



Environmental Protection Agency
An Ghníomhaireacht um Chaomhnú Comhshaoil

Ms Mary Pyne
Director of Services
South Dublin County Council
Environmental Services Department, County Hall
Town Centre
Tallaght, Dublin 24
ATTN: Ms Mary Pyne, Director of Services

Headquarters, PO Box 3000
Johnstown Castle Estate
County Wexford, Ireland
Ceanncheathrú, Bosca Poist 3000
Eastát Chaisleán Bhaile Sheáin
Contae Loch Garman, Éire
T: +353 53 916 0600
F: +353 53 916 0699
E: info@epa.ie
W: www.epa.ie
LoCall: 1890 33 55 99

30th June 2006

Reg No: W0205-01

Dear Ms Pyne

I am to advise you that the Agency has received an application for a Waste Licence from Greyhound Recycling & Recovery Limited, for a facility located at Greyhound Recycling & Recovery Limited, Crag Avenue, Clondalkin Industrial Estate, Clondalkin, Co Dublin.

The applicant proposes, as part of this application, to provide for the discharge of process effluent to a sewer, which the applicant has stated is vested in, or controlled by, your Council. Process effluent includes trade effluent or other matter (other than domestic sewage or storm water). I enclose copy extracts from the application form, which detail proposed discharges.

The provisions of Section 52 of the Waste Management Acts, 1996 to 2005, provides that the Agency shall obtain the consent of the sanitary authority to the proposed discharge from an activity which involves the discharge of trade effluent or other matter (other than domestic sewage or storm water), to a sewer vested in or controlled by a sanitary authority.

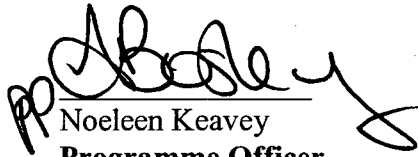
In order to expedite the Agency's consideration of this waste licence application, I am to request your authority's consent to the proposed discharge/s. It should be noted that, your authority's consent may be subject to such conditions as your authority considers appropriate as provided for in Section 52 of the Waste Management Acts, 1996 to 2005 and Section 99E(3) of the Environmental Protection Agency Acts, 1992 and 2003. Your attention is drawn to paragraphs (3) and (4) of the attached copy of the relevant section of the Act. For your convenience please find attached a reply form including a list of draft conditions compiled by the Agency.



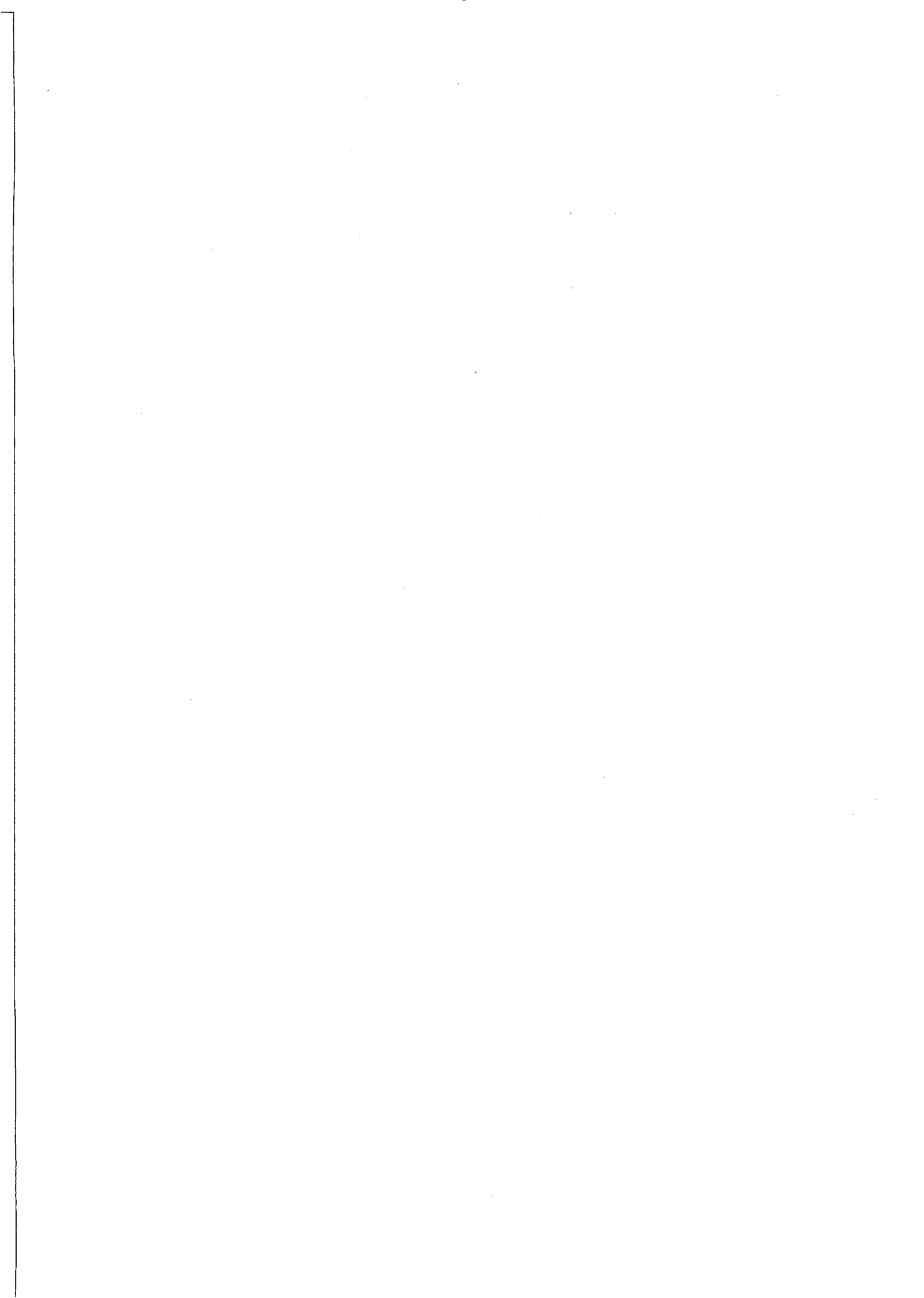
In accordance with paragraph (2) of this section of the Act, you are requested to forward your response within 5 weeks of the date of this letter. Please note that any decision given after the expiry period shall be invalid and in those circumstances the Agency may proceed to determine the application concerned as if consent was obtained. Stuart Huskisson is dealing with this matter and can be contacted at the Licensing Unit, Office of Licensing & Guidance Dublin (Tel. No. 01-2680100) if you have any queries.

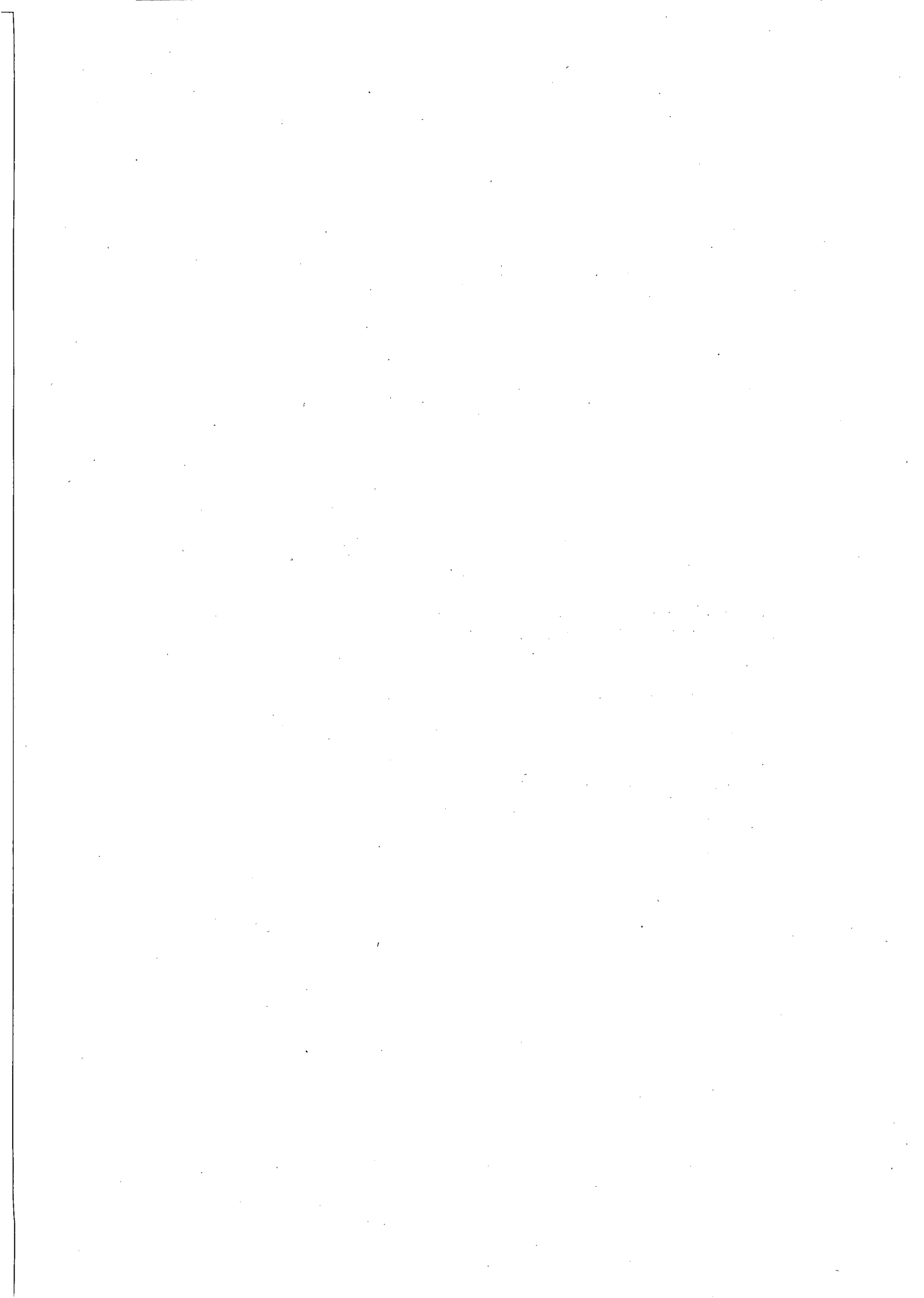
Your co-operation in this matter is appreciated.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Noeleen Keavey', with a large flourish at the end. To the left of the signature is a small, stylized initial 'PK'.

Noeleen Keavey
Programme Officer
Licensing Unit
Noeleen Keavey
Office of Licensing & Guidance





SANITARY AUTHORITY RESPONSE
re: SECTION 52 OF THE WASTE MANAGEMENT ACTS, 1996 to 2005

Name & Address of Sanitary Authority: South Dublin County Council, Environmental Services
 Department, County Hall, Town Centre, Tallaght,
 Dublin 24, ATTN: Ms Mary Pyne, Director of Services.

Waste Reg. No. W0205-01

Waste Facility: Greyhound Recycling & Recovery Limited, Crag Avenue
 , Clondalkin Industrial Estate , Clondalkin, Co Dublin

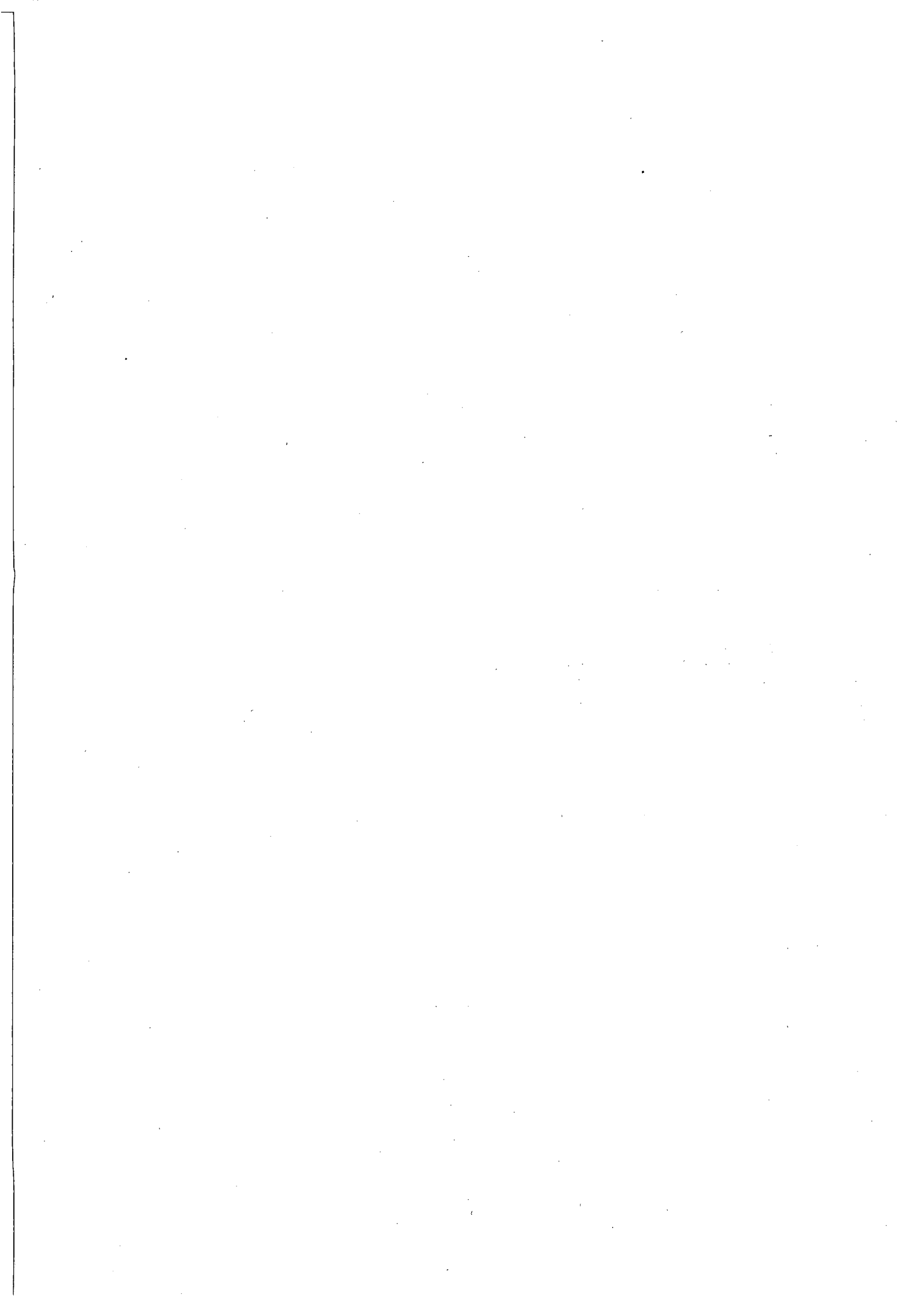
Waste Licence Applicant: Greyhound Recycling & Recovery Limited

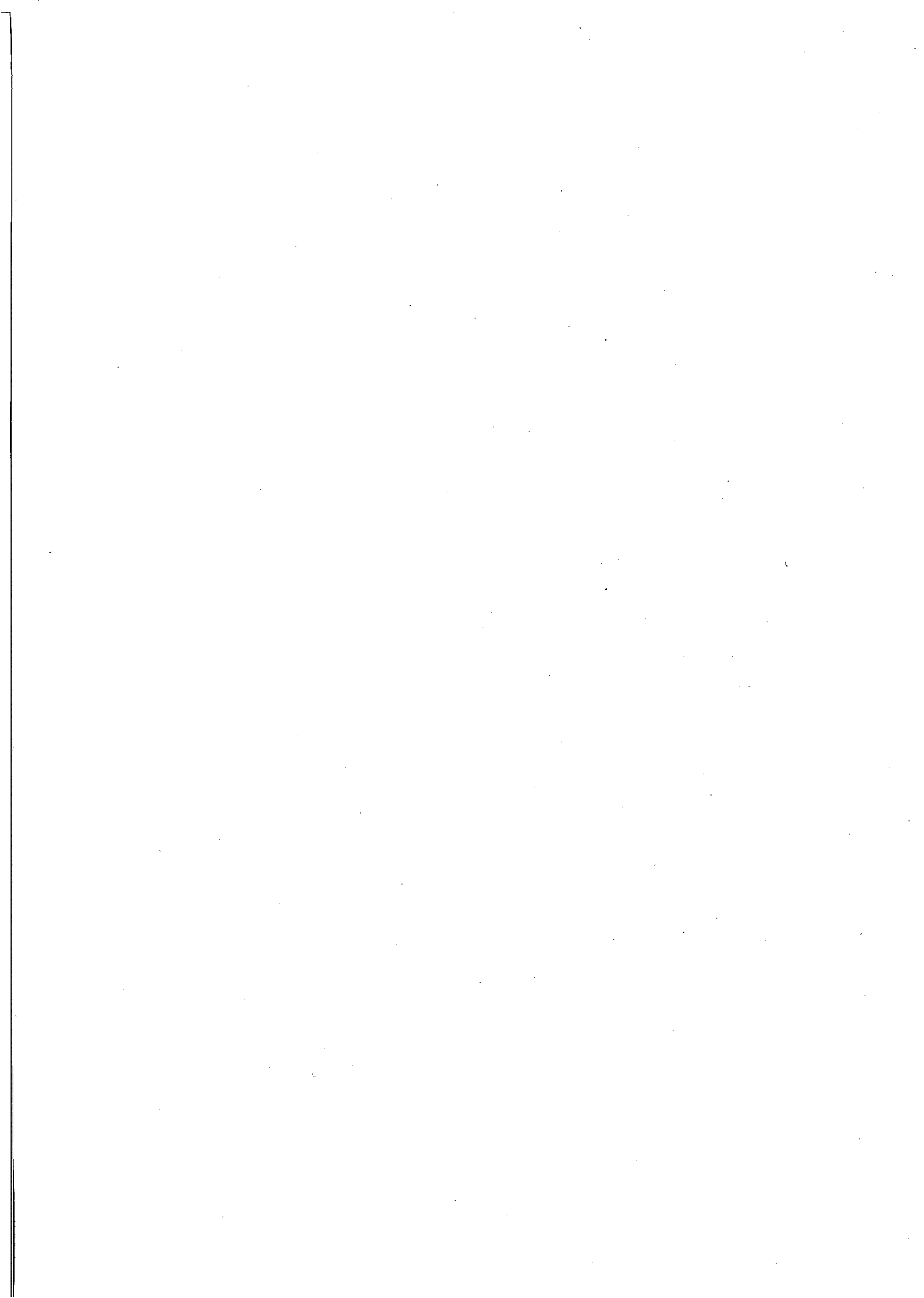
Consent: Indicate Yes to one of the following statements:

Consent granted subject to the consent conditions outlined below	
Consent granted without conditions	
Consent refused ^{Note 1}	

Note 1 Where it is proposed to refuse permission the reasons for the refusal should be clearly outlined in the response.

GENERAL CONSENT CONDITIONS	Condition to be included (Yes/No)
1. No specified emission from the installation shall exceed the emission limit value set out in <i>Schedule B: Emissions Limits to Sewer</i> . There shall be no other emission to sewer of environmental significance.	
2. The licensee shall carry out such sampling, analyses, measurements, examinations, maintenance and calibrations as out in <i>Schedule C</i> .	
3. Monitoring and analytical equipment shall be operated and maintained as necessary so that monitoring accurately reflects the discharge or emission.	
4. The licensee shall permit authorised persons of the Agency and the Sanitary Authority to inspect, examine and test, at all reasonable times, any works and apparatus installed, in connection with the process effluent, and to take samples of the process effluent.	
5. All automatic monitors and samplers shall be functioning at all times (except during maintenance and calibration) when the activity is being carried on unless alternative sampling or monitoring has been agreed in writing by the Agency for a limited period. In the event of the malfunction of any continuous monitor, the licensee shall contact the Agency as soon as practicable, and alternative sampling and monitoring facilities shall be put in place. Prior written agreement for the use of alternative equipment, other than in emergency situations, shall be obtained from the Agency.	
6. The licensee shall record all sampling, analyses, measurements, examinations, calibrations and maintenance carried out in accordance with the requirements of this licence.	
7. The licensee shall provide safe and permanent access to all on-site sampling and monitoring points and to off-site points as required by the Agency.	
8. The licensee shall at no time discharge or permit to be discharged into the sewer any liquid matter or thing which is or may be liable to set or congeal at average sewer temperature or is capable of giving off any inflammable or explosive gas or any acid, alkali or other substance in sufficient concentration to cause corrosion to sewer pipes, penstock and sewer fittings or the general integrity of the sewer.	
9. In the event of any incident which relates to discharges to sewer, having taken place, the licensee shall notify the Agency, Local Authority and Sanitary Authority as soon as practicable after the incident.	





Frequency of Monitoring Process Effluent to Sewer

Schedule C

Waste Licence application Register No. W0205-01

Emission Point Reference No: _____

Parameter <i>(delete parameters which are not applicable)</i>	Monitoring Frequency <i>(e.g. monthly, quarterly, annually)</i>	Sampling Type <i>(grab, composite)</i>
Flow to sewer		
Temperature		
pH		
BOD		
COD		
Suspended Solids		
ADDITIONAL PARAMETERS		
<i>(if required)</i>		

SANITARY AUTHORITY CHARGES	
Charge per cubic metre of process effluent (per s52 of the Waste Management Acts, 1996 to 2005)	
Payment Frequency	
Annual Monitoring Costs	

Signed on behalf of South Dublin County Council

_____ Date _____



The proposed use of this rainwater is for truck washing and cleaning only and the pipework and tapings will be marked as such.

Refer to Drawings **DG0015** (for location details) and **DG0018** (for cross-sectional details of the tank) in Appendix A .

H.10 Discharge to Sewer

Attachment included	yes <input checked="" type="checkbox"/>	no <input type="checkbox"/>	not applicable <input type="checkbox"/>
---------------------	---	-----------------------------	---

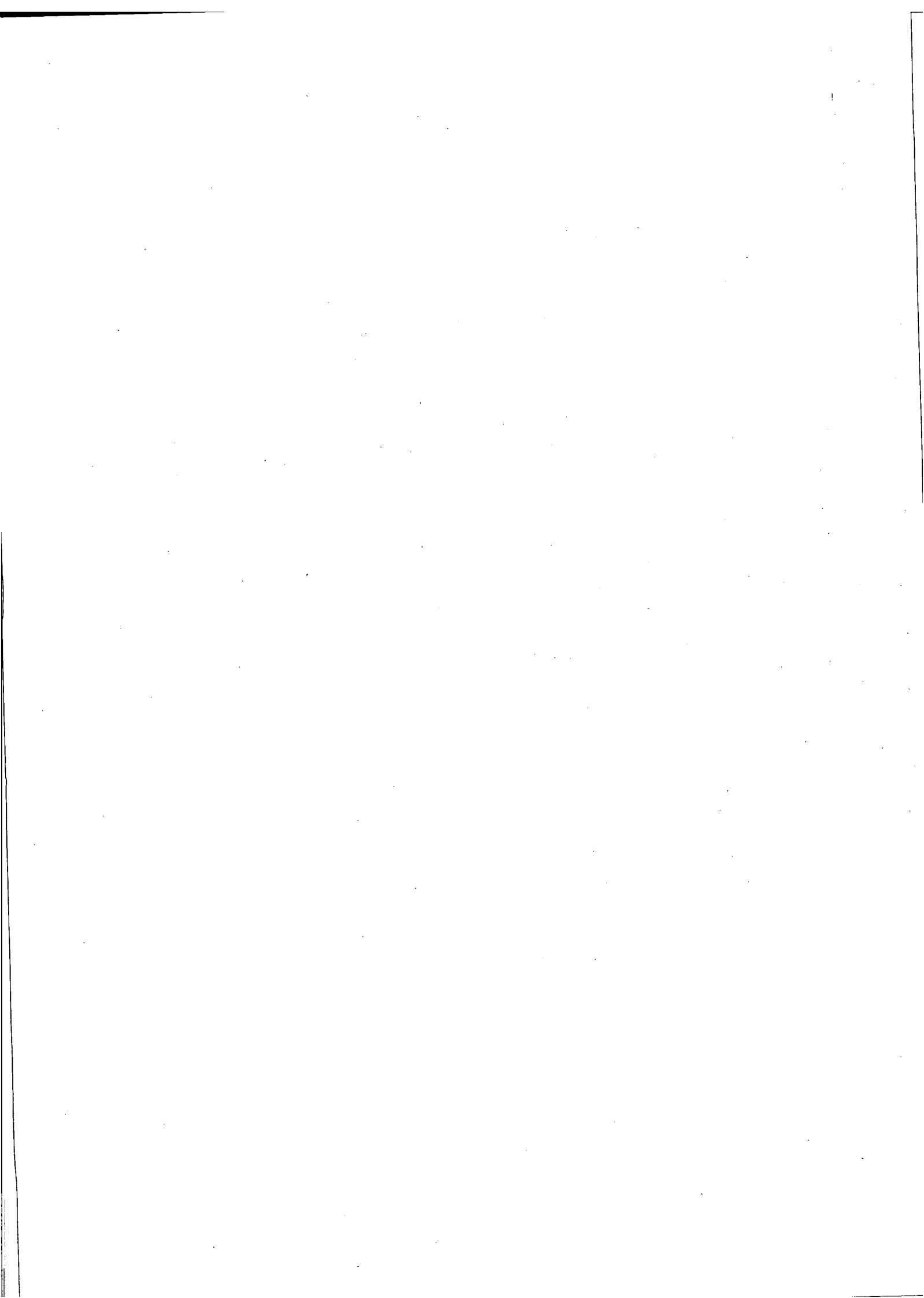
Attachment H10

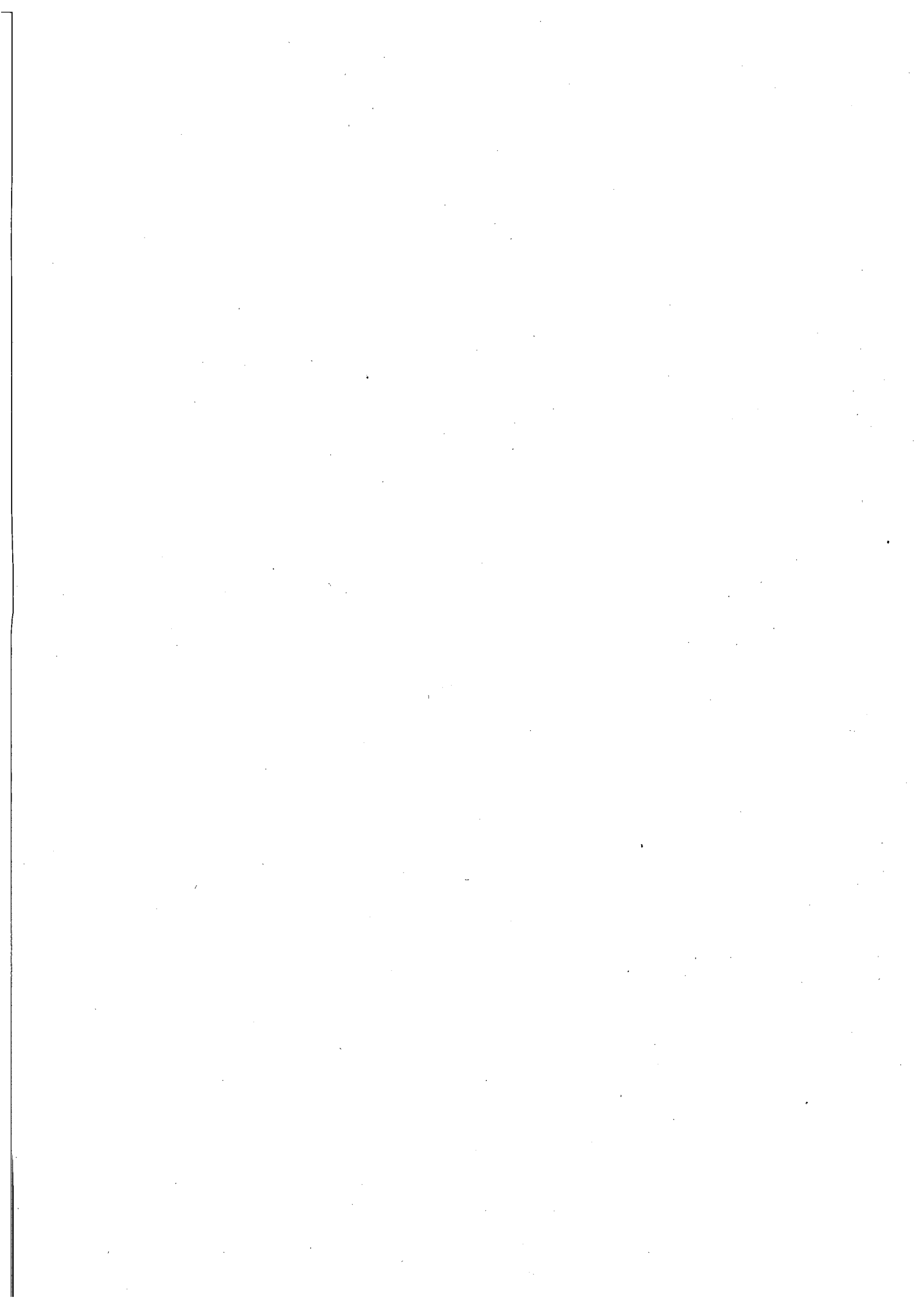
Impacts

It is not envisaged that discharges from the facility to the foul sewer will cause any significant impacts on the environment. Apart from 'domestic' wastewater (from washing facilities, sinks and toilets), these discharges consist only of washings from trucks and cars entering and exiting the facility and therefore do not contain any noxious pollutants.

Mitigation Measures

It is proposed to place a silt trap and an interceptor followed by a sampling chamber before the point of discharge of the wash-bay to foul sewer. The sampling chamber will be used to collect a sample of agency. The silt trap will prevent significant amounts of silt from being carried to foul sewer. The interceptor will also prevent the possibility of fats, oils and greases from being carried to foul sewer and hence prevent the possibility of discharges with a high BOD and COD loading. Refer to **Drawing DG0015** for location details.





Foul Sewerage

GRR will improve the onsite sewerage system in order to deal with the expansion of the site facilities. An existing system services the Crosbie site offices and is shown on **DG0015 in Appendix A**. This system will be maintained with the addition of an interceptor and monitoring point at the wash bay area (upstream of the discharge to foul sewer). In addition, a new 150 mm diameter pipe will connect into the local foul sewer on Crag Avenue network at a separate point. This pipe conveys foul water from the toilet facilities in the new recovery building and the new offices. Design calculations for the improved foul sewerage system are provided as an additional attachment at the end of this section.

Attachment D.1.l Sewerage and Surface Water Drainage Infrastructure

The proposed site drainage of sewage and surface water has been discussed in attachment D.1.k above and is shown on drawing **DG0015 in Appendix A**.

Attachment D.1.m Plant sheds, garages and equipment compound

9. Give full particulars of the source, composition, quantity, level and rate of emissions to sewer and the period or periods during which such emissions are to be made. This information shall include, as a minimum, details relating to collection and treatment of effluent arising from:

- truck wash
- dust and odour suppression systems;
- floor washing in the materials recovery building.

Submit a new revision of drawing DG0015 with any amendments. This drawing shall clearly indicate the source of any effluent, its route to the final discharge point to sewer and the location of this point.

Floor Washings and Dust/Odour Suppression Systems

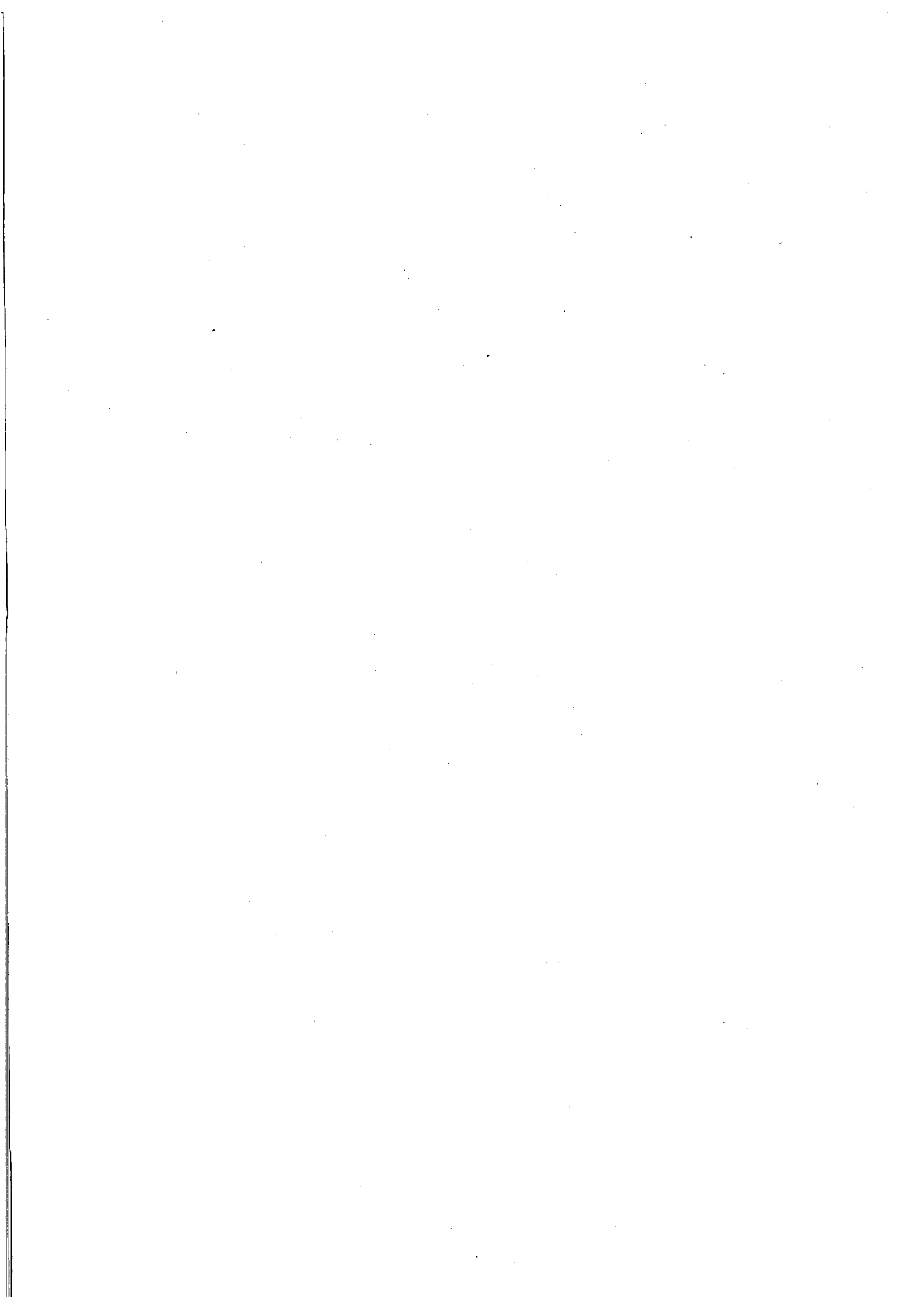
The nature of the new facility will minimise the rate emissions to sewer by efficient management of on-site runoff sources. From experience, Greyhound will ensure that operations within the main warehouse building do not generate substantial effluent discharges from either the dust/ odour suppression systems or the floor washings in the materials recovery building.

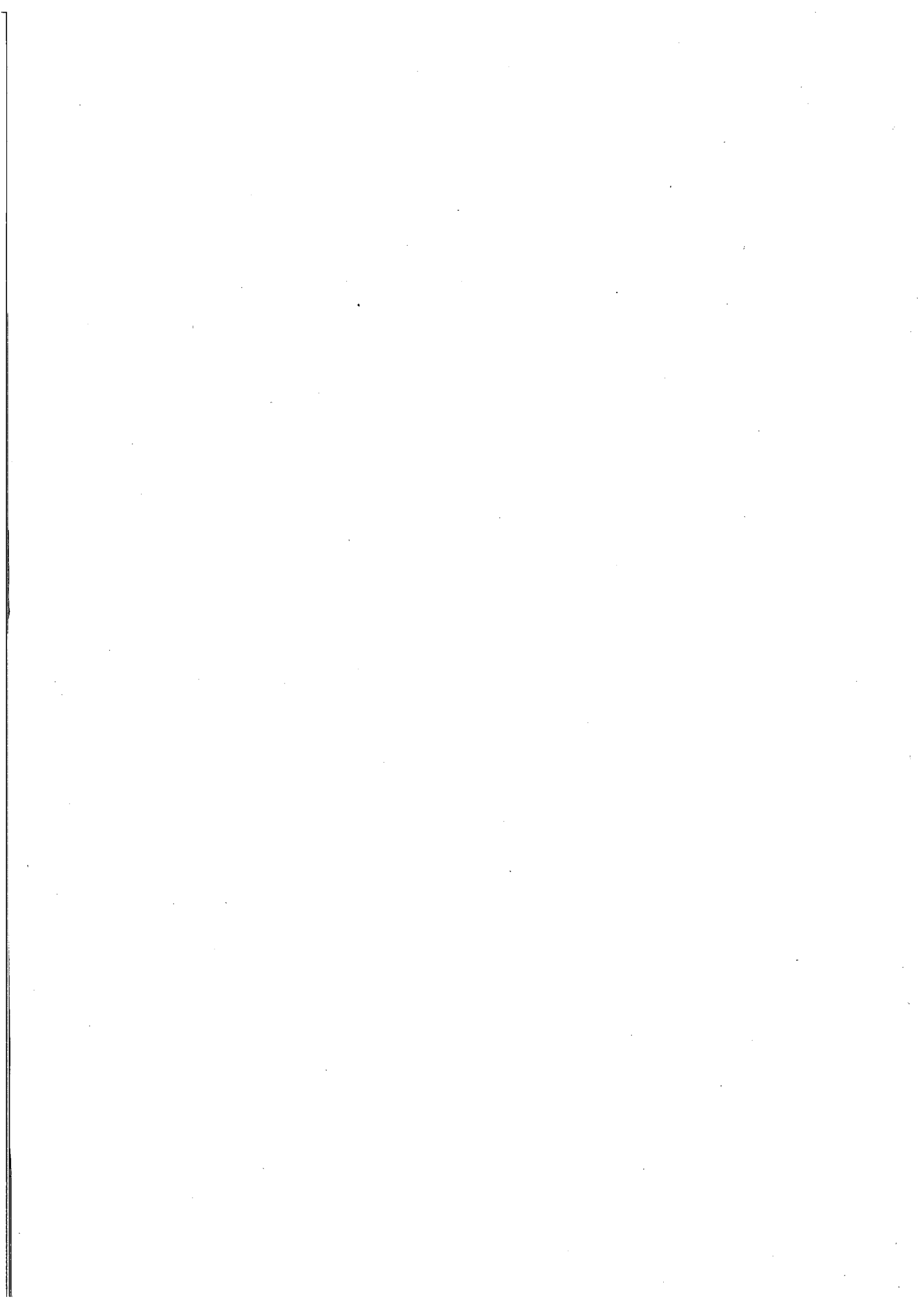
The main floor of the facility will be swept clean using a road sweeper (which Greyhound own) on a daily basis, which will vacuum up any water spillages and grit and prevent a build up of surface water within the facility. Greyhound do not expect significant quantities of material to be collected and will recycle the material collected through the onsite truck wash cleaning system as required. Similarly the mist air system is not expected to generate any surface water within the building due to the fine nature of the water particles.

Spillages on site or within the main processing building will be dealt with using a 'spill kit' which will be stored on-site and form part of the health and safety procedures. Residual material from any spillages will be treated as contaminated waste and Greyhound will employ an appropriate waste contractor to remove and dispose of the material off-site.

Truck Wash

The primary source of emission from the new facility will be generated from the truck wash effluent which will discharge via a grit trap and oil interceptor in the local foul sewer network. The truck wash will be used intermittingly on a daily basis to ensure that all vehicles leaving the site are clean for road use.





Question 5. Bio-diesel Process Plant & Equipment

Question 6. Bio-diesel Production Process

The following is a detailed description of the Greyhound Recycling & Recovery Bio-diesel from UCO production process. The process has been trailed and refined by the applicant and is seen as an accurate presentation of how the proposed facility will operate.

Stage 1 - UCO Reception, Pre-treatment and Storage

Used Cooking Oils (UCO) and other suitable oils will be transferred from the collection receptacle (typically 200L barrels, 1000L IBCs or other) into a UCO reception vessel. Here the UCO is indirectly heated to $>50^{\circ}\text{C}$ and pumped through a coarse filter of 0.5mm aperture, into one of two Water Separation Vessels. The water separation vessels work on a batch basis; each vessel is loaded with UCO, heated to 60°C , and then allowed to settle over night. The following morning water is drained from the bottom; the UCO is then pumped into the Heat Treatment Vessel.

The Heat Treatment Vessel is an optional treatment to further remove trace water content if required. This will only be used for certain oils and fats with obdurate water content. The collected material in its raw state is referred to as UCO. Following filtering and water removal the material is then referred to as RVO.

Following heat treatment the RVO is transferred to one of several RVO storage vessels. These storage vessels act a balance tanks for the RVO to ensure ample capacity when supplies come in faster than Bio-diesel can be manufactured, and also to allow the Bio-diesel process to continue if supply momentarily slows.

Emissions: Discharge to sewer of a maximum of 800 litres per day, laboratory analysis of this untreated material (UCO Water) is attached. The waste stream will be further treated with a grit trap and oil separator prior to discharge.

Stage 2 – Bio-Diesel Production

RVO is drawn from one or more of the storage vessels into a Processing Vessel where the RVO is heated to approx 50°C . Methanol is gravity fed into the Methoxide Mixer. The quantity of methanol added will be 20-25% of the volume of the RVO in the processing vessel. A Catalyst (either Sodium Hydroxide or Potassium Hydroxide) is added to the methoxide mixer, typically 0.5-0.8% by weight of RVO in the Processing Vessel. The catalyst and methanol is slowly mixed to create methoxide. All of the methanol and catalyst is used leaving no residue. The methoxide is added to the Processing Vessel, and the contents of the Processing Vessel are then agitated for 40-60 minutes. The contents are then allowed to settle overnight.

Stage 5 - Product Polishing

The Bio-Diesel may contain up to 0.1-0.5% of water after the water washing stage. This must be reduced to less than 0.05% to pass the European standard for Bio-diesel EN14214. Bio-diesel is pumped from the water wash vessel through a heat exchanger into a vacuum vessel. The Bio-diesel is heated to 120°C and subjected to a partial vacuum. Any residual water will evaporate from the diesel. The evaporate passes through a water-cooled condenser. The resultant water is fed into the wash water settlement vessel.

The Bio-diesel exits the vacuum vessel, passes back through the heat exchanger (to heat the incoming Bio-diesel) and then goes through a 15-micron and a 3-micron filter. The Bio-diesel then enters one of two finished product vessels.

Emissions: The discharge to sewer from this step is termed *Diesel Wash Water*, the characteristics of which are identified in Table E3(ii). The filter cake arising from the filtration step will not exceed 25kg per day. This filtrate is biodegradable. It is proposed that the filtrate and will be sent to a composting facility.

Auxiliary Equipment - Heating Plant

An on-site steam generator will be used to provide all process heat, assuming an overall heat efficiency of 50% in the plant CO2 emissions from the plant will not exceed 630kg per day.

Plant and Equipment Description:

RVO Reception Vessel: 4000 litre capacity open top vessel with steam/hot water heating coil. Covered with 12mm mesh to prevent large items entering.

Water Separation Vessels: 8000 litre capacity closed vessels, fitted with heating coil and insulation layer.

Heat Treatment Vessel 8000 litre capacity vessel insulated and fitted with heating jacket.

RVO Storage Vessels: 16,000 to 20,000 litre capacity closed vessels, fitted with heating coils and insulation layer.

Methanol Storage: 20,000 litre closed storage vessel, spark proof. Fitted with vapour proof vent, insulated and shaded to prevent excessive temperatures. Pump also rated spark proof.

- Methoxide Mixer:** 2500 litre closed vessel. Fitted with spark proof agitator.
- Process Vessels:** 11,000 litre closed vessel, insulated, fitted with spark proof agitator and heating coil. Fitted with condenser to prevent escape of methanol vapours.
- Vacuum Vessel:** 2000 litre capacity, pressure rated tank fitted with heating coil/jacket, splash plate and circulation pump.
- Condenser:** Standard water-cooled condenser, operation temperature of < 15°C.
- Glycerol Storage Vessel:** 24000-litre storage vessel with warming coil.
- Rainwater retention vessel:** 35,000 litres capacity.
Annual rainfall is approximately 732mm. Greyhound's Materials Recovery Building of 4000m² will collect on average 8000 litres of rainwater per day.
- Water Wash Vessels:** 12,000 litre capacity vessels fitted with water spray nozzles, heating coil and insulation.
- Recycle wash water vessel:** 4000 litre capacity vessel, insulated.
- Water wash settlement Vsl:** 12,000 litre capacity vessel, fitted with Bio-diesel recovery (decant) line and disposal to sewer line.
- Water Removal:** 800-litre capacity vacuum vessel fitted with splash plates and circulation pump.
- Condenser:** Air-cooled condenser, operation temperature of < 55°C.

A schematic representation to the UCO to biodiesel process is attached

Question 7. Information on the Bentofix liner:

A bentofix liner has not been installed. Therefore the specification and the minimum hydraulic conductivity of the liner are not available at this time.

TABLE E.3(i): EMISSIONS TO SEWER(One page for each emission)

Emission Point:

Emission Point Ref. N ^o :	FW01
Location of connection to sewer :	Near site entrance to Crag Avenue facility.
Grid Ref. (10 digit, 5E,5N):	
Name of sewage undertaker:	South Dublin County Council

Emission Details:

(i) Volume to be emitted 6 m ³ of Diesel Wash Water			
Normal/day	6m ³	Maximum/day	6m ³
Maximum rate/hour	0.3m ³		

(i) Volume to be emitted 0.8 m ³ of UCO water			
Normal/day	0.8m ³	Maximum/day	0.8m ³
Maximum rate/hour	0.05m ³		

(i) Volume to be emitted 1.5 m ³ Truck Wash			
Normal/day	1.5m ³	Maximum/day	1.5m ³
Maximum rate/hour	0.3m ³		

(ii) Period or periods during which emissions are made, or are to be made, including daily or seasonal variations (*start-up /shutdown to be included*):

Periods of Emission (avg)	60 min/hr 24 hr/day 365 day/yr
---------------------------	--------------------------------

TABLE E.3(ii): EMISSIONS TO SEWER - Characteristics of the emission (1 table per emission point)

Emission point reference number : CONTRIBUTORY EFFLUENT STREAMS

Parameter	Prior to treatment			As discharged				% Efficiency
	Max. hourly average (mg/l)	Max. daily average (mg/l)	kg/day	kg/year	Max. hourly average (mg/l)	Max. daily average (mg/l)	kg/day	
<u>Diesel Wash Water</u>								
<u>BOD</u>	2516	15.06	4710	840	840	5.04	1572.5	66%
<u>COD</u>	7800	46.8	14601	3900	3900	23.4	7300	50%
<u>Suspended Solids</u>	4994	29.96	9349	500	500	3.0	936	95%
<u>Total Fatty Matter</u>	4604	27.6	8618	300	300	1.8	562	95%
<u>UCO Water</u>								
<u>BOD</u>	2448	1.96	611	830	830	0.66	206	66%
<u>COD</u>	31000	24.80	7738	15000	15000	12.0	3744	50%
<u>Suspended Solids</u>	66340	53.07	16558	3500	3500	2.8	874	95%
<u>Total Fatty Matter</u>	36230	28.98	9043	1500	1500	1.2	374.4	95%
<u>Truck Wash</u>								
<u>BOD</u>				3000	2500	3.75	1173	
<u>COD</u>				9000	7500	11.25	3521	
<u>Ammonical Nitrogen</u>				50	40	0.06	18.8	
<u>Suspended Solids</u>				1000	700	1.05	382	

<u>Sulphate (as SO4)</u>						<u>200</u>	<u>200</u>	<u>0.3</u>	<u>94</u>
<u>pH</u>						<u>6-10</u>	<u>6-10</u>	<u>-</u>	<u>-</u>
<u>Temperature</u>						<u>10-42°C</u>	<u>10-42°C</u>	<u>-</u>	<u>-</u>
<u>Fats, Oils and Greases</u>						<u>50</u>	<u>50</u>	<u>0.07</u>	<u>22</u>
<u>Detergents</u>						<u>50</u>	<u>50</u>	<u>0.07</u>	<u>22</u>

Emission point reference number : FW01 - COMBINED EFFLUENT CHARACTERISTICS

Parameter	Prior to treatment			As discharged			% Efficiency	
	Max. hourly average (mg/l)	Max. daily average (mg/l)	kg/day	kg/year	Max. hourly average (mg/l)	Max. daily average (mg/l)		kg/day
<u>BOD</u>					<u>1567</u>	<u>1390</u>	<u>9.45</u>	<u>2948</u>
<u>COD</u>					<u>9300</u>	<u>8800</u>	<u>46.65</u>	<u>14539</u>
<u>Suspended Solids</u>					<u>1667</u>	<u>1567</u>	<u>6.85</u>	<u>1221</u>
<u>Total Fatty Matter</u>					<u>616.7</u>	<u>616.7</u>	<u>3.07</u>	<u>936</u>
<u>Ammonical Nitrogen</u>					<u>50</u>	<u>40</u>	<u>0.06</u>	<u>18.72</u>
<u>Sulphate (as SO4)</u>					<u>200</u>	<u>200</u>	<u>0.3</u>	<u>93.6</u>
<u>pH</u>					<u>6-10</u>	<u>6-10</u>	<u>-</u>	<u>-</u>
<u>Temperature</u>					<u>10-42°C</u>	<u>10-42°C</u>	<u>-</u>	<u>-</u>
<u>Detergents</u>					<u>50</u>	<u>50</u>	<u>0.07</u>	<u>21.84</u>

CARLOW PRECAST TANKS LTD.

Manufacturers and Suppliers of Septic and Effluent Tanks for Sewage, Treatment Systems, Water Reservoirs, Pumping Chambers, Culverts and Special Products.

FULL RETENTION SEPARATORS

Introduction

The use of an oil/water separator is required wherever there is the risk of hydrocarbon pollutants causing contamination at a point of discharge, i.e. an open ditch, river, stream or groundwater.

Normally the interceptors are made of GRP or PVC, which need to be installed on a reinforced concrete slab, filled with water and then encased in concrete.

This is a slow and expensive method of installation.

Our interceptors are manufactured from Precast Concrete, and are normally installed on a bed of cl804 stone and backfilled with the excavated material. This will result in considerable savings on time and materials. Our service also includes delivery to site and off-loading into position.

Description of basic types - Class I & II

Class I Separator

This type of unit is required where the hydrocarbon pollutant concentration in the liquid discharging from the tank must be 5 mg/L or less, or where discharge is to sensitive waters. Class I units contain a coalescing filter which prevents passage through the system, of oil droplets held in suspension in the liquid. Class I units also contain a float controlled closure device. In the event of a major spillage, as pollutants enter the separator the closure device will sink and shut off the water flow. The pollutants are contained within the separator, thus preventing contamination of the outfall.

Class II Separator

This type of unit is required where the hydrocarbon pollutant concentration in the liquid is 100 mg/L or less. They are used where the effluent quality requirements are less stringent, but there is still a need to protect the environment by shutting the system down in the event of a spillage. Class II separators are provided with a closure device only.

Product Selection

Full Retention Separators

Full retention separators are used in areas where there is a high risk of pollution. These areas include garage forecourts, petrol depots and vehicle workshops.

As contaminated water flows through the separator,

it is retained long enough to allow pollutants to accumulate on the surface. Carlow Precast Full Retention Separators are single chamber vessels, resulting in minimal turbulence and velocity, and maximising retention time. The pollutants are retained within the separator, allowing treated water to discharge.

Garage forecourts are particularly high-risk areas. In accordance with Environment Agency Regulations, any separator serving a refuelling area should be at least capable of retaining the spillage from one compartment of a delivery tanker, normally 7,600 litres. The capacity for parking areas etc. within the forecourt is not included in this 7,600 litres capacity.

Materials

Carlow Precast Full Retention Separators are manufactured from Grade A C50 N15 concrete, with steel fibre reinforcement at 40kg per cubic metre. Larger units contain conventional steel reinforcement as well as steel fibre.

Installation

The unit should be installed on a level bed of sand, gravel or broken stone. The base of the excavation should be level and free from projecting hard points such as rocks or boulders. The separator is lifted into position by our truck-mounted crane, assuming there is suitable access for our delivery vehicle. Backfilling is commenced as soon as possible after placement of the separators.

In most installations, it is not necessary to backfill around the separator with concrete.

Design

In principle, we design to four basic classifications; Full Retention, Bypass, Class I and Class II. Classes I and II pertain to the Draft Eurocode prEN858 (Separator Systems for Light Liquids Part I)

Our designs comply with the requirements of the EPA Wastewater Treatment Manuals:-

- Preliminary Treatment: Part 5: Oils, Grease and Fats
- Primary Secondary and Tertiary Treatment: Part II

All of our products are engineered to the customers' requirements, using established design parameters. The designs are based on flow speeds, retention times, temperature and the settlement characteristics of the target materials. The tank structures are designed to BS8110, BS8007 and the Dramix Design Guidelines for Steel Fibre Reinforced Concrete Structures.

NOTES

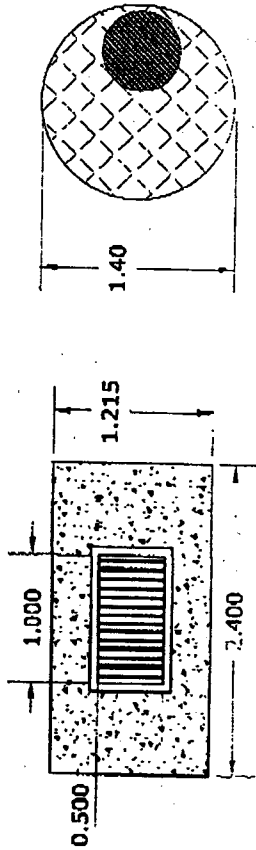
Interceptor opening 600mm diam. with heavy duty cover.

+Other sizes and configurations of opening on request.

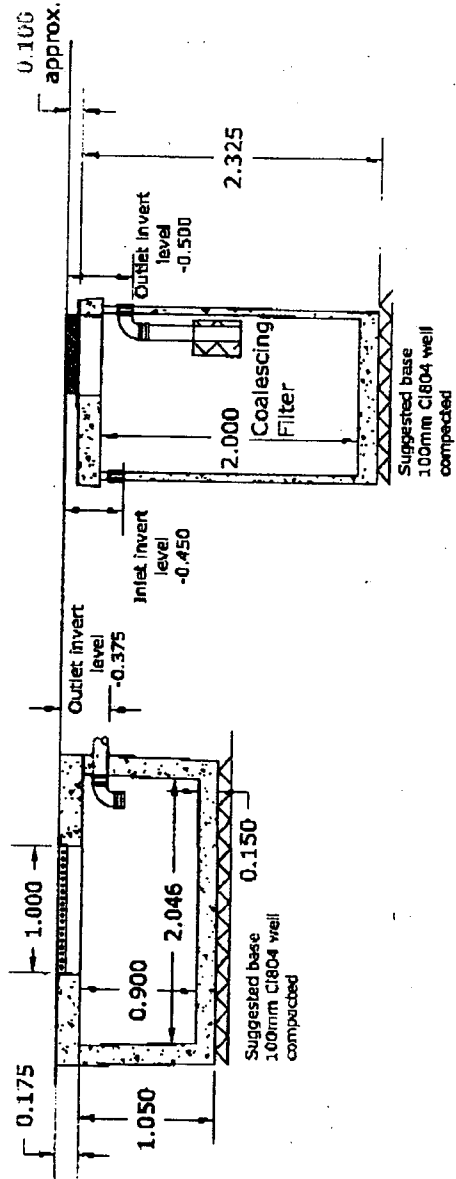
+All Pipework shown to be 100mm wevin. Collars & filter on interceptor by CPT. Grit trap fitted with elastomeric well-seal, pipework by others. Interconnection of tanks by others.

+Please Verify the suitability of the orientation of the tanks & fittings prior to ordering

+Suggested base preparation 100mm ci804 / crushed stone well compacted & level



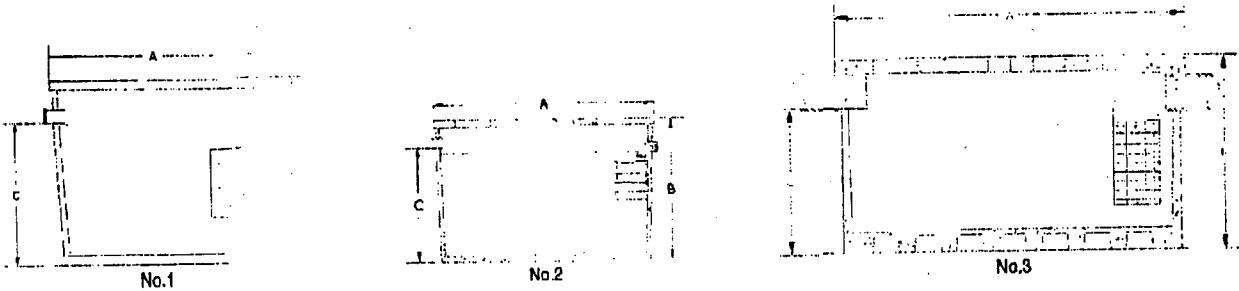
ROOF PLAN



P.O. #:	Site Dwg.
Sts:	P. Walsh
Dm:	J.W.
Ckd:	
Date:	26 January 2005
Greyhound Recycling 2.4m grit trap & CP 150 FR class 1 Interceptor	
Revisions	
1	A
2	
3	

CARLOW PRECAST TANKS LTD

Manufacturers of Septic & effluent tanks, pump chambers, reservoirs, interceptors and special products
 Phone +00 353 (59)91 59322 Fax +00 353 (59)91 59202 e-mail: sales@carlowprecasttanks.com



CRK
TRUCK
WASH

Model	Drainage Area M ²	Max Flow L/s	Oil Retention Capacity L	A Outside Dimensions	B Overall Depth	C Inlet Invert to Base	D Fall Across Unit	Inlet/Outlet O.D.	Refer to Drawing
CP 3	300	3	370	1400 Ø	2325	1825	50	110 Ø	No.1
CP 6	750	8	900	2760 x 1400	1800	1445	50	160 Ø	No.2
CP 15	1100	15	1400	2350 Ø	2275	1800	50	225 Ø	No.1
CP 25	1800	25	2200	3050 Ø	2325	1770	50	225 Ø	No.1
CP 36	2800	36	2650	3050 Ø	3025	2400	50	250 Ø	No.1
CP 50	3600	50	4000	4720 x 3150	2609	2060	50	315 Ø	No.3
CP 72	5200	72	4500	3050 Ø x 2	3025	2400	100	315 Ø	No.1

Detailed drawings for each Full Retention Separator are available on request

Advantages

- ⇒ Ease of installation
- ⇒ Speed of installation
- ⇒ Reduced Civil Costs - no expensive concrete backfill
- ⇒ Durability and robustness
- ⇒ Tanks may be installed in heavily trafficked areas without extra reinforcement.

Accessories

- ⇒ **Oil level Alarms** can be fitted to indicate when the separator requires emptying. They are mounted remotely from the unit and are available with an audible or visual alarm.
- ⇒ **Access Covers** to suit all loadings are available on request.

Capacities available

From 1,500 litres up to 4,500 litres in a single chamber Full Retention Unit. Larger capacities can be achieved using a combination of tanks.

Data Available

- Detailed drawings of each unit
- Detailed Installation Manual
- Maintenance Manual
- Capacity & Design Details for each Separator

Production Selection

For assistance in selecting the required unit, please fill in the following questionnaire and return to our office at the address below, or fax to 0141968202.

Questionnaire for Interceptor enquiry.

Name:

Company:

Phone No: Fax No:

Site Location:

Type Required: Bypass
 Full Retention
 Unknown

Class I or Class II

Type of project Garage Forecourt
 Car Park
 Haulage Company
 Other, please specify below:

Surface area being drained by interceptor:

Where is it discharging to (council sewer, storm drain, percolation area, etc)?

Roof Loading - What type of traffic, if any, will cross unit?

For further details please ring 059-9159322 or email us at sales@carlowprecasttanks.com

Oldcastle Laboratories Ltd.

Cogan St., Oldcastle, Co. Meath. Ireland.
Tel: (049) 8541160/8541406, Fax (049) 8541755
Email: info@oldcastlelabs.ie
Website address: www.oldcastlelabs.ie



CERTIFICATE OF ANALYSIS

Lab Ref No: 139256
Date Received: 27th March 2006
Commencement Date: 27th March 2006
Certificate Date: 10th April 2006
Sender: Greyhound Recycling & Recovery, Knockmitten Lane, Western Ind Est, Dublin 12
Senders Reference: **Sample Ref A - Diesel Wash Water**

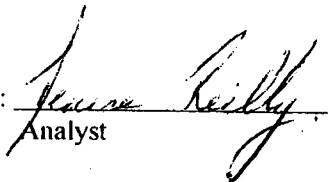
Chemical Analysis Of Effluent

Parameter	Units	Laboratory Result
BOD	BOD ²⁰ ₅ mg/l	2,516
COD	mg/l COD	7,800
Total Suspended Solids	mg/l Total Suspended Solids	4,994
Total Fatty Matter	mg/l Total Fatty Matter	4,604
Surfactants as MBAS	µg/l	3,836

Notes: PV are as per European Communities 2000 regulations on drinking water quality.

Nitrates result is nitrates expressed as N (PV 11.3mg/l N = 50mg/l NO₃) and nitrites result is nitrites expressed as N (PV 0.03mg/l N = 0.1mg/l NO₂).

Excessive iron when present can lead to staining while excessive hardness may lead to deposits on pipes.
Microbiological analysis is reported separately where applicable.

Signed: 
Analyst

Above Results Relate Only To Sample Submitted.

Oldcastle Laboratories Ltd.

Cogan St., Oldcastle, Co. Meath. Ireland.

Tel: (049) 8541160/8541406, Fax (049) 8541755

Email: info@oldcastlelabs.ie

Website address: www.oldcastlelabs.ie



CERTIFICATE OF ANALYSIS

Lab Ref No: 139257

Date Received: 27th March 2006

Commencement Date: 27th March 2006

Certificate Date: 10th April 2006

Sender: Greyhound Recycling & Recovery, Knockmitten Lane, Western Ind Est, Dublin 12

Senders Reference: **Sample Ref B - UCO Water**

Chemical Analysis Of Effluent

Parameter	Units	Laboratory Result
BOD	BOD ²⁰ 5 mg/l	2,448
COD	mg/l COD	31,000
Total Suspended Solids	mg/l Total Suspended Solids	66,340
Total Fatty Matter	mg/l Total Fatty Matter	36,230
Surfactants as MBAS	µg/l	234

Notes: PV are as per European Communities 2000 regulations on drinking water quality.

Nitrates result is nitrates expressed as N (PV 11.3mg/l N = 50mg/l NO₃) and nitrites result is nitrites expressed as N (PV 0.03mg/l N = 0.1mg/l NO₂).

Excessive iron when present can lead to staining while excessive hardness may lead to deposits on pipes.
Microbiological analysis is reported separately where applicable.

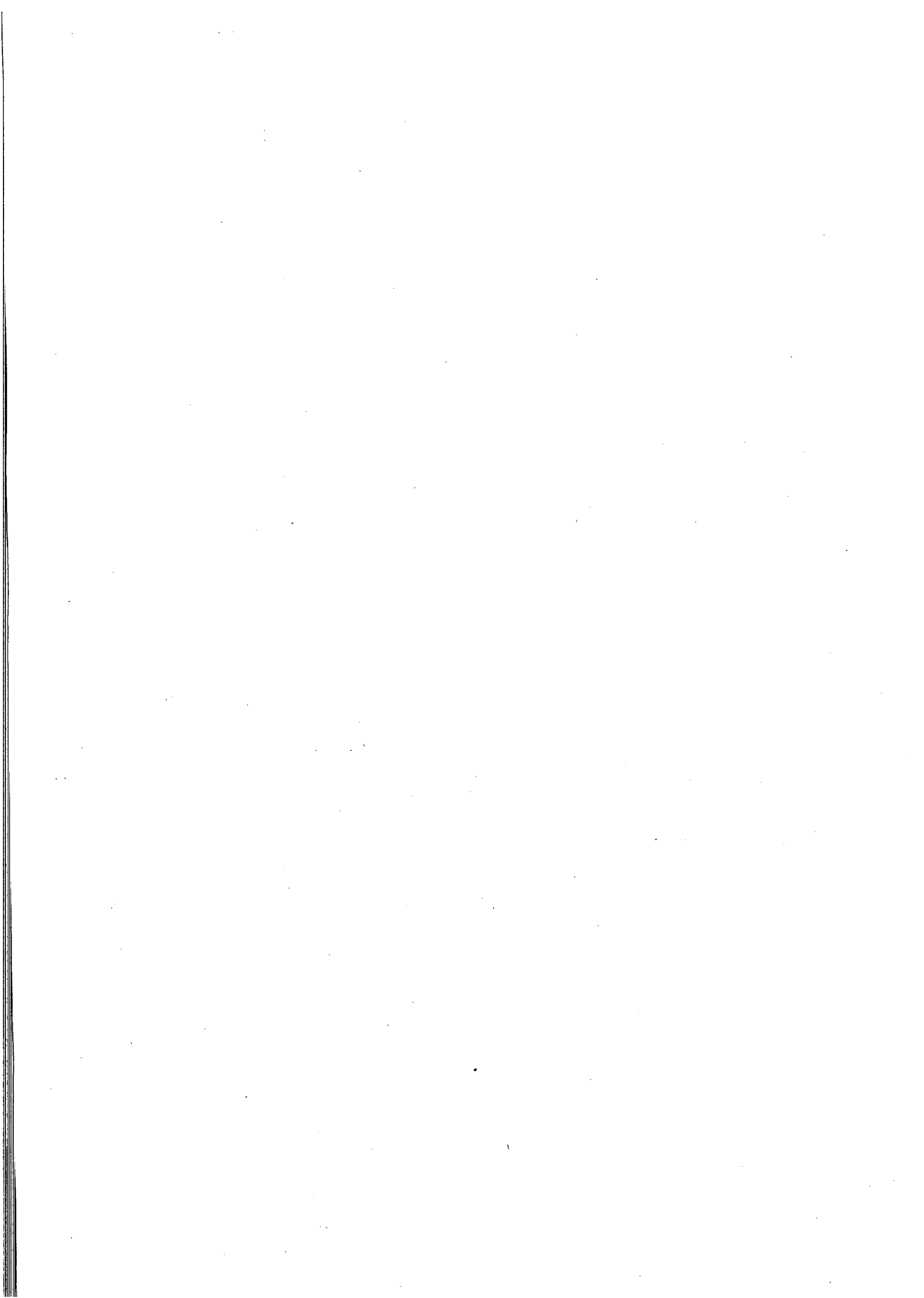
Signed: 

Analyst

Above Results Relate Only To Sample Submitted.

Submitted Drawings Revision 24/04/06

Drawing Title	Drawing No	Rev. No	Change Y/N	Description of change
Site location and Ownership Plan	DG 0012	02	N	
Site layout and Block Plan	DG 0013	02	N	
Recovery Warehouse plan and Section AA	DG 0014	02	N	
Services Proposed Details (New title: Final Construction)	DG 0015 (new No. MOSGH W001)	02	Y	New drainage installation. Updated drawing No: MOSGHW001 Rev. No. 03
Monitoring Plan	DG 0016	02	N	
Storage Tank Details	DG 0017	02	N	
Surface Water Services Permeability Prevent Proposal	DG 0018	02	N	





LEGEND

- New Foul Sewer
- New Surface Water
- Existing Watermain
Note: Watermains at 1.2m. cover except where otherwise stated)
- Existing Old Surface Network
- Existing Old Foul Network
- Telecom
- ESB

GREYHOUND WASTE

MOS Engineering

54 Turnings
Tullaghan
Dublin 24
Co. Dublin
Phone 01-4131333
Fax No. 01-4131333

No.	Date	By	Amended

GREYHOUND WASTE SUSTAINABLE RESOURCE RECOVERY FACILITY

Final Construction

Rev	Date	By	Checked	Appr'd	Scale	Proj. No.	Sheet No.

Drawn: MOS
Checked: Add Ke
Appr'd: MASHAWON
Scale: 1:100
Date: April 06
Drawing No: MOSGHW001
Sheet: T03