MANAGEMENT SYSTEM

ISSUE 01

Report Prepared For	
Cowbridge Compost Ltd	

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1.0 INTRODUCTION

This Management System has been prepared in accordance with the Environmental Permitting Regulations and sets out the considerations and operational details that are relevant to the operation of the In Vessel composter and open windrow facility at Cowbridge Compost Ltd, Cowbridge, Vale of Glamorgan.

The Management System includes as part of the system a Hazard Analysis Critical Control Point (HACCP) which is a requirement under the Animal By-Products Regulation 2005 (ABPR 2005). This element (the HACCP) describes in detail the control of the process in relation to the requirements of the Animal Health and Veterinary Laboratories Agency (AHVLA) and forms an integral part of the Management System.

The Management System (MS) relates to a separate In Vessel composting operation and open windrow composting operation for receipt, storage and treatment of green and food source separated wastes at the site and their conversion through in conventional composting techniques to produce a variety of composts and soil improvers.

This Management System sets out the nature of the site, relevant site and infrastructure works, methods of operation and environmental control.

2.0 SITE DETAILS

2.1 Site Location

Cowbridge Compost Ltd
Penllyn Estates
Cowbridge
Vale of Glamorgan
CF71 7FF

Grid Reference: 299996,175862

2.2 Description

The site is located north of Cowbridge, approximately 5km south of the M4. Bridgend is situated approximately 9km to the west of the site and Cardiff 17km to the east. Access to the site is via the A4222. The site currently comprises of a large area for the stabilisation of green wastes through open-windrow composting and a large area for in vessel composting. There are sheds utilised for product storage, formation of windrows and the reception of material and several tanks for liquid wastes and a lagoon for rainwater and run off from the windrows after stabilisation.

2.3 Permits and Licences

Environmental Permit/License Number: EPR/BP3095SR
State Veterinary Certificate: 57/024/8000ABP/CMP

2.4 Planning Permission

The site has full planning permission for the current facility: IVC 2010/01277/FUL.

2.5 Calculations for IED

In order to establish whether or not the site will fall above or below the threshold of 75tpd the following calculation was undertaken:

Open windrow (Tonnes)	Number of windrows	
400	x 8	Total = 3600 tonnes + 1600 from IVC = 4800 tonnes per batch 4800 tonnes ÷ 91 days processing time (IVC +OW) = 53 tonnes per day

2.5.1 Physical Restrictions

(28 days in IVC, 7 days transfer to OW, 56 days in OWs = 91 days)

To ensure CCL do not go above the 75 tonnes per day threshold the site will require full traceability of all batches on site. The site will note how many bunkers there are on site at any one time and how much tonnage in each bunker and then which bunker batches goes into which windrow. This will be the same for green waste sanitisation. The site will know the amount of waste in each windrow and which batch foes into which windrow. A live spreadsheet will be kept to show the calculations used to total the amount of waste on site during active composting at any one time.

I.e. the site will note how much tonnage is in each bunker and in each green waste windrow, once these are mixed for stabilisation the site will know how much waste is in each stabilisation windrow. To ensure the site does not go above 75 tonnes a day the site will use the following sum 91 days x 75 tonnes per day = 6,825 tonnes on site at any one time. The spreadsheet which is a live document will be able to show that the site is below or at this limit. Once at this limit, the site can reject waste from coming onto site or allow waste on site but not process it immediately, the site will store the waste within stated storage times.

3.0 OPERATIONAL OVERVIEW

3.1 Waste Management Operations

The waste management operations at the site comprise the treatment of organic wastes by In Vessel composting and open windrow composting. The details of the engineering development, method of operation and environmental pollution control are given in Sections 4, 5 and 6 of this document. The area in which operational activities will be carried out are shown in the site layout plan (CCL07). The activities to be carried out will involve Waste Recovery and Waste Storage, being designated as R3 and R13 respectively. The limitations on specified waste operations are illustrates in Table 1 below.

Table 1 – Waste Activities and Operational Limits

Activity	Specified Waste Management Operation	Permitted Waste Category	Limits on Specified Waste Operation
In Vessel Composting and Open Windrow Composting	**R13** Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection on the site where it is produced).	All	i) Storage of waste prior to shredding shall take place on area of impermeable pavement. ii) Storage time prior to commencement of process limited to 48 hours. iii) All shredding and composting operations shall be carried out on areas of impermeable pavement.
	R3 Recycling or reclamation of organic substances which are not used as solvents.		

3.2 Permitted Waste

The Environmental Permit is for the receipt, storage and treatment of green and food wastes and free from excessive contaminant. To assure the output compost from the plant is regarded as product, the Compost Quality Protocol requires all inputs to be separated at source and have not been mixed with general non-biodegradable waste.

Waste shall only be accepted if it is a type and quantity specified in the permitted list of wastes, and if it conforms to the description in the documentation supplied by the producer and holder. See Appendix 1 for full list of accepted wastes.

Any wastes that are not categorised in Appendix 1 (Permitted Wastes) should be considered contrary/non-conforming and dealt with appropriately. There shall only be non-hazardous wastes accepted on site.

Total annual quantities of accepted waste will not exceed 35,000 tonnes per annum.

Total tonnes per day of waste subject to R3 will not exceed 75tpd. The site should not go above 53tpd as per the calculations in section 2.5.

3.3 Hours of Operation

As specified by Planning Permission the site operational hours are presented within Table 2, including maintenance activities.

Table 2 - Site Operational Hours

Week Day	Waste Acceptance	Waste Treatment	Maintenance
Monday to Friday	07:30 - 16:00	07:30 - 16:00	As required
Saturday	NIL	NIL	As required
Sunday	NIL	Emergency only	As required
Bank Holidays	NIL	Emergency only	As required

3.4 Staffing

Cowbridge Compost Ltd (CCL) shall ensure that sufficient personnel, who are suitably trained and competent, are present to manage and operate the on-site recycling/treatment activities safely and without causing pollution. Personnel must be fully familiar with the requirements of the Permit as is relevant to their specific duties. Personnel shall have clearly defined roles and responsibilities. The staff numbers are presented below in Table 3.

Table 3 - Site Operational Staff

Personnel	Management	Administration	Operators	Other	**TOTAL**
Number	1	2	3	NA	**6**

The site is operated under the ultimate control of the Site Manager Mike Hallet, and day to day responsibility rests with the Site Manager, Mike Hallet. The facility will require 6 full or part time employees. Staff numbers will be maintained at a level sufficient to operate and supervise the site effectively and throughout periods of employee sickness and holidays.

3.5 Technical Competence

The manager and operatives will be appropriately trained and will be conversant with the requirements of the Environmental Permit and Management System, with particular regard to:

- Waste acceptance/rejection procedures;
- Operational controls;
- Maintenance procedures;
- Record keeping;
- Emergency action plan; and
- Notification to the Environment Agency and other regulatory authorities.

A copy of the Environmental Permit and Management System will be kept at the site office and will be readily available for reference by site staff, other company staff, Environment Agency and other regulatory authorities.

A designated person will hold a suitable qualification in order to operate the site compliantly (see Table 4 below). The suitably qualified person's actual attendance hours on site will be recorded in the Site Diary.

Table 4 - Technical Competence Qualifications

Name	Qualification
Mike Hallett	WAMITAB COTC Level 4

Any changes in technically competent management at the site, and/or the name of any incoming personnel, together with any evidence that such personnel has required technical competence, shall be submitted to the Environment Agency within 5 working days of change in management. No site operations shall take place unless there is sufficient, trained and competent staff on site.

3.6 Site Identification Board

In conformance with permitting regulations and the Management System, CCL shall display a clear, all-weather, easily readable Site Notice at or near the entrance to the site. The Site Sign/Notice shall contain the following information:

- Company Name
- Permit Holder's Name
- Emergency Contact Name
- Permit Holder's Telephone Number
- Statement that the site is permitted by the Environment Agency (EA)
- The Permit Number
- EA National Telephone Numbers

The Identification Board shall be inspected at least once per week. In the event of damage or defect, the board shall be repaired or replaced within three working days.

3.7 Site Security

The facility lies within a gated facility which is fully bunded and is situated within a rural location.

The site itself is demarcated for operational and HACCP reasons by an internal barrier to control circulation of wastes, equipment, vehicles and personnel between the in vessel composting area and the open windrow area.

Within the specified licensed area, the waste reception building is closed and secured outside of operating hours and each vessel is fully enclosed once charged and the composting process has begun. The internal barrier is gated at the reception end and between the in - vessel sections and the open windrow Sanitisation, Stabilisation and Maturation area.

The access road which connects the site is gated at the site entrance from the highway and these gates are locked outside all normal operating hours.

The boundary fences to the application site and gate from the internal access are checked on a regular basis for damage or signs of attempted entry. Such occurrences are entered in the site diary and any damage is repaired at the earliest opportunity.

All visitors will be required to sign in at the Site Office on arrival and exiting the site.

3.8 Relevant Convictions

In the unlikely event of the Permit Holder or a relevant person being convicted of any relevant offence, the full details will be provided to the Environment Agency within 14 days of the conviction, as will be details of any appeals.

3.9 Change of Operator's or Holders Details

The following information shall be notified in writing within 5 working days to the agency:

- Any change to the Permit holders trading name;
- Any steps taken with a view to the Permit holder going to administration; and
- Any change in the operators trading name, address registered name or registered office address.

3.10 Maintenance of Financial Provision

The Company (Cowbridge Compost Ltd) will make financial provision to meet the obligations of the Permit.

3.11 Notification of Preparatory Works

Commencement of preparatory works for the construction of the site and infrastructure and its completion will be notified to the Agency in writing.

Any additional preparatory works required as a result of the issuing of a new waste Environmental Permit or site improvement would be notified to the Agency or relevant authority. The Permit holder shall give no less than 7 days prior notice of any changes to the Management System.

3.12 Commencement or Cessation of Waste Operations

Commencement of in-vessel composting operations on the site will be notified to the relevant authority in writing in advance.

In the event of any future cessation and subsequent re-commencement of the use of the site for in-vessel composting operations, the relevant authorities would be notified in writing specifying the date of any such cessation or re-commencement.

3.13 Notifications and Submissions to the Agency

Except where otherwise specified all submissions to the Agency shall be in writing. These correspondences shall include the reference number and the name of the Permit holder.

4.0 SITE ENGINEERING

4.1 Operational Area

The proposed permitted site is to include the current footprint with no alteration to the site permitted boundary. The operational layout of the facility is shown on a site layout plan (document reference: CCL07).

The facility is one large area which extends out into the west. The area located to the east of site is where open windrow composting takes place. The site located to the west is down a small lane which is where the in-vessel composting takes place and is the location of the reception hall and in-vessel bunkers. The total concrete pad (the IVC newer building containing bunkers A-H) is approximately 55.2m (length) x 7.9m (width) x 7.6m (height) and (the IVC older building containing bunkers 1-8) is approximately 60m (length) x 14m (width) and 7.8m (height). The concrete pad extends further to the eastern side of the building to accommodate for the trucks that will access the site and for washing down the trucks, this area is approximately 375m^2 (25m x 15m). The floor gradients are employed to ensure any leachate or surface water runs to a drainage system (gully pot). Shallow open channels are also employed to prevent the egress of dirty water through two doorways at the eastern end of the building. This dirty water is directed to an existing underground containment bank which has a 6,000l capacity which is disposed of periodically and sent to a waste treatment facility.

The facility comprises of a large concreted pad area which is split into different areas of waste reception, processing and end product storage by waste type and end production destination. The waste reception takes place within a dedicated hall for the receipt and shredding of waste materials – there is a waste reception for food waste at the IVC facility and there is a reception located within the green waste sheds at the east side of the facility. 16 bunkers are located internal to the reception hall consisting of two lines of bunkers each side containing 8 bunkers and associated biofilters. The impermeable concrete pad beneath the site is constructed with a base of 40mm clean stone and with a 200mm concrete top layer.

The maturation pad is north of the site behind several windrow maturation and screening sheds for the stabilisation of the IVC waste and for the stabilisation of green waste. There are two sheds for the storage and shredding of green waste and one open storage area for the storage of green waste.

CCL intends to extend the site boundary to the east to accommodate a tank for the primary storage of leachate. The tank will have an access road 6m wide and approximately 100m in length leading from a gate which will be located north of the lagoon. The tank will be 18m in diameter with a bund around this extending 1m in height and 2m from the tank – the total concreted area will be 24m in diameter. There will be a pipe leading from the tank to the lagoon for secondary containment if both the tank and the bund were to fail. The leachate will be pumped using a submersible pump which will be located south of shed 6 on the location plan. The pipe for the submersible pump will be directed below the access road. A company called Storth will provide the tank. The tank will have a base area of 277m^2 and a gross capacity of 1,160m^3.

4.2 Drainage and Containment System

All drainage systems will be regularly inspected and maintained by the site manager and recorded on the site diary, at least on a weekly basis. The site manager will initiate regular inspection and cleaning of building gutters, gullies, drains and storage tanks at regular intervals. The floor gradients are employed to ensure any leachate or surface water runs to a drainage system (gully pot). Shallow open channels are also employed to prevent the egress of dirty water through two doorways at the eastern end of the IVC building. This dirty water is directed to an existing underground containment bank which has a 6,000l capacity which is disposed of periodically and sent to a waste treatment facility. All clean water is directed along the roof drainage to two soak-aways located to the north and south of the IVC building.

The maturation pad is approximately 1600m^2 and has a fall engineered into it as shown on the site layout plan. The pad is completed with a drainage system which connects to a large leachate lagoon to the south of the pad. The pad is on a gradient to ensure run off is directed to the underground drainage system to a lagoon. The lagoon is large enough to cope with a 48hr M5 worst case storm event producing 40mm of rainfall. All clean water in the green waste and maturation areas which are captured in the roof drainage are diverted to down pipes into the drains which naturally occur along the eastern boundary of the site.

As stated in section 4.1 the tank will be filled using a submersible pump located south of shed 6. The tank is designed to have a 1,160m^3 gross capacity and will be operated to the 48 hour M5 worst case scenario rule. If rainwater was to enter the tank and increase levels the pipe from the tank to the lagoon will be automatically activated.

These arrangements ensure that under all weather conditions, no water from the site can escape and all is either re-circulated or removed call escape and all is either re-circulated or removed by tanker. A full Drainage and Leachate Management Plan is implemented for the site activities.

All roads will be maintained in a satisfactory condition by means of monthly inspections to check their physical state and the early implementation of repair works when deemed necessary. The results of the inspections and remedial works will be recorded in the Site Diary.

4.3 Contaminant Storage

All wastes received on site are stored on the loading/unloading concrete pad. Waste is not stored for longer than is necessary.

Those wastes received which are unsuitable for processing or not permitted under the Permit and which arrive as minor contaminants within larger loads, are stored in closed containers provided and removed from site to an appropriate disposal site on a regular basis.

Any load containing a greater level of non-permitted wastes is rejected immediately on arrival and following first inspection of the load.

4.4 Biofilter

The dedicated composting facility has infrastructure to control emissions from site at various stages of the process, namely biofilter units.

The 16 bunkers incorporate biofilters to abate odour generated during the most active stage of the compositing. The biofilters are constructed of chipped oversize material (effectively woodchip); the dimensions of the biofilters are 5m by 20m by 1m depth and receive an air flow rate of up to 17,500m^3/hour. Fans are also being constructed inside the building.

Management of the bio-filter includes moisture and temperature monitoring, performance monitoring and the establishment of a maintenance schedule. The temperature and moisture of the biofilter will be monitored weekly with calibration every 12 months. The back pressure of the biofilter will be monitored daily with an annual calibration. The efficacy of the biofilter will be reviewed at least biannually in line with ammonia monitoring of the biofilter.

The media in the biofilters will overtime require both remixing and replenishment to maintain the level of odour abatement, or replacement. Whilst the need for such operations will be driven by the findings of the routine performance monitoring, the need for additional material to be added to the biofilters should be assessed on an annual basis to ensure the depth of media is adequate.

During media replacement, a quantity of the existing media will be incorporated into the replacement media to ensure rapid establishment of a suitable microbial population. The frequency of routine monitoring of emissions should be increased for 1-month following media replacement.

When working at maximum capacity the biofilter system will require regular inspection, monitoring and maintenance to ensure optimal performance and therefore the following monitoring will be conducted: A daily visual inspection of the condition of the biofilter media of both biofilters shall be conducted by a trained operative, to identify areas of drying, weed growth, siltation, shrinkage of the bed, cracks and fissures, etc. The results will be recorded on the Biofilters Daily Inspection Form and any remedial action taken as necessary. There shall be regular monitoring of temperature and moisture levels of the biofilters. Results will be recorded electronically, and summarised on the Daily Biofilters Inspection Form.

Potential Issue	Monitoring	Critical Limits	Process Controls	Records
Biofilter too dry leading ineffective absorption of odorous compounds.	Moisture Monitoring.	Moisture Index: 5	Additions of water to the biofilter should be done on a little and often basis. Water is added to the biofilter routinely to prevent drying out via a fresh water sprinkler system. Too much water should not be added as it will generate excessive runoff and potentially flood the biofilter media.	Site Diary.
Biofilter too wet leading to	Moisture Monitoring.	Moisture Index:	Warm air from the IVC is constantly fed through the biofilter. Should moisture	Site Diary.

Potential Issue	Monitoring	Critical Limits	Process Controls	Records
anaerobic conditions.		1-2	levels exceed the critical limit for the biofilter, the sprinkler system will be turned off and air purged through the aeration system to dry the biofilter material out.	
Biofilter not in optimal temperature range for performance.	Temperature Monitoring.	$>40^0$C.	Elevated temperature readings indicate that biodegradation of biofilter media is occurring. Should temperature become elevated above critical limits, media will be inspected and replaced as required.	Site Diary.

Annex B shows the biofilter inspection form to be used when undertaking monitoring.

5.0 SITE OPERATIONS

5.1 Pre-Acceptance

Personnel shall ensure that the site has the required number of qualified staff on site prior to the waste acceptance and rejection procedures. Personnel shall ensure that the site has capacity to store and treat any incoming waste.

Personnel shall ensure that the site will not exceed Permit conditions by accepting any incoming wastes. Wastes should not be accepted at the installation without a clear method or defined treatment and recovery/disposal route.

5.2 Waste Acceptance

All incoming vehicles will enter via the existing waste facility site entrance and weigh in at the input weighbridge. Documentation will be checked by the weighbridge operative, to ensure that the waste complies with the waste types permitted by the Planning Permission, Permit Regulations or any subsequent updates. The relevant documentation includes Carriers Certificate of Registration and Duty of Care Waste Transfer Note, which will be signed by the weigh-bridge operative to confirm the acceptance/receipt of the waste prior to the driver being allowed to proceed to the Compost site.

Vehicles depositing material will proceed to the respective waste reception areas, vehicle collecting compost product will proceed to the screening area or product storage bays. Each vehicle will be re-weighed at the exit weighbridge prior to leaving the site. Weighbridge data will be stored on computer for record and invoicing purposes. For any waste arriving on site, a record is kept of:

- Date and time of waste delivered;
- Type of waste;
- Weight of load;
- Duty of care transfer note;
- Vehicle registration number; and
- Haulier and waste carrier registration number.

All waste delivered to the compost facility will be inspected visually at the compost reception areas upon being unloaded to check that it complies with the categories of waste specified in the Licence.

5.3 Waste Rejection

In the unlikely event that it is found necessary to refuse to accept a particular load for disposal, a standard rejection procedure will be implemented. The waste rejection procedure to be complied with will be:

- A hard standing holding or quarantine area will be incorporated into the waste reception hall. For loads which are rejected prior to deposit, the driver will be instructed

to park the vehicle as an interim measure for closer inspection. The competent manager and weighbridge will be contacted by radio prior to the rejected materials being removed from the compost site and, if appropriate, the weighbridge ticket and billing rate amended.

- For loads which are rejected following deposit, the unsuitable materials or the whole load depending upon the degree of contamination, will be isolated. Subsequent actions will be dependent upon the reason for rejection and would be similar to those outlined above.
- In the event that the waste material should be determined to be Hazardous Waste then the relevant consignment notification form will be prepared, in conjunction with the haulier or producer and the material will be transported to an appropriate treatment or disposal site.

5.4 Waste Contamination

As part of the normal composting process it is anticipated that there will be some materials unsuitable for composting (contraries e.g. plastic bags and rubble) in the incoming loads and the majority of these contraries will be removed by the site operatives before the waste is processed.

The Plastic bags and other light contrary materials removed from the compost feedstock will be bagged by hand using the appropriate PPE. Larger contrary fractions will be removed using mechanical equipment, for example, a 360^{o} excavator or a front loader.

5.5 Waste Dispatch

All contraries will be stored in a secure area and their weights and other particulars recorded prior to transporting from the site to a suitably permitted facility. All wastes shall be inspected prior to dispatch to confirm their description and composition.

5.6 Waste Measurements

The quantities of all waste input and outgoing compost product will be measured by means of the waste facility's weighbridge. Electronic records will be made of the loaded and unloaded weight of each vehicle (in tonnes), together with the nature and composition of each load. The weighbridge will be subject to regular maintenance and calibration checks. The weighbridge shall have an accuracy of 0.01 tonnes.

5.7 Waste Storage

All specified waste is received and initially stored strictly within the waste loading/unloading area.

Food wastes are stored at the waste reception area at the in vessel composting processing building. Green wastes are stored in one of three areas, there are two sheds or one open storage area.

No other forms of waste are stored within the site other than those non permitted wastes pending removal to an appropriate site.

5.8 Waste Reception

After the vehicle has been weighed, the site Staff shall notify the driver to proceed to the appropriate waste reception area where the load shall be tipped and inspected by the operative who is assigned to operations for that particular day. After tipping, the wheels of the vehicle are inspected by the driver and washed if necessary, also by the driver, before the vehicle is re-weighed before leaving the site.

No waste will be accepted at the site which does not comply with the conditions of the Environmental Permit and where necessary, the Animal Health.

Any non-conforming material will be quarantined and disposed of in accordance with the regulations.

5.9 Current Operations

5.10 In Vessel Composting (Sanitisation of food and green)

The source segregated organic food and wood amendments will enter the site and follow the directional signage to the weighbridge. On entering the weighbridge area, the driver must have the waste transfer documentation with the correct details of the waste on board.

The site operative will inspect the waste transfer documentation, when the site operative is satisfied that the documentation is in order the driver will be instructed to enter the weighbridge, where the weights will be documented.

The driver will then be instructed to proceed to the waste reception hall that is designated for the waste. The site operative will then inspect the load to ensure that it is to the correct standard that is acceptable under the operational procedures; if acceptable the driver will be instructed to tip the waste onto the reception area. The driver will then proceed back to the weighbridge to be weighed out and provide with a copy of the weighbridge ticket for his records.

Wastes will be deposited in the reception hall at the IVC facility and a site operative shall spread and inspect each load deposited at the storage area. The load shall be rejected if, by subjective assessment, it contains more than 5% litter/contrary material unsuitable for composting. The waste will be shredded as required within the reception hall to <400mm in order to comply with ABPR regulations.

The Batch formation during the IVC stage will be based on a maximum available batch size of 80 – 100 tonnes to progress through the IVC stage of the process. Continuous temperature logging is recorded to comply with ABPR requirements that are for a 2 stage catering waste process. Moisture correction is undertaken during the shredding stage by mixing in green waste materials. Residency times are 4 weeks for this stage of the process. There are 16 bunkers A-H and 1-8. The bunkers are 3.5m wide, 6m high and 4.5m long.

Once ABPR standards are achieved the compost is moved to the open/covered stabilisation pad to complete the compost process.

Following the sanitisation phase the compost is transferred to the batch formation shed for one week where batches are formed together ready for open windrow composting. The dimensions of each windrow shall be approximately 2.5 metres high, 6 metres wide and 13 metres long. Gaps of suitable width to enable turning/monitoring and litter picking will be left between the windrows.

5.10.1 Critical Limits

The following critical limits are monitored during the IVC sanitisation phase in both barrier 1 and barrier 2. Exceedance of critical limits will require corrective actions.

Parameter	Critical Limit	Frequency	Location
Temperature	>60^{0}C	Continuous	4 points per batch 0.5m below surface
Moisture	Grip test 3-4	Daily	4 points per batch 1m below surface
Oxygen	<10%	Continuous	Each air extraction pipe per vessel.

5.10.2 Corrective Actions

The following corrective actions are implemented when critical limits are not being met as identified by routine monitoring.

Parameter	Corrective Action
Temperature	Compost is formed into tunnels of adequate size in order to generate required temperatures during active composting phases. Should temperature become elevated above critical limits, tunnels will be flushed with fresh air as soon as possible to fully aerate.
Moisture	The compost tunnels are free draining onto an enclosed drainage system to enable runoff from excessive moisture content. Aeration of tunnels will aid the drying of material to prevent high moisture levels occurring. If elevated moisture levels are encountered, additional air is introduced as soon as possible to fully aerate. Additions of water to compost should be done on a little and often basis. If additional moisture is required by monitoring moisture content less than the critical limit, fresh runoff water is applied directly to the tunnel.
Oxygen	Compost is fully aerated to ensure adequate levels of oxygen within the tunnels. Should oxygen levels be encountered below the critical limit, tunnels will be flushed with fresh air as soon as possible to fully aerate.<10%

5.11 Open Windrow Composting (Stabilisation of food and green)

Green waste that is sanitised will be mixed with the sanitised IVC waste in windrows approximately 2.5 metres high, 6 metres wide and 13 metres long. The stabilisation phase is a minimum 8 week process during which time monitoring equipment will be used for temperature monitoring and moisture levels will be assessed by grip test to ensure critical limits for composting are being met. During this period a minimum of 8 turns are made to fully incorporate the compost by loading shovel. The last week of stabilisation takes place under cover.

At the end of the stabilisation phase the compost will be screened and sampled, on achieving all the criteria for the PAS 100 & QCP the compost will be moved to the storage area to await dispatch.

5.11.1 Critical Limits

The following critical limits are monitored during the open windrow stabilisation phase on the maturation pad. Exceedance of critical limits will require corrective actions.

Parameter	Critical Limit	Frequency	Location
Temperature	45-85^{0}C	Weekly	3 points per batch 1.5m below surface
Moisture	Grip test 3-4	Weekly	3 points per batch 1.5m below surface

5.11.2 Corrective Actions

The following corrective actions are implemented when critical limits are not being met as identified by routine monitoring.

Parameter	Corrective Action
Temperature	Compost is formed into windrows of adequate size in order to generate required temperatures during active composting phases. Should temperature become elevated above critical limits, windrows will be turned as soon as possible to fully aerate.
Moisture	The compost windows are free draining onto a concrete pad to enable runoff from excessive moisture content. If elevated moisture levels are encountered, windrow is turned as soon as possible to fully aerate. Additions of water to compost should be done on a little and often basis. If additional moisture is required by monitoring moisture content less than the critical limit, fresh runoff water is applied directly to the windrow. Too much water should not be added as it will generate excessive runoff onto the composting pad.

5.12 Screening

Matured compost will be periodically characterised chemically, physically and biologically and all material will be screened to produce a range of products for example for agricultural and horticultural markets and land reclamation. The site is certified to BSI PAS 100 and the Compost Quality Protocol, to ensure the manufactured compost is consistent with applicable standards and monitoring regimes.

Screening involves the compost being loaded into a hopper and passing through mechanical rotational screening equipment, which extracts contamination or contraries such as plastic film, etc. A variety of different sized compost end products can be produced this way.

Any oversized waste materials may be returned to the Composting Vessel stages, both through the reception area and within the vessels, acting as a useful catalyst to assist commencement of the composting process.

The screened compost product will be stored in stockpiles on an area specifically designated. When end markets dictate screened matured compost can be transferred by loading shovel to Lorries or other suitable vehicles and weighed out over the weighbridge.

Screened compost may also be combined with soils and finished composts from other sources to produce higher value products.

Daily monitoring records will be kept to ensure the proper functioning and operation of the plant.

5.13 Proposed Operations

5.14 In Vessel Composting (Sanitisation of food and green)

The source segregated organic food and wood amendments will enter the site and follow the directional signage to the weighbridge. On entering the weighbridge area, the driver must have the waste transfer documentation with the correct details of the waste on board.

The site operative will inspect the waste transfer documentation, when the site operative is satisfied that the documentation is in order the driver will be instructed to enter the weighbridge, where the weights will be documented.

The driver will then be instructed to proceed to the waste reception hall that is designated for the waste. The site operative will then inspect the load to ensure that it is to the correct standard that is acceptable under the operational procedures; if acceptable the driver will be instructed to tip the waste onto the reception area. The driver will then proceed back to the weighbridge to be weighed out and provide with a copy of the weighbridge ticket for his records.

Wastes will be deposited in the reception hall at the IVC facility and a site operative shall spread and inspect each load deposited at the storage area. The load shall be rejected if, by subjective assessment, it contains more than 5% litter/contrary material unsuitable for

composting. The waste will be shredded as required within the reception hall to <400mm in order to comply with ABPR regulations.

The Batch formation during the IVC stage will be based on a maximum available batch size of 80 – 100 tonnes to progress through the IVC stage of the process. Continuous temperature logging is recorded to comply with ABPR requirements that are for a 2 stage catering waste process. Moisture correction is undertaken during the shredding stage by mixing in green waste materials. Residency times are 4 weeks for this stage of the process. There are 16 bunkers A-H and 1-8. The bunkers are 3.5m wide, 6m high and 4.5m long.

Once ABPR standards are achieved the compost is moved to the open/covered stabilisation pad to complete the compost process.

Following the sanitisation phase the compost is transferred to the batch formation shed for one week where batches are formed together ready for open windrow composting. The dimensions of each windrow shall be approximately 2.5 metres high, 6 metres wide and 13 metres long. Gaps of suitable width to enable turning/monitoring and litter picking will be left between the windrows.

5.14.1 Critical Limits

The following critical limits are monitored during the IVC sanitisation phase in both barrier 1 and barrier 2. Exceedance of critical limits will require corrective actions.

Parameter	Critical Limit	Frequency	Location
Temperature	>60^{0}C	Continuous	4 points per batch 0.5m below surface
Moisture	Grip test 3-4	Daily	4 points per batch 1m below surface
Oxygen	<10%	Continuous	Each air extraction pipe per vessel.

5.14.2 Corrective Actions

The following corrective actions are implemented when critical limits are not being met as identified by routine monitoring.

Parameter	Corrective Action
Temperature	Compost is formed into tunnels of adequate size in order to generate required temperatures during active composting phases. Should temperature become elevated above critical limits, tunnels will be flushed with fresh air as soon as possible to fully aerate.

Moisture	The compost tunnels are free draining onto an enclosed drainage system to enable runoff from excessive moisture content. Aeration of tunnels will aid the drying of material to prevent high moisture levels occurring. If elevated moisture levels are encountered, additional air is introduced as soon as possible to fully aerate. Additions of water to compost should be done on a little and often basis. If additional moisture is required by monitoring moisture content less than the critical limit, fresh runoff water is applied directly to the tunnel.
Oxygen	Compost is fully aerated to ensure adequate levels of oxygen within the tunnels. Should oxygen levels be encountered below the critical limit, tunnels will be flushed with fresh air as soon as possible to fully aerate.<10%

5.15 Open Windrow Composting (Sanitisation of green only)

The source segregated green waste will enter the site and follow the directional signage to the weighbridge. On entering the weighbridge area, the driver must have the waste transfer documentation with the correct details of the waste on board.

The site operative will inspect the waste transfer documentation, when the site operative is satisfied that the documentation is in order the driver will be instructed to enter the weighbridge, where the weights will be documented.

The driver will then be instructed to proceed to the waste reception hall that is designated for the waste. The site operative will then inspect the load to ensure that it is to the correct standard that is acceptable under the operational procedures; if acceptable the driver will be instructed to tip the waste onto the reception area. The driver will then proceed back to the weighbridge to be weighed out and provide with a copy of the weighbridge ticket for his records.

Wastes will be deposited in the reception area at the green waste facility and a site operative shall spread and inspect each load deposited at the storage area. The load shall be rejected if, by subjective assessment, it contains more than 5% litter/contrary material unsuitable for composting. The waste will be shredded as required within the reception hall to <400mm in order to comply with CQP regulations.

The Batch formation during the open windrow stage will be based on a maximum available batch size of 150 – 400 tonnes to progress through to the stabilisation stage of the process. Temperature logging is recorded daily in the first two weeks. Moisture correction is undertaken during the shredding stage by mixing in green waste materials. Residency times are 2 weeks for the sanitisation stage of the process.

Following the sanitisation phase the compost is transferred to the batch formation shed batches are formed together ready for open windrow composting. The dimensions of each windrow shall be approximately 2.5 metres high, 6 metres wide and 13 metres long. Gaps of suitable width to enable turning/monitoring and litter picking will be left between the windrows.

5.16 Open Windrow Composting (Stabilisation of food and green)

Green waste that is sanitised will be mixed with the sanitised IVC waste in windrows approximately 2.5 metres high, 6 metres wide and 13 metres long. The stabilisation phase is a minimum 8 week process during which time monitoring equipment will be used for temperature monitoring and moisture levels will be assessed by grip test to ensure critical limits for composting are being met. During this period a minimum of 8 turns are made to fully incorporate the compost by loading shovel. The last week of stabilisation takes place under cover.

At the end of the stabilisation phase the compost will be screened and sampled, on achieving all the criteria for the PAS 100 & QCP the compost will be moved to the storage area to await dispatch.

5.16.1 Critical Limits

The following critical limits are monitored during the open windrow stabilisation phase on the maturation pad. Exceedance of critical limits will require corrective actions.

Parameter	Critical Limit	Frequency	Location
Temperature	45-85^{0}C	Weekly	3 points per batch 1.5m below surface
Moisture	Grip test 3-4	Weekly	3 points per batch 1.5m below surface

5.16.2 Corrective Actions

The following corrective actions are implemented when critical limits are not being met as identified by routine monitoring.

Parameter	Corrective Action
Temperature	Compost is formed into windrows of adequate size in order to generate required temperatures during active composting phases. Should temperature become elevated above critical limits, windrows will be turned as soon as possible to fully aerate.
Moisture	The compost windows are free draining onto a concrete pad to enable runoff from excessive moisture content. If elevated moisture levels are encountered, windrow is turned as soon as possible to fully aerate. Additions of water to compost should be done on a little and often basis. If additional moisture is required by monitoring moisture content less than the critical limit, fresh runoff water is applied directly to the windrow. Too much water should not be added as it will generate excessive runoff onto the composting pad.

5.17 Screening

Matured compost will be periodically characterised chemically, physically and biologically and all material will be screened to produce a range of products for example for agricultural and horticultural markets and land reclamation. The site is certified to BSI PAS 100 and the Compost Quality Protocol, to ensure the manufactured compost is consistent with applicable standards and monitoring regimes.

Screening involves the compost being loaded into a hopper and passing through mechanical rotational screening equipment, which extracts contamination or contraries such as plastic film, etc. A variety of different sized compost end products can be produced this way.

Any oversized waste materials may be returned to the Composting Vessel stages, both through the reception area and within the vessels, acting as a useful catalyst to assist commencement of the composting process.

The screened compost product will be stored in stockpiles on an area specifically designated. When end markets dictate screened matured compost can be transferred by loading shovel to Lorries or other suitable vehicles and weighed out over the weighbridge.

Screened compost may also be combined with soils and finished composts from other sources to produce higher value products.

Daily monitoring records will be kept to ensure the proper functioning and operation of the plant.

5.18 Operations Employed

As stated in Section 5.9 and 5.13 there are two potential operations employed on site;

A. All materials sanitised in the IVC and stabilised in open windrows; or
B. All food and some green wastes sanitised in the IVC, remaining green waste sanitised in open windrows, and all materials stabilised in open windrows.

At present operation A is employed. Should there be a change in feedstock split between green and food waste then operation b) will be employed. NRW will be informed of the decision to switch operations prior to implementation and the Management System updated accordingly.

Only one operational procedure will be employed at any one time, i.e. either operation A or operation B, never both at any one time.

6.0 POLLUTION CONTROL

6.1 Site Maintenance

The site operates a strict maintenance regime and equipment used is of sufficient capacity to allow down time for routine maintenance and servicing as recommended by the manufacturer.

No plant may be operated unless full instructions and training have been given by a person competent to do so. Movement of equipment within the composting area is strictly controlled with recorded cleaning between areas.

No plant or equipment may be worked on for maintenance purposes unless it has been removed from the site and has been isolated to prevent an accidental start, only in exceptional circumstances which prevent its removal, shall work be undertaken on any item of plant within the site.

Any newly arrived or hired in equipment is subject to particular scrutiny to ensure it meets the standards required by both the company and current legislation.

All breakdowns or incidents involving plant or equipment are entered in the site diary.

6.2 Meteorological Monitoring

Meteorological conditions are monitored at the site using an electronic Davis Vantage weather station. The unit provides a continuous record of wind speed, wind direction, rainfall, barometric pressure and temperature with these parameters being noted on a daily schedule. The weather station downloads data to the site computer which is located in the site office and the weather station is located in an open area adjacent to the office.

The purpose of monitoring the meteorological conditions is to provide weather data which could be of immediate use for managing the day to day operational activities. The wind direction data is useful in scheduling operations to assure prevailing wind conditions will not impact on sensitive receptors. The rainfall data is of value in predicting the impact on the leachate holding tank capacity and the likely need for pumping off surplus leachate.

The weather station is serviced at regular intervals and a service report filed in the site office.

6.3 Dust & Bioaerosols

Material in active composting phases such as open windrow composting and maturation pad areas will be controlled in terms of moisture to ensure the material does not dry to present a dust and generate a subsequent bio-aerosol issue.

A Site Specific Bioaerosols Risk Assessment has concluded that when industry best practice is applied to dust control as is proposed, the operations present no risk to offsite sensitive receptors.

Turning, movement of material and screening are the operational activities that have greatest potential to generate airborne particles.

Screening will take into account moisture content, wind direction and wind speed to assure the operation does not present a problem in terms of dust or odour. During screening the wind direction will be monitored to detect shifts in wind direction that may occur during the operation.

The actions which will be taken to prevent or minimise dust emission are:-

- During shredding operations an exclusion zone will be maintained around the shredding equipment to ensure that site operatives and waste vehicle drivers are outside the area where airborne dusts would be concentrated. Operatives needing to work inside this zone will wear an appropriate face mask.
- Composting materials in the stockpiles will be kept at a suitable moisture content, using water sprays when necessary.
- The cabs of mobile plant will be provided with P111 air filtration and will be kept under positive air pressure.
- The screening operations will be monitored (as per shredding) and if found necessary, water sprays will be provided on the screening equipment.
- Dust generation attributable to vehicle movements will be controlled by the maintenance and sweeping of the site access road. During dry weather action will be taken to spray the roads using a water bowser.
- The Site Manager will carry out a daily visual assessment of dust emission within the site and at the downwind site boundaries. In the event of a potential or actual dust nuisance being identified, then appropriate remedial actions will be implemented as soon as practicable, with the most effective action likely to involve additional water spraying of the source of the dust emission.
- The results of the daily inspections and any remedial work will be recorded in the Site Diary. Any complaint, which is received, will be reported to the Environment Agency.

6.4 Mud and Debris

The entire working area is surfaced by impermeable concrete or hard-standing. All wastes and process take place on impermeable surfacing with sealed drainage.

Any vehicle leaving the site will be checked to ensure that they are clear of loose material and that waste is secure. Where necessary, vehicles will be cleaned before leaving site.

In the event that mud or debris is deposited onto public areas, by action or inaction, that material will be cleaned as soon as practicable and cause of mud/debris escape investigated and remediated.

6.5 Litter

Waste accepted on site has been pre-segregated at source reducing the risk of contamination from litter. Very little litter is expected within incoming waste, but where present it will be immediately removed to sealed refuse containers, prior to disposal.

Regular checks are made within and around the site for litter which may escape during the waste transfer process between the waste reception building and the composting vessels. The area around the reception building will be kept clean and tidy.

Any materials found will be removed and returned to the waste reception building or stored within the non-permitted waste containers, depending on the nature and origins of the litter.

6.6 Pests

The site has adequate pest control provisions and monitoring to ensure pest and vermin levels remain low. These are checked on a weekly basis and a specialist contractor will carry out independent inspections at least 12 times per year. If an infestation should ever be found, then appropriate pest control measures will be immediately implemented. The results of the inspections and any remedial action will be recorded in the Site Diary.

6.7 Spillages

All spillages will be dealt with immediately. All vehicles, plant and equipment used on site will be operated and maintained with the objective preventing environmentally harmful leaks and spills.

In the event of any potentially environmentally harmful leaks or spillages, documented control and remediation procedures will be implemented immediately and recorded.

Any liquid contrary wastes will be immediately isolated and made ready for further disposal. Incidence of liquid contrary wastes will be recorded in the Site Diary. See Waste Acceptance procedures.

A spillage kit is available on-site (in main office) for rapid clean-up and amelioration of spills.

6.8 Odour

Emissions from the activities shall be free from odour levels likely to cause pollution outside the site. All activities taking place at site will be monitored for unusual odour release.

All incoming wastes will be thoroughly checked for the presence of odorous contraries. Any odorous contraries will be immediately segregated and contained, ready for further disposal.

The site has a fully implemented Odour Management Plan to the Environment Agency H4 Guidance standard.

The IVC system allows oxygen levels to be continually monitored to maintain aerobic conditions, thus reducing the release of odours. Odour emissions will be mitigated by implementing the following operational procedures:

- Waste reception and pre-processing will take place inside a building to minimise emissions;
- Minimise waste storage time by maintaining volumes at a manageable level;

- Blending of waste materials to produce a homogenous mix will manage the moisture content to help minimise odour production;
- Composting within the IVC units will prevent the release of odour;
- Regular cleaning of operational areas to prevent accumulation of potentially odorous material;
- Regular turning of windrows will help minimise odour; and
- All site operatives will undertake routine monitoring and, in the event of identifying malodorous material, will implement mitigation procedures by covering or processing the material at the earliest opportunity.

Odour monitoring will occur daily at the designated monitoring points and an Odour Assessment Report will be filled in.

In the event of odorous problems or a complaint being received, details will be recorded in the Odour Complaint Report Form.

6.9 Noise and Vibration

Emissions from the activities shall be free from noise and vibration levels likely to cause pollution outside the site.

Suitable measures will be implemented and maintained throughout the operational life of the site to ensure noise emanating from the site is minimised. All equipment used at the site will be appropriately silenced and the shredder and screening equipment will be noise attenuated. All vehicles, equipment and plant will be switched off when not in use. All vehicles, equipment and plant will be maintained with a clear intention to reduce noise and vibration levels.

Any noise monitoring carried out and remedial action taken will be recorded in the Site Diary and will be reported to the Environment Agency.

Waste processing operations will only be carried out during the designated hours as stated in Table 2.

6.10 Storage of Wastes

All storage and treatment of waste solids, liquids and sludges shall not be within the following distances:

- 10 metres of any watercourse;
- 50 metres from any spring or well, or from any borehole not used to supply water for domestic or food production purposes; and
- 250 metres from any borehole used to supply water for domestic or food production purposes.

All wastes shall be stored and processed on an impermeable surface with a sealed drainage system.

7.0 ACCIDENT MANAGEMENT

The site has implemented a full Accident Management Plan detailing potential accident and emergency situations that could occur on site, control measures to minimise potential occurrence and procedures should accidents occur on site.

7.1 Potential Accidents

Identified potential accidents include:

- Plant or equipment failure
- Leachate/Surface Water tank overflowing
- Fire
- Severe Weather
- Arson/Vandalism
- Bioaerosols

8.0 MONITORING AND RECORDS

8.1 Monitoring

CCL shall undertake the monitoring as show in Table 5. CCL shall maintain records of all the monitoring required, including records of the taking and analysis of samples, instrument, measurements, calibrations, examinations, tests and surveys and any assessments or evaluations made on the basis of such data.

Table 5 - Site Monitoring Requirements

Parameter	Measurement	Purpose	Operations	Frequency
Temperature	Temperature probe.	Critical limits for composting and biofilter performance.	Sanitisation, maturation and biofilter.	Daily
Moisture	Squeeze test.	Critical limits for composting and biofilter performance.	Sanitisation, maturation and biofilter.	Daily
Odour	Sniff test.	Identify any release of odour from composting operations.	All composting operations.	Daily
Bioaerosols	External Service.	Ensure fugitive releases are not a risk to local sensitive receptors.	All composting operations.	Quarterly

8.2 Site Diary

A Site Diary shall be maintained, and retained in the site office. It shall record visitors, non-routine activities and other incidents. The Site Diary should be checked periodically by the Permit Holder to ensure its correct use. The Site Diary shall be readily available for inspection. Examples of activities recorded in the site diary include:

- Names of operators and times of attendance on site.
- Names and times of technically competent managers on site.
- Names of visitors on site.
- Any accidents resulting in injury.
- Operational details of individual windrows
- Any incident of fire.
- Any incident of spillage.
- Any incidents causing pollution to the environment, harm to human health or detriment to the amenities of the locality.
- Any machinery breakdown.
- Any deposit of unsuitable waste at the site.
- Condition of site infrastructure and engineering.
- Incidence of litter, dust, pest, odour and noise problems.
- Leachate pumping.
- Results of various inspections for litter, odour, noise, birds, pests etc.

- Environment Agency licence inspection reports.

8.3 Waste Records

Records of all waste entering and the leaving the site shall be recorded. All records will be made as soon as reasonably practicable and retained securely for a minimum of two years. Records will be clear, legible and available for viewing (on site). Records must be kept of all incoming wastes, and all outgoing compost, compost-like material and residuals.

The following records will be retained (not comprehensive):

- Waste Carriers Licences (where appropriate).
- Weighbridge Tickets/Documents – incoming wastes.
- Bioaerosols monitoring.
- Weighbridge Tickets/Documents – outgoing wastes (including residual wastes).
- Destination of outgoing wastes (including market sector).
- Destination of outgoing compost like material.
- Reject Waste Forms.
- Environment Agency Inspection Reports.
- Design, construction, inspection, maintenance and monitoring of pollution prevention methods.
- Failure records for pollution prevention methods.
- Off-site environmental effects.
- Batch Formation Data (start and finish dates, activities carried out.
- Composting Batch Conditions (Batch Record Sheet).
- Records of sampling.
- Records of corrective actions taken during composting processes.
- Type of input material, whether the load is rejected or accepted, and if rejected the reason why.
- Maturation Start and Finish date.
- Product Preparation Information.
- Duty of Care Records.
- Quarterly Waste Returns.

8.4 Reporting and Notification

Site personnel will notify the Environment Agency “without delay” following the detection of:

- Any malfunction, breakdown or failure of equipment or techniques, accident, or fugitive emission which has caused, is causing or may cause significant pollution.
- The breach of a limit specified in the Permit.
- Any significant adverse environmental and health effects.

Site personnel will notify the Environment Agency within 24 hours:

- Of actual or potential incidents and breaches of emissions limits.

Site personnel will notify the Environment Agency within 14 days:

- Where the Environment Agency has requested in writing that it shall be notified when CCL is to undertake monitoring and/or spot sampling.
- Of any change in the operator's trading name, registered names or registered offices addresses.

During normal working hours site personnel will contact the Site Officer or the local Environment Agency Office by telephone. The Environment Agency National Incident Hotline number is: 0800 807 060.

8.5 Training Records

Each person, whose duties affect compost quality shall be trained, instructed and supervised commensurate with those duties, such that he/she is competent. Training records for personnel who affect site procedures, operations and quality shall be maintained.

8.6 Site Waste Returns

Quarterly returns shall be provided and stored at the site office in line with Environment Agency regulations.

8.7 Complaints

CCL shall decide and implement any necessary action in response to any complaints or concerns expressed by interested parties, including operatives, customers, clients and regulatory authorities about quality or usability of any compost of compost based products.

CCL shall record the:

- Name and contact details of the person who expressed concern or made a complaint;
- Specific subject(s) of the concern or complaint;
- Date and time communicated to the producer and name of the person to whom it was communicated;
- Nature and date(s) of any actions and checks and who carried them out;
- Nature and date of any response to the person who expressed a concern or made the complaint; and
- Name of the person who communicated the response.

ANNEX A - WASTE INPUT CODES

Waste Code	Description	Condition	Qualifying Standard/Permit
02 01	**Waste from agriculture, horticulture, aquaculture, forestry, hunting and fishing.**		
02 01 01	Sludges from washing and cleaning produced during food preparation and processing only		QPC
02 01 02	Animal tissue waste.		QPC SR2008No17
02 01 03	Plant-tissue waste.		QPC SR2008No17
02 01 06	Animal faeces, urine and manure (including spoiled straw), effluent, collected separately and treated off-site.		QPC SR2008No17
02 01 07	Wastes from forestry.	Only if plant material.	QPC SR2008No17
02 01 99	Wastes not otherwise specified.	Spent mushroom compost only.	SR2008No17
02 02	**Wastes from the preparation and processing of meat, fish and other foods of animal origin.**		
02 02 01	Sludges from washing and cleaning.		QPC
02 02 02	Horse manure, farmyard manure and bedding.		QPC SR2008No17
02 02 03	Shells from shellfish processing (where all the flesh has been removed).		QPC SR2008No17
02 02 09	Horse manure, farmyard manure and bedding.		SR2008No17
02 02 99	Wastes not otherwise specified.		QPC
02 03	**Wastes from fruit, vegetables, cereals, edible oils, cocoa, coffee, tea and tobacco preparation and processing; conserve production; yeast and yeast extract production, molasses preparation and fermentation.**		
02 03 01	Sludges from washing, peeling, cleaning, centrifuging and separation.		SR2008No17
02 03 04	Biodegradable materials unsuitable for consumption or processing.	Other than those containing dangerous substances.	QPC SR2008No17
02 03 05	Sludges from onsite effluent treatment.		SR2008No17
02 04	**Wastes from sugar processing.**		

Waste Code	Description	Condition	Qualifying Standard/Permit
02 04 01	Soil from cleaning and washing beet.		SR2008No17
02 04 03	Sludges from onsite effluent treatment.		SR2008No17
02 05	**Wastes from the dairy products industry.**		
02 05 01	Biodegradable materials unsuitable for consumption or processing (other than those containing dangerous substances).		QPC SR2008No17
02 05 02	Sludges from onsite effluent treatment.		SR2008No17
02 06	**Wastes from the baking and confectionery industry.**		
02 06 01	Biodegradable materials unsuitable for consumption or processing (other than those containing dangerous substances).		QPC SR2008No17
02 06 03	Sludges from onsite effluent treatment.		SR2008No17
02 07	**Wastes from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa).**		
02 07 01	Wastes from washing, cleaning and mechanical reduction of raw materials.		QPC SR2008No17
02 07 02	Wastes from spirits distillation.		QPC SR2008No17
02 07 04	Materials unsuitable for consumption or processing.		QPC SR2008No17
02 07 05	Sludges from on-site effluent treatment.	Biodegradable only.	SR2008No17
02 07 99	Wastes not otherwise specified.	Allowed if biodegradable material only, no chemical agents added, and no toxin residues present.	QPC SR2008No17
03 01	**Wastes from wood processing and the production of panels and furniture, pulp, paper and cardboard.**		
03 01 01	Waste bark and cork.		QPC SR2008No17
03 01 05	Sawdust, shavings, cuttings, wood, particle board and veneer.	Other than those mentioned in 03 01 04.	QPC SR2008No17

Waste Code	Description	Condition	Qualifying Standard/Permit
03 03	**Wastes from pulp, paper, and cardboard production and processing.**		
03 03 01	Waste bark and wood.		QPC SR2008No17
03 03 10	Fibre rejects.		QPC SR2008No17
03 03 11	Sludges from on-site effluent treatment.	Other than those mentioned in 03 03 10.	QPC
04 01	**Wastes from the leather and fur industry.**		
04 01 01	Fleshings and lime split wastes.	Fleshings may also be described as leather shavings. Allowed only if hides and skins, or parts of them, originating from animals that did not show clinical signs of any disease communicable through that product to humans or animals.	QPC
04 02	**Wastes from the textile industry.**		
04 02 10	Organic matter from natural products (for example grease, wax).		QPC SR2008No17
04 02 21	Wastes from unprocessed textile fibres.	Biodegradable material only.	QPC
07 02	**Wastes from the manufacture, formulation, supply and use of plastics, synthetic rubber and man-made fibres.**		
07 02 13	Waste plastic.	Unused and uncontaminated excess production only.	QPC
15 01	**Packaging (including separately collected municipal packaging waste).**		
15 01 01	Paper and cardboard packaging.		QPC SR2008No17
15 01 02	Plastic packaging.	Only biodegradable organic packaging.	QPC
15 01 03	Wooden packaging.	Untreated.	QPC SR2008No17
15 01 05	Composite packaging.	Only biodegradable organic packaging.	QPC SR2008No17

Waste Code	Description	Condition	Qualifying Standard/Permit
15 01 09	Textile packaging.	Allowed only if entirely natural fibres.	QPC SR2008No17
16 10	**Wastes not otherwise specified in the list.**		
16 10 02	Aqueous liquid wastes other than those mentioned in 16 10 01	Only if derived from input types allowed within the QP.	QPC SR2008No17
17 02	**Wood, glass and plastic.**		
17 02 01	Wood.	Untreated	QPC SR2008No17
17 05	**Soil (including excavated soil from contaminated sites), stones and dredging spoil.**		
17 05 06	Dewatered dredging spoil and plant tissue waste from inland waters.	Not containing Japanese Knotweed and not containing dangerous substances.	QPC SR2008No17
19 02	**Wastes from aerobic treatment of solid wastes.**		
19 02 03	Premixed wastes composed only of non-hazardous wastes	Only if derived from input types allowed within the QP.	QPC
19 02 06	Sludges from physico/chemical treatment other than those mentioned in 19 02 05	Acceptable only if derived solely from physical treatment and/or pH adjustment of input types allowed by this Quality Protocol and remains segregated from, and uncontaminated by, any other waste type.	QPC
19 05	**Wastes from the aerobic treatment of solid wastes.**		
19 05 03	Off-specification compost.	Only if derived from input types allowed within the QP.	QPC SR2008No17
19 05 99	Wastes not otherwise specified.	Liquor/leachate from a composting process that accepts only wastes within the QPC.	QPC
19 06	**Wastes from the anaerobic treatment of wastes.**		
19 06 03	Liquor from anaerobic treatment of municipal waste.	Only if derived from input types allowed within the QPC.	QPC SR2008No17

Waste Code	Description	Condition	Qualifying Standard/Permit
19 06 04	Digestate from anaerobic treatment of municipal waste.	Only if derived from input types allowed within the QPC.	QPC SR2008No17
19 06 05	Liquor from anaerobic treatment of animal and vegetable waste.	Only if derived from input types allowed within the QPC.	QPC SR2008No17
19 06 06	Digestate from anaerobic treatment of animal and vegetable waste.	Only if derived from input types allowed within the QPC.	QPC SR2008No17
19 08	**Waste from waste water treatment plants.**		
19 08 05	Sludges from treatment of urban waste water.		SR2008No17
19 12	**Wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified.**		
19 12 01	Paper and cardboard.		SR2008No17
19 12 07	Wood.	Not containing dangerous substances.	SR2008No17
19 12 12	Other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11	Only if derived from input types allowed within the QPC.	QPC
20 01	**Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions.**		
20 01 01	Paper and cardboard.	No preservatives.	QPC SR2008No17
20 01 08	Biodegradable kitchen and canteen waste.		QPC SR2008No17
20 01 25	Edible oil and fat.		QPC SR2008No17
20 01 38	Wood.	Not containing dangerous substances.	QPC SR2008No17
20 01 39	Plastics.	Allowed only if independently certified to European standard EN14995.	QPC
20 02	**Garden and park waste (including cemetery waste).**		
20 02 01	Biodegradable waste.		QPC SR2008No17

Waste Code	Description	Condition	Qualifying Standard/Permit
20 03	**Other municipal wastes.**		
02 03 01	Mixed municipal waste	Allowed only if separately collected biodegradable wastes otherwise allowed by this Quality Protocol.	QPC
20 03 02	Waste from markets.		QPC SR2008No17

Waste Code	Description	Condition	Qualifying Standard/Permit
02 01	**Waste from agriculture, horticulture, aquaculture, forestry, hunting and fishing.**		
02 01 01	Soils from washing and cleaning fruit and vegetables only	Non-ABPR only.	QPC
02 01 03	Plant-tissue waste.		QPC SR2008No16
02 01 06	Animal faeces, urine and manure (including spoiled straw), effluent, collected separately and treated off-site.	Non-ABPR only.	QPC SR2008No16
02 01 07	Wastes from forestry.	Only if plant material.	QPC SR2008No16
02 01 99	Waste not otherwise specified.	Spent mushroom compost only	SR2008No16
02 03	**Wastes from fruit, vegetables, cereals, edible oils, cocoa, coffee, tea and tobacco preparation and processing; conserve production; yeast and yeast extract production, molasses preparation and fermentation.**		
02 03 04	Biodegradable materials unsuitable for consumption or processing.	Other than those containing dangerous substances.	QPC SR2008No16
02 07	**Wastes from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa).**		
02 07 01	Wastes from washing, cleaning and mechanical reduction of raw materials.		QPC SR2008No16
02 07 02	Wastes from spirits distillation.		QPC SR2008No16
02 07 04	Materials unsuitable for consumption or processing.		QPC SR2008No16
02 07 99	Wastes not otherwise specified.	Allowed if biodegradable material only, no chemical agents added, and no toxin residues present.	QPC

Waste Code	Description	Condition	Qualifying Standard/Permit
03 01	**Wastes from wood processing and the production of panels and furniture, pulp, paper and cardboard.**		
03 01 01	Waste bark and cork.		QPC SR2008No16
03 01 05	Sawdust, shavings, cuttings, wood, particle board and veneer.	Other than those mentioned in 03 01 04.	QPC SR2008No16
03 03	**Wastes from pulp, paper, and cardboard production and processing.**		
03 03 01	Waste bark and wood.	No sludges.	QPC SR2008No16
03 03 10	Fibre rejects.	No sludges.	QPC SR2008No16
04 02	**Wastes from the textile industry.**		
04 02 10	Organic matter from natural products (for example grease, wax).		QPC SR2008No16
04 02 21	Wastes from unprocessed textile fibres.		QPC
15 01	**Packaging (including separately collected municipal packaging waste).**		
15 01 01	Paper and cardboard packaging.		QPC SR2008No16
15 01 02	Plastic Packaging	Only biodegradable packaging.	QPC
15 01 03	Wooden packaging.	Untreated.	QPC SR2008No16
15 01 05	Composite packaging.	Only biodegradable organic packaging.	QPC SR2008No16
15 01 09	Textile packaging.	Allowed only if entirely natural fibres.	QPC SR2008No16
17 02	**Wood, glass and plastic.**		
17 02 01	Wood.	Untreated	QPC SR2008No16
17 05	**Soil (including excavated soil from contaminated sites), stones and dredging spoil.**		

Waste Code	Description	Condition	Qualifying Standard/Permit
17 05 06	Dewatered dredging spoil and plant tissue waste from inland waters.	Not containing Japanese Knotweed and not containing dangerous substances.	QPC SR2008No16
19 05	**Wastes from the aerobic treatment of solid wastes.**		
19 05 03	Off-specification compost.	Only if derived from input types allowed within the QP.	QPC SR2008No16
19 08	**Waste from waste water treatment plants**		
19 08 05	Sludges from treatment of urban waste water.		SR2008No16
19 12	**Wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified.**		
19 12 01	Paper and cardboard.		SR2008No16
19 12 07	Wood.	Not containing dangerous substances.	SR2008No16
20 01	**Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions.**		
20 01 01	Paper and cardboard.	No preservatives.	QPC SR2008No16
20 01 38	Wood.	Not containing dangerous substances.	QPC SR2008No16
20 01 39	Plastics.	Allowed only if independently certified to European standard EN14995.	QPC
20 02	**Garden and park waste (including cemetery waste).**		
20 02 01	Biodegradable waste.		QPC SR2008No16
20 03	**Other municipal wastes.**		
20 03 02	Waste from markets.	Non-ABPR biodegradable waste only.	QPC SR2008No16

ANNEX B: BIOFILTER INSPECTION FORM

Biofilter	Parameter	Results			Action Taken
A	Moisture				
	Temperature				
	Weed Growth				
	Compaction				
	Air Retention				

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