

Appendix 4

**ENVIROPARKS (HIRWAUN) LTD
HIRWAUN INDUSTRIAL ESTATE
HIRWAUN
SOUTH WALES**

ODOUR MANAGEMENT PLAN

Proposed Plan – Pre-Operational

Plan Date: June 2008

Introduction

This odour management plan has been prepared for the proposed Enviroparks Hirwaun Ltd development on the Hirwaun Industrial Estate, Hirwaun, South Wales. The plan has been prepared in support of planning and Environmental Permitting applications, and has been compiled prior to any operations at the site. It is however a living document and will be subject to regular review once in use.

The plan is designed as a summary of the foreseeable sources of odour, details of their control, information on situations which may compromise the site's ability to prevent and/or minimise odorous releases from the process and the actions to be taken to minimise any impact. The plan includes operational and control measures for normal as well as abnormal conditions. It is intended to be used as a working reference document for site operational staff on a day-to-day basis and shows the actions that will be taken to minimise any odorous event, alongside details of the staff responsible for authorising or undertaking the action. It also includes details of the complaints handling procedure.

Description of the Site Operations

The Enviroparks facility at Hirwaun, South Wales is an integrated waste processing facility, treating diverse streams of waste materials for recycling and recovery. The site will deliver a 97.5 % diversion from landfill of materials entering the site, and the energy produced by the waste processing will be traded to a high energy demand commercial operation, co-located with the facility, with excess energy being sold to the grid. The site capacity will be 250,000 tonnes per annum, and acceptable wastes will include municipal solid waste, commercial and industrial waste and some animal by-products. The incoming wastes will be subject to the following treatment processes:

FUEL PREPARATION AREA

Feedstocks arriving at site are checked visually for quality assurance purposes and unacceptable feedstocks will be refused entry if they fail this initial inspection and screening process. Acceptable feedstocks are then weighed on a weighbridge and directed to the appropriate process area. Fat or vegetable oil-bearing food wastes, including waste classified as animal by-products, would be sent to the Biomax reception area. Other mixed feedstocks would be directed to the fuel preparation area where they would be transferred under controlled conditions into the first of two holding bunkers. The first bunker would be able to store the equivalent of three days' maximum throughput. Feedstock material would then be shredded and deposited into the second holding bunker, capable of storing the equivalent of one day's maximum throughput.

Once ready for processing, the feedstock is then mixed with water and fed into a slowly rotating drum approximately 30 metres in length. The drum contents are heated by adding steam. Under these conditions the material is reduced to a wet pulp. After approximately one hour the material leaves the drum and passes directly into the recyclate recovery train. This uses water separation to recover metals, plastics, textiles, aggregate and wood. In addition, a cellulose fibre is recovered which will be used as a fuel. This process uses established technologies and is designed to minimise the need for human intervention.

The water separated from the process is first transferred to a day tank for testing prior to being sent to the anaerobic digestion process below. The cellulose fibre is then partially dried before being used as a fuel in the pyrolysers described below. The recovered recyclates are sold 'off site' Any non recyclables are to be co-mingled with materials such as the non-degradable fibre from the Biomax process. These will then be stored separately prior to treatment by the plasma converter.

'BIOMAX' SEPARATOR

The Biomax process employs centrifuge technology under relatively low temperatures to separate the feedstocks into oil, solids and water effluent. The oil is a form of biodiesel and will be used on-site to fuel a diesel engine with heat recovery. Water from the process is to be treated by anaerobic digestion before discharge to the site effluent plant, attaining the required standards before being discharged to the local sewerage network. The remaining solids are passed forward for thermal treatment by plasma conversion. The Biomax process is to be housed within a building specified to food industry standards. All operations including storage would occur inside the building under controlled conditions.

ENHANCED ANAEROBIC DIGESTION

The anaerobic digestion process involves the breakdown of organic feedstocks under sealed conditions in the absence of oxygen, liberating methane for use in heat and power generation. The process also results in other solid and liquid digestates. The anaerobic digestion plant will process the aqueous arisings from the fuel preparation area and the Biomax process and comprises five free-standing digester tanks, four organic feedstock storage tanks and a gas holder for the biogas.

The capture and use of methane is regarded by the applicant as an important benefit of the proposals. Methane arises naturally from the decay of organic wastes and if allowed to escape to the atmosphere, methane acts as a harmful greenhouse gas with over 20 times the potency of carbon dioxide. Its capture is thus inherently beneficial, and this benefit is multiplied where the gas is used in preference to fossil fuels, as a renewable form of energy

PYROLYSIS

Pyrolysis has been used for centuries to make charcoal from wood. The process proposed by Enviroparks Hirwaun Lts is similar but takes place under carefully controlled conditions. The cellulose fibre produced in the fuel preparation area is passed through a chamber and heated at high temperatures. As no oxygen is allowed to enter this sealed chamber the organic fraction cannot burn, and as such, there is no flame. The bulk of the material is reduced to a gas, leaving a solid char. The gas is collected, cleaned and sent to an engine within the building for use as a fuel. The remaining char is high in carbon, being similar to charcoal. This will be collected and sent to a plasma converter where it would also be used as a fuel.

PLASMA CONVERSION

This part of the scheme subjects the remaining unrecyclable materials to high temperature thermal treatment, a process is known as plasma gasification. By the application of intense heat and a controlled addition of oxygen, all organic material is reduced to a simple gas mix. The purpose of the plasma torches is to provide an additional high energy gas reaction that ensures the completion of these reactions, resulting in an organically free gas. Any inorganic material such as residual glass or metal is reduced to a completely inert glassy aggregate that can be used in construction.

ENGINE HOUSE AND ELECTRICITY GENERATION

The processes described above would recover energy resources from the waste stream in three forms:

- Oil / tallow produced by the Biomax process;
- Methane gas produced by the enhanced anaerobic digestion process;
- Simple gas produced by the pyrolysis and plasma gasification processes.

These fuels are to be piped to an array of engines with a net generation capacity of about 20 megawatts (MW). These engines will be accommodated in two adjacent buildings, both noise-attenuated and externally resembling a standard industrial unit, each referred to as an 'engine house'.

THIRD-PARTY DEVELOPMENT

Energy produced from the recycling operation is used by other businesses on the Park. Both the heat and electrical power are available. Surplus electricity generated on the site is exported to the local electricity distribution network.

The site is new and thus has no complaints history, however Enviroparks Hirwaun Ltd are aware that some of their feedstocks and processes could lead to odorous emissions if not properly controlled. The purpose of this document therefore is to identify the control mechanisms in place, the planned observations and preventative maintenance which will ensure that these mechanisms continue to function correctly, and to provide direction in the management of odours should they occur, in order to prevent or minimise the likelihood of nuisance being caused and to contain and control the odour as efficiently as possible.

Summary of Odour Sources

The feedstock for the processes at the Enviroparks site is waste, and as such, could result in the facility being odorous if not adequately controlled. The following process steps could lead to odorous emissions:

Waste is transported to the site in various vehicle types;

Mixed municipal solid waste will arrive at site in standard refuse collection vehicles and will have been collected over the course of a few proceeding hours, prior to being delivered to the site. Therefore odours from these vehicles will be no more offensive than emissions from roadside collections.

Segregated wastes, for example wood or vehicle tyres will arrive in open skips. Non-putrescible materials such as these result in no odour risk. Food waste and organic waste does have the potential to create odours, however their delivery in suitable vehicles or covered containers, will assist in minimising odours.

The feedstock for the Biomax separator consists of segregated foodstuffs as detailed above and animal by-product waste. Animal by-products are a source of odour and hence will be delivered in segregated, covered containers or vehicles.

Feedstock Reception and Preparation;

All waste reception and storage areas are covered and are served by double door systems to minimise the release of odours, by ensuring that the waste container / vehicle is located within the off load bay with the outer door closed, before opening the inner door. Similarly, the inner door must be closed before the outer door is opened to release the container / vehicle.

Additionally, each of the feedstock reception and preparation areas operate under negative pressure, with ventilation air being discharged to the engine intakes as combustion air, or will pass via carbon or biofilters specifically designed to abate odours. The main mixed feedstock storage area is designed to hold a total of up to four days of processing material.

Processing;

All processing plant are housed within purpose built units, and operate under negative pressure where an odour creation potential exists, to ensure that any odour is discharged via a controlled filter system.

The feedstocks are shredded and then mixed with water which immediately reduces the odour potential. This material is then passed through the enclosed rotating drum, exiting into a deluge water system and various mechanical sorting systems. This process has the potential to produce odour, and hence the operation is undertaken within a sealed building, which incorporates negative pressures to ensure that odours do not escape. The organic feedstock from this process is then pumped through pipes to the anaerobic digestion feedstock tanks, and the residual solid feedstock is dried and transferred to the pyrolysis plant which is again situated inside a controlled building.

The anaerobic digestion facility receives waste liquids through direct pumping to feedstock storage tanks and is then pumped into the digesters. The very nature of anaerobic digestion results in a sealed system with feedstocks and residues being transferred through fixed, sealed pipework. Therefore the potential for odorous emissions from the anaerobic digester tanks is limited. The biogas created by the waste digestion will be stored in a gas holder prior to use in the generating engines.

The Biomax separator accepts animal by-products and foodstuffs and processes it using centrifuge technology to separate the oil from the solids and water as described previously. The whole process is enclosed within a building incorporating negative pressure controlled ventilation. The tallow (oil) produced from the separation process will be pumped directly to one of two oil tanks for storage. Solids will be stored in covered bins and / or sealed sacks, and will be manually transferred to the plasma gasification plant or will be pumped in sealed pipes to the anaerobic digestion process for further processing. Any effluent produced will be piped directly to the effluent treatment plants.

Feedstocks destined for plasma gasification are received into the fuel preparation area adjacent to the externally sited plasma plant. Inside this controlled building the feedstocks are fed through an enclosed conveyor system into the plasma gasifier which in itself is a sealed system.

The maximum allowable storage time for wastes on site is six months, however most wastes will pass through the site in a matter of days. The site will operate up to 10 engines, operating similar generator sets to those commonly used at landfill sites. The engines will consist of:

- 3 x 1.5 MWe engines serving the advanced anaerobic digestion processes at the site;
- 5 x 1.5 MWe output serving the pyrolysis engines for the Fuel Preparation Area;
- 2 x 4.0 MWe output engines fuelled using tallow.

Liquid and gaseous fuels are piped directly from the fuel to the engines, and therefore the fuels are not a source of odour. Emissions from the site exhaust stacks will be of combustion gases only and the potential for odorous emissions is minimised through the combustion process. Additionally, the site has four flares for the emergency release of biogas and to control the engine start up and shut down conditions. These are designed to flare off the gas whilst the engines reach steady combustion or in the event of an emergency. The flares are 16.5 m in height.

Effluent is transferred from the main process areas to localised effluent treatment plants. The plants employed will include reverse osmosis or an equivalent technology and will be enclosed, thereby minimising the risk of odour emissions.

Normal Operation and Control

Due to the potential for odour issues to be created by the feedstocks of the Enviroparks process, odour control and minimisation has been considered from the early design stage of the site. Systems of suitable and sufficient ventilation, coupled with negative pressure control and double door systems, minimise the potential release of odour, whilst purpose built abatement systems remove the majority of odour and potentially hazardous emissions from final release points. Under normal operations, the following systems are in place and control releases of odour:

Potential Odours What, Where and How?	Normal Operational Control	Potential Failures	Measures to Reduce the Risk of Failure	Actions in the Event of Failure
<p>Incoming feedstock (a variety of wastes). Odours from wastes can be considered highly offensive if not controlled. Incoming materials will exert a level of odour however this can be worsened under specific conditions, related to the age and degradation of the waste. Odours can arise from the vehicle / container delivering the waste and may become more noticeable if the vehicle has to wait to unload.</p>	<p>The site accepts wastes under contract, and will have scheduled deliveries for each day, which will enable a working schedule to be produced for the site, based on the quantity of waste and approximate arrival time. The site specifies a final cut off delivery time to ensure that all arriving vehicles can be unloaded before the end of the day. Most of the wastes accepted are from regular sources. Putrescible wastes are in closed containers. However where less frequent wastes are handled and may lead to an increased likelihood of odour issues, delivery and processing operations will be more strictly controlled to ensure that the waste is not left standing.</p>	<p>Wastes arriving out of schedule resulting in vehicles having to park up for several hours. Hot, sunny conditions increasing the potential odour from vehicles. Breakdown of handling or processing equipment resulting in vehicles having to park up for several hours.</p>	<p>Scheduled deliveries, which are handled on a first in, first out basis. Daily handling and processing equipment checks, with planned preventative maintenance undertaken on a regular basis. Where a need for repair becomes apparent, Enviroparks aim to schedule this during periods of inactivity (during the evening for handling equipment), or shutdown. Essential items are retained in stock. Feedstock area has a total of four days holding capacity enabling storage for extended holiday periods, e.g. Christmas break. As this will only be used to capacity on an infrequent basis, wastes are generally always acceptable, even in the event of a short term breakdown.</p>	<p>Enviroparks aim to handle all wastes effectively and efficiently and in the event of a backlog due to early or late arrivals would minimise the standing time of vehicles as much as possible. Breakdowns are assessed quickly and repairs are commissioned. Once the repair schedule is known an assessment as to the remaining handling capacity is made, and consideration is given to the requirement to divert wastes to third parties. The Site Manager has ultimate responsibility for delivery and process scheduling and for diverting wastes as necessary.</p>

Potential Odours What, Where and How?	Normal Operational Control	Potential Failures	Measures to Reduce the Risk of Failure	Actions in the Event of Failure
<p>Accepted wastes will include putrescible material and up to 4 days processing capacity may be stored at the site at any one time. Odours from wastes can be considered highly offensive if not controlled, and could arise from any of the site buildings where waste is accepted and stored.</p>	<p>The site includes double door systems operating on the acceptance bays and all process buildings are operated at negative pressure with ventilation air being passed as combustion air through the engines to remove the odorous and potentially hazardous compounds. Where excess ventilation air requires discharging, this will be done through carbon or biofilters to minimise the potential for odour.</p>	<p>Failure of the double door system with doors sticking in the open, closed, or partially open position, resulting in the escape of odour during deliveries Failure of the ventilation extract system preventing air changes. Saturation of the abatement system or failure of the landfill gas engines resulting in reduced or negligible abatement.</p>	<p>Each bay is partitioned from the neighbouring bay, and thus any failure of the door systems should not result in the increased release of odour as the remaining door on that bay can be used to seal the system. In the event of a door failure, the bay concerned would be put out of use until such time that repair was facilitated. Regular checks and planned preventative maintenance on all processing equipment, ventilation and abatement systems.</p>	<p>Should one of the doors fail in whichever position, the bay is cordoned off and the other door to that bay is closed. An engineer is called and repair facilitated as soon as possible. Failure of the ventilation system would result in health and safety implications for process staff. Receipt and processing of waste is halted if the ventilation system fails. Failure of the abatement systems will be detected during the daily noise, odour and housekeeping checks, through the observation of odour at the discharge points. Should one of the engines fail, it is taken out of service for repair, and the remaining engines will continue to operate. The Site Engineer is responsible for organising regular and ad hoc maintenance.</p>

Potential Odours What, Where and How?	Normal Operational Control	Potential Failures	Measures to Reduce the Risk of Failure	Actions in the Event of Failure
<p>Outdoor feedstock, anaerobic digestion and gas storage tanks. All waste handling systems are contained, with liquids being pumped to sealed storage tanks and solids being transferred internally along covered conveyors. Any waste which is not conveyed will be transported in covered bins or sealed bags.</p> <p>The anaerobic digestion plant is sealed during use with sealed pumping of digestate and water effluent, however some odour will be released during tank cleaning or maintenance which will occur on a very infrequent basis (several years apart).</p>	<p>Sealed or adequately enclosed systems, with material being pumped and piped wherever possible. Sealed systems such as the anaerobic digestion tanks would undergo a rigorous pre-clean prior to any maintenance.</p>	<p>Breakdown or blockage of the feed system</p>	<p>Liquid and gaseous material is piped where solids are conveyed. A planned preventative maintenance programme should minimise the risk of un-scheduled stoppages.</p>	<p>In the event of any equipment breakdown, that process line will be taken out of service in order to facilitate repair. Where possible, material will be diverted to another process line, however stoppages may result in the need to slow the process and ultimately potentially divert the material.</p> <p>The Site Engineer is responsible for organising regular and ad hoc maintenance.</p>
<p>Flares – the flares are designed for specific process operations (start up and shut down), or for use in an emergency, to release excess gas in the event that it cannot be used in the engines or be stored in the gas holder. It reduces the emissions and odour content of the gas to a negligible level as it is burned off. Should combustion not be complete, a portion of the gas could escape.</p>	<p>The flare is an emergency release point which auto ignites as required, however its operation is controlled. Enclosed flares benefit from combustion control and higher temperatures. Additionally, the use of the flare is a sign that the process is not creating energy for sale, and thus any flaring operation will be kept to a safe working minimum.</p>	<p>Possible, although unlikely scenarios include the flare failing to auto ignite.</p>	<p>Any flaring will be identified in the control room, as it is an important sign of abnormal operational conditions. At such point, the reason for the flaring would be identified and checks made to ensure that the flare was functioning correctly.</p>	<p>Emergency conditions will be handled as per the site emergency plan and the safety of staff and other people within the locality is paramount. Back up systems will be employed where a potential failure could lead to a safety risk.</p>

Potential Odours What, Where and How?	Normal Operational Control	Potential Failures	Measures to Reduce the Risk of Failure	Actions in the Event of Failure
The intermediate products from the system include gases, liquids and solids which may still retain an odour, until final treatment is facilitated. Odours may be present throughout the processing stages, and could occur where any odorous material is left open to atmosphere.	Intermediate products are pumped and piped between processes where possible, or are transferred on covered conveyors or in covered containers between processes.	Failure of a pipeline could result in the release of an intermediate gas or liquid and therefore an odorous emission to atmosphere. Movement of materials in uncovered containers may also result in odour escaping to atmosphere.	Operating procedures will ensure that staff moving materials are fully trained in site requirements. Regular checks and planned preventative maintenance on all processing equipment, including static equipment such as pipelines.	Issues of nuisance such as odorous releases will be investigated and corrective actions implemented.
Engines will fire gas oil tallow fuels to produce energy. Gas and oil is piped to the engines and therefore should not result in odour. Odour may only be produced due to incomplete combustion of the fuel, and would be released at height from the 40 m exhaust stacks.	Normal operations minimise the potential for odour, as fuels are piped directly from their storage containers to the engines, which reduce the odour to negligible levels through combustion. Engines burning WID fuels must be operating at steady state prior to the incorporation of the fuel. During start up, shut down and emergency situations the fuel will be flared until steady firing conditions are balanced.	Incomplete combustion. Breakdown of an engine. Failure of a pipeline. Each potential failure could result in the release of odorous compounds.	Regular checks and planned preventative maintenance on all processing equipment, including static equipment such as pipelines.	Should an engine fail, it is taken out of service for repair, and the remaining engines will continue to operate. Failure of a pipeline would prompt an emergency response from the site to contain the release and (in the case of oil) clean up any spillage.
Spillages may occur during feedstock handling and may result in odorous material being spread over an area.	As most materials handling is undertaken in enclosed and ventilated areas, spillages should not lead to any increase in the potential for odour emissions.	Failure of a containment system during external transportation (e.g. a pipeline, conveyor or a wheeled, lidded container or sack).	Regular checks and planned preventative maintenance on all processing equipment, including static equipment such as pipelines. Bins are visually inspected after tipping and would be reported and taken out of service if seen to be damaged or leaking.	Any spilled material would be contained and collected as efficiently as possible. Where this is within a process building, odour should not be an issue, however there may be some odorous release if the spill occurs during transit between processing plants.

Potential Odours What, Where and How?	Normal Operational Control	Potential Failures	Measures to Reduce the Risk of Failure	Actions in the Event of Failure
The effluent treatment plants will receive and treat process effluent. Odours from waste water treatment plants can be considered highly offensive if not controlled. Effluent will be piped via a drainage system to the plants, and will be treated in a comprehensive effluent treatment system, including reverse osmosis or equivalent technology	Effluent is piped for on-site treatment before discharge to sewer.	Leaks in the drainage system or failure of the effluent treatment plant.	Planned preventative maintenance programmes will regularly check pipes and drainage (using CCTV where necessary) , and the effluent treatment plants will also be subject to a strict maintenance regime.	The site will not be able to discharge effluent without pre-treatment and thus any failure of the system will result in the site either removing the waste by tanker for third party treatment, or temporarily ceasing operations until the failure is corrected.
-	Daily noise, odour and housekeeping checks. A daily check will be undertaken around the site boundary, with four stationary observations at the NE, SE, SW and NW points of the site, plus a daily check around the outside of the process buildings for evidence of odour, noise or poor housekeeping. This is a documented audit.	Where failures are identified these are investigated.	The daily check and comprehensive staff training ensures that incidents of odour, noise or poor housekeeping are minimised, but detected and remedied quickly where they do occur.	The documented report includes an investigation and follow up sheet which must be completed where issues are identified. This may include the instigation of maintenance, replacement of abatement filters etc.

Abnormal Operation and Control

Poor combustion – release of unburned gases
Filtration issues – planned maintenance and stock control etc
Poor dispersion characteristics
Power failure
Start up Shut Down

Abnormal operation may lead to additional odours and the control of such would depend on the cause. In reality, the foreseeable sources of odour at the site are limited to those already detailed and any control would be based, as far as possible, on the normal control response. For example, should any breakdown occur, an assessment will be made as to the ability to continue to receive and process feedstock material during repair. Breakdowns are assessed and repairs are commissioned quickly. Once the repair schedule is known an assessment as to the remaining handling capacity is made, and consideration is given to the requirement to divert wastes to third parties. Where possible and practicable, maintenance items are held in stock and thus repair and replacement can be facilitated efficiently. Maintenance contracts will be in place for any plant where required.

Key incidents which may affect the site's ability to contain and control emissions of odour include power failures and adverse weather conditions:

Power Failure;

The site requires a power input, however as an energy producer, should be self sustaining. Therefore the potential to utilise grid or produced energy reduces the potential impact that a power failure might otherwise cause.

Adverse Weather Conditions;

Periods of heavy downpours and particularly turbulent wind conditions can result in the emissions from stacks and vents being brought closer to ground level. Where the emission contains an odorous element, this can be brought to ground with the release. However the site release points are all designed to abate odours and dispersion modelling of the site which considered the 5 latest years of meteorological conditions demonstrated that all emissions remained below the relevant Air Quality Objective or other appropriate assessment level, throughout the assessment period.

Additional Measures

There are no additional odour control measures in place at the site, however the daily noise, odour and housekeeping checks would identify any areas of concern where additional measures may be required. Any odour complaints received would be investigated comprehensively, with full consideration given to any additional control or abatement necessary.

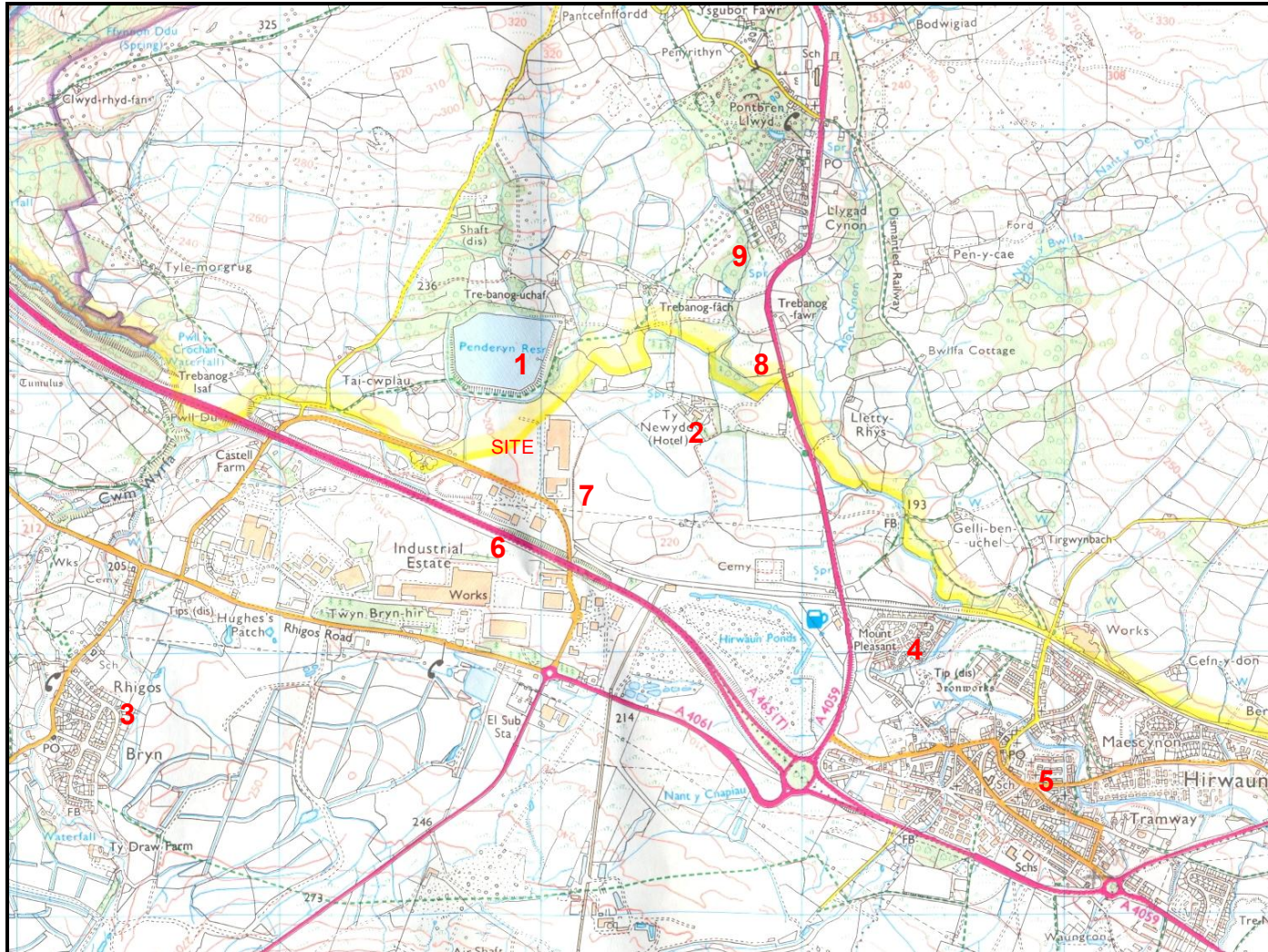
Sensitive Receptors

The Enviroparks (Hirwaun) Ltd facility is located to the west of Hirwaun, on the Hirwaun Industrial Estate. Although not in a residential area, there are a number of odour sensitive receptors in the locality and these include:

Users of the industrial estate - neighbouring industries;

- 1) Penderyn Reservoir, used extensively by anglers and walkers;
- 2) The Ty Newydd Hotel (located approximately 500 m to the west);
- 3) Rhigos (located approximately 2 km to the south west);
- 4) Mount Pleasant (located approximately 2 km to the south east);
- 5) Hirwaun (located approximately 2.5 km to the south east);
- 6) The A465 (running approximately 250 m south of the site);
- 7) The Blaen Cynon Special Area of Conservation;
- 8) Cors Bryn-y-Gaer Site of Special Scientific Interest;
- 9) Woodland Park and Pontpren Special Site of Scientific Interest.

Nearest Odour Sensitive Receptors to Enviroparks (Hirwaun) Ltd; Hirwaun Industrial Estate



Investigating Odour

A daily assessment of noise, odour and housekeeping is undertaken at the Enviroparks site, and the following categories are applied to assess the intensity, extent and sensitivity of noise or odour:

DETECTABILITY / INTENSITY

- 1 No detectable noise / odour
- 2 Faint noise / odour (barely detectable)
- 3 Moderate noise / odour (easily detected while walking normally)
- 4 Loud / strong noise / odour
- 5 Very loud / strong noise / odour

EXTENT & PERSISTENCE (assuming noise / odour detectable, if not then score 0)

- 1 Local & transient (only detected within or at boundary during brief periods)
- 2 Transient (as above, but detected away from the boundary)
- 3 Persistent, but fairly localised
- 4 Persistent and pervasive (up to 50m from plant or installation boundary)
- 5 Persistent and widespread (detected >50 m from installation boundary)

SENSITIVITY OF LOCATION (assuming noise / odour detectable, if not then score 0)

- 1 Remote (no housing, commercial/industrial premises or public area within 500m)
- 2 Low sensitivity (no housing, etc. within 100m of area)
- 3 Moderate sensitivity (housing, etc. within 100m of area)
- 4 High sensitivity (housing, etc. within immediate area)
- 5 Extra sensitive (complaints arising from residents within area affected by odour)

OFFENSIVENESS:

The site assessment of the offensiveness of noise or odour is based upon the subjective response of the observer, however a judgement should be made based upon the scoring of intensity, extent and sensitivity as to whether the noise / odour is:

- 1 Potentially offensive
- 2 Moderately offensive
- 3 Very offensive

Observation periods at each point should be over a standard time, generally 5 minutes at each location. A record will be made of the atmospheric condition prevalent during the assessment.

Daily Assessment Procedure

Noise, Odour and Housekeeping Audit

Date		Time	
Observer		Weather Observation	

Noise

Test Location	Intensity 1-5	Extent 1-5	Sensitiv. 1-5	Offensiv. 1-3	Description	Potential Source	Outside sources?
NE							
SE							
SW							
NW							
Waiting Area							
Fuel Preparation Area							
Plasma Building							
Gasifier Building							
Pyrolysis Building							
Anaerobic Digestion Tanks							
Powerhouse and Emission Points							
Biomax Building							

Odour

Test Location	Intensity 1-5	Extent 1-5	Sensitiv. 1-5	Offensiv. 1-3	Description	Potential Source	Outside sources?
NE							
SE							
SW							
NW							
Waiting Area							
Fuel Preparation Area							
Plasma Building							
Gasifier Building							
Pyrolysis Building							
Anaerobic Digestion Tanks							
Powerhouse and Emission Points							
Biomax Building							

Observations on Housekeeping and Other Comments:

Signed.....

Dated.....

Incident/Complaint Investigation and Follow-Up

Date and time of incident				
Name and role of investigator				
Weather observations				
Nature time and location of incident (Include complainants details and descriptions if applicable)				
Estimate / record the Intensity / Extent / Sensitivity / Offensiveness	Intensity	Extent	Sensitivity	Offensiveness
Cause of incident				
Is the incident the responsibility of the site?	Yes		No	
Can the incident be remedied by the site?	Yes		No	
If yes, state how				
Confirm that the corrective measures have been implemented (state measures employed)				
Has the incident been remedied?	Yes		No	
Can further improvements be made?	Yes		No	
If yes, state how				
Have further improvements been made?	Yes		No	
Have the complainant / relevant authorities been informed	Yes		No	
Is the incident considered closed?	Yes		No	
Investigator to sign and date				
Plant Manager to sign and date				

Complaints Procedure

Enviroparks Hirwaun Ltd operate a complaints reporting procedure, and all complaints are logged and investigated. This procedure applies to complaints of any nature, including those relating to odour issues. Complaints are initially investigated by the Environment Manager and where a complaint relates to an odour nuisance this would involve a thorough assessment of the site facilities in an attempt to identify the source of any odour, followed by an assessment at the boundary and in the vicinity of the nuisance. The Environment Manager aims to identify the cause of the odour, and determine its route and severity.

Investigations would include:

- An assessment of the odour sources in the relevant area and around the site as a whole;
- Checks on operating parameters to identify any operational issues;
- An assessment of odours in the wider area where a site source is not detected;
- Confirmation of the wind speed and direction, and general weather conditions.

Where no evidence of an odour can be found, or where it is determined not to be caused by the site processes, the Environment Manager will log his findings, and will report to the Local Authority / Environment Agency / complainant as appropriate. Where the source of the odour is deemed to be caused by current Enviroparks activities, the Environment Manager would inform the Site Manager, and efforts would be made to eliminate the odour, the method of which would depend on the cause. A report would then be made to the Local Authority / Environment Agency / complainant as appropriate.

All complaints and investigations are recorded and are reported to the Site Manager, who is responsible for ensuring that any complaint is investigated and documented comprehensively.

Actions and Responsibilities

Reports made to:	Environment Manager
Should the site reception or security receive a call from a complainant, this would be directed to the Environment Manager for investigation.	
Investigations undertaken by:	Environment Manager
Investigations overseen and reported to:	Site Manager
Complainant / Regulator liaison:	Environment Manager and Site Manager as appropriate.