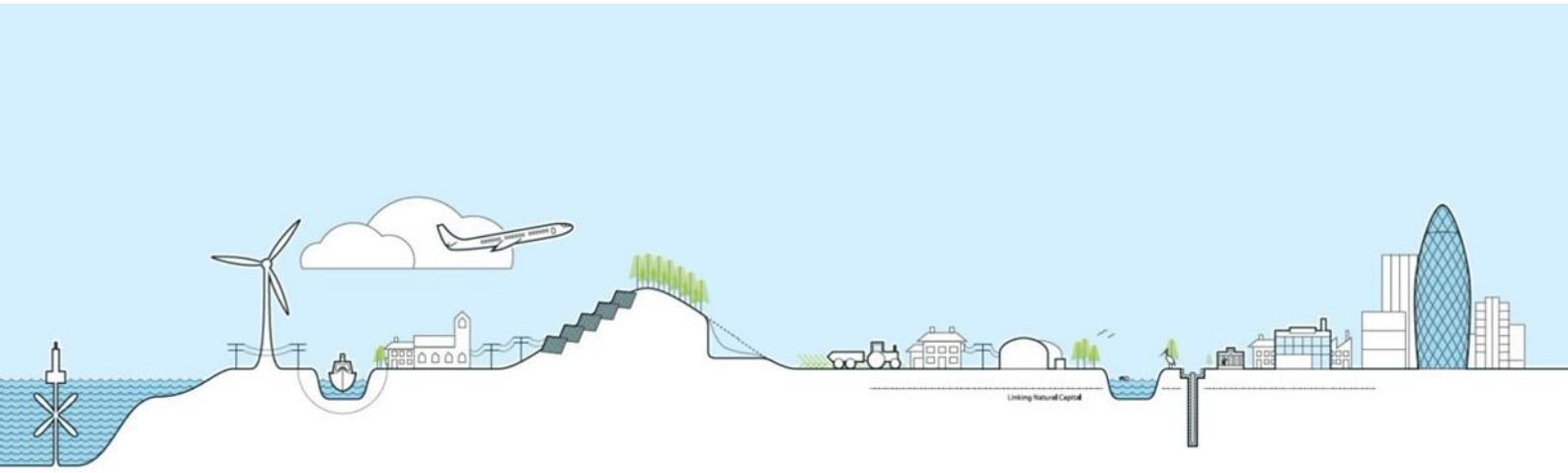
Pyle Community Recycling Centre

Pest Management Plan

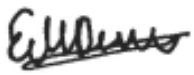
August 2023

Prepared By

aardvark
environment matters



Project Quality Control Sheet

ORIGINAL	Author	Checked by	Approved by
Signature			
Date	11/08/2023	11/08/2023	11/08/2023
Company	Aardvark EM Ltd	Aardvark EM Ltd	Aardvark EM Ltd

Location: 40b Sturmi Way, Village Farm Industrial Estate, Pyle, Bridgend, CF33 6BZ

Grid Reference: SS 83427 81951

Project Manager: Jon Pettitt MSc PIEMA

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Report Number: 2225-R002-02

Report Status: FINAL

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1 Introduction

This Pest Management Plan (PMP) has been prepared in order to support the required permit application for the facility.

1.1 Objectives of this Pest Management plan (PMP)

In accordance with the Environment Agency guidance[1], a Pest Management Plan should explain how you'll prevent or minimise pests on-site.

An effective pest management plan should consider the various reasons a pest may be attracted to the site, mitigation techniques utilised to deter pests and inspection and monitoring plans. The PMP should demonstrate the competence and commitment of the operator to controlling the potential for pests.

It should be noted that this PMP document is a working document which requires continuous review and where necessary, revision. This document will be updated as required and reviewed every 4 years.

[1] Environment Agency (2022) Control and monitor emissions for your environmental permit: Pest management plan.

2 Site Details

2.1 Site location

The development is located within the town of Pyle, approximately 7.5km to the west of Bridgend town centre. The site is located towards the eastern end of the Village Farm industrial estate. The M4 motorway is around 1km south of the site. The site is located within the red boundary line, displayed in Figure 1 below.

Figure 1: Site location

2.2 Site layout

The site utilises a one-way system which allows users to efficiently make their way around the site. Members of the public will access the site via the main gates, accessed from Sturmi Way, located to the North of the site. Waste operatives will be located near to the entrance allowing users to discuss the waste types they have brought to the site and the appropriate waste disposal area for that waste. They will then travel around the one-way system, where they can reverse up to their desired waste containers to unload waste. During busy periods members of the public can utilise a by-pass lane, allowing them to bypass queues for areas of the site they do not need to visit. Once waste is disposed of, users will follow the one-way system and exit to the east of the site onto Heol Mostyn.

Waste disposal will be overseen by site operatives to ensure only accepted waste types are being processed and waste is entering the correct waste disposal container. Members of the public will be advised to take any rejected waste home. Any rejected waste that must be stored at the site will be stored in quarantine/isolation until it can be collected.

The centre of the site is not accessible to the public, this area allows site staff and operators access to the waste containment units, waste can be collected, sorted and observed from this area. Site staff/operators and HGVs will enter the site via an entrance from Heol Mostyn. The north-east of the site houses the existing site building. The building has been retained and is now utilised as a canteen/mess room, offices, reception area, toilets and additionally houses the sites re-use shop (contains discarded items which could be given a new life, for example old furniture, décor, exercise equipment etc.).

Figure 2 displays the site layout.

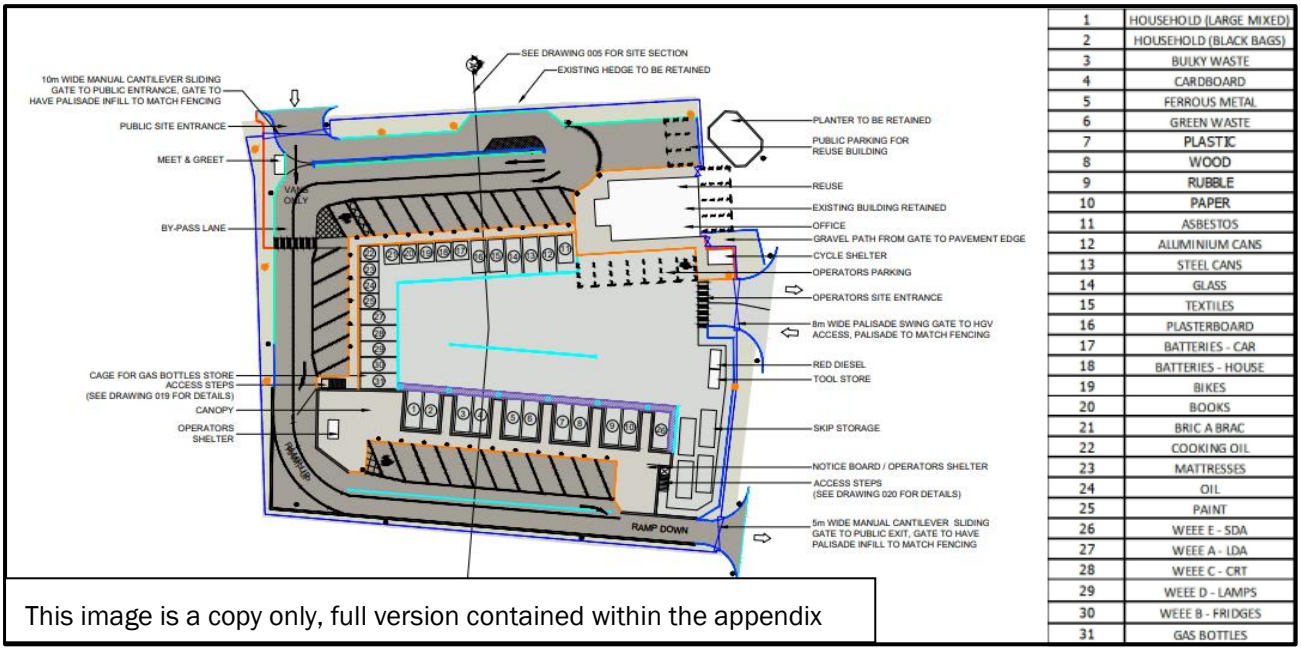

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Figure 2: Site layout

2.3 Site activities

2.3.1 Operating hours

The site will operate 7 days a week, including most bank holidays (except for the 25th and 26th of December and the 1st of January).

Operating hours are as follows:

Opening Period	Opening Hours	Opening Days
1st October - 1st March	9:00 - 16:00	7 days a week
1st April - 30th September	8:30 - 19:00	Mondays to Fridays
1st April - 30th September	8:30 -18:00	Saturdays and Sundays

Table 1: Operating hours

2.3.2 Accepted waste codes

As part of site operations:

- The site will only accept household produced waste, there are signs located outside the site stating this. Any member of the public attempting to dispose of commercial waste will be turned away from the site,
- Information surrounding the sites accepted waste types is available on-line, along with examples of each waste type,
- Site operatives will direct members of the public to the appropriate waste container for the waste type they are disposing of. Waste operatives will assist members of the public in retrieving items from their vehicles.
- The clear use of signage to identify each waste container and the presence of site staff/operatives will minimise the amount of waste placed within the wrong waste containment unit,
- Any wastes brought to the site that are not accepted will be rejected following inspection. Rejected wastes will be stored in a sperate isolation or quarantine cage and disposed of appropriately,
- If a waste is brought to site that poses a serious threat to the environment or human health the site may be closed and the appropriate authority will be notified of the incident.

The following waste codes are accepted at the site, for each waste type a maximum storage quantity and time is also provided. This is strictly adhered to. The waste types most associated with pests are highlighted below.

Waste description	Max. quantity on site	Max. storage duration	EWC code
General household waste	30 tonnes	48 hours	20 03 01 15 01 05 15 01 06
Green waste	20 tonnes	48 hours	20 02 01
Scrap metal	40 tonnes	2 weeks	20 01 40 15 01 04
Inert material	30 tonnes	2 weeks	17 01 07
Fridges/Freezers	50 tonnes	1 month	20 01 35
Gas bottles	100 units	1 month	16 05 05
Asbestos	2 tonnes	3 months	17 06 05
Wood	20 tonnes	2 weeks	20 01 38 15 01 03
LDA/SDA	1 tonne	1 month	20 01 36
TV's & monitors	1 tonne	1 month	20 01 35
Fluorescent tubes	1 tonne	1 month	20 01 21
Household chemicals & paints	200 litres	1 month	20 01 28
Waste oil	2 tonnes	1 month	20 01 26
Plasterboard	20 tonnes	2 weeks	17 08 02
Mattresses	5 tonnes	2 weeks	20 03 07
Tyres	6 tonnes	8 weeks	16 01 03

Waste description	Max. quantity on site	Max. storage duration	EWC code
Paper or cardboard	20 tonnes	2 weeks	20 01 01 15 01 01
Textiles	5 tonnes	4 weeks	15 01 09 20 01 11 20 01 10
Clothes			
Plastics	20 tonnes	4 weeks	20 01 39 15 01 02
Glass	30 tonnes	8 weeks	20 01 02 15 01 07
Steel, aluminium cans	10 tonnes	6 weeks	20 01 40 15 01 04
Batteries – household	50 units	1 month	20 01 33* 20 01 34
Batteries - Car	5 tonnes	8 weeks	16 06 01
Discarded equipment containing chlorofluorocarbons	30 tonnes	4 weeks	20 01 23*
Edible oil and fats	4 tonnes	6 months	20 01 25
Paints, inks, adhesives, and resins containing hazardous substances	2 tonnes	12 weeks	20 01 27*
Soil and stones	25 tonnes	4 weeks	20 02 02
Other non bio degradable wastes	30 tonnes	8 weeks	20 02 03
Wastes from markets	10 tonnes	6 weeks	20 03 02
Street cleansing residues	15 tonnes	4 weeks	20 03 03
Municipal wastes not otherwise specified consisting of absorbent hygiene products	45 tonnes	2 weeks	20 01 99

Table 2: Waste acceptance and storage

2.3.3 Waste containment

The following is undertaken to manage waste containment on site:

- All waste will be stored in a bay or container appropriate for its waste type,
- All waste containment will be place upon an area made up of an impermeable surface and featuring sealed drainage,
- Waste containment areas will be monitored regularly to ensure there is no overspill and that any overspill that does occur is cleared quickly,
- When a waste container on site is either almost full a site operative will contact the appropriate contractor and arrange collection of the waste,
- Waste storage containers and bays will be inspected regularly as part of the daily site check to ensure they are fit for purpose (no cracking in the impermeable surface, drainage functioning correctly, no holes or significant damage to the container etc.),

- Waste will be weighed at its final destination and records will be sent to Kier. This allows Kier to track waste and send records of activities to Natural Resources Wales (quarterly waste returns) and to Bridgend County Borough Council (waste flow data).

The waste containment utilised on site is as follows:

Waste type	Containment
General household waste	35/40 yd container
Green waste	35/40 yd container
Scrap metal	35/40 yd container
Inert material	15/20 yd container
Fridges/freezers	Loose, doors to be securely taped shut.
Gas bottles	Loose, in a locked cage.
Asbestos	In a specialist container, locked and sealed.
Batteries	1m^3 lidded battery boxes.
Wood	35/40 yd container
LDA/SDA	35/40 yd container
TVs and monitors	35/40 yd container
Fluorescent tubes	In a specialist container, coffin box.
Household chemicals and paints	In a specialist container.
Waste oil	1200 ltr bunded oil tank.
Plasterboard	35/40 yd container
Mattresses	35/40 yd container
Tyres	Loose
Paper or cardboard	35/40 yd container
Textiles	In a specialist container
Clothes	35/40 yd container
Plastics	35/40 yd container/1100 bins
Glass	35/40 yd container

Table 3: Waste containment

The site is split up into three main areas, all of which are built upon areas of impermeable surfacing:

- Tarmacked areas for cars (labelled in purple),
- Kerbed pedestrian walkways (labelled in blue),

- Concreted surface housing waste containment and site compound (marked in green).

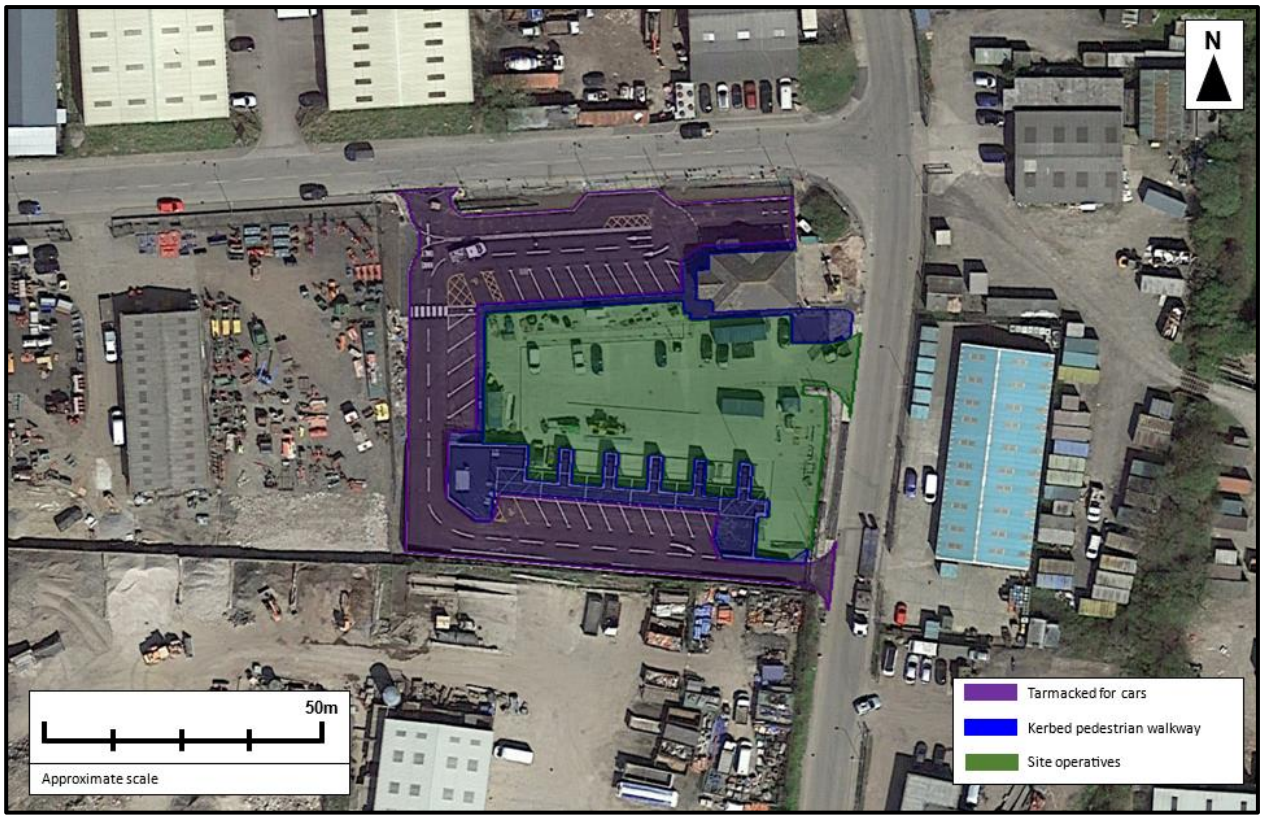


Figure 3: Site surfacing plan

The areas are divided by various types of kerbing, for example, bull nose, HB2 and kerb drains. The sites impermeable surfaces will ensure no waste residue will leave the site boundary or travel between areas of the site. The sites surface contains multiple drains to ensure all waste-water enters the site drainage system and treated appropriately before its exit.

2.4 Nearby Receptors

The site is located within the Village Farm industrial estate, highlighted in green, in Figure 3. There are a number of commercial units within the vicinity of the site including; recycling and waste management sites, equipment and plant hire, a number of automotive business etc, uses that are in general sensitive receptors with regard to the risk of odour.

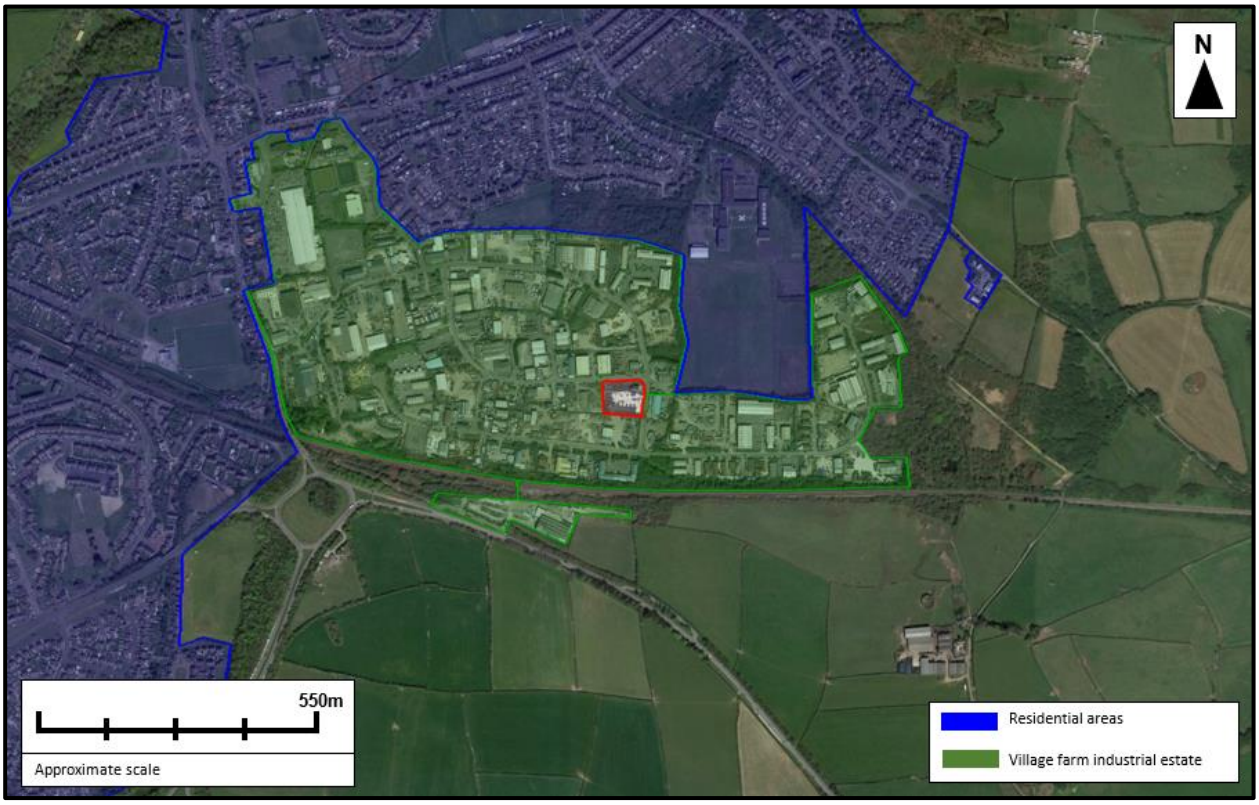


Figure 4: Map showing nearby receptors

The nearest residential areas are located approximately 350m to the north of the site. On Figure 4, residential and community services are indicated in blue. The site will utilise an active complaints line allowing members of the public to report any above average levels of odour emanating from the site.

The predominant wind direct is south-westerly, and as there are limited sensitive receptors to the immediate north-east direction, odour complaints would be expected to be limited.

3 Pest management and risk assessment

3.1 Introduction

This section sets out the control measures/operational procedures that will be put in place at the site in order to reduce the potential for pest activity at the site and the associated activity surrounding the site causing nuisance to local resident. The risk assessment below has been undertaken with consideration of the effectiveness of these measures and procedures. Table 5 is drawn from the relevant Environment Agency guidance and sets out the measures and procedures to be put in place, as well as the residual risk of pest nuisance, during normal operational practises.

3.2 Pest risk assessment and management plan

Hazard	Receptor	Pathway	Risk Management	Probability of exposure	Consequence	What is the overall risk?
Animals attracted to site odours	Site staff/operatives Site visitors Local properties Local businesses	Ground and air	• Olfactory monitoring to be undertaken by site-staff • Waste acceptance criteria should be followed, • Maximum capacity of waste types adhered to, • Waste types stored in the correct containment to avoid rise of odour, • Waste types transferred to disposal point within allotted time period, • Site kept clean and tidy, monitored regularly, • Lids utilised on lidded containers to contain odour. • Maximum storage times to be adhered to.	Medium	Pest annoyance	Not significant if management is effective
Scavenging animals	Site staff/operatives Site visitors Local properties Local businesses	Ground	• Regular site checks to ensure the site is clean and tidy, • Maximum capacity of waste types adhered to, • Waste types stored in the correct containment to avoid spillage and overflow, • Waste types transferred to disposal point within allotted time period, • Ensure waste containers are secure, • Ensure there is no significant damage to waste containers,	Medium	Pest annoyance Untidy Site Damage to site	Not significant if management is effective

			• Deter animals which wander onto site, • Ensure gates are locked when the site is closed, • Lids utilised on lidded containers, • Maximum storage times to be adhered to.			
Birds roosting on site	Site staff/operatives Site visitors Local properties Local businesses	Air and buildings	• Install bird deterrents such as bird spikes or sharp fencing to deter birds from roosting, • If roosting birds are becoming a nuisance, call in a pest control expert, • Avoid creating covered perch areas that are attractive to birds.	Medium	Pest annoyance, Damage to site	Not significant if management is effective
Vermin infestation	Site staff/operatives Site visitors Local properties Local businesses	Ground and buildings	• Install vermin deterrents such as bird spikes or sharp fencing to deter birds from roosting, • If vermin are spotted on site, call in a pest control expert, • Avoid creating areas on site which will be attractive to vermin.	Low	Pest annoyance Risk of disease Damage to site	Not significant if management is effective
Animals carrying disease	Site staff/operatives Site visitors Local properties Local businesses		• Awareness of likely diseases prevalent in local wildlife, • Contact RSPCA or local charity to rescue animal, • If required close site to the public.	Low	Disease spread Dead animals	Not significant if management is effective
Flies	Site staff/operatives Site visitors Local properties Local businesses		Management utilised to manage flies is included within the Fly Management Plan (appendix 2).	Low		Not significant if management is effective

4 Maintenance and monitoring

4.1 Maintenance strategy

The site will be inspected daily by the site staff and operators by means of a visual check. Findings of the visual check will be recorded within the site diary. Any maintenance or serving of equipment required on site will be completed by either a competent and trained member of site staff or a third-party provider. Records of all servicing and maintenance completed on site will be recorded within the site diary for future reference.

It is important that maintenance and servicing of equipment and the general site is completed to ensure pests do not become an issue. An example of this is ensuring the site fencing and gates are maintained to reduce the likelihood of pests entering the site.

4.2 Monitoring

Due to the careful design and planning of the site, incident of pests are not expected to arise. However, the following precautions have been taken to ensure pests do not become an issue.

The site will be supervised by an approved supervisor (holding the appropriate certificates of technical competence). Waste management operatives will be on site during operational hours, with 2 operatives actively working on site during this time. The waste management operatives will be trained on the requirements of Environmental permits/waste management licenses, including pest management mitigation and monitoring to be undertaken on site.

This includes:

- A contractor specialising in pest control is brought to the site on a monthly basis to observe the level of pests active on site, propose pest mitigation plans where required and maintain previous management techniques.
- Odour is monitored frequently as discussed within the sites Odour Management Plan (Document reference, 2225-R001-01),
- A monitored complaints line will be available for members of the public and local businesses (all complaints made to the line will be investigated and recorded),
- Any incidents of pests on site will be recorded in the site diary, including information surrounding; the type of pest, the likely cause of the pests arrival on site, any mitigation measures utilised on site,
- The condition of the site will be regularly monitored to ensure the site is kept to a good level of cleanliness and all maintenance is being completed. A daily walkaround check will be undertaken following the route labelled in the figure below at the end of each working day.

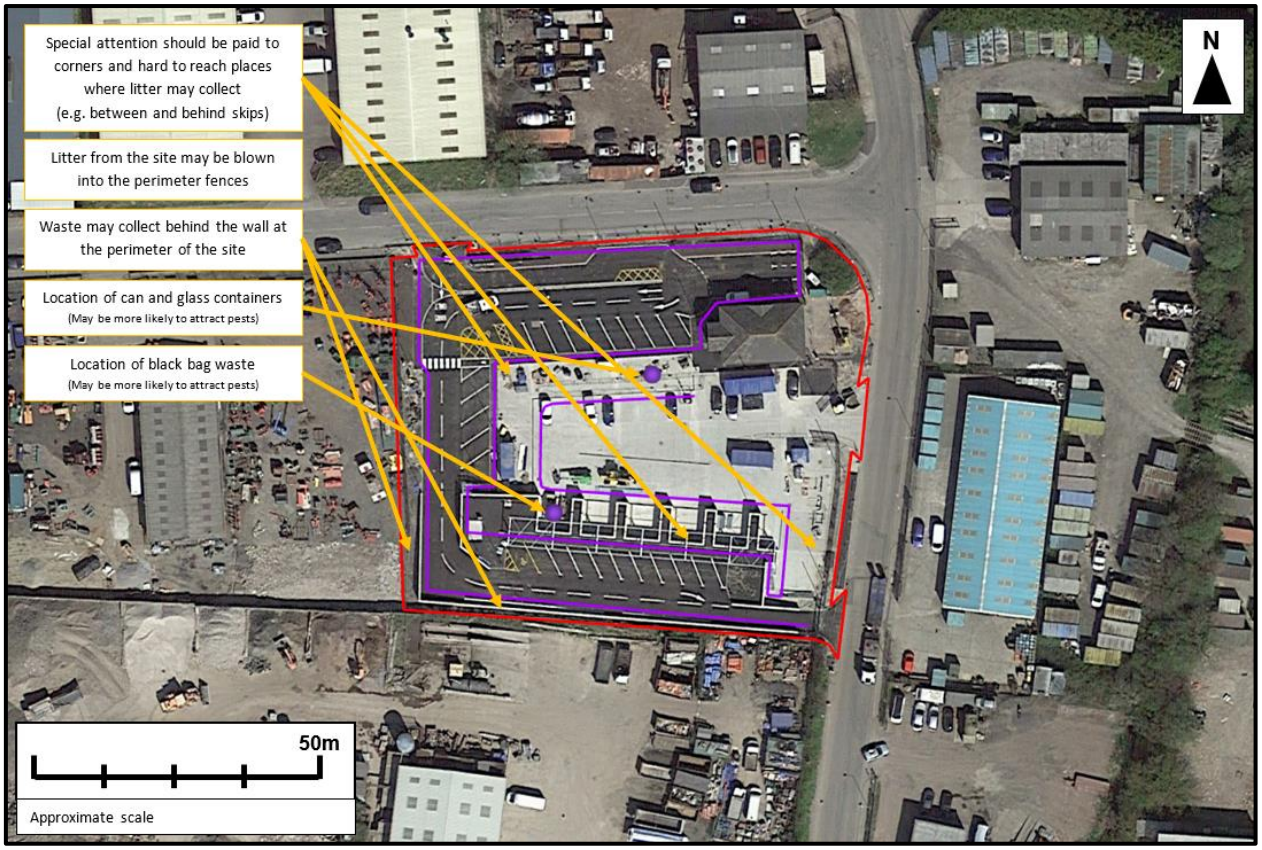


Figure 5: Pest Monitoring Route

4.3 Pest complaints

Members of the public can file a complaint via an emergency contact number which will be visibly displayed near to the site entrance.

When a complaint is received, the following form will be filled out by site operatives to ensure detailed records are noted for each complaint received. These records will then be investigated to ensure that the complaint can be accurately addressed and steps taken to further reduce the impact of pests on local sensitive receptors.

Pest Complaints Form	
Name	
Address	
Contact Number	
Location of compliant source, if not at above address	

Date of pest/s appearance (dd/mm/yyyy)	
Weather conditions	
Temperature	
Wind strength	
Wind direction	
Complainant's description of pest/s encounter	
Duration of incident	
Any further comments relating to the pest/s	
Signed	
Current date (dd/mm/yyyy)	

Table 4: Pest encounter complaints form

4.3.1 Pest complaint response

The following actions will be undertaken in response to a complaint by a member of public.

1	Complaint received by a member of the public via Pest Complaints Form.
2	Investigate operations and weather conditions at the time of the event to identify source of pests.
3	Complete pest reporting in log book.
4	Ensure complaint is reviewed by senior management.
5	Implement pest mitigation measures to reduce the potential for repeat episode.
6	If pest complaints continue – investigate further mitigation methods that can be applied to the operation or activity.
7	Maintain correspondence with complainants and inform of actions taken. A response will be issued within 5 working days of receipt.
8	Senior management will review all complaints and their responses as part of a monthly review of the site log book.
9	If a number are received they will be marked as urgent, a thorough investigation into the cause of the pest event will be undertaken and the matter will be escalated with senior management.

5 Staff competency and training

The site will be supervised by an approved site manager who holds the relevant certificates of technical competence (CoTC). WAMITAB certificates will be held surrounding the management of Hazardous and non-hazardous waste sites. The site manager will be contactable during the operational hours of the site to ensure that any issues can be resolved quickly and the potential impacts mitigated.

During site operational hours at least two site operatives will be working at all times. This is made possible through a staggered lunch system. Waste management operatives will carry out daily inspections to ensure the site is in good working order and any incidents of pests are resolved and mitigation measures put in place in case of future incidents.

Site staff will receive training to ensure they are equipped to deal with any incidents of pests entering the site boundary. The pest management plan will also be available within the site office for site staff to view at any time. Staff will not be expected to deal with pests themselves if thewy do not feel comfortable, however they are expected to contact someone who is if pests are becoming an issue (for example; the trained pest control expert, the RSPCA, a senior member of site staff).

A trained pest control expert will be assigned to the site. The pest control expert will complete planned monthly visits to observe the level of pests active on site, propose pest mitigation plans where required and maintain previous management techniques. The pest control expert will, be contactable during regular office hours and can be called to site as required.

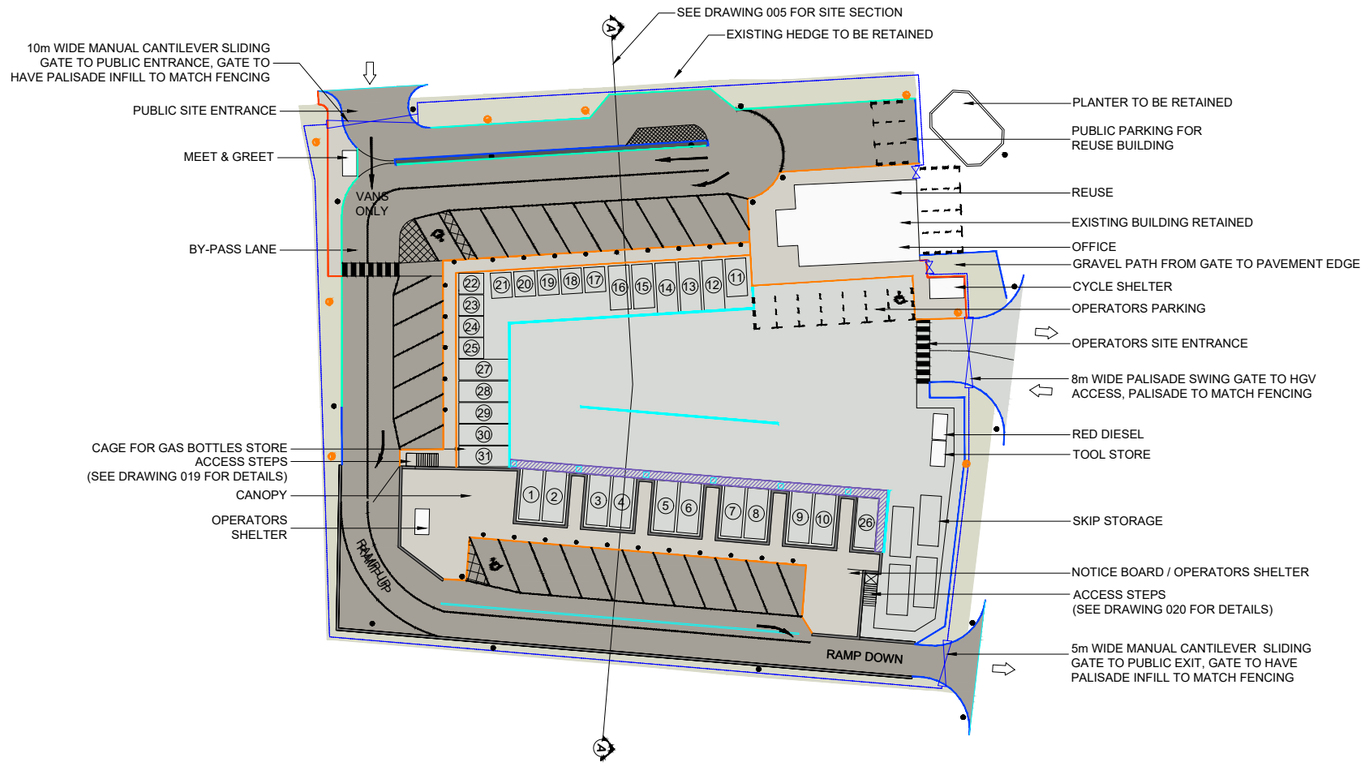
6 Summary and conclusion

The Pyle Community Recycling Centre is located within the Village Farm Industrial estate, approximately 7.5km west of Bridgend town centre. Located within an existing industrial and commercial estate containing sensitive receptors.

The main factor affecting the likelihood of pest nuisance on site is likely to be the management of waste containment. Site operatives will ensure the correct wastes are being placed in the correct containers, maximum waste storage times and quantities are adhered to and the waste containers are generally kept well maintained and tidy.

The pest management plan presented within this report is considered to reduce the risk of pest nuisance, making it insignificant.

Appendix 1 – Site Layout Plan



1	HOUSEHOLD (LARGE MIXED)
2	HOUSEHOLD (BLACK BAGS)
3	BULKY WASTE
4	CARDBOARD
5	FERROUS METAL
6	GREEN WASTE
7	PLASTIC
8	WOOD
9	RUBBLE
10	PAPER
11	ASBESTOS
12	ALUMINIUM CANS
13	STEEL CANS
14	GLASS
15	TEXTILES
16	PLASTERBOARD
17	BATTERIES - CAR
18	BATTERIES - HOUSE
19	BIKES
20	BOOKS
21	BRIC A BRAC
22	COOKING OIL
23	MATTRESSES
24	OIL
25	PAINT
26	WEEE E - SDA
27	WEEE A - LDA
28	WEEE C - CRT
29	WEEE D - LAMPS
30	WEEE B - FRIDGES
31	GAS BOTTLES

NOTES

LEGEND

- BACK EDGE OF PAVEMENT KERB
- BULL NOSE KERB
- HB2 KERB
- HB2 KERB DRAIN
- ACO S150 CHANNEL DRAIN
- PALISADE FENCING
- PEDESTRIAN FENCING
- 900mm WIDE CHANNEL IN CONCRETE HARD STANDING
- TARMAC ROAD
- CONCRETE HARDSTANDING
- PEDESTRIAN PAVEMENT
- LANDSCAPING

Revision	By	Chk'd By	Date	Comments
C0	TW	DP	23.08.18	CONSTRUCTION ISSUE
T0	IMR		MAR 14	

Cyngor Bwrdeistref Sirol
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Site
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Project
HWRC FACILITY

Drawing Title
PROPOSED SITE LAYOUT

Scale
1:500 @ A2

Date
MARCH 14

Drawing Number
004

Revision
C0

CONSTRUCTION

402.00798.00029.03.004.C0 Proposed Site Layout.dwg

Appendix 2 – Fly Management Plan

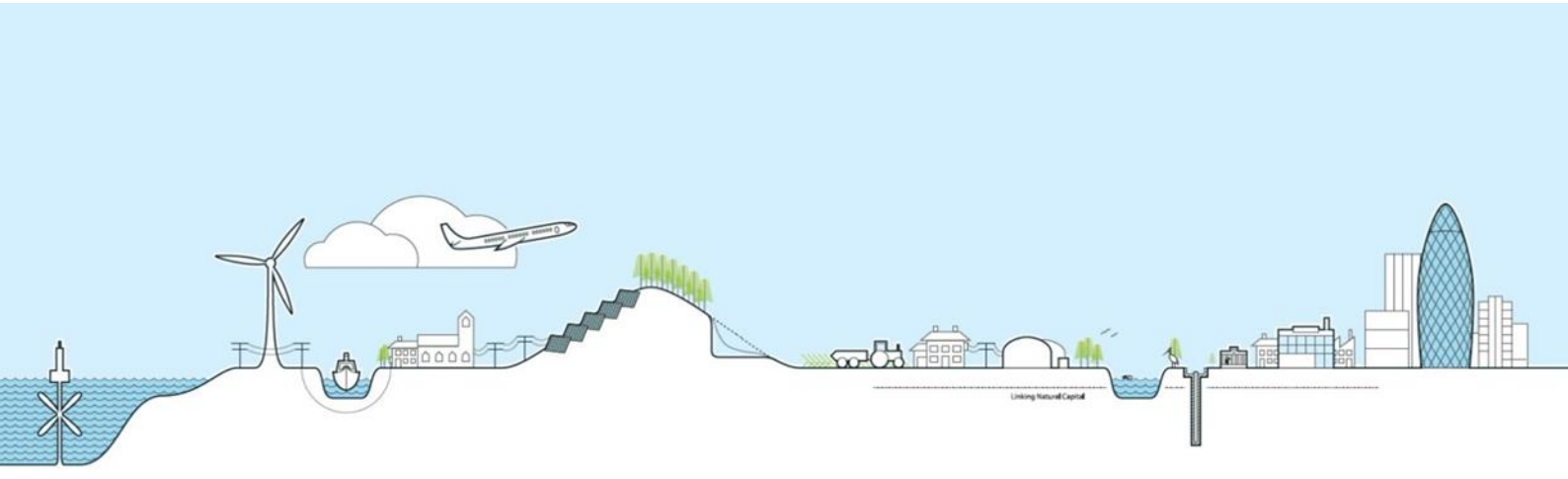
Pyle Community Recycling Centre

Fly Management Plan

August 2023

Prepared By

aardvark
environment matters



Project Quality Control Sheet

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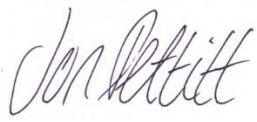
Signature			
Date	09/08/23	09/08/23	09/08/23
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Contents

Tables

1 Introduction

This Fly Management Plan has been prepared as an addendum to the Pest Management Plan (ref. 2225-R002) required to support the permit application for the facility.

1.1 Objective of this Fly Management Plan (FMP)

In accordance with the Environment Agency guidance[1], a Fly Management Plan should explain how to prevent or minimise flies on site.

An effective FMP should consider various reasons flies may be attracted to the site, mitigation techniques utilised to deter flies and inspection and monitoring plans. The FMP should demonstrate the competence and commitment of the operator to controlling the potential for flies.

[1] Environment Agency (2013) Fly Management: How to comply with your environmental permit

Fly Management and Risk Assessment

1.2 Introduction

This section sets out the control measures/operational procedures that will be put in place at the site to reduce the potential for fly activity at the site and the associated activity surrounding the site causing nuisance to local residents. The risk assessment below has been undertaken with consideration of the effectiveness of these measures and procedures. Table 1 is drawn from the Environment Agency fly management guidance and sets out the measures and procedures to be put in place, as well as the residual risk of nuisance, during normal operational practises.

1.3 Fly risk assessment and management plan

Hazard	Receptor	Pathway	Risk Management	Probability of exposure	Consequence	What is the overall risk?
Site becoming odorous and attracting flies	Site staff/operatives Site visitors Local properties Local businesses	Ground and air	• Olfactory monitoring to be undertaken by site-staff • Waste acceptance criteria should be followed, • Maximum capacity of waste types adhered to, • Waste types stored in the correct containment to avoid rise of odour, • Waste types transferred to disposal point within allotted time period, • Site kept clean and tidy, monitored regularly, • Lids utilised on lidded containers to contain odour, • Maximum storage times to be adhered to.	Medium	Pest annoyance	Not significant if management is effective
Site becoming unclean and attracting flies	Site staff/operatives Site visitors Local properties Local businesses	Ground and air	• Olfactory monitoring to be undertaken by site-staff, • Maximum capacity of waste types adhered to, to avoid overspill of waste, • Waste containers taken away as soon as they are filled or close to being filled, • Any spilled material is cleared up as soon as possible to avoid waste festering.	Low	Pest annoyance	Not significant if management effective

Hazard	Receptor	Pathway	Risk Management	Probability of exposure	Consequence	What is the overall risk?
Flies laying eggs within waste	Site staff/operatives Site visitors Local properties Local businesses	Ground and air	• Correct containment is utilised for each waste type to avoid flies accessing containers, • Waste transferred to another site within the allotted time period, to avoid waste sitting and festering on site, • If waste is held on site for a longer period, management techniques will be put in place to ensure the waste does not become attractive to flies; ▪ Sitting waste will be mixed/agitated to avoid it becoming warm, ▪ Fly mitigation techniques will be utilised to avoid attracting flies, ▪ Any waste with the potential to attract flies and become a breeding ground will be contained.	Low	Pest annoyance	Not significant if management effective
Fly larvae being transported off-site	Site staff/operatives Site visitors Local properties Local businesses	Ground and air	Waste piles will be checked before leaving site for any flies. If flies are found management techniques will be put in place to ensure there are no larvae within the waste before it can be removed to another site (larvicides, insecticides etc.).	Low	Pest annoyance	Not significant if management effective
Fly larvae being transported on to site	Site staff/operatives Site visitors Local properties Local businesses	Ground and air	Waste will be checked before being placed into containment, any waste containing larvae will be rejected due to the potential for a fly breeding ground to form. Waste such as AHP waste which may have been sitting in containment prior to arriving on site will be thoroughly checked.	Low	Pest annoyance	Not significant if management effective

Table 1: Fly risk assessment and management plan

2 Fly species and identification

Many varieties and species of flies are associated with the waste industry, particularly common houseflies and blue/greenbottles. Flies are most active between the months of April and October and between the hours of 10:00 and 16:00.

Larvae are laid in warmer weather (12°C-45°C) within damp, decaying, organic waste. Larvae is likely to appear when waste has been left for a long period of time. The higher the temperature the quicker the flies can develop. They will find a drier area allowing them to fully grow and pupate before emerging as an adult.

2.1 Identification

Correctly identifying flies at the site is important. Correct identification ensures:

- The correct prevention and control techniques are being utilised,
- Effective monitoring techniques are established (what is classed as an infestation etc.),
- That, in the event of a complaint or concern about offsite migration of flies, the likelihood of the flies originating from the site can be assessed.

Site operatives will receive training to ensure that the most common flies expected to be present at the site can be identified. A hand lens with x10 magnification will be kept within the site office to ensure accurate identification can be completed (to be used for trapped/stationary flies).

The table below can be utilised to identify the species of flies which may be found at the site.

Fly species	Appearance	Pest status	Image	Notes
Common housefly *Musca domestica*	6-7mm long. Four distinct lines on thorax, yellow-ish abdomen. Larvae has a white-ish, smooth, maggot appearance.	Can cause widespread and severe problems	 	Larvae found in refuse. Adult readily disperses and enters buildings.
Lesser housefly *Fannia canicularis*	4-6mm long. Three distinct lines on thorax, yellow-ish on its sides. Larvae are a dull grey-brown and spikey.	Can cause widespread and severe problems	 	Larvae found in refuse. Adult readily disperses and enters buildings.
Blow flies: blue and green bottles *Calliphora/lucilia*	10-14mm long Have a green, blue or gold metallic hue. Larvae are a pale yellow-ish grey and conical shaped.	Localised problems only	 	Larvae found in carrion and faecal material, commonly associated with putrescible waste. Adults tend not to disperse far.

Stable flies *Stomoxya calcitrans*	5-7mm long. Resembles a common housefly, slightly lighter and smaller. Mouth for biting.	Localised problems only	 	Adult is blood-feeding, and tends not to disperse far.
Fruit flies *Drosophila spp.*	Small, around 2mm. Dull yellow, brown-ish yellow or brown-ish black. Larvae are dirty white and maggot shaped.	Localised problems only	 	Larvae found in rotting vegetation or vegetable waste, e.g. green waste composting. Tends not to disperse far.
Cluster flies *Pollenia rudis, eudasyphora cynella, musca autumnalis*	7-10mm long. Dark grey with patches of gold hair in a checked pattern. Larvae are parasites of earthworms.	Localised problems only	 	The larvae of these flies are not found in livestock or waste facilities, but the adults do enter buildings in the autumn, and may be confused with houseflies by complainants.

Table 2: Fly identification

3 Prevention Strategy

The following will be undertaken at the site to reduce the likelihood of flies.

- The waste site will be kept clean and tidy, any spillages should be cleared quickly,
- Waste will not be held at the site over the maximum approved time,
- Waste will only be stored within its designated container,
- Maximum capacity of waste types stored at any one time must be adhered to,
- The waste acceptance criteria will be followed,
- Any loads containing visible larvae will not be accepted. In the event of accidental acceptance, the waste will be removed to a suitable site as soon as practicable,
- Liquid baited traps may be placed to reduce the amount of flies in certain areas, however are not very effective in large open spaces,
- Waste containers will be removed from site as soon as they are filled or close to being filled,
- Odorous waste will be stored in lidded containers.
- Regular monitoring will be undertaken as discussed below in section 5.2,

The following measure may be undertaken to further reduce risk, subject to assessment of need.

- Insecticide and Larvicide treatments can be used where appropriate,
- If waste must stay at the site longer than is normal, waste may be turned to avoid waste from settling and becoming a breeding area,
- The site will have an assigned pest control officer who will visit the site on a monthly basis and can be contacted if advice is needed in relation to flies,
- Ensure that waste does not accumulate in inaccessible areas or corners of the site,
- When adult fly numbers are high, investigate areas which may have become fly breeding areas,
- Training staff in the use of fly spray, undertaking toolbox talks to ensure site staff can identify and deal with any incidents of flies.

4 Monitoring strategy

Due to the careful design and planning of the site, incidents of fly infestation are unlikely to occur. However the following monitoring is undertaken at the site to ensure any incidents of fly breeding are caught quickly and mitigation measures put in place.

The following monitoring measures may be put in place at the site:

- A contractor specialising in pest control is brought to the site on a monthly basis to observe the level of flies active on site, propose fly mitigation plans where required and maintain previous management techniques.
- Odour is monitored frequently as discussed within the site's Odour Management Plan (Document reference, 2225-R001),
- Any incidents of flies on site will be recorded in the site diary, including information surrounding; the type of flies, the likely cause of the pests' arrival on site, any mitigation measures utilised on site,
- The condition of the site will be regularly monitored to ensure the site is kept to a good level of cleanliness and all maintenance is being completed,
- Larvae monitoring may be required during periods of high complaints,
- Scudder grids or open air adhesive paper catchers may be used to determine a baseline.

4.1 Calculating a fly baseline

A baseline level of fly activity should be calculated at the site in order to determine:

- The amount of flies that can be considered 'normal' and therefore when prevention and mitigation measures should be put in place,
- When flies are most active at the site, to allow for preparation to take place and prevention strategies to be put in place,
- Whether a control measure put in place at the site can be considered successful,
- Trends can be determined to predict when fly peaks may occur,
- Complaints located a distance from the site can be compared with site records to determine if the site is the source of the fly infestation.

Monitoring should be undertaken regularly to determine trends, flies prefer warmer temperatures and so regular monitoring should be undertaken between April and October, between 10:00 and 16:00, which are said to be active hours. Monitoring should occur at multiple locations at the site to determine the areas and materials flies visiting the site may prefer. It is important to note the conditions observed during the monitoring. It is important to identify the species of fly in order to determine fly specific trends and ensure the most effective mitigation methods are put in place.

The following tests can be undertaken to determine the sites baseline:

Scudder Grid Counts

A scudder grid is a grid (usually made of wood or metal and around 60cm^2) which can be dropped onto the surface of the waste to determine the amount of flies located within a certain area of the waste pile. Flies usually settle onto the grid after around 10-30seconds, where they can be counted. The test should be repeated multiple times within a monitoring session and an average calculated. Fly counts should be undertaken at least 2 times a week during the flies most active period (April-October) and at multiple location around the site.

Open Air Adhesive Paper

Adhesive paper can be utilised to monitor fly numbers at the site. Pieces of adhesive paper (approximately 30cm^2) can be placed on posts in various locations around the site. Each week the paper is collected and the amount of flies calculated and recorded in the site diary. New adhesive paper can be placed on the same posts each week ensuring the location has remained constant.

Downsides to this method include; the test is easily affected by the weather conditions (paper going soggy), the paper may catch more than just flies (other insects and small birds), the paper cannot be placed within the waste containment area (only nearby) and birds may grab flies of the paper as a food source.

Due to the quick turnaround of material at the site, it is unlikely that larvae levels will need regular monitoring and so the baseline will be based upon adult levels only.

5 Complaints

Although flies usually stay close to their breeding site and a source of waste, they may also disperse. Houseflies can disperse multiple kilometres, however are unlikely to become a nuisance over 2.5km away from a site and may cause significant issues at around 500m from a site.

The extent to which flies may be causing nuisance to local receptors is measured by the issues observed at the source rather than at the locations the flies have travelled to.

5.1 Issues caused by flies

The persistent presence of flies will give rise to a range of issues if left unchecked:

- Annoyance/nuisance,
- Disease transmission,
- Physical contamination, and
- Stable flies may even bite people.

5.2 Complaints Process

Members of the public can file a complaint via an emergency contact number which will be visibly displayed near to the site entrance.

When a complaint is received, the following form will be filled out by site operatives to ensure detailed records are noted for each complaint received. These records will then be investigated to ensure that the complaint can be accurately addressed and steps taken to further reduce the impact of flies on local sensitive receptors

Fly Complaints Form	
Name	
Address	
Contact Number	
Location of compliant source, if not at above address	
Date of Fly/ies appearance (dd/mm/yyyy)	
Weather conditions	
Temperature	
Wind strength	
Wind direction	

Complainant's description of fly/ies encounter	
Duration of incident	
Any further comments relating to the fly/ies	
Signed	
Current date (dd/mm/yyyy)	

Table 3: Fly complaints form

5.3 Complaints response procedure

The following actions will be undertaken in response to a complaint by a member of public.

1	Complaint received by a member of the public via Fly Complaints Form.
2	Investigate operations and weather conditions at the time of the event to identify source of flies.
3	Complete fly reporting in log book.
4	Ensure complaint is reviewed by senior management.
5	Implement fly mitigation measures to reduce the potential for repeat episode.
6	If fly complaints continue – investigate further mitigation methods that can be applied to the operation or activity.
7	Maintain correspondence with complainants and inform of actions taken. A response will be issued within 5 working days of receipt.
8	Senior management will review all complaints and their responses as part of a monthly review of the site log book.
9	If a number are received they will be marked as urgent, a thorough investigation into the cause of the fly event will be undertaken and the matter will be escalated with senior management.

Table 4: Complaints response procedure

In certain situations, it may be necessary to complete adult fly monitoring on a complainant's premises. Monitoring should be undertaken indoors, in a location frequented by flies. Adhesive fly paper can be placed in the area for a week. Once the week is over the adhesive paper can be collected and the amount and species of the flies can be recorded. If over 50 of a single species of fly has been recorded, this may indicated an unusual amount of fly activity. Fly papers should be placed weekly until the 'infestation' of flies has ceased.

6 Staff competency and training

The site will be supervised by a site manager who holds the relevant certificates of technical competence (CoTC). WAMITAB certificates will be held surrounding the management of hazardous and non-hazardous waste sites. The site manager will be contactable during the operational hours of the site to ensure that any issues can be resolved quickly and the potential impacts mitigated.

During site operational hours at least two site operatives will be working. This is made possible through a staggered lunch system. Waste management operatives will carry out daily inspections to ensure the site is in good working order and any incidents of flies are resolved and mitigation measures put in place in case of future incidents.

Site staff will receive training to ensure they can carry out fly monitoring as per this FMP document. This includes knowledge of Scudder grid counts and open air adhesive counts, as well as ensuring staff can identify the common species of flies.

A trained pest control expert will be assigned to the site and their services retained. The pest control expert will complete planned monthly visits to observe the level of pests (including flies) active on site, propose pest mitigation plans where required and maintain previous management techniques. The pest control expert will, be contactable during regular office hours and can be called to site as required.

7 Summary and conclusion

The main factor affecting the likelihood of fly nuisance on site is likely to be the management of waste containment. Site operatives will ensure the correct wastes are being placed in the correct containers, maximum waste storage times and quantities are adhered to and the waste containers are generally kept well maintained and tidy.

The fly management plan provided as a part of the pest management procedure is considered to have reduced the risk of fly nuisance at the site, making it of low significance.