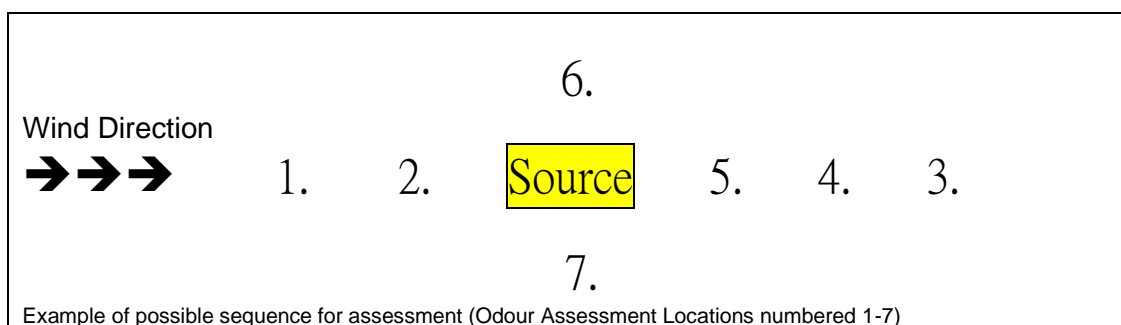
The *Odour Investigation Field Record Sheet* shall be used to record field observations, see Annex A. Before the assessments can commence, the odour investigator must determine the wind direction, so that upwind, downwind, and crosswind locations for assessment can be selected. The assessment involves the odour investigator walking or driving, as far as access allows, to the chosen assessment locations. The odour investigator must get out of the car to make observations. The selection of suitable odour assessment locations will depend on whether the odour investigator is:

- Responding to a complaint,
- Checking the state of compliance at sensitive receptors,
- Attempting to establish the source of an odour.

Wind direction will also affect suitable location selection.

The licensee may choose fixed odour assessment locations so as to evaluate the changing situation over a period of time (days, weeks, months). Or the odour assessment locations may vary from assessment to assessment according to local conditions, which may help to identify worst-case conditions.

When the assessment is being carried out routinely (as opposed to complaint investigation) the following sequence of sampling stations is recommended:



There is no set scale to the above locations. Rather this depends on such factors as:

- Proximity of sensitive receptors,
- Local topography,
- Availability of suitable access,
- Source characteristics (e.g. stack height, area source, fugitive source etc.), etc.

Selection of unsuitable locations, e.g. locations unreasonably far away from the facility or installation, will be detrimental to the credibility of any results obtained.

When the odour investigator intends visiting a complainant, if time permits the starting point should be upwind of the suspected source prior to visiting the complainant.

In instances where no obvious wind direction is detectable or where it is variable, this should be noted in the appropriate section of the *Field Record Sheet*. Selecting suitable assessment locations is more difficult when wind direction is not detectable. In these cases, it is preferable to postpone an assessment. However, if the assessment is needed in order to investigate a recent complaint and postponement is not an option, the odour investigator should commence the assessment at the location of the complaint.

At each assessment location, the odour investigator should get out of the car (if used) and STOP AND SMELL. In the environs of the observation point, you can walk around within a short area, and should breathe normally. The period of assessment should be the same at each location. Five minutes is the recommended minimum time period.

After the sampling period, record all the details required in the Odour Investigation *Field Record Sheet* for that sampling location. The first page of the Field Record Sheet should be filled in before the survey commences. The odour investigator should also keep a note of any external activities that could be either the source of the odour, contribute to the odour, or be a confounding factor. This may be noted in the 'Odour Description Comments' column of the *Field Record Sheet* (Annex A)

If the facility or installation has a weather station in place, the weather details for the period of the assessment should be recorded. It is good practice to print this information and staple it to the completed *Field Record Sheet*.

It is important to note that all odours detected during the course of the assessment should be recorded on the *Field Record Sheet*, regardless of their suspected origin. The column titled 'Odour Description Comments' on the right-hand side of page 2 of the *Field Record Sheet* allows for the recording of any additional details. For example, if an odour is detected but the odour investigator suspects that the source is not the licensed site, this should be recorded here. Also, if a distinguishable mix of odours is detected, this should be recorded here.

The odour investigator should not visit the suspected odour source until all the ambient observations have been completed, this will help avoid odour adaption and fatigue, due to the higher odour concentrations that occur at source.

If an odour investigator is carrying out multiple odour impact assessments in the environs of the same facility, over the course of one day, then:

- If odours are detected during the first odour assessment, a 30-minute break should be taken between the end of the first assessment, and the start of the second assessment. This is to allow your nose adequate time to de-sensitise from odours previously detected.
- If no odours were detected during the first odour assessment, then the second odour assessment can commence as soon as the first assessment is completed.

3.5 Post Odour Assessment Site Inspection

Following an odour assessment during which a potentially nuisance or interfering odour has been recorded, an inspection of the facility or installation should be carried out by the odour investigator, as soon as possible, to determine whether or not any observed odour can be linked to the site, and to evaluate any potential odour producing activities or locations. Details of the site visit must be noted on the Field Record Sheet.

This on-site assessment should include some or all of the following activities as appropriate:

1. A walk of the downwind site boundary to verify if odours can be detected,

2. An assessment of particular areas or activities on site, to verify if odours can be detected. Such an assessment shall cover all possible odour sources on the site,
3. An examination of site operations to:
 - Identify practices that might give rise to odours,
 - Assess the effectiveness of any abatement equipment used at the site (by-passing abatement equipment for the purposes of sniff testing as an abatement efficiency test is not permitted).

Following this inspection, it may be necessary to visit other local potential sources of odour to eliminate them as sources of the detected odour. This will be dependent on access permissions.

3.6 Safety

The odour investigator must never put himself/herself or others at risk by attempting to sniff potentially hazardous emissions. A safe and common-sense approach should be taken when dealing with strong odours. The odour investigator should not inhale deeply over any emission points. Particular care should be taken if any sulphuric (rotten eggs) odours are perceived.

If during the odour assessment, the odour investigator experiences any discomfort, or has any concern about the nature and extent of odour as a potential health impact, the investigator shall immediately cease the assessment, and leave the location. Do not wait until you have completed the five-minute odour assessment, leave the area immediately. Make a record when you have left the area.

3.7 Reporting

The person(s) undertaking the odour assessment must record their findings throughout the assessment period on the *Odour Assessment Field Record Sheet*. This sheet contains a guide that assists with the identification of nuisance. Facility/Installation management should be immediately informed of any significant findings, i.e. presence of nuisance odour.

4. Odour Recording by Complainants

If a local resident, or other party, wishes to record their personal odour experience, a suitable log sheet is provided in Annex B. This *Odour Complainant Log Sheet* allows people to record odours which they have personally experienced.


5. Relevant Legislation

- Environmental Protection Agency Act 1992 (as amended).
- Waste Management Act 1996 (as amended).
- Protection of the Environment Act 2003.
- Air Pollution Act, 1987.
- S.I. No. 787 of 2005 Waste Water Treatment (Prevention of Odours and Noise), Regulations 2005.

6. References

- ENVIRONMENT AGENCY ODOUR GUIDANCE Internal Guidance for the Regulation of Odour at Waste Management Facilities July 2002 VERSION 3.0.
- ENVIRONMENT AGENCY ODOUR GUIDANCE H4 How to comply with your environmental permit, March 2011.
- EUROPEAN STANDARD EN 13725:2003 Air Quality- Determination of Odour Concentration by Dynamic Olfactometry.
- McKeendry, P., Looney, A. & McKenzie, A., Managing Odour Risk at Landfill Sites: Main Report, Viridis, 2002.
- NEW ZEALAND MINISTRY FOR THE ENVIRONMENT Good Practice Guide for Assessing and managing Odour in New Zealand 2016.
- SCOTTISH EXECUTIVE Code of Practice on Assessment and Control of Odour Nuisance from Waste Water Treatment Works, April 2005.
- SCOTTISH EXECUTIVE Guidance on Statutory Code of Practice on Sewerage Nuisance, April 2006.
- WORLD HEALTH ORGANISATION Evolution of WHO Air quality guidelines: Past , Present and Future. Copenhagen: WHO Regional Office for Europe; 2017.
- WORLD HEALTH ORGANISATION Hydrogen Sulphide: Human Health Aspects, Concise International Chemical Assessment Document 53, 2003.

Odour Impact Assessment Guidance for EPA Licensed Sites (AG5)

 Environmental Protection Agency	Assessment of Odour Impact Field Record Sheet										
General	Licensee / Facility		EPA Reg. No.		Assessment by		Date of Inspection		Type of visit <input type="radio"/> Announced <input type="radio"/> Unannounced		
Pre - Assessment Preparation	Observer is free from medical conditions (cold, sore throat, sinus trouble)?		Observer abstinence (30 min) from smoking, flavoured drinks, scented toiletries and deodorisers?		Reason for odour assessment:		Map – Has a map showing assessment locations been attached?		Have you attended the odour impact assessment and use of field record sheet training?		
	<input type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> Complaint verification	<input type="radio"/> Weather conditions / process events			<input type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> Yes
Notes (the ranking system in these notes must be used when completing the field observations table overleaf)	Note 1: Observation point sensitivity 1. Remote (no housing, commercial/industrial premises or public area within 500m of observation point) 2. Low sensitivity (no housing, commercial/industrial premises or public area within 100m of observation point) 3. Moderate sensitivity (housing, commercial/industrial premises or public area within 100m of observation point) 4. High sensitivity (housing, commercial/industrial premises or public area within area of observation point) 5. Extra sensitive (complaints arising from residents, business and users of public areas within area of observation point)					Note 3: Weather conditions Precipitation 1. Dry 2. Rained recently 3. Drizzle 4. Raining 5. Foggy Temperature 1. Cold 2. Cool 3. Warm 4. Hot					
	Note 2: Wind strength 0. Calm Smoke rises vertically 1. Light air Direction of wind shown by smoke drift, but not wind vanes 2. Light breeze Wind felt on face; leaves rustle, ordinary vane moved by wind 3. Gentle Breeze Leaves and small twigs in constant motion 4. Moderate Breeze Raises dust and loose paper; small branches are moved 5. Fresh Breeze Small trees in leaf begin to sway 6. Strong Breeze Large branches in motion; umbrellas used with difficulty against the wind 7. Near Gale Whole trees in motion; inconvenience felt when walking against the wind 8. Gale Twigs break off trees; progress generally impeded 9. Strong Gale Slight structural damage occurs (chimney pots and slates removed)					Note 4: Odour Persistence 0. No Odour 1. Intermittent (detected intermittently during the period of assessment) 2. Persistent (detected throughout the period of assessment)					
						Note 5: Odour Intensity 0. No Detectable Odour 1. Faint Odour (barely detectable, need to stand still and inhale facing into wind) 2. Moderate Odour (easily detectable while walking and breathing normally, possibly offensive) 3. Strong Odour (bearable but offensive- might make clothes / hair smell) 4. Very Strong Odour (unbearable, difficult to remain in area affected by odour)					
	Time: From to		Licensee's representative(s) met on site:					Do any of the odours experienced on-site match those recorded during the survey?		<input type="radio"/> Yes <input type="radio"/> No	
List areas inspected			What processes were occurring during the off-site odour assessment?			Potential on-site odour sources identified					

Odour Impact Assessment Guidance for EPA Licensed Sites (AG5)

Parameter	Observers Location		Wind			Weather			Time		Odour rating		General comments and odour description comments
	Map Location No.	Name of household / commercial site (easily identified)	Sensitivity (1-5) Note 1	Direction from which wind blows	Orientation Observer vs facility	Strength (0-9) Note 2	Precipitation (1-5) Note 3	Temperature (1-4) Note 3	Start Time 24h clock	End Time 24h clock	Odour Persistence (0-7) Note 4	Odour Intensity (0-4) Note 5	Description of any odours, other than source of odours, etc.
Thresholds may indicate nuisance	-		≥3	-	Downwind Approx DW, or Not detectable	-	-	-	-	-	1 or 2	≥2	Guide: A location where the score meets or exceeds all the threshold values will be deemed a non-compliance subject to nuisance/significant impairment, particularly if the observations are supported by public complaints on impact, frequency and duration of odours.
Field Observations					Upwind				:	:			
									:	:			
									:	:			
									:	:			
									:	:			
									:	:			
									:	:			
									:	:			
									:	:			
Brief details of any meeting with last/complaints received during assessment (include name , address, telephone numbers, etc.)													

Annex B: Odour Complainant Log Sheet

Odour Log

Name: _____

Address: _____

Address of Suspected Odour Source: _____

Date	Start Time	Finish Time	Description of Odour (e.g. smelled like Bakery, Coffee, Paint, Mothballs, Wet Dog etc)	Other Comments (e.g. Intensity, or if odour detected at location other than your above address)

Do not forget to complete the declaration of record details (below).

Declaration of True Record

I (Name) _____ confirm that the above list is a true record of events recorded.

from (Date) _____ to (Date) _____.

Signature: _____ Date: _____

I am/am not* prepared to appear in court to give evidence if required (*please delete as appropriate).

Appendix 1

Frequently asked questions

1. *What do I do if I detect odours not related to the licensed site during the odour assessment period?*

Examples of unrelated odours include slurry spreading, vehicle exhaust, etc. The odour agent should make a note of the persistence and intensity of these types of odours in the comment box in the field record sheet only. The odour rating columns in the Odour Field Sheet are only for odours suspected of coming from the site under investigation.

2. *How far back in time must a complaint be made from someone at the observation point, for the observation point sensitivity to be considered extra sensitive?*

If you have ever received a complaint from any resident, business or users of a public areas within the area of the observation point, then the area should be scored as 5. Extra sensitive.

3. *How is intermittent defined in relation to Note 4: Odour Persistence on the field record sheet?*

An odour is intermittent, if it is detected on one or more occasions during the assessment period. For example, odour can be considered to be intermittent, if it is detected at the beginning, and or at the end of the assessment.