



# Malachy Walsh and Partners

CONSULTING ENGINEERS

Cork, Tralee and London

Reg. No: W0221-01

Kerry County Council

Additional Info. rec'd 5 July 2006

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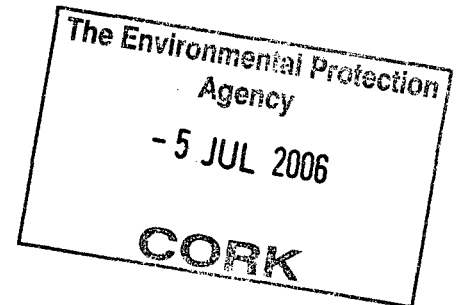
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3<sup>rd</sup> July 2006

Ref. No: 10599

Niamh O Donoghue, Inspector  
Licensing Unit,  
Office of Licensing and Guidance  
Environmental Protection Agency, Headquarters  
PO Box 30000  
Johnstown Castle Estate  
Co. Wexford



Re: Listowel Civic Amenity: Register No. 224-1

Dear Niamh,

As discussed, changes have been made to the Waste Licence Application for the proposed Listowel Civic Amenity.

These changes are regarding:

- Treatment of foul sewage.
- Quantities of waste to be accepted at the facility.

Enclosed please find the tables and attachments that have been affected by these alterations.

N:\Projects\10599\Documentation\Waste Licence Application>Listowel\2006-07-03 Additional Info\Cover letter.doc

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With regard to quantities of waste to be accepted at the facility, the following sections of the Waste Licence Application Form, Waste Licence Application Attachments and the Non-technical Summary have been modified:

**1. Waste Licence Application Form**

Table B.7.2	Maximum Annual Tonnage
Table H.1(A)	Quantities of Waste in Relation to Each Class of Activity Applied For
Table H.1(B)	Annual Quantities and Nature of Waste
Table H.1(C)	Waste Types and Quantities
Table H.1.2	Hazardous Waste Types and Quantities

**2. Waste Licence Application Attachments**

Attachment H	Table H.1.1	Quantity and Nature of Wastes
Attachment H	H.1	Waste Types and Quantities

**3. Non-technical Summary**

Table A.1.1	Quantity and Nature of Wastes
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With regard to treatment of foul sewage at the facility, the following sections of the Waste Licence Application Form, Waste Licence Application Attachments and the Non-technical Summary have been modified:

**1. Waste Licence Application Form**

Table E.3 (i)	Emissions to Sewer
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**2. Waste Licence Application Attachments**

Attachment D	D.1.k	Sewerage and Surface Water Drainage Infrastructure
Attachment E	E.2	Emissions to Surface Water
Attachment E	E.3	Emissions to Sewers
Attachment F	F.1 (ii)	Treatment, Abatement and Control Systems: To Surface Water
Attachment F	Fig. F.1.1	Flow Diagram: Surface Water
Attachment F	F.1 (iii)	Treatment, Abatement and Control Systems: To Sewer
Attachment F	Fig. F.1.2	Flow Diagram: Sewer

**3. Non-technical Summary**

Article 12(1)(j)	Surface/Storm Water
Article 12(1)(j)	Sewage/Wastewater
Article 12(1)(l)	Effect of Emissions

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If you have any questions please do not hesitate to contact me

Thank you and regards,

Helen Griffin  
Helen Griffin  
Malachy Walsh & Partners

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**TABLE B.7.2 MAXIMUM ANNUAL TONNAGE**

The maximum annual tonnage of waste to be handled at the site should be indicated and the year to which the quantity relates indicated.

<b>Maximum Annual Tonnage (tpa)</b>	12,750 approx
<b>Year</b>	2031

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Agency  
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**TABLE H.1(A). QUANTITIES OF WASTE IN RELATION TO EACH CLASS OF ACTIVITY APPLIED FOR**

Waste Management Act 3rd Schedule (Disposal) Activities			Waste Management Act 4th Schedule (Recovery) Activities		
Class of Activity Applied For		Quantity (tpa)	Class of Activity Applied For		Quantity (tpa)
Class 1			Class 1		
Class 2			Class 2		990 approx
Class 3			Class 3		427 approx
Class 4			Class 4		784 approx
Class 5			Class 5		
Class 6			Class 6		
Class 7			Class 7		
Class 8			Class 8		
Class 9			Class 9		
Class 10			Class 10		
Class 11			Class 11		
Class 12		4125 approx	Class 12		
Class 13		4125 approx	Class 13		2200 approx

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**TABLE H.1(B) ANNUAL QUANTITIES AND NATURE OF WASTE**

Year	Non-hazardous waste (tonnes per annum)	Hazardous waste (tonnes per annum)	Total annual quantity of waste (tonnes per annum)
2007	6,229	41	6,270
2008	6,416	42	6,458
2009	6,608.5	43.5	6,652
2010	6,806.5	45	6,851.5
2011	7,010.5	46.5	7,057
2012	7,221	48	7,269
2013	7,437.5	49.5	7,487
2014	7,660.5	51	7,711.5
2015	7,890.5	52.5	7,943
2016	8,127.5	54	8,181.5
2017	8,371.5	55.5	8,427
2018	8,622.5	57	8,680
2019	8,881	58.5	8,940
2020	9,147	60	9,208
2021	9,421.5	62	9,484
2022	9,704	64	9,768
2023	9,995	66	10,161
2024	10,295	68	10,363
2025	10,604	70	10,674
2026	10,922	72	10,994
2027	11,249.5	74	11,323.5
2028	1,1587	76	11,663
2029	11,934.5	78	12,012.5
2030	12,292.5	80.5	12373
2031	12,661	83	12,744

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**TABLE H.1 (C) WASTE TYPES AND QUANTITIES**

<b>WASTE TYPE</b>	<b>TONNES PER ANNUM (existing)</b>	<b>TONNES PER ANNUM (proposed)</b>	<b>TOTAL (over life of site) tonnes</b>
<b>Household</b>	Not applicable	6,284 approx	Not applicable
<b>Commercial</b>	Not applicable	Not applicable	Not applicable
<b>Sewage Sludge</b>	Not applicable	Not applicable	Not applicable
<b>Construction and Demolition</b>	Not applicable	Not applicable	Not applicable
<b>Industrial Non-Hazardous Sludges</b>	Not applicable	Not applicable	Not applicable
<b>Industrial Non-Hazardous Solids</b>	Not applicable	Not applicable	Not applicable
<b>Hazardous *(Specify detail in Table H 1.2)</b>	Not applicable	41 approx	Not applicable
<b>Inert Waste imported for restoration purposes</b>	Not applicable	Not applicable	Not applicable

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**\* TABLE H.1.2 HAZARDOUS WASTE TYPES AND QUANTITIES**

<b>HAZARDOUS WASTE</b>	<b>DETAILED DESCRIPTION</b> <small>* REFERENCE SHOULD BE MADE TO THE RELEVANT EUROPEAN WASTE CATALOGUE CODES AS PRESENTED BY COMMISSION DECISION 2000/532/EC</small>	<b>Tonnes Per Annum (Existing)</b>	<b>(Tonnes Per Annum Proposed)</b>
<b>Waste Oil</b>	This will consist of minor amounts in domestic waste 20 01 25 and 13 01 00	Not applicable	5.5 approx
<b>Oil filters</b>	This will consist of minor amounts in domestic waste 13 02 00	Not applicable	4.0 approx
<b>Asbestos</b>	Not applicable	Not applicable	Not applicable
<b>Paint and Ink</b>	This will consist of minor amounts in domestic waste 20 01 27	Not applicable	5.5 approx
<b>Batteries</b>	This will consist of minor amounts in domestic waste 20 01 33	Not applicable	7.0 approx
<b>Fluorescent Light Bulbs</b>	This will consist of minor amounts in domestic waste 20 01 21	Not applicable	0.75 approx
<b>Contaminated Soils</b>	Not applicable	Not applicable	Not applicable
<b>OTHER HAZARDOUS WASTE (APPLICANT TO SPECIFY)</b>			

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**Table H.1.1 - Quantity and Nature of Wastes<sup>1</sup>**

<b>Material</b>	<b>European Waste Catalogue Code</b>	<b>Tonnes per annum</b>
Mixed Waste	20 03 01	4125
Paper and Cardboard	20 01 01	440
Tetrapaks	15 01 05	27.5
Textiles	20 01 11	82.5
Metals	20 01 40	192.5
Timber	20 01 38	165
Household Construction & Demolition Waste	17 01 07	275
Garden Waste	20 02 01	500
Electronic and Electrical Waste	20 01 36	27.5
White Goods	20 01 36	165
Glass	20 01 02	110
Food Cans	20 01 05	27.5
Aluminium Cans	20 01 05	13.75
Plastic Bottles	20 01 39	27.5
<b>Hazardous Goods</b>		<b>41.25 total</b>
Waste Edible Oil and Fat	20 01 25	
Waste Hydraulic Oils	13 01 00	
Waste Engine Gear and Lubricating Oils	13 02 00	
Batteries	20 01 33	
White Good Components	20 01 23	
Electronic and Electrical Waste Components	20 01 35	
Paints, Inks, etc	20 01 27	
Pesticides	20 01 19	
Solvents	20 01 13	
Fluorescent Tubes	20 01 21	

Note 1: By reference to the relevant European Waste Catalogue Codes s presented by Commission Decision 2000/532/EC of May 2000.

## **Attachment H.1 – Waste Types and Quantities**

The maximum annual tonnage of waste to be handled at the site is based on:

- Proposed tonnage of waste to be handled in 2007 is 6270 tonnes per annum approx.
- The facility does not have a finite lifespan but estimates are calculated assuming a design life 25 years
- Annual waste intake increases at 3% per annum

Only household hazardous waste will be accepted at the site. Special containers for the disposal of small volumes (domestic quantities) of household hazardous wastes will be provided in the Civic Amenity Centre

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**Article 12(1)(G) – Quantity and Nature of Wastes**

**Table A.1.1 - Quantity and Nature of Wastes<sup>1</sup>**

<b>Material</b>	<b>European Waste Catalogue Code</b>	<b>Tonnes per annum</b>
Mixed Waste	20 03 01	4125
Paper and Cardboard	20 01 01	440
Tetrapaks	15 01 05	27.5
Textiles	20 01 11	82.5
Metals	20 01 40	192.5
Timber	20 01 38	165
Household Construction & Demolition Waste	17 01 07	275
Garden Waste	20 02 01	550
Electronic and Electrical Waste	20 01 36	27.5
White Goods	20 01 36	165
Glass	20 01 02	110
Food Cans	20 01 05	27.5
Aluminium Cans	20 01 05	13.75
Plastic Bottles	20 01 39	27.5
<b>Hazardous Goods</b>		<b>41.25 total</b>
Waste Edible Oil and Fat	20 01 25	
Waste Hydraulic Oils	13 01 00	
Waste Engine Gear and Lubricating Oils	13 02 00	
Batteries	20 01 33	
White Good Components	20 01 23	
Electronic and Electrical Waste Components	20 01 35	
Paints, Inks, etc	20 01 27	
Pesticides	20 01 19	
Solvents	20 01 13	
Fluorescent Tubes	20 01 21	

Note 1: By reference to the relevant European Waste Catalogue Codes s presented by Commission Decision 2000/532/EC of May 2000.

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

**Emission Point:**

Emission Point Ref. N <sup>o</sup> :	N/A
Location of connection to sewer:	Sewage will be stored temporarily in underground tanks and transported away to Listowel Waste Treatment Plant on a regular basis.
Grid Ref. (10 digit, 5E,5N):	
Name of sewage undertaker:	Kerry County Council

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### **D.1.k – Sewerage and Surface Water Drainage Infrastructure**

Details of the sewerage and surface water drainage infrastructure are shown on Drawing No.10599-2001

Waste water from staff facilities and public facilities will discharge to the foul sewer system and flow by gravity to the on-site waste water treatment unit, which will satisfy the criteria set out in the Wastewater Treatment Manual “Treatment Systems for Single Houses” published by the Agency. Treated sewage will be temporarily stored in underground tanks. The tanks will be used for temporary storage of sewage before being transported away, on a regular basis, for treatment at the Listowel Wastewater Treatment Plant. It is likely that the existing contractor used by Kerry County Council for transportation of leachate from North Kerry Council will be employed for this. The tanks will be designed and manufactured by a specialist with wastewater/sewage storage/handling expertise.

Surface water run-off from areas of the facility, which are used for the storage and handling of waste, will be diverted to the on-site wastewater treatment unit and also temporarily stored in underground tanks before being transported away to Listowel Wastewater Treatment Plant.

Surface water run-off from areas of the facility, which are not used for the storage and handling of waste, will be collected in the surface water drainage system and diverted via a Class 1 full retention interceptor to a perimeter drain to the NE of the site and ultimately to River Feale

## **Attachment E.2 – Emissions to Surface Water**

Surface water run-off from areas used for the storage and handling of waste will be diverted to the on-site wastewater treatment unit then temporarily stored before being transported for further treatment at Listowel Wastewater Treatment Plant, thus eliminating the potential for surface water contamination.

Surface water run-off from areas of the facility, which are not used for the storage and handling of waste, will be collected in the surface water drainage system and diverted via a Class 1 full retention interceptor to an existing perimeter stream at the NE of the site and ultimately to the River Feale.

Pipe sizes of the collection system and emission points for surface water can be seen in Drawing No. 10599-2001

All roads and hard standing areas will be impermeable. At permeable areas, such as grass or landscaping adjacent to impermeable surfaces, there will be kerbing to prevent run-off from the impermeable surfaces onto this ground.

The area of the roof and other impervious areas drained for the collection system is 3365m<sup>2</sup>

The following are some further control measures, which will minimise the possibility of contamination of surface water run-off:

- The storage of waste in sealed containers will minimise the potential for leachate generation at the site.
- Good housekeeping measures such as sweeping of hard standing areas
- Use of absorbent material to clean up and contain accidental spillages

A surface water monitoring survey has been carried out. This will provide background data with which to assess the impact of surface water discharge at the facility once it is operational. Further monitoring will be carried out bi-annually.

Listowel Civic Amenity – Waste Licence Application

Samples will be taken from the interceptor as well as upstream and downstream of the discharge point and sent for analysis twice a year. Results will be forwarded to the Agency.

Current climatological stations existing in County Kerry are located in Ardfert, Blennerville, Dooks and Muckross. Limited data exists for these stations and is not included in this application.

The closest weather station with long-term data is Valentia Synoptic Weather Station.

This station records meteorological elements on a daily basis.

Monthly and annual mean and extreme values are shown in Table E2

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### **Attachment E.3 – Emission to Sewers**

There will be no emissions to sewer from the facility, as foul sewage generated on the site will not be discharged to a municipal foul sewer.

On site treatment is envisaged. Wastewater generated at the facility and storm water run-off from areas of the site used for the storage and handling of waste will pass through a waste water treatment unit, which will satisfy the criteria set out in the Wastewater Treatment Manual “Treatment Systems for Single Houses”, published by the Agency. Treated waste water will be temporarily stored underground before being transported off site to the nearby Listowel Wastewater Treatment Plant for further treatment.

It is estimated that the volume of foul effluent generated at the facility will not exceed 4m<sup>3</sup>/day. This is based on:

- A maximum permanent staffing level of 3.
- 220 litres flow per population head (based on 200 litres + 10% infiltration), which multiplied by the population gives DWF (dry weather flow)
- Design for 6DWF to take account of daily peaks and daily and seasonal fluctuations in water consumption, together with an allowance for extraneous flows such as infiltration.

**Attachment F.1 (ii) - To Surface Water:**

Surface water run-off from areas of the facility, which are not used for the storage and handling of waste, will be collected in the surface water drainage system and diverted via a Class 1 full retention interceptor to a perimeter drain to the NE of the site and ultimately to the River Feale

Surface water run-off from areas used for the storage and handling of waste will be diverted via the sewer interceptor to the on-site wastewater treatment unit. Treated wastewater will be temporarily stored in underground tanks before being transported off site to the nearby Listowel Wastewater Treatment Plant for further treatment, thus essentially eliminating the potential for surface water contamination.

Pipe sizes of the collection system and emission points for surface water can be seen in Drawing No. 10599-0001

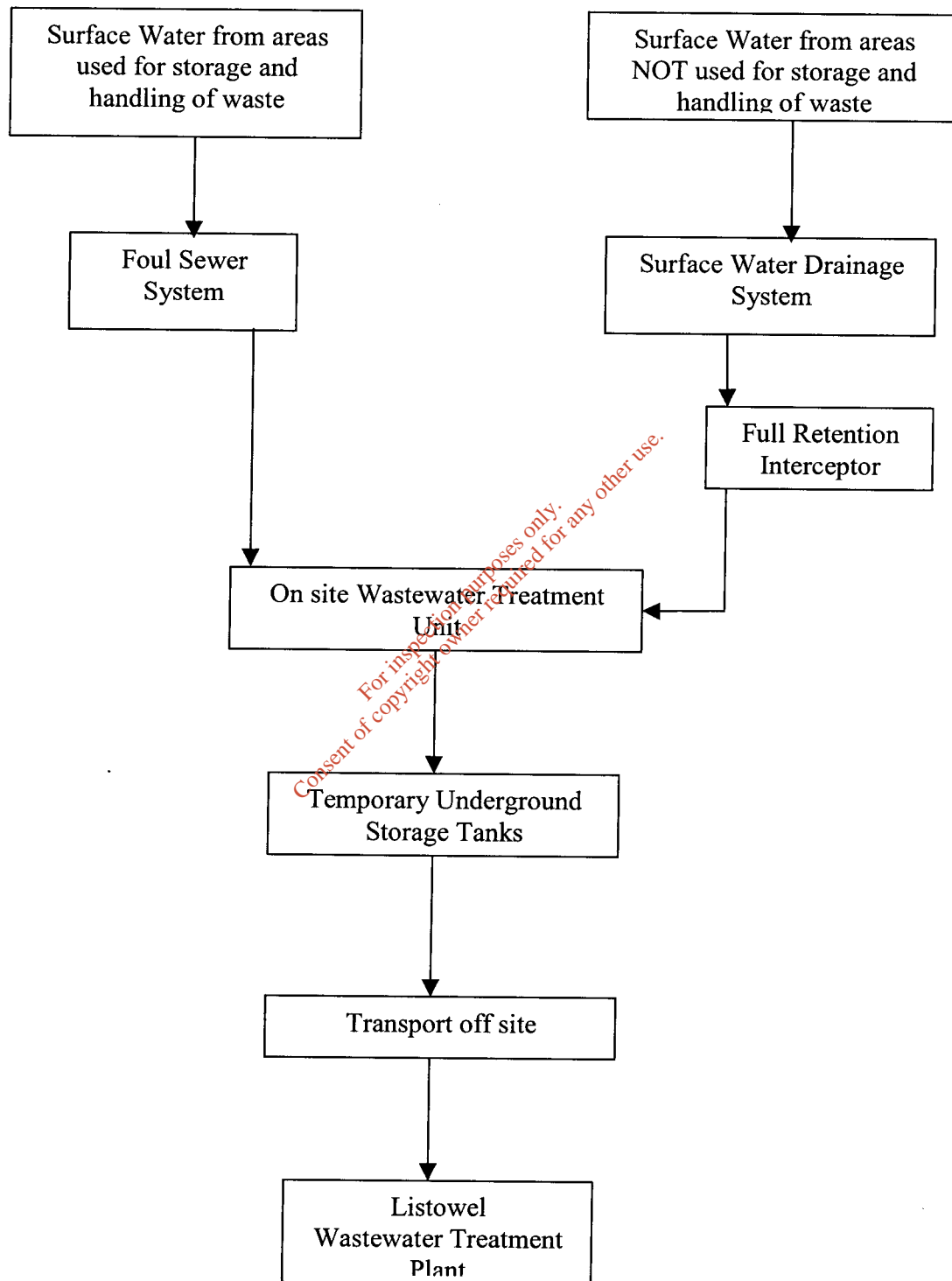
All roads and hard standing areas will be impermeable. At permeable areas, such as grass or landscaping adjacent to impermeable surfaces, there will be kerbing to prevent run-off from the impermeable surfaces onto this ground.

The area of the roof and other impervious areas drained for the collection system is 3365m<sup>2</sup>

The following are some further control measures, which will minimise the possibility of contamination of surface water run-off:

- The storage of waste in sealed containers will minimise the potential for leachate generation at the site.
- Good housekeeping measures such as sweeping of hard standing areas
- Use of absorbent material to clean up and contain accidental spillages

**Figure F.1.1 – Flow Diagram: Surface Water**



### **Attachment F.1 (iii) - To Sewer:**

There will be no emissions to sewer from the facility, as foul sewage generated on the site will not be discharged directly to a municipal foul sewer. On site treatment is envisaged, followed by temporary storage in underground tanks before being transported off site to the nearby Listowel Wastewater Treatment Plant for further treatment.

Surface water run-off from areas used for the storage and handling of waste will be diverted via the sewer interceptor to the on-site wastewater treatment unit. This will also be stored temporarily in underground storage tanks before being transported off site to Listowel Wastewater Treatment Plant, thus effectively eliminating the potential for surface water contamination.

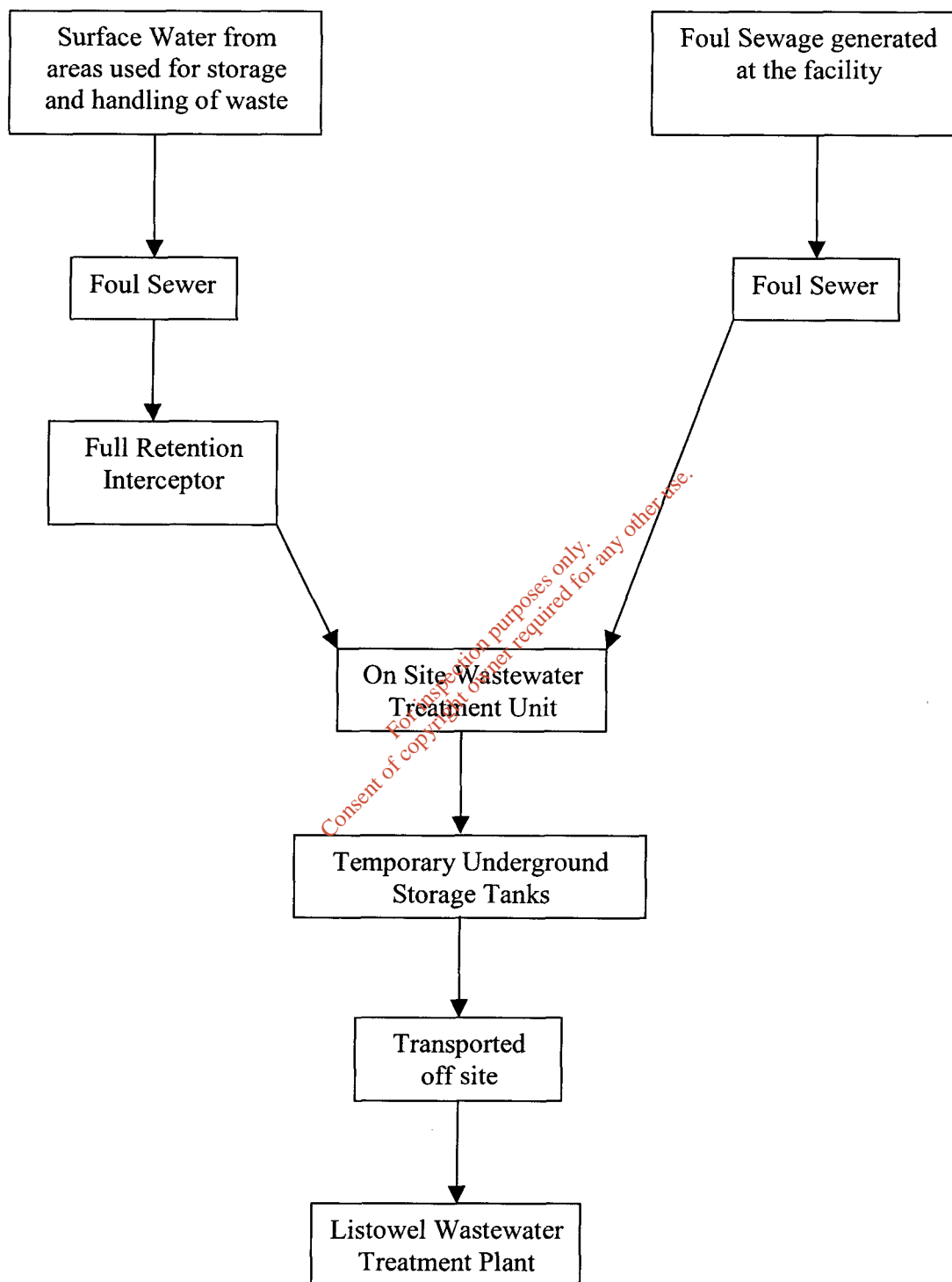
Wastewater generated at the facility will pass through a waste water treatment unit, which will satisfy the criteria set out in the Wastewater Treatment Manual "Treatment Systems for Single Houses", published by the Agency.

The foul effluent discharge will by-pass the oil interceptor.

It is estimated that the volume of foul effluent generated at the facility will not exceed 4m<sup>3</sup>/day. This is based on:

- A maximum permanent staffing level of 3.
- 220 litres flow per population head (based on 200 litres + 10% infiltration), which multiplied by the population gives DWF (dry weather flow)
- Design for 6DWF to take account of daily peaks and daily and seasonal fluctuations in water consumption, together with an allowance for extraneous flows such as infiltration.

**Figure F.1.2 – Flow Diagram: Sewer**



## **Article 12(1)(j) – Emissions from The Site**

### Surface/Storm water

Surface water run-off from areas used for the storage and handling of waste will be diverted to the on-site wastewater treatment unit, stored temporarily in underground storage tanks and then transported off site for further treatment at Listowel Wastewater Treatment Plant. This will effectively eliminate the potential for surface water contamination.

Surface water run-off from areas of the facility, which are not used for the storage and handling of waste, will be collected in the surface water drainage system and diverted via a Class 1 full retention interceptor to a perimeter drain to the NE of the site and ultimately to the River Feale.

All roads and hard standing areas will be impermeable. At permeable areas, such as grass or landscaping adjacent to impermeable surfaces, there will be kerbing to prevent run-off from the impermeable surfaces onto this ground.

The storage of waste in sealed containers will minimise the potential for leachate generation at the site.

Surface water monitoring has been carried out. Results of this survey will be established week ending 25<sup>th</sup> November 2005 and will be forwarded to the Agency accordingly.

Samples will be taken from the interceptor as well as upstream and downstream of the discharge point and sent for analysis twice a year. Results will be forwarded to the Agency.

**Article 12(1)(j) – Emissions from The Site**

Sewage/Wastewater

There will be no emissions to sewer from the facility, as foul sewage generated on the site will not be discharged directly to a municipal foul sewer.

Foul sewage generated at the facility will pass through a waste water treatment unit, which will satisfy the criteria set out in the Wastewater Treatment Manual “Treatment Systems for Single Houses”, published by the Agency, then temporarily stored in underground tanks before being transported off site for further treatment at Listowel Wastewater Treatment Plant

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### **Article 12(1)(l) – Effect of Emissions**

Storm water run-off from areas of the site, which are used for the storage and handling of waste, will be conducted via a foul sewer to the on-site wastewater treatment system, before being temporarily stored in underground tanks and then transported off site for further treatment at the Listowel Wastewater Treatment Plant. Therefore this storm water run-off does not discharge directly from the site and so is not going to have an effect on the receiving environment - treatment levels achieved in the on-site wastewater treatment system, followed by further treatment at Listowel Treatment Plant, will prevent the treated wastewater from polluting groundwater whilst protecting the environment.

Storm water run-off from areas of the site, which are not used for the storage or handling of waste will discharge via a Class 1 full retention oil interceptor to a perimeter stream and ultimately to the River Feale This discharge is unlikely to have a significant effect on the receiving environment.

The use of BATNEEC techniques and controls will ensure that operations at the facility will have minimal impact on background noise levels. Noise monitoring will be carried out annually to determine the impact of activities at the facility on ambient noise levels.

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