

177-2  
office

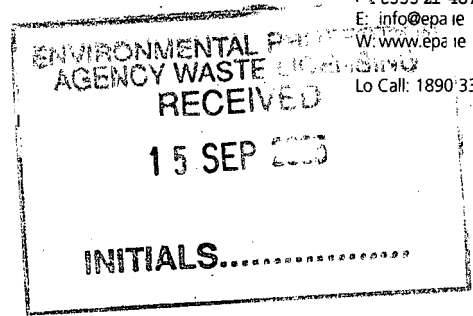


Environmental Protection Agency  
An Ghníomhaireacht um Chaomhnú Comhshaoil

Mr. Michael Walsh  
Director of Services, Planning & Environment  
Waterford City Council  
City Hall  
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Waterford

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12 September 2005

Reg No: 177-2

Dear Mr. Walsh

I am to advise you that the Agency has received an application for a Waste Licence from ONYX Ireland Ltd, for a facility located at ONYX Ireland Ltd, Carrignard, Six Cross Roads, Business Park, Waterford City.

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. No change to the existing discharge has been proposed.

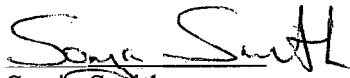
The provisions of Section 52 of the Waste Management Acts, 1996 to 2003, provides that the Agency shall obtain the consent of the sanitary authority to the proposed discharge from an activity which involves the discharge of trade effluent or other matter (other than domestic sewage or storm water), to 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 2003 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. Sean O'Donoghue is dealing with this matter and can be contacted at the Licensing Unit, Office of Licensing & Guidance **Cork** Tel. No. 021 4875540 if you have any queries.

Your co-operation in this matter is appreciated.

Yours sincerely



Sonja Smith

**Programme Officer**  
**Licensing Unit**  
**Office of Licensing & Guidance**

**Section 99E (3) & (4) of the Environmental Protection Agency Acts, 1992 and 2003**

- (3) Subject to subsection (4), a consent under subsection (1) may be granted subject to or without conditions and if it is granted subject to conditions the Agency shall include in the licence or revised licence concerned conditions corresponding to them or, as the Agency may think appropriate, conditions more strict than them.
- (4) The conditions that may be attached to a consent by a sanitary authority under this section are the following and no other conditions, namely conditions-
- (a) relating to-
    - (i) the nature, composition, temperature, volume, level, rate, and location of the discharge concerned and the period during which the discharge may, or may not, be made,
    - (ii) the provision, operation, maintenance and supervision of meters, gauges, manholes, inspection chambers and other apparatus and other means for monitoring the nature, extent and effect of emissions,
    - (iii) the taking and analysis of samples, the keeping of records and furnishing of information to the sanitary authority,
  - (b) providing for the payment by the licensee to the sanitary authority concerned of such amount or amounts as may be determined by the sanitary authority having regard to the expenditure incurred or to be incurred by it in monitoring, treating and disposing of discharges of trade effluent, sewage effluent and other matter to sewers in its functional area or a specified part of its functional area,
  - (c) specifying a date not later than which any conditions attached under this section shall be complied with,
  - (d) relating to, providing for or specifying such other matter as may be **prescribed**.

**SANITARY AUTHORITY RESPONSE**  
**re: SECTION 52 OF THE WASTE MANAGEMENT ACTS, 1996 to 2003**

**Name & Address of Sanitary Authority:** Waterford City Council, City Hall, The Mall, Waterford,  
 FAO: Ms Mary Breen, Administrative Officer, Planning  
 & Environment.

**Waste Reg. No.** 177-2 .

**Waste Facility:** ONYX Ireland Ltd, Carrignard, Six Cross Roads,  
 Business Park, Waterford City

**Waste Licence Applicant:** ONYX Ireland Ltd

**Consent:** Indicate Yes to one of the following statements:

Consent granted subject to the consent conditions outlined below	
Consent granted without conditions	
Consent refused <sup>Note 1</sup>	

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 <i>so</i> 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.	

**ADDITIONAL GENERAL CONSENT CONDITIONS**  
**in respect of discharges or emissions to sewers, in accordance with Section 52**  
**of the Waste Management Acts, 1996 to 2003**  
*(specify, if required)*


## Limit Values for Process Effluent to Sewer

### *Schedule B: Emission Limits*

Waste licence application Register No. 177-2

Emission Point Reference No: \_\_\_\_\_

Emission to (*sewer description*): \_\_\_\_\_

Volume to be emitted: Maximum in any one day: \_\_\_\_\_ m<sup>3</sup>

Maximum rate per hour: \_\_\_\_\_ m<sup>3</sup>

Parameter <i>(delete parameters which are not applicable)</i>	Emission Limit Value	
	Daily Mean Concentration (mg/l)	Daily Mean Loading (kg/day)
BOD		
COD		
Suspended Solids		
PH		
Temperature		
<b>ADDITIONAL PARAMETERS</b>		
<i>(if required)</i>		

## Frequency of Monitoring Process Effluent to Sewer

### Schedule C

Waste Licence application Register No. 177-2

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		
<b>ADDITIONAL PARAMETERS</b>		
<i>(if required)</i>		

SANITARY AUTHORITY CHARGES	
Charge per kilometre of process effluent per 52 £ (the Waste Management Acts, 1996 to 2003)	
Payment Frequency	
Annual Monitoring Costs	

Signed on behalf of Waterford City Council

\_\_\_\_\_ Date   /  /

# EXTRACT FROM APP FORM

The results for SW1 indicate that the levels of contaminants present in the final discharge are not significant and indeed comply with the ELV's as laid down in the Waste Licence. The emissions from SW2 also comply with The ELV's of the Waste Licence.

The surface water emissions within the proposed extension are restricted to that of surface water run-off from hardstanding areas and roof run-off area after a rainfall event.

There are two new additional surface water monitoring points within the proposed extension area namely SW3 and SW4.

Surface water monitoring point SW3 comprises of rain run-off from the asphalt area in extension and will pass through two grit traps and a Class 1 interceptor before discharging into the dyke at the western boundary of the site. In addition a shut-off valve is located in this discharge line to minimize the possibility of unexpected emissions occurring.

Surface water run-off from the roof of the storage shed will discharge directly into the dyke. This dyke discharges into the heavily polluted St. Johns River and ultimately into the river Suir.

Onyx proposes that the monitoring points SW3 and SW4 are monitored as follows:

Parameter	Monitoring Frequency	Analysis method/Technique
PH	Quarterly	Electrometry
Biological Oxygen Demand	Quarterly	Standard Methods
Suspended Solids	Quarterly	Standard Methods
Mineral Oils	Quarterly	Standard Methods
Fats, Oils and Grease	Quarterly	Standard Methods
Visual Inspection	Quarterly	Standard Methods

## Foul Sewer

Emissions to the foul sewer arise from the truck wash area, the concrete apron (in the event of rain) located at the front of the MHRB and garage, and the toilets and canteen facilities on-site (Drawing B2.c (Rev 1)). The truck wash has its own grit trap to remove the bulk of any solid material washed into the drains. The run-off from this subsequently drains into another grit trap a Class I oil/water interceptor prior to final discharge to foul sewer. The run-off from the concrete apron also passes through the same grit trap and interceptor prior to discharge. Following the sampling point in the foul sewer line there is a shut-off valve which can be closed to prevent unexpected emissions occurring. It is estimated that a *maximum* discharge rate of 31.1m<sup>3</sup> may occur with current foul sewer arrangements. This is based on the following calculations:



- An average of 10 persons per day at the premises and an accepted figure for wastewater production of 150litres\day\population equivalent. =0.3 m<sup>3</sup> per hour.
- The 50 year 30 minute maximum rainfall figure of 23.3mm and a concrete area (including truck wash) of 670m<sup>2</sup> =29.9 m<sup>3</sup> per hour.
- 2 -3 trucks per day washed for 15 min periods =0.9 m<sup>3</sup> per hour.

Note: No discharge occurs from the odour abatement system, as this is adsorbed by the waste.

The diameter of the foul sewer piping is 150mm. Using figures provided in "Hydraulics Research, 1983" it has been calculated that the design flow rate for this pipe is 14.8 litres/second or 53.3 m<sup>3</sup>/hour.

An approximate annual discharge to foul sewer of 1,031.3m<sup>3</sup> can be calculated as follows:

- Water consumption estimated at 390m<sup>3</sup>
- The 30 year annual average rainfall for Tycor Meteorological Station is 1,002mm. The concrete area is 640m<sup>2</sup>. Hence the annual volume flowing from this area is 641.3m<sup>3</sup>.

Samples of the foul sewer effluent were collected from monitoring point FW1 since receiving the Waste Licence 177-1 in November 2003. The results of the analysis are detailed in the Table below.

Parameters	FW2 03/12/03	FW2 03/03/04	FW2 22/06/04	ELV's as per Waste Licence 177-1
PH (PH Units)	8.2	7.3	6.6	6-9
Temperature (C)	9.5	11.5	16.2	18
BOD (mg/L)	16	108	<b>580</b>	<b>400</b>
COD (mg/L)	342	67	<b>1232</b>	1100
OFG (mg/L)	5	<1	22	<b>10</b>
Suspended Solids(mg/L)	23	<b>18</b>	<b>73</b>	300
Conductivity (uS/cm @ 20 C)	782	217	1214	1500
Visual Inspection	Slightly cloudy	Cloudy	Cloudy	Cloudy

The major part of all domestic, industrial/commercial wastewaters is gravity-fed or flows to Waterpark. Waterford Corporation has operated a pumping station which is activated during high tide. Otherwise all waste water discharges through a major outfall at Waterpark and through various lesser discharge points along the quay, etc, at low tides. The pumping station at Waterpark is operated against the tides which would have caused flooding in the low lying areas of the city had such pumping not been available.

Sewers in the areas can be divided into three main categories. Foul sewers , taking waste from domestic commercial and industrial premises. Surface water taking waste from roads, foot paths, roofs and all paved areas in general which normally doesn't need treatment.

satisfactory( in rivers Lingaun , Clodiagh , Dawn and Blackwater). However the quality was unsatisfactory in the tributary called St. Johns River which flows through Waterford City.

#### Potential Impacts of Operations at the Waste Transfer Station on Surface Water.

The operations at the facility can impact on the receiving surface water network as a result of surface water run-off from the hardstanding areas of the site containing contaminants. In particular this includes the run-off from the concrete apron at the front of the transfer building. On this apron dust that may have dispersed from the transfer building can settle and subsequently be washed into the drainage system. However, the implementation of a site drainage cleaning programme (inclusive of interceptors) has ensured that the levels of contaminant present are within guideline limits for the most part. It should be noted that no

waste transfer activity occurs outdoors thereby reducing the likelihood of surface water contamination from this source.

Emissions to foul sewer, other than domestic effluent, are caused by the truck wash and skip washing facility. All truck wash effluent is passed via a grit trap and an interceptor prior to discharge to foul sewer.

### **Mitigation Measures to Minimise the Impact on the Surface Water**

To minimise the impacts of the emissions to both surface water and foul sewer IPODEC Ireland have implemented the following measures:

Both surface water and foul sewer grit traps are cleaned out every four weeks. The two interceptors are also desludged. The same cleaning program will be incorporated for the new interceptor.

The hardstanding area of the site is swept regularly using a roadsweeper with wetting capabilities.

No waste is deposited outside the transfer building. Recyclable materials will be deposited within the proposed storage shed area.

Mobile bunds are in use for oil spillage material.

Spill kits have been put in place to minimise the effect of spillages that may arise as a result of on-site activities.

All fuel storage tanks and barrels are suitably banded.

Weekly inspections of the interceptors take place and these are desludged if deemed necessary.

Monitoring of both the surface water and foul sewer emissions will take place as required.

### **Dust**

All dust emitted from the facility can be described as fugitive. The primary source of dust on-site may be attributed to the transfer operations and truck movements. **ONYX** had installed an odour abatement/dust suppression system which has been quite effective for the past few years.

The dust monitoring location **D3** will be re-located within the proposed new extension (See drawing C.1.a Rev 1) however, it is not envisaged that there will be any significant increase in the dust levels at this point or any significant impact on the surrounding environment. The materials to be stored in the storage shed have previously been stored in the open yard of the existing facility. As there are no additional activities on site the inclusion of the storage shed will not add any increase in operations on-site or dust levels.

- 12) **Submit a proposal for environmental monitoring to be carried out at the facility for the new proposed activities as well as the existing activities. The proposal shall include a drawing showing the locations of all proposed monitoring points and the national grid reference of each proposed monitoring location.**

Environmental Monitoring in relation to the proposed extension are as follows:

**Surface water**

There are two surface water monitoring points at present on the existing site namely SW1 and SW2 (Grid ref. 258327E, 109438N and Grid ref. 258338E, 109440N) respectively. There are no amendments proposed for these monitoring points.

**An** additional two surface water monitoring points will be incorporated into the proposed extension. These are SW3 and SW4 (Grid ref. 258286 E, 109438N and Grid ref. 258253E, 109506N) respectively.

Onyx proposes that the monitoring points SW3 and SW4 are monitored as follows:

<b>Parameter</b>	<b>Monitoring Frequency</b>	<b>Analysis method/Technique</b>
<b>PH</b>	Quarterly	Electrometry
Biological Oxygen Demand	Quarterly	Standard Methods
Suspended Solids	Quarterly	Standard Methods
Mineral Oils	Quarterly	Standard Methods
Fats, Oils and Grease	Quarterly	Standard Methods
Visual Inspection	Quarterly	Standard Methods

Please see attached drawings Fig. B.2.c (Revision 1) for further details. **APPENDIX I.**

**Foul Sewer**

There will be no amendments for foul sewer monitoring point FW1.

**Dust**

There are currently three dust monitoring points located at the present site namely D1, D2 and D3 (Grid ref. 258375E, 109495N Grid ref. 258341E, 109436N and Grid ref. 258301E, 109483N) respectively.

There will be no amendments required for monitoring points D1 and D2, however it is proposed that dust monitoring point D3 (Grid ref. 258301E, 109483N) will be re-located within the new extension to Grid ref. 258269E, 109514N.

<b>Results of Foul Water Water Monitoring FW1</b>				
<b>Parameters</b>	<b>FW2 03/12/03</b>	<b>FW2 03/03/04</b>	<b>FW2 22/06/04</b>	<b>ELV's as per Waste Licence 177-1</b>
PH (PH Units)	<b>8.2</b>	<b>7.3</b>	<b>6.6</b>	<b>6-9</b>
Temperature (C)	<b>9.5</b>	<b>11.5</b>	<b>16.2</b>	<b>18</b>
BOD (mg/L)	<b>16</b>	<b>108</b>	<b>580</b>	<b>400</b>
COD (mg/L)	<b>342</b>	<b>67</b>	<b>1232</b>	<b>1100</b>
OFG (mg/L)	<b>5</b>	<b>&lt;1</b>	<b>22</b>	<b>10</b>
Suspended Solids(mg/L)	<b>23</b>	<b>18</b>	<b>73</b>	<b>300</b>
Conductivity (uS/cm @ 20 C)	<b>782</b>	<b>217</b>	<b>1214</b>	<b>1500</b>
Visual Inspection	Slightly cloudy	Cloudy	Cloudy	Cloudy

As can be seen from the results of the analysis the parameters measured for SW1 and SW2 for the Last Quarter of 2003 and the first and second quarters of 2004 are within the ELV's of the waste licence 177-1.

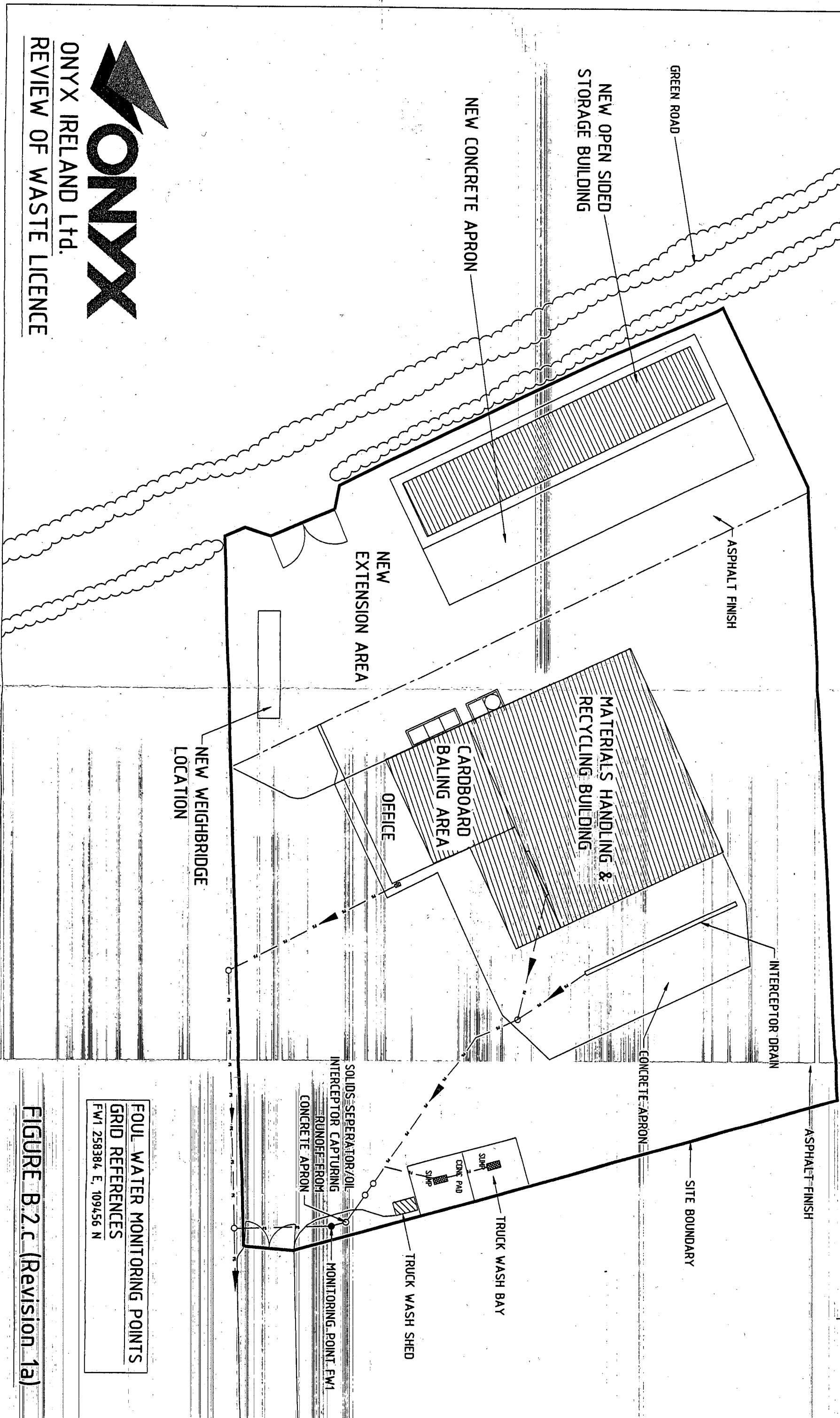
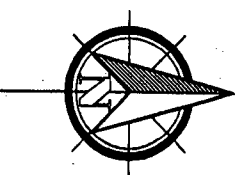
The results of the analysis for the parameters for FW1 for the Last quarter of 2003 and the first quarter 2004 are within the ELV's of the waste licence 177-1.

The results indicate that the BOD, COD and OFG parameters measured for FW1 are outside the ELV's for the waste licence 177-1 for the second quarter of 2004. The foul water drain had previously been desludged on the 26<sup>th</sup> May 2004 and was due again at the end of June 2004. Two days following collection of the samples the foul water drainage system was desludged. A record of this cleaning of the drain is kept on file for your attention.

<b>Location</b>	<b>Description</b>	<b>March 2004 mg/m2/day</b>	<b>June 2004 mg/m2/day</b>	<b>ELV,s as per Waste Licence 177-1</b>
<b>D1</b>	North eastern Boundary of site	<b>144.7</b>	450	<b>350</b>
<b>D2</b>	South Boundary of site	<b>113.1</b>	<b>324</b>	<b>350</b>
<b>D3</b>	Western Boundary of site	<b>86.8</b>	Not available	<b>350</b>

# FOUL WATER DRAINAGE SYSTEM

Scale 1:500



**ONYX IRELAND LTD.**  
**REVIEW OF WASTE LICENCE**

**FOUL WATER MONITORING POINTS  
 GRID REFERENCES**  
 FW1 258384 E, 109456 N

**FIGURE B.2.c (Revision 1a)**