obj (15) 186-1

INDAVER IRELAND

Date 22nd November 2004

Ms Eve O'Sullivan
Waste Licensing Section
Environmental Protection Agency
PO Box 3000
Johnstown Castle Estate
County Wexford

RE: Indaver Ireland Application for a Waste Licence for the Ringaskiddy Waste Management Facility

Objection to a Proposed Decision in accordance with Section 42(2) of the Waste Management Acts, 1996 to 2003.

EPA Reference No. 186-1

Dear Ms O'Sullivan,

Indaver Ireland received a Proposed Decision, dated 26th October 2004, of the application for a waste licence for the Ringaskiddy Waste Management Facility.

We wish to seek clarification on a number of the conditions attached to the Proposed Decision by way of an objection.

Please find enclosed an original and two copies of our objection.

Yours faithfully for
Indaver Ireland

Jackie Keaney
Project Manager

Encl

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ringaskiddy

INDAVER IRELAND

ARUP
Consulting Engineers

waste management facility

Waste Licence Application 186-1

Objection to a Proposed Decision in accordance with Section 42(2) of the Waste Management Acts, 1996 to 2003

Objection to a Proposed Decision for the Waste Licence For A Waste Management Facility Including A Hazardous And Non-Hazardous Waste Incinerator

Licence Register No. 186-1
Indaver Ireland, Ringaskiddy, County Cork

Table of Contents

1 Introduction

The purpose of this document is to seek clarification of a number of conditions attached to a Proposed Decision for a Waste Licence, Register No. 186-1.

2 Part III: Glossary of Terms

Indaver requests that the definition of 'sludge' be clarified as follows:

Sludge	The accumulation of solids resulting from chemical coagulation, flocculation and/or sedimentation after water or wastewater treatment with greater than 2% dry matter. *This definition includes both organic and inorganic sludges*

3 Condition 1. Scope

Condition 1.10 duration of the licence
Condition 1.10 limits the duration of the licence to 5 years from the date the licence is granted. Given the prolonged planning, licensing, judicial review and construction process of the development, which is not yet complete, we request that the condition be worded as follows:

1.10	Having regard to the nature of the works and arrangements necessary in connection with the commencement of the waste activities this licence shall have effect *for five years from the date of commencement of the activity.*

4 Condition 3. Infrastructure And Operation

4.1 Condition 3.1: Establishment of Infrastructure

Condition 3.1 requires that all the infrastructure referred to in the licence application be installed before any element can commence activities. The Ringaskiddy facility will consist of a series of separate activities rather than a single unified activity. The facility may be constructed on a phased basis. For instance, Indaver does not currently have planning permission for Phase II of the project (grate incinerator). The currently wording of this condition would prohibit Indaver from constructing Phase I of the project until planning permission has been received for Phase II. In addition, regarding Phase I of the facility, Indaver may wish to proceed with the operation of the community recycling park and waste transfer station prior to the construction and operation of the incineration plant.

For this reason Indaver requests that the wording of this condition be clarified as follows:

3.1 (a)	The licensee shall establish all infrastructure *relating to the safe operation of the community recycling park* referred to in the licence application and in this licence prior to the commencement of the licensed activities of the *community recycling park,* or as required by the conditions of this licence.
3.1(b)	The licensee shall establish all infrastructure *relating to the safe operation of the waste transfer station referred* to in the licence application and in this licence prior to the commencement of the licensed activities of the *waste transfer station,* or as required by the conditions of this licence.

3.1(c) The licensee shall establish all infrastructure *relating to the safe operation of the fluidised bed and post combustion chamber line* referred to in the licence application and in this licence prior to the commencement of the licensed activities of *the fluidised bed and post combustion chamber line,* or as required by the conditions of this licence.

3.1(d) The licensee shall establish all infrastructure *relating to the safe operation of the moving grate incinerator line* referred to in the licence application and in this licence prior to the commencement of the licensed activities of the *moving grate incinerator line,* or as required by the conditions of this licence.

4.2 Condition 3.4: Facility Security

Condition 3.4.1 requires that a palisade security fence be erected and maintained at the facility. In the licence application drawings it was proposed that a palisade fence be erected on the public road frontage. This was in the interests of visual amenity, as a palisade fence would not be necessary to ensure the security of the activity. It was proposed that the remaining perimeters of the activity would have a 2m high security fence.

For this reason Indaver requests that the condition be clarified as follows:

3.4.1 The licensee shall provide and maintain a palisade security fence *along the public road frontage and a security fence on the remaining boundaries* to ensure adequate security at the facility. During hours of operation access to the waste transfer station and the community recycling park shall be controlled by security barrier. Outside hours of operation the gate shall be locked and monitored by CCTV.

4.3 Condition 3.5: Waste Inspection and Quarantine Areas

Conditions 3.5.1 and 3.5.2 require waste inspection areas and waste quarantine areas be provided in the waste transfer station and incineration plant. These areas should be clearly identified and be segregated from each other.

Because wastes of different hazard categories will be received in the transfer station, a single designated waste quarantine area would not meet safety requirements, while multiple quarantine areas, one per waste hazard category, would be impractical. Indaver proposes that the existing procedure followed in our sister company's EPA licensed waste transfer station (MinChem), at Dublin Port, be adopted. Following inspection, drums and packaged waste to be quarantined are clearly labelled as such and stored in the appropriate section of the warehouse.

For this reason Indaver requests that the condition be clarified as follows:

3.5.1 An impermeable Waste Inspection Area and a Waste Quarantine Area shall be provided and maintained *at the incineration plant. An impermeable Waste Inspection Area shall be provided and maintained at the waste transfer station.*

3.5.2 These areas shall be constructed and maintained in a manner suitable, and be of a size appropriate, for the inspection of waste and subsequent quarantine if required. The waste inspection area and the waste quarantine area shall be clearly identified and segregated from each other. *In the waste transfer station drums and other packaged waste to be quarantined shall be clearly labelled as such and stored as appropriate.*

4.4 Condition 3.8 Residuals Storage Capacity

Condition 3.8 sets down requirements with respect to the capacity for the storage of residuals. It does not specify whether these are minimum or maximum values. A minimum capacity should be specified to provide for the safe and efficient operation of the facility.

For this reason Indaver requests that the condition be clarified as follows:

3.8 The licensee shall provide the following *minimum* residual storage capacity:
(a) bottom ash 2000 m^3;
(b) boiler ash 130 m^3;
(c) fly ash/flue gas cleaning ash 270 m^3; and
(d) gypsum 50 m^3

4.5 Condition 3.10 Drainage System, Pipeline Identification

Condition 3.10.3 requires all surface water discharges to pass through oil separators prior to discharge to the storm water sewer.

The drainage system design, presented in the application, is summarised in Table 1 overleaf. To require surface water, which monitoring has determined as uncontaminated, to be passed through oil interceptors prior to discharge will provide no environmental benefit.

As can be seen from the table, the only surface water, which will not be subject to continuous monitoring or pass through an interceptor prior to discharge, will be from the roof of the warehouse and administration building in the waste transfer station. There will be no potential sources of contamination on these roofs.

Indaver requests that the condition be reworded as follows:

3.10.3 The licensee shall install and maintain an oil separator on the surface water discharge *from the community recycling park and car park of the waste transfer station.* The oil separator shall be a Class II full retention separator and the separator shall be in accordance with European Standard prEN 858 (installations for the separation of light liquids).

Table 1. Surface Water Drainage Proposal

Rainwater Source		Potential contamination sources	Primary Use	Overflow	Environmental Protection
Incineration Plant	Roof of main incineration building	None	As process water	Overflow to yards, roads & hardstandings	Continuous monitoring of overflow for pH and TOC, diversion to retention tank if contaminated
	Yards, roads & hardstandings	Possible spill or leak from truck	None, discharged to sewer		Continuous monitoring for pH and TOC, diversion to retention tank if contaminated
	Tank bunds, tanker unloading / loading bays	Possible leak or spill	None, collected in bund or sump		Contents of buns or sump tested and released to yards, roads & hardstandings if testing shows no contamination, or sent for appropriate disposal if contaminated
Waste Transfer Station	Tank bund, tanker unloading / loading bay	Possible leak or spill	None, collected in bund or sump		Contents of bund or sump tested and released to yards, roads & hardstandings if testing shows no contamination, or sent for appropriate disposal if contaminated
	Yards, roads and hardstandings	Possible spill or leak from truck	None, discharged to sewer		Continuous monitoring for pH and TOC, diversion to retention tank if contaminated
	Drum repack building roof*	None	None, discharged to sewer		Continuous monitoring for pH and TOC, diversion to retention tank if contaminated
	Warehouse roof	None	None, discharged to sewer		Monthly visual inspection of monitoring point for colour, odour & oil
Other Areas	Administration building roof	None	None, discharged to sewer		Monthly visual inspection of monitoring point for colour, odour & oil
	Community recycling park, administration building car park	Possible oil leak from car	None, discharged to sewer		Full retention oil interceptor, monthly visual inspection
	Security hut roof*	None	None, discharged to sewer		Full retention oil interceptor, monthly visual inspection

*The rainwater from the roofs of these two buildings will be monitored or passed through the oil interceptor due to the configuration of the drainage system, not because of a perceived risk.

4.6 Condition 3.11 Waste Acceptance/Removal Hours and Hours of Operation

Condition 3.11.3 states that the waste transfer station and community recycling park shall not be operated outside the hours 0900 to 1900 Monday to Friday inclusive and 0900 to 1400 on Saturdays. This could be understood to mean that no activities could be conducted on the site outside waste acceptance hours. It is our intention to continue with activities on site, such as drum washing, repacking of waste and cleaning of recycling park and administrative activities in the office building outside of waste acceptance hours.

The limitations on the acceptance of waste between these waste acceptance hours, contained in condition 3.11.1 and 3.11.2 should be sufficient.

For this reason Indaver requests that condition 3.11.3 and 3.11.4 be deleted.

4.7 Condition 3.14 Incineration Plant Operation - additional requirements

4.7.1 Condition 3.14.3
Condition 3.14.3 relates to the calorific value of the waste input to the fluidised bed and post combustion chamber incinerator line.

Indaver requests that the condition be clarified as follows:

3.14.3 The calorific values of the *mixture of* wastes input into the fluidised bed and post combustion chamber incinerator line shall be *in the range 6MJ/kg minimum and 40 MJ/kg maximum.*

4.7.2 Condition 3.14.4
Condition 3.14.4 sets limits on the levels of pollutants to be contained in the waste feed to the fluidised bed and post combustion chamber incinerator line.

The limits proposed appear to be based on the levels of contaminants in the flue gas prior to treatment, presented in table 9.4 of the licence application reference document. These contaminant levels in the table were intended to be indicative of the typical pre-treatment contaminant levels per hour over a full year. They were not intended to represent the maximum level, beyond which the flue gas cleaning systems could not cope, and which would result in an emission limit breach. They are not indicative of the removal efficiencies of the flue gas cleaning equipment.

Indaver has prepared a table of maximum pollutant levels in the waste input, which is based on published data for the removal efficiency for the incineration plant (Table 2 overleaf). Indaver is confident that the flue gas cleaning system will deal with such pollutant levels and ensure that emissions will be well within the licence limits. The proposed condition would result in unnecessary export of hazardous waste to other countries in Europe operating similar gas cleaning technology.

Details will have to be agreed in advance with the Agency as to how these pollutant measures will be measured.

Table 2. Maximum pollutants levels in the waste input based on published data for the removal efficiency for the incineration plant

Parameter	Emission Limit Value Note 1	Removal Efficiency %	Flue Gas Volume Nm^3 /tonne	Max. Concentration in Input Waste	Waste Input tonnes/h	Maximum Input kg/h
Chlorine	10 mg/Nm^3	99.9 Note 2	6800	6.8 %	13.3	905.5
Fluorine	1 mg/Nm^3	99.9 Note 2	6800	0.7 %	13.3	88.2
Sulphur	50 mg/Nm^3	99 Note 2	6800	1.8 %	13.3	232.8
Cadmium & Thallium	50 µg/Nm^3	99.99 Note 3	6800	3500 mg/Kg	13.3	46.5
Mercury	50 µg/Nm^3	99.88 Note 3	6800	292 mg/Kg	13.3	3.9
The sum of antimony (as Sb), arsenic (as As), lead (as Pb), chromium (as Cr), cobalt (as Co), copper (as Cu), manganese (as Mn), nickel (as Ni), and vanadium (as V)	500 µg/Nm^3	99.95 Note 3	6800	7000 mg/Kg	13.3	93.1

Note 1: From directive 2000/76/EC on the incineration of waste
Note 2: Website www.eurits.org, Publications, Technical Co-Incineration Criteria, February 1996, removal efficiencies of wet flue gas treatment systems. No data are given in this source for Fluorine removal. The Chlorine removal efficiency has been as assumed, as in practice the efficiency of Fluorine removal is greater than the removal of Chlorine.
Note 3: Bref Waste Incineration draft 2, March 2004, Table 3.2 distribution of heavy metals in a hazardous waste incineration process. The removal efficiency is for the whole process and accounts for the metals in the bottom ash, boiler ash and wet flue gas cleaning step. The Bref note contains no data for Tl, but data for Cd is representative. For the sum of metals the most semi-volatile metal lead (Pb) is taken as the reference.

Indaver requests that condition 3.14.4 be revised as follows:

3.14.4 The waste input into the *fluidised bed and post combustion chamber incinerator line* shall not contain pollutants which exceed the following levels:

(i) Chlorine *905 kg/hour*
(ii) Fluorine *88 kg/hour*
(iii) Sulphur *233 kg/hour*
(iv) Cadmium & Thallium *46 kg/hour*
(v) Mercury 4 kg/hour
(vi) The sum of antimony (as Sb), arsenic (as As), lead (as Pb), chromium (as Cr), cobalt (as Co), copper (as Cu), manganese (as Mn), nickel (as Ni), and vanadium (as V) *93 kg/hour.*

Details of the measuring system to be used to be agreed with the Agency prior to commencement of licensed activities.

4.7.3 Condition 3.14.6
Condition 3.14.6 relates to the calorific value of the waste input to the moving grate incinerator line.

Indaver requests that the condition be clarified as follows:

3.14.5 The calorific values of *the mixture of wastes* input into the moving grate incinerator shall be *in the range 8MJ/kg minimum and 14MJ/kg maximum.*

4.8 Condition 3.19.3: Community Recycling Park Operation - additional requirements

Condition 3.19.3 relates to the removal of containers from the community recycling park.

Indaver requests that the condition be clarified as follows:

3.19.3 The placement and removal of containers shall be carried out during *waste acceptance* hours and containers shall be removed *as soon as practicable*
when full.

5 Condition 5: Emissions

Condition 5.3 Protection of the Environment

Condition 5.3 specifies that the activity shall be carried out in a manner which shall not result in, inter alia, significant interference with amenities.

The word 'amenity' could be subject to wide interpretation. Indaver notes that the avoidance of interference with amenity is not listed in article 40 (4) of the Waste Management Act 1996 and amendments, as a matter about which the Agency shall satisfy itself in granting a licence.

For this reason Indaver requests that the condition be clarified as follows:

5.3 The licensee shall ensure that the activities shall be carried out in a manner such that emissions do not result in significant impairment of, or significant interference with the environment beyond the facility boundary.

6 Condition 7. Resource Use and Energy Efficiency

Condition 7.1 Energy Audit

Condition 7.1 requires an energy audit to be undertaken within one year of the grant of the licence. Given the prolonged planning, licensing, judicial review and construction process of the development, which is not yet complete, we request that the condition be worded as follows:

7.1 The licensee shall carry out an audit of the energy efficiency of the site within one year of *the commencement of licensed activities.* The licensee shall consult with the Agency on the nature and extent of the audit and shall develop an audit programme to the satisfaction of the Agency. The audit programme shall be submitted to the Agency in writing at least one month before the audit is to be carried out. The energy efficiency audit report shall include:

7 Condition 8. Materials Handling

7.1 Condition 8.2.3 Waste Profiling

Condition 8.2.3 specifies waste profiling procedures. Condition 8.2.3 (a) requires waste inspection and the profiling of waste. The community recycling park will have signage and on-site personnel to ensure waste is directed to appropriate containers. Each dedicated container will be clearly labelled to ensure waste is profiled appropriately. Therefore, it will not be necessary to profile waste prior to acceptance at the community recycling park.

For this reason Indaver requests that the condition be clarified as follows:

8.2.3 (a) Waste inspection at the point of entry to the facility and waste characterisation and waste profiling from known customers or new customers *accepted at the waste transfer station and incineration plant.*

Condition 8.2.3(b) refers to waste characterisation and requires that regard shall be had to EU decision (2003/33/EC) on establishing the criteria and procedures for the acceptance of waste at landfills. These criteria are not directly relevant to the activities to be carried out in the Ringaskiddy facility as they apply to acceptance criteria for landfills.

Indaver requests that the condition be clarified, with the reference to the EU decision (2003/33/EC) omitted.

Condition 8.2.3(c) specifies the weighing, documentation and reception of waste. These procedures are not relevant to the activities of the community recycling park.

Indaver requests that the condition be clarified as follows:

8.2.3(c) Waste weighing, documentation and reception intended for *the waste transfer station and incineration plant.*

Condition 8.2.3(f) specifies that the calorific value and pollutant content of the waste be determined "as required". This determination will be carried out where practicable. In the case of tanker loads of bulk waste this will be carried out for each load arriving at the facility. However, in the case of contaminated clothing or off-specification products from the pharmaceutical industry, arriving at the facility in individual drums, it will not be possible or necessary to determine the calorific value of each drum. It will also be impossible to determine the calorific value of each truck load / skip of municipal or industrial waste arriving at the facility.

For this reason Indaver requests that the condition be clarified as follows:

8.2.3 (f) The licensee shall determine the calorific values and the content of pollutants as required *where practicable or necessary* to provide for the management of waste input to ensure compliance with the emission limit values set out in this licence.

7.2 Condition 8.8 Mixing of Wastes

Condition 8.8 prohibits the mixing of hazardous wastes of different categories and the mixing of hazardous and non-hazardous wastes.

Optimal conditions for the operation of an incinerator are when the waste input into the incinerator is homogenous. This is achieved by mixing the waste prior to input to create a consistent feed which does not have a large variation in calorific value, moisture content or pollutant load.

Mixing of waste is a continuous activity required for the operation of the facility. Indaver will agree in advance with the Agency procedures for this activity.

For this reason Indaver requests that the condition be clarified as follows:

8.8 *Prior to the commencement of licensed activities, the licensee shall agree with Agency procedures for the mixing of waste at the facility.*

7.3 Condition 8.14 Residues Storage

Condition 8.14 specifies that boiler ash and flue gas cleaning residues be stored within the building in silos.

The boiler ash and flue gas cleaning residues will be stored in silos, which will have provision for the loading and unloading operation to be fully contained. The silos will be located in a separate, dedicated area on the southern side of the main building. This area will have cladding on four sides and a roof. The cladding does not extend to the ground on three sides, to allow trucks to drive underneath the silos to facilitate unloading. This area could be considered as being in the yard rather than in the building.

To avoid doubt, Indaver requests that the condition be reworded as follows:

8.14 Boiler ash and flue gas cleaning residues shall be stored at *dedicated areas* in silos (vented through self cleaning filter), bulk sacks or bins on concrete hardstanding with contained drainage.

8 Condition 10. Remediation, Decommissioning, Restoration and Aftercare

Condition 10.1 Decommissioning and Aftercare Plan

Condition 10.1 requires the licensee to submit a Decommissioning and Aftercare plan within 12 months of the date of grant of the licence. Given the prolonged planning, licensing, judicial review and construction process of the development, which is not yet complete, we request that the condition be worded as follows:

10.1 The licensee shall within twelve months of the *commencement of licensed activities* submit to the Agency for its agreement a Decommissioning and Aftercare plan for the facility. This plan shall be updated when required by the Agency.

9 Condition 11. Notifications, Records and Reports

9.1 Condition 11.3.2 Recording of Wastes

Condition 11.3.2 sets out requirements for the recording of wastes arriving and departing from the facility. The recording of wastes arriving at the community recycling park to this level of detail is not relevant.

Indaver requests that the condition be reworded as follows:

11.3.2 For each load of waste arriving *at waste transfer station and incineration plant and departing from the facility* the following:-:

9.2 Condition 11.3.3 Codes and Weight of Waste Loads

Condition 11.3.3 requires the EWC codes and the weight of wastes arriving and departing from the facility to be recorded. The recording of this information for wastes arriving at the community recycling park to this level of detail is not relevant.

For this reason Indaver requests that the condition be reworded as follows:

11.3.3 For waste accepted at *waste transfer station and incineration plant or dispatched from the facility:*

9.3 Condition 11.3.4 Profiling of Wastes

Condition 11.3.4 requires the off site profiling and characterisation of customer waste. The information is not relevant to the safe operation of the community recycling park or waste transfer station.

Indaver requests that the condition be reworded as follows:

11.3.4 Off site profiling and characterisation of customer waste *for incineration on site.*

9.4 Condition 11.5.1 Data Management System

Condition 11.5.1 requires the establishment of a data management system within six months of the date of grant of the licence. Given the prolonged planning, licensing, judicial review and construction process of the development, which is not yet complete, we request that the condition be worded as follows:

11.5.1 The licensee shall, within six months of the *commencement of the licensed activities,* develop and establish a Data Management System for collation, archiving, assessing and geographically presenting the environmental monitoring data generated as a result of this licence.

10 Condition 12. Financial Charges and Provisions

10.1 Condition 12.1 Charges

Condition 12.1 sets out charges to be paid to the agency to finance monitoring and measures to protect the environment. The charges come into effect from the date of grant of the licence. Given the prolonged planning, licensing, judicial review and construction process of the development, which is not yet complete, we request that the condition be worded as follows:

12.1.1 The licensee shall pay to the Agency an annual contribution of €65,383, or such sum as the Agency from time to time determines, having regard to variations in the extent of reporting, auditing, inspection, sampling and analysis or other functions carried out by the Agency, towards the cost of monitoring the activity as the Agency considers necessary for the performance of its functions under the Waste Management Acts 1996 to 2003. The first payment shall be a pro-rata amount for the period from *the commencement of the licensed activities* to the 31st day of December *of that year*, and shall be paid to the Agency within one month of the date upon which demanded by the Agency. In subsequent years the licensee shall pay to the Agency such revised annual contribution as the Agency shall from time to time consider necessary to enable performance by the Agency of its relevant functions under the Waste Management Acts 1996 to 2003, and all such payments shall be made within one month of the date upon which demanded by the Agency.

11 Schedule A Limitations

11.1 Schedule A.1

Indaver requests that 'other wastes, to be agreed by the Agency, (quantity and handling details to be agreed by the Agency prior to waste acceptance)' be added to schedule A.1.

11.2 Schedule A.2 and A.3

In schedules A.2 and A.3 the code XX XX 00 is used to represent all waste types/codes in a specific waste category (chapter). This convention is not set down in the Commission Decision 2000/532/EC as regards the list of wastes, which has no codes ending in the digit '00'.

Indaver requests that the Agency specifically clarifies this issue by adding the following note to schedules A.2 and A.3 or to the Glossary:

When a waste code is given in the format XX XX 00 it is intended that all waste codes in this four digit chapter are included.

Schedule A.2: There is a typographical error in relation to the second and third codes for 'inorganic wastes from thermal process'. The codes should be 10 01 00, 10 04 01 and 10 11 99.

Schedule A.3: Schedule A.3 specifies the types of waste to be accepted at the incineration plant.

Indaver requests that 'other wastes, to be agreed by the agency, (quantity and handling details to be agreed by the Agency prior to waste acceptance)' be added to both the hazardous and non-hazardous parts of schedule A.3.

There is a typographical error in relation to the first code for 'oil filters'. The codes should be 15 02 02 and 16 01 07.

There is a typographical error in relation to the code for 'wastes from anaerobic treatment of waste'. 'Wastes from aerobic treatment of waste' is repeated with the code given as 10 06 00. It should be 'wastes from anaerobic treatment of waste' and the code should be 19 06 00.

12 Schedule B Emission Limits

Schedule B.1 and B.2 sets out the maximum emission rate per hour for the listed parameters for the fluidised bed line and the moving grate line respectively.

Indaver requests that this table be presented in a similar format to that contained in the Directive 2000/76/EC, otherwise it could be interpreted to mean something other than was intended in the Directive. Specifically, Indaver requests that, in relation to carbon monoxide, Schedule B.1 and B.2 be clarified to replicate the wording in the Directive 2000/76/EC, as follows:

B.1 Emission limits to Air.
Emission Point Reference No.: A1-1 (Fluidised Bed Incinerator Stack)
Location: Main Process Building

Volume to be emitted: Maximum rate per hour: 101,927 m^3
Minimum Discharge height: 55 m above ground

Parameters	Units	Half Hour Average		Daily Average	Periodic
		A	B		
Total dust	mg/m^3	30 Note 1	10 Note 1	10	-
Gaseous and vaporous organic substances, expressed as total organic carbon	mg/m^3	20 Note 1	10 Note 1	10	-
Hydrogen chloride (HCl)	mg/m^3	60 Note 1	10 Note 1	10	-
Hydrogen fluoride (HF)	mg/m^3	4 Note 1	2 Note 1	1	-
Sulphur dioxide (SO2)	mg/m^3	200 Note 1	50 Note 1	50	-
Oxides of Nitrogen (NO and NO2, expressed as NO2)	mg/m^3	400 Note 1	200 Note 1	200	-
The sum of Cadmium (as Cd) and thallium (as Tl), and their compounds Note 2	mg/m^3			-	0.05
Mercury (as Hg) and its compounds Note 2	mg/m^3			-	0.05
The sum of antimony (as Sb), arsenic (as As), lead (as Pb), chromium (as Cr), cobalt (as Co), copper (as Cu), manganese (as Mn), nickel (as Ni), and vanadium (as V) Note 2	mg/m^3	-		-	0.5
Arsenic and its compounds Note 2	mg/m^3	-		-	0.2
Dioxins/furans (TEQ) Note 3	ng/m^3	-		-	0.1
Carbon monoxide (CO) Note 4					

Note 1: None of the half-hourly average values shall exceed any of the emission limit values set out in column A, or, 97 % of the half-hourly average values over the year shall not exceed any of the emission limit values set out in column B;
Note 2: All average values over the period of a minimum of 30 minutes and a maximum of 8 hours. Metals include gaseous, vapour and solid phases as well as their compounds (expressed as the metal or total as specified).
Note 3: Average values shall be measured over a sample period of a minimum of 6 hours and a maximum of 8 hours. The emission limit value refers to the total concentration of dioxins and furans calculated using the concept of toxic equivalence in accordance with Annex I of Directive 2000/76/EC.
Note 4: The *following* emission limit values of carbon monoxide (CO) concentrations shall not be exceeded in the combustion gases (excluding the start-up and shut-down phase)
- 50 mg/m^3 of combustion gas determined as a daily average
- 150 mg/m^3 of combustion gas of at least 95 % of all measurements determined as 10-minute average values or 100 mg/m^3 of combustion gas of all measurements determined as half-hourly values taken in any 24-hour period.

B.1 Emission limits to Air.
Emission Point Reference No.: A1-2 (Moving Grate Incinerator stack)
Location: Flue gas treatment building
Volume to be emitted: Maximum rate per hour: 80,453000 m^3
Minimum Discharge height: 55 m above ground

Parameters	Units	Half Hour Average		Daily Average	Periodic
		A	B		
Total dust	mg/m^3	30 Note 1	10 Note 1	10	-
Gaseous and vaporous organic substances, expressed as total organic carbon	mg/m^3	20 Note 1	10 Note 1	10	-
Hydrogen chloride (HCl)	mg/m^3	60 Note 1	10 Note 1	10	-
Hydrogen fluoride (HF)	mg/m^3	4 Note 1	2 Note 1	1	-
Sulphur dioxide (SO2)	mg/m^3	200 Note 1	50 Note 1	50	-
Oxides of Nitrogen (NO and NO2, expressed as NO2)	mg/m^3	400 Note 1	200 Note 1	200	-
The sum of Cadmium (as Cd) and thallium (as Tl), and their compounds Note 2	mg/m^3			-	0.05
Mercury (as Hg) and its compounds Note 2	mg/m^3			-	0.05
The sum of antimony (as Sb), arsenic (as As), lead (as Pb), chromium (as Cr), cobalt (as Co), copper (as Cu), manganese (as Mn), nickel (as Ni), and vanadium (as V) Note 2	mg/m^3	-		-	0.5
Arsenic and its compounds Note 2	mg/m^3	-		-	0.2
Dioxins/furans (TEQ) Note 3	ng/m^3	-		-	0.1
Carbon monoxide (CO) Note 4					

Note 1: None of the half-hourly average values shall exceed any of the emission limit values set out in column A, or, 97 % of the half-hourly average values over the year shall not exceed any of the emission limit values set out in column B;
Note 2: All average values over the period of a minimum of 30 minutes and a maximum of 8 hours. Metals include gaseous, vapour and solid phases as well as their compounds (expressed as the metal or total as specified).
Note 3: Average values shall be measured over a sample period of a minimum of 6 hours and a maximum of 8 hours. The emission limit value refers to the total concentration of dioxins and furans calculated using the concept of toxic equivalence in accordance with Annex I of Directive 2000/76/EC.
Note 4: The *following* emission limit values of carbon monoxide (CO) concentrations shall not be exceeded in the combustion gases (excluding the start-up and shut-down phase)
- 50 mg/m^3 of combustion gas determined as a daily average
- 150 mg/m^3 of combustion gas of at least 95 % of all measurements determined as 10-minute average values or 100 mg/m^3 of combustion gas of all measurements determined as half-hourly values taken in any 24-hour period.

13 Schedule C Monitoring and Control

13.1 Schedule C.1.1 Process Control Monitoring of Incineration

Schedule C.1.1 sets out the monitoring required for process parameters. Column 3 in the schedule specifies monitoring equipment or methodology. To allow for future improvements in monitoring techniques and equipment, Indaver requests the Agency to add a note to column 3 of the schedule, similar to note 1 in schedule C.1.2, as follows:

Note 4: Or other equipment or methods agreed in advance by the Agency.

13.2 Schedule C.2.3 Monitoring of Surface Water Emissions

Schedule C.2.3 sets out monitoring of surface water emissions. The emission point reference numbers SW2(b) and SW3 and the monitoring locations require clarification.

For ease of reference a copy of drawing number 106 from appendix 15 of the application, which shows the proposed surface water drainage system for the waste transfer station and community recycling park, is included overleaf. There will be one surface water discharge point from the waste transfer station and community recycling park. Indaver suggests that this be labelled SW2. Note that this is an emission point only. Refer to Figure 10.1 rev 1.

Monitoring point SW2(a) - Waste transfer station hard standing and marshalling areas:
The monitoring point for the Waste transfer station hard standing and marshalling areas will be located adjacent to the storm water holding tank, at the south-eastern corner of the waste transfer station yard. Refer to drawing number 106 from appendix 15 of the application, and Figure 13.2 rev 1. Note that this is a monitoring point and not an emission point.

SW2(b) and SW3: The surface water from the Waste transfer station warehouse roof will drain to the surface water sewer, down stream of the monitoring point SW2(a). The surface water from the administration building roof will be collected by a separate branch sewer which will be connected to the main sewer from the monitoring point SW2(a) at a manhole labelled RW04, on drawing number 106 from appendix 15 of the application.

The surface water from the community recycling park will be collected in a separate branch sewer which will drain to a petrol interceptor prior to connection to the main surface water drainage system at the last manhole prior to discharge from the site. This manhole is labelled SW12 on drawing number 106. The surface water from the car park will be connected to the drain from the community recycling park, upstream of the interceptor, at the manhole labelled SW11 on drawing number 106.

If SW2(b) is to be located in order to monitor surface water from the waste transfer station roof and the car park, it will need to be at manhole labelled SW12 on drawing number 106 where branches serving both these areas will be combined. If the surface water run-off from the community recycling park is to be monitored separately, SW3 will need to be located at manhole labelled SW07 on drawing number 106, upstream of the petrol interceptor.

Indaver suggests to the Agency that the proposed emission points SW2(b) and SW3 in Schedule C.2.3 be combined, as SW2, and the designated monitoring be undertaken at manhole labelled SW12 on drawing number 106. Refer to Figure 13.2 rev 1.

Figure 13.3 has also been amended to include the monitoring chamber, prior to emission point SW1 at the Incineration Plant, labelled as SW1(a).

Indaver suggests that the text in the table entitled "Monitoring of Surface Water Emissions" in Schedule C.2.3 be amended as follows;

Monitoring Point Reference No.:

SW1(a) – Incineration Plant and
SW2(a) – Waste Transfer Station: Hard Standing and marshalling areas.

Emission Point Reference No.:

SW2 – Waste Transfer Station: Roof of Administration building and Car Park
– Community Recycle Park

Indaver has revised Figures 10.1 and 10.2, which indicated surface water and effluent emission points, and Figures 13.2 and 13.3, which indicated surface water monitoring points in the waste transfer station and community recycling park, to reflect this suggestion.

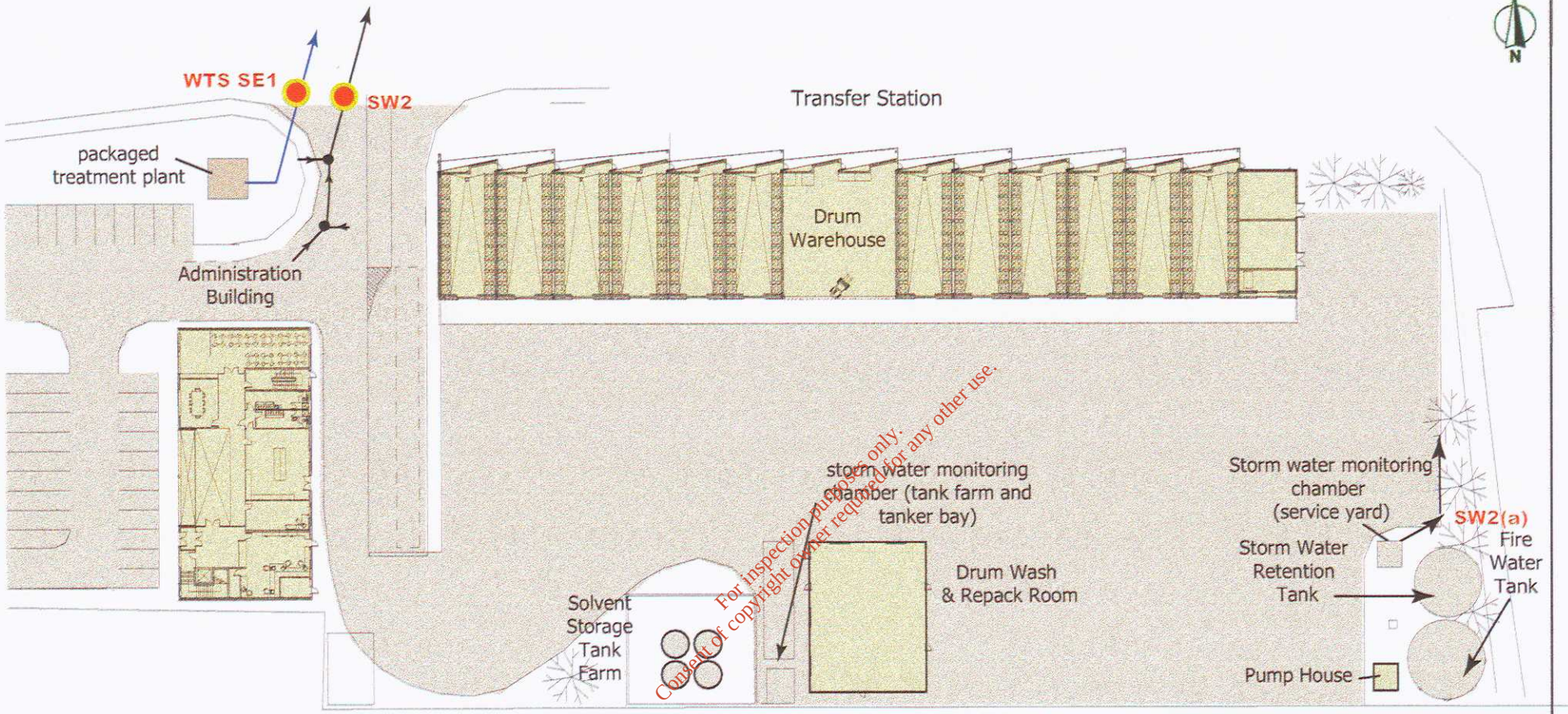
Placeholder

This page has been inserted to indicate that content has been extracted from this location in the document and has been stored in a separate file. (This is due to file size issues.)

The extracted content can be found in the following electronic pdf file:

Objection-Drawing-1

Licence: W0186-01



WTS SE1 Waste Transfer Station sanitary emission point
SW2 Waste Transfer Station and Community Recycling Park storm water emission point

NOTE: Exact location will be defined when detailed engineering has been completed

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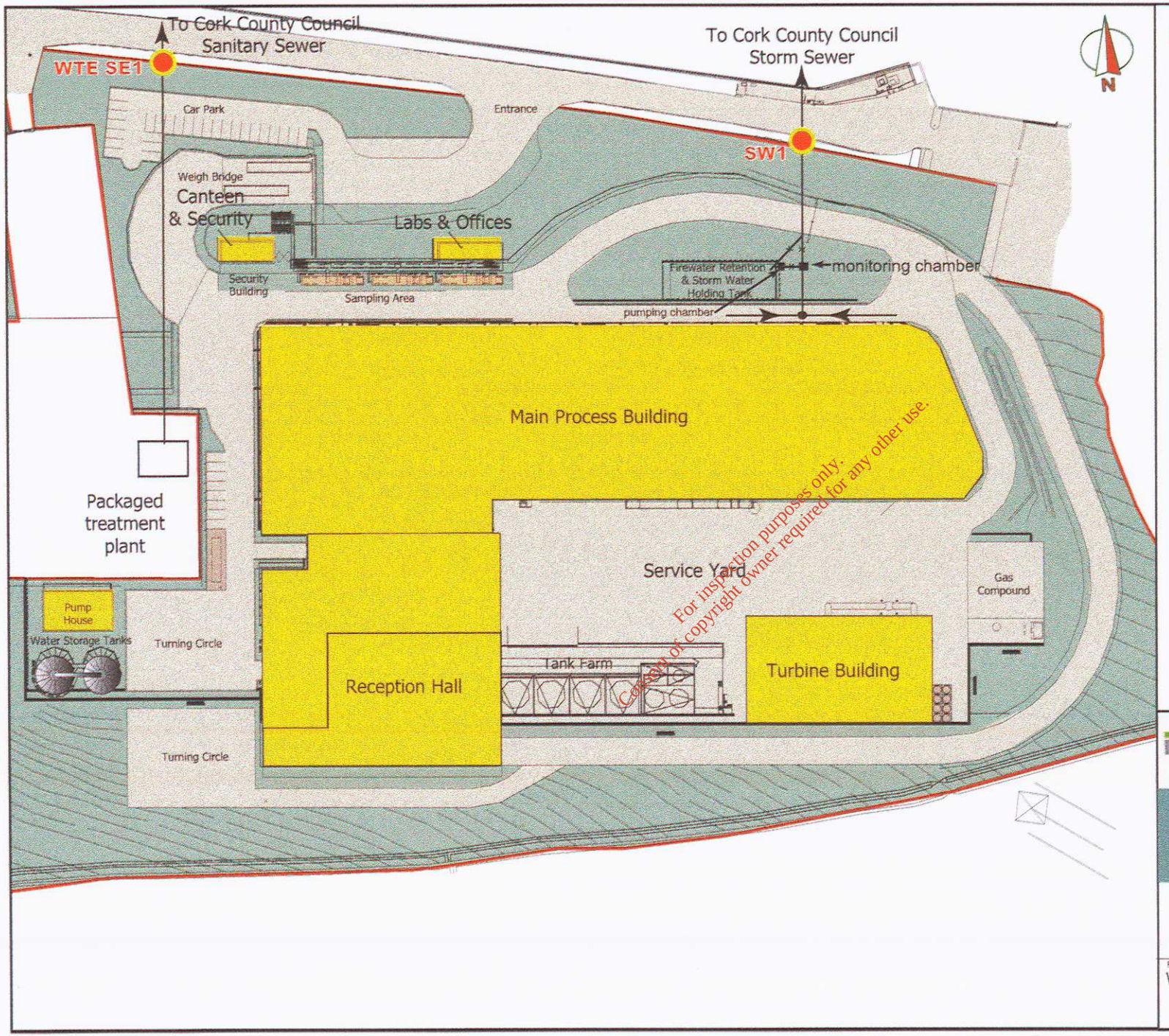
Files Located : J:/jobs/992/graphics/EIS figures
Ordnance Map :

Figure Title : Waste Transfer Station - Location of Stormwater & Sanitary Effluent Emission Points

Figure No : 10.1 Rev 1



WTE SE1: Waste to Energy Plant Sanitary Effluent Emisssion

SW1: Waste to Energy Plant: Storm Water Emission Point

NOTE: Exact location will be defined when detailed engineering has been completed

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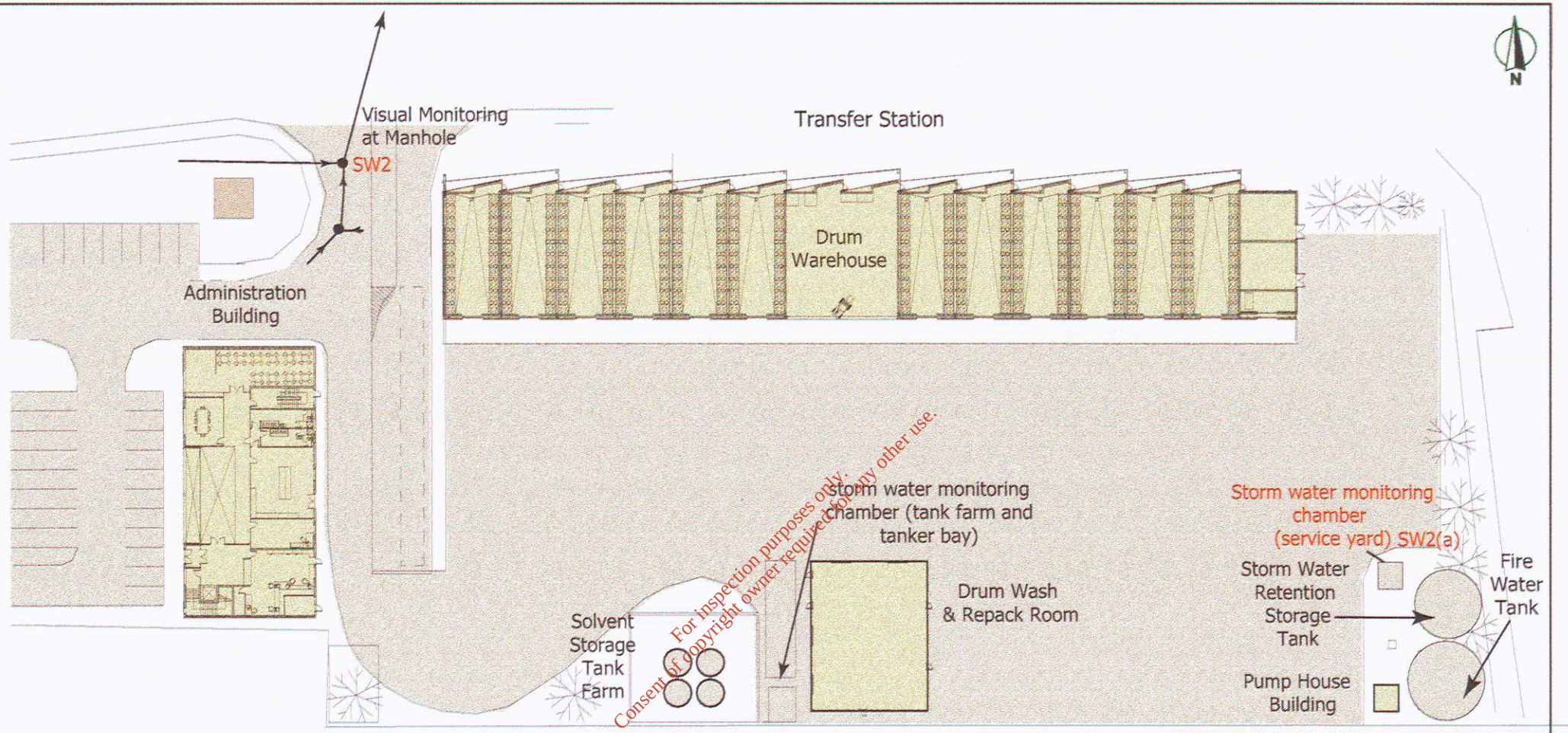
Files Located : J:/jobs/992/graphics/EIS figures

Ordnance Map :

Figure Title : Waste to Energy Plant - Location of Storm Water & Sanitary Effluent Emission Points

Figure No : 10.2 Rev 1



SW2(a) Waste Transfer Station hardstanding and marshalling areas - monitoring location

SW2 Waste Transfer Station and Community Recycling Park - monitoring location

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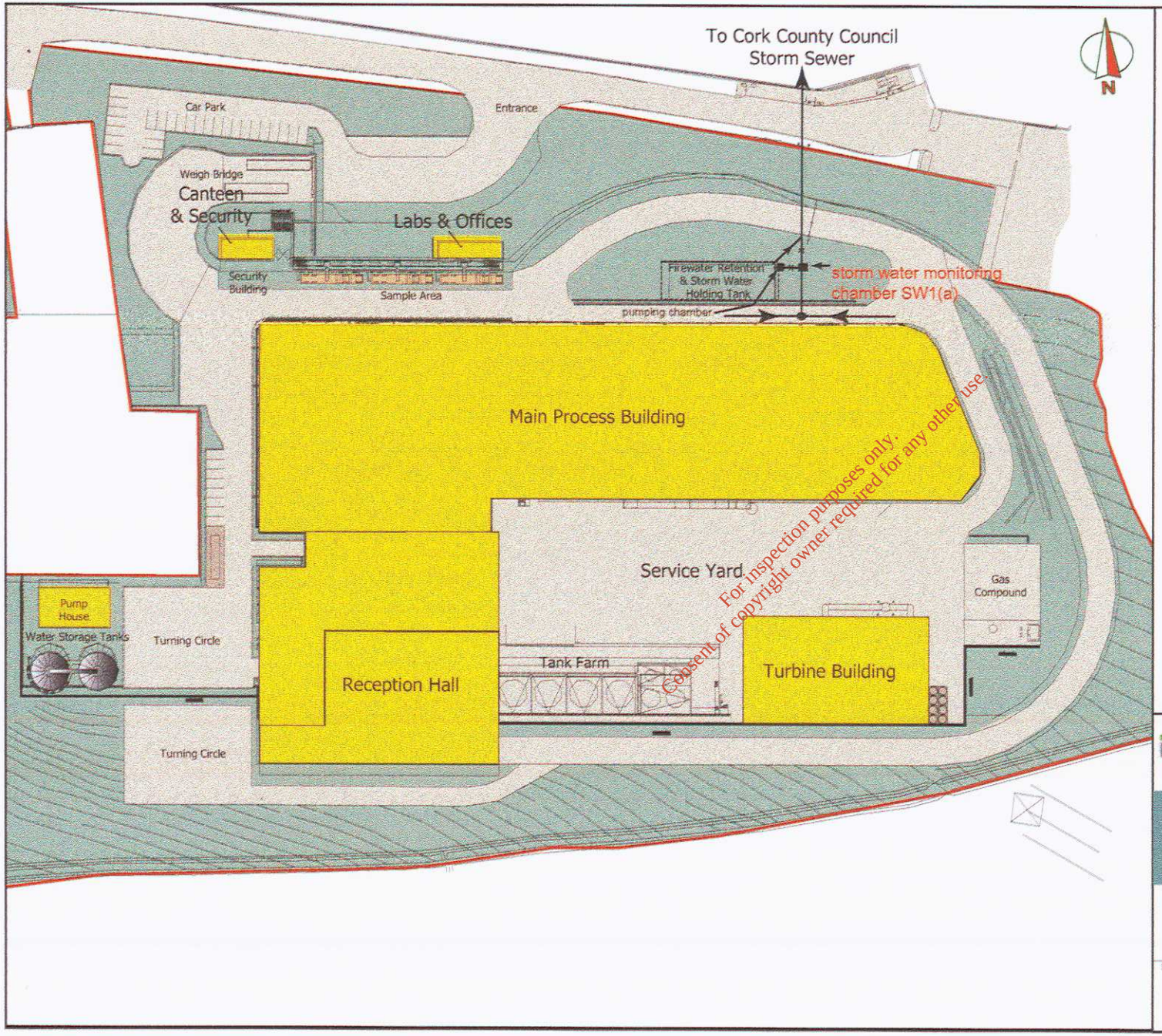
Ordnance Map :

Figure Title : Waste Transfer Station - Storm Water Monitoring Locations

Figure No : 13.2 Rev 1



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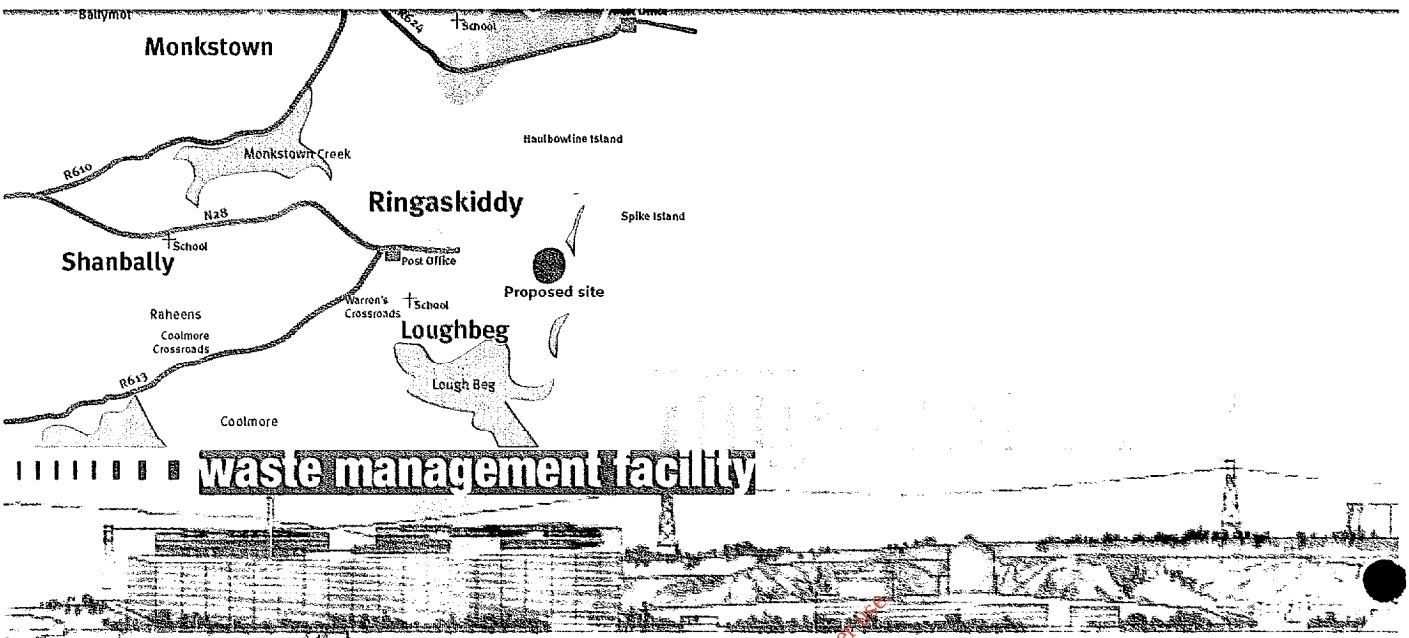
Files Located : J:/jobs/992/graphics/EIS figures

Ordnance Map :

Figure Title : Waste to Energy Plant - Storm Water Monitoring Location

Figure No : 13.3 Rev 1



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